

26 November 2024

Positive preliminary assessment of the satisfactory fulfilment of milestones and targets related to the second payment request submitted by Germany on 13 September 2024, transmitted to the Economic and Financial Committee by the European Commission

Executive summary

In accordance with Article 24(2) of Regulation (EU) 2021/241, on 13 September 2024, Germany submitted a request for payment for the second and third instalment of the non-repayable support/loan support. The payment request was accompanied by the required management declaration and summary of audits.

To support its payment request, Germany provided due justification of the satisfactory fulfilment of the 42 milestones and targets of the second and third instalment of the non-repayable support as set out in Section 2 of the Council Implementing Decision of 16 July 2024 on the approval of the assessment of the recovery and resilience plan for Germany¹.

For 13 targets covering a large number of recipients, in addition to the summary documents and official listings provided by Germany, Commission services have assessed a statistically significant sample of individual files. The sample size has been uniformly set at 60, with 2 additional units for two targets, which corresponds to a confidence level of 95% or above in all cases.

In its payment request, Germany has confirmed that measures related to previously satisfactorily fulfilled milestones and targets have not been reversed. The Commission does not have evidence of the contrary. Upon receipt of the payment request, the Commission has assessed on a preliminary basis the satisfactory fulfilment of the relevant milestones and targets. Based on the information provided by Germany, the Commission has made a positive preliminary assessment of the satisfactory fulfilment of all 42 milestones and targets.

The milestones and targets positively assessed as part of this payment request demonstrate significant steps in the implementation of Germany's Recovery and Resilience Plan. They notably highlight the continuation of the reform momentum in key policy areas. This includes, among others, onshore and offshore wind energy, as well as education and training, such as providing learning support for 1 million students. Areas covered by the reforms also include healthcare, with, for example, the digitalisation of public health offices, and the digitalisation of public administration through the provision of 215 digital public services. Reducing red tape for the permitting of renewables, the electricity grid, transport and housing construction are also included in the reform areas. The milestones and targets also confirm progress towards the completion of investment projects related to financial support for citizens and businesses to purchase a total of 320,000 electric or low-emission cars, and funding for 689,000 recharging points. Investments also cover renewable hydrogen, microelectronics and communication technologies, early childhood education and care, and the modernisation of hospitals.

¹ ST 11674/24 and ST 11674 2024 ADD 1

By the transmission of this positive preliminary assessment and in accordance with Article 24(4) of Regulation (EU) 2021/241, the Commission asks for the opinion of the Economic and Financial Committee on the satisfactory fulfilment of the relevant milestones and targets.

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Number and name of the Milestone: 2 Issuance of first grant decisions

Related Measure: 1.1.1 Hydrogen projects within the framework of IPCEIs

Qualitative Indicator: Grant decisions issued

Time: Q1 2022

1. Context:

The measure aims to accelerate the market uptake of hydrogen and its derivatives to decarbonise emission-intensive processes and develop new areas of application in Germany and in Europe, through the implementation of an Important Projects of Common European Interest (IPCEIs) focused on hydrogen.

Milestone 2 concerns the issuance of first grant decisions by federal ministries.

Milestone 2 is the second step of the implementation of the investment, preceded by milestone 1 on completing the expression of interest procedure. It will be followed by target 3 related to the commitment of at least EUR 500 million for the projects, milestone 4 related to the publication of a first evaluation report of the programme, target 5 related to the commitment of at least EUR 1 500 000 000 for the projects and target 6 related to the creation of at least 300 MW of electrolysis capacity.

The investment has a final expected date for implementation in Q3 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID Annex) was satisfactorily fulfilled.
2	List of selected projects, compiled by the two line ministries in charge of the measure, the Federal Ministry of Digital and Transport (<i>Bundesministerium für Digitales und Verkehr - BMDV</i>) and the Federal Ministry of Economy and Climate Action (<i>Bundesministerium für Wirtschaft und Klimaschutz - BMWK</i>)	List containing information on the funding code, recipient, name of the project, a description, the date of grant issuance and the project start date for each of the 15 selected projects.
3	Copies of 15 applications of selected projects	If the implementation of a project involves several federal states, the project is divided into

		sub-projects with separate applications. Hence, there are three applications for "BoschPowerUnits" and two for "Sunfire1500".
4	Copies of 12 project descriptions of selected projects	Project descriptions form part of the application if their implementation does not involve several federal states. If the implementation of a project involves several federal states, the project is divided into sub-projects with separate descriptions, and a separate grant decision (and letter authorising an early start) is issued for each federal state. Hence, the three sub-projects of "BoschPowerUnits" are bundled into one description, as well as the two sub-projects of "Sunfire1500".
5	Copies of 15 letters authorising an early start by BMWK and BMDV to applicants	Through these letters, the federal ministries steering implementation of this measure (BWMK and BMDV) declare their intention to fund projects (and sub-projects, in case a project spans multiple federal states) upon successful completion of the review of the project applications. These letters serve to authorise applicants/recipients to start implementation at their own risk, i.e. should the project ultimately receive funding, costs incurred can be retroactively reimbursed.
6	Copies of 14 grant decisions issued	So far, 14 grant decisions have been issued to ten recipients.
7	Copy of the decision of 12 January 2022 confirming Forschungszentrum Jülich as having the right and power to steer BMDV projects on behalf of BMDV	This document serves as evidence to show grant decisions issued by Forschungszentrum Jülich have the same legal value as grant decisions directly issued by the line ministry, BMDV.
8	Copy of the change notice of 19 October 2023 confirming Forschungszentrum Jülich as having the right and power to steer hydrogen IPCEI BMDV projects	This change notice to the above decision (Evidence No. 7) includes the governance of hydrogen IPCEI projects as one of the areas of authorisation where Forschungszentrum Jülich can act on behalf of BMDV.
9	Spreadsheet authored by the German transmission system operators of projects for the hydrogen core network, including a link to the publication,	The spreadsheet details projects for the hydrogen core network, including SALCOS, one of the projects under assessment for this milestone. It has been published by FNB Gas, the association of German gas transmission system operators, as part of an application to build the

	from 22 July 2024	hydrogen core network to the Federal Network Agency (<i>Bundesnetzagentur</i>). The application is available online at https://fnb-gas.de/en/hydrogen-core-network/ , verified on 24 October 2024 .
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3. Analysis:

The justification and substantiating evidence provided by the Germany authorities cover all constitutive elements of the milestone.

Grant award decisions have been issued to recipients/applicants by the Federal Ministry for Economic Affairs and Climate Action (BMWK) and the Federal Ministry for Digital and Transport (BMDV) enabling the start of the implementation of the selected projects.

“Grant award decisions” are treated as synonymous to “grant decisions” in the following analysis.

German authorities submitted copies of 14 grant decisions that have been issued to recipients/applicants (Evidence No. 5). Such decisions provide partial funding to projects aimed at accelerating the market uptake of hydrogen and its derivatives to decarbonise emission-intensive processes and develop new areas of application in Germany and in Europe. They include provisions on the conditions for funding, and details on the duration of funding and the amount granted. In line with the information included in spreadsheet under “date of issuance” (Evidence No. 2), the first grant decisions were issued between April 2023 and July 2024 (Evidence No. 6, p. 3). The German authorities clarified that some grant decisions concern the same funding project; for projects in which multiple federal states (*Länder*) partner up as co-financers, one grant decision per federal state was issued. Accordingly, the unique identifiers for each project are detailed in the relevant grant decisions. For example, the grant decision pertaining to project 03H2I053 for Robert Bosch has associated funding numbers: 03H2I053A, 03H2I053B, and 03H2I053C, as set out in the appendix to grant decision 03H2I053C, for instance (Evidence No. 6, identifier: 03H2I053C). Thus, overall, as visible from the list below summarising information from the 14 grant decisions, 10 different applicants/recipients have received grant decisions so far.

The Council Implementing Decision required that the grant award decisions be issued by the Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz - BMWK*) and the Federal Ministry for Digital and Transport (*Bundesministerium für Digitales und Verkehr - BMDV*). 13 of the 14 grant decisions were issued by the BMWK and one was issued by *Forschungszentrum Jülich*, the implementing partner of the BMDV on the grant decision to EKPO Fuel Cell Technologies GmbH & Co. KG. Whilst this constitutes a minimal formal deviation, *Forschungszentrum Jülich* is the implementing partner of BMDV, and thus, the grant decision has the same legal value as if it would have been issued directly by BMDV. The relationship between *Forschungszentrum Jülich* and BMDV has been formalised in the change notice from 19 October 2023 (Evidence No. 8) to the decision by BMDV (Evidence No. 7), authorising *Forschungszentrum Jülich* to make funding decisions on hydrogen IPCEI projects and to administer federal funds accordingly. As of this, this minimal deviation does not affect the progress towards achieving the investment that the milestone represents. On this basis, it is considered that this constitutive element of the milestone is satisfactorily fulfilled.

Topic (Evidence No. 6, section “subject” (<i>Betreff</i>))	Recipient/applicant (Evidence No. 6, recipient address)	Date of grant award decision issuance (Evidence No. 6,	Federal state cofunder (Evidence No. 6, section “subject”	Issuer of grant decision (Evidence No. 6, sender column
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	line)	sender column)	(Betreff)	and signature line)
SALCOS - low-CO2 primary steel production by the use of hydrogen	Salzgitter Flachstahl GmbH	17 April 2023	Lower Saxony	BMWK
BoschPowerUnits - First industrial deployment of stationary fuel cell systems based on SOFC technology	Robert Bosch GmbH	19 June 2023	Baden-Württemberg	BMWK
		19 June 2023	Free State of Bavaria	BMWK
		19 June 2023	Saarland	BMWK
Sunfire1500 - Industrialisation of AEL and SOEC electrolyzers	SunFire GmbH	5 July 2023	Free State of Saxony	BMWK
		5 July 2023	North Rhine-Westphalia	BMWK
NextGen_HD_Stack	EKPO Fuel Cell Technologies GmbH & Co. KG	13 November 2023	Baden-Württemberg	Projekträger Jülich / Forschungszentrum Jülich (as implementing partner of BMDV)
HydroHub Fenne	HydroHub Fenne GmbH	7 June 2024	Saarland	BMWK
mosaHYc	Creos Deutschland Wasserstoff GmbH	13 June 2024	Saarland	BMWK
DE43-H2P-Bremen	EWE HYDROGEN GmbH	18 June 2024	Free Hanseatic City of Bremen	BMWK
DE43-H2P-Emden	EWE HYDROGEN GmbH	18 June 2024	Lower Saxony	BMWK
DE43-H2P-Huntorf	EWE GASSPEICHER GmbH	25 June 2024	Lower Saxony	BMWK
GET_H2_Nukleus	RWE Nukleus Green H2 GmbH	27 June 2024	Lower Saxony	BMWK
GreenMotionSteel	AIR LIQUIDE Deutschland GmbH	4 July 2024	North Rhine-Westphalia	BMWK

As the title of the milestone in the CID Annex, “Issuance of first grant decisions” suggests, these grant decisions will be followed by (an) additional grant decision(s), as suggested by a letter enabling an early start for an additional project that continues to be under review for approval (Airbus’ project with the acronym “WoPLiN”, Evidence No. 5). For the 14 grant decisions already issued, an

early start was also enabled via letter before the grant decisions were issued (Evidence No. 5), as also referred to on each of the grant decisions (Evidence No. 6, “Gewährung eines vorzeitigen Maßnahmenbeginns” on page one and paragraph on “Bewilligungszeitraum” on page two of the grant decision). The letters were issued between December 2021 and February 2024 by the responsible authorities (BMWK and *Forschungszentrum Jülich* on behalf of BMDV), with the purpose of informing recipients that they were free to start accruing project expenses after the start date indicated in the letter enabling an early start, which could be reimbursed following the issuance of the grant decisions (Evidence No. 5, p. 2). Thereby, implementation could be preponed at the risk of the recipient. Each letter contained a disclaimer that the letter does not give rise to any legal entitlement to a grant. Instead, the issuance of the grant decisions gave legal certainty on funding through committing funds to the recipients, and in this sense confirmed the enabling of the start of implementation of the selected projects.

Furthermore, in line with the description of the measure, **the measure consists of financial support that shall be given to integrated projects along the entire value chain through planned IPCEIs on hydrogen.**

Through the measure, financial support is given to projects, as evidenced by the grant decisions, which each contain a total preliminary financial support table per year (“The grant is made available [...] as follows”, “Die Zuwendung wird [...] wie folgt zur Verfügung gestellt”) (Evidence No. 6, pp. 2/3).

In accordance with the Communication from the Commission, criteria for the analysis of the compatibility with the internal market of State aid to promote the execution of important projects of common European interest from 20 June 2014 (2014/C 188/02, section 3.1), an integrated project is a group of single projects inserted in a common structure, roadmap or programme aiming at the same objective and based on a coherent systemic approach.

It is confirmed in the grant decisions that the projects are approved as part of integrated projects in the framework of IPCEIs on hydrogen (Evidence No. 6, Annex “*Weitere Nebenbestimmungen und Hinweise*”, section 5), with the exception of two grant decisions for which this Annex is not available/not conclusive. They are clearly linked to integrated projects in the framework of IPCEIs via their state aid approval under the Hy2Tech IPCEI (acronym “NextGen_HD_Stack”, Evidence No. 6, p. 5) and the application as part of a project consortium (‘GET H2 IPCEI’ initiative) (acronym “SALCOS-Stufe-1”, Evidence No. 4, pp. 20/21) and its integration into the wider hydrogen IPCEIs landscape.

Projects along the entire value chain are being supported: Each of the grant decisions (Evidence No. 6) concerns a hydrogen project, related primarily to producing innovative electrolysers (acronym “Sunfire1500” (in two locations)), enabling renewable hydrogen production through constructing electrolysers (acronyms “GreenMotionSteel”, “GET_H2_Nukleus”, “DE43-H2S-Bremen”, “DE43-H2S-Emden”, “HydroHub_Fenne”), building a hydrogen grid (acronym “mosaHYc”), building hydrogen storage capacity (acronym “DE43-H2S-Huntorf”), developing industrial hydrogen applications (acronyms “SALCOS-Stufe-1”, “BoschPowerUnits” (in three locations)) and industrialising a heavy-duty hydrogen transport application (acronym “NextGen_HD_Stack”) (Evidence No. 3, section V07).

Furthermore, in line with the description of the measure, **as regards production, the planned IPCEIs shall focus on building large electrolysis capability to produce renewable hydrogen in locations where sufficient renewable electricity is available.**

Projects that focus on building large electrolysis capacity to produce renewable hydrogen are part of the Hy2Infra IPCEI wave (Evidence No. 6, Annex “*Weitere Nebenbestimmungen und Hinweise*”, section 5). As regards the requirement to focus on building large electrolysis capability, the revised

Trans-European Networks for Energy (TEN-E) Regulation (2022/869), a set of EU guidelines for cross-border energy infrastructure that outlines the process for selecting projects of common interest (PCI), sets minimum capacity requirements for electrolyzers to contribute to trans-European energy infrastructure priority corridors and areas. As the German authorities explained, all projects in the Hy2Infra wave submitted as evidence under this milestone comply with the requirements of Trans-European Networks for Energy, meaning that a generation capacity of at least 50 MW or cumulatively 50 MW for connected electrolyzers is required. Accordingly, the German projects within the Hy2Infra IPCEI wave with the acronyms “GreenMotionSteel” (120 MW), “SALCOS-Stufe-1” (100 MW), “Get_H2_Nukleus” (300 MW), “DE43-H2S-Bremen” (50 MW) and “DE43-H2S-Emden” (320 MW) (Evidence No. 3, section V07) have been approved for funding (Evidence No. 6). The approval of these projects entails that at least 890 MW of electrolysis capacity is expected to be built within this framework (Evidence No. 3, section V07, and Evidence No. 6). Moreover, the project “Sunfire1500” enables the production of innovative hydrogen electrolyzers (Evidence No. 4) and is part of the IPCEI Hy2Tech (Evidence No. 6, Annex “*Weitere Nebenbestimmungen und Hinweise*”, section 5).

The measure description requires that the electrolyzers be built to produce renewable hydrogen in locations where sufficient renewable electricity is available. The project descriptions (Evidence No. 4) contain provisions in this regard, for instance, the integration of the electrolysis plant of the the project with the acronym *HydroHub Fenne*, with a capacity of 55 MW, is designed to produce around 8,700 tons of hydrogen annually but reacts flexibly to the changing availability of renewable electricity sources like solar and wind available to the location. The electrolyser is using a technology (proton-exchange membrane, PEM) that enables compliance with the Renewable Energy Directive (“RED II”, Directive (EU) 2018/2001 and “RED III”, Directive (EU) 2023/2413), granting flexibility to adjust the timing of electrolysis according to intermittent renewable energy production (Evidence No. 4, ‘*Wasserstoff-Elektrolyse am EnergieHub Fenne (“HydroHub Fenne”)*’, page 9, section 1.2).

More generally, the grant decisions for all electrolyzers specify that the electrolyzers may be used for the production of renewable hydrogen, and that the recipient must ensure that renewable hydrogen is produced in accordance with the criteria for renewable hydrogen of the applicable Renewable Energy Directive (RED) and the requirements set out in the associated legal framework (Evidence No. 6, Annex “*Weitere Nebenbestimmungen und Hinweise*”, section 6.2). The grant recipients are also obliged to ensure a sufficient supply of electricity from renewable energies for the production of renewable hydrogen by concluding power purchase agreements (PPAs) with plants that generate electricity from renewable energies (Evidence No. 6, Annex “*Weitere Nebenbestimmungen und Hinweise*”, section 6.3).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 3 Commitment of at least EUR 500 000 000

Related Measure: 1.1.1 Hydrogen projects within the framework of IPCEIs

Quantitative Indicator: EUR million

Baseline: 0

Target: 500

Time: Q2 2024

1. Context:

The measure aims to accelerate the market uptake of hydrogen and its derivatives to decarbonise emission-intensive processes and develop new areas of application in Germany and in Europe, through the implementation of an Important Projects of Common European Interest (IPCEIs) focused on hydrogen.

Target 3 related to the commitment of at least EUR 500 000 000 for hydrogen projects in line with grant decisions issued.

Target 3 is the third out of six steps of the implementation of the investment, preceded by milestone 1 on completing the expression of interest procedure and milestone 2 on the issuance of first grant decisions. It will be followed by milestone 4 related to the publication of a first evaluation report of the programme, target 5 related to the commitment of at least EUR 1.5 billion for the projects and target 6 related to the creation of at least 300 MW of electrolysis capacity.

The investment has a final expected date for implementation in Q3 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID Annex) was satisfactorily fulfilled.
2	Spreadsheet overview of funds committed, compiled by the two line ministries in charge of the measure, the Federal Ministry of Digital and Transport (<i>Bundesministerium für Digitales und Verkehr - BMDV</i>) and the Federal Ministry of Economy and Climate Action (<i>Bundesministerium für Wirtschaft und</i>	Lists of amounts (EUR) already committed and expected to be committed per project (Table 1) and per contractual counterpart (Table 2). The IPCEI projects are co-financed by the German federal government and by the respective federal states. The federal government share of the total funding is generally 70%, with the federal state (<i>Land</i>) involved contributing 30% of the total grant. The federal government share of the grant amount is to be financed via the DARP funds, and so these are listed as separate amounts (see column "Thereof DARP amount (expected)"). VAT is excluded in accordance with

	<i>Klimaschutz - BMWK</i>)	the formal applications (Evidence No. 3 of M2).
3	List of selected projects, compiled by the two line ministries in charge of the measure, the Federal Ministry of Digital and Transport and the Federal Ministry of Economy and Climate Action	List containing information on the funding code, recipient, name of the project, a description, the date of grant issuance and the project start date for each of the 15 selected projects. Submitted as evidence to M2 and subsequently also considered for T3.
4	Copies of 15 applications of selected projects	If the implementation of a project involves several federal states, the project is divided into sub-projects with separate applications. Hence, there are three applications for "BoschPowerUnits" and two for "Sunfire1500". Submitted as evidence to M2 and subsequently also considered for T3.
5	Copies of 14 grant decisions issued	So far, 14 grant decisions have been issued to ten recipients. Submitted as evidence to M2 and subsequently also considered for T3.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

At least EUR 500 000 000 have been committed to hydrogen projects in line with grant decisions issued.

German authorities have provided an overview table detailing funds committed per project and co-financers, also detailing funds that are planned to still be committed in the future (Evidence No. 2). As the German authorities explain, there are generally two co-financers: The Federal Government and the federal state (*Land*) in which the project is being implemented (Evidence No. 1). As detailed in the grant decisions, the Federal Government is to pay 70% of committed funds, and the federal state 30% (Evidence No. 5).

Commission services verified that the committed funds indicated in the spreadsheet match the indications on funding from the issued grant decisions (Evidence No. 3 and Evidence No. 5), identifying each project by the funding code. Overall, EUR 1 971 115 945.50 financed by the Federal Government with funds from the German recovery and resilience plan (representing 70% of overall funds committed) have been committed to 11 projects, split into 14 grant decisions (see also the table overview of grant decisions of the preliminary assessment on milestone 2). The commitments exclude VAT, as confirmed by the corresponding project applications (Evidence No. 4, section A65). There is more than one grant decision per project in three cases, as they are implemented in two or three different federal states, respectively, and there is a separate grant decision for each of the federal states as co-financers.

Funds have been committed to hydrogen projects, related primarily to producing innovative electrolyzers (acronym "Sunfire1500" (in two locations)), enabling renewable hydrogen production through constructing electrolyzers (acronyms "GreenMotionSteel", "GET_H2_Nukleus", "DE43-H2S-Bremen", "DE43-H2S-Emden", "HydroHub_Fenne"), building a hydrogen grid (acronym "mosaHYc"), building hydrogen storage capacity (acronym "DE43-H2S-Huntorf"), developing industrial hydrogen

applications (acronyms “SALCOS-Stufe-1”, “BoschPowerUnits” (in three locations)) and industrialising a heavy-duty hydrogen transport application (acronym “NextGen_HD_Stack”) (Evidence No. 4, section V07).

Funds have been committed in the period between 17 April 2023 and 4 July 2024, the dates of issuance of the grant decisions (Evidence No. 5, see also the table overview of the preliminary assessment on milestone 2).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 12 Funding guideline (*Förderrichtlinie*) for a pilot programme on climate change contracts based on the principle of Carbon Contracts for Difference

Related Measure: 1.1.3 Pilot scheme for climate action contracts based on the principle of Carbon Contracts for Difference

Qualitative Indicator: Entry into force of funding guideline

Time: Q3 2022

1. Context:

The measure aims to introduce climate action contracts to support the introduction of new, cleaner production technologies for energy-intensive industries. This seeks to provide businesses with financial certainty when they make significant investments in climate-neutral technologies and to reduce on a permanent basis process-related GHG emissions.

Milestone 12 concerns the entry into force of the guideline for a pilot programme on climate change contracts based on the principle of Carbon Contracts for Difference, which enables companies to submit applications. It includes the assessment of the ETS benchmark requirement from the measure description.

Milestone 12 is the middle step of the implementation of the investment, preceded by milestone 11, the completion of the expression of interest procedure for companies interested in receiving support for their projects, and followed by target 13 on disbursement to the supported projects, which will also allow for the evaluation of the signature of climate change contracts between the state and energy-intensive industries for the purpose of cushioning the higher operating costs of innovative technologies.

The investment has a final expected date for implementation in Q3 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID Annex) was satisfactorily fulfilled.
2	Copy of the funding guideline for a pilot programme on climate change contracts based on the principle of Carbon Contracts for Difference (<i>Richtlinie zur Förderung von klimaneutralen Produktionsverfahren in der Industrie durch Klimaschutzverträge</i>)	Funding guideline based on which support to energy-intensive industries to support the introduction of new, cleaner technologies is to be provided under this measure. Not to be mistaken for the call of expression of interest (milestone 11), which preceded the funding guideline. Available online: https://www.bundesanzeiger.de/pub/publication/z26rd4pzhmkLYKeETr6/content/z26rd4pzhmkLYKeETr6/BAanz%20AT%2010.04.2024%20B1.pdf?inline , verified on 24 October 2024.

	published on 10 April 2024 in the Federal Gazette (<i>Bundesanzeiger</i>) and entered into force on 11 March 2024, and corresponding link to publication	
3	Copy of the first funding call (<i>Erster Förderaufruf zum Gebotsverfahren Klimaschutzverträge</i>) launched by BMWK on 12 March 2024, and corresponding links to publication	First funding call under the funding guideline (Evidence No. 2), launched by the Federal Ministry for Economic Affairs and Climate Action (<i>Bundesministerium für Wirtschaft und Klimaschutz - BMWK</i>). Available online: https://www.klimaschutzvertraege.info/dokumente/schrank , verified on 24 October 2024.
4	Copy of the announcement of a preliminary procedure by BMWK, published on 6 June 2023 in the Federal Gazette (<i>Bundesanzeiger</i>), and corresponding link to publication	Preliminary procedure launched by the BMWK that companies were required to take part in and get admitted through to be eligible for funding under the first call for funding (Evidence No. 3). Available online: https://www.bundesanzeiger.de/pub/publication/xHTZ6zQUdOsSbHLHjhg/content/xHTZ6zQUdOsSbHLHjhg/BAanz%20AT%2006.06.2023%20B1.pdf?inline , verified on 24 October 2024.
5	Copy of the funding guideline's Appendix 1 published on 10 April 2024 in the Federal Gazette (<i>Bundesanzeiger</i>) and entered into force on 11 March 2024	Appendix contains the methodology for calculating the annual contract price applied to the carbon contracts. Published together with the funding guideline (Evidence No. 2) but published online in a separate link. Available online: https://www.bundesanzeiger.de/pub/publication/z26rd4pzhmkLYKeETr6/content/240311001600M001/BAanzAT10042024B100.pdf , verified on 24 October 2024.
6	Link to a press release by BMWK from 12 March 2024	Press release on the launch of the funding programme. Available online: https://www.bmwk.de/Redaktion/DE/Pressemitteilungen/2024/03/20240312-erste-runde-klimaschutzvertraege.html , verified on 24 October 2024.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

The guideline for a pilot programme on climate change contracts based on the principle of Carbon Contracts for Difference has entered into force,

The funding guideline provided for a pilot programme on climate change contracts based on the principle of Carbon Contracts for Difference has entered into force on 11 March 2024 (Evidence No. 2, p. 25, section 13). The funding guideline is the basis for support to energy-intensive industries for the introduction of new, cleaner technologies to be provided.

That this is a pilot programme in the sense of being a first-of-its-kind is indicated by the press release of the Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz - BMWK*), which states that Germany is the first EU Member State to be starting funding via climate change contracts (*“Deutschland ist der erste EU-Mitgliedstaat, der eine Förderung durch Klimaschutzverträge an den Start bringt.”*, Evidence No. 6). In the context of the first milestone of this measure, M11, the background section on the call for expression of interest notes that climate change contracts aim to close the gap of instruments for a transition phase to higher and more effective CO₂ prices (M11 Evidence No. 1, section 1, p. 1), implying that the programme is without precedent.

The guideline is on climate change contracts as evident from the title of the guideline, “climate-neutral production procedures in industry via climate change contracts” (*“klimaneutrale Produktionsverfahren in der Industrie durch Klimaschutzverträge”*, Evidence No. 2, p. 1) and the section defining the aim of the funding. In this section, it is clarified that the aim and purpose is to make “grants for additional costs of transformative production processes on the basis of climate protection contracts in emission-intensive sectors” (*“Zuwendungen für Mehrkosten transformativer Produktionsverfahren auf der Basis von Klimaschutzverträgen im Bereich der emissionsintensiven Branchen”*, Evidence No. 2, p. 5, section 3.1). In this context, climate action contracts are the same as climate change contracts and climate protection contracts; the differences emanate from different translations of the German word *“Klimaschutzverträge”*, which has consistently been used across the German recovery and resilience plan and the documents provided as evidence. Climate change contracts are defined as contracts through which “additional costs incurred by companies from emission-intensive sectors as a result of the construction of more climate-friendly plants or the conversion of plants to more climate-friendly plants (CAPEX) and their operation (OPEX) compared to plants with the best technology currently available” are offset (*“Mehrkosten von Unternehmen aus emissionsintensiven Branchen ausgleichen, die diesen durch die Errichtung von klimafreundlicheren Anlagen oder den Umbau von Anlagen zu klimafreundlicheren Anlagen (CAPEX) und deren Betrieb (OPEX) im Vergleich zu Anlagen mit derzeit bester verfügbarer Technik entstehen”*, Evidence No. 2, p. 5, section 4.1), which is based on the principle of “Carbon Contracts for Difference” (*“CO₂-Differenzverträge”*, Evidence No. 2, p. 5, section 4.1). Through climate change contracts, a CO₂ contract price (“basic contract price”) based on the higher operating costs of the climate-friendly production technology is defined. A dynamic variable may be added to the CO₂ basic contract price to cushion price risks of energy sources and thereby increases funding efficiency. Companies receive or pay the difference between the CO₂ contract price and the actual CO₂ price: if the actual price is lower than the contract price the company receives the difference from the government, if the actual price is higher than the contract price the company pays the difference to the government (Evidence No. 2, p. 10, section 7.1).

[...] enabling companies to submit applications.

Companies that are eligible to apply are defined in the section of the funding guideline on recipients, which states that companies as defined in § 14 of the German Civil Code (*Bürgerliches Gesetzbuch*) are eligible to apply (*“Antragsberechtigt sind Unternehmen im Sinne des § 14 des Bürgerlichen Gesetzbuchs [...]”*, Evidence No. 1, p. 9, section 5.1). Furthermore, companies can be required to take part and be admitted in a preliminary procedure to be eligible for funding (Evidence No. 2, p. 19, section 8.6). For the first funding call, this option was chosen (Evidence No. 3, p. 3), and the corresponding preliminary procedure was publicly announced on 8 May 2023 (Evidence No. 4). The funding guideline further specifies that the funding programme is aimed at supporting climate-

friendly construction, conversion and operation of plants in emission-intensive sectors (Evidence No. 2, p. 5, section 4.1)

While the funding guideline sets the legal basis for who can apply, companies were only able to submit applications from 12 March 2024, the day following the entry into force of the funding guideline, when the first funding call was published (Evidence No. 3). The German authorities explained (Evidence No. 1, p. 2) that using a funding call is a typical but not mandatory tool in federal funding in Germany. For climate change contracts, the funding call is also a necessary prerequisite to enabling the submission of applications as the funding guideline is designed in such a way as to leave flexibility on several elements that would then be further specified by the calls. For instance, the funding guideline contains a provision on defining the types of hydrogen that are eligible for funding in the call for funding, following the entry into force of related EU legislation (Evidence No. 2, pp. 2/3, section 2.6).

Furthermore, in line with the description of the measure, **[climate action] contracts shall guarantee a fixed CO2 price over a fixed duration for companies investing in CO2 reduction technologies.**

The Council Implementing Decision states that the climate action contracts should guarantee a fixed CO2 price. The German recovery and resilience plan provides that a fixed CO2 price should be guaranteed over a fixed term (p. 81) but also lays out in the more detailed section on costing that the contracting parties guarantee a mutual payment obligation, consisting of the difference between a contractually agreed price (strike price) for greenhouse gas emissions and its market price, which can vary over time (p. 131). The German recovery and resilience plan further notes that the purpose of this method is to create investment security for climate-neutral technologies (p. 81). The German authorities have provided a funding guideline and methodology in line with this purposive interpretation of “fixed price” (Evidence No. 2 and Evidence No. 5). In light of the purposive interpretation of this requirement from the Council Implementing Decision, through climate change contracts, a CO2 contract price (“basic contract price”) based on the higher operating costs of the climate-friendly production technology is defined. A dynamic variable may be added to the CO2 basic contract price to cushion price risks of energy sources and thereby increases funding efficiency. Companies receive or pay the difference between the CO2 contract price and the actual CO2 price: if the actual price is lower than the contract price the company receives the difference from the government, if the actual price is higher than the contract price the company pays the difference to the government (Evidence No. 2, p. 10, section 7.1). The methodology is laid out in more detail in annex 1 to the funding guidelines (Evidence No. 5). On this basis, it is considered that this constitutive element of the milestone is satisfactorily fulfilled.

The contract is guaranteeing a price over a fixed time duration. The runtime of each climate change contract is set for 15 years (Evidence No. 2, p. 5, section 4.2) and has to start at the latest 36 months after the entry into force of the grant decision, upon completion of the construction works and trial phase (Evidence No. 3, p. 4). The difference between contract and actual CO2 price is calculated and paid every year over this 15-year period (16 fiscal years if started during the fiscal year; Evidence No. 2, p. 19, section 9.2). Companies can terminate climate change contracts before the end of the 15-year time span at the earliest three years after the company has for the first time had to compensate the government (Evidence No. 2, p. 13, section 7.7).

The climate action contracts provide support for companies investing in CO2 reduction technologies. In this context, climate action contracts are the same as climate change contracts and climate protection contracts; the differences emanate from different translations of the German word “*Klimaschutzverträge*”, which has consistently been used across the German recovery and resilience plan and the documents provided as evidence. The purpose of funding is to make “grants for additional costs of transformative production processes on the basis of climate protection contracts in emission-intensive sectors” (“*Zuwendungen für Mehrkosten transformativer Produktionsverfahren*”).

auf der Basis von Klimaschutzverträgen im Bereich der emissionsintensiven Branchen”, Evidence No. 2, p. 5, section 3.1). Climate change contracts are defined as contracts through which “additional costs incurred by companies from emission-intensive sectors as a result of the construction of more climate-friendly plants or the conversion of plants to more climate-friendly plants (CAPEX) and their operation (OPEX) compared to plants with the best technology currently available” are offset (*“Mehrkosten von Unternehmen aus emissionsintensiven Branchen ausgleichen, die diesen durch die Errichtung von klimafreundlicheren Anlagen oder den Umbau von Anlagen zu klimafreundlicheren Anlagen (CAPEX) und deren Betrieb (OPEX) im Vergleich zu Anlagen mit derzeit bester verfügbarer Technik entstehen*”, Evidence No. 2, p. 5, section 4.1), which is based on the principle of “Carbon Contracts for Difference” (*“CO₂-Differenzverträge*”, Evidence No. 2, p. 5, section 4.1).

Furthermore, in line with the description of the measure, **only projects resulting in emissions substantially below the ETS benchmarks shall be eligible for support under the measure: Where the activity supported achieves projected greenhouse gas emissions that are not substantially lower than the relevant benchmarks an explanation of the reasons why this is not possible should be provided. Benchmarks are established for free allocation for activities falling within the scope of the Emissions Trading System, as set out in the Commission Implementing Regulation (EU) 2021/447.**

The ETS benchmarks requirement is complied with: There are no activities supported where the activity supported achieves protected greenhouse gas emissions that are not substantially lower than the relevant benchmarks. The binding section on the object of funding (*Gegenstand der Förderung*, Evidence No. 2, p. 5, section 4) in the funding guideline contains provisions on the eligibility criteria. It sets a minimum funding requirement of expected emission reduction of at least 60% compared to the ETS benchmarks at the beginning of the third full fiscal year of the runtime of each climate change contract (Evidence No. 2, p. 7, section 4.15). The funding guideline also ensures that only projects that show such an emission reduction after the third fiscal year continue to receive funding. Exceptions from this requirement based on objective circumstances, in particular due to force majeure or delayed provision of infrastructures, are permissible (Evidence No. 2, p. 21, section 9.5). Since these exceptions are limited to unforeseeable circumstances, such as the expectation is that projects would result in emissions substantially below the ETS benchmarks by the third fiscal year, the requirement is upheld. Furthermore, the reduction of emissions compared to the ETS benchmarks in the final full fiscal year 15 must be at least 90% (Evidence No. 2, p. 7, section 4.15). While each call for funding can set more ambitious emission saving requirements than these minimum requirements (Evidence No. 2, p. 7, section 4.15), the first call for funding replicates exactly the minimum requirements (Evidence No. 3, p. 4).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 18 Issuance of grant decisions

Related Measure: 1.1.5 Flagship projects for research and innovation in the context of the National Hydrogen Strategy

Quantitative Indicator: Number of grant decisions issued

Baseline: 0

Target: 150

Time: Q2 2022

1. Context:

The measure aims to contribute to decarbonising the economy and focuses specifically on addressing key issues related to the provision of green hydrogen in the future energy system of Germany. It consists of three flagship initiatives focused on i) addressing the challenges of the serial production of water electrolyzers, ii) the integrated direct offshore production of hydrogen and its derivatives at sea using offshore wind energy and iii) the exploration and assessment of the potential of hydrogen transport technologies.

Target 18 requires the issuance of 150 grant decisions to beneficiaries/applicants, whereby implementation of selected projects is started: Grant decisions have been issued to beneficiaries/applicants, enabling the start of the implementation of the selected projects.

Target 18 is the second target of the investment, and it follows the publishing of the competition in milestone 17. It will be followed by target 19 related to the completion of supported projects, target 20 related to the disbursements to recipients and target 21 related to the commitment of funds to the supported projects.

The investment has a final expected date for implementation on 31 August 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID Annex) was satisfactorily fulfilled.
2	Spreadsheet on 353 projects	Spreadsheet with the official reference numbers, flagship initiative to which the project contributes, start and end date, recipient, title and short description of the 353 projects for which grant decisions that have been issued.
3	Copies of 60 grant decisions	Sampled grant decisions from the spreadsheet (Evidence No. 2). Each grant decision contains two Annexes: „ <i>Weitere Nebenbestimmungen und Hinweise</i> “ and „ <i>Gesamtfinanzierungsplan</i> “.
4	Copies of 60 application forms corresponding to the	Templated application form which forms the basis for the funding application. Contains a short

	60 grant decisions	description of the project and/or wider project consortium aim (section V07).
5	Copies of 60 project descriptions corresponding to the 60 grant decisions	Project description describing the project and outlining the research/action gap the project aims to address. Handed in by each project applicant as part of the funding application.
6	Copies of 33 project consortium descriptions corresponding to the 60 grant decisions	Projects are grouped into consortiums with a joint goal. Additional to the project descriptions, each project consortium handed in a description of the overarching goal as part of the funding application.

3. Analysis:

The justification and substantiating evidence provided by the Germany authorities cover all constitutive elements of the target.

Grant decisions have been issued to recipients/applicants, [...]

The German authorities provided a spreadsheet of 353 flagship projects for research and innovation in the context of the National Hydrogen Strategy for which grant decisions have been issued (Evidence No. 2), from which a sample was drawn. The projects aim to address key issues related to the provision of green hydrogen in the future energy system of Germany. The evidence provided for a sample of 60 grant decisions (Evidence No. 3), their corresponding application forms (Evidence No. 4), project and project consortium descriptions (Evidence No. 5 and 6) confirmed that the requirement of the target has been met. Each of the grant decisions indicates a date of sending on the top right corner, suggesting they have been issued by *Forschungszentrum Jülich* and the Federal Ministry of Education and Research (BMBF), to recipients. The grant decisions are issued to the project implementers, which are at the same time the applicants, and hence synonymous to recipients.

Although no unique identifier had been set at the time of application, grant decisions and application documents are unambiguously attributable via the name of applicant and the name of the project (even if slightly adjusted in the grant decision), or – in cases the name of the project but rather the project consortium is noted on the grant decision – via the project consortium setup, noted in the consortium descriptions (Evidence No. 6), which lists individual applicants and their corresponding projects.

[...] enabling the start of the implementation of the selected projects.

Grant decisions enable the start of the implementation of the selected projects. Each grant decision contains an indication of the runtime for the project and a preliminary payment schedule based on the application (Evidence No. 3, section “*Höhe der Zuwendung/Finanzierungsform und – art/Zweckbindung/Bewilligungszeitraum/Zahlungsplan*”). From the moment the grant decision becomes definitive - when it is not appealed within one month - recipients can begin to apply for advance payment/reimbursement of funds by the project coordinator, *Forschungszentrum Jülich*, for project-related expenditures as set out in the grant decision (Evidence No. 3, section “*Nebenbestimmungen und Hinweise*”, subsection “*Voraussetzungen zur Auszahlung der Zuwendung*”), thereby enabling the start of the implementation of selected projects.

The starting date for the runtime dates indicated in the grant decisions precede the issuance dates of the grant decisions. Grant decisions’ issuance date is indicated in the header of the grant decision. Copies of grant decisions without time stamp contain an electronic issuance date (Evidence No. 3,

top right corner of grant decision front page), as filed in the German authorities' project information system, and those with a physical time stamp are scans of issued grant decisions, as clarified by the German authorities. As the German authorities explain, letters stating the non-binding prospect of a grant decision allowed applicants to start working and incurring expenses at their own risk, for which they could get reimbursed in case and under the conditions of a grant decision after issuance. Thus, the grant decisions enable the full start of the selected projects.

Furthermore, in line with the description of the measure, **on the research side, a first flagship initiative will address the challenges of serial production of water electrolyzers.**

The spreadsheet overview of projects (Evidence No. 2) indicates that 189 projects contribute to the flagship initiative called "H2Giga", by which the challenges of serial production of water electrolyzers will be addressed. Out of the 60 sampled projects, 29 are H2Giga projects.

Commission services assessed whether for each of the sampled projects, a link to contributing to this flagship initiative could be established. Thereby, the spreadsheet of projects (Evidence No. 2) was checked against the application documents (Evidence No. 4, 5, and 6). All 29 projects address the challenge of serial production of water electrolysis through researching solutions to such challenges.

For example, the project with the identifier 03HY126G is researching a suitable sealant for large-scale alkaline electrolyzers (a type of water electrolyser), with the aim of finding a durable material for serial production (Evidence No. 4 and 5). The project is embedded in a project consortium researching a new generation of large-scale, high-efficiency alkaline electrolyzers (Evidence No. 6).

Furthermore, in line with the description of the measure, **a second flagship initiative will focus on the integrated direct offshore production of hydrogen and its derivatives at sea using offshore wind energy.**

The spreadsheet overview of projects (Evidence No. 2) indicates that 45 projects contribute to the flagship initiative called "H2Mare", by which the integrated direct offshore production of hydrogen and its derivatives at sea using offshore wind energy will be addressed. Out of the 60 sampled projects, 10 are H2Mare projects.

Commission services assessed whether for each of the sampled projects, a link to contributing to this flagship initiative could be established. Thereby, the spreadsheet of projects (Evidence No. 2) was checked against the application documents (Evidence No. 4, 5, and 6).

Projects contribute to the second flagship initiative in two main ways: through theoretical and/or applied research, and through stakeholder engagement and knowledge transfer.

Seven of the ten sampled projects contribute through theoretical and/or applied research on the integrated direct offshore production of hydrogen and its derivative at sea using offshore wind energy. For example, the project with the identifier 03HY302G researches ways to extract hydrogen and CO₂ from seawater, including also the subsequent step of liquefying hydrogen (hence also focusing on derivatives). The research project has both theoretical and experimental components and assumes an offshore setting (Evidence No. 4 and 5). The project is embedded in a project consortium on stand-alone solutions, that is, integrated power-to-X systems connected to offshore wind turbines without a grid connection (Evidence No. 6).

The remaining 3 sampled projects, which are part of the same project consortium, contribute to the second flagship initiative via stakeholder engagement and knowledge transfer, with the aim to connect relevant actors and enable synergies between different project consortiums (Evidence No. 6). For example, the project with the identifier 03HY303E focuses on bilateral knowledge transfer between relevant stakeholders and the public on the one hand and H2Mare projects and project consortiums on the other hand, with the aim to ensure a transition from the experimental/theoretical setting into practical rollout (Evidence No. 4 and 5).

Furthermore, in line with the description of the measure, **a third flagship initiative shall explore and assess the potential of hydrogen transport technologies.**

The spreadsheet overview of projects (Evidence No. 2) indicates that 119 projects contribute to the flagship initiative called “TransHyDE”, by which the potential of hydrogen transport technologies will be explored and assessed. Out of the 60 sampled projects, 21 are TransHyDE projects. Commission services assessed whether for each of the sampled projects, a link to addressing the third flagship initiative could be established. Thereby, the spreadsheet of projects (Evidence No. 2) was checked against the application documents (Evidence No. 4, 5, and 6).

All 21 projects explore and assess the potential of hydrogen transport technologies through theoretical and/or applied research on specific problems. For example, the project with the identifier 03HY209M assesses future demand for green ammonia, existing storage and handling structures as well as modes of transport, with the aim to explore logistics concepts for this hydrogen derivative. It also considers safety and acceptance of green ammonia (Evidence No. 4 and 5). The project is embedded in a project consortium on testing the entire green ammonia transport chain in a real-world laboratory, located in Poppendorf, Rostock (Evidence No. 6).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 21A Signing of grant decisions

Related Measure: 1.1.6 Federal support for efficient heat networks

Quantitative Indicator: Grant decisions

Baseline: 0

Target: 200

Time: Q4 2023

1. Context:

The objective of this measure is to provide financial support to investment projects to decarbonise existing district heating systems as well as investment projects for the construction of new district heating networks, expanding the share of heat from renewable sources and waste heat. New district heating networks will be supported by at least 75% of renewable energy and waste heat, and no fossil fuels will be financed. Support under the scheme will be granted only to heat generation from renewable energy sources, including sustainable biomass, and waste heat.

Target 21A requires the signature of 200 grant decisions for district heating projects in line with the measure description by the implementing authority, the Federal Office for Economic Affairs and Export Control (*Bundesamt für Wirtschaft und Ausfuhrkontrolle, hereinafter referred to as "BAFA"*).

Target 21A is the first step of the implementation of the investment. It will be followed by target 21B and target 21C, related to the completion of at least 50 feasibility studies and/or transformation plans and the disbursement of at least EUR 541 500 000 for supported projects, in line with the measure description.

The investment has a final expected date for implementation in June 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID Annex) was satisfactorily fulfilled.
2	Copy of the funding guideline Federal support for efficient heat networks (<i>Bundesförderung für effiziente Wärmenetze</i>), published on 18 August 2022 in the Federal Gazette (<i>Bundesanzeiger</i>) and entered into force on 15 September 2022.	Legal basis of the investment scheme, laying out the conditions of the scheme, including the eligibility criteria.
3	Spreadsheet with	Excel spreadsheet containing a list of 200 heat

	information on 200 grant decisions	networks and individual measures supported by measure 1.1.6.
4	§ 37 of Administrative Procedures Act (<i>Verwaltungsverfahrensgesetz - VwVfG</i>)	This is an excerpt from the German Administrative Procedures Act. It outlines that written administrative acts that are issued with the help of automatic devices, such as e-mail, can be sent without a signature, but contain the same legal value.
5	60 grant decisions (sampled)	A random sample of 60 grant decisions was provided out of 200 grant decisions from the spreadsheet (Evidence No. 3). Each contains a reference to the funding guideline, a signature by Federal Office for Economic Affairs and Export Control (<i>Bundesamt für Wirtschaft und Ausfuhrkontrolle - BAFA</i>), the implementing authority, a date, and an indication of the type of project funded (renovation of pre-existing or new heat networks).

3. Analysis:

The implementing authority, BAFA, has signed 200 grant decisions for projects in line with the measure description.

The authority responsible for implementing the measure on Federal support for heat networks is the BAFA, as set by the legally binding funding guideline (Evidence No. 2, p. 13, section 8.1).

The German authorities provided a spreadsheet with information on 200 grant decisions (Evidence No. 3), from which a sample of 60 grant decisions was drawn (Evidence No. 5), identified by the official reference number (Evidence No. 3 and Evidence No. 5, p. 1 of the grant decision, top-right corner section “process” (“*Vorgang*”). The evidence provided for a sample of 60 units confirmed that the requirements of the target have been met. For these 60 grant decisions, Commission services verified that they have been signed by BAFA (Evidence No. 5, end of the grant decision). Commission services also verified the following information contained in the spreadsheet (Evidence No. 3) via the sampled grant decisions (Evidence No. 5):

- i) the official reference numbers of the grant decisions that have been signed (column A). For each of the sampled grant decisions, it was verified that the correct reference number (Evidence No. 5, p. 3, top-right corner section “process” (“*Vorgang*”)) was introduced into the table.

The Council Implementing Decision required the signature of 200 grant decisions. The German authorities note that whereas grant decisions issued from July 2023 on include a signature and name of the signing person, grant decisions issued prior to July 2023 do not contain a signature, but rather the note that the letter was created with the help of automatic data processing and does not require a signature (Evidence No. 1 and Evidence No. 5, p. 8). Whilst this constitutes a minimal formal deviation from the requirement of the Council Implementing Decision, this is in conformity with German internal procedures. Indeed, according to Article 37(5) German Administrative

Procedures Act (*Verwaltungsverfahrensgesetz*), written administrative acts that are issued with the help of automatic devices, such as e-mail, can be sent without a signature, but contain the same legal value (Evidence No. 4). The German authorities explained that the reason for changing the signature variant is solely based on the implementing authority's claim for a more personal design but has no legal consequences (Evidence No. 1). As of this, this minimal deviation does not affect the progress towards achieving the investment that the target represents. On this basis, it is considered that this constitutive element of the target is satisfactorily fulfilled.

- ii) the amount (EUR) of funds committed (column B) and date of issuance (column C). For each of the sampled grant decisions, it was verified that the correct amount and date of issuance (Evidence No. 5, p. 3) were introduced into the table.
- iii) an indication of the kind of heat network supported (new or pre-existent) (column E). The decarbonisation of pre-existing heat networks includes what is denoted in the grant decisions as “individual measures”, as the funding guideline clarifies: decarbonisation can either be achieved via systemic transformation of existing heating networks contributing to the decarbonisation and efficiency upgrade of the latter (Evidence No. 2, p. 4, section 4.2) or via individual measures in existing heating networks (heat pumps, biomass boilers, heat storage, pipelines for connecting renewable energy generators and integrating waste heat as well as for expanding heating networks and heat transfer stations) (Evidence No. 2, pp. 1, 6-7, sections 1, 4.3, and 7.1.3). For each of the sampled grant decisions, it was verified that the kind of heat network supported (Evidence No. 5, p. 3) was introduced into the table.

The projects are in line with the measure description via the connecting evidence of the funding guideline. As the German authorities explain, all projects have been approved under the binding funding guideline Federal support for efficient heat networks (*Bundesförderung für effiziente Wärmenetze*), published on 18 August 2022 in the Federal Gazette (*Bundesanzeiger*) and entered into force on 15 September 2022 (Evidence No. 2). The approval under this funding guideline is noted on each grant decision (Evidence No. 5, p. 1 of the grant decision). As shown in the further analysis below, each of the constitutive parts of the measure description can be verified through the funding guideline.

Furthermore, in line with the description of the measure, **the measure consists of financial support to investment projects to decarbonise existing district heating systems as well as investment projects for the construction of new district heating networks.**

Financial support is granted to each recipient, in form of a non-repayable financial support for investments (Evidence No. 2, p. 6, section 7.1).

Investment projects to decarbonise **existing district heating systems** are supported up to 40% of the eligible investment costs (Evidence No. 2, p. 7, section 7.1.2b), either via systemic transformation of existing heating networks contributing to the decarbonisation and efficiency upgrade of the latter (Evidence No. 2, p. 4, section 4.2) or via individual measures in existing heating networks (heat pumps, biomass boilers, heat storage, pipelines for connecting renewable energy generators and integrating waste heat as well as for expanding heating networks and heat transfer stations) (Evidence No. 2, pp. 1, 6-7, sections 1, 4.3, and 7.1.3).

The construction of **new** district heating networks is also supported up to 40% of the eligible investment costs (Evidence No. 2, p. 6, section 7.1.2 a).

The grant decisions detail whether support has been granted for decarbonising an existing heating system or a new heating system, in line with the funding guideline (Evidence No. 5, p. 1 of the grant decision).

The German authorities indicated that 198 projects have received support for existing and 111 for new heating systems (Evidence No. 3); this information has been found to be accurate by Commission services for the 60 sampled grant decisions (Evidence No. 5).

Furthermore, in line with the description of the measure, **[the measure consists of] expanding the share of heat from renewable sources and waste heat.**

The aid scheme is designed to encourage the decarbonisation of district heating by integrating renewable energy sources and waste heat (Evidence No. 2, p. 2, section 3).

The funding guideline determines that all projects must be based on a feasibility study or a transformation plan presenting the temporal, technical and economic conversion of existing heat network systems or requirements of new heat network systems with the aim of achieving full greenhouse gas neutrality for the networks by 2045 at the latest (Evidence No. 2, p. 3, section 4.1.1). The funding guideline therefore asserts that applicants must state indicative shares of renewable energies in heat generation for the milestones 2030, 2035, 2044 and 2045 (path of transformation). This path of transformation serves as the basis for the decision about the projects' eligibility. The presentation of the target paths for complete decarbonisation is binding for the applicants (Evidence No. 2, p. 14, sections 8.3, and 8.4 on interim proofs, control and monitoring). Thus, section 4.1 and 4.2.2 on page 6 of Evidence No. 2 indicate the share of renewable energies to be expected after the completion of the project.

Furthermore, in line with the description of the measure, **new district heating networks shall be supported by at least 75% of renewable energy and waste heat.**

As set by the legally binding funding guideline, funding is provided for the construction of new heating networks, whose share of supplied renewable energies and waste heat is at least 75% (Evidence No. 2, p. 5, section 4.2.1).

Furthermore, in line with the description of the measure, **no fossil fuels shall be financed.**

According to the funding guideline, systems that provide heat from fossil fuels are not eligible for funding (Evidence No. 2, p. 5, section 4.2).

Quoting from the funding guideline for the strand financing the construction of new heating systems, "The costs of systems for generating heat from fossil fuels are not eligible for funding" ("*Nicht förderfähig sind die Kosten für Anlagen zur Wärmebereitstellung aus fossilen Energieträgern*", Evidence No. 2, p. 5, section 4.2.1). As for decarbonising existing heat networks, funding is restricted to transformative measures towards fully renewable-based heat systems by 2045 (Evidence No. 2, p. 5, section 4.2.2), by definition, no fossil fuels are financed for projects under this strand.

