Dynamic Spectrum Alliance Limited
http://www.dynamicspectrumalliance.org

15 January 2026

Elektroniskie Sakari
Eksporta street 5, Riga,
LV-1010, Latvia

Re: Aptauja par 6425–7125 MHz radiofrekvenču joslas nākotnes izmantošanas plāniem

Dear Sir/Madam

The Dynamic Spectrum Alliance[1] (DSA) welcomes the opportunity to contribute to Latvia's consultation on the future use of the Upper 6 GHz band (6425–7125 MHz). The entire 5945–7125 MHz (6 GHz) band represents a critical resource for enabling next-generation licence-exempt wireless access systems (WAS/RLAN), particularly Wi-Fi, which has become the primary means of broadband connectivity for households, enterprises, public venues, and industry worldwide.

Global demand for high-capacity, low-latency wireless connectivity continues to accelerate, driven by the proliferation of connected devices, the rise of immersive applications such as AR/VR, and the digital transformation of enterprises and public services. Wi-Fi is the dominant "last-metre" access technology, carrying the majority of broadband traffic in Europe and globally. However, the current availability of licence-exempt mid-band spectrum is insufficient to meet these growing needs, especially in dense urban and enterprise environments.

The Upper 6 GHz band offers a unique opportunity to address innovative applications by providing wide, contiguous channels that support multi-gigabit performance, harmonised deployment across Europe, and rapid innovation cycles. Making the 6425–7125 MHz range available for licence-exempt use will ensure Latvia remains aligned with international best practice, maximises socio-economic benefits, and avoids the risks of congestion and fragmentation that would arise from partial allocations or prioritisation of alternative uses.

The DSA outlines its perspective on the consultation questions, emphasising the importance of harmonised licence-exempt access, the readiness of the ecosystem to deploy and the broad societal benefits that will flow from enabling WAS/RLAN use in the entire 6 GHz band.

Sincerely,

Dr. Martha Suárez
President
Dynamic Spectrum Alliance

[1]The DSA is a global, cross-industry, not for profit organization advocating for laws, regulations, and economic best practices that will lead to more efficient utilization of spectrum, fostering innovation and affordable connectivity for all. Our membership spans multinationals, small-and medium-sized enterprises, as well as academic, research and other organizations from around the world all working to create innovative solutions that will benefit consumers and businesses alike by making spectrum abundant through dynamic spectrum sharing. A full list of DSA members is available on the DSA's website at: https://www.dynamicspectrumalliance.org/members.

1) Is there currently a shortage of radio frequency spectrum for providing services? Yes or No.

Yes. From the DSA perspective, there is a clear and growing shortage of licence-exempt mid-band spectrum needed to deliver high-capacity local connectivity (Wi-Fi) that underpins broadband usage in homes, enterprises, venues, industry, and public services.

This shortage is driven by:

- Rapidly increasing traffic over Wi-Fi (the primary "last-metre" access for most broadband connections), caused by the fast-growing number of Wi-Fi devices and an increase in per-device traffic.
- Higher performance requirements (low latency, deterministic throughput, uplink-heavy use cases), and
- The need for wider contiguous channels to deliver multi-gigabit performance efficiently.

Figure 1 depicts the Year-over-year growth of Broadband traffic of the fixed and mobile networks in different regions.

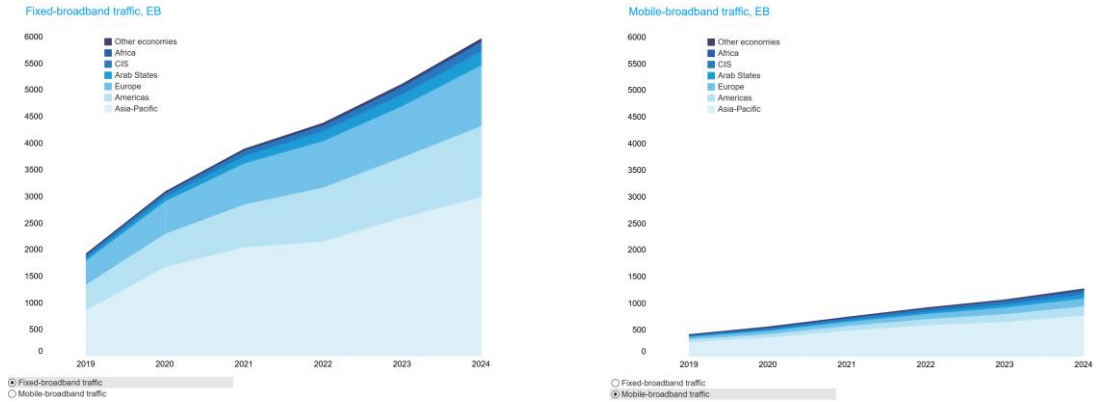

Figure 1. Year-over-Year Growth of Broadband Traffic[2]

Furthermore, there is a shortage of spectrum available for the various types of outdoor networks that could be enabled through allowing Automated Frequency Coordination (AFC) type deployments in the 6 GHz band.

