

#EU4Digital

EU4Digital Facility Telecom Rules

25th EaPeReg Plenary meeting

17 June 2024

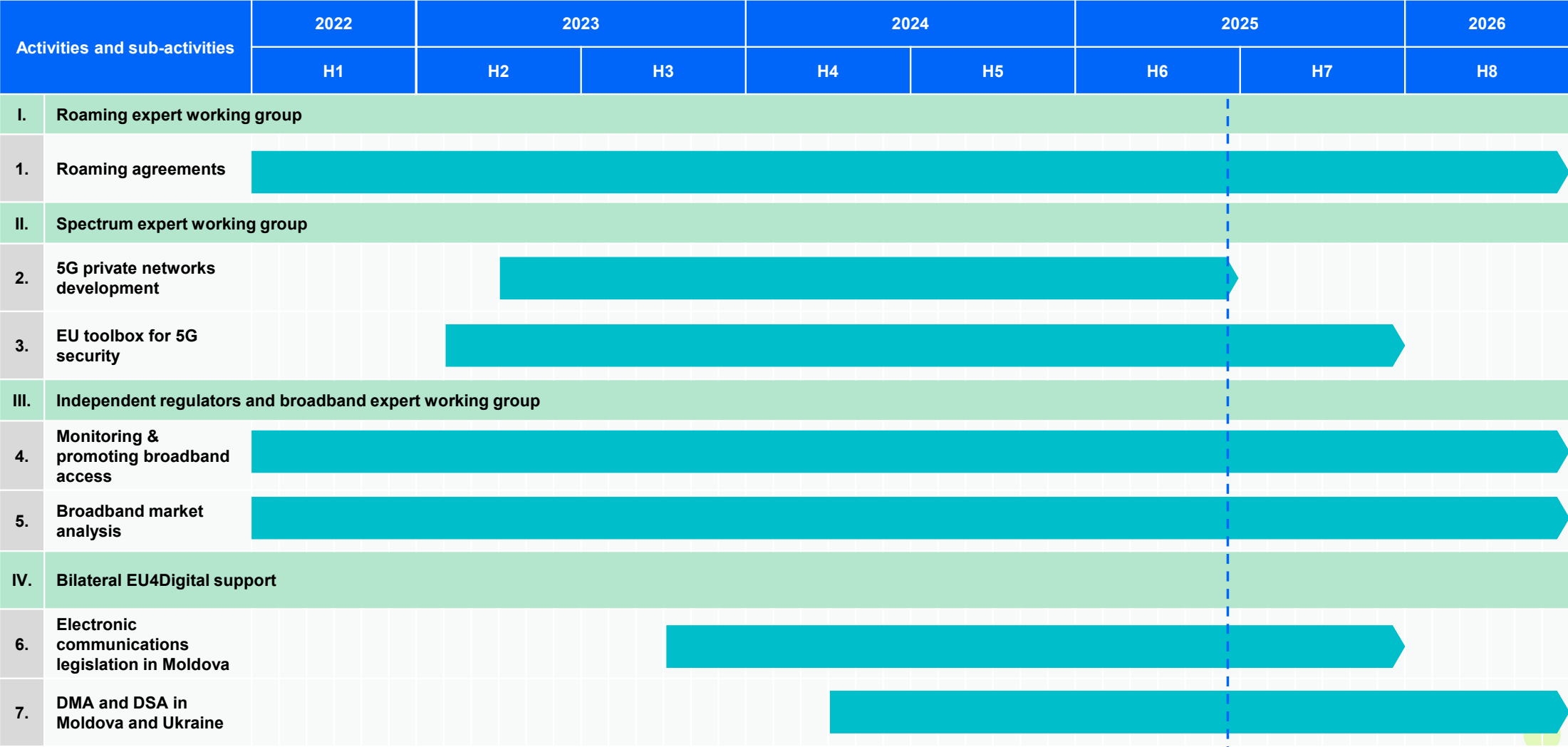


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Content

#	Topic
1.	EU toolbox for 5G security
2.	5G private networks development
3.	Roaming
4.	Broadband market analysis
5.	Electronic communications legislation in Moldova
6.	DMA and DSA in Moldova and Ukraine
7.	Monitoring & promoting broadband access