Furthermore, in line with the description of the measure, **support under the scheme shall be granted only to heat generation from renewable energy sources, including sustainable biomass, and waste heat.**

In line with the funding guideline, the only eligible heat sources are systems for the provision of heat from renewable energies, including solar thermal systems and photovoltaic-thermal collectors, heat pumps for the use of environmental heat, deep geothermal energy, biomass combustion systems and systems for the use of gaseous biomass. The integration of industrial, commercial or other waste heat is also eligible for funding (Evidence No. 2, p. 4, section 4.2).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 24 Expansion of recharging points in residential buildings

Related Measure: 1.2.1 Support for the construction of charging infrastructure

Quantitative Indicator: Number of recharging points in residential buildings

Baseline: 0

Target: 689 000

Time: Q4 2023

1. Context:

The measure consists of aid for building recharging points, including the necessary grid connection of the recharging site and the installation of the recharging point itself. Support takes the form of project funding for a grant scheme to be operated by the Federal Ministry for Digital and Transport (*Bundesministerium für Digitales und Verkehr - BMDV*). It should apply to both publicly accessible and non-publicly accessible charging infrastructure.

Target 24 concerns the expansion of recharging points in residential buildings.

Target 24 is the last target of the investment, preceded by target 23 with foreseen completion in Q4 2025, related to the expansion of public recharging network for electric vehicles, and milestone 22 related to the entry into force of funding guidelines. The measure description was entirely assessed as part of the first payment request.

The investment has a final expected date of completion on 31 December 2025.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Excel spreadsheet listing 689 000 charging points	This document is an Excel spreadsheet containing a list of more than 689 000 privately owned installed charging points supported under measure 1.2.1.
3	Excel spreadsheet of the list of eligible charging stations	This document is an Excel list containing the eligible charging stations in the programme. Only the models on the list meet the technical specifications of the grant scheme. The NOW GmbH compiled the list on behalf of the Federal Ministry for Digital and Transport on the basis of the technical specifications of the grant scheme. The KfW has made the selected models available on the website for the grant recipient and implemented them in the digital verification

		process in the KfW grant portal.
4	Copy of justification from NOW GmbH	This document is a declaration from NOW GmbH confirming that all eligible charging stations meet the technical specifications of the grant scheme.
5	Copy of the justification of the technical specifications	This document shows the verification process in the KfW grant portal with grant recipients only being able to select charging stations that are on the list of eligible models.
6	Copy of signed declaration by KfW	This document is a declaration by KfW that only residential buildings were supported. It was checked and ensured by KfW that the subsidised investment object is a residential building.
7	Sample of 60 recharging points selected by the Commission	For each of the sampled recharging points, the following documentary evidence was provided: an invoice, a grant decision, a payment confirmation, and a bank statement.

3. Analysis:

The justification and substantiating evidence provided by the Germany authorities cover all constitutive elements of the target.

At least 689 000 recharging points have been funded through the disbursement of financial support.

Germany provided a list as evidence displaying that it has funded 689 213 privately owned installed charging points. The documents titled “689k Charging Points” (Evidence No. 2) and “list of eligible charging stations” (Evidence No. 3) effectively show Excel spreadsheets containing a list of more than 689 000 residential recharging points and the eligible charging stations, respectively. The grant support is based on the amended funding guideline that was published on 6 October 2020 in the Federal Gazette (*Bundesanzeiger*) and has entered into force on 1 November 2020.

Following the selection of a random sample of 60 units, the German authorities submitted an invoice, a grant decision, a payment confirmation, and a bank statement. Each of the 60 sampled recharging points was thoroughly reviewed by linking each document to the target and measure descriptions, as well as cross-referencing documents with one another. The evidence provided for a sample of 60 units confirmed that the requirements of the target have been met. The detailed checks performed were as follows:

- i) For the invoice specifying the type of charging point and the recipient (addressee), verification that the invoice effectively contains the applicant’s name.
- ii) For the grant decision, verification that the document contains the name of the applicant, the individual identifier, and the reference “Charging stations for electric cars - residential buildings (440)” to the call for funding.
- iii) For the payment confirmation demonstrating the disbursement, verification that the bank statement contains the individual identifier found on the grant decision.

- iv) For the bank statement demonstrating the disbursement, verification that the bank statement contains the individual identifier found on the grant decision and the payment confirmation.

The evidence provided for a sample of 60 units confirmed that the recharging points have been funded through the disbursement of financial support. Upon reviewing the 240 documents above, it can be concluded that the 60 evaluated recharging points comply with the specified target description. For all 60 recharging points in the sample, the grant decision displays the grant support awarded to the applicant.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 26 Commitment of funds

Related Measure: 1.2.2 Funding for the development of electro-mobility

Quantitative Indicator: EUR million

Baseline: 0

Target: 71.25

Time: Q4 2024

1. Context:

The general challenge addressed by this measure is the need to develop clean mobility solutions to decarbonise the transport sector. It targets the further market development of electro-mobility and, in particular, the development of municipal and commercial vehicle fleets.

Target 26 concerns the commitment of at least EUR 71 250 000 under the measure. It follows the completion of target 25, related to the entry into force of the funding guidelines. It will be followed by target 27 and target 28, related to expansion of municipal and commercial e-mobility fleets and the completion of electro-mobility preliminary designs, respectively. The measure description was entirely assessed as part of the first payment request.

The investment has a final expected date for implementation on 30 June 2024.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Copy of overview of funding calls	This document contains an overview of all (seven) funding calls issued based on the funding guideline to support e-mobility, covering a period from January 2021 to March 2023. Copies of some of these calls are provided as evidence.
3	Copy of list of funded projects	This document contains a list of all decisions committing funds with an indication of the project as well as the amount committed under measure 1.2.2.
4	Copy of call for proposals published in April 2022	This document is a call for proposals for electro-mobility concepts and studies, published in April 2022 on the websites of both the Federal Ministry for Digital and Transport and the project management organisation Projektträger Jülich (PtJ), verified at https://www.ptj.de/lw_resource/datapool/system/files/cbox/5661/live/lw_bekdoc/foerderungauf_ruf_bm_vi_elektromobilitaetskonzepte_202204.pdf , on 24

		October 2024.
5	Copy of call for proposals published in June 2022	This document is a call for proposals for vehicles and infrastructure investments which was published in June 2022 on the websites of both the Federal Ministry for Digital and Transport and the project management organisation Projektträger Jülich (PtJ), verified at https://www.ptj.de/lw_resource/datapool/system_files/cbox/9656/live/lw_file/foerderaufuf_bmdv_fahrzeuge_lis_2022_06.pdf on 24 October 2024.
6	Copy of call for proposals published in March 2023	This document shows a call for proposals for vehicles and infrastructure investments which was published in March 2023 on the websites of both the Federal Ministry for Digital and Transport (<i>Bundesministerium für Digitales und Verkehr - BMDV</i>) and the project management organisation Projektträger Jülich (PtJ), verified at https://www.ptj.de/lw_resource/datapool/system_files/cbox/13842/live/lw_file/foerderaufuf_bmdv_fahrzeuge_lis_2023-03.pdf on 24 October 2024.
7	A sample of 60 decisions committing funds selected by the Commission	For each sampled decision committing funds, the following documentary evidence was provided: an application form and a copy of the grant decision for the project in question.

3. Analysis:

The justification and substantiating evidence provided by the Germany authorities cover all constitutive elements of the target.

Of the EUR 75 000 000 allocated to the measure, at least EUR 71 250 000 have been committed.

The overview of funding calls (Evidence No. 2) lists the seven calls for funding issued to support e-mobility between January 2021 to March 2023 under the measure, based on the funding guidelines on e-mobility, published in the Federal Gazette (*Bundesanzeiger*) on 24 December 2020 and assessed under the first milestone of this measure, milestone 25, in the first payment request.

The “list of funded projects” (Evidence No. 3) contains a list of all decisions committing funds, along with the project and corresponding committed amount under those calls for funding. In March 2024, a total of EUR 82 058 500 was secured through funding commitments following the conclusion of seven calls for funding.

Following the selection of a random sample of 60 units, the German authorities submitted an application form and a copy of the grant decision for the project in question. Each of the 60 sampled committed funds was thoroughly reviewed by linking each document to the target and measure descriptions, as well as cross-referencing documents with one another. The evidence provided for a sample of 60 units confirmed that the requirements of the target have been met. The detailed checks performed were as follows:

For the grant decision:

- i) Verification that the committed grant amount, as of the date of approval, aligns with the details provided in the Excel sheet (Evidence No. 3).

- ii) Verification that the unique identifier associated with the grant can be found within the grant decision document.

For the application form:

- iii) Verification that the application form corresponds accurately to the grant decision, containing the same applicant's name and including a legal reference to the applicable funding guidelines.

Additionally, a distinction has been made between recipients who are businesses and those who are municipalities. Accordingly, for businesses, the grant decision document alone is sufficient, with the committed amount shown on page 2 and the funding guidelines referenced on page 3, whereas for municipalities, both the grant decision (to confirm the commitment) and the application form (which references the funding guidelines and identifies the beneficiary on page 1) are required.

The evidence provided for a sample of 60 units confirmed that the requirements of the target have been met. For all 60 decisions committing funds in the sample, the grant decision displays the grant support committed through an award decision to the applicant. The grant support is based on the funding guidelines that entered into force on 14 December 2020.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 27 Expansion of municipal and commercial e-mobility fleets

Related Measure: 1.2.2 Funding for the development of electro-mobility

Quantitative Indicator: Number of e-vehicles

Baseline: 0

Target: 4000

Time: Q2 2024

1. Context:

The general challenge addressed by this measure is, similar to measure 1.2.1, the need to develop clean mobility solutions to decarbonise the transport sector. The measure consists of financial support given for the purchase of electric vehicles in municipal and commercial fleets and necessary charging infrastructure for the operation of these vehicles. In addition, application-oriented research and development projects, the development of electric mobility projects (municipal and commercial) and electro-mobility concepts will be supported.

Target 27 concerns the expansion of municipal and commercial e-mobility fleets and consists in the reception of funding commitments to municipalities, companies and other eligible organisations for at least 4 000 e-vehicles.

Target 27 is the third target of the investment, and it follows the completion of milestone 25, related to the entry into force of funding guidelines and for which the measure description has already been fully assessed, and target 26, related to the commitment of funds. It will be followed by target 28, related to the completion of 80 electro-mobility preliminary designs for municipalities, companies or other eligible organisations.

The investment has a final expected date for implementation on 30 June 2024.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Overview of calls for the funding of vehicles	The document presents a table of three calls for funding for vehicles and charging infrastructure that were held in February 2021, June 2022 and March 2023 respectively. The table includes the timeframe, call ID, call name, reference to a source and reference to a list of fundable cars for each call. This document was submitted for convenience only and provides reference to

		evidence provided earlier for milestone 25 and for target 26.
3	Excel spreadsheet – List of funded projects	The document shows an Excel spreadsheet containing a list of 223 decisions committing funds supported by measure 1.2.2 between May 2021 and November 2023.
4	Excel spreadsheet of fundable cars under the first call (03EMI4)	The table lists 184 pure battery electric passenger car and lightweight vehicle types fundable under call 03EMI4. It is also available as an online version with drop down menu (not filled out).
5	Excel spreadsheet of fundable cars under the second call (03EMI5)	The table lists 174 pure battery electric passenger car and lightweight vehicle types fundable under call 03EMI5. It is also available as an online version with drop down menu (not filled out).
6	Excel spreadsheet of fundable cars under the third call (03EMI6)	The table lists 154 pure battery electric passenger car and lightweight vehicle types fundable under call 03EMI6. It is also available as an online version with drop down menu (not filled out).
7	A sample of 60 decisions committing funds selected by the Commission	For each sampled decision committing funds, the following documentary evidence was provided: a grant decision, an application form and a product information sheet.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

Municipalities, companies and other eligible organisations have received funding commitments for at least 4 000 e-vehicles with support of the grant scheme. The target is further specified in the Operational Arrangements, which states that, **for the purpose of these Operational Arrangements, the term ‘municipality, company, other eligible organisation’ covers legal entities under public and private law as well as individuals.**

The document titled “overview of funding calls” is an Excel spreadsheet listing three calls for funding for vehicles and charging infrastructure that were held in February 2021, June 2022, and March 2023 respectively (Evidence No. 2).

Evidence No. 3 demonstrates that funding has been committed for 4 882 vehicles for the expansion of municipal and commercial e-mobility fleets.

The documents titled “list of fundable cars 03EMI4”, “list of fundable cars 03EMI5”, and “list of fundable cars 03EMI6” are Excel spreadsheets, each containing a list of pure battery electric passenger car and lightweight vehicle types fundable under the respective call (Evidence No. 4-6).

The German authorities explained that the exclusive focus on purely electric vehicles is based on a comprehensive review of the funding guidelines evaluated as part of milestone 25, under which hybrid vehicles were excluded.

The document titled “list of funded projects” is an Excel spreadsheet containing a list of 223 decisions committing funds (Evidence No. 3). In accordance with Annex I of the Operational Arrangements, all projects are listed with the following parameters:

- Official reference (unique identifier, aid measure case number),
- Name and nature of the recipient (170 municipalities, 36 small and medium-sized enterprises, 14 large enterprises, three associations), and
- Number and type of vehicles granted (4 882 in total including 4 695 passenger cars, 102 lightweight vehicles, 85 special purpose vehicles).

Following the selection of a random sample of 60 units, the German authorities submitted a grant decision, an application form, and a product information sheet. Each of the 60 sampled decisions committing funds was thoroughly reviewed by linking each document to the target and measure descriptions, as well as cross-referencing documents with one another. The evidence provided for a sample of 60 units confirmed that the requirements of the target have been met. The detailed checks performed were as follows:

For the grant decision:

- i) To show the funding commitments, verification that the grant decision includes the date, which is not prior to February 2020 in case of any of the grant decisions, the applicant's name, the amount of funding awarded, which aligns with the corresponding figures in the Excel sheet (Evidence No. 3), and the details of the funded vehicle, typically provided on the final page.

For the application form:

- i) To show that the beneficiaries are municipalities, companies or other eligible organisations, verification that the recipient—whether a municipality, company, or other eligible organisation—is correctly identified, and that the name of the recipient aligns with the name stated on the grant decision.
- ii) To show the support to the grant scheme, verification that the application form includes a reference to the funding guidelines.

For the product information sheet:

- i) To show that the vehicle complies with the funding guidelines, verification that the lists of vehicles referenced in Evidence No. 4-6 represent the selection of eligible vehicles that recipients could choose from. For each vehicle listed, the corresponding product information sheet was submitted as part of the documentation. This product information serves as the primary evidence of the vehicle's electric status, by explicitly identifying whether the vehicle is classified as electric. In instances where the vehicle was a special purpose vehicle, an additional product information sheet was submitted to confirm its electric status.

For all 60 funds committing decisions sampled, the grant decision displays the grant support awarded to the applicant. The grant support is based on the funding guidelines that entered into force on 14 December 2020 or one of the revised and updated versions, thereafter, assessed as evidence under the preceding milestone 25 in the first payment request and stated on the grant decisions.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 28 Completion of electro-mobility preliminary designs

Related Measure: 1.2.2 Funding for the development of electro-mobility

Quantitative Indicator: Number of completed electro-mobility preliminary designs

Baseline: 0

Target: 80

Time: Q2 2024

1. Context:

The measure consists of financial support given for the purchase of electric vehicles in municipal and commercial fleets and necessary charging infrastructure for the operation of these vehicles. In addition, application-oriented research and development projects, the development of electric mobility projects (municipal and commercial) and electro-mobility concepts are supported.

Target 28 concerns the completion of at least 80 electro-mobility preliminary designs for municipalities, companies or other eligible organisations.

Target 28 is the fourth and final target of the investment, and it follows the completion of milestone 25, target 26, and target 27, related to the entry into force of the funding guidelines, the commitment of funds, and the expansion of municipal and commercial e-mobility fleets, respectively. The measure description has been fully assessed as part of the first payment request.

The investment has a final expected date for implementation on 30 June 2024.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Copy of overview of funding calls	This document contains an overview of the two relevant funding calls in connection with target 28 based on the funding guideline to support the preparation of electro-mobility preliminary designs (so called electro-mobility concepts): i) Call ID: 03EMK4(available at: https://www.wilhelmshaven.de/PDF/Infomaterial/36/3604/Aufruf_Elektromobilitaetskonzepte_03.2021.pdf?m=1616651305& , published in March 2021; ii) Call ID: 03EMK5 (https://www.ptj.de/lw_resource/datapool/systemfiles/cbox/5661/live/lw_bekdoc/foer

		deraufwurf_bmvi_elektromobilitaetskonzepte_202204.pdf), published in April 2022.
3	Copy of list of completed electro-mobility preliminary designs	<p>This document shows an Excel spreadsheet as an overview of all 94 projects (electro-mobility concepts) that have submitted their electro-mobility preliminary design until 30 June 2024.</p> <p>Column A contains a unique identifier for each decision committing funds. This unique identifier contains the call-id.</p> <p>Column B contains the case number of the related aid measure.</p> <p>Column C contains the name of the beneficiary.</p> <p>Column D contains the nature of the beneficiary.</p> <p>Column E contains the date of the submission of the final electro-mobility preliminary design.</p> <p>Column F contains the granted amount per funding decision.</p> <p>Column G contains the date of the funding decision.</p> <p>Column H indicates the funding period.</p>
4	Copies of electro-mobility designs	This document shows a zip file containing 94 electro-mobility designs. For each design, Germany has provided the design itself along with a description of the project (application form).

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

At least 80 electro-mobility preliminary designs have been completed for municipalities, companies or other eligible organisations. The target is further specified in the Operational Arrangements, which states that **for the purpose of these Operational Arrangements, the term ‘municipality, company, other eligible organisation’ covers legal entities under public and private law as well as individuals.**

The electro-mobility funding guideline (“*Förderrichtlinie Elektromobilität*”) by the Federal Ministry for Digital and Transport (*Bundesministerium für Digitales und Verkehr - BMDV*), published in the Federal Gazette (*Bundesanzeiger*) on 24 December 2020 (BAnz AT 24.12.2020 B3), provides the basis for the funding of a total amount of 156 “electro-mobility preliminary designs” within the German Recovery and Resilience Plan. The funding guidelines were assessed under the first milestone of this measure (M25) in the first payment request. To prove the fulfilment of this target, Germany has provided a total number of 94 completed electro-mobility preliminary designs.

The document titled “list of completed electro-mobility preliminary designs” (Evidence No. 3) provides an overview of all designs that have been submitted in the final version and covers exclusively projects for the creation of an electro-mobility preliminary design. The targeted groups for the electro-mobility preliminary designs are stakeholders from the public and private sector. Accordingly, 53 completed designs relate to the requirements of municipalities, 34 to those of enterprises / companies (small, medium and large) and seven to those of other eligible organisations such as universities and associations (Evidence No. 3).

For each electro-mobility design, the German authorities provided a description of the electro-mobility preliminary design and its recipient (municipalities, companies or other eligible organisations) in the shape of an application form and a copy of the electro-mobility preliminary design in question. A total of 90 pairs of documents (180 documents) were selected for evaluation, following the exclusion of four electro-mobility preliminary designs from the original pool of 94. The Commission considered the excluded four electro-mobility preliminary designs as incomplete, due to certain inconsistencies, which included insufficient content and a lack of necessary clarifications regarding the ‘electro-mobility’ concept of the projects in question. These shortcomings rendered the designs non-compliant with the required standards for further evaluation.

Each of the electro-mobility preliminary design was reviewed by linking each document to the target and measure descriptions, as well as cross-referencing documents with one another. The detailed checks performed were as follows:

For the preliminary electro-mobility design:

- i) Verification that the design is “preliminary”, and therefore related to “future projects”, was conducted by examining the stages at which the designs were and the implementation timeframes. The analysed preliminary electro-mobility designs were found to be in an early developmental phase, as evidenced by the presence of market analyses and recommendations framed in terms such as “should”, “will”, and “can”, rather than in the past tense. The verification further involved analysing the specified timeframes for the designs, confirming that they were intended for a future date.
- ii) Verification of the design's completion was conducted by ensuring that the submitted designs were in their final form, either as a report or presentation, and included clear evidence of a comprehensive analysis having been completed.
- iii) Verification that the design supports electro-mobility in line with Section 2 of the funding guidelines of 14 December 2020 which lists the funded areas. This scope includes the development of e-mobility concepts/projects (municipal and commercial) (2.1). The review concluded that the 90 assessed preliminary electro-mobility designs addressed at least one of the four priorities listed respectively in the two relevant funding calls. These two funding calls in connection with target 28, based on the funding guideline to support the preparation of electro-mobility preliminary designs, specify the following:

For the funding call published in March 2021 (03EMK4), at least one of the following content priorities must be addressed when creating electromobility concepts:

- Priority 1: Electrification of municipal vehicle fleets / vehicle fleets with corresponding charging infrastructure concepts: Creation of concepts for the electrification of municipal fleets and the municipal vehicle fleet; creation of a charging infrastructure concept for the development of a charging infrastructure necessary for fleet operation.

- Priority 2: Electrification of commercial vehicle fleets / fleets with corresponding charging infrastructure concepts: Creation of concepts for the electrification of the commercial fleet / commercial fleet; creation of a charging infrastructure concept for the development of a charging infrastructure necessary for fleet operation.
- Priority 3: Creation of municipal and regional public charging infrastructure concepts: Structured development and expansion of the local publicly accessible charging infrastructure, taking into account regional / municipal requirements, such as expected charging potentials and availability of space, formation of a network of local actors (e.g. municipal and commercial users, fleet users, mobility providers, etc.).
- Priority 4: Step-by-step integration of municipal or commercial e-vehicles into intermodal transport and logistics concepts and mobility services (combination of different means of transport, operational mobility management, sustainable city logistics concepts). The form for the project asks for the exact assignment of focal points to the concepts.

For the funding call published in April 2022 (03EMK5), at least one of the following content priorities must be addressed when creating electromobility concept:

- Priority 1: Electrification of municipal vehicle fleets/vehicle fleets with corresponding charging infrastructure concepts, taking into account digital instruments: Creation of concepts for the electrification of municipal fleets and the municipal vehicle fleet; creation of charging infrastructure concepts for the development of a charging infrastructure necessary for fleet operation, including adaptations to depots and depots as well as concepts for the multiple use of charging infrastructure or charging station sharing concepts.
- Priority 2: Upgrading of intermodal, electrified transport and logistics concepts taking into account digital instruments: Conception of mobility hubs as central infrastructure hubs; Integration of municipal electrified vehicle fleets and/or electrified public transport into MaaS systems; concepts for sustainable intermodal electrified (freight) transport development on the ground (coupling of the energy and transport sectors, city logistics, last mile, traffic management, etc.).
- Priority 3: Electrification of commercial vehicle fleets / vehicle fleets with corresponding charging infrastructure concepts taking into account digital instruments: Creation of concepts for the electrification of the commercial fleet / commercial vehicle fleet; creation of charging infrastructure concepts for the development of a charging infrastructure necessary for fleet operation, including adaptations to depots and depots as well as concepts for the multiple use of charging infrastructure or charging station sharing concepts.
- Priority 4: Creation of logistics, energy management and/or mobility concepts taking into account digital instruments: Integration of e-vehicles into commercial traffic and logistics concepts and mobility services; development of sustainable corporate mobility management with e-vehicles; Concept for the integration of electromobility into a local energy management system.

For the application form/description of the electro-mobility preliminary design:

- i) Verification that the recipient is either a municipality, company or another eligible organisation according to the funding guidelines dated 14 December 2020.

- ii) Verification that the application form contained a reference to the funding guidelines dated 14 December 2020.

The evidence provided for 90 preliminary electro-mobility designs confirmed that the requirements of the target have been met.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 30 Support for the purchase of another 320 000 electric vehicles

Related Measure: 1.2.3 Support for the replacement of the private vehicle fleet

Quantitative Indicator: Number of e-vehicles purchased

Baseline: 240000

Target: 560000

Time: Q4 2022

1. Context:

The general challenge addressed by this measure is the same as for measure 1.2.2. The promotion of electro-mobility is an essential part of achieving the Paris climate goals in the transport sector. The measure focuses on the challenge represented by the very low share of pure e-cars in the total vehicle fleet (1,2% in 2020), especially compared to the seven million to ten million electric vehicles envisaged in the 2030 Climate Change Programme.

Target 30 concerns the support for the purchase of another 320 000 electric vehicles. Target 30 follows the completion of target 29, related to the support for the purchase of 240 000 electric vehicles. It will be followed by target 30A related to the support for the purchase of additional 399 450 electric vehicles. The measure description has been fully assessed as part of the first payment request.

The investment has a final expected date for implementation on 31 March 2025.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Excel Spreadsheet of vehicles with dates	The document shows an Excel spreadsheet containing a list of 384 000 vehicles purchased with the support of measure 1.2.3.
3	Copy of the publication in the Federal Gazette (<i>Bundesanzeiger</i>) on 8 May 2020 (BAnz AT 07.05.2020 B1) of the funding guideline to promote the sale of electrically powered vehicles (environment	The document shows the funding guideline to promote the sale of electrically powered vehicles (environment bonus). This incentive to promote e-mobility was extended as part of the German Recovery and Resilience Plan by adding an innovation premium. Evidence No. 3 contains the last version of the funding guideline to promote the sale of electrically powered vehicles (environment bonus) before the

	bonus)	innovation premium was added. It was published on 7 May 2020 in the Federal Gazette (<i>Bundesanzeiger</i>) and has entered into force the day after publication on 8 May 2020.
4	Copy of the amendment of the funding guideline with track changes	The document shows the funding guideline to promote the sale of electrically powered vehicles (environment bonus) which was amended in July 2020 mainly to add an innovation premium as provided for under measure 1.2.3 of the German Recovery and Resilience Plan. Amendments made in July to the funding guideline as of May 2020 are shown in track changes in this document for convenience only.
5	Copy of the publication in the Federal Gazette (<i>Bundesanzeiger</i>) on 7 July 2020 (BAAnz AT 07.07.2020 B2) to promote the sale of electrically powered vehicles (environment bonus)	The document shows the funding guideline to promote the sale of electrically powered vehicles (environment bonus) which was amended by way of replacing the former version with an amended version. This funding guideline was published on 7 July 2020 in the Federal Gazette (<i>Bundesanzeiger</i>) and has entered into force the day after publication on 8 July 2020 while the former version of the funding guideline expired.
6	Copy of the amendment of the funding guideline (BAAnz AT 07.07.2020 B2) to promote the sale of electrically powered vehicles, amended in November 2020	The document shows the funding guideline to promote the sale of electrically powered vehicles (environment bonus) which was again amended in November 2020. This did not affect the innovation premium that remained unchanged. Amendments made in November 2020 to the funding guideline are shown in track changes in this document for convenience only.
7	Copy of the publication in the Federal Gazette (<i>Bundesanzeiger</i>) on 5 November 2020 (BAAnz AT 05.11.2020 B1) to promote the sale of electrically powered vehicles (environment bonus) was amended again by way of replacing the former version with an amended version.	The document shows the funding guideline to promote the sale of electrically powered vehicles, which, however, essentially only staggered the subsidy rates in the case of leasing and lifted the ban on cumulation, provided that the respective subsidy provider concludes an administrative agreement with the Federal Ministry for Economic Affairs and Climate Action. This funding guideline was published on 5 November 2020 in the Federal Gazette (<i>Bundesanzeiger</i>) and has entered into force on 16 November 2020 while the former version of the funding guideline expired.
8	Copy of the amendment to the funding guidelines	The document shows the amendment to the funding guideline to promote the sale of

	published in the Federal Gazette (<i>Bundesanzeiger</i>) on 30 December 2021 (BAnz AT 30.12.2021 B1) to promote the sale of electrically powered vehicles (environment bonus)	electrically powered vehicles (environment bonus) which was amended again. Unlike before this amendment only provides for minor changes and the one-year extension of the innovation premium. It contains only the concrete amendments to the funding guideline as of November 2020. It was published on 30 December 2021 in the Federal Gazette (<i>Bundesanzeiger</i>) and has entered into force on 1 January 2022.
9	Copy of the amended publication in the Federal Gazette (<i>Bundesanzeiger</i>), amended in December 2022.	The document shows the amendment to the funding guideline to promote the sale of electrically powered vehicles (environment bonus) which was again amended in December 2022. This did also not affect the structure of the innovation premium. However, the environment bonus and the innovation premium were extended for a maximum of two years. Amendments made in December 2022 to the funding guideline are shown in track changes in this document for convenience only.
10	Copy of the publication in the Federal Gazette (<i>Bundesanzeiger</i>) on 9 December 2022 (BAnz AT 09.12.2022 B1) to promote the sale of electrically powered vehicles (environment bonus)	The document shows the funding guideline to promote the sale of electrically powered vehicles (environment bonus) which was amended again by way of replacing the former version with an amended version. This last amendment is comprehensively updating the guideline to address several issues. It was published on 9 December 2022 in the Federal Gazette (<i>Bundesanzeiger</i>) and has entered into force on 1 January 2023 while the former version of the funding guideline expired.
11	Copy of the Administrative procedure Act from the 25th of July 2023	The document shows an extract of the Administrative Procedure Act comprising section 41, which defines when and how a public administrative act is deemed to be disclosed.
12	Copy of list of shareholders pursuant to § 40 GmbHG of the SecuritiFleet GmbH based in Hamburg (Hamburg District Court, HRB 91341)	The document shows a list of shareholders pursuant to § 40 GmbHG of the SecuritiFleet GmbH based in Hamburg (Hamburg District Court, HRB 91341).
13	Copy of the Commercial Register B of the Local Court of Hamburg	The document shows the legal relationship between SecuritiFleet and EMobG Services Germany GmbH.
14	Copy of Commercial	The document also shows the legal relationship

	Register B of Hamburg Local Court	between SecuritiFleet and EMobG Services Germany GmbH.
15	A sample of 60 vehicles selected by the Commission	For each sampled vehicle, the following documentary evidence was provided: a truthful declaration of data by the applicant, a proof of registration data, a purchase invoice and a grant decision.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

Recipients have received grant support for the purchase of a (cumulative) total of 560 000 electric vehicles on the basis of the amended funding guidelines that entered into force on 8 July 2020.

The grant support is based on the amended funding guidelines that entered into force on 8 July 2020 or on one of the revised and updated versions thereafter. The funding guidelines have been revised and updated multiple times in July 2020, November 2020, December 2021 and December 2022 (Evidence No. 4 ,6, 8 and 9 above). These amendments have no impact on the implementation of target 30, as the core elements for the grant support remained unchanged. However, for transparency reasons the German authorities provided the subsequent amendments to the funding guidelines and the changes done to them. The final version of the funding guidelines was published in the Federal Gazette (*Bundesanzeiger*) on 9 December 2022 (Evidence No. 10 above).

The amended funding guidelines of 8 July 2020 (Evidence No. 5) formed the basis for the grant support. However, as the funding guidelines were regularly revised and updated without having an impact on the implementation of target 30, it is deducted that all later amended funding guidelines are also a valid basis for providing grant support under target 30.

The document titled “Spreadsheet Vehicles with dates” (Evidence No. 2) shows an Excel spreadsheet containing a list of 384 000 vehicles purchased, official references to grant decisions, and the dates of disclosure in accordance with the Administrative Procedure Act (Evidence No. 11) covering the period of October 2020 to March 2024. These 384 000 vehicles are additional to the 240 000 vehicles funded under the previous target 29, assessed under the first payment request, and adding up to a cumulative total of over 560 000 electric vehicles. The German authorities have further specified that a grant decision may be issued for more than one vehicle, meaning that in such cases, the official reference in Column A “*Vorgangsnummer*” is repeated for each supported vehicle whilst column G indicates the corresponding number of vehicles purchased with support under measure 1.2.3.

Following the selection of a random sample of 60 vehicles, the German authorities submitted a truthful declaration of data by the applicant, a proof of registration data, a purchase invoice and a grant decision. Each of the 60 sampled vehicles was thoroughly reviewed by linking each document to the target and measure descriptions, as well as cross-referencing documents with one another. The evidence provided for a sample of 60 units confirmed that the requirements of the target have been met.

For all 60 vehicles in the sample, the grant decision displays the grant support awarded to the applicant reducing the purchase price of the vehicle by the indicated amount. The beneficiaries have received the grant support, as the delivery of the grant decision officially creates the claim for this financial support. According to section 41 of the Administrative Procedure Act, assessed as evidence under the previous target 29 in the first payment request, an official act is deemed officially

announced to the recipient three calendar days after the date indicated on the official decision taken. The detailed checks performed were as follows:

For the grant decision:

- i) Verification that the Vehicle Identification Number (VIN) on the grant decision corresponds with the VIN recorded in the registration data from the Federal Motor Transport Authority (*Kraftfahrt-Bundesamt - KBA*), as well as the VIN listed on the purchase invoice and the Excel list.
- ii) Verification that the name on the grant decision matches the applicant's name as stated in the truthful declaration, the name in the KBA registration data, and the name provided in the purchase invoice.

For the purchase invoice:

- i) Verification that the VIN on the purchase invoice corresponds with the VIN recorded in the KBA data, as well as the VIN listed on the grant decision and the Excel list.
- ii) Verification that the name on the purchase invoice matches the applicant's name as stated in the truthful declaration the name in the KBA registration data, and the name provided on the grant decision.

For the truthful declaration of data by the applicant:

- i) Verification that the name of the individual or entity listed in the application corresponds precisely with the name appearing on the grant decision, the purchase invoice, and the KBA registration data.

For the registration data:

- i) Verification that the VIN recorded in the KBA registration data matches the VIN on the purchase invoice, the grant decision, and the Excel list.
- ii) Verification that the name of the person or entity registering the vehicle aligns with the applicant's name and the name on the purchase invoice, grant decision and registration data. The manufacturer and model of the vehicle should correspond to those listed on the purchase invoice and in the Excel list.
- iii) Verification that the vehicle's engine type is either fully electric or a plug-in hybrid, consistent with the data in the Excel list. Finally, the CO2 emissions, as measured by the combined value according to the Worldwide Harmonised Light Vehicle Test Procedure (WLTP), must be below 50g per kilometre and match the data in the Excel list.

In three sampled cases, the name of the applicant on the grant decision, on the purchase invoice and on the KBA registration data differed for several reasons that were in all cases not deemed significant for the implementation of target 30 and thus accepted for the reasons detailed below. For sample number 271001, Germany has provided three additional pieces of evidence (Evidence No. 12-14) to justify the business relationship between the name found on the invoice, and the name found on the remaining documents. In sample number 269424, the discrepancy was due to the applicant being a company (GbR), with the car being registered to the company owner. In case of sample number 377851, the applicant company had sold the car after the six months deadline, thus remaining eligible for funding, while the registration data indicated the name of the new owner. In both cases, the documents could be unequivocally linked by the VIN number.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 43 Approval of projects related to the development of climate-friendly timber construction

Related Measure: 1.3.1 Support programme for the development of a climate-friendly timber construction sector

Quantitative Indicator: Number of approved projects

Baseline: 0

Target: 17

Time: Q2 2022

1. Context:

The objective of this measure is to accelerate the development, deployment and diffusion of innovative technologies, processes, products and services (digital transformation) to increase the use of timber as a climate-friendly building material. The measure is also intended to help overcome structural disadvantages and obstacles in order to be able to establish construction with timber on an equal footing in large-scale, multi-storey construction. To overcome the challenge of transfer of knowledge, innovation and technology between research and practice, the measure further aims to improve the networking between businesses, academia and research institutions related to climate-friendly construction with timber.

Target 43 requires the approval of at least 17 projects, enabling the recipients to start their implementation. Target 43 is the second and last target of the investment, and it follows the completion of milestone 42, on the entry into force of the funding guideline on the promotion of climate-friendly timber construction. The measure description was entirely assessed as part of the first payment request.

The investment has a final expected date for implementation on 30 June 2022.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID Annex) was satisfactorily fulfilled.
2	Spreadsheet with a list of approved projects	The spreadsheet shows an overview of all approved projects which received a grant notice. List is marked as followed: <ul style="list-style-type: none">• "Project number" for clear identification,• "Application form ID" for assigning applications to projects,

		<ul style="list-style-type: none"> • Name of the project theme (“Project theme”), • Reference to the funding priority in the funding guideline (“Funding priority regarding to funding guideline”), • Name, Federal State and location of the beneficiary (“Name of beneficiary”, “Federal State”, “Location”), <ul style="list-style-type: none"> • Project duration (“Project start”, “Project end”), and • Description of the original aim of the project (“Aim of project”).
3	<p>Copies of 17 approval decisions under the climate-friendly timber construction programme, by the funding agency for renewable raw materials (<i>Fachagentur Nachhaltende Rohstoffe e.V.</i>) on behalf of and with funds from the Federal Ministry of Food and Agriculture (<i>Bundesministerium für Ernährung und Landwirtschaft</i>)</p>	<p>These approval decisions are conditional commitments from the funding agency to the respective grant recipients to finance the eligible costs on a pro-rata basis.</p> <p>Every approval decision contains, among other things, the following information:</p> <ul style="list-style-type: none"> • Information about the granting authority and recipient • A reference to the project motion <ul style="list-style-type: none"> • Notes on attachments • The amount of the grant • The percentage share of financing • Information about the project and the purpose as well as the description of the purpose <p style="text-align: center;">Tthe approval period</p> • Information on legal requirements (e.g. the additional provisions ANBestP) • Information on notification obligations towards the funding provider <ul style="list-style-type: none"> • Notes on payment requirements <ul style="list-style-type: none"> • Notes on proof of use • Instructions on legal remedies <p>Personal data has been blacked out in accordance with Article 4, No. 1 GDPR. In order to clearly assign it to other evidence/receipts, the project number has not been blacked out.</p>
4	<p>Copies of 17 annexes to the approval decisions (<i>Allgemeine Nebenbestimmungen für Zuwendungen zur Projektförderung - ANBest-</i></p>	<p>The annexes include a copy of the additional provisions for expenditure-based grants from the Federal Ministry of Education and Research (<i>Bundesministerium für Bildung und Forschung</i>) for project funding.</p>

	P)	
5	Copies of 17 project descriptions which form part of each project application	<p>The described objectives have been checked to be within the objectives of the funding guideline. The purpose of the project was determined and anchored in the grant notice.</p> <p>Personal data has been blacked out in accordance with Article 4, No. 1 GDPR. In order to clearly assign it to other evidence/receipts, the application form ID has not been blacked out.</p>
6	Copies of the relevant extracts from the funding recommendation	<p>The evidence shows an extract from the funding recommendation for each of the 17 approved projects listed in the spreadsheet. The section "Subject of the planned project" ("<i>Gegenstand des geplanten Vorhabens</i>") describes the objectives of the planned project in a few sentences. The point "Justification for funding" ("<i>Begründung der Förderung</i>") describes why, from a technical point of view, the substantive objectives of the project are in line with the guidelines and are considered eligible for funding.</p> <p>Personal data has been blackened out in accordance with Article 4, No. 1 GDPR. In order to clearly assign it to other evidence/receipts, the project number has not been blacked out.</p>

3. Analysis:

The Commission considers that there is a clerical error in the text of the Council Implementing Decision as regards the description of investment 1.3.1 and has undertaken the assessment on a revised basis. In the description, it is stated that the implementation of the investment shall be completed by 31 December 2021. However, the Council Implementing Decision states that target 43 has an indicative timeline for completion in Q2 2022, which is also in line with Germany's national recovery and resilience plan (see p. 307 and p. 311). This latter expected completion date is the one considered relevant for the fulfilment of investment 1.3.1. Against this background, the justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

At least 17 projects have been approved, enabling the recipients to start their implementation.

Germany submitted evidence for 17 projects approved under the guidelines for climate-friendly timber construction (Evidence No. 2 and Evidence No. 3).

The extracts from the funding recommendation show, in section “rationale of funding” (“*Begründung der Förderung*”), why, from a technical point of view, the substantive objectives of each of the projects is in line with the guideline on the promotion of climate-friendly timber construction (Evidence No. 1 and Evidence No. 2 from assessment of milestone 42 during the first payment request) and clarifies that these projects are eligible for funding (Evidence No. 6).

For the projects for which funding eligibility was confirmed, the activities funded were shortly described in the grant decision in the section “funding purpose” (Evidence No. 3, p. 2). The aims of the projects also described in the grant decision are in line with the aims of the programme, laid out in the funding guidelines (Evidence No. 3, “aim of project” in Evidence No. 2 and Evidence No. 5 compared with Evidence No. 2, section 1.1 “*Zuwendungszweck*” of milestone 42).

The approval periods were anchored in the grant notices. All funded measures have an approval period that starts on 7 June 2021, which is after the entry into force of the funding guideline on climate-friendly timber construction) and ends before 31 December 2021 (project duration in Evidence No. 2 and approval period in Evidence No. 3, p. 2).

Each funding recipient was informed via the funding notification about the positive application review and the project's eligibility for funding (Evidence No. 3).

Thus, the grants, which were anchored in the approval decisions, with planned disbursement still in 2021 (Evidence No. 3, p. 2) enabled the grant recipients to begin implementing their projects.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 44 Approval of ‘living labs’ projects

Related Measure: 1.3.2 Municipal living labs for the energy transition

Quantitative Indicator: Number of approved projects

Baseline: 0

Target: 4

Time: Q4 2023

1. Context:

The objective of this measure is to put in place municipal living labs for the energy transition which explore and demonstrate innovative solutions for the efficient and sustainable energy supply of urban neighbourhoods. Technological and non-technical innovations are tested in a real-world environment, thereby contributing to technology development and market penetration, whilst serving as a blueprint for the subsequent large-scale roll-out of integrated solutions. Living laboratories (including this measure) are one of the sector coupling measures of the German National Energy and Climate Plan (NECP). At least four joint living labs projects will be implemented, covering at least ten urban neighbourhoods.

Target 44 concerns the approval of “living labs” and is the first step of the implementation of the investment. It will be followed by target 45, related to the completion of urban neighbourhood projects.

The final expected date for implementation is 31 March 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	List of partners involved in each living lab	Extract from the federal funding database (“profi – Projektförder-Informationssystem”). Profi is an internal database. The profi-Online procedure gives grant recipients and contractors the opportunity to process grants or orders from the federal government with electronic support. This list contains all the partners involved in the sub-projects of each living lab. Most information can be verified via the federal funding portal („Förderportal des Bundes“) https://foerderportal.bund.de/ or the database

		of the contracted funding agency https://www.enargus.de/ .
3 - 58	Copy of the grant decisions including the confirmations of receipt	These documents show the grant decisions including the confirmation of receipts for the sub-projects involve in one of the four living labs.
59	Copy of detailed description of living lab "GWP" and mapping of the objectives of the measure	The document shows a detailed description as part of the application process to the 'Energy Ideas Competition' produced by the living lab project GWP for the Federal Ministry for Economic Affairs and Climate Action (BMWK) along with mapping the objectives of the measure.
60	Copy of detailed description of living lab "Delta" and mapping of the objectives of the measure	The document shows a detailed description as part of the application process to the 'Energy Ideas Competition' produced by the living lab project Delta for the Federal Ministry for Economic Affairs and Climate Action BMWK along with mapping the objectives of the measure.
61	Copy of detailed description of living lab "IW3" and mapping of the objectives of the measure	The document shows a detailed description as part of the application process to the 'Energy Ideas Competition' produced by the living lab project IW3 for the Federal Ministry for Economic Affairs and Climate Action (BMWK) along with mapping the objectives of the measure.
62	Copy of the detailed description of living lab "TransUrbanNRW" and mapping to the objectives of the measure	The document shows a detailed description as part of the application process to the 'Energy Ideas competition' produced by the living lab project TransUrbanNRW along with mapping the objectives of the measure.
63	Copy of General additional provisions for grants for project funding („Allgemeine Nebenbestimmungen für Zuwendungen zur Projektförderung (ANBest-P“)	The document shows the relevant annex for a grant decision.
64	Copy of General additional provisions for grants for project funding on a cost basis (“Allgemeine Nebenbestimmungen für Zuwendungen zur Projektförderung auf	The document shows the general ancillary provisions for grants for project funding on a cost basis.

	<i>Kostenbasis (ANBest-P-Kosten)“)</i>	
65	Copy of Special additional provisions for grants from the Federal Ministry of Education and Research for project funding on an expenditure basis (<i>“Besondere Nebenbestimmungen für Zuwendungen des Bundesministeriums für Bildung und Forschung zur Projektförderung auf Ausgabenbasis (BNBest-BMBF 98“)</i>)	The document shows special ancillary provisions for grants from the Federal Ministry of Education and Research for project funding on an expenditure basis.
66	Copy of Additional provisions for grants on a cost basis of the Federal Ministry of Education and Research for commercial enterprises for research and development projects (<i>“Nebenbestimmungen für Zuwendungen auf Kostenbasis des Bundesministeriums für Bildung und Forschung an Unternehmen der gewerblichen Wirtschaft für Forschungs- und Entwicklungsvorhaben (NKBF 98)“)</i>)	The document shows ancillary conditions for cost-based grants of the Federal Ministry of Education and Research to enterprises in the business economy for research and development projects.
67	Copy of relevant annex for grant decisions	The document shows an annex providing information for recipients regarding the payment request such proof of expenditure and proof of use.
68	Copy of Energy Ideas Competition "Living Labs of the Energy Transition" from the Federal Ministry for Economic Affairs and Climate Action (<i>Bundesministerium für</i>	The document shows a the 'Energy ideas Competition' underlying the Living Labs from the Federal Ministry for Economic Affairs and Climate Action (<i>Bundesministerium für Wirtschaft und Klimaschutz, BMWK</i>).

	<i>Wirtschaft und Klimaschutz, BMWK)</i>	
69	Copy of 7th Energy Research Programme of the Federal government	The document shows the 7 th Energy Research Programme of the Federal government published in September 2018.
70	Copy of the German Integrated National Energy and Climate Plan (NECP) from 2019	This document shows the German National Energy and Climate Plan (NECP) of 2019.
71	Copy of the call for funding (BAz AT 18.10.2018 B1) 'Applied non-nuclear research funding in the 7 th Energy Research Programme "Innovation for the Energy Transition"' published in the Federal Gazette (<i>Bundesanzeiger</i>) on 18 October 2018	This document shows the call for funding on "Applied non-nuclear research funding" in the 7 th Energy Research Programme "Innovation for the Energy Transition" published on Thursday 18 October 2018.

3. Analysis:

The justification and substantiating evidence provided by the Germany authorities cover all constitutive elements of the target.

At least four joint living labs projects have been approved through a grant decision, enabling the start of their implementation.

Four joint living labs have been approved through grant decisions issued by the Research Centre Jülich GmbH (*Projektträger Jülich GmbH*) and the Federal Ministry for Economic Affairs and Climate Action (*BMWK*): Delta, IW3, Reallabor GWP and TransUrbanNRW.

The 56 grant decisions have been awarded at the level of sub-projects (see Evidence No. 3 to 58) rather than at the level of the living labs projects, acting as the central reference of the sub-projects. Whilst this constitutes a minimal formal deviation from the requirement of the Council Implementing Decision, this is in accordance with the original German RRP and the National Energy and Climate Plan (NECP), where the sub-projects constituting the living labs are generally described as "joint projects with partners from industry, municipalities, and research." The work of these four living labs is indeed carried out with partners from industry, municipalities, and research, which consists of 12 to 17 sub-projects per living labs project. Accordingly, as per the call for funding (Evidence No. 71, page 23, under section 5) and the 7th Energy Research Programme of the Federal Government (Evidence No. 68, page 73, under section 4.6), the selection procedure was organised at the level of sub-projects. It is stated that partners in a joint project must regulate their cooperation in a cooperation agreement that the individual sub-projects work together effectively and that the results are brought together. The project partners must ensure that a valid cooperation agreement is in place shortly before the start of the project. In addition, each project is implemented by a central programme management concept and this structure should apply to the living labs. The sub-projects that have been awarded grant decisions cover all the sub-projects under the four joint living

labs. As of this, this minimal deviation does not affect the progress towards achieving the investment that the target represents. On this basis, it is considered that this constitutive element of the target is satisfactorily fulfilled.

Furthermore, regarding the “joint” nature of these living labs, the Council Implementing Decision states “At least four joint living labs projects have been approved [...]” The Recovery and Resilience Plan also states that “at least four joint projects are to be realised, encompassing at least ten neighbourhoods.” The project descriptions for the flagship living labs, including TransUrban, IW3, Delta and GWP, highlight the significance of collaborative partnerships, with all projects spanning across at least ten neighbourhoods and featuring multiple stakeholders engaged in each sub-project. The term ‘joint’ thus refers to the involvement of multiple partners and stakeholders in the project, consistent with the guidance provided in the German Recovery and Resilience Plan. On this basis, it is considered that this constitutive element of the target is satisfactorily fulfilled.

These living labs are granted support according to the same funding rules that apply to other research projects of the 7th Energy Research Programme of the Federal Government (see Evidence No. 69 and 71), with the call for funding for the Seventh Research Programme being published in October 2018. The general provisions for project funding grants allow for a project to begin once the grant decision has been communicated to the applicants (see section 1.4, page 1 of Evidence No. 63). Accordingly, grant decisions were issued between May 2020 and January 2023.

Also, in line with the measure description, **Municipal living labs for the energy transition explore and demonstrate innovative solutions for the efficient and sustainable energy supply of urban neighbourhoods. Technological and non-technical innovations are tested in a real-world environment, thereby contributing to technology development and market penetration, whilst serving as a blueprint for the subsequent large-scale roll-out of integrated solutions.**

Each of these living labs meets the criteria for being classified as ‘municipal’ by encompassing the following municipalities: Darmstadt, Hamburg, Stuttgart, Berlin, Mannheim, Rosenheim, Herne, Mönchengladbach, Erkrath, and Gelsenkirchen. Renewable heat generation systems are installed in all living labs, ranging from individual heat pumps with new heat sources, local heating networks and large district heating systems to geothermal energy (see sections 2 and 3 of Evidence No. 59, sections 1.2 and 1.3 of Evidence No. 60, sections 1.2-1.5 of Evidence No. 61, and sections 1.1. and 1.2. of Evidence No. 62), thus effectively exploring innovative solutions for the efficient and sustainable energy supply of urban neighbourhoods.

Different approaches are pursued in each Living Lab to investigate and demonstrate innovative energy supply solutions for urban neighbourhoods. For example, in Living Lab 4 TransUrban.NRW, surface water is used as a heat source for individual heat pumps (see section 3 of Evidence No. 62 for an exhaustive description). In Living Lab 2 IW3, research is conducted on the combination of geothermal energy with power-2-heat, heat-pumps, electric vehicles and new business models for large district heating suppliers (see section 3 of Evidence No. 63 for exhaustive description). In addition to technical innovations, the exploration of non-technical innovations is actively being pursued. Accordingly, the focus of a sub-project of Living Lab 4 Transurban.NRW lies on the scalability of energy-optimised districts and their potential feedback effects on the overall system within the framework of sector coupling. This includes an investigation of price effects resulting from a change in demand structure. For instance, a novel methodology is being explored for calculating heating expenses, which concurrently promotes a decrease in energy consumption (refer to section 3.2., p. 80, Evidence No. 62).

The objective of the Living Labs is to support the acceptance and subsequent market penetration of new technologies. Market penetration, in the context of the 7th Energy Research Programme, refers to the widespread adoption of innovative, high-efficiency technologies and processes in the energy sector. To achieve this, demonstration projects, such as the Living Labs, are used to showcase the feasibility of novel process designs on a large industrial scale, thereby bridging the gap towards commercialisation. In the field of geothermal energy, for example, there are two essential requisites identified by the Programme for achieving broad market penetration (Evidence No. 69, section 4.2.4, p. 43). One of them is to mitigate risks associated with geothermal energy utilisation. For instance, a sub-project called “Heating Networks 4.0” is carrying out a feasibility study on the implementation of local heating network with increased integration of geothermal energy in three distributed neighbourhoods in the municipality of Immendingen (Living Lab 4 Transurban.NRW, see p. 22 of Evidence No. 62). The second prerequisite is to reduce energy production costs and expanding geothermal storage applications. For instance, a sub-project titled “ErdEis” intends to develop dynamic simulation models for different storage systems, such as ice reservoirs, and geothermal storage with various uses (Living Lab 4 TransUrban.NRW, see p. 23 of Evidence No. 62). The tested solutions serve as a blueprint for the subsequent large-scale roll-out of integrated solutions. This concerns for example the work on new authorisation procedures needed for the extraction of river water to operate a large heat pump (Living Lab 3 GWP, see section 8 of Evidence No. 59), and the utilisation of waste heat from the manufacturing industry for feeding into the district heating system is a (Living Lab 1 Delta, section 2.1.2. of Evidence No. 60).

Furthermore, in line with the measure description, **living laboratories (including this measure) are one of the sector coupling measures of the German National Energy and Climate Plan (NECP).**

The 7th Energy Research Programme (wherein living labs for the energy transition are one of the pillars) will make contributions to the implementation of the National Energy and Climate Plan under the EU Energy Union (Evidence No. 70, introduction, p. 16). According to the German National Energy and Climate Plan, sector coupling, such as the efficient use of electricity from renewable energy sources, is promoted in order to further decarbonise the industry, buildings and transport sectors (see chapter 2.4.3., p. 93 of Evidence No. 70) and living laboratories are one of these sector coupling measures (see chapter 3.5., p. 136 of Evidence No. 70).

The joint living labs are carried out in the following urban areas, covering more than ten urban neighbourhoods (see Evidence No. 3-63):

No	Acronym	Urban area
1	Delta	Darmstadt, Ludwigshöhe
2	Delta	Darmstadt, Standortentwicklung Merck
3	IW3	Hamburg, Wilhelmsburg
4	GWP	Stuttgart, Münster
5	GWP	Berlin, Neukölln
6	GWP	Mannheim
7	GWP	Rosenheim
8	GWP	Berlin, Stillerzeile
9	TransUrban	Herne, Shamrockpark
10	TransUrban	Mönchengladbach, Seestadt
11	TransUrban	Erkrath, Düsseldorfterrassen
12	TransUrban	Gelsenkirchen, Kokerei Hassel

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 49 Start of projects

Related Measure: 2.1.1 Innovative data policy for Germany

Qualitative Indicator: Start of all projects

Time: Q4 2022

1. Context:

The objectives of the measure are to foster the sharing and innovative use of data. It notably aims at addressing the lack of infrastructures, data literacy, incentives to share data and incentives to invest in the data economy. The investment consists of supporting projects, selected mainly through calls for proposals, covering different areas of innovative data policy for Germany and a specific set of actions aiming at improving data literacy and data use in the federal administration.