While there may be spectrum available in nominal terms, usable licence-exempt capacity in the right bands, with enough contiguous bandwidth and manageable interference, is constrained, especially in Enterprise network deployments.

2) If yes, then how heavily is the available spectrum loaded?

The available spectrum is heavily loaded, especially in dense indoor environments (multi-dwelling buildings, offices, campuses, venues) and in urban/suburban areas. Practical indicators of heavy loading include:

- High co-channel contention in 2.4 GHz and 5 GHz bands,
- Limited number of available channels in existing bands, preventing capacity expansion through use of wider (40/80 MHz) channels, particularly in enterprise deployments (e.g., universities, hospitals)
- Reduced real-world throughput at peak usage times,
- Increased latency/jitter (notably harmful for voice/video collaboration, AR/VR, industrial control, and real-time applications), and

[2] https://www.itu.int/itu-d/reports/statistics/2024/11/10/ff24-internet-traffic

- Congestion that cannot be solved simply by adding more access points (which can increase contention).

Furthermore, there is no spectrum available in the 6 GHz band for outdoor fixed networks under general authorization regime which could be used to alleviate congestion in other similar bands (e.g. 2.4GHz/5GHz etc.) and/or enhance throughput available in these types of fixed outdoor networks.

3) What is the minimum amount of spectrum required for WAS/RLAN use in 6425–7125 MHz?

The DSA believes that the entire 5945–7125 MHz range (1180 MHz) is needed for licence-exempt use. However, for this question, our response focuses on the Upper 6 GHz band.

At least 700 MHz (i.e., full 6425–7125 MHz), should be made available for licence-exempt use because:

- Wi-Fi 7 (and beyond) is designed to leverage wide channels (including 320 MHz), and multiple wide channels are needed to avoid forcing users into the same limited set of channels.
- Capacity gains are maximised when there is a large, contiguous block with harmonised conditions across countries.
- Limiting access to only a "portion" of the band risks recreating congestion and undermining the socio-economic benefits[3] of licence-exempt connectivity for households and enterprises.
- Latvian users can immediately benefit from economies of scale, as a wide ecosystem of Wi-Fi devices supporting Upper 6 GHz is already market-ready.

Where administrations do not make the Upper 6 GHz band available, alternative approaches should be considered to ensure adequate contiguous mid-band spectrum remains accessible to meet long-term WAS/RLAN connectivity requirements.

4) In which year would you be ready to begin using 6425–7125 MHz?

Immediately upon authorisation (i.e., in 2026 if national rules are adopted this year; otherwise, the year of adoption). The ecosystem is ready to deploy quickly once regulatory certainty exists because:

- Wi-Fi equipment development cycles are fast, enabling rapid availability of compliant devices,
- Deployments are predominantly customer-premises and enterprise-led, which means short planning cycles, and
- Demand already exists for additional contiguous spectrum to support next generation connectivity.

As of the end of 2024, more than 5,000 device models supported 6 GHz Wi-Fi, including both Wi-Fi 6E and Wi-Fi 7 technologies. This rapid adoption underscores strong market momentum.[4] Furthermore, the Wi-Fi Alliance forecasts that Wi-Fi 7 device shipments will reach approximately 2.1 billion units by 2028, highlighting the anticipated widespread adoption of this standard.[5] Once regulatory certainty is established, an even greater wave of devices can be expected to enter the market, accelerating deployment and adoption.

5) In which year is final availability of equipment for operating in 6425–7125 MHz expected?

Wi-Fi equipment availability would begin very quickly after regulatory authorisation and mature within approximately 12 to 24 months.

- Initial availability: 2026 (or the year of authorisation)

[3] https://6ghz.info/wp-content/uploads/2022/02/Global_Economic_Value_of_Wi-Fi_2021-2025_202109-1.pdf
[4] https://wifinowglobal.com/news-and-blog/massive-market-adoption-5000-wi-fi-devices-now-support-6-ghz-1230-support-wi-fi-7-intel-says/
[5] https://www.wi-fi.org/system/files/Wi-Fi_Alliance_Insider_202401.pdf

- Broad mass-market maturity: 2027

Effectively, WAS/RLAN vendors can enable support for the 6425-7125 MHz band through new Stock Keeping Units (SKUs) and updates; however, full breadth across price tiers and product categories typically follows within 1 to 2 years.

