*Disclaimer: This is a Romanian to English translation meant to facilitate the understanding of this document. Should differences appear between the Romanian and the English version, following translation, the Romanian version shall prevail.*

1. **IMPLEMENTATION AND MONITORING**
   1. **Action plan/roadmap**

With a view to accomplishing the strategic objectives and to implementing the priority action lines required for the 5G strategic planning in Romania, we have planned and will pursue the following actions.

The currently identified measures focus on the early years of the current strategy, recognizing our role as a facilitator and catalyst for the economic and social developments induced by technology and driven by the entrepreneurial freedom of the private environment.

| **No.** | **Measure** | **Responsible** | **Deadline** | **Related objectives**  **/action lines** | **Indicators** |
| --- | --- | --- | --- | --- | --- |
| 1 | Mechanism for following up the implementation of the strategy and of the roadmap | MCSI, with ANCOM support | S1 2019 | transversal | Functional mechanism  Regular reports  Review of measures |
| 2 | Specific measures and incentives for the rapid launch of 5G commercial services | City Hall X, City Hall Y,… Government | S1 2019 | OS1, OS2 | Signed MoUs  Enforced MoUs |
| 3 | Measures regarding the spectrum usage tariff | ANCOM | S1 2019 | OS1, OS2, OS3, DPA1 | Adopted decision |
| 4 | A favourable building permit regime | MDRAP | S1 2019 | OS1, OS2, OS3, DPA2, DPA3 | Amended normative acts |
| 5 | Review of GD no. 490/2011 | MDRAP | S1 2019 | OS1, OS2, OS3, DPA2, DPA3 | Reviewed HG |
| 6 | Identification of a (segment of) cross-border European corridor for testing self-driving and connected cars | Government  (MT, MCSI, MAE) | S2 2019 | OS4, DPA2, DPA5 | Negotiations with neighbouring countries  Signed memorandum  Notification to the European Commission |
| 7 | Competitive selection (auction) for awarding licences for the use of frequencies | ANCOM | S2 2019 | OS1, OS2, OS3,  DPA1 | Awarded licences  Used spectrum |
| 8 | Identification of the 7 potential pilot projects | MCSI | S2 2019 | OS2, OS3, OS4, DPA4, DPA5 | 7 potential pilot projects identified |
| 9 | Transposition of the European Electronic Communications Code in Romania | Government  Legislative body | S1 2020 | OS3, OS4,  DPA2, DPA3 | Transposed EECC  Enforced EECC |
| 10 | Setting caps on the rents for the electronic communications networks’ using the public domain | Government | S1 2020 | OS2, OS3, DPA3 | Adopted normative act  Enforced normative act |
| 11 | Best Practice Handbook on the level implementation of the building permit regime for electronic communications | MDRAP,  MCSI (INSCC) | S1 2020 | OS3, DPA2 | Approved/published handbook  Handbook usage degree |
| 12 | Feasibility analysis regarding the fiscal incentives for 5G investment | Ministry of Finance | S1 2020 | OS2, DPA3 | Decision on granting fiscal incentives. Normative act |
| 13 | Financial mechanisms for incentivizing 5G, adapted for the potential pilot projects | MFE | S1 2020 | OS2, OS3, OS4, DPA4, DPA5 | Functional financing mechanisms  Absorption degree |
| 14 | Legal framework for interconnecting mobile networks with RO-ALERT | MCSI, SNAOPSN | S2 2020 | OS2, DPA4 | Adopted normative act  Interconnection ensured |
| 15 | Designing, authorising and deploying physical infrastructure for high-speed and 5G networks, once with performing construction, repair, modernization, refurbishment or extension works on roads (highways, national and county roads) and railways | Ministry of Transport  MCSI | S2 2020 | OS3, DPA2 | Identification of necessary measures.  Adopted normative act  The normative act is enforced in major public investment works |
| 16 | Study regarding the operation of 5G small cells on existing selected/most adequate infrastructures | MCSI (INSCC) | S2 2020 | OS2, OS3, DPA2 | Completed study  The study can be used for increasing the site offer |
| 17 | Guidebook on the digital land development of ATUs for enabling the Gigabit society | MDRAP, MCSI, ANCOM | S2 2020 | OS3, DPA2 | Approved Guidebook  Degree of usage by the ATUs |
| 18 | Putting the ”5G Alliance” into operation | MCSI, ANCOM | S2 2020 | OS4,  DPA6, DPA5 | MoU concluded  Number, diversity and quality of the players involved  Regular reporting of activities |
| 19 | Report on the status of communications networks infrastructure in Romania | ANCOM | S2 2020 | OS3, DPA2, DPA3 | Published report  Regular reports (every three years) on the usage degree, for guiding public policies. |
| 20 | Competitive selection (auction) for awarding licences for the use of radio frequencies in mmWaves | ANCOM | S2 2020 | OS1, OS2, OS3,  DPA1 | Licences awarded  Spectrum used |
| 21 | Adoption of the legislative framework on awarding spectrum for BB-PPDR in the 700 MHz band and of the mechanisms for making available the best frequency resources for the chosen implementation model | Government, MCSI, ANCOM,  SNAOPSN | 2020 | OS3, DPA3, DPA4, DPA5 | Approved regulations |
| 22 | Increased site offer for 5G small cells  (following INSCC’s study) | Government  ANRSC | S2 2022 | OS2, OS3, DPA2 | Public Reference Offers for access to public infrastructures in cities  Number of offers, relevance and variety of open infrastructures |
| 23 | Operational BB-PPDR services | STS | 2023 | OS2, OS4, DPA4 | Launched BB-PPDR services  BB-PPDR services used in SNAOPSN |
| 24 | Monitoring coverage obligations in licences | ANCOM | 2025 | OS2 | Monitored coverage obligations |

The deadlines take into account January 2019 as the Strategy adoption term.