This milestone is the first step of the reform and consists of the start of projects and activities related to innovative data policy. The creation of the role of the chief data scientists or similar roles in the federal ministries will be assessed by the following target 50. Target 50 is related to the establishment of a chief data scientist unit or equivalent and an internal data laboratory in at least 95% of federal ministries, and target 51, related to the disbursement of at least EUR 464 400 000 of the EUR 516 000 000 allocated to the measure to envisaged projects and activities.

The reform has a final expected date for implementation on 31 December 2025.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the requirements of the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	List by the German authorities of projects, actions and activities identified in the Annex to the Council Implementing Decision	The document defines each project and action included in the Annex to the Council Implementing Decision.
3	Compilation of evidence for the project "Virtual Cross-Scale Design for Particle Simulation Using Modular Supercomputing - MExMeMo" (" <i>Virtuelles skalenübergreifendes</i> ")	The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16ME0660.

	<i>Design zur Teilchensimulation mittels Modularem Supercomputing")</i>	
4	Compilation of evidence for the project "Exascale-Capable Software Tools for Flow Simulation in the Industrial Design and Optimization Process - EXASIM" (<i>"Exascale-fähige Softwarewerkzeuge zur Strömungssimulation im industriellen Design- und Optimierungsprozess"</i>)	The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16ME0676K.
5	Compilation of evidence for the project "Performance Improvement of the ICON-O Ocean Model on Heterogeneous Exascale Supercomputers with Machine Learning Methods - ExaOcean" (<i>"Leistungsverbesserung des ICON-O Ozeanmodells auf heterogenen ExascaleSupercomputern mit Methoden des Maschinellen Lernens"</i>)	The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16ME0679K.
6	Compilation of evidence for the project "Implementation of a data trust model for the Saxon scientific area at TU Dresden - DDTrust (Sub-project: Concepts, implementation, legal framework and IT support)" (<i>"Implementierung eines Datentreuhandmodells für den sächsischen Wissenschaftsraum an der TU Dresden (Teilvorhaben:</i>	The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DTM110A.

	<i>Konzepte, Umsetzung, rechtliche Rahmenbedingungen und IT-Unterstützung)</i>)	
7	Compilation of evidence for the project “Kickstarter for Data Trustees: Developing an Industry-Independent Framework for Targeted Design, Accelerated Implementation and Successful Operation of Data Trustees - (KickStartTrustee” <i>(“Kickstarter für Datentreuhänder: Entwicklung eines branchenunabhängigen Frameworks für zielgerichtete Konzeption, beschleunigte Umsetzung und erfolgreichen Betrieb von Datentreuhändern”)</i>)	The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DTM117.
8	Compilation of evidence for the project “Legal reforms for data trustees of different types at the interface between science, business and the public sector - ReFo_DaT (Subproject: Analysis of operator models in practice)” (<i>“Rechtsformen für Datentreuhänder unterschiedlichen Typs an der Schnittstelle Wissenschaft, Wirtschaft und öffentliche Hand (Teilvorhaben: Analyse von Betreibermodellen in der Praxis)”</i>)	The document includes evidence for the start of the project (see www.bildung-forschung.digital) as well as the grant notification attesting the completion of the selection procedure. Funding code 16DTM204A.
9	Compilation of evidence for the project “Specification of legal and organizational aspects for	The document includes evidence for the start of the project (see https://ferdinand-steinbeis-institut.de/case_study/ksroad/) as well as the grant notification attesting the completion of

	<p>different data trust models - KS-ROAD” <i>(“Spezifikation rechtlicher und organisatorischer Aspekte für unterschiedliche Datentreuhandmodelle”)</i></p>	<p>the selection procedure. Funding code 16DTM235.</p>
10	<p>Compilation of evidence for the project “Development of an intersectoral data trustee for forestry - DTMForst (Sub-project: Usage scenarios)” <i>(“Entwicklung eines intersektoralen Datentreuhänders für die Forstwirtschaft (Teilvorhaben: Nutzungsszenarien)”)</i></p>	<p>The document includes evidence for the start of the project (see www.bildung-forschung.digital) as well as the grant notification attesting the completion of the selection procedure. Funding code 16DTM308A.</p>
11	<p>Compilation of evidence for the project “The non-profit and ethical use of health data from networked hospitals for data analysis and AI training in research and development - geNuGes” <i>(“Die gemeinnützige und ethische Nutzbarmachung von Gesundheitsdaten aus vernetzten Krankenhäusern für Datenanalysen und KI-Training in Forschung und Entwicklung”)</i></p>	<p>The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DTM309.</p>
12	<p>Compilation of evidence for the project “Establishment of a competence network for data trust models - K-Netz_DTM (Sub-project: Overall coordination, competence transfer, networking and public relations)” <i>(“Aufbau eines Kompetenznetzwerkes für</i></p>	<p>The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DTM320A.</p>

	<i>Datentreuhandmodelle (Teilvorhaben: Gesamtkoordination, Kompetenztransfer, Vernetzung und Öffentlichkeitsarbeit)</i>)	
13	Press release of the Federal Ministry of Education and Research “Data trust models: BMBF funds pilot project” (<i>“Datentreuhandmodelle: BMBF fördert Pilotvorhaben”</i>), 27 January 2022	Press release on the website of the Federal Ministry of Education and Research. https://www.bildung-forschung.digital/digitalezukunft/de/technologie/daten/datentreuhandmodelle_pilotvorhaben/datentreuhandmodelle_pilotvorhaben_node.html , verified on 24 October 2024.
14	Press release of the Federal Ministry of Education and Research “Leveraging the treasure trove of data together: Data trust models as promising opportunities” (<i>“Gemeinsam den Datenschatz heben: Datentreuhandmodelle als zukunftssträchtiger Chancengeber”</i>), 18 October 2023	Press release on the website of the Federal Ministry of Education and Research. https://www.bildung-forschung.digital/digitalezukunft/de/technologie/daten/dtm-2-0-vernetzungsveranstaltung/dtm-2-0-vernetzungsveranstaltung_node.html , verified on 24 October 2024.
14a	Federal Ministry of Education and Research “Research network depersonalisation” (<i>“Forschungsnetzwerk Anonymisierung”</i>)	Link to the website of the Federal Ministry of Education and research section IT-Security – “Research network depersonalisation” (<i>“Forschungsnetzwerk Anonymisierung”</i>) https://www.forschung-it-sicherheit-kommunikationssysteme.de/forschung/it-sicherheit/forschungsnetzwerk-anonymisierung , verified on 24 October 2024.
15	Grant notification for the project “Competence Cluster Anonymization for Medical Applications - AnoMed” (<i>“Kompetenzcluster Anonymisierung für medizinische Anwendungen”</i>)	Grant notification awarded to beneficiary University of Lübeck for the funding period of 15 November 2022 to 14 November 2025, attesting the completion of the selection procedure. Funding code 16KISA050K.

16	Grant notification for the project "Anonymization of personal health data through the generation of digital avatars in medicine and care - AVATAR" (<i>"Anonymisierung persönlicher Gesundheitsdaten durch Erzeugung digitaler Avatare in Medizin und Pflege"</i>)	Grant notification awarded to beneficiary medways e.V. for the funding period of 15 November 2022 to 14 November 2025, attesting the completion of the selection procedure. Funding code 16KISA011K.
17	Grant notification for the project "Personal Mastery Health & Wellness Data – PATH"	Grant notification awarded to beneficiary Dresden University of Technology for the funding period of 15 November 2022 to 14 November 2025, attesting the completion of the selection procedure. Funding code 16KISA100K.
18	Interim report of the project "AnoMed"	Interim report of 2023, demonstrating the start of the project.
19	Interim report of the project "AVATAR"	Interim report for the period of 15 November 2022 to 31 December 2023, demonstrating the start of the project.
20	Article titled "Can Apple and Google continue as health app gatekeepers as well as distributors and developers?", funded in the frame of the "PATH" project. 31 January 2023	Publication of an article, demonstrating the start of the project.
21	Grant notification for the project "Anonymization for networked mobility systems (hereinafter referred to as "ANYMOS")" (<i>"Anonymisierung für vernetzte Mobilitätssysteme"</i>)	Grant notification awarded to beneficiary Research Center for Information Technology for the funding period of 15 November 2022 to 14 November 2025. Funding code 16KISA085K.
22	Grant notification for the project "Recommendation and Audit System for Anonymization (hereinafter referred to as	Grant notification awarded to beneficiary Technische Hochschule Deggendorf (THD) for the funding period of 15 December 2022 to 14 December 2025. Funding code 16KISA128K.

	<i>“EAsyAnon”</i> <i>(“Empfehlungs- und Auditsystem zur Anonymisierung”)</i>	
23	Grant notification for the project “Anonymization and synthesis of click paths and behaviour on the web (hereinafter referred to as “SynthiClick”) <i>(“Anonymisierung und Synthese von Clickpfaden und Verhalten im Web”)</i>	Grant notification awarded to beneficiary <i>Karlsruher Institut für Technologie (Universitätsaufgabe)</i> for the funding period 15 December 2022 to 14 December 2025. Funding code 16KISA108K.
24	Interim report of the project “ANYMOS”	Interim report for the period of 15 November 2022 to 31 December 2023, demonstrating the start of the project.
25	Interim report of the project “EAsyAnon”	Interim report of 2023, demonstrating the start of the project.
26	Interim report of the project “SynthiClick”	Interim report of April 2024, demonstrating the start of the project.
27	Compilation of evidence for the project “Data Literacy in National Research Data Infrastructure - NFDI: Overview of and Requirements for Data Literacy and Data Science Continuing Education Opportunities for Scientists - NFDI Data Literacy” <i>(“Datenkompetenz in NFDI: Übersicht von und Anforderungen an Data Literacy und Data Science Weiterbildungsangebote für Wissenschaftler:innen - NFDI-Datenkompetenz”)</i>	The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DWWQP06.
28	Compilation of evidence for the project “Data Literacy Alliance - Dalia Knowledge Graph for FAIR Data Use and Delivery	The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DWWQP07A.

	Based on Semantic Web Technology" (<i>"Knowledge-Graph der Data Literacy Alliance (Dalia) für FAIRe Datennutzung und -bereitstellung auf der Basis von Semantic-Web-Technologie"</i>)	
29	Compilation of evidence for the project "Interdisciplinary Data Competence Center for the Bremen Region - DataNord (Subproject: University of Bremen - Central Activities and Research Academy Projects "MRI4All" and "SynData")" (<i>"Interdisziplinäres Datenkompetenzzentrum für die Region Bremen (Teilvorhaben der Universität Bremen: Zentrale Aktivitäten und Research Academy Projekte "MRI4All" und "SynData")"</i>)	The document includes evidence for the start of the project (see http://www.bremen-research.de/) as well as the grant notification attesting the completion of the selection procedure. Funding code 16DKZ2026A.
30	Compilation of evidence for the project "Berlin-Brandenburg Data Competence Center for Digital Humanities, Public Administration, Computer Science and Information Science - QUADRIGA (Subproject: Network coordination with head of WP Networking Locations and AP Consolidation - UP)" (<i>"Berlin-Brandenburgisches Datenkompetenzzentrum für Digital Humanities, Verwaltungswissenschaft, Informatik und</i>	The document includes evidence for the start of the project (see https://www.uni-potsdam.de/de/nachrichten/detail/2023-12-04-in-einer-digitalisierten-welt-datenkompetenzzentrum-quadriga-unter-potsdamer-leitu) as well as the grant notification attesting the completion of the selection procedure. Funding code 16DKZ2034A.

	<i>Informationswissenschaft (Teilvorhaben: Verbundkoordination mit Leitung AP Vernetzungsorte und AP Verstetigung)“)</i>	
31	Compilation of evidence for the project “Knowledge Laboratory for Natural Science Collections and Object-Centered Data - WiNoDa (Subprojects: Coordination and MfN)“ (<i>“Wissenslabor für Naturwissenschaftliche Sammlungen und objektzentrierte Daten (Teilvorhaben: Verbundkoordination und Teilvorhaben MfN)“)</i>)	The document includes evidence for the start of the project (see https://winoda.de/ueber-winoda/publikationen/) as well as the grant notification attesting the completion of the selection procedure. Funding code 16DKZ2055A.
32	Compilation of evidence for the project “Quantitative Methods in Slavic Studies – QuantiSlav (Subproject: Development of Digital Humanities Methods in the Field of Slavic Medieval Literature)“ (<i>“Quantitative Methoden in der Slavistik (Teilvorhaben: Entwicklung von Methoden der Digital Humanities im Bereich des slavischen mittelalterlichen Schrifttums)“)</i>)	The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DKWN123A.
33	Compilation of evidence for the project “NLP as a New Data Competence in Educational Research - Studi-BUCH (Subproject: Developments in the German higher education market based on the	The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DKWN139A.

	<p>handbooks on study and career choice from 1970 – 2021) (“NLP als neue Datenkompetenz in der Bildungsforschung (Teilvorhaben: Entwicklungen des deutschen Hochschulmarktes basierend auf den Handbüchern zur Studien- und Berufswahl von 1970 – 2021)“)</p>	
34	<p>Website of the QuantiSlav project</p>	<p>https://quantislav.badw.de/das-projekt.html, verified on 24 October 2024.</p>
35	<p>Compilation of evidence for the project “Sustainable and quality-assured competence development of FDM on HAWn in RLP - FDM@HAW.rlp (Subproject: RDM Competence Development at Mainz University of Applied Sciences)” (“Nachhaltiger und qualitätsgesicherter Kompetenzaufbau zu FDM an HAWn in RLP (Teilvorhaben: FDM-Kompetenzaufbau an der Hochschule Mainz)“)</p>	<p>The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DFH104A.</p>

36	<p>Compilation of evidence for the project “Institutionalized and Sustainable Research Data Management in Brandenburg - IN-FDM-BB (Sub-project: Coordination and qualification)” (<i>“Institutionalisiertes und nachhaltiges Forschungsdatenmanagement in Brandenburg (Teilvorhaben: Koordination und Qualifizierung)”</i>)</p>	<p>The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DFH126A.</p>
37	<p>Website of the IN-FDM-BB project</p>	<p>https://www.fdmhawrlp.de/?page_id=296, verified on 24 October 2024.</p>
38	<p>Compilation of evidence for the project “Long-term monitoring of digital and data-related skills of the German population” (<i>“Langzeitmonitoring von digitalen und datenbezogenen Kompetenzen der bundesdeutschen Bevölkerung”</i>)</p>	<p>The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 01JS2101.</p>
39	<p>Compilation of evidence for the project “Establishing Sustainable AI-Related Degree Programs for Responsible Artificial Intelligence at Freie Universität Berlin - ENKIS” (<i>“Etablierung nachhaltiger KI-bezogener Studienangebote für eine verantwortungsvolle Künstliche Intelligenz an der Freien Universität Berlin”</i>)</p>	<p>The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DHBKI025.</p>
40	<p>Compilation of evidence for the project “AI Integration - Development</p>	<p>The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection</p>

	– Teaching - KI2EL” (“ <i>KI Integration – Entwicklung – Lehre</i> ”)	procedure. Funding code 16DHBKI054.
41	Compilation of evidence for the project “Central point of contact for innovative teaching and learning of interdisciplinary skills in artificial intelligence - ZAKKI” (“ <i>Zentrale Anlaufstelle für innovatives Lehren und Lernen interdisziplinärer Kompetenzen der Künstlichen Intelligenz</i> ”)	The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DHBKI092.
42	Closing report for the project „Establishment of a data skills transfer hub” (“ <i>Aufbau eines Transfer-Hubs Datenkompetenzen</i> ”)	Closing report for the period of July 2023 to December 2023, demonstrating the start of the project.
43	Contract between PD – Berater der öffentlichen Hand GmbH and the Federal Ministry of Education and Research, for the establishment of a transfer hub for data skills (<i>Aufbau eines Transfer-Hubs Datenkompetenzen für das Bundesministerium für Bildung und Forschung - BMBF</i>), signed on 6 July 2023	Contract between PD and the Federal Ministry of Education and Research.
44	Compilation of evidence for the sub-project “Development of a digital data tool-centered learning and competence platform for the comprehensive teaching of data literacy and basic data literacy”	The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DWCQP01B.

	<p><i>“Entwicklung einer digitalen Datentool-zentrierten Lern- und Kompetenzplattform zur flächendeckenden Vermittlung von Data Literacy und grundlegender Datenkompetenz”</i>) of the joint project “Toolbox Data Literacy” (<i>hereinafter referred to as “TBDK”</i>)</p>	
45	<p>Compilation of evidence for the sub-project “Scientifically accompanying needs analysis and requirements management based on the design-based research model for the development of a data tool-centered learning and competence platform” <i>“Wissenschaftlich begleitende Bedarfsanalyse und Anforderungsmanagement auf Basis des Design-Based Research-Modells zur Entwicklung einer Datentool-zentrierten Lern- und Kompetenzplattform”</i>) of the joint project TBDK</p>	<p>The document includes evidence for the start of the project as well as the grant notification attesting the completion of the selection procedure. Funding code 16DWCQP01A.</p>
46	<p>Website of the TBDK project</p>	<p>https://projekt.toolboxdatenkompetenz.de/en/, verified on 24 October 2024.</p>
47	<p>Feasibility study by PD – Berater der öffentlichen Hand GmbH for the project “Fair prices for sustainability in the agriculture and food industry” (<i>Faire Preise für Nachhaltigkeit in der Land- und</i></p>	<p>Feasibility study published on 8 February 2023, demonstrating the start of the project.</p>

	<i>Lebensmittelwirtschaft)</i>	
48	Contract between PD – Berater der öffentlichen Hand GmbH and the Federal Ministry of Food and Agriculture for the delivery of a feasibility study on “Fair prices for sustainability in the agriculture and food industry” (<i>Machbarkeitsstudie “Faire Preise für Nachhaltigkeit in der Land- und Lebensmittelwirtschaft”</i>), signed on 2 May 2022	Contract between PD and the Federal Ministry of Education and Research.
49	E-Mail sent by the data laboratory (<i>Datenlabor</i>) of the Federal Chancellery on 21 October 2022 to all Federal Ministries	E-Mail including a questionnaire to initiate the stock taking and analysis of measures already taken to increase data literacy.
50	Template of the questionnaire sent to all Federal Ministries by the Federal Chancellery	Questionnaire for the Federal Ministries to initiate the stock taking and analysis of measures already taken to increase data literacy in the Ministries.
51	Questionnaire completed by the Federal Foreign Office (<i>Auswärtiges Amt</i>)	Responses by the Federal Foreign Office on measures already taken to increase data literacy in the Ministry.
52	Questionnaire completed by the Federal Ministry of Labour and Social Affairs (<i>Bundesministerium für Arbeit und Soziales</i>)	Responses by the Federal Ministry of Labour and Social Affairs on measures already taken to increase data literacy in the Ministry.
53	Questionnaire completed by the Federal Institute for Occupational Safety and Health (<i>Bundesanstalt für Arbeitsschutz und Arbeitsmedizin</i>)	Responses by the Federal Institute for Occupational Safety and Health on measures already taken to increase data literacy in the Ministry.
54	Questionnaire completed by the Federal Ministry of	Responses by the Federal Ministry of Education and Research on measures already taken to

	Education and Research (<i>Bundesministerium für Bildung und Forschung</i>)	increase data literacy in the Ministry.
55	Questionnaire completed by the Federal Ministry for Digital and Transport (<i>Bundesministerium für Digitales und Verkehr</i>)	Responses by the Federal Ministry for Digital and Transport on measures already taken to increase data literacy in the Ministry.
56	Questionnaire completed by the Federal Ministry of Food and Agriculture (<i>Bundesministerium für Ernährung und Landwirtschaft</i>)	Responses by the Federal Ministry of Food and Agriculture on measures already taken to increase data literacy in the Ministry.
57	Questionnaire completed by the Federal Ministry of Finance (<i>Bundesministerium der Finanzen</i>)	Responses by the Federal Ministry of Finance on measures already taken to increase data literacy in the Ministry.
58	Questionnaire completed by the Federal Ministry of Family Affairs, Senior Citizens, Women and Youth (<i>Bundesministerium für Familie, Senioren, Frauen und Jugend</i>)	Responses by the Federal Ministry of Family Affairs, Senior Citizens, Women and Youth on measures already taken to increase data literacy in the Ministry.
59	Questionnaire completed by the Federal Ministry of Health (<i>Bundesministerium für Gesundheit</i>)	Responses by the Federal Ministry of Health on measures already taken to increase data literacy in the Ministry.
60	Questionnaire completed by the Federal Ministry of Interior (<i>Bundesministerium des Innern und für Heimat</i>)	Responses by the Federal Ministry of Interior on measures already taken to increase data literacy in the Ministry.
61	Questionnaire completed by the Federal Ministry of Justice (<i>Bundesministerium der Justiz</i>)	Responses by the Federal Ministry of Justice on measures already taken to increase data literacy in the Ministry.
62	Questionnaire completed	Responses by the Federal Ministry for the

	by the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection (<i>Bundesministerium für Umwelt, Naturschutz, nukleare Sicherheit und Verbraucherschutz</i>)	Environment, Nature Conservation, Nuclear Safety and Consumer Protection on measures already taken to increase data literacy in the Ministry.
63	Questionnaire completed by the Federal Ministry of Defence (<i>Bundesministerium für Verteidigung</i>)	Responses by the Federal Ministry of Defence on measures already taken to increase data literacy in the Ministry.
64	Questionnaire completed by the Environment Agency (<i>Umweltbundesamt</i>)	Responses by the Environment Agency on measures already taken to increase data literacy in the Ministry.
65	Questionnaire completed by the Federal Ministry for Economic Affairs and Climate Action (<i>Bundesministerium für Wirtschaft und Klimaschutz</i>)	Responses by the Federal Ministry for Economic Affairs and Climate Action on measures already taken to increase data literacy in the Ministry.
66	Questionnaire completed by the Federal Ministry for Housing, Urban Development and Building (<i>Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen</i>)	Responses by the Federal Ministry for Housing, Urban Development and Building on measures already taken to increase data literacy in the Ministry.
67	Questionnaire completed by the Federal Ministry for Economic Cooperation and Development (<i>Bundesministerium für wirtschaftliche Zusammenarbeit und Entwicklung</i>)	Responses by the Federal Ministry for Economic Cooperation and Development on measures already taken to increase data literacy in the Ministry.

68	Questionnaire completed by the Data Lab of the German Development Cooperation (<i>Deutsche Gesellschaft für Internationale Zusammenarbeit - GIZ</i>)	Responses by the Data Lab of the German Development Cooperation on measures already taken to increase data literacy in the Ministry.
69	Questionnaire completed by the Federal Chancellery (<i>Bundeskanzleramt</i>)	Responses by the Federal Chancellor on measures already taken to increase data literacy in the Ministry.
70	Minutes of the 6 th meeting of the Interministerial Working Group "Data Policy" (<i>"Datenpolitik"</i>)	Meeting minutes of the 6 th meeting of the Interministerial Working Group of 13 December 2022.
71	Presentation on data literacy held at the 6 th meeting of the Interministerial Working Group "Data Policy"	"DATA LITERACY: What is it and how can it be measured?" (<i>"DATA LITERACY Was ist das und wie kann man es messen"?</i>) presentation of 13 December 2022.
72	Invitation by the Data Lab of the German Development Cooperation to a webinar on data competence	Invitation sent by e-mail on 7 October 2022 for a webinar on data competence on the 13 October 2022.
73	Programme of the webinar "Data literacy: Understanding data in the public sector" (<i>"Datenkompetenz: Daten verstehen im öffentlichen Dienst"</i>)	Webinar targeted at all Federal employees. Webinar held on 13 October 2022.
74	Data literacy catalogue presented at the 6 th meeting of the Interministerial Working Group "Data Policy"	Catalogue, contained in an Excel file, created by experts from STAT-UP on how data literacy can be measured.
75	Sample evaluation form presented at the 6 th meeting of the Interministerial Working Group "Data Policy"	Sample evaluation created by experts from STAT-UP to classify data competences.

76	Invitation to the 1 st Interministerial Working Group “Data Policy”, 12 August 2021	E-mail containing an invitation to the 1 st Interministerial Working Group meeting.
77	Minutes of the 3 rd Interministerial Working Group “Data Policy”	Meeting minutes of the 6 th meeting of the Interministerial Working Group of 14 July 2022.
78	Letter of confirmation for the creation of the position of a Chief Data Scientist and of a data laboratory in the Federal Ministry for Economic Affairs and Climate Action	Letter confirming the creation of the role of Chief Data Scientist and of a data laboratory, demonstrating the start of the action.
79	Letter of confirmation for the creation of the position of Chief Data Officer, Chief Data Scientist and of a data laboratory in the Federal Ministry of Finance	Letter confirming the creation of the role of Chief Data Officer, Chief Data Scientist and data laboratory, demonstrating the start of the action.
80	Letter of confirmation for the creation of the position of Chief Data Scientist and of a data laboratory in the Federal Ministry of Interior and Community, as well as of a Digital Academy in the Federal Academy of Public Administration (<i>Bundesakademie für öffentliche Verwaltung</i>)	Letter confirming the creation of the role of Chief Data Scientist and of a data laboratory, demonstrating the start of the action. The letter also confirms the creation of the Digital Academy.
81	Letter of confirmation for the creation of the position of Chief Data Scientist and of a data laboratory in the Federal Foreign Office	Letter confirming the creation of the role of Chief Data Scientist and of a data laboratory, demonstrating the start of the action.
82	Letter of confirmation for the creation of the position of Chief Data Scientist and of a data laboratory in the Federal	Letter confirming the creation of the role of Chief Data Scientist and of a data laboratory, demonstrating the start of the action.

	Ministry of Justice	
83	Letter of confirmation for the creation of the position of Chief Data Officer and of a data laboratory in the Federal Ministry of Labour and Social Affairs and in the Federal Institute for Occupational Safety and Health	Letter confirming the creation of the role of Chief Data Officer and of a data laboratory, demonstrating the start of the action.
84	Letter of confirmation for the creation of the position of Chief Data Officer and of a data laboratory in the Federal Ministry of Defence	Letter confirming the creation of the role of Chief Data Officer and of a data laboratory, demonstrating the start of the action.
85	Letter of confirmation for the creation of the position of Chief Data Scientist and of a data laboratory in the Federal Ministry of Food and Agriculture	Letter confirming the creation of the role of Chief Data Scientist and of a data laboratory, demonstrating the start of the action.
86	Letter of confirmation for the creation of the position of Chief Data Officer and of a data laboratory in the Federal Ministry of Family Affairs, Senior Citizens, Women and Youth	Letter confirming the creation of the role of Chief Data Officer and of a data laboratory, demonstrating the start of the action.
87	Letter of confirmation for the creation of the position of Chief Data Officer and of a data laboratory in the Federal Ministry of Health	Letter confirming the creation of the role of Chief Data Officer and of a data laboratory, demonstrating the start of the action.
88	Letter of confirmation for the creation of the position of Chief Data Scientist and of a data laboratory in the Federal Ministry for Digital and	Letter confirming the creation of the role of Chief Data Scientist and of a data laboratory, demonstrating the start of the action.

	Transport	
89	Letter of confirmation for the creation of the position of Chief Data Officer and of a data laboratory in the Federal Ministry for the Environment, Nature Conservation, Nuclear Safety and Consumer Protection and in the Environment Agency	Letter confirming the creation of the role of Chief Data Officer and of a data laboratory, demonstrating the start of the action.
90	Letter of confirmation for the creation of the position of Chief Data Scientist and of a data laboratory in the Federal Ministry of Education and Research	Letter confirming the creation of the role of Chief Data Scientist and of a data laboratory, demonstrating the start of the action.
91	Letter of confirmation for the creation of the position of Chief Data Scientist and of a data laboratory in the Federal Ministry for Economic Cooperation and Development and in the German Development Cooperation	Letter confirming the creation of the role of Chief Data Scientist and of a data laboratory, demonstrating the start of the action.
92	Letter of confirmation for the creation of the position of Chief Data Officer, Chief Data Scientist and of a data laboratory in the Federal Ministry for Housing, Urban Development and Building	Letter confirming the creation of the role of Chief Data Officer, Chief Data Scientist and of a data laboratory, demonstrating the start of the action.
93	Letter of confirmation for the creation of the position of Chief Data Officer and of a data laboratory in the Federal Chancellery	Letter confirming the creation of the role of Chief Data Officer and of a data laboratory, demonstrating the start of the action.

94	Organisational chart of the Federal Foreign Office	Organisational chart, as of 18 March 2024.
95	Link to the Digital Academy	https://www.digitalakademie.bund.de/DE/Home/home_node.html , verified on 24 October 2024.
96	Press statement on the creation of the Digital Academy by the Federal Ministry of Interior and Community, 31 May 2021	https://www.bmi.bund.de/SharedDocs/pressemitteilungen/DE/2021/05/bakoev.html , verified on 24 October 2024.
97	Notice for the Guideline for the funding of collaborative projects in the field of “New methods and technologies for high-performance exascale computing - SCALEXA” (<i>“Bekanntmachung der Richtlinie zur Förderung von Verbundprojekten auf dem Gebiet “Neue Methoden und Technologien für das Exascale-Höchstleistungsrechnen”</i> ”), 18 August 2021	Notice published in the Federal Gazette (<i>Bundesanzeiger</i>) on 26 August 2021.
98	Amendment of the Federal Gazette on 26 August 2021	Amendment of 24 January 2024 published 8 February 2024 in the Federal Gazette.
99	Guideline for the Funding of Projects for the Development and Practical Testing of Data Trust Models in the Areas of Research and Industry (<i>Richtlinie zur Förderung von Projekten zur Entwicklung und praktischen Erprobung von Datentreuhandmodellen in den Bereichen Forschung und Wirtschaft</i>), 20 November	Guideline published in the Federal Gazette on 8 January 2021.

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100	Guideline for the Funding of Projects for the Research or Development of Practice-Relevant Solution Aspects ("Building Blocks") for Data Trust Models (<i>Richtlinie zur Förderung von Projekten zur Erforschung oder Entwicklung praxisrelevanter Lösungsaspekte („Bausteine“) für Datentreuhandmodelle</i>), 12 January 2023	Guideline published in the Federal Gazette on 20 January 2023.
101	Guideline for the Funding of Projects to Scale and Increase Acceptance of Intersectoral Data Trust Models in Practice (<i>Richtlinie zur Förderung von Projekten zur Skalierung und Akzeptanzsteigerung von intersektoralen Datentreuhandmodellen in der Praxis</i>), 4 October 2023	Guideline published in the Federal Gazette on 13 October 2023.
102	Guideline for the funding of research projects for a "Research Network Anonymization for Secure Data Use" within the framework of the Federal Government's Research Framework Program on IT Security "Digital. Sure. Sovereign." (<i>Richtlinie zur Förderung von Forschungsvorhaben für ein „Forschungsnetzwerk Anonymisierung für eine sichere Datennutzung“ im Rahmen des</i>	Guideline published in the Federal Gazette on 9 December 2021.

	<i>Forschungsrahmenprogramms der Bundesregierung zur IT-Sicherheit „Digital. Sicher. Souverän.“</i>), 2 December 2021	
103	Amendment of the Federal Gazette on 9 December 2021	Amendment of 12 December 2023, published in the Federal Gazette on 20 December 2023.
104	Guideline for the funding of research projects for the establishment of Data Competence Centres in Science (<i>Richtlinie zur Förderung von Projekten zum Aufbau von Datenkompetenzzentren in der Wissenschaft</i>), 13 June 2022	Guideline published in the Federal Gazette on 21 June 2022.
105	Guideline for the funding of projects to strengthen the data literacy of early career researchers (<i>Richtlinie zur Förderung von Projekten zur Stärkung der Datenkompetenzen des wissenschaftlichen Nachwuchses</i>), 17 August 2021	Guideline published in the Federal Gazette on 6 September 2021.
106	Guideline for the funding of projects on the topic of reuse and management of research data at Universities of Applied Sciences (<i>Richtlinie zur Förderung von Projekten zum Thema Nachnutzung und Management von Forschungsdaten an Fachhochschulen</i>), 29 July 2021	Guideline published in the Federal Gazette on 17 August 2021.
107	Guideline on the Federal-State initiative for the promotion of Artificial Intelligence in higher	Guideline published in the Federal Gazette on 24 February 2021.

	education (<i>Richtlinie zur Bund-Länder-Initiative zur Förderung der Künstlichen Intelligenz in der Hochschulbildung</i>), 12 February 2021	
108	Federal Budget Code (<i>Bundeshaushaltsordnung - BHO</i>) of 19 August 1969 (Federal Law Gazette I, p. 1284), as last amended by Article 12 of the Act of 22 December 2023 (Federal Law Gazette I, no. 412).	Available at: https://www.bundesfinanzministerium.de/Content/EN/Downloads/Resources/Laws/1969-08-19-federal-budget-code.pdf? blob=publicationFile&v=1

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

All projects and activities of the measure have started.

The following supporting projects of the measure, covering the following activities, have started:

i) networks and research and development of software for high-performance computing

The project is defined by the German authorities as the improvement of the scalability of high-performance computing application software for the future exaflop performance range with the aim to further develop technologies for exascale computers (Evidence No. 2).

The evidence submitted by the German authorities relates to three joint projects (*Verbundprojekte*) responding to the activities foreseen by project i):

- “Virtual Cross-Scale Design for Particle Simulation Using Modular Supercomputing (MExMeMo)” (Evidence No. 3),
- “Exascale-Capable Software Tools for Flow Simulation in the Industrial Design and Optimization Process (EXASIM)” Evidence No. 4), and
- “Performance Improvement of the ICON-O Ocean Model on Heterogeneous Exascale Supercomputers with Machine Learning Methods (ExaOcean)” (Evidence No. 5).

The joint project “Virtual Cross-Scale Design for Particle Simulation Using Modular Supercomputing (MExMeMo)”, carried out by the Forschungszentrum Jülich GmbH - Jülich Supercomputing Centre (JSC), has started, as evidenced by the interim reports for 2022 (Evidence No. 3, pp. 11-12) and 2023 (Evidence No. 3, pp. 15-19). The grant notification and the interim reports (Evidence No. 3) confirm that the project is related to networks and research and development of software for high performance computing.

Further, the joint project “Exascale-Capable Software Tools for Flow Simulation in the Industrial Design and Optimization Process (EXASIM)”, carried out by the Karlsruhe Institute of Technology (*Karlsruher Institut für Technologie*) - Steinbuch Centre for Computing (SCC), has started, as

evidenced by the interim reports for 2022 (Evidence No. 4, pp. 15-16) and 2023 (Evidence No. 4, pp. 19-26), as well as by the Project Progress Overview presentation of 19 September 2024 (Evidence No. 4, pp. 28-45). The grant notification and the interim reports, as well as the Project Progress Overview presentation (Evidence No. 4) confirm that the project is related to networks and research and development of software for high performance computing.

Lastly, the joint project “Performance Improvement of the ICON-O Ocean Model on Heterogeneous Exascale Supercomputers with Machine Learning Methods (ExaOcean)”, carried out by the Hamburg University of Technology (*Technische Universität Hamburg*), has started, as evidenced by the following reports: report on the project meeting of 21 December 2022 (Evidence No. 5, pp. 15-16), interim report of 2023 (Evidence No. 5, pp. 13-14), and milestone report of 12 April 2024 (Evidence No. 5, pp. 19-22). The grant notification, the interim reports, as well as the milestone report (Evidence No. 5) confirm that the project is related to networks and research and development of software for high performance computing.

ii) pilot projects/use cases/real laboratories (‘regulatory data sandboxes’) for the testing and scientific monitoring of data diffusion models

The project has several dimensions and is defined by the German authorities as the support of pilot projects for the regulatory data diffusion models, the support of research and development projects for solution modules of data diffusion models, and the support of data trustees in their establishment and scaling, and of the increase of their acceptance within the world data ecosystem (Evidence No. 2).

The evidence submitted by the German authorities relates to (joint) projects responding to the activities foreseen by project ii):

- “Implementation of a data trust model for the Saxon scientific area at TU Dresden (*hereinafter referred to as “DDTrust”*) (Sub-project: Concepts, implementation, legal framework, and IT support)” (Evidence No. 6),
- “Kickstarter for Data Trustees: Developing an Industry-Independent Framework for Targeted Design, Accelerated Implementation and Successful Operation of Data Trustees (*hereinafter referred to as “KickStartTrustee”*)” (Evidence No. 7),
- “Legal reforms for data trustees of different types at the interface between science, business, and the public sector (*hereinafter referred to as “ReFo_DaT”*) (Subproject: Analysis of operator models in practice)” (Evidence No. 8),
- “Specification of legal and organizational aspects for different data trust models (KS-ROAD)” (Evidence No. 9),
- “Development of an intersectoral data trustee for forestry (*hereinafter referred to as “DTMForst”*) (Sub-project: Usage scenarios)” (Evidence No. 10),
- “The non-profit and ethical use of health data from networked hospitals for data analysis and AI training in research and development (*hereinafter referred to as “geNuGes”*)” (Evidence No. 11),
- “Establishment of a competence network for data trust models (K-Netz_DTM) (Sub-project: Overall coordination, competence transfer, networking and public relations)” (Evidence No. 12).

The start of the different joint projects, which relate to pilot projects, use cases and real laboratories for the testing and scientific monitoring of data diffusion models, as described in two press releases

of 27 January 2021 and 18 October 2023 on the website of the Federal Ministry of Education and Research (Evidence No. 13, Evidence No. 14), is evidenced as follows:

The joint project “DDTrust”, carried out by the Dresden University of Technology (*Technische Universität Dresden*), has started, as evidenced by the interim report of 2023 (Evidence No. 6, pp. 12-20).

Further, the project “KickStartTrustee”, carried out by the Fraunhofer Institute for Experimental Software Engineering (*Fraunhofer-Institut für Experimentelles Software Engineering*) (IESE), has started, as evidenced notably by the annual report of 2023 (Evidence o. 7, pp. 9-11).

Moreover, the joint project “ReFo_DaT”, carried out by the Technical University of Darmstadt (*Technische Universität Darmstadt*), has started, as evidenced by a press release from 16 November 2023 titled “Project start: 20 projects develop solution modules for data trust models”, and published on the website of the Federal Ministry of Education and Research (Evidence No. 8, link on p.12).

Furthermore, the project “Specification of legal and organizational aspects for different data trust models - KS-ROAD”, carried out by the Ferdinand-Steinbeis-Gesellschaft für transferorientierte Forschung gGmbH of the Steinbeis Foundation (*Steinbeis-Stiftung*) (FSG), has started, as evidenced by the press release from 16 November 2023 titled “Project start: 20 projects develop solution modules for data trust models”, and published on the website of the Federal Ministry of Education and Research (Evidence No. 9, link on p.13). The website of the Ferdinand-Steinbeis-Institute (*Ferdinand-Steinbeis-Institut*) further presents the project, which started on 1 October 2023.

Moreover, the joint project “DTMForst”, carried out by the RIF Institute for Research and Transfer (*RIF Institut für Forschung und Transfer e.V.*), has started, as evidenced by a press release from 7 June 2024 titled “Data fiduciary models: Six scaling projects and competence network successfully launched” published on the website of the Federal Ministry of Education and Research (Evidence No. 10, link on p. 13).

Further, the project “geNuGes”, carried out by Tiplu GmbH, has started, as evidenced by the press release from 7 June 2024 titled “Data fiduciary models: Six scaling projects and competence network successfully launched”, published on the website of the Federal Ministry of Education and Research (Evidence No. 11, p. 9).

Lastly, the joint project “Establishment of a competence network for data trust models (K-Netz_DTM)”, carried out by the Centre Responsible Digitality (*Zentrum verantwortungsbewusste Digitalisierung*) (ZEVEDI), has started, as evidenced by the press release from 7 June 2024 titled “Data fiduciary models: Six scaling projects and competence network successfully launched”, published on the website of the Federal Ministry of Education and Research (Evidence No. 12, p. 12).

iii) a research network of six living labs investigating depersonalisation of data in certain application domains such as healthcare, automotive, retail and manufacturing

The project is defined by the German authorities as the development of technical solutions for anonymisation, which guarantee misuse-proof and legally compliant data protection, to simplify and foster the sharing of data (Evidence No. 2).

The Council Implementing Decision states that the investment covers as one of three activities a network of six living labs investigating depersonalisation of data in certain application domains such

as healthcare, automotive, retail and manufacturing The Recovery and Resilience Plan provides that the research networks on depersonalisation should consist of three to six living labs, examining the topic of data anonymisation in areas such as health care, automotive, retail and manufacturing. In light of the contextual interpretation of this requirement from the Council Implementing Decision the establishment of five competence clusters is considered as addressing the requirement of establishing the living labs as the description of the objective and the procedure of the competence centres is in line with the expectations from living labs. One competence cluster is formed around the topic of anonymising the combination of datasets with georeferences (AnigeD) which relates to retail and manufacturing. Two competence clusters focus on data anonymisation in the area of healthcare (AnoMed and AVATAR), another two investigate data anonymisation of connected mobility and intermodal mobility networks (ANYMOS and IIP), which covers the requirement of the automotive domain. The terminology of a Living Lab and competence clusters both relate to collaborative research and development of competencies or technologies. Competence clusters are often clustered geographically which is not necessarily the case for a living lab, however a competence cluster can be understood as a living lab. On this basis, it is considered that this constitutive element of the milestone is satisfactorily fulfilled.

The content of different projects, which relate to the five established competence clusters investigating depersonalisation data in certain application domains such as healthcare, automotive, retail and manufacturing is as described on the website of the ministry of education and research (Evidence No. 14a). Germany provided the link of the website (Evidence No. 14a). This website was checked by Commission services on 21 October 2024. Further evidence submitted by the German authorities related to three joint projects responding to the activities foreseen by project iii):

- “Competence Cluster Anonymization for Medical Applications (AnoMed)” (Evidence No. 15),
- “Anonymization of personal health data through the generation of digital avatars in medicine and care (AVATAR)” (Evidence No. 16), and
- “Personal Mastery Health & Wellness Data (*hereinafter referred to as “PATH”*)” (Evidence No. 17).

The joint project “Competence Cluster Anonymization for Medical Applications (AnoMed)”, carried out by the University of Lübeck (*Universität zu Lübeck*), has started, as evidenced by the interim report of 2023 (Evidence No. 18).

Further, the joint project “Anonymization of personal health data through the generation of digital avatars in medicine and care (AVATAR)”, carried out by medways e.V., has started, as evidenced by the interim report for the period of 15 November 2022 to 31 December 2023 (Evidence No. 19).

Lastly, the joint project “PATH”, carried out by the Dresden University of Technology (*Technische Universität Dresden*), has started, as evidenced by the publication on 31 January 2023 of an article titled “Can Apple and Google continue as health app gatekeepers as well as distributors and developers?”, funded in the framework of the “PATH” project (Evidence No. 20).

iv) research projects on technologies to anonymise data

The project is defined by the German authorities as the research into technologies, processes, and methods for anonymising personal data, as well as developing and evaluating related services and business models (Evidence No. 2).

The evidence submitted by the German authorities relates to three joint projects responding to the activities foreseen by project iv):

- “Anonymization for networked mobility systems (ANYMOS)” (Evidence No. 21),
- “Recommendation and Audit System for Anonymization (EAsyAnon)” (Evidence No. 22), and
- “Anonymization and synthesis of click paths and behaviour on the web (SynthiClick)” (Evidence No. 23).

The joint project “Anonymization for networked mobility systems (ANYMOS)”, carried out by the Research Center for Information Technology (*Forschungszentrum Informatik*) (FZI), has started, as evidenced by the interim report for the period of 15 November 2022 to 31 December 2023 (Evidence No. 24).

Further, the joint project “Recommendation and Audit System for Anonymization (EAsyAnon)”, carried out by the Deggendorf Institute of Technology (*Technische Hochschule Deggendorf*), has started, as evidenced by the interim report of 2023 (Evidence No. 25).

Lastly, the joint project “Anonymization and synthesis of click paths and behaviour on the web (SynthiClick)”, carried out by the Karlsruhe Institute of Technology (*Karlsruher Institut für Technologie*), has started, as evidenced by the interim report of April 2024 (Evidence No. 26).

v) actions aiming at developing data literacy in different fields of science (including those that are less data-intensive)

The project, as defined by the German authorities, aims at developing data literacy in different fields of science (Evidence No. 2).

The evidence submitted by the German authorities relates to (joint) projects responding to the activities foreseen by project v) and vi):

- “Data Literacy in National Research Data Infrastructure (*“Nationale Forschungsdateninfrastruktur - NFDI”*): Overview of and Requirements for Data Literacy and Data Science Continuing Education Opportunities for Scientists (NFDI Data Literacy)” (Evidence No. 27), and
- “Data Literacy Alliance (Dalia) Knowledge Graph for FAIR Data Use and Delivery Based on Semantic Web Technology (Subproject: Project Management, Communication and Information Model)” (Evidence No. 28).

The project “Data Literacy in NFDI: Overview of and Requirements for Data Literacy and Data Science Continuing Education Opportunities for Scientists (NFDI Data Literacy)”, carried out by the National research data infrastructure (*Nationale Forschungsdateninfrastruktur e.V.*), has started, as evidenced by the report on the proof of use dated 1 July 2024, which includes a brief and detailed report of the project, as well as a performance review (Evidence No. 27, p. 11–36).

The joint project “Data Literacy Alliance (Dalia) Knowledge Graph for FAIR Data Use and Delivery Based on Semantic Web Technology”, carried out by the Technical University of Darmstadt (*Technische Universität Darmstadt*), has started, as evidenced by the interim report for the period of 1 November 2022 to 31 December 2023 (Evidence No. 28, pp. 10-16).

vi) data science laboratories linked to the national research data infrastructure

The project is defined by the German authorities as the establishment of eleven data competence centres to support researchers in data-driven research. The centres offer several services, such as the assistance in developing ideas for the use of data, finding, and collecting data, research data

management, analytics, and archiving and sharing of data. Each centre offers a range of courses and events, facilitates data driven research and fosters networking (Evidence No. 2).

The evidence submitted by the German authorities relates to three joint projects responding to the activities foreseen by project vi):

- “Interdisciplinary Data Competence Center for the Bremen Region (DataNord) (Subproject: University of Bremen - Central Activities and Research Academy Projects "MRI4All" and "SynData")” (Evidence No. 29),
- “Berlin-Brandenburg Data Competence Center for Digital Humanities, Public Administration, Computer Science and Information Science (QUADRIGA) (Sub-project: Network coordination with head of WP Networking Locations and AP Consolidation (UP))” (Evidence No. 30), and
- “Knowledge Laboratory for Natural Science Collections and Object-Centered Data (WiNoDa) (Subprojects: Coordination and MfN)” (Evidence No. 31).

The joint project “Interdisciplinary Data Competence Center for the Bremen Region (DataNord)”, carried out by the University of Bremen (*Universität Bremen*), has started, as evidenced by a press article on the kick-off event of “Data Nord” on 24 November 2023, which demonstrates that the project commenced, and which is published on the website of the UBremen Research Alliance (Evidence No. 29, link on p. 13).

Furthermore, the joint project “Berlin-Brandenburg Data Competence Center for Digital Humanities, Public Administration, Computer Science and Information Science (QUADRIGA)”, carried out by the University of Potsdam (*Universität Potsdam*), has started, as evidenced by a press release from 4 December 2023 titled “In a digitalized world – Data competence centre "QUADRIGA" launched under Potsdam leadership”, which demonstrates that the project commenced, and which is published on the website of the Universität of Potsdam (Evidence No. 30, link on p. 13).

Lastly, the joint project “Knowledge Laboratory for Natural Science Collections and Object-Centered Data – Knowledge laboratory for natural science collections and object-centered data (WiNoDa)”, carried out by the Museum of Natural History - Leibniz Institute for Evolution and Biodiversity Science (*Museum für Naturkunde Leibniz-Institut für Evolutions- und Biodiversitätsforschung*), has started, as evidenced by the publications published in the frame of the WiNoDa project, which are published and accessible on the WiNoDa Knowledge Lab website, and which demonstrate that the project commenced (Evidence No. 31, link on p.13).

vii) support to young researchers in data science

The project, as defined by the German authorities, aims to connect junior researchers from diverse scientific fields and data specialists to upskill the young researchers’ data analytical skills (Evidence No. 2).

The evidence submitted by the German authorities relates to joint projects responding to the activities foreseen by project vii):

- “Quantitative Methods in Slavic Studies (QuantiSlav) (Subproject: Development of Digital Humanities Methods in the Field of Slavic Medieval Literature)” (Evidence No. 32), and
- “NLP as a New Data Competence in Educational Research (Studi-BUCH) (Subproject: Developments in the German higher education market based on the handbooks on study and career choice from 1970 – 2021)” (Evidence No. 33).

The joint project “Quantitative Methods in Slavic Studies (QuantiSlav)”, carried out by the Albert Ludwig University of Freiburg (*Albert-Ludwigs-Universität-Freiburg*), has started, as evidenced by the interim report for the period of 1 October 2022 to 31 December 2023, which demonstrates that the project commenced (Evidence No. 32, p. 10-12). Additionally, the website of the project clearly indicates that funding is related to connect junior researchers (Evidence No. 34) verified by Commission services on 24 October 2024.

Further, the joint project “NLP as a New Data Competence in Educational Research (Studi-BUCH)”, carried out by the RWI - Leibniz Institute for Economic Research (*Leibniz-Institut für Wirtschaftsforschung e.V.*), has started, as evidenced by the interim report for the period of 1 October 2022 to 31 December 2023, which demonstrates that the project commenced (Evidence No. 33, pp. 10-16).

viii) support to universities in the re-use, sharing and management of research data

The project, as defined by the German authorities is targeted towards universities of applied sciences to develop, improve, and test suitable research data management structures and simultaneously build the corresponding skillset (Evidence No. 2).

The evidence submitted by the German authorities relates to two joint projects responding to the activities foreseen by project viii):

- “Sustainable and quality-assured competence development of FDM on HAWn in RLP (FDM@HAW.rlp) (Subproject: RDM Competence Development at Mainz University of Applied Sciences)” (Evidence No. 35), and
- “Institutionalized and Sustainable Research Data Management in Brandenburg (IN-FDM-BB) (Sub-project: Coordination and qualification)” (Evidence No. 36).

The joint project “Sustainable and quality-assured competence development of FDM on HAWn in RLP (FDM@HAW.rlp)”, carried out by the Mainz University of Applied Sciences (*Hochschule Mainz*), has started, as evidenced by the interim report for 2023 (Evidence No. 35, pp. 10-16). The website of the FDM@HAW.rlp project explains the concept of the research data life cycle (that accompanies the management of research data), which includes the sharing of data as well as the re-use of data (Evidence No. 37), verified by Commission services on 24 October 2024.

Further, the joint project “Institutionalized and Sustainable Research Data Management in Brandenburg (IN-FDM-BB)”, carried out by the Potsdam University of Applied Sciences (*Fachhochschule Potsdam*), has started, as evidenced by the status report for the period of 1 October 2022 to 31 December 2023 (Evidence No. 36, pp. 10-53).

ix) monitoring of data skills of the German population

The project is defined by the German authorities as the long-term monitoring of digital and data-related skills in a representative sample of the German population to understand how these skills develop (Evidence No. 2).

The evidence submitted by the German authorities relates to the project “Long-term monitoring of digital and data-related skills of the German population”, responding to the activities foreseen by project ix) (Evidence No. 38). The project, has started, as evidenced by the interim report for 2023 (Evidence No. 38, pp. 12-13).

x) data literacy courses for students and other learners

The project, as defined by the German authorities, aims at addressing the lack of data literacy of students and other learners, in particular around Artificial Intelligence (Evidence No. 2).

The evidence submitted by the German authorities relate to three projects responding to the activities foreseen by project x):

- “Establishing Sustainable AI-Related Degree Programs for Responsible Artificial Intelligence at Freie Universität Berlin (ENKIS)” (Evidence No. 39),
- “AI Integration - Development – Teaching” (Evidence No. 40), and
- “Central point of contact for innovative teaching and learning of interdisciplinary skills in artificial intelligence (ZAKKI)” (Evidence No. 41).

The project “Establishing Sustainable AI-Related Degree Programs for Responsible Artificial Intelligence at Freie Universität Berlin (ENKIS)”, carried out by the Free University of Berlin (*Freie Universität Berlin*), has started, as evidenced by the interim report for the period 1 December 2021 to 31 December 2022 (Evidence No. 39, pp. 22-30).

Further, the project “AI Integration - Development – Teaching”, carried out by the Christian Albrecht University of Kiel (*Christian-Albrechts-Universität zu Kiel*), has started, as evidenced by the interim report for the period 1 December 2021 to 31 December 2022 (Evidence No. 40, pp. 13-14).

Lastly, the project “Central point of contact for innovative teaching and learning of interdisciplinary skills in artificial intelligence (ZAKKI)”, carried out by the Magdeburg-Stendal University of Applied Sciences (*Hochschule Magdeburg-Stendal*), has started, as evidenced by the interim report for 2023 (Evidence No. 41, pp. 21-44).

xi) research and innovation on architectures, institutions and spaces for the data society

The project, as defined by the German authorities, integrates several initiatives for a joint, interministerial and cross-sectoral learning and innovation architecture aiming at enhanced levels of data literacy and an open data culture. Further, the transfer hub provides the resources, and the space needed to develop, prototype and scale user-friendly solutions for a competent data usage and an open data society (Evidence No. 2).

The evidence submitted by the German authorities relates to the project „Establishment of a data skills transfer hub”, responding to the activities foreseen by project xi) (Evidence No. 42). The project carried out by PD – Berater der öffentlichen Hand GmbH, on behalf of the Federal Ministry of Education and Research, has started, as evidenced by the closing report for the period of July 2023 to December 2023 (Evidence No. 42, pp. 1-20). The project provides research and innovation with regard to architectures, institutions and spaces for the data society (Evidence No. 43, p. 4).

xii) development of a freely available toolbox for increased data literacy

The project is defined by the German authorities as the development of a freely available digital tool and training platform with the aim to increase data literacy in various fields of application (Evidence No. 2).