0. Telecom Rules work stream: High-level timeline



Progress up to date

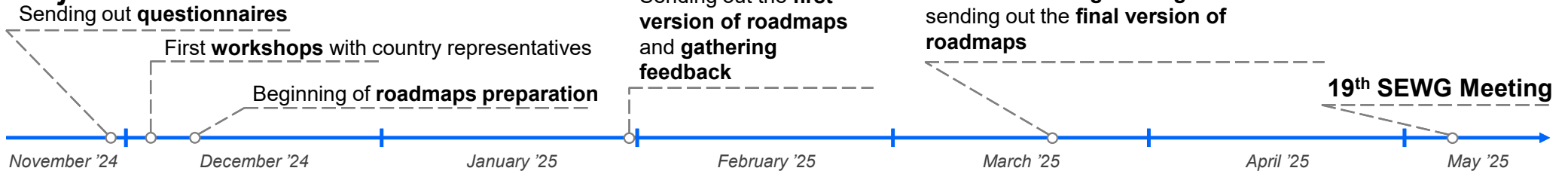
1. Summary of 5G Private Networks development in EaP Countries

The project explored the potential of 5G Private Networks in several EaP countries, resulting in a tailored roadmap and use cases to enhance industry efficiency and drive economic growth

Summary

This activity aimed to explore the transformative **potential of 5G Private Networks in several EaP Countries**: Armenia, Azerbaijan, Georgia, Moldova and Ukraine. At the beginning, **questionnaires** were sent to these countries' representatives regarding the current development of 5G Private Networks in their respective countries. Moreover, **workshops** were held to clarify the details with these representatives.

Project timeline



Based on the meetings and each countries' economy analysis, innovative **applications of 5G Private Networks across key industries** were proposed, highlighting their potential to enhance efficiency and drive growth. Additionally, **allocation schemes for Private Networks** tailored to each countries' unique landscape was presented.

As part of the work of the EY team, two documents were created:

Country specific roadmap



- ▶ Industries mapped and ways of applying 5G Private Networks proposed
- ▶ Insights into the future of 5G connectivity

5G Private Networks use cases with examples



- ▶ Supplementary document, outlining an extensive list of use cases for 5G Private Networks
- ▶ Showcasing real-life examples from various countries that illustrate the successful implementation and benefits of this technology

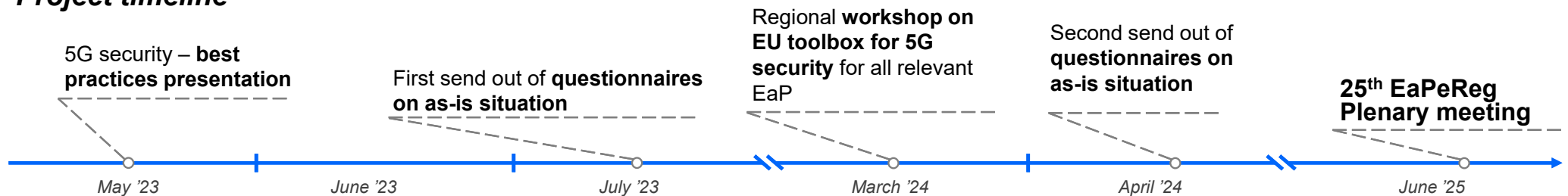
2. Summary of EU toolbox for 5G security in EaP Countries project

The project aimed to promote a coordinated and comprehensive approach to ensure the security of 5G networks in the EaP Countries in line with the EU Toolbox for 5G security

Summary

This activity aimed to promote a **coordinated and comprehensive approach** to ensure the **security of 5G networks** in the **EaP Countries** in line with the EU Toolbox for 5G security. EU Toolbox for 5G security **provides guidance** to administrations, network operators, and other stakeholders **on the security risks and potential vulnerabilities of 5G networks**, as well as **best practices** and **mitigation measures to address these risks**.

