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DIRECTORATE-GENERAL FOR COMMUNICATIONS NETWORKS, CONTENT AND
TECHNOLOGY

Digital Decade and Connectivity
Radio Spectrum Policy Group
RSPG Secretariat

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RSPG24-027 FINAL

RADIO SPECTRUM POLICY GROUP

State of play regarding award of 5G pioneer bands

The attached table represents information as of 05/11/2024. The information has been provided by the RSPG Members and Observers.

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Country	700 MHz			3.4-3-8 GHz			24.25-27.5 GHz		
	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
Austria	September 2019	May 2019	September 2020	February 2018	April 2019	March 2019	Aug 2019 Public consultations on principles in autumn 2022, public consultations on tender document and auction rules summer 2023.	October 2023	Assignment of frequencies (1.4 GHz) completed after auction in March in 2024.
Belgium	July 2017		Band has been awarded in June 2022.	June 2017		370 MHz has been awarded in June 2022. The award procedure for the remaining band of 20 MHz (there is a 10 MHz guard band) took place in the first half of 2024. No candidatures were received for the award of this 20 MHz.	Public consultation in Q4 2023.		Regulatory action will be considered in 2024.

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	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
Bulgaria	October 2023		November 2023	December 2020- January 2021 Public consultation on 3430-3800 MHz November 2023 Public consultation on 3430-3440 MHz (10 MHz TDD)		May 2021 Awarded 3500-3800 MHz (100 MHz for each of the three operators) October 2022 Granted 3440-3500 MHz (additional 20 MHz for each of the three operators)	August 2022 Public consultation on 26 GHz band November 2023 Public consultation on 25500-25700 MHz (200 MHz)		November 2022 Awarded 1600 MHz in 26 GHz band.
Croatia	April 2021	10 th May 2021*	12 August 2021	April 2021	10 May 2021*	12 August 2021	April 2021	10 th May 2021*	12 August 2021
Cyprus	September 2019		December 2020	September 2019		December 2020	September 2019		Not expected in 2020 (subject to clear market demand)
Czechia	June 2019 March 2020 June 2020		January 2021	3.6-3.8 GHz 2017 3.4-3.6 GHz June 2019 March 2020 June 2020	2017	August 2017 January 2021	December 2019 August 2020		No award planned 26.5-27.5 GHz open for non-commercial experiments in October 2020

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Denmark	March 2018		March 2019	December 2020		April 2021	August 2018 and December 2020		April 2021
Estonia	July 2014 and November 2019		November 2022	April 2018	January 2022*	July 2022	November 2019		May 2023
Finland			November 2016	May 2018	April 2019	October 2018	February 2020		June 2020
France			November 2015	July 2019	September 2019	October 2020	1 st public consultation in Jun 2018 New public consultation of market demand on May-September 2022		On-going process to encourage trials in various sectors.
Germany			June 2015			June 2019	October 2018 February 2020 August 2020	n.a.	(Individual frequency assignments: - on application - for 15 years with the possibility of extension - since end of 2020)

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Greece (Individual frequency rights of use assigned for the three 5G bands for 15 years with the possibility of 5 years extension, starting on the 16 th December 2020)	August – September 2020	May 2021	Completed December 2020	August – September 2020	May 2021	Completed December 2020 10 MHz (3.400-3.410 GHz) have been reserved for by the Ministry of Digital Governance for pilot projects. A pilot is already ongoing with another two expected to start by end of August 2022.	August – September 2020	May 2021	Completed December 2020 200 MHz (24.250 – 24.450 GHz) have been reserved by the Ministry of Digital Governance on secondary basis for pilot project
Hungary	June 2019	December 2018	April 2020	June 2019	December 2018	April 2020	July 2017, December 2019 and March 2022	TBD	There is no market demand for 5G. The existing operators (4 MNO and 1 broadcasting company) want to us