The evidence submitted by the German authorities relates to two sub-projects of the joint project “Toolbox Data Literacy (TBDK)”, responding to the activities foreseen by project xi):

- “Development of a digital data tool-centered learning and competence platform for the comprehensive teaching of data literacy and basic data literacy” (Evidence No. 44), and

- “Scientifically accompanying needs analysis and requirements management based on the design-based research model for the development of a data tool-centered learning and competence platform” (Evidence No. 45).

The sub-project “Development of a digital data tool-centered learning and competence platform for the comprehensive teaching of data literacy and basic data literacy”, carried out by StackFuel GmbH, has started, as evidenced by the interim report for 2023 (Evidence No. 44, pp. 37-55).

Further, the sub-project “Scientifically accompanying needs analysis and requirements management based on the design-based research model for the development of a data tool-centered learning and competence platform”, carried out by the Institute for Applied Computer Science (*Institut für Angewandte Informatik e.V.*) (InfAI), has started, as evidenced by the interim report for 2023 (Evidence No. 45, pp. 37-55).

The website of the Toolbox Data Literacy project provides a link to the Data Literacy Toolbox, which is described as an innovative tool and advanced education platform that is free of charge, online and flexible to use (Evidence No. 46). It was verified by Commission services on 24 October 2024.

xiii) a pilot project on data cooperation in the food value chain.

The project is defined by the German authorities as the publication of a feasibility study with the aim to evaluate the feasibility of a data based-transparency system in the food value chain (Evidence No. 2).

The evidence submitted by the German authorities relates to the feasibility study “Fair prices for sustainability in the agriculture and food industry”, responding to the activities foreseen by project (xiii). The project carried out by PD – Berater der öffentlichen Hand GmbH, on behalf of the Federal Ministry of Education and Research, has started, as evidenced by the publication of the feasibility study on 8 February 2023 (Evidence No. 47). The contract between PD and the Ministry of Education and Research notably includes a work package for the conception of an award process for the tendering of possible pilot projects (Evidence No. 48, p. 7).

In line with the description of the measure, **the following specific actions, aiming at improving data literacy and data use in the federal administration, have started:**

xiv) the stock-taking and analysis of measures already taken to increase data literacy

The stock-taking and analysis of measures already taken to increase data literacy has started, as shown by the E-mail message sent on Friday 21 October 2022 from the general coordinator of the interministerial working group (imag) “data policy” (“Datenpolitik”) (Federal Chancellery, *Bundeskanzleramt*) to all federal ministries (Evidence No. 49). The message included a questionnaire to initiate the stock taking and analysis of measures already taken to increase data literacy (Evidence No. 50). In the meantime, all federal ministries sent back the completed questionnaire to the coordinating body in the Federal Chancellery (Evidence No. 51-69). Furthermore, at the 6th meeting of the interministerial working group of data laboratories on 13 December 2022, the definition of data literacy, the measurement of data literacy, the creation of data literacy maps and the Standard for Data and Artificial Intelligence Literacy were on the agenda, as evidenced by the note of the interministerial working group (Evidence No. 70) and the presentation on data literacy held at the interministerial working group (“Data Literacy: Was ist das und wie kann man es messen?, Interministerielle Arbeitsgruppe Daten Labore, Stat-Up”) (Evidence No. 71). In addition, a webinar

series on the topic of data literacy has been launched on 13 October 2022 (Evidence No. 72 and Evidence No. 73).

xv) the mapping of data competence across public administration services

The mapping of data competence across public administration services has started as shown by the E-mail message sent on Friday 21 October 2022 from the general coordinator of the interministerial working group (imag) “data policy” (Federal Chancellery) to all federal ministries (Evidence No. 49). The messages contained a questionnaire, including a section asking for the level of data competence of employees in the data laboratories and IT units (Evidence No. 50). All federal ministries have replied to the questionnaire and sent it back to the coordinating body in the Federal Chancellery (Evidence No. 51-69). This proves that all federal ministries initiated the mapping of data competencies across public administration. In addition, at the 6th meeting of the interministerial working group on data laboratories on 13 December 2022 (Evidence No. 70), the experts from STAT-UP (Statistical Consulting & Data Science) presented to the data laboratories how data literacy can be measured more granularly, and introduced a data literacy catalogue (Evidence No. 74) and a sample evaluation form to classify data competences (*Kompetenzprofil Senior Data Science Consultant, Beurteilungsbogen Mitarbeiter* (STAT-UP) (Statistical Consulting & Data Science)) (Evidence No. 75).

xvi) the establishment and strengthening of internal data laboratories and data competence centres in federal ministries and agencies, including notably the Foreign Office, the Federal Ministry of Education and Research, the Federal Environment Agency, the Federal Ministry of Defence, the Federal Ministry for Economic Cooperation and Development, the Federal Institute for Occupational Safety and Health, the German Corporation for International Cooperation

The interministerial working group (imag), “data policy” was created as an exchange forum for the respective Chief Data Scientists or Chief Data Officers and data laboratories, as shown by the invitation to the first interministerial working group on 12 August 2021 (Evidence No. 76). In the third meeting of the interministerial working group of 14 July 2022, the representatives of the ministries gave a presentation on the progress on the establishment and strengthening of internal data laboratories and data competence centres in their ministries (Evidence No. 77). In addition, as a general coordinator of the interministerial working group, the Federal Chancellery requested reports by the respective State Secretaries on the progress of the establishment of internal data laboratories and to confirm that the initiation of the establishment of the internal data laboratory in their ministry has started. The ministries confirmed that the project of the creation of Chief Data Scientists or similar roles has started, as proven by letters signed by the respective State Secretaries or Director Generals (Evidence No. 78-93). These letters of confirmation concerning both, the creation of chief data scientist and the establishment of internal data laboratories have also been submitted for the institutions explicitly mentioned in the measure description: the Federal Foreign Office (Evidence No. 81), in addition to an organisational chart of the Federal Foreign Office (Evidence No. 94), the Federal Ministry of Education and Research (Evidence No. 90), the Federal Environment Agency (Evidence No. 89), the Federal Ministry of Defence (Evidence No. 84), the Federal Ministry for Economic Cooperation and Development (Evidence No. 84), the Federal Institute for Occupational Safety and Health (Evidence No. 91), and the German Development Cooperation (Evidence No. 91).

xvii) the creation of a digital academy in the Federal Academy for Public Administration, bringing together all training opportunities to support digitalisation.

The start of the project of the creation of a digital academy in the Federal Academy for Public Administration is confirmed by the letter sent by the State Secretary of the Ministry of Internal Affairs to the general coordinating body of “data policy” in the Federal Chancellery (Evidence No. 80). The creation of the Digital Academy is furthermore confirmed by the creation of the website of the Digital Academy (Evidence No. 95), verified by Commission services on 24 October 2024. The creation of the Digital Academy is also evidenced by the press statement by the Federal Ministry of Interior and Community of 31 May 2021 on the creation of the Digital Academy (Evidence No. 96). The Digital Academy brings together all training opportunities to support digitalisation, by notably offering IT, technical and organizational skills, promoting self-development skills, as well as new leadership, cooperation, and communication skills (Evidence No. 95).

Wherever relevant, selection procedures have been completed and selected projects have started.

The selection procedures for the following projects have been completed and selected projects have started.

i) networks and research and development of software for high-performance computing

The guidelines for the funding of collaborative projects in the field of “New methods and technologies for high-performance exascale computing” (SCALEXA) of 18 August 2021 (Evidence No. 97), published in the Federal Gazette (*Bundesanzeiger*) on 26 August 2021, and amended on 24 January 2024 (Evidence No. 98), define the selection procedure pertaining to activities foreseen by project i).

The selection procedures of the projects submitted by the German authorities as evidence have been completed, as attested by the grant notifications (*Zuwendungsbescheid*) awarded to the beneficiaries (*Zuwendungsempfänger*):

The joint project (*Verbundprojekt*) “Virtual Cross-Scale Design for Particle Simulation Using Modular Supercomputing (MExMeMo)” has been awarded to the Forschungszentrum Jülich GmbH for the funding period of 1 September 2022 to 31 August 2025 as proven by the grant notification (Evidence No. 3, pp. 2-8).

The joint project “Exascale-Capable Software Tools for Flow Simulation in the Industrial Design and Optimization Process (EXASIM)” has been awarded to the Karlsruhe Institute for Technology (*Karlsruher Institut für Technologie*) for the funding period of 15 September 2022 to 14 September 2025 as proven by the grant notification (Evidence No. 4, pp. 2-11).

The joint project “Performance Improvement of the ICON-O Ocean Model on Heterogeneous Exascale Supercomputers with Machine Learning Methods (ExaOcean)” has been awarded to the Hamburg University of Technology (*Technische Universität Hamburg*) for the funding period of 1 October 2022 to 30 September 2025 as proven by the grant notification (Evidence No. 5, pp. 2-10).

As evidenced in the section above under paragraph i), all above-mentioned projects related to the project “networks and research and development of software for high-performance computing” have started.

ii) pilot projects/use cases/real laboratories (‘regulatory data sandboxes’) for the testing and scientific monitoring of data diffusion models

The evidence submitted by the German authorities regard three funding guidelines which define the selection procedure pertaining to activities foreseen by project ii):

- Guideline for the Funding of Projects for the Development and Practical Testing of Data Trust Models in the Areas of Research and Industry of 20 November 2020, and published in the Federal Gazette on 8 January 2021 (Evidence No. 99),
- Guideline for the Funding of Projects for the Research or Development of Practice-Relevant Solution Aspects ("Building Blocks") for Data Trust Models of 12 January 2023, and published in the Federal Gazette on 20 January 2023 (Evidence No. 100), and
- Guideline for the Funding of Projects to Scale and Increase Acceptance of Intersectoral Data Trust Models in Practice of 4 October 2023, published in the Federal Gazette on 13 October 2023 (Evidence No. 101).

The selection procedures of the projects submitted by the German authorities as evidence have been completed, as attested by the grant notifications awarded to the beneficiaries:

The joint project "Implementation of a data trust model for the Saxon scientific area at TU Dresden (DDTrust)", has been awarded to the Dresden University of Technology (*Technische Universität Dresden*) for the funding period of 1 January 2022 to 31 December 2024 as proven by the grant notification (Evidence No. 6, pp. 2-11).

The project "Kickstarter for Data Trustees: Developing an Industry-Independent Framework for Targeted Design, Accelerated Implementation and Successful Operation of Data Trustees (KickStartTrustee)" has been awarded to the Fraunhofer Society (*Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e. V.*) for the funding period of January 2022 to 31 December 2023 as proven by the grant notification (Evidence No. 7, pp. 2-8).

The joint project "Legal reforms for data trustees of different types at the interface between science, business and the public sector (ReFo_DaT)" has been awarded to the Technical University of Darmstadt (*Technische Universität Darmstadt*) for the funding period of 15 October 2023 to 31 December 2025 as proven by the grant notification (Evidence No. 8, pp. 2-11).

The project "Specification of legal and organizational aspects for different data trust models (KS-ROAD)" has been awarded to the Ferdinand-Steinbeis-Gesellschaft für transferorientierte Forschung gGmbH of the Foundation (*Steinbeis-Stiftung*) (FSG) for the funding period of 1 October 2023 to 31 December 2025 as proven by the grant notification (Evidence No. 9, pp. 2-10).

The joint project "Development of an intersectoral data trustee for forestry (DTMForst)", has been awarded to the RIF Institute for Research and Transfer (*RIF Institut für Forschung und Transfer e.V.*) for the funding period of 1 June 2024 to 31 December 2025 as proven by the grant notification (Evidence No. 10, pp. 1-12).

The project "The non-profit and ethical use of health data from networked hospitals for data analysis and artificial intelligence training in research and development (geNuGes)" has been awarded to Tiplu GmbH for the funding period of 1 June 2024 to 31 December 2025 as proven by the grant notification (Evidence No. 11, pp. 1-8).

The joint project "Establishment of a competence network for data trust models (K-Netz_DTM)" has been awarded to the Technical University of Darmstadt for the funding period of 1 June 2024 to 30 June 2026 as proven by the grant notification (Evidence No. 12, pp. 1-11).

As evidenced in the section above under paragraph ii), all above-mentioned projects related to the project "pilot projects/use cases/real laboratories ("regulatory data sandboxes") for the testing and scientific monitoring of data diffusion models" have started.

iii) a research network of six living labs investigating depersonalisation of data in certain application domains such as healthcare, automotive, retail and manufacturing

The guidelines for the funding of research projects for a "Research Network Anonymization for Secure Data Use" within the framework of the Federal Government's Research Framework Program on IT Security "Digital. Sure. Sovereign." of 2 December 2021, published in the Federal Gazette on 9 December 2021 (Evidence No. 102) and amended on 12 December 2023 (Evidence No. 103) define the selection procedure pertaining to activities foreseen by project iii).

The selection procedures of the projects submitted by the German authorities as evidence have been completed, as attested by the grant notifications awarded to the beneficiaries:

The joint project "Competence Cluster Anonymization for Medical Applications (AnoMed)" has been awarded to the University of Lübeck (*Universität zu Lübeck*) for the funding period of 15 November 2022 to 14 November 2025 as proven by the grant notification (Evidence No. 15, pp. 2-11).

The joint project "Anonymization of personal health data through the generation of digital avatars in medicine and care (AVATAR)" has been awarded to medways e.V. for the funding period of 15 November 2022 to 14 November 2025 as proven by the grant notification (Evidence No. 16, pp. 1-10).

The joint project "Personal Mastery Health & Wellness Data (PATH)" has been awarded to the Dresden University of Technology (*Technische Universität Dresden*) for the funding period of 15 November 2022 to 14 November 2025 as proven by the grant notification (Evidence No. 17, pp. 2-11).

As evidenced in the section above under paragraph iii), all above-mentioned projects related to the project "a research network of six living labs investigating depersonalisation of data in certain application domains such as healthcare, automotive, retail and manufacturing" have started.

iv) research projects on technologies to anonymise data

The guidelines for the funding of research projects for a "Research Network Anonymization for Secure Data Use" within the framework of the Federal Government's Research Framework Program on IT Security "Digital. Sure. Sovereign." of 2 December 2021 (Evidence No. 102) and amended on 12 December 2023 (Evidence No. 103) define the selection procedure pertaining to activities foreseen by project iv).

The selection procedures of the projects submitted by the German authorities as evidence have been completed, as attested by the grant notifications awarded to the beneficiaries:

The joint project "Anonymization for networked mobility systems (ANYMOS)" has been awarded to the Research Center for Information Technology (*Forschungszentrum Informatik*) (FZI) for the funding period of 15 November 2022 to 14 November 2025 as proven by the grant notification (Evidence No. 21, pp. 2-8).

The joint project "Recommendation and Audit System for Anonymization (EAsyAnon)" has been awarded to the Deggendorf Institute of Technology (*Technische Hochschule Deggendorf*) for the funding period of 15 December 2022 to 14 December 2025 as proven by the grant notification (Evidence No. 22, pp. 2-11).

The joint project "Anonymization and synthesis of click paths and behaviour on the web (SynthiClick)" has been awarded to the Karlsruhe Institute for Technology (*Karlsruher Institut für*

Technologie) for the funding period 15 December 2022 to 14 December 2025 as proven by the grant notification (Evidence No. 23, pp. 2-11).

As evidenced in the section above under paragraph iv), all above-mentioned projects related to the project “research projects on technologies to anonymise data” have started.

v) actions aiming at developing data literacy in different fields of science (including those that are less data-intensive)

The guideline for the funding of research projects for the establishment of Data Competence Centres in Science of 13 June 2022, published in the Federal Gazette on 21 June 2022 (Evidence No. 104), defines the selection procedure pertaining to activities foreseen by project v).

The selection procedures of the projects submitted by the German authorities as evidence have been completed, as attested by the grant notifications awarded to the beneficiaries:

The project “Data Literacy in NFDI: Overview of and Requirements for Data Literacy and Data Science Continuing Education Opportunities for Scientists (NFDI Data Literacy)” has been awarded to the National research data infrastructure (*Nationale Forschungsdateninfrastruktur e.V.*) for the funding period of 1 January 2022 to 31 December 2023 as proven by the grant notification (Evidence No. 27, pp. 1-9).

The joint project “Data Literacy Alliance (Dalia) Knowledge Graph for FAIR Data Use and Delivery Based on Semantic Web Technology” has been awarded to the Technical University of Darmstadt (*Technische Universität Darmstadt*) for the funding period of 1 November 2022 to 31 October 2025 as proven by the grant notification (Evidence No. 28, pp. 1-9).

As evidenced in the section above under paragraph (v), all above-mentioned projects related to the project ‘actions aiming at developing data literacy in different fields of science (including those that are less data-intensive)’ have started.

vi) data science laboratories linked to the national research data infrastructure

The guideline for the funding of research projects for the establishment of Data Competence Centres in Science of 13 June 2022 (Evidence No. 104) defines the selection procedure pertaining to activities foreseen by project vi).

The selection procedures of the projects submitted by the German authorities as evidence have been completed, as attested by the grant notifications awarded to the beneficiaries:

The joint project “Interdisciplinary Data Competence Center for the Bremen Region (DataNord)” awarded to the University of Bremen (*Universität Bremen*) for the funding period of 15 November 2023 to 14 November 2026 as proven by the grant notification (Evidence No. 29, pp. 1-12).

The joint project “Berlin-Brandenburg Data Competence Center for Digital Humanities, Public Administration, Computer Science and Information Science (QUADRIGA)” has been awarded to the University of Potsdam (*Universität Potsdam*) for the funding period of 15 November 2023 to 14 November 2026 as proven by the grant notification (Evidence No. 30, pp. 1-12).

The joint project “Knowledge Laboratory for Natural Science Collections and Object-Centered Data – Knowledge laboratory for natural science collections and object-centered data (WiNoDa)” has been awarded to the Museum for Natural History - Leibniz Institute for Evolution and Biodiversity Science (*Museum für Naturkunde Leibniz-Institut für Evolutions- und Biodiversitätsforschung*) for the funding

period of 15 November 2023 to 14 November 2026 as proven by the grant notification (Evidence No. 31, pp. 1-12).

As evidenced in the section above under paragraph vi), all above-mentioned projects related to the project “data science laboratories linked to the national research data infrastructure” have started.

vii) support to young researchers in data science

The guideline for the funding of projects to strengthen the data literacy of early career researchers of 17 August 2021, published in the Federal Gazette on 6 September 2021 (Evidence No. 105), defines the selection procedure pertaining to activities foreseen by project vii).

The selection procedures of the projects submitted by the German authorities as evidence have been completed, as attested by the grant notifications awarded to the beneficiaries:

The joint project “Quantitative Methods in Slavic Studies (QuantiSlav)” has been awarded to the Albert Ludwig University of Freiburg (*Albert-Ludwigs-Universität-Freiburg*) for the funding period of 1 October 2022 to 30 September 2025 as proven by the grant notification (Evidence No. 32, pp. 1-9).

The joint project “NLP as a New Data Competence in Educational Research (Studi-BUCH)” has been awarded to the RWI - Leibniz Institute for Economic Research (*Leibniz-Institut für Wirtschaftsforschung e.V.*) for the funding period of 1 October 2022 to 30 September 2025 as proven by the grant notification (Evidence No. 33, pp. 1-9).

As evidenced in the section above under paragraph vii), all above-mentioned projects related to the project “support to young researchers in data science” have started.

viii) support to universities in the re-use, sharing and management of research data

The guideline for the funding of projects on the topic of reuse and management of research data at Universities of Applied Sciences of 29 July 2021, published in the Federal Gazette on 17 August 2021 (Evidence No. 106), defines the selection procedure pertaining to activities foreseen by project viii).

The selection procedures of the projects submitted by the German authorities as evidence have been completed, as attested by the grant notifications awarded to the beneficiaries:

The joint project “Sustainable and quality-assured competence development of FDM on HAWn in RLP (FDM@HAW.rlp)” has been awarded to the Mainz University of Applied Sciences (*Hochschule Mainz*) for the funding period of 1 September 2022 to 31 August 2025 as proven by the grant notification (Evidence No. 35, pp. 1-9).

The joint project “Institutionalized and Sustainable Research Data Management in Brandenburg (IN-FDM-BB)” has been awarded to the Potsdam University of Applied Sciences (*Fachhochschule Potsdam*) for the funding period of 1 October 2022 to 30 September 2025 as proven by the grant notification (Evidence No. 36, pp. 1-9).

As evidenced in the section above under paragraph viii), all above-mentioned projects related to the project “support to universities in the re-use, sharing and management of research data” have started.

ix) monitoring of data skills of the German population

The selection procedure of the project “Long-term monitoring of digital and data-related skills of the German population”, which pertains to the activities foreseen by project ix), has been completed. It

is attested by the grant notification awarded to the beneficiary Leibniz Institute for Educational Trajectories (*Leibniz-Institut für Bildungsverläufe e. V.*) for the funding period of 1 August 2021 to 31 July 2026 (Evidence No. 38, pp. 1-11). As evidenced in the section above under paragraph ix), the project has started. The selection procedure of the project “Long-term monitoring of digital and data-related skills of the German population”, which pertains to the activities foreseen by project (ix), has been completed. It is attested by the grant notification awarded to the beneficiary Leibniz Institute for Educational Trajectories for the funding period of 1 August 2021 to 31 July 2026 (evidence No. 38, pp 1-11). As evidenced in the section above under paragraph (ix), the project has started.

x) data literacy courses for students and other learners

The guideline on the Federal-State initiative for the promotion of Artificial Intelligence in higher education of 12 February 2021, published in the Federal Gazette on 24 February (Evidence No. 107), defines the selection procedure pertaining to activities foreseen by project x).

The selection procedures of the projects submitted by the German authorities as evidence have been completed, as attested by the grant notifications awarded to the beneficiaries:

The project “Establishing Sustainable AI-Related Degree Programs for Responsible Artificial Intelligence at Freie Universität Berlin (ENKIS)” has been awarded to the Free University of Berlin (*Freie Universität Berlin*) for the funding period of 1 December 2021 to 30 November 2025 as proven by the grant notification (Evidence No. 39, pp. 1-10).

The project “AI Integration - Development – Teaching” has been awarded to the Christian Albrecht University of Kiel (*Christian-Albrechts-Universität zu Kiel*) for the funding period of 1 December 2021 to 30 November 2025 as proven by the grant notification (Evidence No. 40, pp. 1-9).

The project “Central point of contact for innovative teaching and learning of interdisciplinary skills in artificial intelligence (ZAKKI)” has been awarded to the Magdeburg-Stendal University of Applied Sciences (*Hochschule Magdeburg-Stendal*) for the funding period of 1 December 2021 to 30 November 2025 as proven by the grant notification (Evidence No. 41, pp. 1-9).

As evidenced in the section above under paragraph x), all above-mentioned projects related to the project “data literacy courses for students and other learners” have started.

xi) research and innovation on architectures, institutions and spaces for the data society

The project pertaining to activities foreseen by project xi) is carried out by PD – Berater der öffentlichen Hand GmbH, on behalf of the Federal Ministry of Education and Research, in line with Section 7 (2) of the Federal Budget Code on the commissioning of private-sector providers to perform government tasks or economic activities serving public purposes with equal or greater efficiency (expression of interest procedure) and following an expression of interest procedure (Evidence No. 108). The selection procedure for project xi) has thus been completed by the signing of a contract between PD - Berater der öffentlichen Hand GmbH and the Federal Ministry of Education and Research on 6 July 2023 for the establishment of a transfer hub for data skills (Evidence No. 43).

As evidenced in the section above under paragraph xi), the project related to the project “research and innovation on architectures, institutions and spaces for the data society” has started.

xii) development of a freely available toolbox for increased data literacy

The selection procedures of the projects submitted by the German authorities have been completed, as attested by the grant notifications awarded to the two beneficiaries of sub-projects of the joint project “Toolbox Data Literacy (TBDK)”: The selection procedures of the projects submitted by the German authorities have been completed, as attested by the grant notifications awarded to the two beneficiaries of sub-projects of the joint project “Toolbox Data Literacy (TBDK)”:

The sub-project “Development of a digital data tool-centered learning and competence platform for the comprehensive teaching of data literacy and basic data literacy” has been awarded to StackFuel GmbH for the funding period of 15 December 2021 to 14 December 2024 as proven by the grant notification (Evidence No. 44, pp. 29-36).

The sub-project “Scientifically accompanying needs analysis and requirements management based on the design-based research model for the development of a data tool-centered learning and competence platform” has been awarded to the Institute for Applied Computer Science (*Institut für Angewandte Informatik e.V.*) (InfAI) for the funding period of 15 December 2021 to 14 December 2024 as proven by the grant notification (Evidence No. 45, pp. 28-36).

As evidenced in the section above under paragraph ix), the project has started.

xiii) a pilot project on data cooperation in the food value chain.

The project pertaining to activities foreseen by project xiii) is carried out by PD – Berater der öffentlichen Hand GmbH, on behalf of the Federal Ministry of Education and Research, in line with Section 7 (2) of the Federal Budget Code on the commissioning of private-sector providers to perform government tasks or economic activities serving public purposes with equal or greater efficiency (expression of interest procedure) and following an expression of interest procedure (Evidence No. 102). The selection procedure was completed with the signing of a contract between PD – Berater der öffentlichen Hand GmbH and the Federal Ministry of Food and Agriculture on 2 May 2022 (Evidence No. 48, p. 16) for the delivery of a feasibility study.

As evidenced in the section above under paragraph xiii), the project related to the project “a pilot project on data cooperation in the food value chain” has started.

In line with the description of the measure, **a specific set of actions aiming at improving data literacy and data use in the federal administration shall also be supported. These shall include the set of actions mentioned in the measure description.**

The following set of actions have as an objective the improvement of data literacy and data use in the federal administrations:

xiv) the stock-taking and analysis of measures already taken to increase data literacy

This action initiated a stock-taking exercise and analysis of measures already taken across all Federal Ministries in order to increase data literacy. As mentioned above under paragraph xiv), a questionnaire has been sent to this end to all Ministries, which have responded to the exercise (Evidence No. 49-69).

xv) the mapping of data competence across public administration services

This action consisted in a mapping of the data competence across public administration services in order to address the lack of data literacy. As mentioned above under paragraph xv), a questionnaire has been sent to this end to all Federal Ministries which have responded to the exercise (Evidence No. 49-69).

xvi) the creation of Chief Data Scientists or similar roles in federal ministries

This action consists in the creation of Chief Data Scientists or similar roles in Federal Ministries to address the lack of infrastructure to share and use data within the federal administrations. As mentioned above under paragraph xvi), this action has begun, as proven by confirmation letters signed by the respective State Secretaries and Director Generals (Evidence No. 78-93).

xvii) the establishment and strengthening of internal data laboratories and data competence centres in federal ministries and agencies, including notably the Foreign Office, the Federal Ministry of Education and Research, the Federal Environment Agency, the Federal Ministry of Defence, the Federal Ministry for Economic Cooperation and Development, the Federal Institute for Occupational Safety and Health, the German Corporation for International Cooperation

This action consists in the establishment and strengthening of internal data laboratories and data competence centres in Federal Ministries and agencies. As mentioned above under paragraph xvii), the action has begun in all Ministries and agencies concerned, as proven by confirmation letters signed by the respective State Secretaries and Director Generals (Evidence No. 78-93).

xviii) the creation of a digital academy in the Federal Academy for Public Administration, bringing together all training opportunities to support digitalisation.

This action consisted in the creation of a digital academy in the Federal Academy for Public Administration to bring together all training opportunities to support digitalisation (Evidence No. 80, 95 and 96).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 53 Launch of first projects

Related Measure: 2.1.2 IPCEI Microelectronics and Communication Technologies

Quantitative Indicator: Number of projects

Baseline: 0

Target: 10

Time: Q4 2022

1. Context:

The objective of the measure is to contribute to a cross-border initiative aiming at endowing the European Union with capabilities in electronics design and deployment of the next generation of low power trusted processors and other electronic components. The initiative is implemented through a planned Important Project of Common European Interest (IPCEI).

Target 53 concerns the launch of first projects. Target 53 follows the completion of milestone 52, related to the content design of the planned IPCEI. It will be followed by target 54, related to the budget execution.

The final expected date for implementation is 31 August 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Notification of a grant of a provisional amount (<i>Bescheid über eine Zuwendung in vorläufiger Höhe</i>) for ams-OSRAM International GmbH	The document shows the decision on a grant of a provisional amount from the Federal Ministry for Economic Affairs and Climate Action.
3	Notification of a grant of a provisional amount for TRUMPF Photonic Components GmbH	The document shows the decision on a grant of a provisional amount from the Federal Ministry for Economic Affairs and Climate Action.
4	Notification of a grant of a provisional amount for Elmos Semiconductor SE	The document shows the decision on a grant of a provisional amount from the Federal Ministry for Economic Affairs and Climate Action.
5	Notification of a grant of a provisional amount for Semikron Elektronik	The document shows the decision on a grant of a provisional amount from the Federal Ministry for Economic Affairs and Climate Action.

	GmbH & Co. KG	
6	Notification of a grant of a provisional amount for Ericsson Antenna Technology Germany GmbH	The document shows the decision on a grant of a provisional amount from the Federal Ministry for Economic Affairs and Climate Action.
7	Notification of a grant of a provisional amount for Wacker Chemie AG	The document shows the decision on a grant of a provisional amount from the Federal Ministry for Economic Affairs and Climate Action.
8	Notification of a grant of a provisional amount for Carl Zeiss SMT GmbH	The document shows the decision on a grant of a provisional amount from the Federal Ministry for Economic Affairs and Climate Action.
9	Notification of a grant of a provisional amount for Adtran Networks SE	The document shows the decision on a grant of a provisional amount from the Federal Ministry for Economic Affairs and Climate Action.
10	Notification of a grant of a provisional amount for Rohde&Schwarz GmbH & Co.	The document shows the decision on a grant of a provisional amount from the Federal Ministry for Economic Affairs and Climate Action.
11	Notification of a grant of a provisional amount for NXP Semiconductors Germany GmbH	The document shows the decision on a grant of a provisional amount from the Federal Ministry for Economic Affairs and Climate Action.
12	Copy of AMS-OSRAM project description	<p>The document shows the project description involving:</p> <ul style="list-style-type: none"> • Development of new technologies: (1) Process technology based on digital twin; (2) Visible LEDs based on 200 mm wafers; (3) Chip-scale packaging for miniaturized LEDs • Development of new products with (1) IR-technology, (2) miniaturized white light LEDs, (3) UV-technology, and (4) headlights.
13	Copy of TRUMPF project description	<p>The document shows the project description involving:</p> <ul style="list-style-type: none"> • Development of new technologies based on VCSEL chips • Development of new products based on VCSEL chips: (1) AR/VR glasses, (2) Polarised arrays, (3) High power single mode for future data storage, (4) Integrated illumination sources for 3D sensing, (5) LiDAR, (6) Datacom, (7) Illumination source, and (8) VCSEL chip at 1310 nm for longer haul data transmission.
14	Copy of Elmos Semiconductor project	The document shows the project description involving:

	description	<ul style="list-style-type: none"> • New solution for cyber security sensors • Development of new technologies: (1) New digital technology node < 130 nm, (2) Dual die and BSI 3D integration technology, and (3) SPAD technology • Development of new products: (1) LiDAR imager and laser driver, (2) Ultrasonic Vision, (3) Gesture Recognition, and (4) Intelligent Motor Control.
15	Copy of Semikron Elektronik project description	<p>The document shows the project description involving:</p> <ul style="list-style-type: none"> • Development of double-sided sinter technology • Development of new products: (1) Free-wheeling diodes based on silicon combined with IGBT and (2) Power module based on SiC-chips.
16	Copy of Ericsson Antenna project description	<p>The document shows the project description involving:</p> <ul style="list-style-type: none"> • Development of new products: (1) GaN power amplifier, (2) IC for digital radio front-end, (3) AD/DA-Converter, and (4) Analogue front-end module for radio antenna.
17	Copy of Wacker Chemie project description	<p>The document shows the project description involving:</p> <ul style="list-style-type: none"> • Development of a novel technology for fabrication of high purity polysilicon.
18	Copy of Carl Zeiss project description	<p>The document shows the project description involving:</p> <ul style="list-style-type: none"> • Development of new products: (1) EUV Lithography optics, (2) EUV Photomask repair equipment, and (3) EUV Photomask metrology and inspection platform.
19	Copy of Adtram project description	<p>The document shows the project description involving:</p> <ul style="list-style-type: none"> • Development of hard- and firmware based cybersecurity components for both product families • Development of a common platform for transceiver family technology <ul style="list-style-type: none"> • Development of new pluggable coherent optical • transceivers based on the above mentioned technology.
20	Copy of Rohde & Schwarz project description	<p>The document shows the project description involving:</p> <ul style="list-style-type: none"> • Development of GaN-on-SiC semiconductor technology for

		application in mobile communication and sensors as well as test and measurement systems.
21	Copy of NXP project description	<p>The document shows the project description involving:</p> <ul style="list-style-type: none"> • New solutions for cyber security: (1) RISC-V 5nm automotive security subsystem with physical protection, (2) RISC-V security subsystem for automotive security assurance/certification level, (3) 5nm countermeasures with RISC-V integration, (4) Post-quantum cryptography security countermeasures against physical attacks, and (5) In-depth package traffic inspection support • Development of new products: 1) novel System-on-Chip Platform for automotive processors in 5nm technology node, (2) new Baseband ICs for 6G applications in 5nm technology node, (3) new Analog-Frontend-Module for 6G, and (4) 140 GHz Multi-domain radar solution in sub-20nm technology node.
22	Copy of the Administrative Procedures Act (<i>Verwaltungsverfahrensgesetz</i>)	The document shows the Administrative Procedures Act.
23	Copy of the leaflet of the project of ams-OSRAM International GmbH funded via the grant decision	<p>The leaflet, published by the Federal Ministry for Economic Affairs and Climate Action, indicates the project's start as well as anticipated end date. Available online at:</p> <p>https://www.bmwk.de/Redaktion/DE/Downloads/I/Ipcei-Projektsteckbriefe-2/2023-11-ipcei-mekt-projektsteckbrief-ams-osram.pdf?__blob=publicationFile&v=4.</p>
24	Copy of the leaflet of the project of TRUMPF Photonic Components GmbH funded via the grant decision	<p>The leaflet, published by the Federal Ministry for Economic Affairs and Climate Action, indicates the project's start as well as anticipated end date. Available online at:</p> <p>https://www.bmwk.de/Redaktion/DE/Downloads/I/Ipcei-Projektsteckbriefe-2/2023-11-ipcei-mekt-projektsteckbrief-trumpf.pdf?__blob=publicationFile&v=2.</p>
25	Copy of the leaflet of the project of Elmos Semiconductor SE funded via the grant decision	<p>The leaflet, published by the Federal Ministry for Economic Affairs and Climate Action, indicates the project's start as well as anticipated end date. Available online at:</p> <p>https://www.bmwk.de/Redaktion/DE/Downloads/I/Ipcei-Projektsteckbriefe-2/2023-11-ipcei-</p>

		mekt-projektsteckbrief-elmos-semiconductor.pdf?_blob=publicationFile&v=2.
26	Copy of the leaflet of the project of Semikron Elektronik GmbH & Co. KG funded via the grant decision	The leaflet, published by the Federal Ministry for Economic Affairs and Climate Action, indicates the project's start as well as anticipated end date. Available online at: https://www.bmwk.de/Redaktion/DE/Downloads/I/Ipcei-Projektsteckbriefe-2/2023-11-ipcei-mekt-projektsteckbrief-semikron.pdf?_blob=publicationFile&v=2.
27	Copy of the leaflet of the project of Ericsson Antenna Technology Germany GmbH funded via the grant decision	The leaflet, published by the Federal Ministry for Economic Affairs and Climate Action, indicates the project's start as well as anticipated end date. Available online at: https://www.bmwk.de/Redaktion/DE/Downloads/I/Ipcei-Projektsteckbriefe-2/2023-11-ipcei-mekt-projektsteckbrief-ericsson-antenna.pdf?_blob=publicationFile&v=2.
28	Copy of the leaflet of the project of Wacker Chemie AG funded via the grant decision	The leaflet, published by the Federal Ministry for Economic Affairs and Climate Action, indicates the project's start as well as anticipated end date. Available online at: https://www.bmwk.de/Redaktion/DE/Downloads/I/Ipcei-Projektsteckbriefe-2/2023-11-ipcei-mekt-projektsteckbrief-wacker.pdf?_blob=publicationFile&v=2.
29	Copy of the leaflet of the project of Carl Zeiss SMZ GmbH funded via the grant decision	The leaflet, published by the Federal Ministry for Economic Affairs and Climate Action, indicates the project's start as well as anticipated end date. Available online at: https://www.bmwk.de/Redaktion/DE/Downloads/I/Ipcei-Projektsteckbriefe-2/2023-11-ipcei-mekt-projektsteckbrief-carl-zeiss.pdf?_blob=publicationFile&v=2.
30	Copy of the leaflet of the project of Adtran Networks SE funded via the grant decision	The leaflet, published by the Federal Ministry for Economic Affairs and Climate Action, indicates the project's start as well as anticipated end date. Available online at: https://www.bmwk.de/Redaktion/DE/Downloads/I/Ipcei-Projektsteckbriefe-2/2023-11-ipcei-mekt-projektsteckbrief-adtran.pdf?_blob=publicationFile&v=2.
31	Copy of the leaflet of the project of Rohde&Schwarz GmbH & Co. funded via the grant decision	The leaflet, published by the Federal Ministry for Economic Affairs and Climate Action, indicates the project's start as well as anticipated end date. Available online at: https://www.bmwk.de/Redaktion/DE/Downloads/I/Ipcei-Projektsteckbriefe-2/2023-12-ipcei-mekt-projektsteckbrief-rohde-schwarz.pdf?_blob=publicationFile&v=2.
32	Copy of the leaflet of the	The leaflet, published by the Federal Ministry for

	<p>project of NXP Semiconductors Germany GmbH funded via the grant decision</p>	<p>Economic Affairs and Climate Action, indicates the project's start as well as anticipated end date. Available online at: https://www.bmwk.de/Redaktion/DE/Downloads/I/Ipcei-Projektsteckbriefe-2/2023-12-ipcei-mekt-projektsteckbrief-nxp.pdf?__blob=publicationFile&v=2.</p>
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3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

Ten grant decisions have been signed. Launch of first projects.

The German authorities have provided ten grant decisions (Evidence No. 2-11) that were issued by the Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz* - BMWK), The grant decisions followed the call of expression of interested for planned research and investment projects in the area of microelectronics and communication technology from 1 February 2022 (*Bekanntmachung einer Interessensbekundung zur geplanten Förderung von Forschungs-und Investitionsvorhaben im Bereich Mikroelektronik und Kommunikationstechnology, Bundesministerium für Wirtschaft und Energie, jetzt Bundesministerium für Wirtschaft und Klimaschutz*, 1 Februar 2021 and the subsequent authorisation of 23 notified projects via the stated aid decision adopted by the European Commission on 8 June 2023 State Aid Decision, Important Project of Common European Interest on Microelectronics/Communication Technologies (ICPEI ME/CT, C(2023), 3817 final, 8 June 2023, hereinafter State Aid Decision ICPECI ME/CT). Following this authorization, the grant decisions for 10 projects have been signed by Mid-November 2023. These decisions were sent electronically and were not signed. Whilst this constitutes a minimal formal deviation from the requirement of the Council Implementing Decision, the grant decisions have legal effect based on Section 37(3) of the Administrative Procedures Act, which states in phrase one that a written or electronic administrative act must indicate the issuing authority and contain the signature or name of the head of the authority, his representative or deputy. (Copy of the Administrative Procedures Act (*Verwaltungsfahrengesetz*) Evidence No. 22, p. 22). As of this, this minimal deviation does not affect the progress towards achieving the investment that the target represents. On this basis, it is considered that this constitutive element of the target is satisfactorily fulfilled.

The following ten documents show the ten grant decisions for provisional amounts that have been issued for ten projects for the IPCEI Microelectronics and Communication Technologies and provided as substantiating evidence by Germany:

- Notification of a grant of a provisional amount for ams-OSRAM International GmbH
- Notification of a grant of a provisional amount for TRUMPF Photonic Components GmbH
- Notification of a grant of a provisional amount for Elmos Semiconductor SE
- Notification of a grant of a provisional amount for Semikron Elektronik GmbH & Co. KG
- Notification of a grant of a provisional amount for Ericsson Antenna Technology Germany GmbH
- Notification of a grant of a provisional amount for Wacker Chemie AG
- Notification of a grant of a provisional amount for Carl Zeiss SMT GmbH
- Notification of a grant of a provisional amount for Adtran Networks SE
- Notification of a grant of a provisional amount for Rohde&Schwarz GmbH & Co.
- Notification of a grant of a provisional amount for NXP Semiconductors Germany GmbH

The grant decisions indicate the funding ratio related to the actual costs of a project as well as the maximum amount of funding (Evidence No. 2-11). The final grant amount will be calculated on the basis of incurred eligible and demonstrated costs. Each grant decision obliges the company to carry out the listed co-operation (Evidence No. 2-11, p. 11, paragraph 7). For each of the decisions, it is stated that the project is intended to contribute to the development of sustainable, innovative microelectronics and communication technologies up to market maturity in Germany and the European Union (Evidence No. 1, p. 4, paragraph 3). For ams-OSRAM International GmbH (Evidence No. 2), Carl Zeiss SMT (Evidence No. 8) and NXP Semiconductors Germany GmbH (Evidence No. 11), the financial support consists of a conditionally repayable grant. For TRUMPF Photonic Components GmbH (Evidence No. 3), Elmos Semiconductor SE (Evidence No. 4), SEMIKRON Elektronik GmbH & Co. KG (Evidence No. 5), Ericsson Antenna Technology Germany GmbH (Evidence No. 6), Wacker Chemie AG (Evidence No. 7), Adtran Network SE (Evidence No. 9), and Rohde & Schwarz GmbH & Co. KG (Evidence No. 10), the financial support consists of non-repayable grants.

The following ten documents, provided as substantiating evidence by Germany, show that the ten projects for the IPCEI Microelectronics and Communication Technologies have been launched:

- Copy of the leaflet of the project of ams-OSRAM International GmbH funded via the grant decision listing the goals, budget and cooperation partners of the project in the sense workstream of the IPCEI and dated July 2023
- Copy of the leaflet of the project of TRUMPF Photonic Components GmbH funded via the grant decision listing the goals, budget and cooperation partners of the project in the sense and communicate workstreams of the IPCEI and dated July 2023
- Copy of the leaflet of the project of Elmos Semiconductor SE funded via the grant decision listing the goals, budget and cooperation partners of the project in the sense and think workstreams of the IPCEI and dated July 2023
- Copy of the leaflet of the project of Semikron Elektronik GmbH & Co. KG funded via the grant decision outlining the goals, budget and cooperation partners of the project in the act workstream of the IPCEI and dated July 2023
- Copy of the leaflet of the project of Ericsson Antenna Technology Germany GmbH funded via the grant decision listing the goals, budget and cooperation partners of the project in the communicate workstream of the IPCEI and dated July 2023
- Copy of the leaflet of the project of Wacker Chemie AG funded via the grant decision listing the goals, budget and cooperation partners of the project in the communicate, sense and think workstreams of the IPCEI and dated July 2023
- Copy of the leaflet of the project of Carl Zeiss SMZ GmbH funded via the grant decision listing the goals, budget and cooperation partners of the project in the think workstream of the IPCEI and dated July 2023
- Copy of the leaflet of the project of Adtran Networks SE funded via the grant decision listing the goals, budget and cooperation partners of the project in the communicate workstream of the IPCEI and dated July 2023
- Copy of the leaflet of the project of Rohde&Schwarz GmbH & Co. funded via the grant decision listing the goals, budget and cooperation partners of the project in the communicate workstream of the IPCEI and dated July 2023
- Copy of the leaflet of the project of NXP Semiconductors Germany GmbH funded via the grant decision listing the goals, budget and cooperation partners of the project in the communicate, sense and think workstreams of the IPCEI and dated July 2023

Furthermore, in line with the measure description, **the initiative shall be implemented through a planned Important Project of Common European Interest (IPCEI).**

The financial support is granted as aid pursuant to Article 107(3)(b) of the Treaty on the Functioning of the European Union in conjunction with the IPCEI Communication (2021/C 528/02) from the European Commission. The approval under state aid law was granted by decision of the European Commission SA.101129 (2023/N) on 8 June 2023 (Evidence No. 2-11, paragraph 2, p. 2). The European Commission has thus authorised Germany to grant all 23 notified German projects a maximum amount of state aid of EUR 4 506 000 000. This was further emphasised in each of the ten grant decisions, which state that the project assessed as eligible for funding is part of the IPCEI Microelectronics and Communication Technologies and the results achieved are to be utilised primarily in the European Union (Evidence No. 2-11, paragraph 3, p. 4).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 55 Launch of R&D&I projects

Related Measure: 2.1.3 IPCEI Next Generation Cloud Infrastructure and Services (IPCEI CIS)

Qualitative Indicator: Signature of grant decisions for R&D&I projects

Time: Q4 2022

1. Context:

The objective of the measure is to contribute to a large-scale cross-border initiative aiming at fostering the development and first industrial deployment of smart cloud and edge solutions that are highly innovative, fully interoperable, highly secure, energy efficient and fully compliant with data protection. The initiative shall be implemented through a planned Important Project of Common European Interest (IPCEI). The investment consists of providing financial support to German participants in projects to be implemented as part of the planned IPCEI. The selection criteria shall ensure that more than 50% of these projects address energy efficiency as one of their key priorities and comply with the European Code of Conduct on Data Centre Energy Efficiency.

Milestone 55 concerns the launch of R&D&I projects.

It is the first step of the investment. It will be followed by Milestone 56, related to the launch of a pilot phase of use cases, target 57, related to the first industrial deployment of solutions developed under the measure, and target 58 related to the budget execution.

The final expected date for implementation is 31 August 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Copy of the publication in the Federal Gazette (<i>Bundesanzeiger</i>) on 5 July 2021 of the description of the selection criteria	The document shows a description of the selection criteria, as published in the Federal Gazette on 5 July 2021 (BAnz AT 05.07.2021 B1).
3	Copy of the list of grant decisions	The document shows the list of the grant decisions signed, including for each of them the date of signature, the names of project participants and a brief description of the projects.
4	Copy of the grant decisions issued	The document shows a copy of the grant decisions issued to SAP SE, Deutsche Telekom AG and Siemens AG.
5	Copy of the COM decision	The document shows the decision of the European Commission regarding the Important Project of Common European Interest on Next Generation

		Cloud Infrastructure and Services (IPCEI-CIS).
6	Copy of the SAP preliminary launch	The documents show a notice of the project facilitator VDI Technologiezentrum GmbH on behalf of the Federal Ministry for Economic Affairs and Climate Action (<i>Bundesministerium für Wirtschaft und Klimaschutz – BMWK</i>) to allow for a preliminary launch of the SAP SE project within the IPCEI-CIS.
7	Copy of the opposition waivers	The document shows declarations by Deutsche Telekom AG and SAP SE to accept the grant decision and waive their right of opposition.
8	Press release of Deutsche Telekom AG of 6 December 2023	The article states that Deutsche Telekom AG has started its R&D&I project within the scope of the IPCEI. Available at: https://www.telekom.com/de/medien/medieninformationen/detail/cloud-edge-infrastruktur-1054870 , verified by Commission services on 24 October 2024.
9	Website of the project undertaken by SAP SE	The project's website indicates the launch of the project. Available at: https://apeirora.eu/ , verified by Commission services on 24 October 2024.
10	Website of the project undertaken by Siemens AG	The project's website indicates the launch of the project. Available at: https://kicksforedge.siemens.cloud/ verified by Commission services on 24 October 2024.
11	EU Code of Conduct on Data Centre Energy Efficiency - Participant Guidelines and Registration Form	Available at: https://e3p.jrc.ec.europa.eu/sites/default/files/documents/publications/participant_guidelines_v3.0.0.pdf , verified by Commission services on 24 October 2024.
12	Assessment application of EU Code of Conduct on Data Centre Energy Efficiency for Deutsche Telekom AG	This document shows why the EU Code of Conduct on Data Centre Energy Efficiency is not applicable to Deutsche Telekom AG.
13	Assessment application of EU Code of Conduct on Data Centre Energy Efficiency for SAP SE	This document shows why the EU Code of Conduct on Data Centre Energy Efficiency is not applicable to SAP SE.
14	Assessment application of EU Code of Conduct on Data Centre Energy Efficiency for Siemens AG	This document shows why the EU Code of Conduct on Data Centre Energy Efficiency is not applicable to Siemens AG.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

The grant decisions have been signed for all R&D&I projects covered by the IPCEI State aid decision. Launch of R&D&I Projects.

The copy of the IPCEI State aid decision of the European Commission regarding the Important Project of Common European Interest on Next Generation Cloud Infrastructure and Services (*hereinafter referred to as "IPCEI-CIS"*) (Evidence No. 5) is dated 5 December 2023 on page 1 and shows that the European Commission raised no objections and decided to approve the IPCEI (Evidence No. 5, p. 115). On page 8 (Evidence No. 5) it is clarified that "(16) [...]the Member States submit that IPCEI CIS aims to perform research, development and innovation (R&D&I)[...]" and that "(17) The Member States submit that the activities performed in the framework of IPCEI CIS qualify as R&D&I[...]". The IPCEI State aid decision covered three projects by German participants. These projects will be carried out by Deutsche Telekom AG (FKZ 13IPC005), SAP SE (FKZ 13IPC007) and Siemens AG (FKZ 13IPC008) (Evidence No. 5, p. 13, 15).

Deutsche Telekom AG (*hereinafter referred to as "DTAG"*) is part of workstream (*hereinafter referred to as "WS"*) 1 (Evidence No. 5, p. 19, (74)) and "(76) More specifically, the R&D&I and FID activities of WS 1 can be grouped in six key areas of research:[...]" (Evidence No. 5, p. 19) out of which DTAG contributes to five areas (Evidence No. 5, p. 22, (83)).

SAP SE is part of WS 2 (Evidence No. 5, p. 22, (85)) and "(87) The R&D&I and FID activities of WS 2 can be grouped into six key research areas:[...]" (Evidence No. 5, p. 23) out of which SAP SE contributes to 5 areas (Evidence No. 5, p. 27, (104)).

Siemens AG is part of WS 4 (Evidence, No. 5, p. 31, (118)) and "(119) [...] The R&D&I and FID activities within WS 4 can be grouped into three key research areas [...]" (Evidence No. 5, p. 31) out of which Siemens AG contributes to one area (Evidence No. 5, p. 34, (127)).

The IPCEI-CIS decision provides the required legal basis to provide state aid to three German projects within the IPCEI-CIS. The grant decisions for the projects were signed by the project administrator VDI Technologiezentrum GmbH on behalf of the Federal Ministry for Economic Affairs and Climate Action (*Bundesministerium für Wirtschaft und Klimaschutz, hereinafter referred to as "BMWK"*) on 12 and 13 December 2023 for all three German participants.

- i) The grant decision for Telekom Deutschland GmbH has been signed by the project administrator VDI Technologiezentrum GmbH on behalf of the BMWK on 12 December 2023 (Evidence No. 4, FKZ 13IPC005). Deutsche Telekom actively declared to waive their right of opposition to the grant decision on 21 December 2023 (Evidence No. 7, FKZ 13IPC005).
- ii) The grant decision for SAP SE has been signed by the project administrator VDI Technologiezentrum GmbH on behalf of the BMWK on 13 December 2023 (Evidence No. 4, FKZ 13IPC007). SAP SE actively declared to waive their right of opposition to the grant decision on 18 December 2023 (Evidence No. 7, FKZ 13IPC007).
- iii) The grant decision for Siemens AG has been signed by the project administrator VDI Technologiezentrum GmbH on behalf of the BMWK on 12 December 2023 (Evidence No. 4, FKZ 13IPC008). Siemens AG did not declare actively the right of opposition, but as it did not oppose the decision within one month, that automatically implies that it has accepted the decision (Evidence No. 4, p. 4, Section 3, FKZ 13IPC008).

Launch of R&D&I Projects.

The launch of these three R&D&I projects with German participants is evidenced by the press release of Deutsche Telekom AG of 6 December 2023 (Evidence No. 8) and the project websites of SAP SE (Evidence No. 9) and Siemens AG (Evidence No. 10).

The selection criteria have ensured that more than 50% of these projects address energy efficiency as one of their key priorities and comply with the European Code of Conduct on Data Centre Energy Efficiency.

On 5 July 2021 the Federal Ministry for Economic Affairs and Energy published a call for expression of interest in the Federal Gazette (Evidence No. 2). This call was the starting point for the selection of German projects for the IPCEI-CIS.

With respect to energy efficiency, the following should be noted. The call for expression of interest states under section “4. Selection criteria” (“4. Auswahlkriterien”) (Evidence No. 2, p. 3), which lists the selection criteria, that one of the criteria is the contribution of the project to supporting the green transformation, for example through the reduction of CO₂ emissions or increase of energy efficiency. Out of the three German projects selected as part of the IPCEI-CIS two of them address energy efficiency as one of their key priorities (Evidence No. 3). This means that two thirds and thus more than 50% of these projects address energy efficiency as one of their key priorities.

