

**Annex 3 - INPUT**  
**of the RSPG Peer Review WG**  
**from the Questionnaire**

EC Recommendations 2020/1307 Section 4

Best practices identified based on responses received:

**a) Promote adequate reserve prices which reflect the minimum levels of fees for rights of use of radio spectrum.**

- To set not excessive reserve prices understood as market price-related reserve prices if the expected market value for the spectrum is higher than the spectrum usage fee which is based on administrative cost.
- The market price-related reserve prices shall be set on the basis of national and international benchmarks by taking into account factors such as market size, purchasing power parity or differences in license durations in order to make the benchmarks comparable.
- To estimate values of the specific 5G bands on an economic analysis and comparison with price benchmarks and on high level qualitative analysis of its future and current use as well as on price benchmarks.
- To introduce the reduction of fees in order to ensure efficient use and effective spectrum management.
- While setting reserve prices, to take into consideration the size of the local market (population) and the special circumstances (local/global economy) always having in mind to attract substantial investments.
- To set the reserve prices as low as possible.
- To tie the reserve price with an auction object, which will lead to the solution that the maximum allowed reserve price is same for example for 2x20 MHz in 2500 MHz band and for 100 MHz in 3600 MHz band.
- To set reserve prices taking into account the value of the spectrum in spectrum auctions in other similar markets and adopt such evaluation into the market in terms of e.g. population, mobile penetration and data usage.
- The reserve price has to reflect the economic intrinsic value of the spectrum and has to capture a part of the net profitability generated by the exclusive rights of use of radio spectrum minus mobile infrastructure deployment costs (that cost includes coverage obligations).
- The reserve price has to be fixed at a “fair price” between the financial valuation of the public asset and the equity payment of private stakeholders who invest in mobile infrastructures.

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- The minimum prices should consist of a two-part payment structure composed of an upfront fee (“minimum SAF”) and an on-going stream of indexed Spectrum Usage Fees (“SUFs”) apportioned on a 40/60 basis.
- Reserve prices for 700 MHz and 3600 MHz could be set on the basis of a market analysis performed.
- Spectrum fees for the 700 MHz band could be set at par with the spectrum fees for the 800 MHz band in view of the likeness in the characteristics of the bands in question.
- Reserve prices should ensure that the license fees are a fair representation of the economic value of the licenses, even in the case of a limited number of bidders.
- Comparing market and social circumstances (amount of offered spectrum, availability of spectrum after conducting selection procedure, amount of population, coverage obligations etc.) alongside with reserve prices could be considered as a factors leading to set adequate reserve price in auction.
- Important factors for adequate reserve price are coverage obligations as well quality obligations imposed on winners of auction.
- The reserve price should not be too low that could encourage speculative bidders and, at the same time, should not be too high that could hamper discovering the spectrum value at the auction.
- To the extent possible, when deciding on the reserve prices, the conditions and obligations being imposed should be taken into account.
- Benchmarking analysis of the reserve and final prices of awards in other European countries should be taken into account when setting reserve prices. As a result, reserve prices have been set below the average of the benchmark which, among other reasons, will allow price discovery.
- The reserve price for 700 MHz band could be lower than for 800 MHz band due to the support of faster roll out of the 5G network.
- The reserve prices could be set by taking into account expected demand for the spectrum and anticipated level of competition in the auction, the state of the mobile market and equipment ecosystem, European Union benchmark data and expected impact of the recommended reserve prices on the future development of innovative services and competition in the mobile telecoms market.
- The auction rules should allow for ample scope of competition in an auction, where the aim is to establish a reserve price significantly lower than the valuation that i.e. takes into account auction proceeds in comparable countries.

**b) Avoid spectrum scarcity by ensuring the assignment of the full amount of radio spectrum harmonised at Union level.**

- To provide the industry timely with sufficient spectrum to avoid artificial spectrum scarcity.
- To closely monitor the market development, regularly conduct consultations and publish an updated spectrum release plans that includes a timetable of award procedures that are planned in the mid-term (e.g. 5 years).