6) Which services would be provided/made available to the public in 6425–7125 MHz?

Licence-exempt WAS/RLAN in Upper 6 GHz would support a wide range of public-facing and societal services, including:

- Multi-gigabit fixed broadband "in-home" distribution (Wi-Fi as the access layer for fibre/cable),
- Enterprise connectivity: High-density office, manufacturing, logistics and campus deployments
- Public Wi-Fi in venues: Transport hubs, stadiums, universities, hospitals, conference centres
- Industrial wireless (Industry 4.0): Real-time automation, robotics, and wireless sensing in factories/warehouses
- Public service: Smart education, e-health, and government digital services, emergency communications backhaul
- Hospitality: Hotels and resorts for reliable guest connectivity
- Immersive applications: AR/VR/XR applications, real-time collaboration, cloud gaming, and other high-capacity/low-latency services.
- Furthermore, if an AFC framework is adopted to allow outdoor fixed use across the band then wider area outdoor networks would be rolled out to meet the needs of rural, enterprise and public network providers.

The Dynamic Spectrum Alliance, together with our partners, has developed a series of case studies demonstrating the critical importance of Wi-Fi across different industries. These case studies describe some examples of the services that would be made available to the public in the 6 GHz band. For example, we collaborated with Ahold Delhaize, one of the world's largest food retail groups, operating 9,400 grocery stores across nine countries.[6] We also highlighted Wi-Fi's essential role in education at Thomas More University, the largest university of applied sciences in Flanders, with 12 campuses serving up to 22,000 students, staff members and researchers.[7] In healthcare, we examined how Wi-Fi has become fundamental to the smooth operation of vital processes at Sidra Medicine, one of Qatar's leading hospitals.[8]

7) Predicted radio equipment emission parameters (e.r.p.: dBm/100 MHz)?

The DSA would support harmonised licence-exempt technical conditions aligned with established European approaches for 6 GHz WAS/RLAN device classes.

For reference, ETSI EN 303 687[9] sets both total EIRP[10] and mean EIRP density limits[11] for Low Power Indoor (LPI) and Very Low Power (VLP) in the 6 GHz RLAN framework (for the lower 6 GHz range).

[6] https://www.dynamicspectrumalliance.org/2025/DSA_case_study_retail_digital.pdf
[7] https://www.dynamicspectrumalliance.org/2025/Wi-Fi'sCriticalRoleinEducation.pdf
[8] https://www.dynamicspectrumalliance.org/2025/DSA_case_study_healthcare.pdf
[9] EN 303 687 - V1.1.1 - 6 GHz WAS/RLAN; Harmonised Standard for access to radio spectrum
[10] EN 303 687 in 4.3.2.2 "In case of multiple (adjacent or non-adjacent) channels, the total RF output power of all channels shall not exceed the limit given in table 2."
[11] EN 303 687 in 4.3.3.2 "The PSD shall not exceed the limits given in table 3."

Table 2: Mean EIRP limit for RF output power

Frequency range (MHz)	RF output power limit (dBm)	
	LPI usage	VLP usage
5 945 to 6 425	23	14

Table 3: Mean EIRP density limit

Frequency range (MHz)	PSD limit (dBm/MHz)		
	LPI usage	VLP usage	VLP NB usage
5 945 to 6 425	10	1	10 (see clause 4.3.3.3)

Figure 2. Power limits in ETSI EN 303 687

For LPI, the PSD limit is 10 dBm/MHz, and for VLP it is 1 dBm/MHz. Converted to the units requested in the questionnaire (per 100 MHz):

- LPI: 10 dBm/MHz → 23 dBm/100 MHz → ESTI total EIRP limit 23dBm (200mW)
- VLP: 1 dBm/MHz → 14 dBm/100 MHz → ESTI total EIRP limit 14dBm (25mW)

The DSA would typically support applying similar, harmonised PSD-based limits for Upper 6 GHz licence-exempt use (with incumbents protected through appropriate operational constraints/mitigation).

If an AFC type deployment was allowed for fixed outdoor usage, then total max EIRP would level up to 36 dBm (4 W) and PSD limits of 23 dBm/MHz → 36 dBm/100 MHz.

8) Where is deployment planned (indoor and/or outdoor)?

Deployment is expected to be primarily indoor, with support for portable/nomadic use and, where feasible under harmonised rules, limited outdoor use consistent with incumbent protection.

