

# **Evaluation plan**

on the 'mobile telephony support' scheme of the  
The Federal Ministry of Transport and Digital Infrastructure

## **1. Preamble**

The Federal Republic of Germany is committed to an independent, competent and comprehensive evaluation of the Federal Government's mobile phone support programme. As part of a transparent and non-discriminatory tendering procedure, the Federal Ministry of Transport and Digital Infrastructure will entrust an independent and competent service provider as an evaluation body and will assist in the implementation of the evaluation process on the basis of this evaluation plan.

Comprehensive data will be collected and analysed in order to examine the impact of the Funding Directive on the roll-out of mobile telephony in Germany. Decisions on any necessary adjustments to the support measure will be taken on the basis of the lessons learnt. It also aims to ensure that the aid scheme is efficient and effective and does not hinder or distort competition.

At the same time, the evaluation should be made efficient and cost-effective so that the available financial resources can be used as a priority for investment in mobile infrastructure.

## **2. Objectives and design of the Funding Guidelines**

The aim of the Funding Guidelines is to promote the development of mobile communications infrastructure in Germany. The measure is based on the Federal Government's mobile telephony strategy, which was adopted by the Federal Cabinet in November 2019. The basis for a successful evaluation is the clear definition of both objectives and intervention logic.

### **2.1. Objectives of support for mobile telephony**

Germany needs mobile communications infrastructure that sustainably supports the digital transformation of the economy and society and increases the attractiveness of Germany. With its mobile telephony strategy, the Federal Government is pursuing the objective of a nationwide mobile telephone coverage of at least 4G and thus a high-capacity mobile voice and data transmission. In doing so, Germany also creates an important condition for the rapid roll-out of 5G. All regions, households and businesses should be able to benefit equally from the benefits of digitalisation, not only in major metropolitan areas, but also in rural areas. To this end, the mobile communications strategy defines a mix of measures to help speed up mobile deployment in the long term and to close previously unserved areas. Support for mobile telephony is one of the main measures in this mix. The mix of measures also includes federal broadband support, which can, within a certain framework, prepare the connection of mobile telephony sites. Thus, synergies can be achieved in the deployment of fibre to connect sites. In addition, the Federal Government, together with the companies and associations represented in the Network Alliance for Digital Germany, is committed to ensuring universal coverage of high-capacity next-generation connections, which should be reliably downloaded at least 50 Mbps.

The Federal Ministry of Transport and Digital Infrastructure has laid the scientific basis for the Federal Government’s mobile communications strategy and, therefore, the support for mobile telephony, as part of a coverage and cost study for mobile telephony. The study identified the current supply using crowd-sourcing data. On the basis of this data, the impact of the supply requirements and of the other contractual obligations was predicted and the remaining unserved areas (white spots) were subsequently identified. The study concludes that 4.400 white spots are expected to remain, the closure of which will require around 5.000 sites. A cost estimate estimated that around EUR 1,1 billion will be needed to build and connect these sites with a mix of optical fibre and radio communications. These funds were made available in the federal budget for the Funding Guidelines and their administration.

In the context of the Covid-19 pandemic, the governing parties have adopted a stimulus package which, in addition to strengthening the German economy, also has a strong focus on future technologies. Part of this package of measures is additional funding to accelerate 5G deployment in Germany. The total available budget is EUR 5 billion, part of which (expected EUR 1 billion) will be used to increase mobile support. In view of this policy decision, mobile phone support will put a stronger focus on fibre connections for subsidised sites, making them 5G ready.

In addition to the shooting of supply gaps, particularly in rural areas, sustainability is also the focus of the Funding Guidelines. For example, the Federal Government already relies on synergies to be created in the context of other funding projects. For example, mobile telephony sites can already be connected via broadband support, but also via a KfW credit programme.

## 2.2. Justification for the intervention

The development of mobile telephony networks in Germany is a task for private companies. However, the coverage and cost study of mobile telephony shows that it is unlikely that remote or rural regions will be economically viable because of the high investment costs and at the same time small additional revenues. For example, the costs of a mobile phone site include different components. For example, acquisition, construction, installation, configuration costs should be considered. There are also costs for active equipment. In addition to the costs of connecting the base station to the core network.

In addition, the study shows in which areas there are still gaps in mobile coverage in Germany.