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- The key principle is to have spectrum awards regularly on shorter time intervals instead of having big bang auctions at rare intervals.
- To assign dedicated 5G bands: the 700 MHz, 3.6 GHz and 26 GHz as soon as possible.
- To balance the domestic request for spectrum for private 5G-networks with the commercial demand for harmonized spectrum by developing a leasing-model in the 3.6 GHz-band.
- To release harmonised spectrum from other use before auction in order to ensure the assignment of the full amount of radio spectrum.
- To allocate as much as possible spectrum for mobile broadband. Frequencies should be taken into use quickly after the international harmonization measures.
- To assign all 5G-pioneer-bands for a 5G-rollout. In terms of 3.6 GHz it could be considered to award in auction part of the resources, e.g. 300 MHz while the rest, e.g. 100 MHz dedicated for exclusive licenses on a local basis.
- To assign part of the frequency band 3.6 GHz for use by MNOs and the rest, e.g. 2x50 MHz at the edges of the band to keep available for e.g. private local networks.
- Market studies shown that there is a demand for spectrum that can be deployed locally for specific connectivity solutions such as mission-critical communications. Private local networks are therefore seen as an important component in the 5G ecosystem. Providing various market parties with access to these frequencies is important for ensuring competition and innovation.
- In some cases the domestic NRA could issue a decision that it is not possible to make frequency reservations for the next period for the specific reasons, in particular due to the need to ensure equal and effective competition or the need to significantly increase the efficiency of frequency use. The proceedings shall be commenced not earlier than 4 years before the expiry of the period of frequency use.
- To award the entire harmonised spectrum in the band e.g. 3.6 GHz including parts of it that are still subject to rights of use but that will be due in the future e.g. 5-year time.

**c) Provide in a non-discriminatory manner the possibility that fees for rights of use of radio spectrum are paid in instalments within the period of those rights.**

- To implement option of deferral or payment in instalments under certain conditions. If the total frequency usage fees that must be paid in a frequency allocation procedure are more than 50 million euros, the addressees of the notification have the option of obtaining instalment payments or deferring their respective claims (up to 12 months). The amount of the interest charged for deferred payment must be set at 1% above the current base rate announced by the National Bank of Austria per year.
- To implement the possibility for every operator to choose between an upfront payment or a payment in annual instalments. So, if an operator has bid a certain amount in an auction (e.g. 10 million Euro) for the usage rights for a 20 year period, the operator can pay 10 million euro at the start of the licensing period, or the operator can choose to pay 0.5 million every year for 20 years. In the latter case, an interest rate is applicable.

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- To implement the option of paying the fees for rights of use of radio spectrum in instalments. Usually, a percentage of the fee has to be paid in advance with the issuing of the license and the rest of the fee is divided into annual instalments. The initial percentage to be paid can be flexible, taking into consideration the status of the local/global economy.
- To implement the option that the first instalment will be payable in 15 months from the day of issue of the authorization. Taking into consideration the economic situation due to the pandemic, we give our operators more time before starting to pay their instalments.
- By taking into consideration the economic situation due to the pandemic one can decide to reduce the amount of the bank guarantee (i.e. to cover part of the amount of the fee to be paid) in order to help operators to invest in their network deployment.
- To implement the option that the winning bidders can choose to either pay the full price up front or to pay the price in instalments during the first 10 years of the rights of use. If the winning bidders choose the instalments, then they must pay 10% of the licence price before issuance of the licence and then pay a yearly instalment of the rest of the licence price over nine years together with providing a guarantee for at least three instalments.
- Licences could be extended annually, and spectrum fees could also be paid annually.
- The fees for 5G bands, i.e. 700 MHz, 3.5 GHz and 26 GHz network licences could be paid in five annual equal instalments starting from the granting of the licence.
- To split fixed fees into several instalments and to tie them with variable annual fee, equal to one percent of the revenue earned from the use of these frequencies.
- To set annual instalments over the specific period with regard to the liabilities from the past spectrum auction (s), which could contribute return for additional coverage commitments by the mobile network operators.
- The fee paid for the use of the spectrum could be paid monthly by the MMOs. Generally the one-time fee (entry fee) could be paid before the licencing by the result of the auction.
- The fees for rights of use of this radio spectrum resource are to be paid in indexed yearly instalments. In addition, if a licensee returns the spectrum, then they are no longer liable for these yearly payments.
- The fees could be paid in various financial years, with the biggest instalment in the last year.
- To provide in a non-discriminatory manner the possibility that fees for rights of use of radio spectrum are paid in instalments within the period of those rights.
- The payment of the total amount could be split in one 5 year part and yearly instalments up to the license duration.
- The fees for the right of use for the respective spectrum bands are established to reflect the charge on an annual basis. In addition, licensees verse the annual licence fee in quarterly instalments.
- Fees for rights of use are exclusively the prices that are paid after an auction. In principle, and as a result of budget rules, these prices will have to be paid immediately

and in one instalment. However, exceptions are possible and what rules to apply will be decided upon individually for each award.