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	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
									the band for P-P purposes until the expire date of their licences.
Ireland	December 2020	June 2020	Jan 2023 ComReg Document 23/06 refers	December 2015	January 2018	May 2017	No current demand – ComReg document 21/07 refers	NA	NA
Italy	March 2018	December 2018	October 2018 Spectrum usable nationally from 1 July 2022	3.4-3.6 GHz January 2018 (for 5G use) 3.6-3.8 GHz March 2018	December 2018	3.4-3.6 GHz Extended licenses for 5G use November 2018 3.6-3.8 GHz October 2018	26.5 – 27.5 GHz March 2018 24.25-26.5 GHz • April 2022: preliminary consultation • Analysis still ongoing	December 2018	26.5 – 27.5 GHz October 2018
Latvia	November 2021		Awarded on 16 December 2021. Available for use from February	On August 2023 a public consultation was started on the auction of the free		Last unused 50 MHz block of spectrum have been awarded in October 2023	<i>A public consultation with market players was initiated in Q1 of 2023</i>		Subject to market demand. It was concluded that at the

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			2022.	remaining 50 MHz spectrum block.					moment there is no demand on the MNO side to use 26 GHz band. The way forward that was agreed during the consultation is to organize an auction or tender after Regulator receives a request for granting the right to use the band, which would serve as an indicator of the of MNO actual readiness to use of the Band.
Lithuania	May 2018 June 2021	22 June 2021*	September 2022	May 2018 March 2019		September 2022	April 2020; February		Currently no demand. The

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	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
	October 2021			January 2021 February 2021 March 2022			2024.		frequency band of 1.2 GHz is available. Waiting for requirements from MNO.
Luxembourg	May 2019		August 2020	May 2019		August 2020	October 2020		New public consultation scheduled for Q4-2025.
Malta	5 February 2021	23 March 2021*	Subject to market demand. Based on responses to a questionnaire launched by the Malta Communications Authority in Q3.2023, market interest for the 700 MHz band may be expressed	5 February 2021	23 March 2021*	3.5-3.6 GHz: <i>Aug. 2021</i> 3.6-3.7 GHz: <i>May 2021</i> 3.7-3.8 GHz: <i>Oct. 2021</i> <i>The band 3.4-3.5 GHz remains unassigned due to a lack of market interest.</i>	5 February 2021	23 March 2021*	Subject to market demand. Based on responses to a questionnaire launched by the Malta Communications Authority in Q3.2023, market interest for the 26 GHz band may be expressed

Country	700 MHz			3.4-3.8 GHz			24.25-27.5 GHz		
	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
			after 2025.						after 2025.
Netherlands	December 2019 – February 2020		July 2020	May/June 2021 March/May 2023	24 June 2021*	Started on the 25 th of June 2024, end of auction on the 1 st of July 2024. Licenses awarded on 10 th of July 2024.	Public consultation in 2020 showed limited market demand		Award policy is subject to market demand. Investigation into national (market) demand is expected to be finalized by end 2024.
Poland	2024-10-04 - 2024-11-04		<u>Start of auction:</u> Expected 2024-11-08 <u>Auction results:</u> Expected in Q1 2025 <u>Licences award:</u> Expected in Q2 2025	<u>1st consultation (3.48-3.8 GHz):</u> 2019-12-02 - 2020-01-10 <u>2nd consultation (3.48-3.8 GHz):</u> 2020-01-27 - 2020-02-27 <u>Start of auction (3.48-</u>		<u>Start of auction (3.4-3.8 GHz):</u> 2023-06-22 <u>Auction results:</u> 2023-10-18 <u>4 licences award:</u> 2023-12-19	<u>1st consultation (questionnaire on market demand in the 26 GHz band):</u> 2020-07-20 - 2020-09-07 <u>2nd consultation (questionnaire on market demand in the 26 GHz and 42 GHz band):</u>		The 2 nd consultation showed a lack of market demand (operators indicated 2026 as a possible date for band allocation).

