

Status of 5G Quality and Experience in France

MedUX Insights: 5G QoE Research Study

Detailed Report – Q3 2025 [CONFIDENTIAL]

15 January, 2025

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5G



free



Content

1. Executive Summary
2. Methodology
3. Benchmark Score
4. 5G Deployment Insights
5. QoS - Quality of Service Insights
6. QoE - Quality of Experience Insights
7. MedUX - A trusted partner



1. Executive Summary

- About this research study
- Mobile QoE Crowdsourcing Overview
- Highlights about QoE in France
- Key findings about 5G deployment in France





5G Crowdsourcing Benchmarking in France with TRUE QoE KPIs



MedUX Insights: 5G QoE Research Study

At MedUX, we have conducted a pioneering **5G Quality of Experience (QoE) Benchmark in France**, providing a comprehensive analysis based exclusively on Q3 2025 data. This report presents the findings of a crowdsourcing-based study that measures Mobile QoE across the country during the third quarter of 2025, analyzing both operator performance and overall network behavior nationwide.

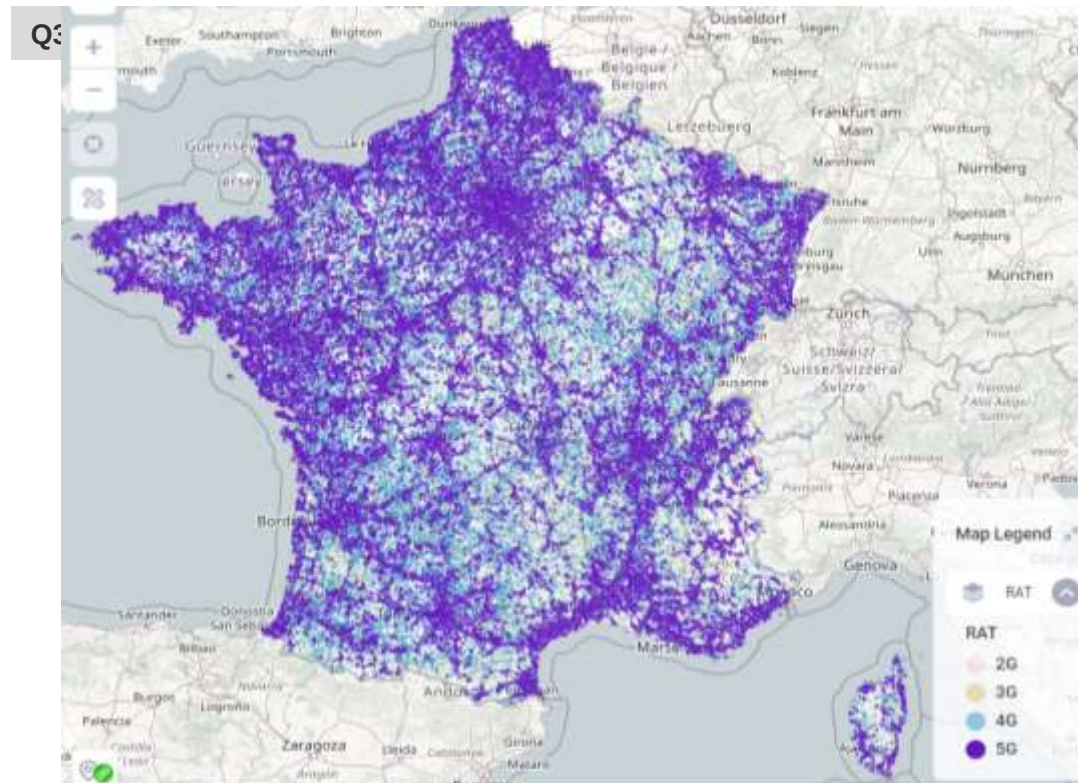
This study provides a detailed view of the real Quality of Experience across France, highlighting how users perceive network performance in everyday conditions and revealing differences in service quality among operators and deployment types.

We leverage our innovative QoE Crowdsourcing testing solution to benchmark, monitor and improve mobile networks. It aims at improving customer satisfaction by delivering an honest, **independent review that enhances service quality** from the viewpoint of the people who matter most – the users.

QoE Crowdsourcing overview

MedUX continuously expands its global crowdsourcing solution, gathering real end-user data via passive and active tests, and reaching millions of users covered and billions of samples collected.

Our comprehensive QoE crowdsourcing solution already covers over 100 countries. This benchmark report is based on data collected during Q3 2025, in France.



QoE Crowdsourcing Initiative

Active Testing with real services and applications



- Technology: Up to 5G+ & Wi-Fi 7.
- Active QoS Testing against CDNs: CloudFlare, Akamai, etc.
- Active QoE Testing against real-service and application servers: Youtube, Facebook, Tiktok, Blizzard, etc.