- An entity that has received the right to use a frequency subject to a general exclusive frequency license shall pay annual fees for the right to use this frequency.
- The annual fee shall be paid once for the whole year by the end of February of that year or in instalments: quarterly at the amount equal to 1/4 of the annual fee by the end of January, April, July and October of a given year or semi-annual at the amount equal to 1/2 of the annual fee by the end of February and August of a given year.
- The access to spectrum fee resulting from an auction could be paid in instalments: between 1/3 and 1/2 of the access fee has been allowed to be paid in the period between 5 and 7 years after the licence is granted.
- Two options: disposable fee for granting a license and annual fees for rights of use the radio spectrum. The first one depends on the result of tender and the second one is charge monthly / quarterly (depend on the operator decision) throughout the duration of rights.
- The fees could be paid all at once before issuing the licence.
- Spectrum licence fees are invoiced on an annual basis. On the other hand, an auction proceed is paid for the entire licence duration when the licence is issued.

**d) Use an individual authorization regime for the 24,25-27,5 GHz frequency band which promotes its timely use including, in particular, one that is based on fast-track administrative procedures when applied to geographically limited rights of use.**

- The propagation characteristic of the 26 GHz band is completely different to the other bands that are used by the Mobile Industry. There are a wide variety of business models and usage types possible. Some of them are well supported by nationwide licenses others are better supported by geographically limited usage rights. Each regime has advantages and bear risks such as the underutilization or sterilization of spectrum in significant parts of the country. Therefore, it is key that regulators have a good understanding of demand in order to setup the best authorisation model. To take that into account NRAs organise consultations on usage models and a suitable authorisation regime for that band. The authorisation model should as far as possible cover all relevant usage forms for electronic communications services.
- The authorization regime for the 24.25-27.5 GHz band is currently under study in many Member States.
- In most cases the outcome of the public consultation that there is no market demand right now for 26 GHz band. That is why there is no decision on the authorization form of the 24.25-27.5 GHz frequency band in some cases.
- A public consultation on the 26 GHz band is under preparation. Among others, the amount of spectrum to be made available (on a global and local basis), the adequate timing and the authorisation regimes, are expected to be addressed during the consultation.

- One part of the band reserved to the private networks. The authorisation regimes are different. It can be licenced according to the principle first-come-first-served or set aside in an award process and/or issue licences with geographical limitations as a first step.
- Since January 2019, NRA has awarded frequencies in the 26 GHz band for 5G trial platforms to better identify the various types of innovative use cases of this band and design the most appropriate award procedure.
- Taking into account the comments from the stakeholders, new regulation entering into force on administrative regulation for frequency assignments for local, broadband frequency uses in the frequency range 24.25 - 27.5 GHz. The draft of the administrative regulation contains the frequency allocation regulations for local, broadband frequency uses. Its entry into force and the start of the frequency assignments based on it is planned for this year.
- In order to promote an investment-friendly access to 5G radio spectrum, that will be able to provide high-quality wireless services, as well as to foster the sharing of passive and active infrastructure, there is “club use” model. It means there are individual but not exclusive rights of use of the spectrum assigned in the 26.5-27.5 GHz band.

**e) Combine financial incentives with obligations or formal commitments to accelerate or to expand high-quality wireless coverage.**

- One of the main objectives of the 5G auction to improve coverage in unserved and underserved, economically hard to cover rural areas. Coverage obligations in spectrum awards are a key mechanism to improve coverage in such areas. Normally coverage obligations are directly bound to specific spectrum blocks. The buyer of the spectrum block is obligated to fulfil the coverage obligation that is attached to the block. In case of very ambitious coverage obligations this approach carries the risk that the award could end with an undesirable outcome. For example, the auction could end with unsold spectrum if the cost that is caused by the coverage obligation exceeds the value that operators attach to the spectrum block. In order to mitigate that risk, NRA invented an incentive auction system. The auction model is a combination of a forward and a reverse auction. The forward auction is designed pretty much the same way as normal spectrum auctions. In the reverse auction the successful bidders of the forward auction have the possibility to earn a price discount on the spectrum fee by accepting coverage obligations. The price discount and the level of the coverage obligation are not fixed, it is determined in a well-designed market process which fosters competition among operators. Bidders offer the level of coverage they are willing to provide along with the discount. A big advantage of this approach is that bidders could control the risk that is connected with comprehensive coverage obligations. Dependent on the design objective the winners determination process selects the bids with the lowest cost and/or the highest level of coverage as winning bids.
- This approach requires the accurate identification of underserved areas and the identification of a scalable and to certain extent homogenous coverage target. NRA has conducted coverage and cost simulations prior to the award. At the end it has

been decided to use the smaller geographical unit than a municipality. The discount model creates strong financial incentives for operators to expand their wireless coverage. On the other hand, by using a competitive process the social cost for coverage is minimized. This approach had been used together with standard coverage obligations to reach the ambitious mobile broadband (5G) coverage objectives that are set by government and the European Commission (e.g. 5G action plan).