Regarding the compliance with the European Code of Conduct on Data Centre Energy Efficiency, the Council Implementing Decision required that selection criteria have ensured that the projects comply with the European Code of Conduct on Data Centre Energy Efficiency. Whilst reference to the European Code of Conduct is not explicitly made in “4. Selection criteria” (Evidence No. 2, p. 3), it should be noted that the three supported projects do not relate to data centres, so that the EU Code of Conduct on Data Centre Energy Efficiency is not applicable (Evidence No. 12-14) as evidenced by an ex-post assessment carried out by the project evaluator VDI Technologiezentrum GmbH. Whilst this constitutes a minimal substantive deviation from the requirement of the Council Implementing Decision, this is in line with the overall IPCEI-CIS that has at its core the development of novel Open Source Software for cloud edge continuum. The three German projects contribute to a part that is different from data centre infrastructure (A data centre is defined as a structure or a group of structures used to house, connect and operate computer systems/servers and associated equipment for data storage, processing and/or distribution, as well as related activities (C/2022/380, pt. 2.6.3.1.16)). Correspondingly, the related European Code of Conduct on Data Centre Energy Efficiency does not apply to the three German projects, which does not change the nature of the measure or inhibit the achievement of this milestone. However, there will be very limited funding of hardware (especially edge and far-edge hardware) solely for the purpose of testing software. The EU Code of Conduct on Data Centre Energy Efficiency addresses “buildings, facilities and rooms which contain enterprise servers, server communication equipment, cooling equipment and power equipment, and provide some form of data service (e.g. large-scale mission critical facilities all the way down to small server rooms located in office buildings)” (Evidence No. 11, p. 5). The areas of responsibility cover data centre hardware (e.g. building, cabinets, IT equipment etc.) as well as operating system, software and business practices to run the data centre (Evidence No. 11, p. 16). Testbeds are not covered by the Code of Conduct, because they do not “provide some form of data service” but strictly serve the development of the software. Therefore, compliance with the European Code of Conduct on Data Centre Energy Efficiency is not applicable for these three German projects (see also Evidence No. 12-14). As of this, this minimal deviation does not affect the progress towards achieving the investment that the milestone represents. On this basis, it is considered that this constitutive element of the milestone is satisfactorily fulfilled.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 60 Approval of projects

Related Measure: 2.2.1 Vehicle manufacturers/suppliers industry investment programme

Quantitative Indicator: Number of projects approved

Baseline: 0

Target: 401

Time: Q1 2023

1. Context:

Investment Measure 2.2.1 (Vehicle manufacturer/supply industry investment programme) seeks to modernise the German car production industry. The investment consists of funding projects to be selected through four calls for proposals corresponding to three modules and addressing “future-oriented” investments. Under this measure, no support for fossil combustion engine technologies is allowed.

For the completion of target 60, at least 401 funding projects (for the three modules) have been approved and have received a decision to provide support for implementation. This means that for each project there must be a proposal and that for each recipient there is a funding application that was accepted by the relevant project partners.

Target 60 (approval of projects) is the second target of this investment; it follows the completion of milestone 59 (publication of all funding guidelines). For the final target 61 (number of projects successfully completed), at least 531 projects need to be funded and completed.

The final expected date for implementation is 31 August 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document, duly justifying how the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID Annex) was satisfactorily fulfilled. The document also details the relevant appeal procedure for grant decisions in Germany.
2	Spreadsheet	Spreadsheet with the list of selected approved projects, containing for each project relevant information on the project, recipient, funding and date of approval.
3	Funding guidelines	Funding guidelines for the different funding modules, including later amendments.
4	Supplementary provisions	These are supplementary provisions for the funding guidelines for each module. These also include provisions on the use of the funding and

		the mechanisms to verify the correct use of the funding.
5	Sample of 61 proposals selected by the Commission	For each project, a copy of the submitted project proposal. These proposals include a description of the project, with attached the signed funding applications from each recipient.
6	Sample of 61 approvals selected by the Commission	For each project, a copy of the signed approval from the relevant project implementing partner. These documents include a notification that the funding has been granted, followed by the specific supplementary provisions for that module.
7	Sample of 61 acknowledgements selected by the Commission	For each project, a copy of the recipient's acknowledgement of receipt of the approval and support decision for implementation. In those cases where no acknowledgement of receipt by the recipient exists, a signed PDF-document is included that explicitly mentions the one-month appeal period.
8	Explanations of acknowledgement	These are signed letters by the project implementation partners, that confirm that for none of the funding recipients from their respective modules appealed against the support decision.

3. Analysis:

At least 401 funding projects (for the three modules) have been approved and have received a support decision for implementation.

The German authorities provided a list with 484 unique projects that focused on future-oriented investments for the German car manufacturing sector. These projects fall under one of three modules: i) modernise the vehicle production process; ii) develop new vehicle technologies and; iii) support the development of electric vehicles. For this target, all modules are represented in Evidence No. 2. In the spreadsheet, the funding code, name of the recipient, module number and the amount of support is shown. The grant support was granted on the basis of the funding guidelines and its amended versions (Evidence No. 3).

On the basis of the list of 484 unique projects (Evidence No. 2) the Commission drew a sample of 60 randomly selected projects and an additional one was added to ensure that all modules were covered. For each of the sample units selected, the German authorities provided the documents listed as Evidence No. 5-7. For each project selected, there is a copy of the submitted project proposal. These proposals include a description of the project, with the signed funding applications from each recipient. In addition, for each project, there is a copy of the implementing partner's approval of the application and decision to provide support for the project. Lastly, a copy was provided of the recipient's acknowledgement of receipt of this approval and support decision for implementation. In those cases where no acknowledgement of receipt by the recipient exists, a signed PDF-document is included that explicitly mentions the one-month appeal period.

The evidence provided for a sample of 61 units confirmed that the requirements of the target have been met:

For each project in the sample, a copy of the submitted project proposal (Evidence No. 5) and signed approval from the project implementing partner (Evidence No. 6) are present. The recipient's name, amount of funding and project partner are aligned with the information from the spreadsheet. In the summary document, the German authorities describe in detail the funding procedure and that the support decision becomes final by law after the one-month appeal period indicated at the end of each grant notification has expired (See Article 40 and Article 70 of the Code of Administrative Court Procedure (*Verwaltungsgerichtsordnung - VwGO*)).

To verify that each project included in the sample received a final support decision for implementation, the recipient's acknowledgements (Evidence No. 7) are checked. In 46 cases, there is an explicit acknowledgment from the recipient that the approval was well-received and that they did not object to the support decision. In seven cases, the Commission received a document signed by the recipient, waiving their right to appeal and declaring that they did not object to the funding decision. In eight cases, the acknowledgement came in the form of a signed PDF-document from the project implementing partner. These documents state the name of the recipient, project and module, as well as the date of the approval and the end of the appeal period. Lastly, via additional signed letters, the project implementing partners confirmed that for none of those projects in their modules, the support decision was appealed by the recipient (Evidence No. 8). Considering this evidence, it is considered that each of the 61 sampled project received a final support decision for implementation.

Furthermore, in line with the measure description, **no targeted support for fossil combustion engine technologies in the vehicle sector will be provided under the measure.** The funding guidelines for the four different modules (Evidence No. 3) explicitly mention what kind of projects can be supported. Fossil combustion engine technologies do not feature in any of the categories listed (nor are they explicitly mentioned in the guidelines or supplementary provisions). In addition, the project proposals and spreadsheet (Evidence No. 2, column B and E) confirm that the funding was focused on green- and digital-related projects. On this basis, it is concluded that no targeted support for fossil combustion engine technologies was given for the projects.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 63 Active participation of additional enterprises in CET networks

Related Measure: 2.2.2 Federal programme ‘Building continuing education and training networks (CET networks)’

Quantitative Indicator: Number of additional enterprises participating in CET networks

Baseline: 0

Target: 200

Time: Q4 2022

1. Context:

Reform measure 2.2.2 aims to support a culture of learning and training for employees of German small and medium-sized enterprises (SMEs). The measure does so by supporting the creation and expansion of training networks (*hereinafter referred to as “CET networks”*), which facilitate exchange with other companies and offer training activities (creating so-called skills alliances).

For the completion of target 63, at least 200 additional enterprises need to have participated in projects organised by one of these CET networks, focusing on one or more training activities. These are: i) collection of training needs (for example through surveys), ii) the design of new training measures or modules and iii) the use of proposed training measures or modules together with other companies. These 200 enterprises need to be additional, meaning that they are not designated as cooperation partners at the start of the respective skills alliance.

This target is the second target of this reform; it follows target 62 related to the publication of the funding guidelines, which was completed in Q2 2020. It will be followed by the final target 64 related to redesigning or revising at least 60 training measures or sub-modules while building upon the needs assessments carried out by the CET networks.

The final expected date for implementation is 31 December 2024.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID Annex) was satisfactorily fulfilled, with appropriate links to the underlying evidence.
2	List of additional enterprises	A list of 240 additional enterprises, which are participating in CET networks, including an indication of the type of activity exercised in connection to the core activities of the CET networks.
3	Confirmation by CET network offices	Confirmation by the CET network offices that each of the additional enterprises participated in

		at least one of the CET network training activities.
4	Sample of 60 (selected by the Commission) documents proving the enterprise participation in the core activity of the CET networks (<i>Belege</i>)	For each unit in the sample, a copy of one or more documents such as written submissions, call for expression of interest, notes, training material, participant lists of meetings or other available primary evidence supporting the fact that the enterprise participates in the core activities of the CET networks.
5	Sample of 60 initial project applications (<i>Anträge</i>)	For each unit in the sample, an extract of the initial applications of the applicants/project managers of the CET network indicating the cooperation partners at the start of the respective skills alliances.
6	Copy of the grant decision (<i>Zuwendungsbescheide</i>)	For each project in the sample, a copy of the grant decisions sent to the applicants applying for funding of a CET network (following application).
7	WBV Übersicht DARP Spreadsheet	A spreadsheet providing following information on the CET networks: the number of the CET network, the CET project title (name), the name of the applicant, the place of origin of the applicant, the place of establishment of the CET, the area of action of the CET, the cooperation partners at the start of the respective CET networks and the date of the project start.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

At least 200 additional enterprises participate in CET networks.

The German authorities provided a list of 240 additional enterprises, which participated in the CET networks (Evidence No. 2). Additional in this sense means that they joined the network only after the start of the network's activities.

On the basis of the list of 240 additional enterprises (Evidence No. 2), the Commission drew a sample of 60 randomly selected enterprises. The evidence provided for a sample of 60 units confirmed that the requirements of the target have been met. For each of the sampled enterprises, the German authorities provided the documents listed under 3-5 in the section "Evidence provided" above. These documents include confirmation by the CET network offices that each of the additional enterprises participated in at least one of the CET network activities (Evidence No. 3). For each unit in the sample, a copy of one or more documents (Evidence No. 4) such as written submissions, calls for expression of interest, notes, training material, participant lists of meetings or other available primary evidence supporting the fact that the enterprise participates in the core activities of the CET networks. For each unit in the sample, an extract of the initial applications (Evidence No. 5) of the applicants/project managers of the CET network indicating the cooperation partners at the start of the respective skills alliances.

In addition, the German authorities provided a spreadsheet containing the following information: the number of the CET network, the CET project title (name), the name of the applicant, the place of origin of the applicant, the place of establishment of the CET, the area of action of the CET, the cooperation partners at the start of the respective CET networks and the date of the project start (Evidence No. 7).

To make sure that the additional companies joined a CET network that received funding through this programme, the copies of the grant decisions for each project (Evidence No. 6) were checked for the correct network name and training activity. It was concluded that all the sampled enterprises indeed participated in existing CET networks.

These companies participate in the collection of training needs, the design of new training measures or modules and the use of proposed training measures or modules together with other companies (use of information and participation in events only shall not be considered as active participation).

Each additional enterprise (that is an enterprise that joined a CET network after the start of the network's activities), needs to have participated in one of the following three activities. These activities are i) the collection of training needs (such as through a survey), ii) the design of new training measures or modules or iii) the use of proposed training measures or modules together with other companies (for example by presenting on relevant skills or experience in an event). The enumeration of the activities is alternative, meaning that each enterprise only needs to have participated in one of the three activities. For all 60 enterprises in the sample, the collection of primary evidence (Evidence No. 4) and confirmations by the CET network (Evidence No. 3) were considered.

For each enterprise, it was checked whether the documents proving enterprise participation (Evidence No. 4) showed the name of the additional enterprise, the name or number of the network and a mention or description of the training activity. For some of the enterprises, multiple pieces of evidence were provided to prove that at least one of the three activities mentioned above took place. Evidence No. 3 contains the confirmation from each CET network that the enterprises participated in one of the activities mentioned above. The documents under Evidence No. 4 show that their participation goes beyond merely using information and attending events (for example by providing a presentation given by the enterprise, or the signed minutes of a meeting where experiences were exchanged). To further substantiate this participation, it was checked under Evidence No. 3 that the number and/or name of the network was present, that they confirm that the enterprise took part in the training activity mentioned in the application (Evidence No. 5) and that there is a signature from the network. It is considered that for 59 out of 60 enterprises in the sample, there is evidence that they (actively) took part in the activity mentioned in the original application. As a whole, all categories of activities were covered. For the final enterprise, convincing primary evidence (Evidence No. 4) was lacking for the enterprise taking part in one of the activities mentioned above, and it was thus excluded by the Commission.

Only companies that have not already been designated as cooperation partners at the start of the respective skills alliance shall be taken into account for this target.

The extracts of the initial applications (Evidence No. 5) show which enterprises were cooperation partners at the start of the respective CET Network (skills alliance). If an enterprise that has been active with a CET network does not appear in these applications, it logically joined later and was not a cooperation partner at the start of the respective CET network. This was double-checked by the Commission, by making sure that none of the additional companies showed up in the overview spreadsheet of initial project partners for each network (Evidence No. 7). It is concluded that indeed all the enterprises from the sample were additional in the sense that they were not designated as partners at the start of the network.

Following the selection of a random sample of 60 units, Germany submitted project applications, grant decisions and the participation documents (Evidence No. 4-6). The evidence provided for a sample of 59 units confirmed that the requirements of the target have been met. The grant decisions (Evidence No. 6) show that the enterprises signed up for one of the three training activities mentioned above with one of the recognised CET-networks. The initial project applications (Evidence No. 5) showed that the enterprise was not a part of the CET network from the start (meaning they are additional). The participation documents (Evidence No. 4) demonstrate that the enterprises actively participated in these training activities.

A statistical analysis was carried out taking into account the overachievement of the target of 63 for a required 200 additional enterprises participating in CET networks. Based on this, there is statistical assurance that the target has been met, and all its constitutive elements have been satisfactorily fulfilled.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 66 Report on research and transfer outputs

Related Measure: 2.2.3 Digitalisation and Technology Research Centre of the Bundeswehr (dtec.bw)

Qualitative Indicator: Publication of a report to Federal Ministry of Defense confirming successful progress of projects

Time: Q4 2023

1. Context:

The objective of the measure is to support research and innovation activities on strategic technological areas for the future, in order to contribute to strengthen German and European digital and technological sovereignty. The investment consists of supporting research, development and innovation activities led by the Digitalisation and Technology Research Centre of the Bundeswehr (*Zentrum für Digitalisierungsforschung und Technologieforschung der Bundeswehr - dtec.bw*). The corresponding research projects should focus on digital fields and key technologies for the future, in line with the federal government's high-tech strategy priorities.

Milestone 66 concerns the publication of a report to the Federal Ministry of Defense (*Bundesministerium der Verteidigung - BMVg*), confirming the progress of the funded projects in terms of research outputs, cooperation, knowledge transfer and technology transfer with at least (overall):

- 200 publications;
- 70 collaborations initiated with other research institutes;
- 30 collaborations initiated with industrial companies and startups;
- 15 collaborations initiated with agencies of the Federal Armed Forces and the public administration;
- ten prototypes of mature technologies; and
- ten patent applications.

Additionally, an external evaluation of the measure by the German Science Council has also been published.

Milestone 66 is the second milestone of the investment, and it follows the completion of target 65 on the launch of research projects, under which the measure requirements were fully assessed. It will be followed by target 67, target 68 and milestone 69, related to the continuation and successful progress of these projects. The measure description was entirely assessed as part of the first payment request.

The investment has a final expected date for implementation by 30 June 2024.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Duly justifying how the requirements of the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in

		the CID annex) have been satisfactory fulfilled.
2	Evaluation Report	German Recovery and Resilience Plan (DARP) Evaluation Report on measure 2.2.3 from 30 November 2023 by the Digitalisation and Technology Research Centre of the Bundeswehr (dtec.bw).
3	Publication of Evaluation Report	Copy of the electronic upload of the dtec.bw evaluation report to the electronic file/document management system (<i>Dokumentenmanagement der Bundeswehr - DokMBw</i>).
4	List of publications	List and references of selected publications resulting from the projects at University of the Federal Armed Forces (<i>Universität der Bundeswehr - UniBw</i>) München and Hamburg.
5	List of research collaborations	List, details, and scope of selected collaborations initiated with other research institutes.
6	List of industry collaborations	List, details and scope of selected collaborations initiated with industrial companies and startups.
7	List of public administration collaborations	List, details and scope of selected collaborations initiated with agencies of the Federal Armed Forces (<i>Bundeswehr</i>) and the public administration.
8	List of prototypes	List and the descriptions of selected prototypes of mature technologies resulting from the projects at the Universities of the Federal Armed Forces München and Hamburg.
9	List of patent applications	List and the references of selected patent applications resulting from the projects at the Universities of the Federal Armed Forces München and Hamburg.
10	External evaluation report: "DARP Evaluation Report: 2.2. Digitalisierung der Wirtschaft – Maßnahme 2.2.3"	Copy of the public external evaluation of the measure by the German Science and Humanities Council (<i>Wissenschaftsrat</i>), including recommendations. Available at: https://www.wissenschaftsrat.de/download/2023/1384-23.pdf?blob=publicationFile&v=13 .

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

A report to the Federal Ministry of Defence has been published, [...]

The German authorities provided a screenshot of the document management system of the German Bundeswehr (Evidence No. 3), showing that the German Recovery and Resilience Plan (DARP) Evaluation Report on measure 2.2.3 from 30 November 2023 by the Digitalisation and Technology Research Centre of the Bundeswehr (Evidence No. 2) was internally published in the document

management system of the German Bundeswehr (*Dokumentenmanagement der Bundeswehr/DokMBw*).

The Commission services conducted an on-the-spot check on 22 October 2024 to verify the internal publication of the evaluation report from the Technology Research Centre of the Bundeswehr (dtec.bw) to the Ministry of Defence. This check was completed successfully, confirming that the evaluation report was published in the internal document management system of the Ministry of Defence.

[...] confirming the progress of the funded projects in terms of research outputs, cooperation, knowledge transfer and technology transfer [...]

The German Recovery and Resilience Plan (DARP) Evaluation Report on measure 2.2.3 (Evidence No. 2) confirms the progress of the 68 funded projects. The report provides a description and status update for the various projects in terms of research outputs, cooperation, knowledge transfer and technology transfer and was authored by dtec.bw, the Digitalisation and Technology Research Centre of the Bundeswehr.

Chapter 3 of the Report describes the progress made during the first funding period and the criteria applied regarding data collection and data quality. All research projects that dtec.bw (Digitalisation and Technology Research Centre of the Bundeswehr) is involved report their progress quarterly, and clear definitions and criteria are applied when the output (publication/collaboration/prototype/patent) is sufficient to be included in M66. These definitions are outlined in sections e, f, g, and h, in chapter 3. All publication, collaboration, prototypes and patents that fulfil these criteria are described in more detail in the Annex (Evidence No. 4-9). Thus, the research progress is demonstrated on the basis of the listed scientific publications, the listed collaborations concluded, the listed specific results on technologies and the inventions registered in the dtec.bw projects. Chapter 4 of the report outlines the evaluation process by the German Science Council and discusses the recommendations made.

[...] with at least (overall):

- **200 publications;**
- **70 collaborations initiated with other research institutes;**
- **30 collaborations initiated with industrial companies and startups;**
- **15 collaborations initiated with agencies of the Federal Armed Forces and the public administration;**
- **ten prototypes of mature technologies; and**
- **ten patent applications. [...]**

The German Recovery and Resilience Plan (DARP) Evaluation Report on measure 2.2.3 (Evidence No. 2) details that the set scientific goals have been over-fulfilled (Evidence No. 2, p. 8, table 3), with 236 publications, 81 collaborations with other research institutes, 53 collaborations with industrial companies and startups, 25 collaborations with agencies of the Federal Armed Forces and the public administration, 22 prototypes of mature technologies and 12 patent applications. These outputs are listed in more detail in individual Excel lists annexed to the report (Evidence No. 4, 5, 6, 7, 8 and 9).

The list and references of 236 selected publications (Evidence No. 4) resulting from selected projects at the University of the Federal Armed Forces München and Hamburg includes journal articles, e-papers, conference posters, anthologies, or presentations. All publications have clear identifier. The table contains information about the name of the respective selected dtec.bw-project, title of the resulting publication, author, type of author, type of publication, publication year, publisher,

publishing location, source, impact factor of the journal (if available), language of the publication, identifier, rights of access and comments (other authors).

The list of 81 selected collaborations signed with other research institutes (Evidence No. 5) contains information about the name of the respective dtec.bw-project, the type of collaboration, collaboration contract, collaboration partner, scope and details of the collaboration.

The list of 53 selected collaborations signed with industrial companies and startups (Evidence No. 6) contains information about the name of the respective dtec.bw-project the type of collaboration, collaboration contract, collaboration partner, scope and details of the collaboration.

The list of 14 selected collaborations initiated with agencies of the Federal Armed Forces (*Bundeswehr*), nine selected collaborations with public administration, plus two collaborations with Non-Profit-Organisations (in total 25) (Evidence No. 7) contains information about the name of the respective dtec.bw-project, the type of collaboration, collaboration contract, collaboration partner, scope and details of the collaboration. For collaborations with agencies of the Federal Armed Forces confirmation letters replace cooperations agreements.

The list of 22 selected prototypes of mature technologies (Evidence No. 8) contains information about the name of the respective dtec.bw-project, the name of the mature technology, the description and contribution and a technology-readiness-level allocated by the project leader.

The list of 12 patent applications resulting from the projects (Evidence No. 9) contains information about the name of the respective dtec.bw-project, the patent application number, the title, the patent status, date of the application and description of the invention.

Additionally, an external evaluation of the measure by the German Science Council has also been published.

The external evaluation report ("*Bewertungsbericht zum Zentrum für Digitalisierungs- und Technologieforschung der Bundeswehr*") of the measure by the German Science Council has been published in April 2023 (Evidence No. 10) and confirms the findings of the internal evaluation report and its annexed lists of projects. The German Science Council positively evaluated the work of dtec.bw, looking at its military, social and academic significance (Evidence No. 10, p. 9), financing (Evidence No. 10, p. 9), long-term set-up (Evidence No. 10, p. 10), research (Evidence No. 10, p. 11), staff development (Evidence No. 10, p. 13), scientific services and transfer (Evidence No. 10, p. 13), cooperation and networks (Evidence No. 10, p. 14), quality assurance (Evidence No. 10, p. 14) and administrative aspects (Evidence No. 10, p. 15). Despite the positive evaluation, the Council could identify some room for improvement in the aforementioned areas and provides detailed recommendations as part of its analysis in section C (Evidence No. 10, p. 9-15). Such recommendations include for example to establish a sustainable staff strategy in light of many junior staff on short-term contracts. Overall, the Council finds that the dtec.bw poses a highly relevant addition to the German scientific landscape and has a clearly operationalised objective for the promotion of digitalisation research by the BMVg (Evidence No. 10, p. 9).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 67 Continuation of projects

Related Measure: 2.2.3 Digitalisation and Technology Research Centre of the Bundeswehr (dtec.bw)

Quantitative Indicator: Number of projects assessed as progressing satisfactorily

Baseline: 0

Target: 40

Time: Q2 2024

1. Context:

The objective of the measure is to support research and innovation activities on strategic technological areas for the future, in order to contribute to strengthen German and European digital and technological sovereignty. The investment consists of supporting research, development and innovation activities led by the Digitalisation and Technology Research Centre of the Bundeswehr (*hereinafter referred to as "dtec.bw"*). The corresponding research projects shall focus on digital fields and key technologies for the future, in line with the federal government's high-tech strategy priorities ("Sustainability", "Climate Protection and Energy", "Mobility", "Security" and "Economics and Work 4.0").

Target 67 is the third target of the investment and covers an interim evaluation of the projects launched under target 65. It follows the completion of target 65 and milestone 66. It will be followed by target 68 and milestone 69, related to the disbursement of a minimum of EUR 700 000 000 of funding to the projects covered as well as a report confirming the overall success of the projects funded.

The investment has a final expected date for implementation on 30 June 2024.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Digitalisation and Technology Research Centre (<i>hereinafter referred to as "dtec.bw"</i>) evaluation report	Evaluation report from the dtec.bw of the Bundeswehr to the German Federal Ministry of Defence.
3	Excel list of selected projects	Excel list containing 68 research projects at the Universities of the Bundeswehr in Munich and Hamburg that were positively assessed and can continue activities.
4	Project evaluation schemes	66 evaluation schemes confirming the positive interim evaluation of the projects to be worth to

		be continued.
5	Transmission E-Mail dtec.bw to the Federal Ministry of Defence	E-Mail confirming the submission of the evaluation report from the dtec.bw of the Bundeswehr to the Federal Ministry of Defence.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

On the basis of an interim evaluation, at least 40 projects are considered as progressing satisfactorily and may continue their activities.

The interim evaluation report (Evidence No. 2) assesses the progress of in total 66 projects.

The evaluation report on the project progress of the dtec.bw research projects (Evidence No. 2) was drafted by the dtec.bw and submitted to the Federal Ministry of Defence (Evidence No. 5). Chapter 3 of the report contains the evaluation of the progress of the individual projects and justification that they are considered satisfactory and that the activities can be continued.

Chapter 3a presents the selection of the 66 projects eligible for continuation, see table 3 on pages 8 to 9 (“Tabelle 3: Übersicht über die Auswahl der 66 verlängerungsfähigen Projekte für die Jahre 2025-2026“). Chapter 3b describes the selection and continuation process at the two Bundeswehr universities in Munich (pp. 10ff) and Hamburg (pp. 12-13). Chapter 3c (p. 14) describes the comparative evaluation schemes provided by the Federal Ministry of Defence for each project. These evaluation schemes were completed by dtec.bw and contain among other items the progress of the project, the planned budget for the next round of funding, an external scientific review, and the result of the evaluation committees. Chapter 3d (pp. 15-16) explains the redundancy check carried out by the University of the Bundeswehr Munich to avoid double funding at EU level. This was done by doing a comparison on project level with KOHESIO and the Financial Transparency System (*hereinafter referred to as “FTS”*). Finally, Chapter 3e (pp. 16ff) clarifies what constitutes a satisfactory performance of the projects and why the activities should be continued. The evaluation schemes differentiate between “very eligible for funding” (“*sehr förderungswürdig*”) “eligible for funding” (“*förderungswürdig*”) and “eligible for funding with low priority” (“*förderungswürdig mit geringer Priorität*”) based on the quality of the respective project, the visibility and international presence, the promotion of young talent and the sustainability of the project as well as the external expert reports. Chapter 4 summarises the evaluation.

The Excel spreadsheet annexed to the report contains a list of all 68 projects selected to be covered under the measure (Evidence No. 3) whereas the project evaluation schemes, and the evaluation report only cover 66 projects in total that are deemed as progressed enough to be continued. This difference in numbers results from two projects merged with two other existing projects respectively. Specifically project No. 28 (full project title: “*Makro/Mikro-Simulation des Phasenzersfalls im Transkritischen Bereich*”, acronym: “ED_Neumann_MaST”) will be merged with project 68 (full project title: “*Kompetenzplattform für Softwareeffizienz und Höchstleistungsrechnen*”, acronym: “KoDiA_Neumann_HPC.Bw”) and project No. 33 (full project title: “*Digitales Tomographie-Zentrum*”, acronym: “ED_Kramer_CTCentre”) will be merged with project No. 27 (full project title: “*Digitale Material Manufaktur für anwendungsorientierte, beschleunigte Entwicklung von Funktionsmaterialien der Energiewende*”, acronym: “ED_Kramer_DMF”). For the two merged projects the evaluation schemes detail the progress of the individual projects pre-merging and explain why merging them is reasonable for the continuation of the projects. During the assessment

process all 66 evaluation schemes were cross checked by the Commission against the Excel list annexed to the evaluation report, verifying the positive assessment for continued funding, the project name, acronym, as well as the categorisation of the project as per the description of the measure as assessed and milestone 65 assessed as part of the first payment request.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 72 A Successful completion of the final pilot project

Related Measure: 2.2.4 Promotion of the digitalisation of rail by replacing conventional interlocking/fast-track programmes to speed up the roll-out of the “Digital Rail Germany” (SLP)

Quantitative Indicator: Number of pilot projects completed

Baseline: 6

Target: 7

Time: Q1 2023

1. Context:

The objective of this investment is supporting the digitalisation of the railway in the context of the “Digital Rail Germany” initiative and the “fast track” programme aiming at accelerating it. The goal is to develop standardised, interoperable, and modular components for the digitalisation of railway operations. Overall, the investment consists of funding seven pilot projects, aiming at developing solutions to replace old signal boxes and level crossing protection systems by security systems of the latest digital generation.

Target 72A requires the successful completion of the final, seventh pilot project with validation in operational conditions. Those are met when the technical system is fully operational and can function correctly and safely.

Target 72A is the fourth and last target related to investment 2.2.4. It follows the completion of milestone 70, milestone 71 and target 72, related to the signature of the financing agreement, the submission of the interim report on implementation and the successful completion of six pilot projects. All requirements in the measure description of investment 2.2.4 were already assessed in the positive preliminary assessment of the satisfactory fulfilment of milestones and targets related to Germany’s first payment request.

The investment has a final expected date for implementation on 31 March 2023.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Project Description	This document contains a description of the completed pilot project.
3	Copy of the Certificate Ansbach Triesdorf	This document is a copy of the report certifying that validation in operational conditions has been reached for the project Ansbach-Triesdorf

		(Herstellung der Funktionsfähigkeit - HdF). It was issued on 5 December 2022.
4	Nachweisführung SLP Ansbach_GvW	This document by DB Infrago explains the process for issuing the validation in operational conditions (<i>Herstellung der Funktionsfähigkeit, HdF</i>) and the actors involved.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

The final pilot project of the programme has been completed successfully with validation in operational conditions.

The seventh and final pilot project of the programme, Ansbach Triesdorf, has been completed successfully, with validation in operational conditions. Germany has submitted a copy of the certificate providing validation of operational conditions (*Herstellung der Funktionsfähigkeit - HdF*) for the project Ansbach Triesdorf (Evidence No. 3). This certificate was issued by the contractor Alstom as part of his contractual obligations on 5 December 2022 (Evidence No. 2 and Evidence No. 4). The certificate confirmed that the pilot project was completed successfully.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 74 Disbursement of at least EUR 475 000 000 to the supported projects

Related Measure: 3.1.1 Investment programme for teacher devices

Quantitative Indicator: EUR million

Baseline: 0

Target: 475

Time: Q1 2022

1. Context:

The objective of this investment is to ensure the feasibility of digital teaching and learning across schools in Germany. It consists of equipping teachers with mobile digital devices on a lending basis. The measure shall be part of a bigger framework supporting digital education that is only partially supported by the German recovery and resilience plan.

Target 74 concerns the disbursement of at least EUR 475 000 000 to the supported projects.

Target 74 is the second step of the investment, and it follows the completion of milestone 73, which concerned the conclusion and publication in the Federal Gazette (*Bundesanzeiger*) of the administrative agreement between the Federal Government of Germany and the governing bodies at Länder level regarding the implementation of the investment programme for teacher devices. It will be followed by milestone 75 related to the evaluation of changes in digital infrastructure and use of digital media in schools. The measure description was entirely assessed as part of the first payment request.

The reform has a final expected date for implementation on 31 December 2025.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Copy of the administrative agreement between the Federal Government of Germany and the governing bodies at Länder level as published in the Federal Gazette (<i>Bundesanzeiger</i>) on 18 February 2021, titled	This document shows the administrative agreement between the Federal Government of Germany and the governing bodies at Federal States (<i>Länder</i>) level as published in the Federal Gazette (<i>Bundesanzeiger</i>) on 18 February 2021 (BAnz AT 18.02.2021 B3). It is a supplementary administrative agreement to the administrative agreement on the overall programme <i>DigitalPakt Schule 2019-2024</i> (see Evidence No.

	<p>“Supplementary administrative agreement “rental devices for teachers” to the <i>DigitalPakt Schule 2019 to 2024</i> (“Zusatz-Verwaltungsvereinbarung „Leihgeräte für Lehrkräfte“ zum <i>DigitalPakt Schule 2019 bis 2024</i>“)</p>	<p>3 below) that implements the investment programme for teacher devices.</p> <p>It is an agreement between the Federal Government of Germany and the governing bodies at Länder level as evidenced by the signatures of the Federal Minister of Education and Research Anja Karliczek on behalf of the Federal Government on 27 January 2021 and the representative of the responsible governing body in each of the 16 Länder between 10 December 2020 and 26 January 2021. The administrative agreement entered into force the day after the last signature (Article 13), and thus on 28 January 2021.</p>
3	<p>Copy of the administrative agreement between the Federal Government of Germany and the governing bodies at Länder level as published in the Federal Gazette (<i>Bundesanzeiger</i>) on 14 June 2019, titled “Administrative agreement <i>DigitalPakt Schule 2019 to 2024</i>” (“<i>Verwaltungsvereinbarung DigitalPakt Schule 2019 bis 2024</i>“)</p>	<p>This document shows the administrative agreement between the Federal Government of Germany and the governing bodies at Federal States (Länder) level as published in the Federal Gazette (<i>Bundesanzeiger</i>) on 14 June 2019 (BANz AT 14.06.2019 B2) on the overall programme <i>DigitalPakt Schule 2019-2024</i>.</p>
4	<p>Copy of the report submitted by the Federal Government of Germany to the Budget Committee of the German Parliament (<i>Bundestag</i>) on the special fund (<i>Sondervermögen</i>) “Digital Infrastructure” of 14 September 2021</p>	<p>This document shows the copy of the report submitted by the Federal Government of Germany to the Budget Committee of the German Parliament (<i>Bundestag</i>) on the special fund (<i>Sondervermögen</i>) “Digital Infrastructure”. The disbursements (total and per Federal State) relating to the programme for teacher devices as of the key date of 30 June 2021 can be found on page 12.</p>
5	<p>Copy of the report submitted by the Federal Government of Germany to the Budget Committee of the German Parliament (<i>Bundestag</i>) on the special fund (<i>Sondervermögen</i>) “Digital Infrastructure” of 14 March 2022</p>	<p>This document shows the copy of the report submitted by the Federal Government of Germany to the Budget Committee of the German Parliament (<i>Bundestag</i>) on the special fund (<i>Sondervermögen</i>) “Digital Infrastructure”. The disbursements (total and per Federal State) relating to the programme for teacher devices as of the key date of 31 December 2021 can be found on page 13.</p>
6	<p>Copy of the report submitted by the Federal</p>	<p>This document shows the copy of the report submitted by the Federal Government of</p>

	Government of Germany to the Budget Committee of the German Parliament (<i>Bundestag</i>) on the special fund (<i>Sondervermögen</i>) "Digital Infrastructure" of 13 September 2022	Germany to the Budget Committee of the German Parliament (<i>Bundestag</i>) on the special fund (<i>Sondervermögen</i>) "Digital Infrastructure". The disbursements (total and per Federal State) relating to the programme for teacher devices as of the key date of 30 June 2022 can be found on page 15.
7	Copy of the report submitted by the Federal Government of Germany to the Budget Committee of the German Parliament (<i>Bundestag</i>) on the special fund (<i>Sondervermögen</i>) "Digital Infrastructure" of 13 September 2023	This document shows the Copy of the report submitted by the Federal Government of Germany to the Budget Committee of the German Parliament (<i>Bundestag</i>) on the special fund (<i>Sondervermögen</i>) "Digital Infrastructure". The disbursements (total and per Federal State) relating to the programme for teacher devices as of the key date of 30 June 2023 can be found on page 18.
8	Copy of the confirmation - letter from Baden-Wuerttemberg on 27 July 2023	This document shows the Federal state of Baden-Wuerttemberg (<i>Baden-Württemberg</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
9	Copy of the confirmation letter from Bavaria on 7 August 2023	This document shows the Federal state of Bavaria (<i>Bayern</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
10	Copy of the confirmation letter from Berlin on 18 July 2023	This document shows the Federal state of Berlin (<i>Berlin</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
11	Copy of the confirmation letter from Brandenburg on 4 August 2023	This document shows the Federal state of Brandenburg (<i>Brandenburg</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
12	Copy of the confirmation letter from Bremen on 11 August 2023	This document shows the Federal state of Bremen (<i>Bremen</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
13	Copy of the confirmation letter from Hamburg on 14 July 2023	This document shows the Federal state of Hamburg (<i>Hamburg</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
14	Copy of the confirmation letter from Hesse on 18	This document shows the Federal state of Hesse (<i>Hessen</i>) confirming the purpose of the funding

	August 2023	and the receipt and withdrawal of the funds from the federal treasury per reporting date.
15	Copy of the confirmation letter from Lower Saxony from 19 July 2023	This document shows the Federal state of Lower Saxony (<i>Niedersachsen</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
16	Copy of the confirmation letter from Mecklenburg-Western Pomerania on 20 July 2023	This document shows the Federal state of Mecklenburg-Western Pomerania (<i>Mecklenburg-Vorpommern</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
17	Copy of the confirmation letter from North-Rhine Westphalia on 3 August 2023	This document shows the Federal state of North-Rhine Westphalia (<i>Nordrhein-Westfalen</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
18	Copy of the confirmation letter from Rhineland-Palatinate on 2 August 2023	This document shows the Federal state of Rhineland-Palatinate (<i>Rheinland-Pfalz</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
19	Copy of the confirmation letter from Saarland on 25 July 2023	This document shows the Federal state of Saarland (<i>Saarland</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
20	Copy of the confirmation letter from Saxony on 24 July 2023	This document shows the Federal state of Saxony (<i>Sachsen</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
21	Copy of the confirmation letter from Saxony-Anhalt on 16 August 2023	This document shows the Federal state of Saxony-Anhalt (<i>Sachsen-Anhalt</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
22	Copy of the confirmation letter from Schleswig-Holstein on 21 July 2023	This document shows the Federal state of Schleswig-Holstein (<i>Schleswig-Holstein</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date.
23	Copy of the confirmation letter from Thuringia on 25 July 2023	This document shows the Federal state of Thuringia (<i>Thüringen</i>) confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per

		reporting date.
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3. Analysis:

The Commission considers that there is a clerical error in the text of the Council Implementing Decision as regards the description of investment 3.1.1 and has undertaken the assessment on a revised basis. In the description, it is stated that the implementation of the investment shall be completed by 31 December 2021. However, the Council Implementing Decision states that milestone 75 has an indicative timeline for completion in Q4 2025, which is also in line with Germany's national recovery and resilience plan (see p. 662 and p. 673). This latter expected completion date is the one considered relevant for the fulfilment of investment 3.1.1. Against this background, the justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

Of the EUR 500 000 000 allocated to the measure, at least EUR 475 000 000 have been disbursed for the provision of digital equipment for teachers.

Germany provided the administrative agreement, whose conclusion was positively assessed under the previous milestone 73 that was part of the first payment request, between the Federal Government and the Federal States (*Länder*) as published in the Federal Gazette (*Bundesanzeiger*) on 18 February 2021 (BAnz AT 18.02.2021 B3) as disbursement decision which specifies that EUR 500 000 000 are invested so that schools can provide teachers with mobile digital devices (see Article 1(1) and Article 2 on page 2 of Evidence No. 2). The provision of the mobile digital devices for teachers is part of a bigger framework supporting digital education, the '*DigitalPakt Schule*' (see the preamble and Article 1 of Evidence No. 2; and Evidence No. 3).

The amount available to the respective federal state (*Land*) is determined according to the so-called 'Koenigstein formula' (*Koenigsteiner Schluessel*) and is specified in Article 6(1) on page 3 of the administrative agreement as follows:

Federal State	Share in %	Share in Euro
Baden-Wuerttemberg (<i>Baden-Württemberg</i>)	13,01280	65 064 000
Bavaria (<i>Bayern</i>)	15,56491	77 824 550
Berlin (<i>Berlin</i>)	5,13754	25 687 700
Brandenburg (<i>Brandenburg</i>)	3,01802	15 090 100
Bremen (<i>Bremen</i>)	0,96284	4 814 200
Hamburg (<i>Hamburg</i>)	2,55790	12 789 500
Hesse (<i>Hessen</i>)	7,44344	37 217 200
Mecklenburg-Western Pomerania (<i>Mecklenburg-Vorpommern</i>)	1,98419	9 920 950
Lower Saxony (<i>Niedersachsen</i>)	9,40993	47 049 650
North-Rhine Westphalia (<i>Nordrhein-Westfalen</i>)	21,08676	105 433 800
Rhineland-Palatinate (<i>Rheinland-Pfalz</i>)	4,82459	24 122 950
Saarland (<i>Saarland</i>)	1,20197	6 009 850
Saxony (<i>Sachsen</i>)	4,99085	24 954 250
Saxony-Anhalt (<i>Sachsen-Anhalt</i>)	2,75164	13 758 200
Schleswig-Holstein (<i>Schleswig-Holstein</i>)	3,40526	17 026 300
Thuringia (<i>Thüringen</i>)	2,64736	13 236 800
Total	100,00	500 000 000

The Länder are directly withdrawing the funds related to the 'DigitalPakt Schule' from the federal treasury within the framework of the automated procedure for the federal budget, treasury and accounting system ('HKR procedure'). In a second step, the Länder allocate the funding to different programme components of the 'DigitalPakt Schule', and report on this to the Federal Government. The reports handed in by the Länder are then compared with the actual withdrawals from the federal treasury. The reporting is then summarised in the official reports of the Federal Government of Germany to the Budget Committee of the German Parliament (*Bundestag*) (Evidence No. 4-7).

The reports submitted by the Federal Government of Germany to the Budget Committee of the German Parliament on the special fund (*Sondervermögen*) "Digital Infrastructure" (Evidence No. 4-7) show the disbursements related to the programme for teacher devices as of the respective reporting dates. As of 30 June 2023, at least EUR 475 000 000 – namely EUR 484 077 728,95 – have been disbursed for the provision of digital equipment for teachers (Evidence No. 7, p. 18).

Furthermore, each Federal State provided a confirmation letter (Evidence No. 8-23). In these letters, each Federal State confirms the receipt and withdrawal of the funds from the federal treasury per reporting date. In the confirmation letters each Federal State further confirms the purpose of the funding which is to enable schools or school authorities (*Schulträger*) to provide teachers with mobile digital devices (laptops, notebooks and tablets) for lessons at school or as distance learning as well as for general lesson preparation and follow-up ("*Die Mittel dienen ausschließlich dem Zweck, die Schulen¹ in die Lage zu versetzen, Lehrkräften mobile digitale Endgeräte (Laptops, Notebooks und Tablets mit Ausnahme von Smartphones) für Unterricht in der Schule oder als Distanzlernen sowie zur allgemeinen Unterrichtsvor- und -nachbereitung zur Verfügung zu stellen.*") (Evidence No. 8-23, p.1).

Taken together, the reports submitted by the Federal Government of Germany to the Budget Committee of the German Parliament (*Bundestag*) on the special fund (*Sondervermögen*) "Digital Infrastructure" (Evidence No. 4-7) and the signed letters of each of the 16 Länder confirming the purpose of the funding and the receipt and withdrawal of the funds from the federal treasury per reporting date (Evidence No. 8-23), constitute the proof of payment.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 76 Entry into force of the funding guidelines for education platform prototypes and procurement launched

Related Measure: 3.1.2 Education platform

Qualitative Indicator: Publication of the funding guidelines and call for tenders in the Federal Gazette (*Bundesanzeiger*)

Time: Q1 2022

1. Context:

The objective of this measure is to develop and establish a national education platform using digital means to support learners throughout their individual learning pathways. The platform shall connect existing and new learning offers and learning materials and allow for a broad and open access.

Milestone 76 is the first milestone of this measure and aims at the entry into force of the funding guidelines for the education platform prototypes as well as the launch of the procurement process for developing this education platform. It is followed by milestone 77 in this payment request that aims at the launch of a beta-version of this education platform. These will be followed by the final milestone 78 that comprises the publication of a final evaluation report on the education platform with a decision on its future.

The reform has a final expected date for implementation on 31 December 2025.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID Annex) was satisfactorily fulfilled, with appropriate links to the underlying evidence.
1a	Funding guideline	Funding guideline for the development of three separate prototypes of the meta-platform on education, as well as for cross-compatible research projects, accessible by learners and teachers. The guideline was published on 26 April 2021 " <i>Veröffentlicht am Montag, 26. April 2021</i> " (see the top right on each page of Evidence No. 1) in the Federal Gazette (<i>Bundesanzeiger</i>) and has entered into force on 26 April 2021 " <i>Diese Förderrichtlinie tritt am Tag ihrer Veröffentlichung im Bundesanzeiger in Kraft</i> " (Evidence No. 1, p. 14, section 8).
2	Amendment of funding guideline	Amendment of funding guideline for the development of three separate prototypes of the meta-platform on education, as well as for cross-compatible research projects, accessible by learners and teachers. The amendment of funding

		<p>guidelines was published on 1 February 2024 “<i>Veröffentlicht am Montag, 1. Februar 2024</i>” (see the top right on each page of Evidence No. 2) in the Federal Gazette and has entered into force on 1 February 2024. “<i>Die Änderungen der Richtlinie treten am Tag nach der Veröffentlichung im Bundesanzeiger in Kraft.</i>” (Evidence No. 2, p. 4, section 4.3).</p>
3	<p>Confirmation by the Federal Ministry of Education and Research (<i>Bundesministerium für Bildung und Forschung - BMBF</i>) that final reports of the prototype projects and the cross-compatible research projects are reviewed</p>	<p>This document declares that the Federal Ministry of Education and Research as responsible authority confirms the final reports of each of the prototype projects and the cross-compatible research projects are reviewed.</p>
4	<p>Confirmation by independent expert VDI/VDE Innovation + Technik GmbH that final reports of the prototype projects and the cross-compatible research projects are reviewed</p>	<p>This document declares that independent experts reviewed the final reports of each of the prototype projects and the cross-compatible research projects.</p>
5	<p>Overview table of 59 prototype projects and cross-compatible research projects</p>	<p>This document is a summary of final reports and contains a table with 59 projects with altogether 83 sub-projects that submitted a final report (<i>Schlussbericht</i>) and the corresponding date of submission (<i>Nachweis/ Bericht vom</i>), as well as the review date by independent experts (<i>Erledigungsdatum der fachlichen Prüfung</i>) for each sub-project. This list is an export from the management system for funding projects (profi) and includes information about the availability of the final reports for 1) the prototype projects "Ziel 3 Projekte" and 2) the cross-compatible research projects "Ziel 1 & 2 Projekte".</p>
5a	<p>Final project reports</p>	<p>The zip-file contains copies of the final reports signed by an independent expert and the competent authority. One out of 83 sub-projects was not successfully conducted by its beneficiary. Project (<i>Förderkennzeichen: 16INB1066B</i>) by Humboldt-Universität zu Berlin submitted a proof that non-expenditure was initiated during the project period and the project was not conducted. This proof by Humboldt-Universität zu Berlin is not signed by the independent expert and the competent authority.</p>
6	<p>Key dimensions of the education platform</p>	<p>This document contains the key dimension of education platform “<i>Technische</i></p>

		<i>Rahmenparameter</i> ” (Evidence No. 6, p. 3-6, section 5).
6a	Commented version of the key dimensions of the education platform	As additional evidence an anonymized commented version of the initial draft is provided.
7	Public procurement call for development of the education platform	Public procurement call for development and programming services of the education platform. The call was announced on 23 June 2022 in the European Tenders Electronic Daily (TED) <i>“Tag der Absendung dieser Bekanntmachung: 23/06/2022”</i> (Evidence No. 7, p. 5, section VI.5).

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

Funding guidelines have entered into force for the development of three separate prototypes of the meta-platform on education, as well as for cross-compatible research projects, accessible by learners and teachers.

The funding guidelines (Evidence No. 1a) with the title „Guideline for the funding of prototypes for an educational cross-sector, transdisciplinary meta-platform for collaborative, competent and digitally supported access to innovative teaching/learning formats and supporting learning technologies: Initiative National Education Platform” (*“Richtlinie zur Förderung von Prototypen für eine Bildungssektor-übergreifende, transdisziplinäre Meta-Plattform für kollaborativen, kompetenten und digital gestützten Zugang zu innovativen Lehr-/Lernformaten und unterstützenden Lerntechnologien: Initiative Nationale Bildungsplattform”*) is dated 14 April 2021 and was published in the Federal Gazette on 26 April 2021. In section 8 (Evidence No. 1a, p. 14) of this funding guideline it is stated that it enters into force on the same day as its publication in the Federal Gazette and that it remains valid until the 31 December 2023.

This funding guideline was amended on 19 January 2024 which was published on 1 February 2024 (Evidence No. 2). This amendment includes changes to section 8 (Evidence No. 2, p. 1) that extend the validity of this funding guideline to 31 December 2024. The amendments of the funding guideline entered into force the day after the publication in the Federal Gazette (Number 3 of Evidence No. 2, p. 4, section 4), thus on 2 February 2024.

The funding guidelines (Evidence No. 1a, p. 3) contain as objective number 3 (*Ziel 3 Projekte*) the development of up to three separate prototypes of the meta-platform on education. The following three projects with six sub-projects and these funding numbers (KOLIBRI: 16INB3003A/ 16INB3003B/ 16INB3003C/ 16INB3003D, mEDUator: 16INB3006 and L3OOP: 16INB3007A) (Evidence No. 5) are marked as *“Ziel 3 Projekte”* and relate to the development of these three prototypes of the meta-platform on education.

The funding guidelines (Evidence No. 1a, pp. 2-3) also contain as objective number 1 and 2 (*Ziel 1 & 2 Projekte*) the development of cross-compatible research projects, accessible by learners (*“Ziel 1 Projekte”*) and by teachers (*“Ziel 2 Projekte”*). In total 56 such projects with 77 sub-projects were developed (Evidence No. 5).

For all the three prototype projects and the 56 cross-compatible research projects final reports have been received (Evidence No. 5a) which were all individually signed by an independent expert (VDI/VDE Innovation + Technik GmbH) and the Federal Ministry of Education and Research as responsible authority. These reports demonstrate the completion of the different research projects.

All projects have been checked that their titles and research content relate to the education platform and to which objective number 1,2 or 3 (see above) they belong. This helped identifying the three projects relating to the development of prototypes of the meta-platform on education as well as the cross-compatible research projects.

Depending on the result of these projects, the key dimensions of the project specifications are clarified...

The document (Evidence No. 6) “Education platform.digital Framework for the implementation of the National Education Platform” (“*BILDUNGSRAUM.DIGITAL Rahmenbedingungen für die Umsetzung der Nationalen Bildungsplattform*”) contains the specifications and key dimensions for setting up the National Education Platform. In section 5 (Evidence No. 6, pp. 3-6) the key dimensions are listed and further specified in more detail in the following sections 6 to 10 (Evidence No. 6, pp. 7-30). These key dimensions are:

Key dimension (English)	Key dimension (German)	Overview in section 5 (page number)	Details in section X (page number)
Wallet	Ablage	Page 4	Section 6 (pp. 7-11)
Digital identities	Digitale Identitäten	Page 4	Section 7 (pp. 12-15)
Digital certificates	Digitale Nachweise	Page 3	Section 8 (pp. 16-24)
Meta data / Data spaces	Metadaten / Datenräume	Page 4	Section 9 (pp. 25-27)
Showroom	Schaufenster	Page 4	Section 10 (pp. 28-30)

The key dimensions of the project specifications were clarified in an auditing process with external experts. The decision on the final version of these key dimensions was made by the architecture team of the education platform project team and the key dimensions were published to the public (Evidence No. 6). Moreover, a draft version of this report on the key dimensions including anonymised comments (Evidence No. 6a) was provided to better illustrate this selection process.

...and the procurement procedure shall be launched.

The public procurement procedure for the education platform was launched on 23 June 2022 on the European Tenders Electronic Daily (TED) (Evidence No. 7, p. 7, section VI.5) including a call for development and programming services. The procurement involves the setting up of a dynamic purchasing system (*dynamisches Beschaffungssystem*).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 77 Launch of the beta-version of the education platform

Related Measure: 3.1.2 Education platform

Qualitative Indicator: Launch of beta version of the platform on the website of the Federal Ministry of Education and Research (BMBF)

Time: Q3 2023

Context:

The objective of this measure is to develop and establish a national education platform using digital means to support learners throughout their individual learning pathways. The platform shall connect existing and new learning offers and learning materials and allow for a broad and open access.

Milestone 77 is the second milestone of this measure and aims at developing a beta version of the education platform with all high-priority services and functions including additional security and data protection audits as well as successful load tests. It is accompanied by the previous milestone 76 in this payment request with the entry into force of the funding guidelines for the development of prototypes of the education platform as well as the launch of the related procurement process. The subsequent milestone 78 comprises the publication of a final evaluation report on the education platform with a decision on its future.

