

# IMPLEMENTATION ROADMAP EU CONNECTIVITY TOOLBOX FOR THE NETHERLANDS

## 1. Introduction

On September 17, 2020 the European Commission adopted a Recommendation, calling on Member States to develop and agree on a common Union Toolbox of best practices to foster connectivity and, in particular, the deployment of Very High Capacity Networks (VHCN), including fibre and 5G.<sup>1</sup> This Connectivity Toolbox has subsequently been developed by the Member States and was published on March 26, 2021.<sup>2</sup> The toolbox provides 39 best practices in different areas, ranging from streamlining permit granting procedures and improving transparency through the Single Information Point, to providing financial investments in spectrum policy and aspects related to electromagnetic fields and public health.

As a next step, Member States were asked to provide a national roadmap for implementation of the toolbox. This implementation roadmap should (i) present an initial assessment by the Member State as to the usefulness of the best practices according to the national situation, (ii) overall reflect the expected plan of the Member State, based on its initial assessment, in regard to the implementation of the best practices and (iii) provide an indicative timing and potential stakeholders for implementation.

This document presents the national implementation roadmap for the Netherlands. The roadmap is provided as a table, evaluating each of the best practices using the three criteria mentioned in the toolbox. In this way, a quick overview is obtained of the usefulness and implementation plans for each of the 39 best practices in the Netherlands. In the column 'Usefulness..', it is indicated if the Netherlands already meets the best practice, after which in the next column 'Expected implementation..', it is specified which further actions/steps have been or will be taken. This roadmap should be considered as a living document, where during the course of the year adjustments might be made, to respond to new developments and depending on discussions with relevant stakeholders.

As an introductory note, it is stressed that many of the toolbox' best practices are aligned with the Dutch policy regarding the roll-out of telecommunication infrastructure and are considered useful for implementation on the short to medium term. For instance, the best practices that focus on the development of standards and the provision of information materials at the local level, are in line with the current national policy to strive for (more) transparency and harmonization of local policies, whilst respecting local autonomy, and to foster the sharing of knowledge/information with local governments. On the other hand, some of the best practices are considered less relevant in the Dutch situation, where a relatively good coverage of high-speed fixed broadband and mobile broadband networks has already been achieved.<sup>3</sup> For instance, further improvements in the transparency of existing physical infrastructure via a Single Information Point, are only to be considered if they provide clear added value to the stakeholders.

Finally, we would like to make an explicit reservation that our involvement in the toolbox process and any measures agreed upon in the toolbox should not be considered as commitment to include these measures in the upcoming revision of the Broadband Cost Reduction Directive.

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<sup>1</sup> Commission Recommendation (EU) 2020/1307 of 18 September 2020 on a common Union toolbox for reducing the cost of deploying very high-capacity networks and ensuring timely and investment-friendly access to 5G radio spectrum, to foster connectivity in support of economic recovery from the COVID-19 crisis in the Union, OJ L 305, 21.09.2020, p.33.

<sup>2</sup> Common Union Toolbox for Connectivity, <https://digital-strategy.ec.europa.eu/en/policies/connectivity-toolbox>

<sup>3</sup> See e.g. the 6<sup>th</sup> position of the Netherlands in the DESI broadband connectivity indicator, <https://ec.europa.eu/digital-single-market/en/broadband-connectivity>