Project timeline



EU best practices analysis related to implementation of EU Toolbox for 5G security was conducted and presented to SEWG members and to broader audience of relevant stakeholder from EaP Countries.

It should be noted that **the preparation of roadmaps was not initiated as there was lack of interest from EaP country stakeholders on 5G security specific interest areas after two iterations of questionnaires** (in July 2023 and April 2024)

As part of the work of the EY team documents were created:

EU toolbox for 5G security - best practices



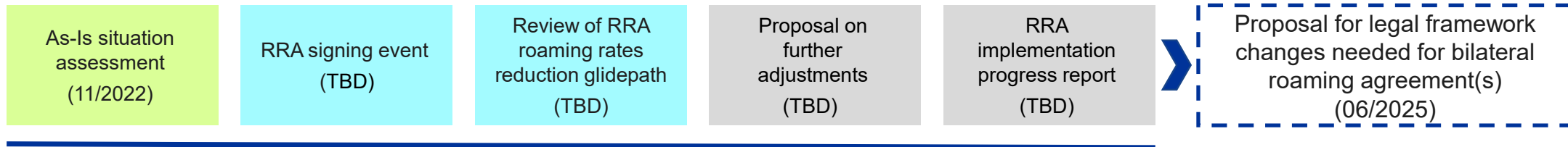
- ▶ Supplementary document, outlining approach recommended by EU Toolbox for 5G security.
- ▶ Showcasing EU Member States best practices related to implementation of EU Toolbox for 5G security.

3. Roaming

3. Roaming (1/2)

Regional Roaming Agreement

Status of the activity:



- **Regional Roaming Agreement (RRA):**

- The updates on the RRA signing and national alignments were discussed during the 15th REWG meeting on 13 May. There is confirmation on signing of the RRA by all participants present, final confirmation from UA side is necessary to launch official national consultations.
- For the current reporting period there are no updates.

3. Roaming (2/2)

Wholesale voice call termination market analysis

Status of the activity:



- **Voice call termination market analysis:**

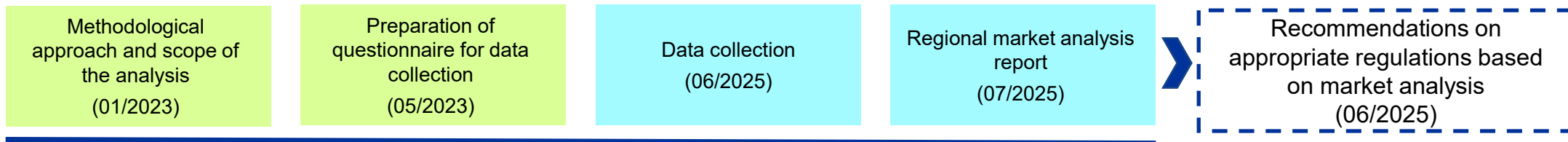
— Currently, EU4Digital is drafting a regional report for voice call termination market analysis and will share for review of country representatives **in June**. Remaining open items for finalisation of regional report are as listed:

- EU4Digital continues to seek clarification on the wholesale voice call termination regulatory framework in Ukraine. If no clarifications will be made available, Ukraine's results will be included to the extent information is currently available.
- Data inputs for Armenian market analysis remain pending, as such, the report will be updated with AM data once received.

4. Broadband market analysis

4. Broadband market analysis

Status of the activity:



- **Data collection for market analysis:**

- EU4Digital shared the reviewed dataset for both AM and AZ review and validation with operators, and alignment is ongoing.
 - **AM representatives provided data;** after initial assessment, EU4Digital requested further clarification – additional discussion with AM counterparts pending. We would like to align on the cut-off date for the data collection.
 - **AZ representatives shared the validated data:** EU4Digital is currently preparing the country-specific report based on the collected data and plans to share for alignment with country representatives in July.