- Coverage obligations imposed on the 700 MHz band. There is a reduction in the reserve price for the auction of the 700 MHz band. This value was decreased to approximately half of the original value in order to take account of increased general coverage requirements and the coverage requirement of the main railway lines.
- To accelerate the roll out of 5G and to ensure coverage in rural areas has been proposed ambitious coverage obligations in the draft information memorandum for the upcoming multiband auction. According to the proposed coverage obligation associated with the 3.5 GHz licences, the licensees shall ensure that 60% of the population is covered with services using the 3.5 GHz band by the end of 2023 and 75% of the population by the end of 2025. According to the proposed coverage obligation associated with the 2100 MHz licences, licensees shall ensure provision of an outdoor mobile voice service and a mobile broadband service with a download bit rate of 30 Mbps and an upload bit rate of 3 Mbps. The coverage obligation applies in the coverage areas specified in the licence, and in each individual coverage area at least 90% of the area shall be covered.
- For the spectrum auctions held so far there have been no fiscal goals and for example the 700 MHz, 3.5 GHz and 26 GHz auctions were auctioned at a reasonable price. This principle enables more investments to the networks, in our view.
- Coverage obligations depends of the frequency band in question:
  - The 700 MHz network licences include obligations for population coverage and coverage for roads and railways (operators may use also other frequency bands to fulfil these requirements).
  - There are no coverage obligations in the 3.5 GHz and 26 GHz network licences, because these higher frequency bands require more investments to the network and the broader coverage for 5G could be provided by using lower frequency bands.
  - In the 3.5 GHz licenses there is a requirement to lease spectrum for local networks, if requested.
- To combine financial incentives with obligations. The governmental program for improving coverage overseas territories will be based on public funds. That public program will subsidize mobile infrastructure for covering “white spaces” and urgent needs identified by local authorities.
- An agreement with the MNOs with regard to the closing of white and grey spots. In this agreement it is allowed for paying in annual instalments over the period to 2030 by the MNOs with regard to the liabilities from the 2019 spectrum auction. In return the MNOs made coverage commitments to cover 99% of all households with LTE.
- Fee discounts (50%) are available (for 10 years) to parties who obtained frequency use rights in this auction procedure in the 700 MHz or the 3600 MHz frequency band, and/or already hold frequency use rights for the 3600 MHz frequency band before the

start of the auction procedure. The all winners requested the fee discount with conditions according to Auction Documentation. The obligation: to implement a total of 10 or more network development cases selected from 4 or more groups of network development cases divided into 5 groups of the Documentation, and to ensure broadband wireless coverage with metrics set down in the Documentation, within the deadlines specified for each case (2023-25).

- There is a proposed outdoor coverage obligation in the rights of use in the 700 MHz band which includes coverage of specific locations.
- It is proposed to achieve indoor voice and text coverage and quality of service via an obligation on any rights of use obtained via the award process were, if a mobile service is provided to a licensee's customers then it must also provide Native Wi-Fi within 2 years of license commencement.
- Financial incentives to expand high-quality wireless coverage were not specifically set by the regulation for the 5G auction, as they are considered pertinent to the more general policy to promote broadband and ultrafast broadband connectivity.
- To use a coverage obligation in the license in the 700 MHz band. In the 3.6 GHz band a minimum number of base stations to deploy were included as an obligation in the license. The deadline: December 2024.
- The 700 MHz licenses include an obligation to provide coverage in 98% of each municipality within 2 years after the start of the license. This coverage should provide end-users with an absolute minimum service level of 8 Mbps, which should be available with a 90% certainty level. 6 years after issuance of the licenses – so in 2026 – this minimum service level needs to be 10 Mbps. This obligation ensures that mobile network coverage is further extended towards the least densely populated and visited areas in our country. It also ensures continued investment as the obligation requires that end-users are provided with a minimum service level. As demand for data continues to rise the obligation will require the licence holders to continually invest if they want to keep ensuring that the minimum service is delivered. Next to this specific coverage obligation for the 700 MHz licenses, 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 the start of the license.
- To include obligations, namely roll-out obligations, as conditions applicable to the rights of use and are clearly integrated in the award rules. By letting bidders know in advance the conditions in the award rules, as well as by setting reserve prices at the adequate level namely taking also into account the obligations being imposed, the objective of accelerating and expand high-quality wireless coverage can thus be achieved. Deferred payment has also been allowed. This flexibility can also play a role in the operators' business plan thus helping to accelerate coverage.
- By lowering annual fees for newly assigned frequencies for the first year they should pay only 30 %, for the second year 50 %, for third year 70 % of annual fees for the frequencies.
- In the 700 MHz band there are coverage obligations in 2x10 MHz FDD with the objective to be complementary to previous obligations in the 800 MHz and 900 MHz bands.