## 2. Implementation roadmap

### STREAMLINING PERMIT GRANTING PROCEDURES

Nr.	Best practice	Usefulness of the best practice	Expected implementation plan	Indicative timing and potential stakeholders
1.	INTRODUCE PERMIT EXEMPTIONS AND FAST TRACK PROCEDURES AND PROMOTE THE APPLICATION OF EXISTING LIGHTER PERMIT GRANTING PROCEDURES	In the Netherlands a permit exemption for the construction of certain antenna installations (in practice antennas on rooftops) is already in place. Rules and procedures regarding the proper deployment of permit-free antenna installations have been laid down in an Antenna Agreement <sup>4</sup> .	The Netherlands will consider introducing additional permit exemptions and/or mere notification mechanisms or other potential improvements when relevant legislation is under review.	When said legislation is under review all relevant pros and cons of proposed measures will be taken into account. This in turn may lead to adopting additional measures in legislation.
2.	PROVIDE MODEL REGULATIONS ON ELECTRONIC COMMUNICATIONS NETWORK DEPLOYMENT	The Netherlands considers the provision of model regulations on ECN/VHCN deployment a useful best practice and has already undertaken action to meet this best practice.	In the past year, a taskforce consisting of national and local authorities have worked on a so called Municipal Sample Memorandum on Antenna Policy <sup>5</sup> . This sample memorandum includes, among other things, an overview of relevant national legislation with a view to the deployment of antenna installations for mobile telecommunications subject to an environmental permit, and an assessment framework for municipalities to construct their own local 'antenna policy'. Adoption of the memorandum aims at fostering a more uniform approach with regards to local antenna policy and the provision of more equal conditions for obtaining permits for the deployment of antenna installations. Thereby taking into account the trade-off between the use of the spatial environment and the availability of good connectivity in a municipality.	The sample memorandum was developed under the guidance of the Antenna Bureau (part of the Radiocommunications Agency Netherlands). Next to the members of the taskforce, also mobile telecom operators were involved in the preparation of the memorandum. The memorandum will be promoted among municipalities through (an) online seminar(s) of the Antenna Bureau <sup>6</sup> . Adoption of the memorandum is on a voluntary basis, but is encouraged by the national administration and by the Association of Netherlands Municipalities.
3.	PROVIDE INFORMATIVE MATERIALS AND WORKSHOPS FOR MUNICIPALITIES AND OTHER COMPETENT AUTHORITIES	The Netherlands considers the provision of informative materials and supporting measures for municipalities a useful best practice and has already undertaken action to meet this best practice.	In 2019 the Ministry of Economic Affairs and Climate Policy had organized seven regional events with municipalities and operators, to discuss how a smooth roll out of digital connectivity infrastructure can be realised at the local level. <sup>7</sup> In the same year, the ministry had also launched a special platform/website ('fast internet everywhere') <sup>8</sup> and accompanying newsletter for municipalities to provide them with knowledge on local policy issues related to the roll out of VHCN and promoting harmonisation of local policies and exchange of best practices. Such also includes matters related to telecom legislation and permit granting procedures. Furthermore, the Antenna Bureau also provides local governments with specific information on technical aspects of antennas, the legal framework, and health effects by means of online information materials <sup>9</sup> , courses and country wide information meetings.  With regards to particular aspects of permit granting, the ministry and the Antenna Bureau (part of the Radiocommunications Agency Netherlands) have created and published an infographic about the role of municipalities with regards to the deployment of antenna-installations, including a flow chart to determine in which situations an environmental permit is needed <sup>10</sup> . In the coming year the ministry and the	The Dutch Government intends to continue the provision of informative materials and supporting measures as currently provided through the online platform 'fast internet everywhere' and the information activities of the Antenna Bureau. Furthermore, the Dutch government will consider to organize a new round of regional discussion tables with municipalities and operators in the nearby future.

<sup>4</sup> <https://www.antennebureau.nl/documenten/convenanten/2021/januari/26/antenneconvenant-2021-2025>

<sup>5</sup> <https://www.antennebureau.nl/actueel/nieuws/2021/april/29/nieuwe-voorbeeldnota-gemeentelijk-antennebeleid>

<sup>6</sup> <https://www.antennebureau.nl/actueel/nieuws/2021/april/19/online-kenniscafe-voorbeeldnota-gemeentelijk-antennebeleid>

<sup>7</sup> <https://www.overalsnelinternet.nl/documenten/publicaties/12/16/16/terugkoppeling-regionale-gesprekstafels>

<sup>8</sup> [www.overalsnelinternet.nl](http://www.overalsnelinternet.nl)

<sup>9</sup> [www.antennebureau.nl](http://www.antennebureau.nl)

<sup>10</sup> <https://www.antennebureau.nl/actueel/nieuws/2020/december/18/infographic-rol-gemeenten-bij-plaatsing-antennes>