		Telekom	Vodafone	Telefónica	Kombiniert
Basis der Analyse (erfasste Anteile bezogen auf Deutschland)	Fläche:	65,8%	68,9%	67,4%	81,0%
	Haushalte:	97,7%	97,9%	98,0%	99,3%
	Bevölkerung:	97,5%	97,8%	97,8%	99,3%
Versorgung mit Sprachdiensten (2G, 3G & 4G)	Fläche:	97,9%	97,1%	96,8%	98,5%
	Haushalte:	99,8%	99,6%	99,7%	99,9%
	Bevölkerung:	99,8%	99,5%	99,7%	99,9%
Versorgung mit Datendiensten (3G & 4G)	Fläche:	92,0%	85,0%	80,6%	92,8%
	Haushalte:	98,9%	96,7%	95,5%	99,5%
	Bevölkerung:	98,7%	96,3%	95,0%	99,4%
Versorgung mit LTE (4G)	Fläche:	89,9%	80,8%	69,1%	90,3%
	Haushalte:	98,4%	95,2%	89,1%	99,2%
	Bevölkerung:	98,2%	94,7%	88,3%	99,2%

Figure I Mobile coverage in Germany

In the context of spectrum auctions, the Federal Network Agency has defined broad coverage requirements to be met by mobile network operators. In addition, the BMVI has entered into contractual agreements with the MNOs, which define additional coverage targets. By the end of 2024 at the latest, these measures alone will cover 99.7 % of households and 95 per cent of the national territory over all networks. At this point, the Federal Government's mobile telephony strategy is based on a mix of measures designed to further improve coverage in the remaining unserved areas. Among other things, a mobile telephone infrastructure company set up for this purpose should support the expansion, improve the use of public property and activate co-use and/or acceleration potentials. In addition, the support for mobile telephony provides aid for the development of particularly uneconomical areas. The aim of these measures is to supply at least 97.5 % of the territory of Germany and 99.95 % of households. Intervention is necessary to create equal living conditions in rural and urban areas and to enable all citizens, but also businesses, to have access to sustainable digital applications.

The accompanying measures on access to passive infrastructure, coordination of public works and comprehensive transparency requirements for construction and appropriate infrastructure will ensure that the need for state aid in mobile telephony is minimised.

### **2.3. Presentation of the intervention**

It provides for an open access model in which passive infrastructure is promoted and then made available to mobile network operators and other users on a non-discriminatory basis. Beneficiaries are private undertakings, in particular operators and providers of mobile telephony sites ('Tower Companies'). Support will be provided for the full closure of the profitability gap for the construction, connection and operation of mobile telephony sites for a seven-year earmarking period. As a general rule, the connection shall be provided by ducts, fibre and power lines. Synergies from other funding programmes and construction projects will also be realised. Exclusive radio connections should be used only in exceptional cases, for example in the case of sites which are particularly difficult to access. Active technology, installation and operation of active technology are not eligible.

The aim of the mobile communications strategy is to reduce the burden on businesses and municipalities in a sustainable manner and not to overburden scarce planning and construction capacity. To this end, the mobile infrastructure company will take responsibility for the deployment process through a comprehensive preparatory process and will take forward the search for suitable sites. It will also prepare authorisation processes, identify and address obstacles at an early stage.

The aim of the intervention is to support companies from the lengthy and burdensome siting process and to close the profitability gap. It allows very low location usage charges for mobile operators, thereby incentivising the deployment of mobile coverage in these previously unserved areas. In addition, incentives will be put in place to motivate MNOs to make an early commitment to site use and to involve as many mobile customers as possible.

### **2.4. Interaction with other mobile support measures**

Although the Federal Government's mobile telephony support actively involves the Länder and municipalities in the funding process, it does not provide for any financial commitment for them. There will be no co-financing. Similarly, there is no provision for a combination of mobile telephony support measures by individual Länder. In a consultation process with the Länder and municipalities, it is decided whether mobile phone support should be implemented through a regional or federal

funding programme. Early and permanent coordination ensures a clear demarcation between support measures and excludes double funding.

### **3. Evaluation questions**

When formulating the evaluation questions, it is important for the Federal Government, on the one hand, to initiate a comprehensive and meaningful evaluation, but at the same time to limit the administrative burden and the costs of the evaluation process to an effective and appropriate level. This is particularly necessary because the costs of the administrative process must be covered by the available funding and investment for broadband deployment.

In order to limit the administrative burden and the cost of the evaluation process, the following basic theses are therefore put forward:

- In view of the long duration of mobile telephony support, there is no need to carry out a permanent evaluation process because of the costs involved. The process should therefore be concentrated on specific periods, as set out in the section below.
- As far as possible, electronic procedures should be used to prepare and analyse the data. The electronic platforms used in the context of mobile telephony support will be designed in such a way that the data necessary for the evaluation can, as far as possible, be created directly in the authorisation procedure and can be read by the evaluation body.
- Due to the potentially high number of funding procedures, a full examination and detailed analysis of all procedures is not possible efficiently. The evaluation should therefore primarily be based on aggregated data and supported by sampling.

Further reflections on the costs and efficiency of the evaluation are also discussed in the following sections.