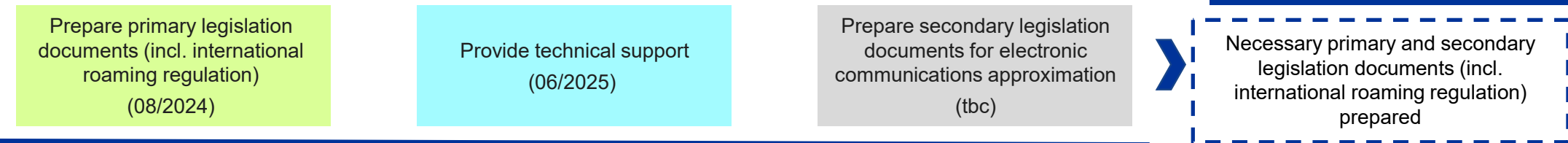
- **Preparation of the regional market analysis report:**

- EU4Digital has compiled the results of previously completed MD and UA market analyses.
- GE market analysis report received, to be incorporated in the regional report.
- Finally, AM and AZ market analysis results will be included to the report once the market analysis is completed

5. Electronic communications legislation in Moldova

5. Electronic communications legislation in Moldova

Status of the activity:

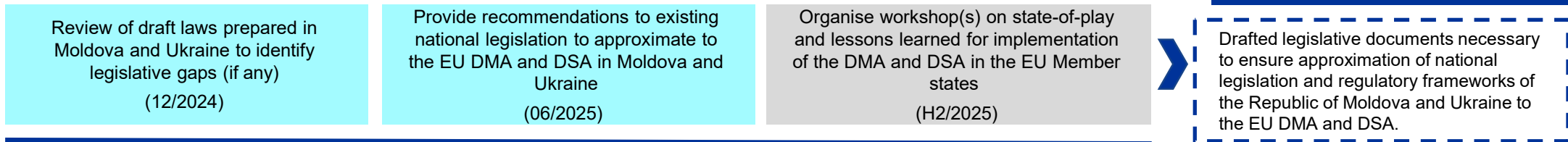


- **Potential support to Moldova on secondary legislation drafting to approximate with EU's electronic communications framework**
 - Previously, the Parliament of Moldova has approved and published [electronic communications](#) and [roaming laws](#)
 - Following the publishing, EU4Digital is aligning on providing potential support to the MD representatives for the preparation of relevant secondary legislation for approximating Moldova's electronic communications regulatory framework with the EU's electronic communications framework

6. DMA and DSA in Moldova and Ukraine

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Status of the activity:



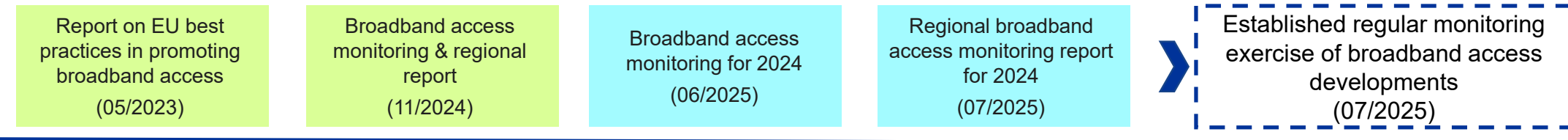
- **Support in the transposition of EU Digital Services Act (DSA) and Digital Markets Act (DMA) into national legislation of the Republic of Moldova as well as of Ukraine:**
 - EU4Digital have conducted assessments of UA and MD draft laws on digital services (for alignment with DSA) and held a series of bilateral meetings country representatives and EC
 - In May, MD stakeholders received comments from the public consultations on the draft law on digital services, and in June, EU4Digital will discuss and advise MD stakeholders on updates to the draft law
 - Additionally, in June EU4Digital will organise a stakeholder awareness session for MD stakeholders on the draft law on digital services
 - EU4Digital has initiated work in Ukraine to provide operational support for mapping of digital service providers in Ukraine