			Antenna Bureau will be publishing and promoting the Sample Memorandum on Antenna Policy (see BP2) through their respective information channels. Furthermore, both the ministry and the Antenna Bureau will be regularly updating their respective websites in order to provide local governments with useful and up-to-date information on the relevant legal framework and permit granting procedures.	
4.	ENSURE THE USE OF ELECTRONIC MEANS FOR PERMIT APPLICATIONS	The Netherlands endorses the submission of permit applications by electronic means and whenever possible, viable and useful, through a single digital portal or interconnected digital portals. In the Netherlands there are already central digital facilities in place where telecom operators can apply for permits.	Via the central digital facility 'Omgevingsloket' <sup>11</sup> mobile telecom operators can apply for an environmental permit needed for the construction of antenna installations (that are subject to a permit). Municipalities must have connected their systems to this digital facility.	In the coming year, the Dutch government will explore together with municipalities and telecom operators if improvements are needed in the current digital facility to enhance the submission and/or handling of applications for consents.
5.	DIGITAL ADMINISTRATIVE PORTAL/SINGLE INFORMATION POINT (SIP) COORDINATION		Via the central digital facility 'Business.gov.nl' <sup>12</sup> (Ondernemersplein in Dutch), telecom operators can find information about the required consent (permit) from municipalities and provinces for the installation, maintenance and removal of telecom cables. The online portal includes a functionality to search for the specific consent in a municipality and to digitally apply for a local consent through a message box. For the handling of applications for consents, municipalities often make use of a (commercial) electronic information system.	
6.	TACIT APPROVAL FOR RIGHTS OF WAY	The Netherlands is sceptical about introducing either tacit approval or fast track procedures for rights of way, since it already complies with the minimum terms/deadlines as stated in the BCRD, which are deemed necessary for reasons of due diligence.	The Netherlands will consider introducing tacit approval for rights of way or other potential improvements when relevant legislation is under review.	When said legislation is under review all relevant pros and cons of proposed measures will be taken in to account. This in turn may lead to adopting additional measures in legislation.
7.	FAST TRACK PROCEDURES FOR RIGHTS OF WAY		The Netherlands will consider introducing fast track procedures for rights of way or other potential improvements when relevant legislation is under review.	
8.	ESTABLISH BROADBAND COORDINATORS	The Netherlands supports the idea of establishing broadband coordinators and the use of joint coordination procedures, but local authorities should decide on whether and how they want to carry out such roles and tasks.	There are best practices where municipalities in the Netherlands have established a multidisciplinary team on digital connectivity within their organisation. Within these multidisciplinary teams, workers from various departments have joined, such as permit granting, public space, ICT, etc. The Dutch government has collected such best practices and published these on the platform/website 'fast internet everywhere' <sup>13</sup>	In the coming year the Dutch government will continue collecting best practices and promote the idea among municipalities of establishing a multidisciplinary team on digital connectivity.
9.	USE OF JOINT PREPARATORY COORDINATION PROCEDURES FOR GRANTING RIGHTS OF WAY AND PERMITS NECESSARY FOR CIVIL WORKS			
10.	LEGAL REQUIREMENTS WITH REGARD TO THE APPROPRIATENESS OF FEES	According to Dutch legislation the fees charged by local governments for the granting of permits for civil works must cover only the administrative costs incurred for the provision of such permits. In addition, there exists various general models and guidelines on the calculation of municipal fees for the granting of permits. However, due to local circumstances, fees may vary between local governments.  As regards fees/rent for rights of way on public ground, according to Dutch legislation the titleholder or manager of public land shall be obliged to tolerate that cables are installed, maintained, or removed in and on said land, without the levying of fees/rents.	Specifically, for the calculation of municipal fees for the granting of permits for ECN/VHCN deployment, the Netherlands will develop a guideline. This concerns an integral guideline with a focus on administrative fees for the granting of a permit for: <ul style="list-style-type: none"> <li>- carrying out works in or on public land related to the installation, maintenance and removal of telecom cables (consent), and</li> <li>- the construction of antenna masts for mobile telecom (environmental permit).</li> </ul> The purpose of the guideline is to provide guidance on the calculation of fees for issuing consent decisions and for environmental permits, not to set the fees for local governments.	In the coming year, the Dutch government together with municipalities and telecom operators, will work on the development of the said guideline. It is expected that the guideline will be finalized in 2021.