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	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
				<p>3.8 GHz): 2020-03-06</p> <p><u>Cancellation of auction:</u> 2020-06-10</p> <p><u>1st consultation (3.48-3.8 GHz):</u> 2022-12-20 - 2023-01-31</p> <p><u>2nd consultation (3.4-3.8 GHz):</u> 2023-04-06 - 2023-05-12</p>			2024-01-18 – 2024-02-16		
Portugal	<p>April 2018 & Oct.2019 (RoU and award procedure)</p> <p>Consultation on the auction rules was launched Q1 2020, it</p>		<p>Initially planned for Q2 2020, due to the suspension of the public consultation, it started on the Q4 2020. The licences were</p>	<p>April 2018 & Oct.2019 (RoU and award procedure)</p> <p>Consultation on the auction rules was launched Q1 2020, it was suspended</p>		<p>Initially planned for Q2 2020, due to the suspension of the public consultation, it started on the Q4 2020. The licences were awarded</p>	<p>April 2018 (1st consultation).</p> <p>A second consultation took place between December 2021 and March 2022.</p>		TBD according to market demand.

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	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
	was suspended due to pandemic and ended in July 2020. Public consultation (non-allocated spectrum – 2x5MHz): September-November 2024.		awarded in 2021.	due to pandemic and ended in July 2020.		in 2021.	By decision of 13 July 2022, ANACOM approved the report of the public consultation. 3 rd public consultation: September-November 2024.		
Romania	First public consultation: July-August 2019 (but the multi-band auction in WAPECS bands was postponed). Second public consultation: July-August 2022.		The auction phase of the 2022 selection procedure has finished on 15.11.2022. Three FDD blocks (2x5 MHz each) were awarded (valid during	First public consultation: May-June 2015. Second public consultation: July-August 2019 (but the multi-band auction in WAPECS bands was postponed). Third public		An amount of 255 MHz (FDD and TDD) in the 3.4-3.8 GHz band has already been allotted by auction since 2015 (valid during 2016-2025). After the refarming from FDD to	First public consultation (by a strategy for a multi-band auction in WAPECS bands, including the 26 GHz band): February-March 2019. Second public consultation (by a		In 2019: the 26 GHz band was postponed after the finalisation of the multi-band auction for the rest of the WAPECS bands (not yet awarded at that time). In 2022: there

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	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
			2023-2047), out of six FDD blocks and three SDL blocks, that were available.	consultation: July-August 2021. Fourth public consultation: July-August 2022.		TDD, an amount of 90 MHz in the 3.4-3.6 GHz band (not awarded in 2015) was put to auction in 2021, but only 5 MHz TDD were allotted (valid during 2022-2025). The auction phase of the 2022 selection procedure has finished on 15.11.2022. An amount of 310 MHz TDD was awarded (valid during 2026-2047), out of 400 MHz available.	dedicated questionnaire on market demand in the 26 GHz band): August-September 2022.		was no interest expressed by the market. ANCOM will issue a new questionnaire during 2024-2025, in order to assess again the market demand.
Slovakia	December 2019		December 2020	December 2021 – January 2022		3.4-3.6 GHz: May 2016	February 2024		Public discussion result –a

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						<p>3.6-3.8 GHz July 2017</p> <p>3410 – 3800 MHz awarded in May 2022 (100 MHz for three operators, 90 MHz for one operator) Licence validity 09.2025 – 12.2045.</p>			<p>slight increase in interest aimed both at nation-wide allocation, but also at exclusively local allocation. Several cases of test operation at the local level. Next public discussion is planned in Q2 2025. Part of the band (27,1 – 27,5 GHz) is still subject of negotiation with military.</p>
Slovenia	<i>Q3 2020</i>	December 2018 October 2020	<i>June 2021</i>	Q3 2020 (3.42-3.8 GHz) Q3 2022 and Q2 2023 (3.4-3.42 GHz)	October 2020	June 2021 <i>Q2 2024</i>	Q3 2020	October 2020	June 2021

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	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
Spain	2017 and 2019	December 2020	July 2021	2017		July 2018 20 MHz awarded in April 2021	2017, 2019 and 2021	30 September 2022*	December 2022 (450 MHz reserved for verticals, first come-first served approach)
Sweden	July 2018	May 2018 February 2019	December 2018	July 2019	April 2019	National licenses January 2021 Local licenses November 2021	December 2019 May 2022		November 2021 Local licences in 24,25 – 25,1 GHz
Iceland	2015		2017, the lowest 2x10 part assigned 2022	2015		3.5-3.8 GHz already assigned for 5G 3.4 GHz award waiting for a market demand			No clear market demand.
Liechtenstein	November 2022		December 2022	November 2022		December 2022			No market demand at this time
Norway	2018		June 2019	August 2019		September 2021	September 2022 and May 2023. Planned		Planned award in 2024.