7. Broadband access monitoring

7. Monitoring & promoting broadband access (1/2)

Broadband monitoring reports

Status of the activity:



- **Broadband monitoring reports:**

- Following alignment on broadband monitoring data, EU4Digital shared **country-specific reports for AM, AZ, GE and MD representatives' review**; feedback was expected by **13 June**.
- Also, on the need basis, EU4Digital is organising bilateral meetings with EaP country representatives to finalise alignment on collected data or / and feedback on country-specific broadband access reports.
- Once the country-specific reports are validated and confirmed by EaP country representatives, EU4Digital will incorporate the information and prepare a regional report.

- **Note on the Digital Decade Policy Programme:**

- Following IRB EWG meeting, EU4Digital shared the updated the **Note on the Digital Decade Policy Programme**, including the practical proposal for organising a capacity-building workshop.
- For the workshop, it was agreed for EU4Digital to compile a list of potential indicators to be analysed in the broadband access monitoring exercise for the EaP countries.

Establishing harmonised approach for monitoring

In order to introduce a monitoring exercise, the following steps were agreed to be done to support the Eastern partner countries to:

1. **Prepare a common methodology** for assessment of state of play of identified key targets and market situation
2. **Set up an information collection exercise** to collect information necessary for understanding state of play on broadband access and competitive conditions
3. **Review the national broadband access markets and prepare reporting** based on information collected
4. **Establish the approach as a recurring exercise**

Stakeholders involved

- Eastern Partnership Electronic Communications Regulators Network (EaPeReg)
- EaP National Regulatory Authorities and relevant stakeholders, i.e., Ministries
- European Commission and EU4Digital Facility team

Key phases and timeline of annual monitoring exercise

1. Data collection

January – February

- In January, EU4Digital shares data collection questionnaire with country representatives
- Country representatives circulate questionnaires among relevant national stakeholders, i.e., mobile network operators
- Deadline for submitting the collected information is by end of February

2. Data validation and analysis

March

- In March, EU4Digital initiate the review and validation of data collected
- In case, data reported is incomplete or inconsistent, EU4Digital flags such cases and validates with country representatives
- Once data is validated, EU4Digital further analyses the validated data and drafts broadband monitoring reports

3. Reporting

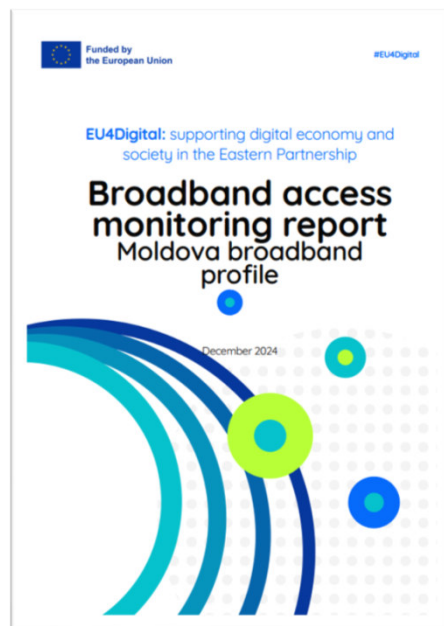
April-May

Final reports

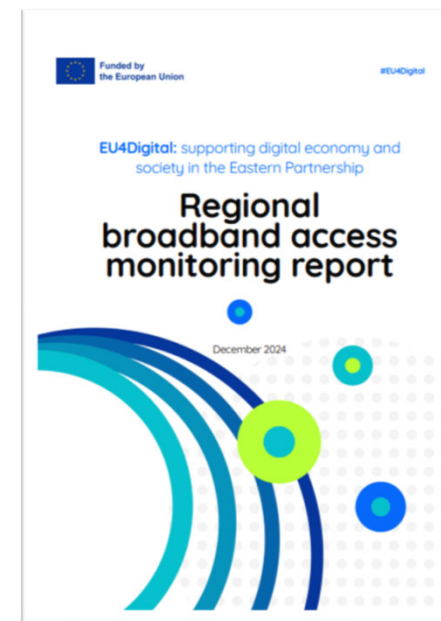
- In April, draft broadband monitoring reports are shared with Eastern partner countries for alignment
- Once draft reports are aligned, they are presented and published online