<sup>11</sup> <https://www.omgevingsloket.nl/>

<sup>12</sup> <https://business.gov.nl/>

<sup>13</sup> <https://www.overalsnelinternet.nl/onderwerpen/best-practices>

## IMPROVING TRANSPARENCY THROUGH THE SINGLE INFORMATION POINT (SIP)

Nr.	Best practice	Usefulness of the best practice	Expected implementation plan	Indicative timing and potential stakeholders
11.	ENSURE THE AVAILABILITY OF INFORMATION FROM DIFFERENT SOURCES AND ENHANCE TRANSPARENCY OF PLANNED CIVIL WORKS	Information access in the Netherlands: In the Netherlands a SIP as proposed in best practices 11-15 is already in place.  Physical access in the Netherlands: In the Netherlands there is little demand from telecom operators for access to existing (underground) physical infrastructure of utility companies. Access to physical infrastructure amongst telecom operators, by means of the swapping of ducts, mostly takes place on a voluntary basis.	Information from different sources regarding existing physical infrastructure is already available via the SIP (the online information exchange portal called KLIC <sup>14</sup> ). As an option, network operators can indicate via the KLIC portal information on their planned physical infrastructure and their infrastructure which is currently under construction. T	
12.	ENSURE THE AVAILABILITY OF INFORMATION VIA THE SINGLE INFORMATION POINT (SIP) IN ELECTRONIC FORMAT		Information in different electronic formats (.gml, PDF) is already available via the KLIC portal and can be opened via a GIS system and via an online viewer of the KLIC portal.	
13.	INCLUDE GEOREFERENCED INFORMATION (MAPS AND DIGITAL MODELS) IN THE DATA MADE AVAILABLE VIA THE SIP		The information on utilities infrastructure, which is exchanged via the KLIC portal, includes standardised georeferenced geo-information in xml format. The information is based on the IMKL information model (information model cables and pipeline), based on the INSPIRE US model. The geo-information is available in standardised XML conform the IMKL specs.	
14.	MAKE AVAILABLE INDICATIVE INFORMATION ON THE OCCUPATION LEVEL OF THE INFRASTRUCTURE AND/OR THE EXISTENCE OF DARK FIBRE		There is a lot of digital information available via the KLIC portal, including information on the georeferenced location of the infrastructure, its digital model, its type and current use. Information on the state of occupation/capacity is available via the KLIC portal to a limited extent. Information on whether the infrastructure is functional or not, is available, as well as certain specifications of the infrastructure (e.g. pipe diameter, type of pipe). Dark fibre is also available via the KLIC portal with the INSPIRE indication current status (functional/disused/projected). Information on spare capacity is not available (e.g. occupation in a duct, or spare capacity of a cable of pipeline).	
15.	ENSURE THE PROVISION VIA THE SINGLE INFORMATION POINT (SIP) OF TRANSPARENT INFORMATION REGARDING THE CONDITIONS OF ACCESS TO THE EXISTING PHYSICAL INFRASTRUCTURE		In the current information exchange between network operators via the KLIC portal, contact details of network operators and information of the requested area are exchanged. Information concerning the terms and conditions of access to the existing physical infrastructures can be send together with the georeferenced data by using a website url or a pdf file. In case not available via the SIP, the conditions of access to existing physical infrastructure can be obtained by getting in contact with the network companies based on the contact details obtained via the SIP request.	

## EXPANDING THE RIGHT OF ACCESS TO EXISTING PHYSICAL INFRASTRUCTURE

Nr.	Best practice	Usefulness of the best practice	Expected implementation plan	Indicative timing and potential stakeholders
16.	ENSURE ACCESS TO PHYSICAL INFRASTRUCTURE CONTROLLED BY PUBLIC BODIES	The Netherlands endorses the intent of this best practice to ensure access to physical infrastructure controlled by public bodies, where possible. However, at this moment, the Netherlands has no intention to impose an obligation on public bodies to ensure such access, other than the one laid down in Article 57 of the EEC. Instead, the Netherlands will promote the	As regards to access to physical infrastructure owned by the central government, there already exists a policy guideline <sup>15</sup> on the deployment of antenna installations for mobile communication. In principle this guideline states that objects owned or managed by the central government are available for the deployment of such antenna installations. This concerns office buildings, sites and structures such as bridges,	As stated in BP2, the Municipal Sample Memorandum on Antenna Policy is expected to be completed in the second quarter of 2021 and will be promoted by the Antenna Bureau. Adoption is encouraged by the national administration and by the Association of Netherlands Municipalities.
17.	ENTRUST A BODY WITH A COORDINATOR AND/OR PROMOTER ROLE			
18.	DEVELOPMENT OF GUIDELINES FOR ALL GOVERNANCE LEVELS			

<sup>14</sup> <https://www.kadaster.nl/zakelijk/registraties/landelijke-voorzieningen/klic>

<sup>15</sup> Gedragslijn antennes op rijksobjecten, <https://www.rijksvastgoedbedrijf.nl/documenten/richtlijn/2014/06/24/gedragslijn-antennes-op-rijksobjecten>