The reform has a final expected date for implementation on 31 December 2025.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID Annex) was satisfactorily fulfilled, with appropriate links to the underlying evidence.
1a	Beta version education platform	This document describes the beta version of the education platform and contains information on access to information via the component showroom (display, workbench), user profile via the component digital identities and showroom (display, workbench), collaboration via the component showroom (display, workbench), wallet, digital certificates and data space, identity and access management via the component digital identities and digital certificates, workflows via user journeys and segments and test scenarios, and inbox via the component wallet and showroom (display, workbench).
2	Certificate of work completion by the Federal	This document by the competent authority (BMBF) confirms the launch of beta version of

	Ministry of Education and Research (<i>hereinafter referred to as "BMBF"</i>) on launch of beta version	the education platform on 10 October 2023. Moreover, the document confirms that the beta version includes the components Wallet (" <i>Ablage</i> "), showroom (display, workbench (" <i>Schaufenster (Display, Workbench)</i> "), digital certificates (" <i>Digitale Nachweise</i> "), digital identities (" <i>Digitale Identitäten</i> "), and data space (" <i>Datenraum</i> ").
3	Certificate of works completion by the contractor / project office on launch of beta version	This document by the contractor confirms the launch of beta version of the education platform on 10 October 2023. Moreover, the document confirms that the beta version includes the components wallet, showroom (display, workbench), digital certificates, digital identities, and data space.
4	Technical resistance analysis report of web application by the Federal Office for Information Security (<i>Bundesamt für Sicherheit in der Informationstechnik - BSI</i>)	This document is a report for security and data protection by the Federal Office for Information Security on the technical resistance analysis of the web application (<i>Bericht zur technischen Widerstandsanalyse der Webanwendung</i>) of the education platform " <i>Digitaler Bildungsraum - Vernetzungsinfrastruktur</i> ".
5	Technical resistance analysis report by the Federal Office for Information Security	This document is a report for security and data protection by the Federal Office for Information Security on the technical resistance analysis (<i>Bericht zur technischen Widerstandsanalyse</i>) of the education platform " <i>Digitaler Bildungsraum</i> ".
6	Penetration test results report by independent expert msg (msg systems ag)	This document is a report for security and data protection by the independent expert msg systems ag on the penetration test (<i>Ergebnisbericht Penetrationstest</i>) of the education platform " <i>Nationale Bildungsplattform</i> ".
7	Report on security and data protection including the quality assurance compliance of the deletion concept	This document is a report for security and data protection on quality assurance compliance consideration of the deletion concept and data protection impact assessment with preceding threshold analysis " <i>Qualitätssichernde Compliancebetrachtung des Löschkonzepts und der Datenschutzfolgenabschätzung mit vorgelagerter Schwellenwertanalyse</i> ".
8	Load and performance tests by independent expert Wisercat	This document by an independent expert confirms conducted load and performance tests on a regular basis in an intensive matter. " <i>...intensive Last- und Performancetests auf der Vernetzungsinfrastruktur „Mein Bildungsraum“ durchgeführt werden...</i> ".
9	Onboarding of the national education platform	This document describes the digital structure including the first set of functions for the alpha- and beta-version which were defined in

		November 2022.
10	Website of the beta version of the education platform	The project's website is available at: https://www.meinbildungsraum.de/ , verified on 11 September 2024
11	Link to the workbench	Available at: https://portal.demo.meinbildungsraum.de/de/ , verified on 11 September 2024
12	Link to the beta version	Available at: https://www.meinbildungsraum.de/vorhaben/beta-test , verified on 11 September 2024
13	Link to the wallet app in the Google Play Store	Available at: https://play.google.com/store/apps/details?id=de.bildungsraum.wallet.beta , verified on 11 September 2024
14	Link to the wallet app in the Apple App Store	Available at: https://apps.apple.com/de/app/mein-bildungsraum-wallet/id6467007352 , verified on 11 September 2024
15	Link to open source code of the beta version	Available at: https://gitlab.opencode.de/mbr , verified on 22 October 2024
9	Onboarding of the national education platform	This document describes the digital structure including the first set of functions for the alpha- and beta-version which were defined in November 2022.
10	Website of the beta version of the education platform	This document describes the digital structure including the first set of functions for the alpha- and beta-version which were defined in November 2022.
11	Link to the workbench	The project's website is available at: https://www.meinbildungsraum.de/ , verified on 11 September 2024.
12	Link to the beta version	Available at: https://www.meinbildungsraum.de/vorhaben/beta-test , verified on 11 September 2024.
13	Link to the wallet app in the Google Play Store	Available at: https://play.google.com/store/apps/details?id=de.bildungsraum.wallet.beta , verified on 11 September 2024.
14	Link to the wallet app in the Apple App Store	Available at: https://apps.apple.com/de/app/mein-bildungsraum-wallet/id6467007352 , verified on 11 September 2024.
15	Link to open source code of the beta version	Available at: https://gitlab.opencode.de/mbr , verified on 22 October 2024.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

A beta version of the education platform shall be online,...

The beta version of the education platform is described in detail in the document by Deloitte “Beta-Version Mein Bildungsraum” (Evidence No. 1a). This report mentions under the summary (Evidence No. 1a, p. 5) that the beta version went online on 10 October 2023 for five components and was accessible to a selected group of users.

This includes the webpage (Evidence No. 10), workbench (*Persönliche Arbeitsumgebung*) (Evidence No. 11), access to beta test (*Interesse am Beta-Testprogramm*) (Evidence No. 12), as well as wallet app (*Ablage App*) at Google Play Store and Apple App Store (Evidence No. 13 and Evidence No. 14).

This beta version includes the following five components:

- digital identities (*Digitale Identitäten*)
- wallet (*Ablage*)
- digital certificates (*digitale Nachweise*)
- data space (*Datenraum*)
- showroom (*Schaufenster – Display and Workbench*)

On 30 June 2024 this beta version was taken off-line again to allow further development of the components, which is technically not possible while being online. Since then, the code of the beta version can be accessed under this link (Evidence No. 15) and the beta version could be reproduced online again using this code. In order to demonstrate the functionalities of the beta version (user journeys) a virtual on-the-spot check was performed on 11 September 2024, where in a presentation with embedded videos the components and their functionalities were displayed, as also described in the project documentation by Deloitte (Evidence No. 1a). This allowed assessing the interaction of the components on a virtual basis. Once the components are finished developing, they are supposed to go online again and in the final version remain online available and accessible.

At the time of the on-the-spot check and the assessment of this milestone, the app in the app stores of google and Apple were available for download and some webpages of the beta version were accessible online. However, as explained in the analysis of the requirement above, the interaction between the components was not possible as the components were under development and not accessible online anymore. For this reason, the fact that the subsequent milestone 78 comprises the publication of a final evaluation report on the education platform with a decision on its future confirms that the beta version was only intended for testing and evaluation purposes and not to be online permanently, which will be a possible final version. The end date of this testing and evaluation period was 30 June 2024, so that the beta version does not have to be online beyond that date.

...with all services and functions that have been identified in the functional description as high priority by the Federal Ministry of Education and Research (BMBF). These functions include access for information, user profile, collaboration, identity and access management, workflows, inbox.

The first set of functions for the alpha- and beta-version was defined in November 2022 in the document “Onboarding national education platform” (*“Onboarding Nationale Bildungsplattform - NBP”*) (Evidence No. 9, pp. 9-27). The final set of functions identified as high priority by the Federal Ministry of Education and Research was defined in the project description by Deloitte of the beta version of the education platform (Evidence No. 1a). This document describes the different components that were developed to address the functions identified as high priority. This includes access for information, user profile, collaboration, identity and access management, workflows, and inbox. The following table gives an overview of these functions and how they are addressed by

which component together with the sections and page numbers where they are described in detail in the document (Evidence No. 1a).

Function	Component	Section	Page numbers
Access for information	Showroom	6.3	Pages 183 – 233
User profile	Digital identities, Showroom	6.2	Pages 125 – 182
		6.3	Pages 183 – 233
Collaboration	Showroom, wallet, Digital certificates, Data space	6.3	Pages 183 – 233
		6.4	Pages 234 – 255
		6.5	Pages 256 – 283
Identity and access management	Digital identities, Digital certificates	6.2	Pages 125 – 182
		6.4	Pages 234 – 255
Workflows	User journeys and segments, Test scenarios	3.2	Pages 14 – 15
		5	Pages 43 – 65
Inbox	Wallet, showroom	6.3	Pages 183 – 233

The launch shall be accompanied by additional security and data protection audits and successful load tests.

For the additional security and data protection audits, the authorities provided a first technical resistance analysis of the web application by the Federal Office for Information Security (Evidence No. 4), a second technical resistance analysis by the Federal Office for Information Security (Evidence No. 5), a penetration test by msg systems ag (Evidence No. 6) and a quality assurance, compliance consideration of deletion concept, and data protection impact assessment with preceding threshold analysis by msg systems ag (Evidence No. 7). The successful load tests were conducted on a continuous basis by Wisercat Software OÜ (Evidence No. 8) who performed several load and performance tests.

The following table gives an overview of the performed additional security and data protection audits and successful load tests performed by independent experts before and after the launch of the beta version on 10 October 2023:

Independent expert	Type of audit or test	Period of audit or test	Report and date
Federal Office for Information Security	First technical resistance analysis of the web application	17.07.2023 to 26.07.2023	Evidence No. 4, 01.08.2023
Federal Office for Information Security	Second technical resistance analysis	26.09.2023 to 29.09.2023	Evidence No. 5, 10.10.2023
msg systems ag	Penetration test	04.10.2023 to 13.10.2023	Evidence No. 6, 20.10.2023
msg systems ag	Quality assurance, compliance consideration of deletion concept, and data protection impact assessment with preceding threshold analysis		Evidence No. 7, 18.08.2023
Wisercat Software OÜ	Load and performance tests	Conducted on regular basis	Evidence No. 8, interim report of 21.06.2024

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 80 Approval of at least 45 research projects

Related Measure: 3.1.3 Educational centres of excellence

Quantitative Indicator: Number of research projects approved and in progress

Baseline: 0

Target: 45

Time: Q3 2022

1. Context:

The measure aims to support the institutionalisation of digital education as part of the established teacher education and further education framework by providing scientific content for the development and set-up of competences centres for digital education. These competences centres will be based on a system of collaboration between the teacher education and in-service training institutions, universities, and research institutes.

Target 80 concerns the approval of at least 45 research projects by the project-executing agency and the publication of the results via the Federal catalogue of funds (*Förderkatalog*) and on the website of the Federal Ministry of Education and Research (*Bundesministerium für Bildung und Forschung – BMBF*).

Target 80 follows the completion of milestone 79 which concerned the entry into force and publication of the first funding guidelines in the Federal Gazette (*Bundesanzeiger*) as well as the selection of a project-executing agency based on applications received via a public call for tenders on an award platform. It will be followed by milestone 81, related to the entry into force of three additional funding guidelines and target 82, related to the completion of at least 45 research projects.

The reform has a final expected date for implementation on 31 August 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Overview list of at least 45 approved research projects with indication of the project actors and recipients, timeline of the project and brief description of the subject	This excel file shows the list of 52 approved research projects with indication of the project actors and recipients (see columns E, F, G and C), timeline of the projects (see columns H and I) and a brief description of the subject of the research and how it relates to the objective of the measure (see columns D and K). This

	of the research and how it relates to the objective of the measure	document also shows a short description of the state of play of each project in column J.
3	Approval decisions by the project-executing agency for these 52 projects	This document shows the approval decisions by the project-executing agency for the 52 projects included in the list of approved research projects (see evidence 2 above).
4	Copy of the results of the selection process as they can be found in the Federal catalogue of funds (<i>Förderkatalog</i>)	This document shows the results of the selection process for the 52 projects included in the list of approved research projects (see evidence 2 above) as they can be found in the Federal catalogue of funds (<i>Förderkatalog</i>) (https://foerderportal.bund.de/foekat/jsp/StartAction.do?actionMode=list) verified on 24 October 2024, searching for the respective funding code (<i>Förderkennzeichen</i>), as e.g. 01JA23M01A. The Federal catalogue of funds is a publicly available database of completed and ongoing federal funding projects.
5	Copy of the results of the selection process as they can be found on the website of the Federal Ministry of Education and Research	This document shows the results of the selection process for the 52 projects included in the list of approved research projects (see evidence 2 above) as they can be found on the publicly available website of the Federal Ministry of Education and Research (<i>Bundesministerium für Bildung und Forschung – BMBF</i>) (https://www.bmbf.de/SharedDocs/Downloads/de/2023/uebersicht-kompetenzzentrum-mint.pdf?__blob=publicationFile&v=4 , verified by Commission services on 24 October 2024.

3. Analysis:

The justification and substantiating evidence provided by the Germany authorities cover all constitutive elements of the target.

At least 45 research projects have been approved by the project-executing agency and are in progress.

According to the approval decisions (Evidence No. 3 above), all 52 research projects aiming to provide scientific content for the development and set-up of competences centres for digital education have been approved by the project-executing agency German Aerospace Center Deutsches (*Zentrum für Luft- und Raumfahrt - DLR*). The research projects started on 1 April 2023, and are in progress (see p. 2 of each approval decision (Evidence No. 3) as well as Evidence No. 2 column J showing a short description of the state of play of each project). They have the following respective funding codes: 01JA23M01A; 01JA23M01B; 01JA23M01C; 01JA23M01D; 01JA23M02A; 01JA23M02B; 01JA23M02C; 01JA23M02D; 01JA23M02E; 01JA23M02F; 01JA23M02G; 01JA23M02H;

01JA23M02I; 01JA23M02J; 01JA23M02K; 01JA23M02L; 01JA23M03A; 01JA23M03B; 01JA23M03C; 01JA23M03D; 01JA23M04A; 01JA23M04B; 01JA23M04C; 01JA23M04D; 01JA23M04E; 01JA23M04F; 01JA23M04G; 01JA23M04H; 01JA23M05A; 01JA23M05B; 01JA23M05C; 01JA23M05D; 01JA23M05E; 01JA23M05F; 01JA23M05G; 01JA23M05H; 01JA23M05I; 01JA23M06A; 01JA23M06B; 01JA23M06C; 01JA23M06D; 01JA23M06E; 01JA23M06F; 01JA23M06G; 01JA23M06H; 01JA23M06I; 01JA23M06J; 01JA23M06K; 01JA23M06L; 01JA23M06M; 01JA23M06N; and 01JA23M06O.

The approval decisions are in line with the overview list of approved research projects (Evidence No. 2 above) provided by the German authorities. This excel file shows the list of 52 approved research projects with indication of the project actors and recipients (see columns E, F, G and C), timeline of the projects (see columns H and I) and a brief description of the subject of the research and how it relates to the objective of the measure (see columns D and K). This document also shows a short description of the state of play of each project in column J.

Results of the selection process have been published via the Federal catalogue of funds (*Förderkatalog*) and the BMBF website.

The copy of the results of the selection process as they can be found in the Federal catalogue of funds (*Förderkatalog*) (p. 1-9 of Evidence No. 4 above) as well as the copy of the results of the selection process as they can be found on the BMBF website (Evidence No. 5 above) show that the results of the selection process have been published in the Federal catalogue of funds (*Förderkatalog*) and the BMBF website. At the time of the assessment, all 52 approved research projects included in the copy of the approval decisions (Evidence No. 3 above) and in the overview list of approved research projects (Evidence No. 2 above) can also be found in the Federal catalogue of funds (see <https://foerderportal.bund.de/foekat/jsp/StartAction.do?actionMode=lists>) searching for the respective funding code (*Förderkennzeichen*), as e.g. 01JA23M01A) and on the BMBF website (Evidence No. 5).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 81 Entry into force of three additional funding guidelines

Related Measure: 3.1.3 Educational centres of excellence

Qualitative Indicator: Publication of the additional funding guidelines in the Federal Gazette (*Bundesanzeiger*)

Time: Q3 2022

1. Context:

The measure aims to support the institutionalisation of digital education as part of the established teacher education and further education framework by providing scientific content for the development and set-up of competence centres for digital education. These competences centres will be based on a system of collaboration between the teacher education and in-service training institutions, universities, and research institutes.

Milestone 81 concerns the entry into force and publication in the Federal Gazette (*Bundesanzeiger*) of three additional funding guidelines, each of them with a specific thematic orientation.

Milestone 81 is the third step of the reform, and it follows the completion of milestone 79 (entry into force and publication of the first funding guidelines in the Federal Gazette (*Bundesanzeiger*) as well as the selection of a project-executing agency based on applications received via a public call for tenders on an award platform) and target 80 (approval of at least 45 research projects by the project-executing agency and the publication of the results via the Federal catalogue of funds (*Förderkatalog*) and on the website of the Federal Ministry of Education and Research (*Bundesministerium für Bildung und Forschung – BMBF*)). It will be followed by target 82, related to the completion of at least 45 research projects by the agency.

The reform has a final expected date for implementation on 31 August 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Copy of the publication in the Federal Gazette (<i>Bundesanzeiger</i>) on 30 November 2022 (BAnz AT 30.11.2022 B8) of the funding guideline for joint projects in the field of new methods and technologies for high-performance	The document shows the funding guideline for the funding of educational centres of excellence for languages, social sciences and economics as published in the Federal Gazette on 30 November 2022 (https://www.bundesanzeiger.de/pub/publication/71YRJh6bcJWO60t7R64/content/71YRJh6bcJWO60t7R64/BAnz%20AT%2030.11.2022%20B8.pdf?inline).

	exascale computing and reference to the relevant provisions indicating their entry into force	The funding guideline entered into force the same day.
3	Copy of the publication in the Federal Gazette on 6 December 2022 (BAnz AT 06.12.2022 B8) of the funding guideline for musical and creative subjects and sports and reference to the relevant provisions indicating their entry into force	The document shows the additional funding guideline for the funding of educational centres of excellence for musical and creative subjects and sports as published in the Federal Gazette on 6 December 2022 (https://www.bundesanzeiger.de/pub/publication/tF3zLHuSDDSVgva3uqj/content/tF3zLHuSDDSVgva3uqj/BAnz%20AT%2006.12.2022%20B8.pdf?inline). The funding guideline entered into force the same day.
4	Copy of the publication in the Federal Gazette on 6 December 2022 (BAnz AT 06.12.2022 B7) of the funding guideline for digital school development and reference to the relevant provisions indicating their entry into force	The document shows the additional funding guideline for the funding of educational centres of excellence for digital school development as published in the Federal Gazette on 6 December 2022 (https://www.bundesanzeiger.de/pub/publication/B8RpkadplSty7M9nzHG/content/B8RpkadplSty7M9nzHG/BAnz%20AT%2006.12.2022%20B7.pdf?inlin). The funding guideline entered into force the same day.

3. Analysis:

The justification and substantiating evidence provided by the Germany authorities cover all constitutive elements of the milestone.

Under the lead of the Federal Ministry of Education and Research (BMBF), three additional funding guidelines, each of them with a specific thematic orientation, have entered into force and been published.

The funding guideline titled “Funding guideline for languages, social sciences and economics” (*“Richtlinie zur Förderung von Verbundprojekten als „Kompetenzzentrum für digitales und digital gestütztes Unterrichten in Schule und Weiterbildung in den Sprachen, Gesellschafts- und Wirtschaftswissenschaften“*) (Evidence No. 2) with the specific thematic orientation of languages, social sciences and economics was published in the Federal Gazette on 30 November 2022 and according to section 8 of the guideline, it entered into force on the day of publication. The publication of the funding guideline took place under the lead of the Federal Ministry of Education and Research (*Bundesministerium für Bildung und Forschung - BMBF*), which was in the lead of the adoption of the guideline as mentioned on the first page in the title of the guideline.

Regarding the funding guideline titled “Funding guideline for musical and creative subjects and sports” (*“Richtlinie zur Förderung von Verbundprojekten als „Kompetenzzentrum für digitales und digital gestütztes Unterrichten in Schule und Weiterbildung in musisch-kreativen Fächern und Sport“*) (Evidence No. 3) with the specific thematic orientation of musical and creative subjects and

sports, it was published in the Federal Gazette on 6 December 2022 and according to section 8 of the guideline, it entered into force on the day of publication. The publication of the funding guideline took place under the lead of the Federal Ministry of Education and Research, which was in the lead of the adoption of the guideline as mentioned on the first page in the title of the guideline.

Moreover, the funding guideline titled “Funding guideline for digital school development” (*“Richtlinie zur Förderung von Verbundprojekten als „Kompetenzzentrum digitale Schulentwicklung“*”) (Evidence No. 4) with the specific thematic orientation of digital school development was published in the Federal Gazette on 6 December 2022 and according to section 8 of the guideline, it entered into force on the day of publication. The publication of the funding guideline took place under the lead of the Federal Ministry of Education and Research, which was in the lead of the adoption of the guidelines as mentioned on the first page in the title of guideline.

Furthermore, in line with the measure description, **the measure shall support by providing scientific content for the development and set-up of competence centres for digital education based on a system of collaboration between teacher education and in-service training institutions, universities, and research institutes.**

Article 1.1. of each of the three funding guidelines mentioned above sets out the aim of the measure which is to develop and set-up competence centres which support digital education by providing scientific advice to schools on how to make use of digital education and by strengthening the use of digital education in the established teacher education and training framework. As per Article 1.1 of the funding guidelines, the competence centres for digital education, research institutes, universities, and institutions for the education of teachers are to be connected with one another to collaborate as well as to build and strengthen networks between stakeholders.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 84 Analysis of educational institutions and identification of their IT needs

Related Measure: 3.1.4 Modernisation of the Federal Armed Forces’ educational and training facilities

Quantitative Indicator: Number of educational institutions fully analysed

Baseline: 0

Target: 60

Time: Q1 2022

1. Context:

This investment aims to equip 60 different education institutions of the Federal Armed Forces (*Bundeswehr*) with up-to-date information technology. The measure includes a thorough analysis of the state of play and upgrade needs in the different educational institutions and a subsequent roll out of the necessary equipment and systems.

Target 84 concerns the adoption of an assessment report by the Federal Ministry of Defence (*Bundesministerium der Verteidigung - BMVg*) demonstrating that the IT environments and needs of the 60 initially designated educational institutions have been analysed, and the needs and implementation possibilities have been identified.

Target 84 is the second step of the investment, and it follows the completion of milestone 83, which consists of the signature of the project contract with the IT service provider for the initial phase for assessing the IT systems of the educational and training facilities. It will be followed by target 85 related to the completion of the modernisation of the 60 educational institutions.

The investment has a final expected date for implementation on 31 March 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Copy of the assessment report prepared by the Federal Office of Federal Armed Forces Equipment, Information Technology and In-Service Support (BAAINBw) (<i>Bundesamt für Ausrüstung,</i>	This document shows a copy of an assessment report prepared by the BAAINBw and adopted by the BMVg on 7 November 2023 demonstrating that the information technology (IT) environments and needs of the 60 initially designated educational institutions, and 33 additional educational institutions, have been analysed, and the needs and implementation possibilities have been identified for each of

	<i>Informationstechnik und Nutzung der Bundeswehr - BAAINBw</i>) and adopted by the Federal Ministry of Defence (<i>Bundesministerium der Verteidigung - BMVg</i>) on 7 November 2023	them.
3	Copy of the list of all analysed educational institutions	This document shows the list of all 93 analysed educational institutions, setting out the identified IT needs and implementation possibilities (column " <i>Identifizierte Bedarfe/ Lösungen</i> "), the current state of implementation of the roll out of the necessary equipment and systems (column " <i>offene/ in Bearbeitung befindliche Maßnahmen</i> ") and the expected date of completion (column " <i>Fertigstellungstermin</i> ").

3. Analysis:

The justification and substantiating evidence provided by the Germany authorities cover all constitutive elements of the target.

An assessment report has been adopted by the Federal Ministry of Defence (BMVg).

The Council Implementing Decision states that the assessment report shall be adopted by the Federal Ministry of Defence (BMVg). Germany's national recovery and resilience plan (see p. 677) does not refer to an adoption of the report within a formal written procedure but to the submission of the report for information to the BMVg who will take note of it ("*in Form einer Vorlage zur Information*"). In light of the contextual interpretation of this requirement of the Council Implementing Decision, the requirement is interpreted as referring to the taking note of the report by the BMVg. An assessment report on the completion of the analysis activities was prepared by the Federal Office of Federal Armed Forces Equipment, Information Technology and In-Service Support (*Bundesamt für Ausrüstung, Informationstechnik und Nutzung der Bundeswehr - BAAINBw*) (Evidence No. 2 above) and submitted for information to the BMVg who took note of it, as illustrated in the statement by the department Cyber/information technology (*Abteilung Cyber/Informationstechnik - CIT*) of the BMVg „Notification/Report on the fulfilment of milestone T84 was taken note of on 7 November 2023“ („*Meldung/Bericht zur Erfüllung des Meilenstein T84 am 7. November 2023 zur Kenntnis genommen*") (p. 1, Evidence No. 2 above). On this basis, it is considered that this constitutive element of the target is satisfactorily fulfilled.

This report demonstrates that the IT environments and needs of the 60 initially designated educational institutions have been analysed, and the needs and implementation possibilities have been identified.

The report demonstrates that the IT environments and modernisation needs of the 60 initially designated educational institutions, and 33 additional educational institutions, have been analysed, and that the needs and implementation possibilities have been identified for each of them (see p. 1 and the Annex on pp. 3-8 ("*Anlage 1*") of Evidence No. 2 above).

Furthermore, in line with the measure description, **the measure shall include a thorough analysis of the state of play and upgrade needs in the different institutions and a subsequent roll out of the necessary equipment and systems.**

The list of all analysed educational institutions (Evidence No. 3 above) shows 93 analysed educational institutions setting out the identified IT needs and implementation possibilities (column "*Identifizierte Bedarfe/ Lösungen*"), the current state of implementation of the roll out of the necessary equipment and systems (column "*offene/ in Bearbeitung befindliche Maßnahmen*") and the expected date of completion (column "*Fertigstellungstermin*") for each of them. The list highlights 74 out of these 93 educational institutions as having IT modernisation needs (see rows marked by an "x" in the "*Bedarf*" column of Evidence No. 3 above). The needs and implementation possibilities include inter alia the set up of learning management systems (LMS), diverse software or Wifi solutions (see column "*Identifizierte Bedarfe/ Lösungen*" of Evidence No. 3 above; and the Annex on pp. 3-8 ("*Anlage 1*") of Evidence No. 2 above).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 87 Publication of interim report in compliance with KitaFinHG

Related Measure: 4.1.1 Investment programme 'Childcare-financing 2020/21': special fund 'Child Day-care Expansion'

Qualitative Indicator: Publication of interim reports containing numerical evidence (funding, number of childcare places, number of subsidised equipment) in accordance with the legal provisions and the relevant coordination discussions between the federal government and the Länder.

Time: Q4 2023

1. Context:

The objective of the measure is to promote the creation of new childcare facilities and the refurbishment of existing facilities, which will create 90 000 additional places. For this purpose, the federal government provides support to the federal states and local authorities so that these invest in new buildings, extensions, conversions, refurbishments, renovations, and equipment.

Milestone 87 requires the publication of an interim report on approved and created childcare places and investments in equipment (in line with Article 30(2) and 30(3) KitaFinHG). In addition, the relevant federal states are required to having reported to the federal government on the state of implementation, including on funding, number of childcare places, number of subsidised equipment, in accordance with the monitoring and guidance obligations.

Milestone 87 is the second milestone of the investment, and it follows the completion of milestone 86 related to the legal requirements for the funding of childcare places. It will be followed by target 88, related to the final reporting on the creation of a total number of 90 000 newly funded childcare places. The requirement of the measure that the federal government provides support to the Länder and local authorities for the related investments to this measure has already been assessed under milestone 86.

The investment has a final expected date for implementation on 31 December 2023.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the requirements of the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Child Care Financing Act (<i>Kinderbetreuungsfinanzierungsgesetz- KBFZG</i>)	The Child Care Financing Act, as introduced in 2007 and amended in 2023: Child Care Financing Act of 18. December 2007 (BGBl. I S. 3022), amended by Article 2 of the Law adopted on 23 May 2023 (BGBl. 2023 I Nr. 136).
3	Federal Financial	The Act on Federal Financial Assistance for the

	Assistance Act for the Expansion of Day Care for Children (<i>Gesetz über Finanzhilfen des Bundes zum Ausbau der Tagesbetreuung für Kinder - KitaFinHG</i>)	Expansion of Day Care for Children, as introduced in 2008 and amended in 2023: <i>Gesetz über Finanzhilfen des Bundes zum Ausbau der Tagesbetreuung für Kinder vom 10. Dezember 2008</i> (BGBl. I Seite 2403, 2407), amended by Article 1 of the Law adopted on 23 May 2023 (BGBl. 2023 I Nr. 136).
4	Interim report (<i>Zusammenfassender Zwischenbericht zum Monitoring der Länder gem. des Gesetzes über Finanzhilfen des Bundes zum Ausbau der Tagesbetreuung für Kinder - KitaFinHG</i>)	The interim monitoring report of the <i>Länder</i> (federal states) according to the Federal Financial Assistance Act for the Expansion of Day Care for Children with cut-off date 31 December 2022 for the 5th investment programme “Childcare-financing 2020/21” of the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth (<i>Bundesministerium für Familie, Senioren, Frauen und Jugend, hereinafter referred to as “BMFSFJ”</i>). It contains information about the goal of the programme, financial volume of the programme, duration and deadlines of the programme and an evaluation of the <i>Länder</i> -monitoring as of 31 December 2022 (appropriation of funds and funding requests, approved places and committed funds, approved childcare places in <i>Kindertageseinrichtungen</i> und <i>Kindertagespflege</i> , approved and implemented equipment investments and overall assessment by the BMFSFJ). The report was published electronically on 12 July 2024.
5	Collection of all <i>Länder</i> -Reports	This evidence includes copies of the 16 <i>Länder</i> reports on monitoring the 5th investment programme “Childcare-financing 2020/21” as of 31 December 2022 (according to the Federal Financial Assistance Act for the Expansion of Day Care for Children. The document contains for each <i>Land</i> the report to the federal government on the state of implementation, including on funding, number of childcare places, number of subsidised equipment, in accordance with the monitoring and guidance obligations.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

An interim report on approved and created childcare places and investments in equipment (Article 30(2) and 30(3) KitaFinHG) has been published.

An interim report has been published on 12 July 2024 (*Zusammenfassender Zwischenbericht zum Monitoring der Länder gem. des Gesetzes über Finanzhilfen des Bundes zum Ausbau der Tagesbetreuung für Kinder (KITAFinHG) zum Stichtag 31.12.2022*) (Evidence No. 4, see also the website of the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth dedicated to early childhood education and care, at https://www.fruehe-chancen.de/fileadmin/user_upload/PDFDateien/BMFSFJ_240712_ZwischenberichtgemKitaFinHG_BF2.pdf), verified on 24 October 2024.

The interim report contains the results of the monitoring reports submitted by the Länder in line with the requirements of Article 30(2) of the Federal Financial Assistance Act for the Expansion of Day Care for Children (Evidence No. 3). Article 30(2) of the Federal Financial Assistance Act for the Expansion of Day Care for Children requires the Länder to report by 31 December 2022 to the Federal Ministry for Family Affairs, Senior Citizens, Women and Youth the state of implementation, including the number of approved and additionally created childcare places, funding, and the number of subsidised equipment.

The interim report (Evidence No. 4, p. 4) provides an overview how the Länder have complied with their reporting requirements. The report provides an overview over the commitments and disbursements (Evidence No. 4, pp. 5-6) as well as an overview of the approved and additionally created childcare places and related funding commitments by the reporting date of 31 December 2022 (Evidence No. 4, pp. 6-7). There are details on equipment investment, including on the objectives to which the equipment contributes (Evidence No. 4, pp. 9-10).

The relevant Länder have reported to the federal government on the state of implementation, including on funding, number of childcare places, number of subsidised equipment, in accordance with the monitoring and guidance obligations.

All Länder have submitted their monitoring reports by 31 December 2022, including the number of approved and additionally created childcare places, funding and number of subsidised equipment. (Evidence No. 5).

The monitoring reports submitted by the Länder to the federal government contain information on funding, number of childcare places supported, number and type of subsidised equipment (Evidence No. 1-16), in line with the reporting requirements of Article 30(2) of the Financial Assistance Act for the Expansion of Day Care for Children (Evidence No. 3).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 91 Outflow of support for the federal programme Ausbildungsplätze sichern

Related Measure: 4.1.3 Apprenticeship support

Quantitative Indicator: EUR million

Baseline: 0

Target: 652.5

Time: Q4 2022

1. Context:

The objective of the investment “Apprenticeship support” is to counteract the reduction in the number of apprenticeships due to COVID-19. For this purpose, the government provides financial support to SMEs that take on apprentices and that maintain their current level of training, create additional apprenticeships, avoid short-time working (Kurzarbeit) for apprentices, or take on apprentices from companies that have become insolvent.

Target 91 tracks that at least EUR 282 000 000 have been disbursed to recipients under the programme.

Target 91 is the second of three milestones and targets related to this investment. It follows milestone 90 that required that the revised funding guidelines covering the whole federal programme Securing apprenticeships (*Ausbildungsplätze sichern*) have been published in the Federal Gazette (*Bundesanzeiger*). The last target of the measure, target 92 requires the funding of at least 70 000 eligible applications.

The investment has a final expected date for implementation on 31 December 2022.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document justifying how the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID Annex) was satisfactorily fulfilled, with appropriate links to the underlying evidence.
2	Excel spreadsheet	A spreadsheet containing a list of 37 313 companies supported with EUR 303 271 199 with support by the measure.
3	Sample of 62 companies selected by the Commission	For each company a proof of application (grant application, <i>Förderantrag</i>) was provided as documentary evidence, proving that the company applied for funding for apprenticeship places . Also for each company, a proof was provided that the company has been awarded support for apprenticeship places (award

		<p>decision(s), <i>Förderbescheid</i>). In addition, for each company a proof was provided on the disbursement of support (payment order(s), <i>Kassenanordnung/KAO</i>, with which the Federal Employment Agency initiated payment, and records from the payment system of the Federal Employment Agency: payment invoice and clearing document, <i>Beleg zur Zahlung</i> and <i>Ausgleichsbeleg</i>).</p>
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3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

At least EUR 282 000 000 have been disbursed to recipients under the programme.

The German authorities provided a spreadsheet containing a list of 37 313 companies with disbursements totalling EUR 303 271 199, where support decisions follow the first funding guideline and its revised version that were assessed during the assessment of the first payment request of Germany. The spreadsheet covered five relevant categories of support for companies:

- *Prämie01 (Ausbildungsprämie)*: “Apprenticeship bonus” paid for apprenticeship places when SMEs that maintain their level of training,
- *Prämie02 (Ausbildungsprämie plus)*: “Apprenticeship bonus plus” paid for apprenticeship places when SMEs increase their level of training,
- *Prämie03 (Übernahmeprämie)*: “Takeover bonus” paid for apprenticeship places that are taken over from other companies that became insolvent,
- *Zuschuss01 (Kurzarbeit)*: “Support to avoid Kurzarbeit”, paid for SMEs that continue training despite a reduction in their economic activity,
- *Zuschuss03 (Sonderzuschuss)*: “Lockdown-II special support” is paid for very small companies if they continue training.

Following the selection of a random sample of 62 companies that represented all five support categories, Germany submitted documentary evidence related to the support received by these companies. For each company a proof of application (grant application, *Förderantrag*) was provided, proving that the company applied for funding for apprenticeship places. Also for each company, a proof was provided that the company has been awarded support for apprenticeship places (award decision(s), *Förderbescheid*). In addition, for each company a proof was provided on the disbursement of support (payment order(s), *Kassenanordnung/KAO*, with which the Federal Employment Agency initiated payment, and records from the payment system of the Federal Employment Agency: payment invoice and clearing document, *Beleg zur Zahlung* and *Ausgleichsbeleg*). Some companies posted more applications, received payments in more instalments, resulting in altogether 460 documents for the sample which could be attributed to each company by the company ranking number (*Lfd. Nr.*), the company name, the company address and the IBAN bank account number.

Each of the 62 sampled companies was checked in the following way by linking each document to the information provided in the spreadsheet of 37 313 companies (Evidence No. 2) and also linking the documents among each other. The checks done in detail are:

- i) For the truthful declaration of data by the applicant:

- Company name, city and street address in the spreadsheet matches with name and address on the grant application, the award decision, the payment order and the payment invoice. The IBAN bank account number is matching between the grant application, the award decision, the payment order and the payment invoice.
- ii) For the disbursements
- The support amount is matching between the award decision, the payment order, the payment invoice and the clearing document.

The evidence provided for a sample of 62 units confirmed that the requirements of the target have been met. For all 62 companies in the sample the award decision, the payment order, the payment invoice and the clearing document is matching the indicated disbursement amount in the spreadsheet. This provided assurance that the disbursement target was achieved.

As the records from the payment system of the Federal Employment Agency were provided in the form of digital documents that were printed out of the software application of the Agency, the Commission performed an online on-the-spot check on 2 October 2024. This aimed to obtain reasonable assurance that the received digital documents, the payment invoice (*Beleg zur Zahlung*) and the clearing document (*Ausgleichsbeleg*) are correct and were retrieved from the payment management application of the Federal Employment Agency. The on-the-spot check was finalised successfully without any issue found.

Furthermore, in line with the description of the measure, **the government shall provide financial support to SMEs that take on apprentices and that maintain their current level of training, create additional apprenticeships, avoid short-time working (*Kurzarbeit*) for apprentices, or take on apprentices from companies that have become insolvent.**

The support as categorised in the spreadsheet matches the measure description (table below). The sample included at least one case of each support category as specified in the award decision.

Measure description	Matching support category	Spreadsheet identifier	Disbursements
SMEs that maintain their current level of training	<i>Ausbildungsprämie (Apprenticeship bonus)</i> is paid for SMEs that keep the number of apprentices at the level of the three years preceding the pandemics, at EUR 2 000 for training contracts for year 2020 and at EUR 4 000 for training contracts for year 2021.	01: <i>Ausbildungsprämie</i>	66 282 000
	Lockdown-II special support (<i>Sonderzuschuss</i>) of EUR 1 000 for very small companies when they continue training for at least 30 days more	<i>Zuschuss 03</i>	400 000
SMEs that create additional apprenticeships	<i>Ausbildungsprämie plus</i> is paid for SMEs that increase the number of apprentices above the level of the three years preceding the pandemics, at EUR 3 000 for training contracts for year 2020 and at EUR 6 000 for training contracts for year 2021.	02: <i>Ausbildungsprämie plus</i>	221 763 000
SMEs that avoid short-time working	SMEs that continue training activities despite a work reduction exceeding 50% can receive subsidies of 75% of the gross	<i>Zuschuss 01</i>	13 254 199

(Kurzarbeit) for apprentices	apprenticeship remuneration.		
SMEs that take on apprentices from companies that have become insolvent	<i>Übernahmeprämie</i> : companies taking over apprentices from other companies who became insolvent due to the pandemics can obtain a subsidy of EUR 6 000	03: <i>Übernahmeprämie</i>	1 572 000

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 92 Award decisions on applications for the federal programme Ausbildungsplätze sichern

Related Measure: 4.1.3 Apprenticeship support

Quantitative Indicator: Number of eligible applications having been awarded funding

Baseline: 0

Target: 70000

Time: Q4 2022

1. Context:

The objective of the investment “Apprenticeship support” is to counteract the reduction in the number of apprenticeships due to COVID-19. For this purpose, the government provides financial support to SMEs that take on apprentices and that maintain their current level of training, create additional apprenticeships, avoid short-time working (Kurzarbeit) for apprentices, or take on apprentices from companies that have become insolvent.

Target 92 requires the funding of at least 70 000 eligible applications.

Target 92 is the last of three milestones and targets related to this investment. The first milestone was milestone 90 that required that the revised funding guidelines covering the whole federal programme securing apprenticeships (*Ausbildungsplätze sichern*) have been published in the Federal Gazette (*Bundesanzeiger*) and was assessed as part of Germany’s first payment request. Target 91 tracked that at least EUR 282 000 000 have been disbursed to recipients under the programme, and has been assessed in parallel with target 92. With this final step the implementation of the measure is completed.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document justifying how the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID Annex) was satisfactorily fulfilled, with appropriate links to the underlying evidence.
2	Spreadsheet	A spreadsheet containing a list of 37 313 companies supported with EUR 303 271 199 with support by the measure.
3	Sample of 62 companies selected by the Commission	For each company a proof of application (grant application, <i>Förderantrag</i>) was provided as documentary evidence, proving that the company applied for funding for apprenticeship places . Also for each company, a proof was provided that the company has been awarded support for apprenticeship places (award

		<p>decision(s), <i>Förderbescheid</i>). In addition, for each company a proof was provided on the disbursement of support (payment order(s), <i>Kassenanordnung/KAO</i>, with which the Federal Employment Agency initiated payment, and records from the payment system of the Federal Employment Agency: payment invoice and clearing document, <i>Beleg zur Zahlung</i> and <i>Ausgleichsbeleg</i>).</p>
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3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

At least 70 000 eligible applications have been awarded funding under the programme. As specified further in the operational arrangement, the target relating to eligible applications refer to the number of apprenticeship places covered in the award decisions.

The German authorities provided a spreadsheet containing a list of 37 313 companies with award decisions referring to 91 507 apprenticeship places for five eligible support schemes, following the first funding guideline and its revised version that were assessed during the assessment of the first payment request of Germany:

- *Prämie01 (Ausbildungsprämie)*: “Apprenticeship bonus” paid for apprenticeship places when SMEs that maintain their level of training,
- *Prämie02 (Ausbildungsprämie plus)*: “Apprenticeship bonus plus” paid for apprenticeship places when SMEs increase their level of training,
- *Prämie03 (Übernahmeprämie)*: “Takeover bonus” paid for apprenticeship places that are taken over from other companies that became insolvent,
- *Zuschuss01 (Kurzarbeit)*: “Support to avoid Kurzarbeit”, paid for SMEs that continue training despite a reduction in their economic activity,
- *Zuschuss03 (Sonderzuschuss)*: “Lockdown-II special support” is paid for very small companies if they continue training.

Only those apprenticeship places were calculated against the target where the same apprenticeship place was not benefitting from different support schemes for the same period. This was the case for 89 245 apprenticeship places.

Following the selection of a random sample of 62 companies that represented all five support categories, Germany submitted documentary evidence related to the support received by these companies. For each company a proof of application (grant application, *Förderantrag*) was provided, proving that the company applied for funding for apprenticeship places. Also for each company, a proof was provided that the company has been awarded support for apprenticeship places (award decision(s), *Förderbescheid*). In addition, for each company a proof was provided on the disbursement of support (payment order(s), *Kassenanordnung/KAO*, with which the Federal Employment Agency initiated payment, and records from the payment system of the Federal Employment Agency: payment invoice and clearing document, *Beleg zur Zahlung* and *Ausgleichsbeleg*). Some companies posted more applications, received payments in more instalments, resulting in altogether 460 documents for the sample which could be attributed to each company by the company ranking number (*Lfd. Nr.*), the company name, the company address and the IBAN bank account number.

Each of the 62 sampled companies was checked in the following way by linking each document to the information provided in the spreadsheet of 37 313 companies (Evidence No. 2) and also linking the documents among each other. The checks done in detail are:

1. For the truthful declaration of data by the applicant:

- Company name, city and street address in the spreadsheet matches with name and address on the grant application, the award decision, the payment order and the payment invoice. The IBAN bank account number is matching between the grant application, the award decision, the payment order and the payment invoice.

2. For the eligible applications

- The number and type of apprenticeship places covered indicated in the award decision is matching the number and type of apprenticeship places indicated in the spreadsheet.

A statistical analysis was carried out taking into account the overachievement of the target 92 of 89 245 for a required 70 000. Based on this, there is statistical assurance that target 92 has been met, and all its constitutive elements have been satisfactorily fulfilled.

Measure description	Matching support category	Spreadsheet identifier	Apprenticeship places counted for the target
SMEs that maintain their current level of training	<i>Ausbildungsprämie (Apprenticeship bonus)</i> is paid for SMEs that keep the number of apprentices at the level of the three years preceding the pandemics, at EUR 2 000 for training contracts for year 2020 and at EUR 4 000 for training contracts for year 2021	<i>Prämie01: Ausbildungsprämie</i>	22 472
	Lockdown-II special support (<i>Sonderzuschuss</i>) of EUR 1 000 for very small companies when they continue training for at least 30 days more	<i>Zuschuss 03</i>	248
SMEs that create additional apprenticeships	<i>Ausbildungsprämie plus</i> is paid for SMEs that increase the number of apprentices above the level of the three years preceding the pandemics, at EUR 3 000 for training contracts for year 2020 and at EUR 6 000 for training contracts for year 2021	<i>Prämie02: Ausbildungsprämie plus</i>	48 993
SMEs that avoid short-time working (<i>Kurzarbeit</i>) for apprentices	SMEs that continue training activities despite a work reduction exceeding 50% can receive subsidies of 75% of the gross apprenticeship remuneration	<i>Zuschuss 01</i>	17 219

SMEs that take on apprentices from companies that have become insolvent	<i>Übernahmeprämie</i> : companies taking over apprentices from other companies who became insolvent due to the pandemics can obtain a subsidy of EUR 6 000	<i>Prämie03: Übernahmeprämie</i>	296
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4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 94 1 000 000 students have received learning support

Related Measure: 4.1.4 Educational support for students with a learning backlog

Quantitative Indicator: Number of pupils receiving support under the programme

Baseline: 0

Target: 1 000 000

Time: Q3 2022

1. Context:

The aim of this measure is to provide educational support to avoid that a temporary learning backlog due to COVID 19-related disruption becomes entrenched. For this purpose, the Federal Government shall provide financial support to the Länder (federal states) so that these provide additional courses and mentoring to pupils, with a focus on core subjects and core competences such as German language, mathematics, and science.

Milestone 94 requires that at least 1 000 000 pupils have received learning support as part of the programme, as proved by the monitoring report.

Milestone 94 is the second and last milestone of this investment and it follows the completion of milestone 93, related to the funding agreement for the educational support for students with a learning backlog The part of the measure description requesting that the Federal Government shall provide financial support to the Länder, so that these provide additional courses and mentoring to pupils, has been assessed already as part of milestone 93. With this final step the implementation of the measure is completed.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Evaluation report (<i>Abschließendes Berichtsblatt zum Aktionsprogramm „Aufholen nach Corona für Kinder und Jugendliche“ für die Jahre 2021 und 2022 Maßnahme „Abbau von Lernrückständen“</i>)	Evaluation report issued by the Standing Conference of the Minister of Education and Cultural Affairs of the Länder (<i>Kultusministerkonferenz der Länder - KMK</i>) (<i>Abschließendes Berichtsblatt zum Aktionsprogramm „Aufholen nach Corona für Kinder und Jugendliche“</i>) on the implementation of the educational support for students with learning backlog (<i>Umsetzung des Aktionsprogramms „Aufholen nach Corona für Kinder und Jugendliche für die Jahre 2021 und</i>

		2022”).
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3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

At least 1 000 000 pupils have received learning support as part of the programme, as proved by the monitoring report.

The monitoring report (*Abschließendes Berichtsblatt zum Aktionsprogramm “Aufholen nach Corona für Kinder und Jugendliche”*) issued by the secretariat of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder (*Kultusministerkonferenz der Länder - KMK*) (Evidence No. 2, published at the website of the KMK at https://www.kmk.org/fileadmin/Dateien/veroeffentlichungen_beschluesse/2024/2024-Corona-abschl-Berichtsblatt.pdf verified on 24 October 2024, shows in table 3 „Mittelwendung und Anzahl der erreichten Schülerinnen und Schüler“ that overall more than 8 million pupils have been reached with the measure in the different Länder (federal states) by the cut-off date 31 December 2022. In the monitoring report, the Länder explicitly state that their implementation of the measure is based on the signed funding agreement/political memorandum (see p. 2, Evidence No. 2) and provide information on the funding used.

The reported data includes certain flags. Out of 16 Länder,

- for seven it is indicated there may have been multiple counting (BY, BE, HB, HH, RP, SL, SH),
- for two rounded values were provided (BW, SH),
- for one a maximum value was given (“up to”) (ST), and
- for one of the smaller Länder there was no reported value (TH).

Only counting the number of pupils reached in Brandenburg (BB), Mecklenburg-Vorpommern (MV), Nordrhein-Westfalen (NW) and Sachsen (SN) gives 1 586 274 pupils being reached, exceeding the target of 1 million students. The data for these Länder do not have flags that might imply achievement below the showed value, there are no indications of double counting or rounding (see table 1).

Table 1: Number of students having received learning support by 31 December 2022

<i>Land</i>	<i>Number of pupils reached</i>
<i>BW (Baden-Württemberg)</i>	<i>Rounded 400 000</i>
<i>BY (Bayern)</i>	<i>779 520*</i>
<i>BE (Berlin)</i>	<i>2 137 206*</i>
<i>BB (Brandenburg)</i>	<i>271 247</i>
<i>HB (Bremen)</i>	<i>420 000*</i>
<i>HH (Hamburg)</i>	<i>371 620*</i>
<i>HE (Hessen)</i>	<i>783 385</i>
<i>MV (Mecklenburg-Vorpommern)</i>	<i>38 833</i>
<i>NI (Niedersachsen)</i>	<i>1 105 719</i>
<i>NW (Nordrhein-Westfalen)</i>	<i>At least 865 176</i>
<i>RP (Rheinland-Pfalz)</i>	<i>At least 767 349*</i>
<i>SL (Saarland)</i>	<i>146 429*</i>
<i>SN (Sachsen)</i>	<i>411 018</i>

<i>ST (Sachsen-Anhalt)</i>	<i>Up to 250 000</i>
<i>SH (Schleswig-Holstein)</i>	<i>Rounded 100 000*</i>
<i>TH (Thüringen)</i>	<i>[no data]</i>
Total	8 847 502
Total from BB, MV, NW, SN	1 586 274

* Multiple counting cannot be excluded by Germany

Furthermore, in line with the description of the measure **these [the Länder] provide additional courses and mentoring to pupils with a focus on core subjects and core competences, for example German language, mathematics and science.**

The evaluation report (Evidence No. 2) indicates that, as specified in the political agreement, the focus of learning support was on reducing learning deficits in core subjects and core competences such as languages, mathematics and science (p. 2, Evidence No. 2). There it is explained that the measures focused particularly on core competencies and were aligned with the recommendations of the standing scientific committee of the KMK (*Ständige Wissenschaftliche Kommission der Kultusministerkonferenz*). The report explains that the recommendations have been implemented at three levels: i) basic support during the lessons with a focus on the core competences in mathematics, German language, English as well as science, as well as ii) supplementary measures including language training for pupils with different mother tongue than German, as well as iii) extracurricular activities including learning activities during holidays (Evidence No. 2).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 96 Completion of the development and first operational phase

Related Measure: 4.1.5 Digital Pension Overview

Qualitative Indicator: The portal is available and has been tested in a first operational phase. The evaluation report on the first operational phase has been submitted by the Central Office for the Digital Pension Overview (*Zentrale Stelle für Digitale Rentenübersicht – ZfDR*) to the steering committee for further discussion.

Time: Q4 2023

1. Context:

The measure aims to create an online portal called “Digital Pension Overview” (*Digitale Rentenübersicht*) providing citizens information about their individual pension provision and current entitlements from all three pillars of the German pension system (statutory, company and private pensions). For this purpose, the German Pension Fund (*Deutsche Rentenversicherung Bund*) must establish a pension information portal involving the various stakeholders to ensure that it aggregates relevant pension information, and ensuring, through testing and development, that the portal is user-friendly.

Milestone 96 consists of the provision of an evaluation report by the coordination body responsible for the digital pension overview. This report covers the first operational phase and should identify possible actions for improvements and new functionalities to be further discussed in the steering committee.

Milestone 96 is the second step of the reform that has altogether three milestones. It was preceded by milestone 95 that required the publication of the law on the Digital Pension Overview (*Rentenübersichtsgesetz - RentÜG*) in the relevant legal journal and which was satisfactorily implemented according to the assessment of the first payment request of Germany. Milestone 97 is related to the completion of the implementation of improvements, and where appropriate new functionalities, following the evaluation report and consultation with the steering committee.

The reform has a final expected date for implementation in August 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Evaluation report	An evaluation report of the pilot phase, by the Central Office for the Digital Pension Overview (<i>Zentrale Stelle für Digitale Rentenübersicht – ZfDR</i>). The report includes an assessment of the achieved level of usability, frequency of use and implementability for pension providers and a

		description of the identified possible actions for improvements and new functionalities, as well as a proposal of the possible actions for improvements and new functionalities to be further discussed in the steering committee.
3	Link to the Digital Pension Overview	Document including a link to the Digital Pension Overview https://www.rentenuebersicht.de , verified on 17 October 2024
4	Agenda	Agenda (<i>Tagesordnung</i>) of the steering committee meeting on 24 May 2024.
5	Decision paper	Decision proposal (<i>Vorlage</i>) for the steering committee meeting on 24 May 2024.
6	Minutes	Minutes of the steering committee meeting on 24 May 2024.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone. **The Central Office for the Digital Pension Overview (*Zentrale Stelle für die Digitale Rentenübersicht - ZfDR*) has provided an evaluation report according to § 6 (3) RentÜG of the first operational phase.** The evaluation report on the first operational phase has been submitted by ZfDR to the steering committee for further discussion.

The Central Office for the Digital Pension Overview (*Zentrale Stelle für die Digitale Rentenübersicht, ZfDR*) prepared an evaluation report (Evidence No. 2) covering the development of the pension portal from December 2022 to December 2023. The steering committee that oversees the work on the digital pension overview discussed this evaluation report on 24 May 2024, regarding its conclusions and follow-up action. This is shown by the meeting's agenda (Evidence No. 4), the proposed committee decision related to it (Evidence No. 5) and the minutes of the meeting (Evidence No. 6). The evaluation report was also published on the website of the Digital Pension Overview on 8 August 2024, verified by the Commission services at <https://www.deutsche-rentenversicherung.de/DRV/DE/Ueber-uns-und-Presse/Presse/Pressemitteilungen/Pressemitteilungen-aktuell/2024/2024-08-08-dig-rentenuebersicht-evaluation-positiv.html> on 24 October 2024.

Completion of the development and first operational phase.

Article 6 (3) of the law on the Digital Pension Overview (*Rentenübersichtsgesetz - RentÜG*) was published in the Federal Law Gazette (*Bundesgesetzblatt, Jahrgang 2021 Teil I Nr. 6*) on 17 February 2021 as Article 1 of the "Law for Improving Transparency on Old-age Provision and Rehabilitation and for Modernising Social Insurance Elections". The law foresees that the first operational phase of the pension review starts 21 months after the entry into force of the law, thus January 2023, and finishes after 12 months later, by end of December 2023. The law also foresees that before the first operational phase is closed, the ZfDR shall provide the steering committee with an evaluation report about the experiences and results of the first operational phase. The first operational phase finished end November 2023 (Evidence No. 2, p. 77) and the regular operational phase started in December 2023. The evaluation report, dated March 2024, was discussed by the steering committee on 24 May 2024.

The evaluation report shall **assess the achieved level of usability and implementability for pension providers. The portal is available and has been tested in a first operational phase.**

The link to the portal that Germany submitted <https://www.rentenuebersicht.de> (Evidence No. 3), was indeed verified by the Commission services on 17 October 2024 confirming that the portal is available. The evaluation report by the ZfDR (Evidence No. 2) also covered how different stakeholder groups used the portal. The report assessed the usability of the pension portal through the use of a wide range of research methods, including expert interviews, and data analysis. The views of representatives of pension providers, pension experts, users were assessed, through interviews, questionnaires and analysing website statistics. The assessment shows that by 27 October 2023, 105 pension providers were successfully connected to the website which shows implementability for the pension providers. The detailed findings related to the testing of the first operational phase also document a relatively high level of usability for the pension providers, while also identifying potential improvements (pp. 81-89).