Developments are reflected in country-specific and regional reports

1. Country-specific broadband profiles, based on the collected data and other relevant developments (e.g., national broadband development plans and goals, main market & regulatory developments)



2. Regional broadband monitoring report, providing overview of country-specific profiles and regional comparisons between the Eastern partner countries and the EU (where applicable)



Country-specific broadband monitoring reports

The image shows the cover and two content pages of a report titled "Broadband access monitoring report Moldova broadband profile". The cover page features the EU4Digital logo, the text "Funded by the European Union", and the report title. It also includes a date "December 2024" and a decorative graphic of overlapping circles and lines.

The first content page (page 1) contains a table with the following data:

2022	2023	EaP average (2023)	EU average (2023)
89%	93%	95%	N/A
82%	86%	81%	78%
62%	65%	20%	55%
2%	6%	2%	14%
80%	89%	53%	67%
3%	2%	3%	N/A
0%	0%	2%	68%
81%	89%	85%	N/A

The second content page (page 2) contains text describing broadband access services, mobile services, and digital technologies, along with a link to the Moldova Service Coverage Map.

- **Methodology is based on the DESI Digital Infrastructure dimension**
- DESI methodology is applied in the same manner as in the EU MS, besides **one additional indicator to reflect EaP countries' broadband market structures**
- Country-specific broadband profiles give a **comprehensive overview of broadband developments** in Armenia, Azerbaijan, Georgia and Moldova
- **Besides quantitative indicators, reports also include additional relevant qualitative information**, e.g., national broadband development plans and goals, main market & regulatory developments and other
- **All reports are published** and available online at eufordigital.eu

Measuring connectivity (1 / 2)

Digital Decade – targets, objectives and approach

1

Digital Decade

Comprehensive framework that guides all actions related to digital in European Union:

- Aim is to ensure all aspects of technology and innovation work for people
- Digital Decade **includes the policy programme, the targets, the objectives, the multi-country projects** and the Digital Decade **rights & principles**
- **targets** are measurable goals for each of the four areas: connectivity, digital skills, digital business, and digital public services

2

Connectivity targets

- **Digital Decade connectivity targets by 2030:**
 - **Gigabit connectivity for everyone**
 - **High speed mobile (at least 5G) coverage everywhere**

How to measure?

Measuring connectivity (2 / 2)

Digital Decade – targets, objectives and approach

(EU) 2022/2481 of 14 December 2022 establishing the Digital Decade Policy Programme 2030 **sets out the KPIs based on which** the MSs and the Commission **shall measure the progress towards the digital targets established**

1

Fixed technologies

Gigabit connectivity, **measured as the percentage of households covered** by fixed Very High-Capacity Networks (VHCN). The technologies considered are those currently able to deliver gigabit connectivity, namely Fibre to the Premises and Cable DOCSIS 3.1. The evolution of the Fibre to the Premises coverage will also be monitored separately and taken into consideration when interpreting VHCN coverage data

2

Mobile technologies

5G coverage, **measured as the percentage of populated areas covered** by at least one 5G network regardless of the spectrum band used