		<p>intent of this best practice through several soft approaches.</p>	<p>locks and road portals. The aim is to provide unambiguous access conditions to the owner of the antenna-installation.</p> <p>Furthermore, as stated in BP2, currently the Antenna Bureau (part of the Radiocommunications Agency Netherlands) is working together with municipalities and mobile operators, on a Municipal Sample Memorandum on Antenna Policy. This sample memorandum includes the policy option/suggestion for municipalities to make available their physical infrastructure for the deployment of (macro) antenna-installations, under reasonable conditions. Thereby, municipalities can choose to apply similar procedures, rules and conditions as regards to the obligations under Article 57 of the EECC. In addition, if municipalities want to foster the (future) deployment of small cells (and other antenna-installations) within their municipality, it is suggested that municipalities can draw up and publish a list of available municipal objects suitable for the deployment of antenna-installations.</p> <p>Lastly, the Dutch Government is planning to develop a guideline to assist municipalities with the implementation of the new legislation under Article 57 of the EECC. This guideline consists of various components and serves as a national policy template which municipalities can adopt, whilst taking into account their specific local circumstances. The guideline consists at least of a process description for handling requests for access (based on fair and reasonable terms and conditions), a standard agreement model and a cost model/pricing methodology. The guideline could serve as a blueprint for the handling of all reasonable requests for access to the physical infrastructure of municipalities, in the case of deployment of all types of antenna-installations for mobile communication.</p>	<p>The guideline on handling requests for access to the physical infrastructure of municipalities, is expected to be completed by the beginning of 2022 at the latest. The guideline will be developed under the guidance of the Radiocommunications Agency and in close cooperation with municipalities and mobile operators. Where relevant and useful, other stakeholders will also be involved and/or consulted.</p>
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#### DISPUTE RESOLUTION MECHANISM

Nr.	Best practice	Usefulness of the best practice	Expected implementation plan	Indicative timing and potential stakeholders
19.	INCLUDE AN OPTIONAL PRIOR/PARALLEL CONCILIATION MECHANISM	In the last couple of years, the Dutch National Regulatory Authority (ACM) has not handled many disputes about access to physical infrastructure. In this regard, the proposed best practices on dispute resolution mechanisms are of less usefulness for the Dutch national situation. Nevertheless, the Dutch NRA has, as part of their current practice, already implemented the best practices to some extent. At this moment the Dutch NRA has no intentions of further implementing the best practices.	It is already common practice of the ACM to propose mediation in specific circumstances where mediation, according to the ACM, might be effective. Thereby mediation can be provided by the regulator itself or an external third party.	
20.	ENSURE TRANSPARENCY, AWARENESS AND TRUST IN THE DISPUTE RESOLUTION MECHANISM BY ISSUING GUIDELINES		As a rule, the ACM publishes dispute decisions, in order for other interested parties to take note of the content of the dispute decisions and to provide guidance to all interested parties.	
21.	ENSURE ELECTRONIC COMMUNICATION AND SUBMISSION FOR PARTIES		ACM has not opened the electronic route for parties to submit documents concerning dispute resolution. In the Netherlands, this is an issue that is much larger than dispute resolution alone, because if ACM were to open up the electronic route, this would apply to all applications received by ACM. This is regulated in the General Administrative Law Act (Algemene wet bestuursrecht)."	

#### REDUCING THE ENVIRONMENTAL FOOTPRINT OF NETWORKS

Nr.	Best practice	Usefulness of the best practice	Expected implementation plan	Indicative timing and potential stakeholders
22.	LIMIT THE NEGATIVE ENVIRONMENTAL FOOTPRINT OF THE ELECTRONIC COMMUNICATIONS NETWORKS	From a "greener network" perspective network operators should be stimulated to use more renewable energy. Limiting the negative environmental footprint of the electronic communications networks is important in order to meet European and national objectives for reduction of CO <sub>2</sub> , and therefore falls under the general policies for achieving these objectives. As such, telecom companies must also adhere to these general policies.	Network operators have incentives to reduce energy consumption and become "greener". Lower energy consumption means lower operational costs. Consumers are more and more aware of sustainability aspects and expect their provider to be "green". The Dutch incumbent KPN has recently announced that it aims to have CO <sub>2</sub> -neutral energy consumption in 2040. It also has started a pilot for the deployment of fibre, using 90% recycled plastics for the pipe and a smaller volume.	

#### ENVIRONMENTAL IMPACT ASSESSMENT

Nr.	Best practice	Usefulness of the best practice	Expected implementation plan	Indicative timing and potential stakeholders
23.	ASSESSMENT OF ENVIRONMENTAL EFFECTS	This best practice refers to the applicability of the Directives 2001/42/EC, 2011/92/EU and 92/43/EEC for wireless communication network roll-outs. At the time of granting rights or issuing licences for spectrum use, the prevailing view among Member States is that the conditions for the application of these Directives do not seem to be fulfilled. In the Netherlands, there is currently no obligation to do an environmental assessment according to the mentioned directives when issuing licenses for frequency spectrum or antenna installation.		