**f) Provide, subject to competition law, the possibility for the sharing of passive and active infrastructure, as well as for joint roll-out of infrastructure that relies on the use of radio spectrum.**

- Joint efforts to make investments in infrastructure more efficient.
- To allow the operators to transfer and lease spectrum by the regulation generally or case by cases.
- To allow active sharing of the spectrum RAN sharing by the regulation generally or case by case basis.
- To allow the sharing of passive infrastructure without restrictions and to allow joint roll-out of active infrastructure subject to competition issues.
- To allow frequency pooling and active sharing, including Dynamic Spectrum Sharing in challenging areas such as National Park, Road and railway tunnels. Buildings under the protection of Cultural heritage etc. Sharing is allowed in accordance with competition law principles.
- To allow sharing of passive and active infrastructure, joint roll-out of infrastructure that relies on the use of radio spectrum under the current spectrum regulation.
- The roll-out obligation, which also provides that some of the stations be installed in areas which may commercially be less attractive, gives operators the flexibility to reach these areas through passive or active sharing.
- To allow national roaming to the operators in order to fulfil coverage obligations in areas that may commercially be less attractive.
- To use access obligation (national roaming) for existing operators that acquire a certain amount of spectrum at the award, that benefits new entrants which, as a consequence, will be subject to a coverage obligation of 25% and 50% of the population, respectively, three and six years after signing the roaming agreement.
- In case of limiting the number of rights of use, the NRA set the conditions of shared use of spectrum in particular with regard to ensuring the possibility of managing end user's service by an authorized telecommunications undertaking and making decisions on the provision of services for his/her benefit or granting access to technical interfaces, protocols or other key technologies that are indispensable to ensure service interoperability.
- When attaching conditions to individual rights of use for radio spectrum, competent authorities may, in particular with a view to ensuring effective and efficient use of radio spectrum or promoting coverage, provide for the following possibilities:
  - (a) Sharing passive or active infrastructure which relies on radio spectrum or radio spectrum;
  - (b) Commercial roaming access agreements.
- Sharing of passive infrastructure such as antenna masts and rooftop locations is both a common practice and can be mandatory depending on local circumstances. MNOs and municipalities follow mutually agreed procedures for the deployment of shared antenna masts, and for information exchange about future roll-out plans.
- In order to promote an investment-friendly access to 5G radio spectrum and high-quality wireless services, other than the definition of the aforementioned “club use”

model in the 26 GHz band, NRA established some “collective” coverage obligations for assignee operators in the 700 MHz band.