KPIs highlighted in country-specific broadband profiles

1. Total broadband take-up	<i>% of households subscribing to fixed and mobile broadband</i>
2. Fixed broadband take-up	<i>% of households subscribing to fixed broadband</i>
3. At least 100 Mbps fixed broadband take-up	<i>% of households subscribing to fixed broadband of at least 100 Mbps, calculated as overall fixed broadband take-up, multiplied with the percentage of fixed broadband lines of at least 100 Mbps</i>
4. At least 1 Gbps fixed broadband take-up	<i>% of households subscribing to fixed broadband of at least 1 Gbps, calculated as overall fixed broadband take-up, multiplied with the percentage of fixed broadband lines of at least 1 Gbps</i>
5. Mobile broadband take-up (DESI)	<i>% of individuals who used the internet on a mobile device</i>
6. Mobile broadband data-only take-up	<i>% of individuals subscribing to data-only mobile broadband</i>
7. 5G spectrum	<i>Assigned spectrum as a % of total harmonised 5G spectrum</i>
8. Mobile broadband take-up (EaP)	<i>% of individuals who used the internet on a mobile device including add-on packages</i>

DESI: Digital infrastructures indicators (1/2)

1. Overall Internet take-up	Households with access to the Internet at home - % of households
2. Fixed broadband take-up	<i>% of households subscribing to fixed broadband</i>
3. At least 100 Mbps fixed broadband take-up	<i>% of households subscribing to fixed broadband of at least 100 Mbps, calculated as overall fixed broadband take-up, multiplied with the percentage of fixed broadband lines of at least 100 Mbps</i>
4. At least 1 Gbps fixed broadband take-up	<i>% of households subscribing to fixed broadband of at least 1 Gbps, calculated as overall fixed broadband take-up, multiplied with the percentage of fixed broadband lines of at least 1 Gbps</i>
5. Fixed Very High Capacity Network (VHCN) coverage	% of households covered by any fixed VHCN. The technologies considered are FTTH and FTTB for 2017-2018 and FTTH, FTTB and Cable DOCSIS 3.1 for 2019 onwards
6. Fibre to the Premises (FTTP) coverage	% of households covered by FTTH and FTTB
7. Mobile broadband data-only take-up	<i>% of individuals subscribing to data-only mobile broadband</i>
8. Mobile broadband take-up (DESI)	<i>% of individuals who used the internet on a mobile device</i>

DESI: Digital infrastructures indicators (2/2)

9. Mobile broadband take-up (EaP)	<i>% of individuals who used the internet on a mobile device including add-on packages</i>
10. Overall 5G coverage	% of populated areas with coverage by at least one 5G mobile network
11. 5G coverage in the 3.4-3.8 GHz band	% of populated areas with coverage by 5G using the 3.4-3.8 GHz spectrum band
12. 5G spectrum	The amount of spectrum assigned and ready for 5G use within the so-called 5G pioneer bands. These bands are 700 MHz (703-733 MHz and 758-788 MHz), 3.6 GHz (3400-3800 MHz) and 26 GHz (1000 MHz within 24250-27500 MHz). All three spectrum bands have an equal weight
13. 5G SIM cards share of population	5G mobile subscriptions defined as SIM cards that generated any internet traffic on a domestic 5G network in the last 90 days
14. Edge node (estimates)	Number of compute nodes providing latencies below 20 milliseconds. Number of deployed edge nodes

Measuring connectivity

Digital Decade – reflection and next steps

The Digital Decade sets measurable 2030 targets for digital skills, infrastructure, business transformation, and public services. It uses DESI-based indicators and an annual monitoring cycle to track progress. **A mid-term review of targets is planned for 2026.**

1

Eastern partner countries' context

- **Based on observations, there is a need to better reflect the EaP Context :**
 - Current monitoring and targets heavily tailored to EU MS; limited alignment with EaP capacities and realities.
 - EaP countries face unique infrastructural, regulatory, and data collection challenges.
 - Growing need for contextualised indicators to support realistic benchmarking and policy design.

2

Data collection 2025

- **As discussed during EaPeReg status call, EU4Digital will:**
 - Analyse and suggest additional KPIs
 - Revise broadband data collection indicators to reflect updated DESI KPIs

3

Additional indicators

- Discussion needed on adding new indicators or / and removing/adjusting existing ones

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Questions

Thank you