#### INCENTIVES FOR INVESTMENT

Nr.	Best practice	Usefulness of the best practice	Expected implementation plan	Indicative timing and potential stakeholders
24.	PROMOTE ADEQUATE RESERVE PRICES	Reserve prices in spectrum auctions should lead to the license fees being a fair representation of the economic value of the licenses, even in the case of a limited number of bidders. Revenue maximization is not an objective, and unsold spectrum should be avoided. Auction objectives are: 1) efficient allocation of spectrum, 2) realistic opportunities for all participants, and 3) realistic revenues that represent the economic value of the licenses.	The Netherlands has used reserve prices in the auction of the 700 MHz band and intends to do so also for the 3.5 GHz band. Reserve prices in the 3.5 GHz band auction will primarily be based on an international benchmark, which analyses reserve prices and auction revenues in other countries and translates these to the Dutch situation. External experts are consulted to perform this benchmark and to give advice on realistic reserve prices. The award procedure for the 26 GHz band, including the potential use of reserve prices, still has to be decided.	Reserve prices and auction design for the 3.5 GHz band are soon to be published for consultation, as an important milestone towards the auction of the 3.5 GHz band that is scheduled for early 2022.
25.	TIMELY AVAILABILITY OF 5G HARMONISED BANDS	The Netherlands always strives to ensure that the full amount of radio spectrum that is harmonized at Union level will be made available. Availability should be as timely as possible, however by taking adequate account of existing use in the band.	The Netherlands has assigned all of the 700 MHz band (2x30 MHz) in July 2020. Of the 400 MHz available in the 3.5 GHz band, 300 MHz (3450-3750 MHz) will be auctioned for national use, while the other 2x50 MHz (3400-3450 MHz and 3750-3800 MHz) will remain available for local networks.	The auction of the 3.5 GHz band is planned for early 2022, so that licenses can start at 1 September 2022. In parallel, the authorization regime for local licenses in the 3400-3450 and 3750-3800 MHz bands will be determined. In the course of 2021, more clarity will be provided about the authorization regime for the 26 GHz band, so that at least 1 GHz of spectrum in this band can be issued as soon as possible.
26.	REVIEW NATIONAL SPECTRUM PLANS ON A REGULAR BASIS	Regular review of national spectrum plans is common practice in the Netherlands. This is useful and important for providing longer-term predictability of spectrum policy to the relevant stakeholders and to ensure that spectrum plans are up-to-date with market and technological developments	In 2019, the Netherlands has published a long-term strategy plan for spectrum for mobile communications <sup>16</sup> , as part of a regular process of reviewing and updating national spectrum policy. New harmonized bands for mobile communications will be taken into account in regular updates of the allocation table.	A review of the long-term strategy is not foreseen in the next few years. Current licenses for the harmonized mobile frequency bands do not expire earlier than 2030. However, a review might be triggered by the harmonization of new frequency bands for mobile communications, substantial changes in the market structure, or technological developments. All new harmonized bands, including those for licensed exempt use/general authorization, will be taken into account,

<sup>16</sup> <https://www.rijksoverheid.nl/documenten/rapporten/2019/06/11/nota-mobiele-communicatie>