The report shall clearly identify possible actions for improvements and new functionalities to be further discussed in the steering committee.

The evaluation report identified improvement possibilities and suggested proposals for improvements and new functionalities. Some of these changes were already implemented by the finalisation of the report, e.g. using clearer notation for not yet available information, showing a feedback form at the end of the page rather than on top of it, putting in links for easier access to further information (pp. 90-93). A number of additional changes were identified as further steps, including simplifying the openly accessible pages, with further information on the authentication process using eID, including a search function in the glossary, as well as adding a notification functionality for the personalised, password protected pages, so that users could be informed automatically of updates. It was also suggested to better inform on the use of the data export functionality (pp. 88-89; 94-95).

The steering committee discussed the evaluation report's suggestions for improvements and new functionalities on 24 May 2024. This is shown by the meeting's agenda (Evidence No. 4), the proposed committee decision of it (Evidence No. 5) and the minutes of the meeting (Evidence No. 6).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 99 Progress of public health offices towards digital maturity

Related Measure: 5.1.1 Strengthening of the digital and technical resources of the public health service

Quantitative Indicator: Percentage

Baseline: 0

Target: 35

Time: Q1 2024

1. Context:

The objective of this reform is to modernise the public health offices, in particular through increasing the level of their digitalisation and interoperability of IT systems to connect public health offices with other actors in the public healthcare system. The measure consists of the nationwide rollout of an IT system to track pandemic developments and increasing the overall level of digital maturity in the public health offices over the next years.

Target 99 concerns the improvement of the digital maturity of public health offices. At least 35% of public health offices have improved their digital maturity by at least two levels by the end of Q4 2023 in at least two categories in the employed digital maturity system, as compared to their digital maturity level of 2021.

Target 99 is the second target of the reform, and it follows the completion of target 98. Under target 98, the competent authorities were charged to use a software product called DEMIS to register persons in the context of SARS-CoV-2 and to discharge the reporting requirements under § 8 (1) (2) of the Infection Protection Law. It will be followed by target 100, related to the share of public health offices that have improved their digital maturity. The part of the measure description requesting a nationwide rollout of an IT system to track pandemic developments has been assessed already as part of target 98.

The reform has a final expected date for implementation in August 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	List of digitally matured public health offices	This list comprises public health offices, which have improved their digital maturity by at least two levels by the end of Q4 2023 in at least two categories in the employed digital maturity system, as compared to their digital maturity

		level of 2021. The list contains the digital maturity levels of all the relevant public health offices for all categories in both Q4 2021 and Q4 2023. Three public health offices (Heinsberg, Siegen-Wittgenstein and Wuppertal), which started their funding programme participation with the second call for funding and did not participate in the maturity assessment for 2021, did not reach an improvement of at least two levels in at least two categories. These three public health offices were nevertheless included in the total number of funded public health offices (see Evidence No. 1).
3	General funding guideline	The general funding guideline to promote measures to increase and develop the digital maturity of the public health service was published on 22 April 2022 by the Federal Ministry of Health.
4	1st Call for funding	The first call for funding was published along with the general funding guideline for the funding programme on 22 April 2022 by the Federal Ministry of Health.
5	2nd Call for funding	The second call for funding was published on 21 March 2023 by the Federal Ministry of Health.
6	3rd Call for funding	The third call for funding was published on 15 December 2023 by the Federal Ministry of Health.
7	Scientific Publication Maturity Model	The research paper “A Maturity Model for Assessing the Digitalisation of Public Health Agencies” highlights the development process for the model and the scientific methods applied in this context.
8	First interim report maturity measurement	The first interim report explains the methodology used for the digital maturity classification and results of the first digital maturity measurement emphasising the measurement process.
9	Third interim report maturity measurement	The third interim report summarises the result progress between the first and third maturity measurement and therefore the progress in respect to T99.
10	Confirmation letter by Fraunhofer FIT	This letter by Fraunhofer Institute for Applied Information Technology - FIT on behalf of the entire research consortium confirms that -1 is the baseline level when measuring digital maturity.
11	List of all funded projects	This list comprises all projects receiving funding

		by the Federal Ministry of under the first (year 2022) and second (year 2023) funding call in the underlying funding programme.
12	Copy of the digital maturity categories, issued in accordance with national legislation, in Q4 2021	60 copies of the certificates of the digital maturity categories as part of the sample, issued in accordance with national legislation, in Q4 2021.
13	Copy of the digital maturity categories, issued in accordance with national legislation, in Q4 2023	60 copies of the certificates of the digital maturity categories as part of the sample, issued in accordance with national legislation, in Q4 2023.
14	Copy of the application for funding	60 copies as part of the sample of the application for funding.
15	Copy of the disbursement decision	60 copies as part of the sample of the disbursement decision.
16	List of all funded public health offices	This list comprises all public health offices receiving funding by the Federal Ministry under the first (year 2022) and second (year 2023) funding call in the underlying funding programme aiming to increase digital maturity by at least two levels in at least two categories.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

At least 35% of public health offices ...

The target is further specified in the Operational Arrangements, which requires that **for the purpose of these Operational Arrangements, public health offices shall be understood as public health offices that received a federal subsidy [as part of measure 5.1.1] for improving their digital maturity.**

In total, 238 Public Health Offices (PHOs) received funding as part of measure 5.1.1 for improving their digital maturity (Evidence No. 1 and Evidence No. 16).

As 35% of PHOs need to achieve an improvement of two grades in two categories, this translates to at least 84 PHOs.

120 PHOs were reported to have achieved at least two grades of improvement in two categories of digital maturity (Evidence No. 2). A random sample of 60 PHOs was drawn for which the certificates of digital maturity in 2021 and Q4 2023 were provided (Evidence No. 12 and Evidence No. 13) as well as the application for funding by the PHO (Evidence No. 14) and the confirmation of disbursement of funding to the PHO (Evidence No. 15).

The evidence provided for a sample of 60 units confirmed that the requirements of the target have been met. The sample showed that 60 out of 60 PHOs drawn fulfilled the requirements of T99. That

is, for all 60 PHOs the necessary certificates showing the improvement of digital maturity are available, as well as the application for funding and the disbursement confirmations (Evidence No. 12-15). The latter two confirm the status of a PHO as a PHO that applied and received funding under this policy scheme and is therefore a funded PHO. For easier identification of the individual PHOs, a list was provided to facilitate cross-checks as the exact name of individual PHOs can differ in the certificate of digital maturity, the application for funding, or the confirmation of disbursement (Evidence No. 11).

... have improved their digital maturity by at least two levels by the end of Q4 2023 ...

... as compared to their digital maturity level of 2021.

The baseline maturity level measurement refers to the reference date 31 December 2021 (*“Die Ersterhebung erfasste den Stand der Digitalisierung zum Stichtag 31.12.2021.”*) (Evidence No. 8). Subsequently, PHOs are obliged to partake in annual measurements of their digital maturity (Evidence No. 3). *„(...) sind alle geförderten Projekten aufgefordert, (...) ihren digitalen Reifegrad während der Projektlaufzeit in regelmäßigen Abständen zum Stichtag 31.12., sowie im Rahmen der Beantragung und nach Projektende zu erheben bzw. zu aktualisieren. Die Bereitschaft dazu ist eine Fördervoraussetzung.“*

“Two levels” refers to the improvement of the digital maturity grade. To evaluate the level of digital maturity, a framework by an independent scientific consortium based on a research paper published in the journal for Business & Information Systems Engineering was used (Evidence No. 7). Certificates to assess the level of digital maturity were authored by three institutes of this consortium, that is, Fraunhofer Institute, the University of München and the Technical University of Dresden. When applying for funding, PHOs have to agree to participate in the relevant survey that underlies said certificates (Evidence No. 3, p. 3).

The employed digital maturity model has five [reachable] maturity levels, ranging from level 0 to 4. For classification in the digital maturity system, the PHOs undertake a self-assessment for each criterion in the respective subdimension whether it has already been implemented ("applies"), is currently being implemented ("being implemented") or not yet implemented ("does not apply"). If level 0 has been reached, the next level can also be reached if 80% of all its criteria have been ticked with applicable (Evidence No. 7).

However, since there are minimum requirements to reach grade 0, it can be missed and it is therefore not the lowest possible grade on this scale. As an example, to reach grade 0, PHOs have to at least plan to improve their digital maturity. If there are no plans, the grade requirements are not reached. That is, all organisations that have not reached the minimum requirements of grade 0 are graded as -1, which becomes the baseline grade for this evaluation. This has been confirmed by the Fraunhofer Institute (Evidence No. 10). In the original German: *“Alle Organisationen, die in der Ist-Erhebung noch nicht diese Mindestanforderungen erreicht hatten, befinden sich damit eine Stufe darunter, also -1. Die Erreichung von Stufe 0 setzt voraus, dass Gesundheitsämter erste Digitalisierungsbemühungen in verschiedenen Dimensionen planen.“*

... in at least two categories in the employed digital maturity system, ...

The employed digital maturity system (Evidence No. 7) has a matrix structure with eight dimensions. In this context, dimension and category are considered synonyms. The five categories are Digitalisation strategy, Employees, Process digitalisation, IT-equipment & organisation, IT-security,

citizen centralisation, working together and Software, data & interoperability. These are arranged in five maturity levels (Evidence No. 7, p. 7, section 4).

In the sample, a PHO meets the two-category requirement as soon as the improvement of two levels is evident in at least two of the eight categories mentioned above. The assessment is done using the certificates of digital maturity for Q4 2021 and Q4 2023 that show on page two the eight categories in the very left column and the achieved level in the very right column (Evidence No. 12 and Evidence No. 13). The sample-check found that all 60 PHOs fulfil the two-categories requirement.

Following the selection of a random sample of 60 units, Germany submitted copies of the certificates of the digital maturity categories, issued in accordance with national legislation, showing the level of digital maturity in Q4 2021 and Q4 2023 as well as the applications for funding by the PHOs and the disbursement decision for the funds. The certificates demonstrate the fulfilment of the increase of the digital maturity in at least two categories by at least two levels. The applications for funding and disbursement decisions demonstrate whether a PHO can be considered a funded PHO. The evidence provided for a sample of 60 units confirmed that the requirements of the target have been met. The certificates for digital maturity show sufficient improvement in the digital maturity of each PHO, both in the number of categories (at least two) and the number of levels (at least two). The applications of funding and disbursement decisions show that all 60 PHOs can be considered funded PHOs.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 101 Applications submitted to the Federal Office for Social Security for at least EUR 2 700 000 000

Related Measure: 5.1.2 Programme to future-proof hospitals

Quantitative Indicator: Volume of funding (in million euro) for applications submitted to the Federal Office for Social Security

Baseline: 0

Target: 2700

Time: Q2 2022

1. Context:

The measure aims to support the modernisation and digitalisation of hospitals in Germany. A fund for modernisation projects of hospitals will be established, and hospitals will have to apply for funding for the projects they intend to implement.

Target 101 concerns the submission of applications of at least EUR 2 700 000 000 in volume to the Federal Office for Social Security for hospitals' projects under the Programme to future-proof hospitals by the deadline for the applications of 31 December 2021. By 31 March 2022, the Federal Office for Social Security will publish the requested volume of funding.

Target 101 is the first step of the implementation of the investment. It will be followed by target 102, related to the increase in the digital maturity for 35% of funded hospitals in at least two categories by at least two levels, and target 103, related to the full implementation of 75% of funded projects.

The investment has a final expected date for implementation on 31 August 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Copy of the publication in the Official Journal (<i>Bundesgesetzblatt</i>) on 28 Oktober 2020 (<i>Bundesgesetzblatt Jahrgang 2020 Teil I Nr. 48</i>) of the Hospital Future Act (<i>Krankenhauszukunftsgesetz</i>)	The document introduces the amendments made to different regulations, including to the Hospital Financing Act (<i>Krankenhausfinanzierungsgesetz</i>) and the Regulation on the "Strukturfonds" (<i>Krankenhausstrukturfonds-Verordnung</i>). It was published on 28 Oktober 2020 (http://www.bgbl.de/xaver/bgbl/start.xav?startbk=Bundesanzeiger_BGBl&jumpTo=bgbl120)

	tz - KHZG)	s2208.pdf).
3	Copy of the Hospital Financing Act (<i>Gesetz zur wirtschaftlichen Sicherung der Krankenhäuser und zur Regelung der Krankenhauspflegesätze</i>)	Act concerning the financing of hospitals in the version published on 10. April 1991 (Federal Gazette I S. 886), which was last amended by Article 8a of the Act of 22 March 2024 (Federal Gazette 2024 I Nr. 101).
4	Copy of the “ <i>Verordnung zur Verwaltung des Strukturfonds im Krankenhausbereich</i> ” (<i>Krankenhausstrukturfondsverordnung, hereinafter referred to as “KHSFV”</i>)	Regulation on the “ <i>Strukturfonds</i> ” of 17 December 2015 (Federal Gazette I p. 2350), which was last amended by Article 6 of the Act of 20 December 2022 (Federal Gazette I p. 2793).
5	Copy of the Federal Budget 2021 for the Federal Ministry of Health	The document provides the overview of the entire budget of the Federal Ministry of Health for 2021.
6	Copy of the publication of the Federal Office for Social Security (<i>Bundesamt für Soziale Sicherung - BAS</i>) in line with Article 21(4) of the KHSFV from 18 January 2022	The document contains information on the total number of applications sent, the requested volume for funding, and the volumes for funding granted.
7	Copy of the publication of the Federal Office for Social Security in line with Article 21(4) of the KHSFV from 2 April 2024	The document contains information on the total number of applications sent, the requested volume for funding, and the volumes for funding granted.
8	Spreadsheet containing a list of 5 772 applications submitted to and approved by the Federal Office for Social Security under the programme to future-proof hospitals	The spreadsheet contains the entire list of applications submitted to the Federal Office for Social Security that have been approved by the Federal Office for Social Security by May 2024. The spreadsheet includes for each application the applicable grant eligibility criteria (<i>Fördertatbestand</i>), the date of application, and the requested volume for funding.
9	A sample of 60 applications of funding, for each applicant selected	For each application selected, the complete application for funding was provided, as submitted to the Federal Office for Social Security. The documents are excerpts from the system of the Federal Office for Social Security which include all information related to the respective application, including: <ul style="list-style-type: none"> • Unique identifier (“<i>Aktenzeichen</i>”) • Date of application

		<ul style="list-style-type: none"> • Requested volume for funding • Decision by the Federal Office for Social Security.
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3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

Of the EUR 3 000 000 000 allocated to the measure, applications of at least EUR 2 700 000 000 in volume have been submitted to the Federal Office for Social Security for hospitals' projects under the Programme to future-proof hospitals by the deadline for the applications of 31 December 2021. By 31 March 2022, the Federal Office for Social Security shall publish the requested volume of funding.

Of the EUR 3 000 000 000 allocated to the measure, ...

The German authorities provided evidence showing that EUR 3 000 000 000 have been allocated to the measure. The Hospital Future Act (*Krankenhauszukunftsgesetz*) (Evidence No. 2) amended the Hospital Financing Act (*Gesetz zur wirtschaftlichen Sicherung der Krankenhäuser und zur Regelung der Krankenhauspflegesätze*) (Evidence No. 3). The amendment introduced §14a in the Hospital Financing Act (Evidence No. 3, p. 9) which states that the funds established for the modernisation projects of hospitals will have a total volume of EUR 3 000 000 000. Moreover, the federal budget, and in particular the section relating to the Federal Ministry of Health ("*Bundeshaushalt 2021 – Einzelplan 15*") (Evidence No. 5, p. 7) includes the allocation of EUR 3 000 000 000 to the liquidity reserve of the fund under the programme to future-proof hospitals. Evidence No. 5 states that the funds would be made available to the fund on the first banking day in 2021.

... applications of at least EUR 2 700 000 000 in volume have been submitted to the Federal Office for Social Security for hospitals' projects under the Programme to future-proof hospitals by the deadline for the applications of 31 December 2021.

The regulation governing the fund (*Verordnung zur Verwaltung des Strukturfonds im Krankenhausbereich*) (Evidence No. 4, pp. 10-11) establishes the administrative tasks relating to the funding under the programme to future-proof hospitals that the Federal Office for Social Security is required to fulfil. In particular, this includes the publication of the total number of applications received until 31 December 2021 and the total amount of funding requested by 31 March 2022 (Evidence No. 4, p. 11). The Federal Office for Social Security published this information on 18 January 2022 (Evidence No. 6). The total number of applications submitted amounts to 6 076 (Evidence No. 6, p. 1), corresponding to a total volume of EUR 3 041 787 992.83 (Evidence No. 6, p. 3). However, not all of these applications were approved, for instance due to being incomplete. Therefore, the sample was drawn from the list of approved applications (Evidence No. 8). The spreadsheet includes a total of 5 772 applications, amounting to a total volume of EUR 2 938 296 413.78.

On the basis of the 5 772 applications submitted to and approved by the Federal Office for Social Security as set out in the spreadsheet provided (Evidence No. 8), the Commission drew a sample of 60 randomly selected applications. For each of the sampled applications, the German authorities provided the complete application for funding (Evidence No. 9). These applications for funding include details on the project to be implemented, an attachment indicating the details concerning the relevant grant eligibility criterion, and the decision by the Federal Office for Social Security. The checks done in detail are:

- The unique identifier of the application as provided in Evidence No. 9 matches the identifier provided in the spreadsheet (Evidence No. 8).
- The application was submitted under the programme to future-proof hospitals as laid out in Evidence No. 3, and in particular, pages 14 and 15 thereof (Article 14a). The application for funding has to relate to the “*Krankenhausstrukturfonds*” established with this regulation.
- The application had to be submitted before 31 December 2021.
- The project relates to the grant eligibility criteria as set out in the regulation. The regulation on the “*Strukturfonds*” (*Verordnung zur Verwaltung des Strukturfonds im Krankenhausbereich - Krankenhausstrukturfonds-Verordnung - KHSFV*) (Evidence No. 4) establishes 11 grant eligibility criteria. The project to be implemented has to refer to at least one of these grant eligibility criteria. For some of the applications, more than one grant eligibility criterion applies.
- The amount of funding requested is available in Evidence No. 9 and matches the amount of funding indicated in the spreadsheet (Evidence No. 8).

Following the selection of a random sample of 60 units, Germany submitted the complete application for funding for each applicant, as submitted to the Federal Office for Social Security. The evidence provided for a sample of 60 units confirmed that the requirements of the target have been met. For all 60 units in the sample the grant decision displays the grant amount requested by and awarded to the hospital. For all 60 units, the grant amount displayed in the grant decision is identical to the grant amount indicated in the list of approved applications (Evidence No. 8). For all 60 units of the sample, the unique identifiers in the application and in the spreadsheet (Evidence No. 8) match, all applications were submitted under the programme to future-proof hospitals, relate to grant eligibility criteria set out in the regulation on the “*Strukturfonds*” (Evidence No. 4) and all applications were submitted before 31 December 2021. For sample number 20109-03916-2021 the date of the application as indicated by the grant decision was erroneous. However, the application itself and other documents submitted as part of sample number 20109-03916-2021 confirm that the application was submitted on 30 November 2021 and that the information in Evidence No. 8 is correct. For sample number 20109-01925-2021 the grant decision erroneously names a different hospital than the one that requested the grant amount. However, based on the unique identifiers, it is possible to identify the correct hospital, that is the “*Kreiskrankenhaus Vilshofen*”. For this reason, the German authorities deemed issuing a corrected grant decision unnecessary. When consulted, the German authorities provided internal emails that clarified that a formal mistake occurred.

By 31 March 2022, the Federal Office for Social Security shall publish the requested volume of funding.

The German authorities provided the publication by the Federal Office for Social Security, which is dated 18 January 2022 (Evidence No. 6). The requested volume for funding amounts to EUR 3 041 787 992.83 (Evidence No. 6, p. 1). The German authorities also provided the publication by the Federal Office for Social Security, which is dated 2 April 2024, which contains the final approved volume paid out, namely EUR 2 932 849 445.08. (Evidence No. 7, p.4).

Furthermore, in line with the description of the measure, **the measure consists of establishing a fund, from which hospitals may receive financial support for a number of modernisation projects.**

As set out above, the Hospital Future Act (*Krankenhauszukunftsgesetz*) (Evidence No. 2) amended the Hospital Financing Act (*Gesetz zur wirtschaftlichen Sicherung der Krankenhäuser und zur Regelung der Krankenhauspflegesätze*) (Evidence No. 3). The amendment introduced Article 14a in the Hospital Financing Act (Evidence No. 3, p. 9) which states that a fund will be established which will have a total volume of EUR 3 000 000 000.

Furthermore, in line with the description of the measure, the financial support may be granted to hospitals, **for instance, to improve their digital infrastructure, emergency capacities, telemedicine, robotics, or IT and cyber security.**

The regulation governing the funds establishes 11 different grant eligibility criteria (Evidence No. 4, pp. 9-10). Projects that are eligible for funding target the adaption of the technical and IT equipment in the emergency department, the procurement, establishment, expansion, or development of information technology, communication technology, and robotics-based systems, processes, or spatial measures that enable the use of telemedicine procedures, or the procurement and establishment of information technology or communication technology systems, processes, and measures that ensure the confidentiality of the hospital's information technology systems, thereby improving the IT and cyber security.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 106 Disbursement of at least EUR 561 450 000 to vaccine research supported by this special programme

Related Measure: 5.1.3 Special programme to accelerate research and development of urgently needed vaccines against SARS-CoV-2

Quantitative Indicator: EUR million

Baseline: 0

Target: min 95% of total funding (total funding: EUR 591 000 000; 95%-target: EUR 561 450 000)

Time: Q3 2022

1. Context:

This target is part of an investment aimed at accelerating research and development of urgently needed vaccines against SARS-CoV-2. Financial support to increase development and production capacities of German vaccine producers aimed to strengthen the pharmaceutical and biotech sector in Germany, also in the long run.

Target 106 specifically sets out that of the EUR 591 000 000 allocated to the measure, a minimum of EUR 561 450 000 that is 95% of the total funding, have been disbursed to the beneficiaries for vaccine research.

Target 106 is the second target of the investment, and it follows the completion of milestone 104 related to approval of a first vaccine against SARS-CoV-2 by the regulatory authority. It will be followed by milestone 107, related to the completion and conclusive audit of the utilisation reports as well as the final reports. The part of the measure description requesting that the investment consists of financial support to German vaccine producers to increase their development and production capacity, and to increase patient numbers for clinical trial phases, has been assessed already as part of milestone 104.

The investment has a final expected date for implementation on 31 December 2022.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Duly justifying how the requirements of the target (including all its constitutive elements, as set out in the description of the target and of the corresponding measure in the CID annex) have been satisfactory fulfilled.
2	Break down of funds	Excel table summarising and breaking down the individual payments made to the three beneficiaries of the programme.
3	Proof of payment BioNTech	This confirms the reception of funding (EUR 375 002 291.08) by BioNTech. It is signed both by representatives of BioNTech as well as the

		implementing agency (<i>Projekträger</i>) the German Aerospace Center (<i>Deutsches Luft- und Raumfahrtzentrum - DLR</i>) (Evidence No. 3).
4	Proof of payment CureVac	This confirms the reception of funding (EUR 196 321 401) by CureVac. It is signed both by representatives of CureVac as well as the implementing agency. (<i>Projekträger</i>) the German Aerospace Center (<i>Deutsches Luft- und Raumfahrtzentrum - DLR</i>) (Evidence No. 4).
5	Proof of payment IDT	This confirms the reception of funding (EUR 19 957 468.25) by IDT Biologika GmbH. It is signed both by representatives of IDT Biologika GmbH as well as the implementing agency (<i>Projekträger</i>) the German Aerospace Center (<i>Deutsches Luft- und Raumfahrtzentrum - DLR</i>) (Evidence No. 5).
6	Allocation of funds BionTech (1)	This document contains proof of the allocation of funds to the company BioNTech SE (Evidence No. 6).
7	Allocation of funds BionTech (2)	This document contains proof of the allocation of funds to the company BioNTech SE. For BioNTech there are two documents, as there were originally two funding codes, but they were then merged (Evidence No. 7).
8	Allocation of funds IDT	This document contains proof of the allocation of funds to the company IDT Biologika GmbH (Evidence No. 8).
9	Allocation of funds CureVac	This document contains proof of the allocation of funds to the company CureVac AG (Evidence No. 9).

3. Analysis:

The justification and substantiating evidence provided by the Germany authorities cover all constitutive elements of the target.

Of the EUR 591 000 000 allocated to the measure, at least EUR 561 450 000 (95% of the total funding) have been disbursed to the beneficiaries for vaccine research.

Germany submitted for each of the three beneficiaries a proof of payment (Evidence No. 3, 4 and 5). With this document the beneficiaries (BioNTech, CureVac and IDT Biologika GmbH) report the costs incurred and confirm the reception of funding. The effective payment received as funding is indicated under number 19 "Zahlung auf Anteil des Bundes". For BioNTech SE that is EUR 375 002 291.08, for IDT Biologika GmbH EUR 19 957 468.25 and for CureVac AG EUR 196 321 401.00 (Evidence No. 3, 4 and 5 respectively). This sums up to a total of EUR 591 281 160.33 funding disbursed to the three beneficiaries which is more than the minimum of EUR 561 450 000 required to be disbursed as per the milestone description in the CID.

In addition to the proof of payment Germany also submitted documents (Evidence No. 6, 8 and 9) that show the detailed allocation of funds to the different items where costs were incurred in the vaccine development projects. In more detail, number 0881 gives out the prime costs, number 0882 to 0884 indicates the resources for the funding, that is own resources, external funds as well as the allocation from the funding programme. The allocation of funds also indicates under subject (*Thema*) the overall funding objective which for all three beneficiaries are directly related to the development of a vaccine against SARS-CoV-2.

For one beneficiary, BioNTech, two documents with the allocation of funds were submitted, this is because initially BioNTech had been awarded two separate contracts (identification numbers FKZ 01KI20700 and FKZ 01KI20700I). In September 2021, the funds from FKZ 01KI20700I were completely transferred to FKZ 01KI20700 (formally via reduction of FKZ 01KI20700I by 22 574 400 EUR and increase of FKZ 01KI20700 by the same amount), so that the complete funding hence is summarised under FKZ 01KI20700.

The allocation of funds also each have a section that is called payments (*Zahlungen*) where the individual transfers of the funding paid out in tranches is listed. The flow of payments can also be found in the overview in the Excel spreadsheet – Breakdown of payments (Evidence No. 2) provided as additional evidence and for ease of overview over the individual payments. The only difference between the flow of payments listed in Evidence No. 6, 8 and 9 and in Evidence No. 2 are bookings that have been offset by another entry, meaning the Excel list only contains those payments which are effective.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 107 End of programme

Related Measure: 5.1.3 Special programme to accelerate research and development of urgently needed vaccines against SARS-CoV-2

Qualitative Indicator: Completion and conclusive audit of the utilisation reports and of all final reports

Time: Q4 2022

1. Context:

The objective of this investment is to support the research and development of vaccines against SARS-CoV-2 in order to reduce the severity and duration of the pandemic. The investment consists of financial support to German vaccine producers to increase their development and production capacity, and to increase patient numbers for clinical trial phases.

Milestone 107 concerns the submission and auditing of all final reports on the utilisation of funds.

Milestone 107 is the third and last step of the investment, and it follows milestone 104 related to the recommendation for approval of the first vaccine against SARS-CoV-2 by the European Medicines Agency, and target 106 related to the disbursement of the funding under the measure. The part of the measure description requesting that the investment consists of financial support to German vaccine producers to increase their development and production capacity, and to increase patient numbers for clinical trial phases, has been assessed already as part of milestone 104. With this final step the implementation of the measure is completed.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Copy of the final report on the utilisation of funds by BioNTech "Schlussbericht zum Vorhaben BNT-COVID-19-Vaccine"	The document provides details on the activities by BioNTech as part of the project. It outlines the goals, the steps taken, as well as the overall results (Evidence No. 2).
3	Copy of the numerical proof of use by BioNTech "Zahlenmäßiger Verwendungsnachweis"	The document shows the costs incurred by BioNTech relating to the project (Evidence No. 3).
4	Copy of the final report on the utilisation of funds by CureVac "ACE-mR-CoV –	The document provides details on the activities by CureVac as part of the project. It outlines the goals, the steps taken, as well as the overall

	Entwicklung, Testung und Produktion eines SARS-CoV-2 Impfstoffes auf Basis der mRNA-Technologie“	results (Evidence No. 4).
5	Copy of the numerical proof of use by CureVac “Zahlenmäßiger Verwendungsnachweis“	The document shows the costs incurred by CureVac relating to the project (Evidence No. 5).
6	Copy of the final report on the utilisation of funds by IDT Biologika “Schlussbericht Förderkennzeichen: 01KI20702“	The document provides details on the activities by IDT as part of the project. It outlines the goals, the steps taken, as well as the overall results (Evidence No. 6).
7	Copy of the numerical proof of use by IDT Biologika “Zahlenmäßiger Verwendungsnachweis“	The document shows the costs incurred by IDT relating to the project (Evidence No. 7).
8	Copy of the audit report for the reports submitted by BioNTech “VERMERK über die Prüfung des Verwendungsnachweises für eine Zuwendung auf Kostenbasis (NKBF 2017 bzw. NKBF 98)“	The document contains the factual and computational verification of the reports on the utilisation of funds (Evidence No. 8).
9	Copy of the audit report for the reports submitted by CureVac “VERMERK über die Prüfung des Verwendungsnachweises für eine Zuwendung auf Kostenbasis (NKBF 2017 bzw. NKBF 98)“	The document contains the factual and computational verification of the reports on the utilisation of funds (Evidence No. 9).
10	Copy of the audit report of the reports submitted by IDT Biologika “VERMERK über die Prüfung des Verwendungsnachweises für eine Zuwendung auf Kostenbasis (NKBF 2017 bzw. NKBF 98)“	The document contains the factual and computational verification of the reports on the utilisation of funds (Evidence No. 10).
11	Copy of the notice of reduction of funds “Zuwendung aus dem Bundeshaushalt,	The document sent by the project coordinating entity German Aerospace Center (<i>Deutsches Deutsches Zentrum für Luft- und Raumfahrt e.V. – DLR</i>) informs BioNTech SE about the reduction

	Einzelplan 30, Kapitel 3004, Titel 68530, Haushaltsjahr 2021, für das Vorhaben: BNT-Covid-19-Vaccine-I – Investitionen für die beschleunigte Entwicklung und Bereitstellung eines mRNA-basierten COVID-19-Impfstoffs (BNT162) hier: Kürzungsbescheid“	of funding by EUR 22 574 400 (Evidence No. 11).
12	Copy of the notice of top-up of funds Zuwendung aus dem Bundeshaushalt, Einzelplan 30, Kapitel 04, Titel 68530, Haushaltsjahr 2021, für das Vorhaben: “BNT-Covid-19-Vaccine – Beschleunigte Entwicklung und Bereitstellung eines mRNA-basierten COVID-19-Impfstoffs (BNT162)“	The document sent by the project coordinating entity German Aerospace Center (<i>Deutsches Deutsches Zentrum für Luft- und Raumfahrt e.V. – DLR</i>) informs BioNTech SE about the top-up of funding by EUR 22 574 400 (Evidence No. 12).

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

All final reports on the utilisation of funds have been submitted and audited.

All final reports on the utilisation of funds have been submitted ...

The German authorities submitted the final report on the utilisation of funds for all three companies BioNTech, CureVac and IDT: Copy of the final report on the utilisation of funds by BioNTech (Evidence No. 2); copy of the final report on the utilisation of funds by CureVac “ACE-mR-CoV” (Evidence No. 4) and copy of the final report on the utilisation of funds by IDT Biologika (Evidence No. 6).

Under measure 5.1.3, the three companies BioNTech, CureVac, and IDT were supported. As assessed as part of the first payment request (M104), BioNTech SE received two notices of grants (funding code {Förderkennzeichen 01KI20700 and 01KI20700I; both grants were awarded for the same project (BNT 162)). The two notices of grants were combined into one, technically done by a reduction of the notice of grant 01KI20700I by its entire amount EUR 22.574.400,00 (Evidence No. 11) (*‘Zuwendung aus dem Bundeshaushalt, Einzelplan 30, Kapitel 3004, Titel 68530, Haushaltsjahr 2021, für das Vorhaben: “BNT-Covid-19-Vaccine-I – Investitionen für die beschleunigte Entwicklung und Bereitstellung eines mRNA-basierten COVID-19-Impfstoffs (BNT162)” hier: Kürzungsbescheid’*), and an increase of the notice of grants 01KI20700 by the same amount (See p. 2 of Evidence No. 12) (*‘Zuwendung aus dem Bundeshaushalt, Einzelplan 30, Kapitel 04, Titel 68530, Haushaltsjahr 2021, für das Vorhaben: “BNT-Covid-19-Vaccine – Beschleunigte Entwicklung und Bereitstellung eines mRNA-basierten COVID-19-Impfstoffs (BNT162)”*”). CureVac AG (funding code (Förderkennzeichen) 01KI20703) and IDT Biologika GmbH (Förderkennzeichen 01KI20702) each received one

'Förderkennzeichen'. All three companies submitted their reports on the utilisation of funds, which were split into two separate documents each: a factual report ("Sachbericht") and a numerical proof of use ("Zahlenmäßiger Verwendungsnachweis").

According to the audit report for BioNTech SE (p. 1, Evidence No. 8) ("VERMERK über die Prüfung des Verwendungsnachweises für eine Zuwendung auf Kostenbasis (NKBF 2017 bzw. NKBF 98)"), the factual report from BioNTech SE (See Evidence No. 2) ("Schlussbericht zum Vorhaben BNT-COVID-19-Vaccine") was received on 01 August 2022. The factual report contains a detailed description of the individual work packages carried out as part of the project. According to the stamp on the numerical proof of use (See Evidence No. 3) ("Zahlenmäßiger Verwendungsnachweis"), the corresponding numerical proof of use was received on 01 August 2022. The numerical proof of use lists the cost incurred as part of the project. The factual report and the numerical proof of use can be clearly attributed to the project under this measure conducted by BioNTech SE through the funding code Förderkennzeichen 01KI20700.

According to the audit report for CureVac (p. 1, Evidence No. 9) ("VERMERK über die Prüfung des Verwendungsnachweises für eine Zuwendung auf Kostenbasis (NKBF 2017 bzw. NKBF 98)"), the factual report from CureVac AG (See Evidence No. 4 above) ("ACE-mR-CoV – Entwicklung, Testung und Produktion eines SARS-CoV-2 Impfstoffes auf Basis der mRNA-Technologie") was received on 31 May 2022. The factual report contains a detailed description of the individual work packages carried out as part of the project. According to the stamp on the numerical proof of use (See Evidence No. 5) ("Zahlenmäßiger Verwendungsnachweis"), the corresponding numerical proof of use was received on 3 June 2022. The factual report and the numerical proof of use can be clearly attributed to the project under this measure conducted by CureVac AG through the Förderkennzeichen 01KI20703.

According to the audit report for IDT Biologika GmbH (p. 1, Evidence No. 10) ("VERMERK über die Prüfung des Verwendungsnachweises für eine Zuwendung auf Kostenbasis (NKBF 2017 bzw. NKBF 98)"), the factual report from IDT Biologika GmbH (see Evidence No. 6) ("Schlussbericht Förderkennzeichen: 01KI20702") was received on 30 June 2022. The factual report contains a detailed description of the individual work packages carried out as part of the project. According to the stamp on the numerical proof of use (See Evidence No. 7) ("Zahlenmäßiger Verwendungsnachweis"), the corresponding numerical proof of use was received on 15 August 2022. The factual report and the numerical proof of use can be clearly attributed to the project under this measure conducted by IDT Biologika GmbH through the Förderkennzeichen 01KI20702.

... and audited.

The audit report for BioNTech SE was filed on 26 September 2022 (p. 15, Evidence No. 8). The audit concluded that the funds have been used for the intended purpose (see p. 3 of Evidence No. 8). The audit concluded that the objectives intended with the grant have been achieved (See p. 4 of Evidence No. 8). The audit concluded that the proof of use meets the requirements (See p. 1 of Evidence No. 8). The audit report for CureVac AG was filed on 01 October 2022 (p. 15, Evidence No. 9). The audit concluded that the funds have been used for the intended purpose (see p. 3 of evidence no. 9). The audit concluded that the objectives intended with the grant have been partly achieved (See p. 4 of Evidence No. 9). The audit concluded that the proof of use meets the requirements (p. 1, Evidence No. 9). The audit report for IDT Biologika GmbH was filed on 17 October 2022 (p. 15, Evidence No. 10). The audit concluded that the funds have been used for the intended purpose (p. 3, Evidence No. 10). The audit concluded that the objectives intended with the grant have been achieved (p. 4, Evidence No. 10). The audit concluded that the proof of use meets the requirements (p. 1, Evidence No. 10).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 113 Widespread digitalisation of administrative services

Related Measure: 6.1.2 Digitalisation of the administration – Implementation of the Online Access Act

Quantitative Indicator: Number of service bundles implemented

Baseline: 0

Target: 215

Time: Q4 2022

1. Context:

The measure aims to make digitally available to users (individuals and businesses) 100 of the most important public service “bundles” under the responsibility of the federal states (*Länder*) and 115 public service “bundles” under the responsibility of the federal government, in line with the Online Access Act (*Onlinezugangsgesetz*). “Bundles” are thematically consistent groups of public services grouped together for the purpose of digitalisation.

Target 113 requires the digital implementation of at least 100 of the most important administrative service bundles of the *Länder* as one-for-all services and of 115 Federal Government service bundles.

Target 113 is the third target of the reform, and it follows the completion of target 111 and target 112, related to the conclusion of agreements to implement the Online Access Act between the federal government and *Länder* and the go-live of at least 70 public service bundles, respectively. It is followed by target 113A relating to the nationwide implementation (in at least 50% of *Länder*) of at least 100 of the most important administrative service bundles of the *Länder*.

2. Evidence provided:

	Name of the evidence.	Short description
1	Summary document	Summary document duly justifying how the requirements of the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Spreadsheet detailing 100 <i>Länder</i> and 115 Federal Government service bundles implemented	The spreadsheet lists 100 administrative service bundles (<i>OZG-Leistungen</i>) of the <i>Länder</i> implemented as one-for-all services and additional 115 Federal Government service bundles (<i>OZG-</i>

		<i>Leistungen</i>). It is the basis for sample selection.
3	Copy of the Online Access Act implementation catalogue with service objects (<i>OZG-Umsetzungskatalog mit Leistungsobjekten</i>) in the version of 8 October 2024, as curated by the Federal Ministry of the Interior and Community	Latest available version of the Online Access Act implementation catalogue with service objects, compiled by the implementing authorities of the Federal Government and the Länder. It specifies the service bundles of the Federal Government and of the Länder to be digitalised. It includes information on, amongst others, the importance of digitalising each of the service bundles, their state of implementation, and the responsible authority.
4	Copy of the maturity level model 1.1 (<i>Reifegradmodell 1.1</i>) published by the Federal Ministry of the Interior (BMI)	Guidance document of the member state, adopted by the conference of the IT representatives of the departments (<i>Konferenz der IT-Beauftragten der Ressorts (KoITB)</i>) on 4 November 2019, on assessing the quality of an implemented service bundle in terms of five steps (from the least mature level 0 to the most mature level 4). Available online: https://www.it-planungsrat.de/fileadmin/beschluesse/2020/Beschluss2020-20_Reifegradmodell.pdf
5	Copy of the 2018 resolution by the IT Planning Council (<i>IT-Planungsrat</i>) on the classification into Federal Government and Länder services	This document sets out the classification according to service types and is based on a resolution of the 26th meeting of the IT Planning Council on June 28, 2018 (https://www.it-planungsrat.de/beschluss/beschluss-2018-22) and the first OZG implementation catalogue linked there as an appendix to the resolution.
6	Evidence on a sample of 60 service bundles selected by the Commission, including copies of website links, certificates, legal references and justifications.	For each sampled service bundle, the following documentary evidence was provided: <ul style="list-style-type: none"> • Link to a live website of sampled service bundles on which users (citizens/businesses) can access the application forms, fill in and digitally sign applications, and

		<p>submit them to the public authorities. These functionalities may not be accessible for non-users as the German authorities require authentication to access them. Non-users can access the landing page with a description of the service process and a link to the first step.</p> <ul style="list-style-type: none"> • For sampled service bundles of the Länder, identifiers allowing their identification on the marketplaces for one-for-all use (23 services are available under https://www.marktplatz.govdigital.de/; five services are available under https://www.fitko.de/fitstore/?#fitstore-anchor) • Where applicable, a justification by the Federal Ministry of the Interior corresponding to one service bundle implemented, on why certain evidence supporting the service application cannot be digitally provided, as well as a copy of the legal basis (§ 9, § 39 of the Civil Status Act (PStG), § 371 of the Code of Civil Procedure (ZPO)). <p>In addition, the German authorities provided further evidence in cases where weblinks did not allow for conclusive findings on implementation or where the implementation as one-for-all service could not be verified from a website alone. This evidence includes:</p> <ul style="list-style-type: none"> - Additional weblinks, for instance to an explanatory website such as information on the federal portal for administrative services
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		<p>(‘Bundesportal’, available under https://verwaltung.bund.de/portal/DE),</p> <ul style="list-style-type: none"> - Legal bases for administrative services and the application process, - Two certificates of completion covering three service bundles, signed by the IT provider and the administrative authority in charge of digitalising the service bundles, - Several clarifications/explanations on the provided evidence, for example instructions on which geographical region to test an application process for, the scope of the service or the content of the <i>LeiKa</i>; - Test ID allowing reviewers to authenticate themselves in order to check two live application processes. <p>In addition, Commission services conducted three on-the-spot checks between 24 October and 11 November 2024, for four service bundles where weblinks did not allow for conclusive findings on implementation on the basis of pre-authentication information alone. During on-the-spot checks, someone from the user group authenticated themselves on the live website for which a link had been provided and walked Commission services through the application process, as evidenced by minutes and screenshots from the live demonstration.</p>
7	Copy of the Online Access Act from 14 August 2017 published in the Federal Gazette part I No 57 on 17 August 2017 (Onlinezugangsgesetz	Law laying out the duty of the Federal Government and federal regions (‘Länder’) to digitalise their administrative services. Available online, starting p. 17: https://www.bgbl.de/xaver/bgbl/st

	(OZG), 14. August 2017 (BGBl. I p. 3122, 3138))	art.xav?startbk=Bundesanzeiger_BG Bl&jumpTo=bgbl117s3122.pdf#__bgbl__%2F%2F*%5B%40attr_id%3D%27bgbl117s3122.pdf%27%5D__1686291946844 . Submitted as evidence to T111 and subsequently also considered for T113.
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3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

At least 100 of the most important administrative services of the Länder are implemented as one-for-all services, as well as an additional 115 Federal Government services.

The target is further specified in the Operational Arrangements, which require that:

- i) **service, as set out in the description of the target, be understood as equivalent to “service bundle” (OZG-Leistung).**
- ii) **a “service bundle” (OZG-Leistung) be considered as one of the most important services of the Länder if it has been included into priority categories 1, 2, or 3 in the “Online Access Act implementation catalogue with service objects” (OZG-Umsetzungskatalog mit Leistungsobjekten)**

For the service bundles of the Länder (implemented at the regional level), the Operational Arrangements further specify that:

- iii) **a one-for-all service bundle (*einer-für-alle OZG-Leistung*) be seen as a service variant that is developed by one Land or a group of Länder and can then be adopted by other Länder**
- iv) **a service bundle be considered digitalised and implemented in line with the Online Access Act (*Onlinezugangsgesetz, OZG*) and maturity model version 1.1 if it achieves maturity level (*Reifegrad*) 3 or it achieves maturity level 2 and service users are able to initiate, sign (where signature is required) and submit their application digitally and they are not asked to provide supporting evidence offline. Service users may exceptionally be asked to provide supporting evidence offline.**

The evidence provided for a sample of 60 service bundles, as identified by the service bundle identifier (*‘OZG ID’*), confirmed that the requirements of the target have been met. As a basis for the sample, the German authorities provided a list of 100 of the most important administrative services of the German federal states (*‘Länder’*) implemented as one-for-all services, as well as an additional 115 Federal Government (*‘Bund’*) services (Evidence No. 2). The following elements were assessed:

- i) Unique identifier of each service bundle (*‘OZG ID’*, column A). This identifier has been verified by Commission services for sampled service bundles as being identical to the identifiers of service bundles included in the latest available Online Access Act implementation catalogue with service objects (*OZG-Umsetzungskatalog mit Leistungsobjekten*, Evidence No. 3, column J). They all identify administrative service digitalisation projects. In line with the requirements of the Council Implementing Decision,

- as further specified by the Operational Arrangements, Germany provided weblinks to a total of 215 administrative services implemented, each part of a different service bundle.
- ii) An indication of whether the service bundle is under the authority of the Länder or the Federal Government. In line with the requirements of the Council Implementing Decision, 100 service bundles provided fall within the implementing authority of the Länder (Evidence No. 3, responsibility code “2/3”, “3a/3b”, “4” and “5”, column D – 31 of which were drawn as part of the sample), and 115 service bundles provided fall within the implementing authority of the Federal Government (Evidence No. 3, responsibility code “1”, column D – 29 of which were drawn as part of the sample). For instance, in the case of OZG ID 10003 (*‘Geburtsanzeige’*), the responsibility code indicated is 3, meaning that the implementation is under the authority of the Länder (here: Bremen). In the case of OZG ID 10008 (*‘Mutterschaftsgeld’*), the responsibility code is indicated as 1, meaning that the Federal Government is responsible for the service implementation. This split of services is derived from the German Basic Law (*Grundgesetz* from 23 May 1949, last amended on 19 December 2022, available online: <https://www.gesetze-im-internet.de/gg/GG.pdf>), more precisely the Articles on the legislative competence of the federal government and the federal states (Art. 70 and following) and the execution of federal laws (Art. 83 and following).
 - iii) A confirmation that all services have been digitalised, and therefore implemented (Evidence No. 2, column J ‘digital maturity level’ and column N ‘active links’).
 - a. Commission services verified the existence of a live website for a random sample of 60 service bundles (Evidence No. 6). For these websites, Commission services established the clear connection between the online service name and description on the relevant website(s) on the one hand and the service-identifying information (service bundle and *LeiKa* names) provided on the sampling spreadsheet (Evidence No. 2) on the other hand. Generally, the Online Access Act (from 14 August 2017, published in the Federal Gazette part I No 57 on 17 August 2017 (*Onlinezugangsgesetz (OZG)*, 14. August 2017 (BGBl. I p. 3122, 3138)) requires that individual services be developed to function ‘without media discontinuity’ (*‘medienbruchfrei’*, Article 3(1) of the Online Access Act, evidence No. 5 of target 111), meaning every step of the service process should be digitally available to the user. In essence, from the perspective of the user, digitalisation of public services enables the user to complete the service process from home. Therefore, Commission services assessed the digital maturity level (*Reifegrad*) of the sampled service bundles (Evidence No. 6), in line with the further specification on digital maturity in the Operational Arrangements, by considering in particular the process description for users, the possibility to authenticate and the possibility to initiate an application online. Beyond the existence of an online application form (‘maturity level 2’ according to the maturity level model used for implementation, Evidence No. 4), Commission services confirmed that at minimum, each service selected through sample rendered service users able to initiate, sign (where signature is required) and submit their application digitally (Evidence No. 6). Commission services also confirmed that users need not to provide supporting evidence offline in line with the further specifications, except for one case (OZG ID 10025). In this case, users are asked to provide a birth certificate offline for legal reasons as part of the application process, which the German authorities justified and for which the legal basis was submitted as further evidence (§ 9, § 39 of the Civil Status Act (PStG), § 371 of the Code of Civil Procedure (ZPO), part of Evidence No 6). Thereby, Commission services confirmed that a full online application is possible.
 - b. For cases in which information accessible via the provided weblinks did not allow for conclusive findings on implementation, Germany provided further evidence in the

form of additional weblinks, for instance to descriptions of the application process, legal bases, test IDs or certificates of completion. This included cases where relevant information was only available following authentication, which Commission services were not able to access. For four service bundles (OZG ID 10289, 10315, 10346, 10616), a meeting between Commission services and the German authorities was conducted as an on-the-spot control as provided by Article 6(4) of the Financing Agreement, in order to verify the steps following authentication, meaning that the submitted service was accessible online and users were able to initiate, sign (where signature is required) and submit their application digitally. In all cases, the additional evidence provided was sufficient to allow for a positive assessment of the requirements of the target.

For service bundles that were implemented by the Länder (responsibility code 2/3, 4 or 5; Evidence No. 3, column D), two additional target conditions were confirmed, as required by the target description:

- i) The importance of each service, as indicated by the priority category (Evidence No. 2, column P). The indicated priority category has been verified by Commission services for sampled service bundles as being identical to the category assigned in the Online Access Act implementation catalogue with service objects (Evidence No. 3, column O). The prioritisation of the catalogue, in turn, has been decided by the German IT Planning Council, the central government digitalisation committee consisting of representatives of the Federal Government and the federal states (*'Länder'*) on 28 June 2018 (Evidence No. 5), ahead of the services' implementation. All sampled services belong to the most important services, as they have been assigned one of the three highest priority categories (1, 2 or 3), in line with the further specifications in the Operational Arrangements.
- ii) A confirmation that all services are one-for-all services (Evidence No. 2, column O). As clarified in the further specifications of the operational arrangements, a one-for-all service is a service variant that is developed by one federal state (*'Land'*) or a group of federal states (*'Länder'*) and can then be adopted by other *Länder*. Commission services cross-checked that the sampled service bundles are indeed one-for-all service bundles by verifying they are active on digital marketplaces for the adoption by additional Länder (Evidence No. 6). For three service bundles that have not been inserted into digital marketplaces (OZG ID 10228, 10501 and 10509), Commission services additionally assessed certificates signed by the implementing IT providers, counter-signed also by the federal state (*'Länder'*) ministry in charge of implementation (Evidence No. 6).

The spreadsheet detailing 100 Länder and 115 Federal Government service bundles implemented (Evidence No. 2) contains four special cases which are digitalised but where an active link to a live website for the service user may not be available (OZG IDs 10275, 10408, 10437 and 10771). In line with the preceding T112, German authorities listed individual services which are or were only temporarily available online as there is no need for them to continuously be online, for example because they apply only to crisis situations such as the Covid-19 pandemic. As the Online Access Act requires the Federal Government and the federal states (*'Länder'*) to digitalise their public services without specifying any limitations to this task (Art. 1(1); Evidence No. 7 (Online Access Act), p. 17), and as the German recovery and resilience plan makes explicit reference to a Covid-related, non-permanent individual service, they are considered to be eligible and included in the assessment of this target.

Furthermore, Commission services assessed the correctness of the claims regarding the (potential) unavailability of a live service made on the four special cases listed above, to verify the information provided by the German authorities. The following checks were carried out:

- OZG ID 10275: It was verified that the service '*Deutsche Staatsangehörigkeit Erteilung Entlassung aus der deutschen Staatsangehörigkeit*', the service on being released from German nationality, is being discontinued because its legal basis has been removed on 26 March 2024 (§18, 19, 22 ,23 and 24 of the *Staatsangehörigkeitsgesetz* (StAG) revoked, <https://www.recht.bund.de/bgbl/1/2024/104/VO>).
- OZG ID 10408: Commission services verified that the service '*Bewerbung Deutscher Buchhandlungspreis Auswahl*', the application to the selection of the German Bookstore Award, is a recurring, non-continuous service (<https://www.deutscher-buchhandlungspreis.de/termine/>). The application round for 2025 has not been opened at the time of assessment (<https://bewerbung.deutscher-buchhandlungspreis.de/>).
- OZG ID 10437: It was verified that the service '*Kraftfahrzeugsteuer Erhebung*' has been automatised to the point that the user does not have to provide any manual input for the collection of motor vehicle tax. With the registration of the vehicle, all information is transmitted to the German central customs agency (*Generalzolldirektion*) and the tax is collected automatically annually via direct debit, meaning that the applicant does not have to take any further action (https://www.zoll.de/SharedDocs/Downloads/DE/Publikation/Broschuere/Die-Zollverwaltung/faltblatt_kraftfahrzeugsteuer.pdf? blob=publicationFile&v=17).
- OZG ID 10771: Commission services verified that the service '*Energiepreispauschale für Studierende und Fachschülerinnen und Fachschüler*', one-off energy price lumpsum payments to students, was discontinued in line with the Student Energy Price Allowance Act – EPPSG, paragraph 2(2) (<https://www.gesetze-im-internet.de/eppsg/BJNR235700022.html>).

Furthermore, in line with the description of the measure, **the measure consists of digitalising 100 service bundles that fall within the implementing competency of the Länder, and 115 service bundles within the competency of the Federal Government.**

Implementation of the digitalisation was assessed for exactly 100 service bundles of the Länder and 115 service bundles of the Federal Government. The Online Access Act implementation catalogue with service objects (Evidence No. 3) confirmed that the services indicated in the table for sampling (Evidence No. 2) belong to 100 different service bundles of the Länder's implementing competency and 115 different service bundles of the Federal Government's implementing competency, uniquely identified by their OZG ID (Evidence No. 2, Evidence No. 3).

4. Commission Preliminary Assessment: Satisfactorily fulfilled.

Number and name of the Milestone: 114 Completion of pilot projects to test pilot registers

Related Measure: 6.1.3 Digitalisation of the administration – modernisation of registers

Qualitative Indicator: End of pilot and assessment document compiled

Time: Q4 2023

1. Context:

The objective of the measure is to enable a simple, secure and digital exchange of data stored in various German registers. This shall allow citizens and companies to submit their data only once, instead of having to submit the same data to different authorities multiple times.

Milestone 114 is the first step of the implementation of the reform, tracking the completion of a pilot project testing pilot registers.

The next step in implementation will be milestone 115 related to the completion of the implementation of the uniform architecture for the advancement of the once-only principle. Then target 116 relates to the connection of 6 prioritised registers as well as having another 12 priority registers ready for connection.