- Indoor LPI is the main high-capacity use case (homes/enterprises/venues). The DSA considers that use of the upper 6 GHz band should be primarily focused on indoor deployments, where Wi-Fi delivers high-capacity, efficiency and no harmful interference for incumbents. Indoor networks handle ~90% of traffic carried over Wi-Fi in the EU. [12]
- VLP portable devices enable connectivity for portable and nomadic applications and are permitted to operate across a wider range of environments, subject to technical conditions that ensure effective coexistence with incumbent services
- At the same time, outdoor use under appropriate coordination mechanisms, such as AFC, should be permitted to support specific WAS//RLAN use cases. An indoor-first approach combined with controlled outdoor access provides a balanced framework that maximises spectrum efficiency while ensuring effective incumbent protection.

9) Preferred method of spectrum sharing (see ECC Report 366)? If so, what and why?

The DSA strongly prefers licence-exempt WAS/RLAN access under harmonised low-power technical rules, using mitigation proportional to risk (e.g., indoor low power as baseline; database coordination if higher-power/outdoor is introduced).

ECC Report 366 explicitly studies shared use feasibility between MFCN (mobile) and WAS/RLAN in 6425–7125 MHz. From a DSA viewpoint, the most efficient and innovation-friendly sharing model is:

[12] https://6ghz.info/wp-content/uploads/2022/09/6-GHz-Infographic-Europe.pdf

- General authorisation (licence-exempt) for WAS/RLAN: This approach maximises spectrum reuse, lowers barriers to entry and supports ubiquitous local connectivity.
- Simple, enforceable technical rules: Clear power/PSD limits, indoor restrictions where needed),
- Targeted coordination tools only if/where necessary for specific higher-power use cases.

The DSA would caution against extremely complex, high-overhead sharing mechanisms that create uncertainty, delay deployment, or effectively function as a barrier to licence-exempt innovation.

It is also noted that CEPT is actively progressing work on AFC frameworks. The WGSE is scheduled to approve a draft ECC Report for public consultation in January 2026, focusing on sharing with incumbents in the lower 6 GHz band (5925–6425 MHz).

10) Do you support shared use of a portion of the band while granting higher priority to another usage?

Only as a second-best outcome. The DSA's preference is not to create "primary vs. secondary" arrangements that:

- Reduce available contiguous bandwidth for licence-exempt use,
- Create investment uncertainty for Wi-Fi ecosystem and users, and
- Risk reintroducing congestion which can deter investment in devices and infrastructure and reduce the overall benefits of licence-exempt spectrum.

If the regulator insists on prioritisation, the DSA would emphasise that:

- At minimum, a large contiguous block (preferably the full 700 MHz) should remain available licence-exempt,
- Any prioritisation mechanism should not undermine predictable, harmonised access for WAS/RLAN which is of particular importance for enterprise networks, and
- The regulator should ensure there is sufficient protection for incumbent WAS(RLAN) services in the 5925 - 6425 MHz band from Out-of-Band (OOB) emissions from Higher power IMT deployments in the upper 6GHz band.

11) Is it possible to divide the band between IMT and WAS/RLAN? What resources should be allocated to each usage?

Dividing the Upper 6 GHz band is not the preferred approach. The DSA recommends dedicating the entire 6425–7125 MHz to licence-exempt WAS/RLAN (under general authorisation), because:

- The socio-economic benefits of Wi-Fi scale strongly with contiguous bandwidth, enabling wide-channel operation and high-capacity services
- Fragmentation reduces efficiency, increases contention, and risks recreating congestion challenges and
- Mobile services already benefit from substantial licenced mid-band allocations, plus some new ones under consideration at WRC-27, whereas licence-exempt mid-band spectrum remains comparatively scarce.

If the regulator nevertheless pursues division, the DSA recommends:

- Ensuring at least one very large contiguous segment dedicated exclusively to licence-exempt WAS/RLAN, to preserve wide-channel operation and capacity scaling,
- Allowing access to the full band for RLAN devices on a shared or opportunistic access basis, and
- Considering appropriate protection rules to ensure that WAS/RLANs can operate without interference from high-power IMT in adjacent blocks.

12) Other comment or opinion

Additional DSA-aligned points include:

- **Harmonisation matters:** aligning Latvia's approach with a broader European licence-exempt framework lowers device costs, increases availability, and reduces cross-border interference risks.
- **Economic impact:** licence-exempt spectrum delivers broad-based benefits by enabling enterprise digitisation, consumer broadband performance, and public services often with faster real-world deployment than centrally assigned licenced models; and in more environmentally favourable manner.
- **Future-proofing:** demand growth will continue; planning should avoid decisions that lock Europe/Latvia into a capacity deficit for indoor connectivity and constrain Latvia's ability to enable consumers to benefit from innovative services.
- **Incumbent protection is compatible with licence-exempt:** with appropriate technical rules and (where needed) coordination mechanisms, licence-exempt access can coexist with incumbent services.