				if possible, in the regular updates of the allocation table.
27.	ENABLE PAYMENTS OF AWARD FEES IN INSTALLMENTS	Payment of award fees in instalments is considered as an option to lower the cost of capital. On the other hand, it is important that award winners show their commitment by paying of a considerable part of the total award fee directly after the auction. Instalment schemes should be as simple as possible in order to avoid complexity and administrative burden.	An instalment scheme has been offered for the 700 MHz band auction, offering the possibility to pay 50% of the award fee directly after the auction and 50% after 1 year. A similar instalment scheme will possibly be offered for the 3.5 GHz band.	The award procedure for the 3.5 GHz auction, which includes a description of the payment conditions, is planned to be published for consultation in Q2 2021.
28.	INDIVIDUAL AUTHORISATION REGIME FOR THE 24.25-27.5 GHZ FREQUENCY BAND	Given the large available bandwidth and the shorter radio propagation distances, the 26 GHz band is well suited for an individual authorization regime where the band can be shared between a large number of users. The 26 GHz is therefore considered as an important frequency band for meeting the local connectivity needs of industry verticals.	The authorization regime for the 24.25-27.5 GHz frequency band is currently under study. It is expected that at least part of this band will be reserved for licenses with geographically limited rights of use. Given the successful use in the past of a first-come-first-serve procedure for the awarding of local licenses in the 3.5 GHz, a similar procedure may be followed for the 26 GHz band. However this is still under study.	In the course of 2021, more clarity will be provided about the authorization regime for the 26 GHz band, so that at least 1 GHz of spectrum in this band can be issued as soon as possible.
29.	COMBINE COVERAGE OBLIGATIONS WITH FINANCIAL INCENTIVES	The Netherlands is hesitant to use direct financial incentives in combination with coverage obligations. It is difficult to successfully employ such incentives without risking unforeseen consequences or abuse. In spectrum auctions, the cost of meeting coverage obligations will be considered by the bidders and reflected in their auction bids. Therefore, the final result of the auction will already take into account the coverage obligations being imposed.	it is common for licenses in all bands to include an obligation for deploying a network with limited geographic area within a given number of years after start of the license, sometimes even at two points in time (for instance a first obligation after two years and a second obligation after five years). This ensures that awarded spectrum is actually put into use.	
30.	PROMOTE THE OPPORTUNITY OF INFRASTRUCTURE SHARING	Infrastructure sharing can help to reduce the cost of network deployment and the number of antenna sites, but should on the other hand not lead to a distortion of competition. Sharing of passive infrastructure such as antenna masts and rooftop locations is a common practice in the Netherlands and can be mandatory depending on local circumstances. Active sharing is possible, subject to competition law, but has so far not been applied by the Dutch MNOs.	The Dutch regulator ACM has recently published guidelines on mobile network sharing <sup>17</sup> . These guidelines cover three aspects of mobile network sharing: 1) coordination of site acquisition, 2) leasing and renting out spectrum, and 3) national roaming on 2G or 3G networks. ACM will also look into the anticompetitive effects of and any potential benefits of the sharing of active equipment, and may also take a position thereon.	The ACM will decide on planning and approach for further guidance in the course of 2021.
31.	STRUCTURE OF RECURRENT SPECTRUM FEES TO INCENTIVISE ROLL-OUT	It is uncommon in the Netherlands to apply recurrent spectrum fees that have a relation to e.g. the number of base stations in the network. Therefore this best practice does not apply.		
32.	USE FINANCIAL AID AS A COMPLEMENT TO INCENTIVISE INVESTMENTS	Current network capabilities in the Netherlands are primarily the result of private investment. Financial aid from EU-level programs is useful in cases where private investments may be unprofitable and/or require coordination (market failure). Furthermore, instruments such as loans from the European Investment Bank are used by Dutch telecom operators.	The Netherlands has expressed its interest in collaboration on the deployment of (cross-border) 5G corridors within the framework of the Connecting Europe Facility 2 (CEF2) program. This will be further explored in the coming period.	

#### ENHANCED COORDINATION AT UNION LEVEL ON SPECTRUM ASSIGNMENT FOR CROSS-BORDER INDUSTRIAL USE

Nr.	Best practice	Usefulness of the best practice	Expected implementation plan	Indicative timing and potential stakeholders
33.	USE COHERENT PRACTICE FOR GRANTING RIGHTS OF USE FOR RADIO SPECTRUM BASED ON THE EUROPEAN ELECTRONIC COMMUNICATIONS CODE	Use of a coherent practice between member states for granting rights of use for radio spectrum is considered a useful best practice which helps to align the spectrum use between the Netherlands and its neighbouring countries Germany and Belgium. The European Electronic Communications Code is the relevant framework.	The transposition of the EECC into national law is ongoing. For the coordination of frequency use at the border, the Netherlands will continue to rely on existing agreements such as the Harmonised Calculation Method.	The transposition of the EECC into national law will be finalized as soon as possible.
34.	FACILITATE INTEROPERABILITY THROUGH THE DEVELOPMENT AND APPLICATION OF STANDARDS	Development and application of standards is considered as a useful and important practice for achieving operability between member states. The Netherlands	The Netherlands has already implemented the relevant elements of article 39 of the EECC.	

<sup>17</sup> <https://www.acm.nl/en/publications/guidelines-sharing-mobile-networks>

		is facilitating interoperability through its active participation in standardisation bodies.		
35.	MAKE USE OF HARMONISED TECHNICAL CONDITIONS DEVELOPED BY THE EUROPEAN CONFERENCE OF POSTAL AND TELECOMMUNICATIONS ADMINISTRATIONS (CEPT)/ ELECTRONIC COMMUNICATIONS COMMITTEE (ECC), IF COMMON DEDICATED FREQUENCY RANGES ARE DEEMED NECESSARY	The Netherlands supports this best practice and normally implements, whenever possible, the harmonized technical conditions developed by CEPT.	The Netherlands is an active member of CEPT/ECC and will continue to be so.	All CEPT harmonized bands will be taken into account, if possible, in the regular yearly updates of the allocation table. Moreover, the Radiocommunications Agency Netherlands, an agency of the Ministry of Economic Affairs and Climate Policy, will continue to contribute at all levels of the work in CEPT/ECC, being most of the Project Teams and Forum Groups, and all Working Groups. Moreover, it provides one of the vice chairs of the ECC plenary.
36.	WHEN IDENTIFYING THE APPROPRIATE AUTHORIZATION REGIME MEMBER STATES SHOULD PAY PARTICULAR ATTENTION TO ANY SPECIFICITIES RESULTING FROM A CROSS-BORDER DIMENSION	Paying particular attention to any specificities resulting from a cross-border dimension is considered useful and necessary in order to mitigate interference and to ensure service continuity in the border areas. This is common practice in the Netherlands.	Cross-border specificities are typically addressed in mutual discussions with neighbouring member states (Germany and Belgium). Also the RSPG Peer Review Platform could be used for this purpose.	The authorization regime for the 3.5 GHz band will be brought into the RSPG Peer Review Forum in 2021. The planning for the 26 GHz band is still under consideration.