Technological and economic developments, and evolutions on market or legislative level may require reviews of the action plan, within the time horizon of this Strategy.

* 1. **Financial resources**
     1. **Current context**

For 2014-2020, a total amount of EUR 1,041 billion has been provided in the European Fund for Strategic Investments for the development and deployment of information and communications technologies, especially by: digital content, digital services, high-speed telecommunications infrastructures and broadband networks.

For ICT projects, funding is also available under the 2014-2020 Competitiveness Operational Programme (COP), which addresses the support needs for research, development and innovation (RDI), and for underdeveloped ICT infrastructure, under the Regional Operational Programme (ROP) 2014-2020, which finances regional investments and stimulates the activity of small and medium-sized enterprises, as well as under the National Program for Rural Development (NRDP) 2014-2020, which supports the diversification of economic activities and job creation by improving infrastructure and services in rural areas.

White area broadband coverage projects have already been initiated and even completed in Romania - Ro-NET 1 (completed, funded from the Operational Programme 'Increase of Economic Competitiveness' 2007-2013) and Ro-NET 2 (completed, financed through the Competitiveness Operational Programme 2014-2020), from the European Regional Development Fund (ERDF) and a series of funding schemes from the European Agricultural Fund for Rural Development (EAFRD) operated by the Ministry of Agriculture. They will also contribute to the development of 5G networks, which requires a solid fibre optic infrastructure.

Another funding mechanism is the Connecting Europe Facility[[1]](#footnote-1), an initiative of the European Commission in cooperation with the European Investment Bank for the development of cross-border transport, communication and energy networks, and it also provides EUR 1 billion for the communications sector in 2014-2020.

* + 1. **Investment and financial intervention needs**

The achievement of the 5G benefits, the development of the use cases enumerated under the action lines set out in Chapter 8, involves investment in research (theoretical, experimental, applied), in public or private communications networks, but also in upstream or downstream industries, but especially in various branches of the national economy, for the development of smart, connected eco-systems of infrastructures, objects and people.

The vast majority of investments in the development of 5G will be made from private sources, in a healthy competitive environment benefiting from a favourable investment and operational framework from the Romanian state.

However, supporting the development of 5G by completing private investment with well-targeted public funding can play an important role in various ways and may evolve based on the progress achieved:

* expansion and fibre optic connection of 5G cell networks in important public policy areas but with limited commercial attractiveness - for example, to ensure smart mobility and regional connectivity along highways, roads, railways, or to boost cohesion and reduce gaps in small towns and rural areas;
* the funding models used in practice for financing network roll-out are: the state as a network provider, the state as a partner and the beneficiary/customer state [for reasons of investment and operational efficiency, given the economies of scale and scope typical of the communications sector and in the context of technological leaps, we do not recommend using the "state as a network provider" model;
* boosting the integration of a critical mass of ”technology” upstream, downstream or inbuilt in the communications sector, which can be done within an innovation cluster, in an industrial park or in a field of activity, until the achievement of commercial sustainability;
* uninterrupted financing of theoretical and applied research and development activities, in the communications and information technology sector, for new equipment or new uses.

The 7 pilot projects identified under point 8.5 above may be the first applicants to such funding.  
  
Looking at the various stages of implementation of the strategy, by 2020 the use cases will be developed, i.e. innovative 5G-based solutions, and fibre-based or other high-capacity backhaul networks, with mass-network developments being anticipated during 2021-2025.

Beyond the 2020 horizon, regional ICT connectivity remains one of the strategic objectives of the European cohesion policy and complements the other thematic objectives set by the regulation on accessing European funds in the period 2021-2027[[2]](#footnote-2), namely innovative and smart economic transformation, low carbon emissions and the sustainable and integrated development of urban, rural and coastal areas through local initiatives.

The 5G potential to gear multiple socio-economic sectors indicates the opportunity that potential incentives for the development of 5G be granted in synergy with other support measures targeting strategic lines of intervention - intelligent specialization, fostering RDI activities, especially towards facilitating the assimilation of RDI results and their implementation in mass production, fostering SMEs, regional development, etc.

In this context, funding may be granted through banking institutions (funded from private sources, or partly or totally from financial instruments) to finance local or regional project ideas.  
  
**1.3. Monitoring, assessment and reporting**

The Ministry of Communications and Information Society is the institution responsible for monitoring, evaluating and reporting the stage of implementation of the strategy. In this respect, it will benefit from ANCOM support. A timetable and a system for monitoring and reporting the state of implementation of the Strategy and of its Roadmap, based on concrete indicators and deadlines, is to be set up.

1. https://ec.europa.eu/info/business-economy-euro/growth-and-investment/financing-investment/connecting-europe-facility-cef-financial-instruments\_en#a-common-infrastructure-financing-instrument-for-2014-2020 [↑](#footnote-ref-1)
2. Proposal for a regulation of the European Parliament and of the Council laying down common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, and the European Maritime and Fisheries Fund and financial rules for those and for the Asylum and Migration Fund, the Internal Security Fund and the Border Management and Visa Instrument, COM(2018) 375 final, 2018/0196 (COD) [↑](#footnote-ref-2)