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	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
							consultation in December 2023.		
Montenegro	Preliminary public consultation with mobile operators to express interest started in October 2020; Public consultation on Draft Public Bidding Documents - 26 May to 8 July 2022		FDD: 2x30 MHz (6 blocks of 2x5 MHz) awarded on 9 February 2023; SDL: 15 MHz (3 blocks of 5 MHz) were subject of the public bidding procedure but remained unawarded due to lack of demand; Public bidding procedure (multiband spectrum auction: 700 MHz, 3.6 GHz and 26 GHz) started on 26	Preliminary public consultation with mobile operators to express interest started in October 2020; Public consultation on Draft Public Bidding Documents - 26 May to 8 July 2022		400 MHz (40 blocks of 10 MHz) awarded on 9 February 2023; Public bidding procedure (multiband spectrum auction: 700 MHz, 3.6 GHz and 26 GHz) started on 26 October 2022.	Preliminary public consultation with mobile operators to express interest started in October 2020; Public consultation on Draft Public Bidding Documents - 26 May to 8 July 2022		1000 MHz (5 blocks of 200 MHz) were subject of the public bidding procedure but remained unawarded due to lack of demand; Public bidding procedure (multiband spectrum auction: 700 MHz, 3.6 GHz and 26 GHz) started on 26 October 2022.

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	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
			October 2022.						
Republic of Moldova	Public consultations held during the adoption of the Government Decision No. 987 of 12-22-2020 regarding the approval of the Spectrum Management Program for the 2021-2025 years.		Spectrum award scheduled for Q3 2024.	Public consultations held during the adoption of the Government Decision No. 987 of 12-22-2020 regarding the approval of the Spectrum Management Program for the 2021-2025 years.		Spectrum award scheduled for Q3 2024.	Public consultations held during the adoption of the Government Decision No. 987 of 12-22-2020 regarding the approval of the Spectrum Management Program for the 2021-2025 years.		Spectrum award scheduled for Q3 2024.
North Macedonia	2020,2021		2022, 2x20 MHz assigned for 5G (two existing mobile operators) lowest 2x10 MHz not awarded	2020, 2021		2022, 3.6-3.8 GHz assigned for 5G (two existing mobile operators) 3.5-3.6 GHz not awarded (reserved for	2020, 2021		No market demand.

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	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
			(reserved for third mobile network operator)			third mobile network operator)			
Serbia	Rulebook on the minimum conditions for the issuance of individual licences for the use of RF spectrum in specific RF bands – currently on public consultations (Ministry's jurisdiction, it contains necessary input data for the auction).		Expected in 2025	Rulebook on the minimum conditions for the issuance of individual licences for the use of RF spectrum in specific RF bands – currently on public consultations (Ministry's jurisdiction, it contains necessary input data for the auction)		Expected in 2025			Not expected to be awarded in the upcoming award process

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	Public consultation	Peer review	Award	Public consultation	Peer review	Award	Public consultation	Peer review	Award
Ukraine	Consultations on auction rules for 2022 have been postponed due to the fullscale invasion of Ukraine. This issue will be raised as soon as the situation in Ukraine allows. Two MNOs have expressed interest in obtaining this spectrum from 2023 (or later).		Expected in 2025-2026, depending on the country's military and economic situation.	Consultations on auction rules for 2022 have been postponed due to the fullscale invasion of Ukraine. This issue will be raised as soon as the situation in Ukraine allows. Two MNOs have expressed interest in obtaining this spectrum from 2023 (or later).		Expected in 2025-2026, depending on the country's military and economic situation.			No market demand at this time

*Peer Review Forum held in line with the provisions of Article 35 of the [European Electronic Communications Code](#).