The reform has a final expected date for implementation on 31 December 2023.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Identify data retrieval assessment document (<i>Identitätsdatenabruf Bewertungsdokument - IDA</i>)	This document by the Federal Office for Administration (<i>Bundesverwaltungsamt - BVA</i>) and the Federal Central Tax Office (<i>Bundeszentralamt für Steuern – BZSt</i>) describes the pilot project.
3	Certificate of completion of pilot project (<i>Bescheinigung Abschluss Pilotprojekt</i>)	This document signed by BVA and BZSt certifies the completion of the pilot project.
4	Announcement of the fulfilment of the technical requirements (<i>Bekanntmachung über das Vorliegen der technischen</i>	This announcement, published on 31.08.2023 in the Federal Law Gazette, confirms the existence of the technical requirements for operation under the Identification Number Act (<i>Identifikationsnummerngesetz - IDNrG</i>).

	<i>Voraussetzungen)</i>	
5	Register Modernisation Act (<i>Registermodernisierungsgesetz</i>)	The Registry Modernisation Act, as published in the Federal Law Gazette, on 6 April 2021. (BGBl. I p. 591).
6	Certificate of connection of the pilot project (<i>Bescheinigung über den Anschluss des Pilotprojekts</i>)	Certificate on the completion of the project by BVA and the Federal Information Technology Centre (<i>Informationstechnikzentrum Bund - ITZBund</i>).
6a	Annex to the certificate (<i>Annex to the Bescheinigung</i>)	Declaration by the BZst describing the involvement of ITZBund in the implementation of the pilot project.
7	Proof of selection of the national weapons registry (NWR) as pilot register (<i>Nachweis über Wahl des NWR als Pilotregister</i>)	A letter of the BVA to the Federal Ministry of the Interior (<i>Bundesministerium des Innern und für Heimat – BMI</i>), dated 15 February 2021, explaining that the weapons registry is the only register having the characteristics that make it appropriate to be a pilot registry.
8a	Progress report on the National Weapons register (<i>Erfahrungsbericht Nationales Waffenregister</i>)	Presentation delivered by the BVA on the experience of having connected the weapons registry as pilot registry, from the on-the-spot check on 20 September 2024.
8b	Identity data retrieval statistics for NWR Initial Allocation (<i>Identitätsdatenabruf Statistik für NWR Initiale Zuordnung</i>)	Statistical overview of connections established from the weapons registry to the ID database, also shown on the on-the-spot check on 20 September 2024.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

Completion of a pilot project to test pilot registers, in accordance with the implementation of the Identification Number Act (*Identifikationsnummerngesetz*) and the Register Modernisation Act (*Registermodernisierungsgesetz*)

The certificate of completion signed by the Federal Office of Administration (*Bundesverwaltungsamt, BVA*) and the Federal Central Tax Office (*Bundeszentralamt für Steuern, BZSt*) (Evidence No. 3) shows that the pilot project for the connection of the national weapon registry was completed in accordance with the implementation of the Identification Number Act (*Identifikationsnummerngesetz*, 28 March 2021 (BGBl. I p. 591)) and the Register Modernisation Act (*Registermodernisierungsgesetz*, 28 March 2021 (BGBl. I p. 591-606), Evidence No. 5) that provide the legislative framework for registry modernisation. The certificate also confirms that since 21 August 2023 the necessary technical architecture for connecting the registers exists.

In addition, also the federal government's IT service provider (*Informationstechnikzentrum Bund - ITZBund*) that technically implemented the pilot project, certified the successful completion of the pilot project, together with the BVA (Evidence No. 6 and Evidence No. 6a). The ITZBund is in charge

of the technical implementation of the requirements of the Identification Number-procedure of the BZSt. The ITZBund developed the interface for the identification retrieval procedure of the BVA making access possible to the Identification Number (IdNr)-registry of the BZSt.

The completion of the pilot project to test pilot registers was demonstrated through an on-the-spot check on 20 September 2024 (Evidence No. 9). During this check, the Federal Office of Administration (*Bundesverwaltungsamt, BVA*) explained and demonstrated the process of connecting the national weapons registry (*Nationales Waffenregister*) as pilot registry (Evidence No. 8a), demonstrated how the identity data retrieval process works from the Federal Central Tax Office (*Bundeszentralamt für Steuern, BZSt*) and presented statistical evidence on data retrievals during the pilot (Evidence No. 8b).

The measure description in the Council Implementing Decision required the completion of a pilot project to test pilot registers. The testing involved only one register, the national weapons registry, which was then connected to the database of the BZSt. Whilst this constitutes a minimal substantive deviation from the requirement of the Council Implementing Decision, this can be explained by the circumstance that upon assessing potential pilot registries the BVA found that the weapons registry was the only register having the characteristics that made it appropriate to be a pilot registry (Evidence No. 7). This reflected among others that national weapon registry had a functioning active committee structure that covered all stakeholders involved, so that necessary technical adjustments could be decided promptly and brought to implementation the IT operations for the BVA, BZSt and the national weapon registry were carried out by one service provider. Given that the work with the pilot registry allowed the testing of connecting registries which was the objective of this particular milestone, it did not change the nature of the measure and did not affect the progress towards the achievement of modernising registries that the milestone represents. As of this, this minimal deviation does not change the nature of the measure and does not affect the progress towards achieving the reform that the milestone represents. On this basis, it is considered that this constitutive element of the milestone is satisfactorily fulfilled.

Furthermore, in line with the measure description, the measure consists of the development of the necessary technical architecture.

The pilot project provides evidence of the development of the necessary technical architecture, notably the Information Technology Centre of the federal government (*ITZBund*) created the necessary switches so that the Federal Office of Administration's identity retrieval procedure connects to the identity number-procedure of the BZSt (Evidence No. 2 and Evidence No. 6a).

Furthermore, in line with the measure description to reach these objectives and steer the project, a register modernisation authority (*Registermodernisierungsbehörde*) shall be established.

The Register Modernisation Act of 2021 (Evidence No. 5) designated the Federal Office of Administration as the register modernisation authority (Article 3 (1), p. 592) and defined its tasks and responsibilities. BVA's work in steering registry modernisation is reflected in the evidences submitted (Evidence No. 2 to 8) on progress regarding the pilot project, and related documents such as a description of its tasks as register modernisation authority, the composition of advisory bodies was verified by Commission services at https://www.bva.bund.de/DE/Services/Behoerden/Verwaltungsdienstleistungen/Registermodernisierung/registermodernisierung_node.html, on 24 October 2024.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 118 Second progress report for the Conference of Minister-Presidents

Related Measure: 6.2.1 Joint programme of the federal government and the Länder for an efficient administration that benefits citizens and businesses

Qualitative Indicator: Second progress report published

Time: Q2 2022

1. Context:

This measure aims to make the German administration more efficient and innovative. The measure aims to accelerate planning and approval procedures, to streamline the requirements for lower levels of government to request financial subsidies in order to ensure a quicker outflow of funds, to accelerate housing construction, and to increase the number of successful transfers of business ownership to the next generation.

Milestone 118 requires the publication of a second progress report, identifying the measures that should be implemented under the leadership of Federal Government and/or the Länder (federal states). The report should contain the following elements: the name of the measure; status (started, completed, not yet started); next milestone; expected end date.

Milestone 118 is the second milestone of the reform, and it follows the completion of milestone 117 that tracked the publication of a first progress report. It will be followed by target 119, related to the completion of 80% of measures identified in the second progress report. The part of the measure description requesting that measure consists of establishing a working group comprised of the federal level and the Länder which shall develop proposals to improve the efficiency of public administration in 11 areas, has been assessed already as part of milestone 117.

The reform has a final expected date for implementation in March 2025.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the requirements of the milestone (including all its constitutive elements, as set out in the description of the milestone and of the corresponding measure in the CID annex) have been satisfactorily fulfilled.
2	Second progress report	The second progress report prepared by the head of the Federal Chancellery and the heads of Länder Chancelleries and submitted to the Conference of Minister-Presidents (<i>Ministerpräsidentenkonferenz – MPK</i>) who took note of it, published in 2022 describing the progress made in relation to those measures of the first progress report. The report was

		published at the website of the Federal Government at https://www.bundesregierung.de/resource/blob/974430/2047470/7213d84a6c6b074187f35c80476daa63/2022-06-03-mpk-beschluss3-top102-data.pdf , verified on 24 October 2024.
3	Specifications to the second progress report	A formal letter issued by the Federal Ministry of Justice (<i>Bundesministerium der Justiz – BMJ</i>), the Federal Ministry of Finance (<i>Bundesministerium der Finanzen - BMF</i>) and the Ministry of State (<i>Staatsministerium</i>) Baden-Württemberg that represented the Länder, specifying detailed deliverables, amending the second progress report. The letter was also published at the website of the Federal Ministry of Finance on 4 August 2023, verified at https://www.bundesfinanzministerium.de/Content/DE/Downloads/Europa/deutscher-aufbau-und-resilienzplan-measure-6-2-1.pdf on 24 October 2024.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

The published progress report shall identify the measures that shall be implemented under the leadership of the Federal Government and/or the Länder. The progress report shall contain the following elements: The name of the measure; status (started, completed, not yet started); next milestone; expected end date. The milestone is further specified in the Operational Arrangements, which require **that the identification of measures that shall be implemented shall be understood as referring only to measures related to the eleven areas of action listed under milestone 117 of the CID Annex.**

The second progress report was prepared by the head of the Federal Chancellery and the heads of Länder Chancelleries and submitted to the Conference of Minister-Presidents (*Ministerpräsidentenkonferenz – MPK*), who took note of it at their meeting of 2 June 2022. The report (Evidence No. 2) was published on the website of the federal government, reflecting the joint work of the Federal Government and the Länder. The link has been verified at <https://www.bundesregierung.de/resource/blob/974430/2047470/7213d84a6c6b074187f35c80476daa63/2022-06-03-mpk-beschluss3-top102-data.pdf> on 24 October 2024. The report lists 47 measures of which it identified nine measures as being relevant for implementing this reform 6.2.1 under Germany’s Recovery and Resilience Plan (identifiers 20, 35, 46, 79, 184, 189, 196, 201, 208). The report specified for the measures,

- their name,
- whether the Federal Government and/or the Länder are responsible for implementation,
- their implementation status classified as “started”, “partly completed”, “completed”, and

- information on the implementation timeline, when the measure was or should be implemented.

Germany provided further details on the content of these measures, elaborating on their contribution to the objective of measure 6.2.1, and giving details on the planned implementation of these measures in August 2023, in an official letter of the Federal Ministry of Justice (*Bundesministerium der Justiz – BMJ*), the Federal Ministry of Finance (*Bundesministerium der Finanzen – BMF*) and the Ministry of State Baden-Württemberg (*Staatsministerium Baden-Württemberg*) that represented the Länder (Evidence No. 3). The letter was also published at the website of the Federal Ministry of Finance on 4 August 2023, verified at <https://www.bundesfinanzministerium.de/Content/DE/Downloads/Europa/deutscher-aufbau-und-resilienzplan-measure-6-2-1.pdf>. This letter specified concrete milestones with concrete deliverables for each measure, along with confirming the planned date of completion. It provided the information required in the description of the currently assessed milestone 118 (name of the measure, status, next milestone, expected end date, see table below).

The identified measures cover the 11 areas of action identified in the description of milestone 117 and also referred to in the measure description. Compared to the first progress report that was assessed in the first RRF payment request submitted by Germany, three measures (20, 23, 25) were merged to measure number 20, with measure 20 now covering 3 areas of action.

Table: The areas of action, the matching measures and related details in the second progress report as further specified in the addendum

Area of action	Measure in the second report and its identifier	Milestone	Government responsibility	Implementation status	Milestone due	Completion due
Accelerating the outflow of grants;	[20] Measure comprising action for accelerating the outflow of funds, identifying obstacles, supporting municipalities	Publication of the final Report of the Federal-Länder Expert Working Group on Accelerating the Outflow of Funds for Federal Financial Aid	Federal government and Länder	Started	Q1 2025	Q1 2025
Identifying obstacles to the outflow of grants and reporting them to the Federal Ministry of Finance						
Improving the financial support of municipalities						
Streamlining and making grants from the Federal Government to the Länder and municipalities as uniform as possible	[35] Setting up federal grants in a uniform way	Publication of the First Report of the Federal Government on the All-German Funding System for Structurally Weak Regions	Federal Government	Started	Q2 2021	Q4 2023
		Publication of the report “Better Promote 2.0 - a common approach to funding consultation”	Federal Government	Started	Q4 2023	

Improving transfer of business ownership through a dedicated task force	[46] Task force company succession	Legal opinion on the universal succession of public law positions	Federal Government and Länder	Completed	Q4 2024	Q4 2024
Revising the <i>Musterbauordnung</i> (model building code)	[79] Revising the <i>Musterbauordnung</i>	Publication of the Amendment of the Model Building Code	Federal Government and Länder	Completed	Q4 2022	Q4 2022
Strengthening planning and approval authorities	[184] Strengthening planning and approval authorities	Adaption of the Federal-Länder-Pact to speed up planning and approval procedures	Federal Government and Länder	Started	Q1 2025	Q1 2025
		Go-live of the Building Information Modeling (BIM) portal	Federal Government	Started	Q4 2022	
		Entry into force of the Law on the Acceleration of Administrative Court Proceedings in the Infrastructure Sector of 14 March 2023	Federal Government and Länder	Started	Q1 2023	
Improving recruitment of skilled staff and ensuring an improved staffing situation	[189] Determining the need for skilled staff, timely improvement of recruitment and staff availability	Adaption of the Federal-Länder-Pact to speed up planning and approval procedures	Federal Government and Länder	Started	Q1 2025	Q1 2025
		Entry into force of the Act to Improve Climate Protection in Immission Control, to Accelerate Immission Control Licensing Procedures	Federal Government and Länder	Started	Q1 2025	
		Enhancement of the Federal Digital Academy	Federal Government	Started	Q2 2024	
Accelerating planning, in particular rail, local public and private transport	[201] Further legal changes to support acceleration of planning, in particular for rail and local public transport	Entry into force of the Act to ensure proper planning and approval procedures during the COVID-19 Pandemic and the Law Amending the Planning Security Act	Federal Government and Länder	Started	Q4 2022	Q1 2025
		Entry into force of the Act to Strengthen Digitisation in the Urban Land Use Plan Procedure and to amend other provisions	Federal Government and Länder	Started	Q1 2025	

Streamlining the consultation process and public participation procedures and simplifying participation through digitalisation	[196] Exploring the potential of digitalisation in public participation processes	Entry into force of the Act on the acceleration of authorisation procedures in the transport sector and the implementation of Directive (EU) 2021/1187	Federal Government and Länder	Started	Q1 2025	Q1 2025
Further accelerating planning and approval processes	[208] Further verification of accelerating planning and infrastructure initiatives	Amendment to the Renewable Energy Sources Act	Federal Government and Länder	Completed	Q3 2022	Q1 2023
		Amendment to the Spatial Planning Act	Federal Government and Länder	Completed	Q1 2023	
		Amendment to the Energy Industry Act	Federal Government and Länder	Completed	Q3 2022	
		Amendment to the Grid Expansion Acceleration Act	Federal Government and Länder	Completed	Q3 2022	
		Amendment to the Federal Requirements Plan Act	Federal Government and Länder	Completed	Q3 2022	

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 120 Start of PD consulting services for selected funding programmes

Related Measure: 6.2.2 Expansion of consulting services of PD – Berater der öffentlichen Hand GmbH

Qualitative Indicator: Agreement with the federal ministries on selection of funding programmes

Time: Q4 2022

1. Context:

The objective of reform 6.2.2 “Expansion of consulting services of PD – Berater der öffentlichen Hand” is to increase public investment activity, especially on the municipal level, by enabling municipalities and other public entities to better integrate public funding programmes into their investment projects (first submeasure 6.2.2.1), as well as by improving the implementation of IT investments in schools (second submeasure 6.2.2.2). The measure is to be executed by PD – Berater der öffentlichen Hand GmbH, a public-sector consulting firm owned mostly by the federal state and the Länder (federal states). The first submeasure aims to support municipalities and other public entities in navigating the funding programme landscape and to make funding programmes more accessible, while the second submeasure concerns the digitalisation of schools, for which PD – Berater der öffentlichen Hand GmbH will develop consulting concepts and advise school authorities.

Milestone 120 requires that suitable funding programmes for submeasure 6.2.2.1 have been identified by PD – Berater der öffentlichen Hand GmbH jointly with the relevant federal ministries, and the consulting project to improve the calibration of these funding programmes to the needs of the recipients has started.

Milestone 120 is the first step of the implementation of the first submeasure of the reform. It will be followed by target 121 and target 124, related to consultations with funding programme beneficiaries carried out and target 122 and milestone 123 on the development and dissemination of revision concepts to make the funding programmes more accessible. The second submeasure of the reform on school IT consists of target 125 and will be followed by milestone 126 and target 127.

The reform has a final expected date for implementation by 31 August 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the milestone has been satisfactorily fulfilled.

2	List of the funding programmes (<i>Liste der Förderprogramme</i>)	The list of funding programmes lists the four funding programmes that were jointly identified by PD – Berater der öffentlichen Hand GmbH and the Federal Ministries for Food and Agriculture (<i>Bundesministerium für Ernährung und Landwirtschaft – BMEL</i>) and Housing, Urban Development and Building (<i>Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen – BMWSB</i>).
3	Proof of identification of funding programme BULE (<i>Nachweis Identifikation Förderprogramm BULE</i>)	A confirmation of the start of the consultation, signed by both the Federal Ministry for Food and Agriculture and PD – Berater der öffentlichen Hand GmbH, confirming that the consultation programme “ <i>Bundesprogramm Ländliche Entwicklung – BULE</i> ” was jointly identified as suitable for measure 6.2.2.1.
4	Proof of identification of funding programme GAK-ILE (<i>Nachweis Identifikation Förderprogramm GAK-ILE</i>)	A confirmation of the start of the consultation, signed by both the Federal Ministry for Food and Agriculture and PD – Berater der öffentlichen Hand GmbH, confirming that the consultation programme “ <i>Gemeinschaftsaufgabe Agrarstruktur und Küstenschutz Integrierte ländliche Entwicklung – GAK-ILE</i> ” was jointly identified as suitable for measure 6.2.2.1.
5	Proof of identification of funding programme KFN (<i>Nachweis Identifikation Förderprogramm KFN</i>)	A confirmation of the start of the consultation, signed by both the Federal Ministry for Housing, Urban Development and Building and PD – Berater der öffentlichen Hand GmbH, confirming that the consultation programme “ <i>Klimafreundlicher Neubau – KFN</i> ” was jointly identified as suitable for measure 6.2.2.1.
6	Proof of identification of funding programme Urban development (<i>Nachweis Identifikation Förderprogramm Städtebauförderung</i>)	A confirmation of the start of the consultation, signed by both the Federal Ministry for Housing, Urban Development and Building and PD – Berater der öffentlichen Hand GmbH, confirming that the consultation programme “ <i>Städtebauförderung</i> ” was jointly identified as suitable for measure 6.2.2.1.
7	IBA-DARP contract for the first phase (<i>IBA-DARP-Vertrag – Phase 1</i>)	The contract between the Ministry of Finance and PD – Berater der öffentlichen Hand GmbH on the implementation of the first phase of measure 6.2.2 of the DARP. This includes M120.
8	IBA-DARP contract for the second phase (<i>IBA-DARP-</i>	The contract between the Ministry of Finance and PD – Berater der öffentlichen Hand GmbH

	<i>Vertrag – Phase 2)</i>	on the implementation of the second phase of measure 6.2.2 of the DARP. This includes milestones and targets following M120.
9	Consultation offer for the DARP (<i>PD-Beratungsangebot im Rahmen des DARP)</i>	A brochure for municipalities and schools explaining measure 6.2.2 of the German RRP.
10	Consultation offer for public swimming pool proprietors within the scope of the DARP (<i>Beratung im Rahmen des DARP)</i>	The document, dated 14 December 2021, contains a request for confirmation of an offer of counselling services by PD – Berater der öffentlichen Hand GmbH for Berliner Bäder Betriebe. The aim is to develop a pilot case to efficient public funding for public swimming pool proprietors of similar size.
11	Consultation for public construction projects within the scope of the DARP (<i>Beratung im Rahmen des DARP)</i>	The document, dated 3 December 2021, contains a pilot project on the identification of relevant public funding for the construction of public childcare facilities in Lilienthal. The aim is to develop a standardised screening of public funding for municipal construction projects.
12	Consultation for the DARP (<i>Beratung im Rahmen des DARP)</i>	The document, dated 26 November 2021, contains a pilot project on the identification of relevant public funding for the reconstruction of public buildings in the city of Schwarzenbek. The aim is to develop a standardised screening of public funding for municipal construction projects.
13	Collection of links to projects funded through the DARP	The links contained in the document lead to i) the central website of PD – Berater der öffentlichen Hand GmbH on the DARP; ii) a press release of the association of cities and municipalities in North Rhine-Westphalia advertising counselling services free of charge by PD – Berater der öffentlichen Hand GmbH via the DARP; iii) an addition to the press release that only consultation of projects for funding within the DARP is free of charge; and iv) a video of a workshop from 27 June 2023, organised by PD – Berater der öffentlichen Hand GmbH, where the top-down projects were presented (available at: < https://www.pd-g.de/assets/Aktuell-im-Fokus/DARP/DARP_EU_Stakeholderveranstaltung_Rueckblick.mp4 > and verified by Commission services on 25 October 2024).
14	Copy of an e-mail from PD – Berater der öffentlichen Hand to the Ministry of	The e-mail, dated 11 October 2022, contains attachments of the timeline for the drafting of a funding guideline under the KFB and the

	Housing, Urban Development and Building	contributing parties.
15	Practical Guideline for municipalities for the funding programme climate friendly new construction <i>(Praxisleitfaden für Kommunen zum Förderprogramm „Klimafreundlicher Neubau (KFN)“)</i>	The guideline from August 2023 and published by PD – Berater der öffentlichen Hand is directed at municipalities and explains the scope of the funding programme as well as the eligibility conditions.
16a	Copy of an e-mail from PD – Berater der öffentlichen Hand GmbH to the Ministry of Food and Agriculture	In this e-mail from 23 October 2024 the document on the status update on the counselling projects BULE and GAK-ILE, that was sent to the Ministry of Food and Agriculture on 23 June 2022 following a presentation (Evidence No. 16a), was forwarded.
16b	Status update on the counselling projects BULE and GAK-ILE by PD – Berater der öffentlichen Hand GmbH to the Ministry of Food and Agriculture <i>(Statusupdate zur Beratung des BMEL zu BULE und GAK-ILE)</i>	The presentation from 23 June 2022 is a status update for the Ministry of Finance regarding the BULE and GAK-ILE projects. The document lays out the state of the project at the time, the aims of the counselling project as well as the process to implementation.
17a	Copy of an e-mail from PD – Berater der öffentlichen Hand GmbH to the Ministry of Food and Agriculture	In this e-mail from 23 October 2024, the document on the final results of the counselling projects BULE and GAK-ILE, that was sent to the Ministry of Finance on 24 January 2023 in advance of a presentation (Evidence No. 17 a), was forwarded.
17b	Template for the final presentation on the counselling projects BULE and GAK-ILE by PD – Berater der öffentlichen Hand GmbH to the Ministry of Food and Agriculture <i>(Abschlussstermin zur Beratung des BMEL zu BULE und zur GAK-ILE)</i>	The presentation from 9 February 2023 lays out the findings of PD – Berater der öffentlichen Hand GmbH regarding a more efficient distribution of funding for the projects BULE and GAK-ILE.
18a	Copy of an e-mail from PD – Berater der öffentlichen Hand GmbH to the Ministry of Finance	In this e-mail from 23 October 2024, the offer of counselling services (Evidence No. 18a), that was sent to the Ministry of Finance on 29 September 2022, was forwarded.
18b	Request for confirmation of the counselling offer by PD – Berater der	The document, dated 29 September 2022, contains an offer to develop a practical guideline for municipalities to increase competences and

	öffentlichen Hand GmbH regarding the project of a practical guideline for the Urban Development programme	optimize processes regarding the request of public funds for projects under the Urban Development programme.
19a	Copy of an e-mail from PD – Berater der öffentlichen Hand GmbH to the Ministry of Finance	In this e-mail from 23 October 2024, the presentation of the final results of the counselling project (Evidence No. 19a), that was sent on 11 December 2023 to the Ministry of Finance, was forwarded.
19b	Presentation for the final results of the counselling project Urban Development for the Ministry of Housing, Urban Development and Building (<i>Top-down-Beratung des BMWWSB zur Prozessoptimierung im Kontext der Städtebauförderung</i>)	The presentation from 8 December 2023 by PD – Berater der öffentlichen Hand lays out the different phases of the counselling project, the main findings as well as action recommendations for the Ministry.

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

Suitable funding programmes have been identified by PD jointly with the relevant federal ministries [...]

The Federal Ministry of Food and Agriculture (*Bundesministerium für Ernährung und Landwirtschaft – BMEL*) and the Federal Ministry for Housing, Urban Development and Building (*Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen – BMWWSB*) have identified, jointly with PD a public-sector consultancy firm owned mostly by the federal state and the Länder (PD - Berater der öffentlichen Hand GmbH), four suitable funding programmes that support investments by financially disadvantaged municipalities. DE has provided a list of these funding programmes as Evidence No. 2 “List of the funding programmes”. This was confirmed by PD - Berater der öffentlichen Hand GmbH and the relevant ministries in writing (Evidence No. 3 – 6). The four funding programmes are the following:

- i) Federal Programme for Rural Development (*Bundesprogramm Ländliche Entwicklung - BULE*): The Federal Ministry of Food and Agriculture together with PD - Berater der öffentlichen Hand GmbH jointly identified this programme as suitable and have confirmed this in a proof of identification funding programme BULE (Evidence No. 3).
- ii) Federal Programme Joint task agricultural structures and coastal protection – integrated rural development (*Bundesprogramm Gemeinschaftsaufgabe Agrarstruktur und Küstenschutz – Integrierte ländliche Entwicklung – GAK-ILE*): The Federal Ministry of Food and Agriculture together with PD – Berater der öffentlichen Hand GmbH jointly identified this programme as suitable and have confirmed this in proof of identification of funding programme GAK-ILE (Evidence No. 4).

- iii) Development of funding guidelines for the programme “climate friendly new construction” (*Entwicklung Förderrichtlinie Klimafreundlicher Neubau – KFN*): The Federal Ministry for Housing, Urban Development and Building together with PD – Berater der öffentlichen Hand GmbH jointly identified this programme as suitable and have confirmed this in a proof of identification of funding programme KFN (Evidence No. 5).
- iv) Urban Development – process optimisation (step 2) (*Städtebauförderung - Prozessoptimierung (Stufe 2)*): The Federal Ministry for Housing, Urban Development and Building together with PD - Berater der öffentlichen Hand GmbH jointly identified this programme as suitable and have confirmed this in a proof of identification of funding programme *Städtebauförderung* (Evidence No. 6).

[...] and the consulting project to improve the calibration of these funding programmes to the needs of the recipients has started:

After the identification of four suitable funding programmes, PD – Berater der öffentlichen Hand GmbH started consulting projects to calibrate these funding programmes to the needs of the recipients:

- i) The consulting project for the Federal Programme for Rural Development (Bundesprogramm Ländliche Entwicklung – BULE) started on 17 February 2022 (Evidence No. 3, p. 3). Progress achieved from the start of the project until 23 June 2022 was documented in a status update, covering a stronger focus on the needs of municipal beneficiaries and reducing the administrative burden for beneficiaries (Evidence No. 16b, pp. 9-16). The findings of the project (Evidence No. 17b, pp. 5-32) were discussed on a workshop on 9 February 2023 which was prepared by PD – Berater der öffentlichen Hand GmbH sharing suggestions for lessons learned (Evidence No. 17a).
- ii) The consulting project for the Federal Programme Joint task agricultural structure and coastal protection – integrated rural development (GAK-ILE) started on 17 February 2022 (Evidence No. 4). Progress achieved from the start of the project until 23 June 2022 was documented in a status update (Evidence No. 16b, pp. 17-25). The findings of the project (Evidence No. 17b, pp. 33-58) were discussed in a workshop on 9 February 2023, which was prepared by PD – Berater der öffentlichen Hand GmbH sharing suggestions for lessons learned (Evidence No. 17a). Lessons learned included recommendations on communication relating to and digitalisation of the application process, transferability of funds, support for financially disadvantaged municipalities.
- iii) The consulting project for the development of funding guidelines for the programme “climate friendly new construction” (KFN/KFB) started on 20 September 2022 (Evidence No. 5) Correspondence of 11 October 2022 sent to project participants show ongoing work on the project (Evidence No. 14). The practical guideline for municipalities to access funding under the climate friendly new construction programme, dated August 2023, provides practical support for potential beneficiaries to better satisfy their needs (Evidence No. 15).
- iv) The consulting project for the Urban Development – process optimisation (*Städtebauförderung*) started on 15 December 2022 (Evidence No. 6). The findings of the project (Evidence No. 19a) were discussed in a workshop on 8 December 2023, which was followed by PD sharing the findings with participants (Evidence No. 19b). The findings included recommendations for the use of digital procedures and support for municipalities, bringing the funding guidelines closer to the needs of the recipients.

Progress of the consulting projects was discussed in a stakeholder event held on 27 June 2023. A video compilation of this event is available on the website of PD – Berater der öffentlichen Hand GmbH pd-g.de/assets/Aktuell-im-Fokus/DARP/DARP_EU_Stakeholderveranstaltung_Rueckblick.mp4 (Evidence No. 13), checked by Commission services on 25 October 2024. Posters on the consulting projects for the funding programmes BULE, GAK-ILE and KFN are shown in the video. The posters for BULE and GAK-ILE mention the start of the projects in February 2022.

The consulting programmes have the objective of improving the calibration of these funding programmes to the needs of recipients. This is confirmed by the contracts between PD – Berater der öffentlichen Hand GmbH and the Ministry of Finance (*Bundesministerium der Finanzen – BMF*) (Evidence No. 7, p. 6, and Evidence No. 8, p. 6). The contracts show that PD – Berater der öffentlichen Hand GmbH is following both a bottom-up and top-down approach, consulting both ministries managing the funding programmes (as part of milestone 120) and the municipalities and other funding programme beneficiaries on the planning, conception, and implementation of their funding programmes.

Furthermore, in line with the description of the measure, the measure is to be **executed by PD - Berater der öffentlichen Hand GmbH (PD)**.

Measure 6.2.2, which consists of two submeasures, is executed by PD – Berater der öffentlichen Hand GmbH. German authorities provided the contracts between PD – Berater der öffentlichen Hand GmbH and the Ministry of Finance for phase one and for phase two of the project as Evidence No. 7 “*IBA-DARP-Vertrag-Phase 1*” and Evidence No. 8 “*IBA-DARP-Vertrag-Phase 2*”. The contract for the first phase (Evidence No. 7) covers both components of measure 6.2.2 and specifies the work to be carried out until June 2022. The contract for the second phase (Evidence No. 8) covers all activities by PD – Berater der öffentlichen Hand GmbH starting from 1 July 2022.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Target: 125 Roll-out and pilot consulting projects on school IT

Related Measure: 6.2.2 Expansion of consulting services of PD – Berater der öffentlichen Hand GmbH

Quantitative Indicator: Number of consulting projects carried out

Baseline: 0

Target: 5

Time: Q4 2022

1. Context:

The objective of reform 6.2.2 “Expansion of consulting services of PD – Berater der öffentlichen Hand” is to increase public investment activity, especially on the municipal level, by enabling municipalities and other public entities to better integrate public funding programmes into their investment projects (first sub-measure 6.2.2.1), as well as by improving the implementation of IT investment in schools (second sub-measure 6.2.2.2). The measure is to be executed by PD – Berater der öffentlichen Hand GmbH, a public sector consulting firm owned mostly by the federal state and the Länder. While the first submeasure aims to support municipalities, the second submeasure concerns the digitalisation of schools, for which PD – Berater der öffentlichen Hand GmbH will develop consulting concepts and advise school authorities.

Target 125 requires that at least five consulting projects for school authorities on school IT have started.

Target 125 is the first step of the implementation of the second submeasure of the reform. It will be followed by milestone 126 and target 127, related to the development of a model IT concept for schools and 50 consulting projects for school authorities on IT. The first submeasure of the reform on supporting investment activity by municipalities consists of milestone 120, and will be followed by targets 121, 122 and 124 and milestone 123.

The reform has a final expected date for implementation on 31 August 2026.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the target has been satisfactorily fulfilled.
2	Confirmation of counselling (<i>Beratungsbestätigung</i>)	Evidence No. 2 is a confirmation from the municipal authority (Kreis Rhein-Hunsrück) responsible for schools that a consulting project by PD – Berater der öffentlichen Hand GmbH on school IT has been launched.
3	Confirmation of counselling (<i>Beratungsbestätigung</i>)	Evidence No. 3 is a confirmation from the municipal authority (city of Hannover) responsible for schools that a consulting project

		by PD – Berater der öffentlichen Hand GmbH on school IT has been launched.
4	Confirmation of counselling (<i>Beratungsbestätigung</i>)	Evidence No. 4 is a confirmation from the municipal authority (Kreis Segeberg) responsible for schools that a consulting project by PD – Berater der öffentlichen Hand GmbH on school IT has been launched.
5	Confirmation of counselling (<i>Beratungsbestätigung</i>)	Evidence No. 5 is a confirmation from the municipal authority (Stadt Königs Wusterhausen) that a consulting project by PD – Berater der öffentlichen Hand GmbH on school IT and IT services for educational facilities in the city has been launched.
6	Confirmation of counselling (<i>Beratungsbestätigung</i>)	Evidence No. 6 is a confirmation from the municipal authority (Landkreis Karlsruhe) responsible for schools that a consulting project by PD – Berater der öffentlichen Hand GmbH on school IT has been launched.
7	Online advertisement of PD counseling services for digitalisation of schools	The website of PD – Berater der öffentlichen Hand GmbH advertising counselling services on school digitalisation (see: https://www.pd-g.de/aktuell-im-fokus/darp).
8	Online navigation tool for schools termed “ <i>Schul-IT Navigator</i> ”	PD – Berater der öffentlichen Hand GmbH online webpage with tools available for schools and school authorities to develop school IT services, available at: schul-it-navigator.de .
9	Study by PD – Berater der öffentlichen Hand GmbH “Ready for the future? Strengthening municipalities for school digitalisation” („ <i>Bereit für die Zukunft? Kommunen für den digitalen Umbau der Schulen stärken</i> “)	A study “Ready for the future? Strengthening municipalities for school digitalisation” by PD – Berater der öffentlichen Hand GmbH putting forward recommendations for the digitalisation in schools (see: https://www.pd-g.de/pd-perspektiven/schul-it-studie) directly downloadable via https://www.pd-g.de/assets/PD-Perspektiven/221206_PD-Perspektiven_Schul-IT.pdf .
10	Link to a presentation of a status update on the counselling project on <i>DigitalPakt Schule</i>	The link leads to a presentation by PD – Berater der öffentlichen Hand GmbH from 11 May 2023 which provides a status update on the counselling project <i>DigitalPakt Schule</i> and an outlook on the further implementation (see: https://www.lmz-bw.de/fileadmin/user_upload/Downloads/Handouts/MEP/230511_DARP_Schul-IT-Umsetzungshilfen_und_Beratungen_final.pdf).

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the target.

At least five consulting projects for school authorities on school IT have started.

Germany has provided evidence that five individual consulting projects on school IT for school authorities have started. To this end, confirmation forms were signed by both the school authorities and by a consultant from PD – Berater der öffentlichen Hand GmbH (Evidence No. 2 – 6).

The five individual consulting projects on school IT for which launch confirmations were provided are the following:

- i) *“Rhein-Hunsrück-Kreis: Konzept für mobile Endgeräte an Schulen im Kreis“*, which translates to: *“Rhine-Hunsrück district: Concept for mobile devices in schools in the district”* and started in September 2022 (Evidence No. 2);
- ii) *“Stadt Hannover – Konzept Systemlandschaft”*, which translates to *“City of Hannover – System Landscape concept”* and started in March 2022 (Evidence No. 3);
- iii) *“Kreis Segeberg – Konzept mobile Endgeräte“*, which translates to *“District Segeberg – Concept for mobile devices”* and started in February 2022 (Evidence No. 4);
- iv) *„Stadt Königs Wusterhausen: Servicekonzept mit zentralem Service Desk für die schulische IT“* which translates to *“City of Königs Wusterhausen: service concept with central service desk for school IT”* and started in April 2022 (Evidence No. 5);
- v) *„Landkreis Karlsruhe: Entwicklung eines IT-Grundkonzepts für berufliche Schulen und Sonderpädagogische Bildungs- und Beratungszentren (SBBZ)“* which translates to *“Regional district of Karlsruhe: Development of a basic IT concept for vocational schools and Special Needs Education and Guidance Centres (SBBZs)”* and started in April 2022 (Evidence No. 6).

Each of these individual consulting projects then reflects steps described in and thus contributed to a study on school digitalisation *“Ready for the future? Strengthening municipalities for school digitalisation”* <https://www.pd-g.de/assets/PD-Perspektiven/221206_PD-Perspektiven_Schul-IT.pdf> (Evidence No. 9), which was conducted by PD – Berater der öffentlichen Hand GmbH, published on their website for which Germany provided a link <<https://www.pd-g.de/pd-perspektiven/schul-it-studie>> (Evidence No. 9). The link was checked by Commission services on 24 October 2024.

For this study, PD – Berater der öffentlichen Hand GmbH conducted qualitative interviews with 29 school authorities and 25 further stakeholders to identify the most important topics for a large online survey directed at school authorities as well as their needs regarding the *DigitalPakt Schule* (Evidence No. 9, p. 18). The online survey was then filled out by the representatives of 536 school authorities. On this basis, the status quo and the obstacles to the digitalisation of schools faced by the school authorities could be identified. Finally, a workshop with representatives from 20 school authorities and other stakeholders took place in order to assess and derive action recommendations for the implementing school authorities (Evidence No. 9, p. 18). Through this process, PD – Berater der öffentlichen Hand GmbH formulated eight action recommendations.

Moreover, based on their extensive consulting work in the realm of school IT, PD – Berater der öffentlichen Hand GmbH has developed a digital tool for schools to develop their own IT vision. The website *“Schul-IT Navigator”* managed by PD – Berater der öffentlichen Hand GmbH, offers several tools for schools and school authorities to develop school IT services <<https://www.pd-g.de/aktuell-im-fokus/darp>>, <schul-it-navigator.de> (Evidence No. 7 and Evidence No. 8). Germany provided links to the online advertisement of PD – Berater der öffentlichen Hand GmbH for school IT

consultation services and the website of school IT services (*Schul-IT Navigator*) (Evidence No. 8). Both websites were checked by Commission services on 25 October 2024.

This includes:

- i) documents on how to develop a vision (*Zielbild*) for a school's IT;
- ii) excel templates for stock-taking for both schools and funding institutions of existing hard- and software as well as further needs;
- iii) documents setting out the development and formulation of practices, roles, and processes for school IT;
- iv) instructions on how to develop an IT service catalogue and clearly define the therein included IT services;
- v) a collection of modules to be combined for the procurement of IT services;
- vi) documents, including templates, to assist in the development of IT services and IT support concepts; and
- vii) overviews over the necessary facilities in school buildings.

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 136 Entry into force of the Wind Energy on Land Act (*Wind-an-Land-Gesetz*)

Related Measure: 7.1.4. Wind Energy on Land Act

Qualitative Indicator: Provision in the legal act indicating the entry into force of the legal act

Time: Q1 2023

1. Context:

The objective of the reform is to accelerate the deployment of onshore wind energy and increase its share in Germany’s energy mix. The measure is implemented through the adoption of an act that will define each federal state’s land-use target for wind energy. The act shall also contain provisions to change the Construction Code (*Baugesetzbuch - BauGB*) to enable federal states to designate additional areas as suitable for onshore wind generation and the implementation of the reform shall be monitored by a joint committee of the federal level and the federal states (*EEG-Bund-Länder Kooperationsausschuss*).

Milestone 136 concerns the entry into force of the Wind Energy on Land Act. Milestone 136 is the only milestone of the reform.

The reform has a final expected date for implementation on 31 March 2023.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary Document	Summary document duly justifying how the milestone (including all the constitutive elements) was satisfactorily fulfilled.
2	A copy of the Wind Energy on Land Act (<i>Wind-an-Land-Gesetz</i>)	A copy of the Wind Energy on Land Act (<i>Wind-an-Land-Gesetz</i>) published on 28 July 2022 in the Federal Law Gazette (<i>Bundesgesetzblatt, Jahrgang 2022 Teil I Nr. 28, 1353</i>), with reference to the relevant provisions entering into force on 1 February 2023 (as per Article 2 (1)b).
3	A copy of a report of the joint committee (<i>EEG-Bund-Länder Kooperationsausschuss</i>) monitoring federal states’ targets	A copy of the 2023 report issued by the joint committee of the federal level and federal states (<i>EEG-Bund-Länder Kooperationsausschuss</i>).
4	A copy of a report of the joint committee (<i>EEG-Bund-Länder Kooperationsausschuss</i>) monitoring federal states’ targets (published on 22 October 2024)	A copy of the 2024 report issued by the joint committee of the federal level and federal states (<i>EEG-Bund-Länder Kooperationsausschuss</i>).

3. Analysis:

The justification and substantiating evidence provided by the German authorities cover all constitutive elements of the milestone.

The Wind Energy on Land Act (*Wind-an-Land-Gesetz*) has entered into force.

The reform of the Wind Energy on Land Act (*Wind-an-Land-Gesetz*, hereinafter referred to as “the Act”) was adopted by Germany’s Federal Parliament on 7 July 2022, published on 28 July 2022 in the Official Gazette, No. 71/23 and entered into force on 1 February 2023 in accordance with the provision in Article 5 (Evidence No. 2, p. 1361).

Furthermore, in line with the description of the measure, **the act shall define each federal state (*Land*)’s land-use target for wind energy.**

Article 1 (1) of the Act (Evidence No. 2, p. 1353) lays out its aim which is to promote the transformation to a sustainable and greenhouse gas neutral electricity supply based entirely on renewable energies by accelerating the expansion of onshore wind energy in the interest of climate and environmental protection. To this end, Article 3 including the Annex of the Act sets binding area targets (area contribution values) for federal states (*Länder*) that are required for the expansion of onshore wind energy in order to achieve the expansion targets and expansion paths of the Renewable Energy Sources Act of 21 July 2014 (Evidence No. 2, p. 1066), which was last amended by Article 8 of the Act of 20 July 2022 (Evidence No. 2, p. 1325).

In each federal state (*Land*), a predetermined percentage of the state's area must be designated for onshore wind energy (area contribution value) in accordance with the Annex accompanying the Act (Evidence No. 2, p. 1356). The minimum area contribution values (in percent) to be designated by 31 December 2027 are indicated in column 1 of the Annex. Column 2 gives the relative contribution values (in percent) to be designated by 31 December 2032. Column 3 lists the total state’s area in square kilometres. To the extent that a state has made use of Article 4, which deals with the creditable area, the increased area contribution values and the early reference dates set out by the state replace the corresponding area contribution values specified in the Annex and the corresponding reference dates.

Furthermore, in line with the description of the measure, **the act shall also contain provisions to change the Construction Code to enable federal states (*Länder*) to designate additional areas as suitable for onshore wind generation.**

Section 2 of the Wind Energy on Land Act (Evidence No. 2) amends the Construction Code (*Baugesetzbuch – BauGB*) of 3 November 2017 (*Bundesgesetzblatt (BGBl)*. I, p. 3634), last amended by Section 2 of the Act of 26 April 2022 (*BGBl*. I, p. 674). This amendment, introduced as part of broader efforts to accelerate the energy transition, provides a boost to procedures for the planning, approval, and construction of onshore wind turbines. Section 2 of the Act introduces the new Article 249 to the Construction Code which introduces special arrangements for onshore wind turbines. Article 9a of the Construction Code is supplemented with a paragraph (2) to allow the Federal Ministries of Housing and Environment to issue biodiversity related decrees for land use plans, with additional input from the Ministry of Economic Affairs required for onshore wind energy projects. The new provisions allow for preferential treatment when permitting onshore wind, in case federal states fall short of targets due to land use planning. In short, if sufficient areas have not been designated by the foreseen due date, onshore turbines are permitted on a preferential basis throughout the planning process.

Furthermore, in line with the description of the measure, **the implementation of the reform shall be monitored by a joint committee of the federal level and federal states (*Länder*) (*EEG-Bund-Länder Kooperationsausschuss*).**

Section 4 of the Act (Evidence No. 2, Section 4) amends the Renewable Energies Act (*Änderung des Erneuerbare-Energien-Gesetzes*) from 21 July 2014 (BGBl. I, p. 1066), last amended by Section 8 of the Act from 20 July 2022 (BGBl. I, p. 1325). Article 97 of the Renewable Energies Act is amended so that the joint committee of representatives of the federal level and federal states (*EEG-Bund-Länder Kooperationsausschuss*) is coordinating the recording of targets, their achievement, and the designation of areas to reach area contribution values by the federal states. Article 98 of the Renewable Energies Act is amended to require the federal states to report to the secretariat of the joint committee of representatives of the federal level and federal states (*Länder*) by 31 May each year at the latest on the status quo of the designation of areas for wind energy needs as well as the status quo of the expansion of renewable energies particularly the up-to-date status of land allocation and permits. This provision is to ensure that the joint committee of representatives of the federal level and federal states has the relevant data on which it bases its analysis of the report on the status of the expansion of renewable energies. The joint committee of representatives of the federal level and federal states is paying particular attention to the expansion of onshore wind energy, particularly the up-to-date status of land allocation and permits.

On 22 October 2024, the latest report of the joint committee of representatives of the federal level and federal states was published. Starting in 2024, the yearly report includes the monitoring of the newly enacted Wind Energy Area Requirements Act (*Windenergieflächenbedarfsgesetz - WindBG*) and monitoring the designation of land in the federal states in accordance with the set land targets (Evidence No. 3, p. 6). The report highlights that the overall expansion of renewable energies has further increased. More specifically, in 2023 there was an increase in reported draft plans compared to the previous year. Simultaneously, there has been a substantial increase in the number of permits for onshore wind turbines. This development signals that the acceleration measures introduced in recent years to increase the expansion of onshore wind energy have started to be effective although the length of procedures could and should be further accelerated (Evidence No. 3).

This positive trend in expansion of renewable energies as well as the need for approval procedures to be faster was stated also in the report published in 2023. However, almost all states have already developed a concept for how they intend to achieve the area targets under the Wind Energy Area Requirements Act. Some intend to achieve the targets earlier than stipulated in federal law (Evidence No. 3, p. 3).

4. Commission Preliminary Assessment: Satisfactorily fulfilled

Number and name of the Milestone: 137 Entry into force of the Offshore Wind Energy Act (*Wind-auf-See-Gesetz*)

Related Measure: 7.1.5 Offshore Wind Energy Act

Qualitative Indicator: Provision in the legal act indicating the entry into force of the legal act

Time: Q4 2023

1. Context:

The objective of this measure is to accelerate the deployment of offshore wind energy power plants. The reform shall increase the expansion targets for offshore wind energy in Germany from 20 GW to at least 30 GW by 2030, and to reach 40 GW by 2035 and 70 GW by 2045. It shall also contain provisions to streamline planning and approval procedures and bundle the review of applications.

Milestone 137 requires that the Offshore Wind Energy Act has entered into force.

The implementation of the measure shall be completed by 31 March 2023. Milestone 137 is the only milestone of the reform.

2. Evidence provided:

	Name of the evidence	Short description
1	Summary document	Summary document duly justifying how the milestone (including all the constitutive elements) was satisfactorily fulfilled.
2	Copy of the Federal Law Gazette (<i>Bundesgesetzblatt</i>) for the Offshore Wind Energy Act (<i>Wind-auf-See-Gesetz</i>) of 20 July 2022, published in the Federal Law Gazette on 28 July 2022 (BGBl 2022, part 1, Nr. 28)	A copy of the Federal Law Gazette for the Second Law amending the Offshore Wind Energy Act and further provisions. Article 1 contains the amended Offshore Wind Energy Act. Article 12 governs the entering into force of the amendments. The Offshore Wind Energy Act entered into force on 1 January 2023. Sections 2, 5 and 9 entered into force on the day after its announcement on 21 July 2022.
3	Copy of the Area Development Plan 2023 (<i>Flächenentwicklungsplan</i>)	The Area Development Plan is the key planning instrument for the expansion of offshore wind energy. The Area Development Plan 2023 was published on 20 January 2023 based on the Second Law of the Offshore Wind Energy Act and further provisions. The expansion pathway to the first expansion target in 2030 is laid down by the Area Development Plan 2023.

3. Analysis:

The Offshore Wind Energy Act has entered into force.

The Second Act amending the Offshore Wind Energy Act from 20 July 2022 (*Zweites Gesetz zur Änderung des Windenergie-auf-See-Gesetzes und anderer Vorschriften*) (Federal Law Gazette (*Bundesgesetzblatt* (BGBl.) I, p. 2258, 2310), last amended by Section 12a of the Act of 16 July 2021

(BGBl. I p. 3026) *hereinafter referred to as the “Second Act”*) (Evidence No. 2) was adopted and entered into force on 1 January 2023, except for Sections 2, 5 and 9 which entered into force on the day after its announcement on 21 July 2022 in accordance with Section 12. Section 1 of the Second Act amends the Offshore Wind Energy Act (Section 1, Amendment to the Offshore Wind Energy Act (*Änderung des Windenergie-auf-See-Gesetzes*) of 13 October 2016 (BGBl. I, p. 2258, 2310)). Section 2 amends the Employment Regulation (*Beschäftigungsverordnung*). Section 3 amends the Administrative Court Code (*Verwaltungsgerichtsordnung*). Sections 4 and 5 amend the Energy Industry Act (*Energiewirtschaftsgesetz*). Section 6 amends the Grid Expansion Acceleration Act (*Netzausbaubeschleunigungsgesetzes Übertragungsnetz*). Section 7 amends the Federal Requirements Plan Act (*Bundesbedarfsplangesetzes*). Section 8 amends the Renewable Energies Act (*Erneuerbare-Energien-Gesetz*). Section 9 amends the Accreditation Body Act (*Akkreditierungsstellengesetzes*). Section 10 amends the Energy Financing Act (*Energiefinanzierungsgesetzes*) and Section 11 amends the other energy recovery areas ordinance (*Sonstige-Energiegewinnungsbereiche-Verordnung*).

In line with the measure description, **the reform shall increase the expansion targets for offshore wind energy in Germany from 20 GW to at least 30 GW by 2030, and to reach 40 GW by 2035 and 70 GW by 2045 (previously: 40 GW by 2040).**

In this respect, Section 1 of the Second Act amended Article 1 of the Offshore Wind Energy Act amended as follows: “The objective of this law is to increase the installed supply of offshore wind turbines connected to the grid to a total of at least 30 gigawatts by 2030, a total of at least 40 gigawatts by 2035 and a total of at least 70 gigawatts by 2045”. In addition, this is supplemented by the provision in Article 1 (3) which states that “the construction of offshore wind turbines and offshore connecting lines is in the overriding public interest and serves public safety”. The newly introduced Article 2a further specifies the tender volumes, distributed over yearly bidding targets which have minimum requirements that exceed the target values set out in Article 1. The tender volumes per year are as follows:

- in the years 2023 and 2024 annually between 8 000 and 9 000 megawatts (which is 8 to 9 GW)
- in the years 2025 and 2026 annually between 3,000 and 5,000 megawatts (3-5 GW) per year
- from 2027, generally 4,000 megawatts (4 GW) per year.

In addition, Article 2a (1) of the Offshore Wind Energy Act sets out that the exact tender volume and the distribution of the tendering volume to areas and sites is regulated by the Area Development Plan (*Flächenentwicklungsplan*) in accordance with Article 5 of the Offshore Wind Energy Act. Article 5 sets out the legal framework for the area development plan. The legal framework is binding for the planning approval and authorization procedures in accordance with the provisions of Part 4 of the Offshore Wind Energy Act, the provisions of the Offshore Installations Act and the Offshore Installations Ordinance (Evidence No. 2, Section 6, Paragraph 9). The Area Development Plan that was published on 20 January 2023 (Evidence No. 3) sets the expansion pathway to the first expansion target in 2030 in line with the Offshore Wind Energy Act.

Furthermore, in line with the measure description, **the Offshore Wind Energy Act shall also contain provisions to streamline planning and approval procedures and bundle the review of applications.**

Section 1 of the Offshore Wind Energy Act contains numerous changes that serve to streamline planning and approval procedures. These also include bundling measures, such as bundling the review of applications (Evidence No. 2, Section 1).

- Instead of reviewing each application separately and potentially in a fragmented manner, the act aims to consolidate the review process, aiming at faster decision-making, reduced

bureaucracy, and a more efficient way to assess multiple projects at once. Participation rights were also bundled to simplify the permitting process. Section 1, point 45 b of the Second Act amends Article 45 of the Offshore Wind Energy Act to become Article 66. With the new Article 66, the planning approval procedure was replaced by a planning permission procedure with respect to permitting for offshore wind farms on centrally pre-investigated sites (Evidence No. 2). With this change, duplicated participation procedures in the environmental impact assessment are avoided, which are in substance already conducted in the central pre-investigation stage as part of the strategic environmental impact assessment.

- Moreover, Section 1 point 8 of the Second Act amends Article 5 of the Offshore Wind Energy Act to include a new provision on the bundling of environmental impact assessments. As a result, the planning and approval procedures are streamlined. Specifically, the amended Offshore Wind Energy Act ensures that there are fewer overlapping impact assessments, as it clarifies which environmental impacts are to be assessed on which stage of the multi-stage planning and approval process. Moreover, the law specifies that environmental tests should be limited to additional or serious environmental impacts as compared to prior stages. Hence, the procedures are simplified, and the workload reduced (Evidence No. 2).
- Section 1 point 48 of the Second Act amends Article 48 of the Offshore Wind Energy Act to become Article 69. To the new Article 69 a subsection 4 is added that enacts a maximum duration of planning approval and planning permission procedures. A planning approval decision shall be granted by the authorities within 18 months (Evidence No. 2).

4. Commission Preliminary Assessment: Satisfactorily fulfilled