#### **3.1. Direct effects of the aid**

One of the conditions for granting aid on the basis of the Mobile Promotion Directive is the identification of a market failure. The mobile telecommunications infrastructure company must ensure, as part of a market consultation procedure, that no private network operator plans to expand networks without the use of funding in the next three years. It must also be ensured that there are no supply requirements or contractual obligations excluding support in the area in question. In the preparatory procedure, preliminary contracts will also be concluded to ensure the use of the supported sites. The direct effects of the aid on the beneficiary are thus fully disclosed:

- Without the use of funding, private network expansion would not have taken place at least within the next three years.
- The aid leads to a change in the behaviour of the beneficiary: a new mobile phone site is being built in an area where this has not been done so far due to a lack of economic viability.
- The aid will only be granted if the use of the site for the deployment of mobile telephony is guaranteed with at least 4G. The aid therefore also leads to a commitment by mobile network operators which would not have taken place without the aid. This is ensured by low site usage charges.

The evaluation will therefore focus on analysing how mobile telephone expansion projects have been designed by the beneficiaries. A key aspect of this is their contribution to achieving the objective of

improving mobile coverage. In addition, it will be examined whether the projects implemented with the aid of aid have resulted in sustainable, efficient and cost-effective passive infrastructure. In addition, it will be examined whether the aid granted might have distorted competition. To this end, it examines which private network operators could benefit from the aid as beneficiaries.

On the basis of these considerations, the following evaluation questions are formulated:

- a1. What would have been the development of mobile telephony deployment in the absence of aid? What is the contribution of the aid scheme to development in Germany?
- a2. How has the aid scheme contributed to a sustainable and sustainable deployment of mobile telephony?
- a3. Would there have been a different form of competition in the absence of the aid?
- a4. Does the aid lead to an efficient and cost-effective deployment of mobile telephony?

The evaluation questions set out above are to be answered mainly by analysing the data obtained during the funding procedure and the verification of the use of funds.

### **3.2. Indirect impact of the aid scheme**

In particular, the European Commission intends to assess the spillover effects on businesses and regions in this area. The Federal Ministry of Transport and Digital Infrastructure supports this approach in principle, but has serious concerns about the administrative burden of such an analysis. As part of the evaluation, this should therefore be carried out only to an extent adapted to the situation. However, in order to allow a scientific investigation by the European Commission or interested third parties, the Federal Ministry of Transport and Digital Infrastructure will make available the available data, unless there are any data protection concerns in this respect.

As explained above, the availability of high-capacity mobile subscriptions is of great importance for both households and businesses. In many cases, the location issue can also be significantly influenced by this availability. However, a direct statistical relationship between mobile telephony and the attractiveness of regions or the economic success of businesses is not measurable in isolation. Rather, there are very individual and diverse factors that only interact with each other. The sometimes low population density or attractiveness and lack of economic strength, especially in rural areas, is influenced by the absence of mobile telephony, but this is only one indicator in a much more complex environment compared to semi-urban or urban areas. Other influencing factors may include, for example, transport links, business locations, the attractiveness of the region or other public infrastructure. Mobility and logistics applications, as well as agricultural and forestry use, also account for a significant part of their use in very rural areas. This means that users of the mobile infrastructure will stay only for a short period of time within the mobile coverage generated by the support and use services outside the coverage area. For example, the added value of high-capacity mobile communications is usually not generated on a territorial basis but outside the assisted areas:

- Private users will benefit from mobile coverage as widely as possible. This is particularly true for fixed locations; in particular, housing units and workplaces. However, they also use mobile voice and data services that are not part of a fixed area. It appears that neither the use at a fixed location nor the mobile use has a significant impact on the behaviour of private customers: however, customers living or working in underserved areas or passing through them on a regular basis often already have mobile terminals and related contracts, as they use them in better served areas. The support thus generates greater benefits for private customers, but it is not possible to quantify them seriously. New contracts or actual measurable and

analysable use of individual sites do not occur to the same extent. In addition, although different applications are of immense importance, they are hardly used and cannot be quantified either: for example, the possibility of choosing an emergency call in an emergency situation is extremely important, but happens only rarely.

- Businesses benefit from improved mobile coverage in a variety of ways. However, there is no specifically identifiable value added against improved supply. In this way, the management of internal processes can also be implemented through alternative technical solutions. The same applies to external corporate communications. Mobile applications benefit from coverage as widely as possible, but do not generate added value within a single area of supply and are therefore not included in the assisted areas either.
- Agricultural applications are increasingly based on wireless connections to deliver innovative applications. However, here too it is difficult to carry out a serious analysis. As a result of the agricultural processes, intensive use takes place only at a limited number of times, spread over the year.

Telemedicine in rural areas offers an opportunity to improve medical care in regions with a low density of doctors. For example, tests can be carried out using video telephony, but also diagnoses in better-equipped practices in agglomerations can be requested.