#### ASPECTS RELATED TO ELECTROMAGNETIC FIELDS AND PUBLIC HEALTH

Nr.	Best practice	Usefulness of the best practice	Expected implementation plan	Indicative timing and potential stakeholders
37.	PROMOTE CONTINUOUS SCIENTIFIC RESEARCH ON ELECTROMAGNETIC FIELD (EMF) EMISSIONS CARRIED OUT BY CREDIBLE AND INDEPENDENT INSTITUTIONS	The Dutch government promotes scientific research on electromagnetic field (EMF) emissions carried out by credible and independent institutions.	<p>The Dutch Government is financing the current stage of the large COSMOS cohort study into mobile phone use and health (until 2023), in which also Dutch researchers and volunteers participate.</p> <p>Furthermore, the Dutch government contributes to a WHO meta-analysis EMV study that it currently conducts.</p> <p>Finally, the government has indicated that it is considering how to contribute to research aimed at health effects in the higher frequency bands (e.g. the 26 GHz frequency band) and scenario studies into the exposure of individuals as a result of wireless communication systems (3G, 4G, 5G).</p>	The COSMOS study is expected to last until 2023. The WHO study is expected to deliver results in 2022. The Dutch government expects to decide on supporting further research in the higher frequency bands (e.g. the 26 GHz frequency band) and scenario studies into the exposure of individuals in the course of 2021-2022.
38.	COORDINATED AND TARGETED COMMUNICATION FOR INFORMING AND EDUCATING ON 5G IMPLEMENTATION	It is important that research-based information on 5G which is free of judgement is accessible to the public. Therefore, the Netherlands already provides such information via various organisations.	<p>The Dutch Knowledge platform Electromagnetic Fields and Health<sup>18</sup> is financed by the Dutch Government and has an important role in informing on public questions and concerns about possible health effects related to electromagnetic fields, including from mobile communication and 5G. In the Knowledge Platform governmental and scientific organisations<sup>19</sup> work together to interpret the latest results and make these accessible on a website for citizens, professionals, local governments and the media.</p> <p>The Antenna Bureau (part of the Radiocommunications Agency Netherlands) is the information agency of the Dutch Government concerning antennas. The Bureau gives advice and information on the technical aspects of antennas, the legal framework, and health effects. Target groups are the general public, local government and property owners. The Bureau makes an effort to especially facilitate municipalities with factsheets on 5G and new legislation.</p>	The Dutch Government will continue updating its own websites (rijksoverheid.nl/5G and overalsnelinternet.nl) and will continue financing the information services that are now provided by the Antenna Bureau and the Knowledge Platform Electromagnetic Fields and Health.

<sup>18</sup> <https://www.kennisplatform.nl/english/>

<sup>19</sup> National Institute for Public Health and the Environment (RIVM), the Netherlands Organisation for applied scientific research (TNO), DNV, the overarching organization of Municipal Public Health Services and Regional Medical Aid Organizations (GGD GHOR Netherlands), Radiocommunications Agency Netherlands and ZonMw (The Netherlands Organisation for Health Research and Development)

			The platform/website 'fast internet everywhere' <sup>20</sup> of the Ministry of Economic Affairs and Climate Policy informs municipalities about various aspects of 5G, including aspects related to EMF and health.	
39.	INFORM THE PUBLIC ON THE COMPLIANCE OF RADIO BASE STATIONS INSTALLATIONS WITH APPLICABLE EMF SAFE LIMITS	Regular measurement and monitoring of EMF levels is important to ensure that these remain within the applicable exposure limits.	Measurement results should be available to the public: each year 400 cumulative (broadband) sample measurements are performed by the Radiocommunications Agency Netherlands at different locations and times. The reports of these measurements are published by the Antenna Bureau in the national Antenna Register.	The Radiocommunications Agency is responsible for obtaining and allocating frequency space and monitoring its use. This is done by a permanent network, random sample measurements and by mobile measurement systems mounted on cars.

<sup>20</sup> <https://www.overalsnelinternet.nl/>