- In cases of active sharing of infrastructure, the competent authority would be required to take a thorough look at any agreements.
- Obligation to share 5G network in white areas where 4G network is already shared in the award procedure.
- Regulation on site sharing which implies that owners of masts for radio communication purposes shall meet requests from other operators with a licence to use frequencies to share the mast in question, and also that owners of masts not used for radio communications, buildings and other high structures, shall meet requests from operators with a licence to use frequencies for access to set up antenna systems on the mast, building or structure in question.
- For providers of electronic communications networks get access to the existing passive physical infrastructure of other network operators, for example empty ducts, across utility sectors, including telecommunications, power, water and heating supply etc., for the purpose of establishing high-speed networks for electronic communication.
- To make it possible for operators to get access to physical infrastructure and street furniture owned by public authorities in order to install small cells.
- The legislator strongly encourages operators to share their antenna sites (mast, pylon, etc.) and even imposes on them the requirement to inform their competitors during each installation of a new aerial in order to allow them to consider sharing the facility. This obligation only concerns the sharing of antenna sites (i.e. masts, pylons and other buildings used to this end).
- Competition Authority issued a Guide regarding the interpretation and application of Article 5 paragraph (2) of the Competition Law, with subsequent amendments and completions, on the topic of agreements for co-investment and, respectively, for the shared use of mobile electronic communications networks.
- Issue guidelines on different type of spectrum sharing. Regarding the different forms of mobile infrastructure sharing, these guidelines indicated that competent authority in line with EU law principles encourages passive network sharing between operators as this sharing benefits to market development and will not affect the independence of operators. Concerning Moran sharing, authority indicated that it does not have any objection, as long as operators follow the general recommendations, regarding the full independence of operators. In contrary, spectrum pooling, as can be envisaged in a GWCN configuration and whereby operators are making a joint usage of one spectrum block, is problematic under law. This can be derived from the fact that the license is a personal license; usage rights cannot be transmitted to another party, except in the case of “spectrum trading”. Concerning the use of MOCN sharing configuration, it is not supported by authority as operators share both the RNC and Node B and pool their spectrum, which would typically limit the scope for service differentiation and competition in the market. The same view is shared by authority for the GWCN sharing configuration, as operators share parts of the core network in addition to the RAN. In addition, operators either pool spectrum, or use the spectrum of one of the sharing parties. This prevents physical or logical separation of the sharing operators’ networks and, therefore, little differentiation is possible in terms of

coverage and network quality, which limits competition in the market. Finally, these guidelines provided additional guidelines on the geographical and operational aspects of infrastructure sharing.

- To issue a position paper on infrastructure sharing, taking into account the market structure in mobile communications at the time as well as the extensive coverage obligations with a self-operated network (without active sharing) in the conditions attached of the award to provide mobile operators with a legal framework that is as clear as possible for the 5G awards in the 700 MHz and the 3.4-3.8 GHz band, the associated investments and the possibility of corresponding cooperation. The position paper aims to mitigate any conflict of goals between the goal of an inexpensive, modern infrastructure and functioning competition.
- In order to enable more passive infrastructure sharing, authority published guidance that competitive concerns in competition law are unlikely to arise in the case of passive infrastructure sharing of up to 50% between two partners, as well as other qualitative criteria to be taken into account in an assessment in the case of more extensive sharing. The most recent figure for passive infrastructure sharing was below 50% for each partner. The guidance therefore supports the possibility of increased sharing.
- In order to enable active infrastructure sharing, Authority first clarified where independent active infrastructure is in any case necessary for sustainable infrastructure-based competition in the medium and long term - in the largest cities. There - with exceptions - sharing of active infrastructure is not allowed. In order to ensure the rapid roll-out of the new technology and to prevent spectrum hoarding, the two 5G awards imposed on operators the roll-out of up to 1000 and 2000 sites respectively without active sharing. These restrictions were deemed necessary to impose in advance in order to ensure the main objectives such as effective competition.
- The obligations for the fulfilment of the coverage target of the auction provide for the possibility of sharing and joint roll-out of active infrastructures. Furthermore, Authority provided a set of quantitative rules in order to enable a certain degree of joint and reciprocal use of frequencies – subject to competition law – for these basic coverage obligations. For the extended coverage obligations, which addresses unserved or underserved areas – thus "hard to cover underserved areas" - any sharing of infrastructure and frequencies or joint roll-out is possible (subject to competition law).

**In case of RAN sharing, more competitors filed a complaint with the Competition Authority. The cases are ongoing.**

**g) Other**

- An investment-friendly framework such as a sufficient license duration that allows operators to earn back their 5G investment.
- To lay the groundwork for enterprises' future connectivity and to foster competitiveness in other sectors of the economy, an optional commitment has been included in the award procedure. The candidates committed to granting reasonable requests from economic actors (business, local authorities, administrations...) by

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providing them with customized solutions in terms of coverage and performance or, if the operator prefers, by assigning its frequencies locally. This commitment has been included as an obligation in the awarded licenses, which will be monitored.

- 300 MHz of spectrum in the 3.4-3.8-GHz-band was auctioned to MNOs. The other 100 MHz are available for exclusive licenses on a local basis for example on industrial premises. The 24.25-27.5 GHz frequency range is completely reserved for exclusive licenses on a local basis.
- To encourage MNOs to sign secondary trade agreement with verticals (e.g. universities manufacturer) supporting its needs (e.g. scientific research, education).
- To allow meeting coverage obligation of 5G technology and services with previously licensed spectrum bands, in line with the spectrum licence obligations.
- The 5G Pioneer spectrum bands do not form part of the overall spectrum cap applicable.