The above examples are intended to illustrate the difficulties that analysis of indirect effects in the mobile sector will regularly face. Common to all is that the additional availability, while having a positive impact, will in most cases not only lead to real change in value added. In addition, customers' usage behaviour is not illustrable either, as MNOs cannot provide a detailed analysis of the usage behaviour. In normal operation, only connection parameters are usually covered — a deeper analysis of the underlying data flows is already critically assessed from a legal point of view. There is therefore no basis for further analysis of indirect effects.

In addition, in view of the administrative burden, the benefits to be gained from an analysis of indirect effects must be critically questioned. The importance of broadband and mobile voice communications for Europe's competitiveness is indisputable and is also emphasised by the European Commission in a variety of publications and decisions. The objective of deploying efficient mobile communications infrastructure also in rural areas is therefore pursued at both national and European level. In this respect, it is not necessary to carry out a burdensome analysis of the effects achieved.

On the basis of these considerations, the following evaluation questions are formulated:

- b1. How would mobile phone availability in the Federal Republic of Germany have changed in the absence of aid measures in the period under consideration?
- b2. What is the additional structural impact of the aid scheme on the assisted areas?

### **3.3. Appropriateness and proportionality of the aid scheme**

The Federal Government's support for mobile telephony is embedded in the mobile communications strategy. Through a variety of measures, it aims at enabling and facilitating self-supply. In addition, additional expansion will be sought through service requirements and contractual obligations. The aim of mobile telephony support is to provide coverage in extremely uneconomic areas and thus to achieve coverage. Against this background, the evaluation will in particular address the following issues: Proportionality and appropriateness of the aid

- c1. Was the scheme efficient? Is the amount of aid granted proportionate to the total investment achieved?

- c2. Has mobile telephony support achieved the desired effect within the existing funding and funding cultures in the Federal Republic of Germany?
- c3. Is the scheme proportionate to the task, or could the objective be achieved with less aid or another form of aid?

## 4. Result indicators

Based on the evaluation questions 3 set out in section, a list of result indicators has been developed and is attached.

## 5. Data collection

In order to allow for an efficient and cost-effective evaluation, the majority of the necessary data should already be collected in the funding process and made available to the evaluation panel. The following arrangements shall be put in place for this purpose:

- Provision of information on the market prospection and promotion process in a standardised form on an electronic platform. Provide the project information provided here for evaluation and monitoring in the form of evaluation tables in Excel format.
- Applications and applications are to be processed by the Federal Mobile Infrastructure Company. As these are still in the process of being set up, necessary data exchange processes can be foreseen as soon as they are set up.
- In addition, the mobile infrastructure company will bring together existing GIS information systems and create a single information platform. It can also be used to analyse developments in mobile coverage.
- Documentation of all process steps by the case handlers using standardised forms in electronic form.

With regard to data which are not already available as part of the funding procedure and the verification of the use of funds, the evaluation body is authorised by the Mobile Promotion Guidelines and the ancillary provisions on grant decisions to collect the data necessary for the evaluation from the beneficiaries. The mobile telecommunications infrastructure company is tasked with ensuring cooperation with the evaluation body and the federal service providers (Broadband atlas, etc.) to ensure that the necessary information is provided.

## 6. Timetable

The timetable for the evaluation is set out below:

- 1st half of 2021: launch of the Federal Government's mobile phone support
- Appointment of the evaluation panel by Q3 2021
- 4th quarter 2020: Preparation of evaluation processes
- 1st quarter 2021-2023: production of an interim/annual report
- 2nd semester 2023: preparation of the final report
- 31.12.2024: Completion of evaluation

For budgetary and public procurement reasons, an evaluation body may only be appointed for a maximum period of three years. In order to allow consistent evaluation from one hand and to avoid a burdensome second procurement process, the duration of the evaluation should be extended to that period. At the same time, it will be ensured that the results of the evaluation are available in good time before any necessary prolongation or adaptation of the State aid scheme. The timeline presented should focus the evaluation and monitoring activities on the turn of the year and the first quarter in order to minimise the burden and costs of the evaluation process.

## **7. Selection of the evaluation panel**

The evaluation will be carried out by an external company to be identified through an EU-wide competitive tendering process. This will ensure the technical competence and functional independence requirements of the “Common Methodology for the Evaluation of State Aid of the European Commission”. During the execution of the contract, the contractor may still submit and implement its own proposals for complementing the evaluation plan, in particular in terms of methodology.

## **8. Publication and transparency**

The final report of the evaluation shall be published by the Federal Ministry of Transport and Digital Infrastructure on the internet and in any other appropriate form. To the extent possible, the data obtained shall be made available to interested third parties other than those relating to operational and commercial secrets or critical infrastructure.