Highlights about QoE in France

The mobile network benchmark conducted in France in the third quarter of 2025 (Q3 2025) highlights a very close competition in the “**Best Mobile Experience**” (Top Awards) category, with Bouygues, Orange, SFR, and Free all demonstrating strong performance across multiple metrics.

Q3 2025 results demonstrate that both Bouygues and Orange provide very good mobile experiences, with Bouygues excelling in consistency and reliability, closely followed by Orange, standing out in speed, streaming, and data services. Orange remains among the top performers in nearly all categories.



Bouygues shows **very good, stable and balanced mobile performance across all categories with the most reliable network**

- Operator with the highest total score (#1), standing out for reliability and consistency.
- Leader (#1) in Gaming and Network Responsiveness (Accessibility).
- Co-leader (#1) in Streaming alongside Orange and very competitive in Social Media.
- Strong performance in Data & OTT and Value for Speed, reflecting a consistent experience for its users.

QoE Score: 3.86 over 5
Best Experience and most reliable network

79.6% Service Reliability
65.3% Network Responsiveness
76.3% Streaming



Orange show **very good results in Streaming and Data & OTT (specially Web Browsing)**, providing the fastest experience.

- Second operator in total score (#2), demonstrating very strong overall performance.
- Leader (#1) in Social Media and Web browsing.
- Leader in Value for Speed (#1), indicating that customers enjoy the speeds they expect.

QoE Score: 3.84 over 5

85.1% Data& OTT
70.9% Value for Speed



SFR results are **very good in Data & OTT and Web Browsing**, standing out in everyday services.

- Third operator in total score (#3), offering a balanced mobile experience, behind Bouygues and Orange.
- Competitive in Streaming and Social Media.

QoE Score: 3.77 over 5



Free has **good performance in Data & OTT and Streaming**.

- Fourth operator in total score, providing a good experience but with room for improvement compared to the leaders.
- Lowest performance in Gaming and Value for Speed.

QoE Score: 3.64 over 5

Key findings about 5G Deployment in France

The results of our study show a positive evolution in the deployment of 5G in France, with 5G device penetration above the European average and at comparable levels across the four operators.



5G Adoption and Usage in France

- Focusing on users equipped with 5G-capable devices, **Orange leads, with 64% of its customers already experiencing consistent 5G usage.**
- The remaining three operators show comparable performance levels, all reporting 5G take-up rates above 50%, confirming a broadly mature adoption of 5G-capable devices across the French market.
- All French mobile operators outperform the European average in terms of 5G adoption.
- When analysing actual network usage among 5G-capable devices, **Orange and Free stand out for their higher proportion of time spent on 5G networks.**
- In contrast, SFR and Bouygues retain a relatively higher share of 4G connections, positioning them slightly below the European average in terms of effective 5G usage.
- A **gradual increase in 5G Standalone (SA) connections** has been observed compared to previous periods. However, **5G SA usage remains marginal**, with the vast majority of connections still relying on **5G Non-Standalone (NSA)**.
- Among the operators, **Free shows a slightly higher level of 5G SA adoption** compared to its competitors.



Orange:

63.9% 5G Availability
74.4% 5G Connections



Free:

76,89% Connections
8.3% 5G SA Availability



BT:

3,75% 5G SA Availability

2. Methodology

- Overview of MedUX QoE Crowdsourcing Solution
- Benchmarking Methodology
- Ranking approach



MedUX QoE Crowdsourcing Methodology

MedUX delivers a comprehensive and objective view of mobile network experience through a global crowdsourcing methodology. By embedding a lightweight SDK into real mobile applications used by millions, MedUX captures user experience from the end-user perspective, generating reliable insights that support regulatory, operational, and commercial decisions across the telecom sector.

Real-world Data collection

Data is collected through a combination of passive and active measurements, providing a multi-dimensional view of network performance. Active tests are designed to replicate typical user activities — such as web browsing, file downloads, video streaming, or online gaming — and are executed under standardized conditions to ensure comparability across networks and geographies. Crucially, these tests are launched only when the device is idle and connected to a network, ensuring that ongoing user activity does not influence the results or create unrealistic performance scenarios. Passive measurements, on the other hand, capture ongoing network conditions and device behavior without initiating traffic. These include signal strength, type of network connection, cell transitions, and handovers.

Data is collected from a wide array of real-world conditions, covering urban and rural areas, indoor and outdoor environments, and users in motion or stationary. This broad coverage ensures the representativeness and contextual relevance of the collected dataset.

Data validation and processing

To guarantee the integrity and reliability of the dataset, all collected data is subjected to a rigorous, multi-stage validation process.

This begins with the automatic detection and exclusion of anomalous or corrupted samples, followed by the removal of duplicate entries and any data points that fall outside defined temporal and spatial uniqueness thresholds. Particular attention is given to identifying and filtering extreme values in both signal metrics and active test results, which may result from atypical environmental or device-specific anomalies.

Additionally, test results from devices running outdated versions of the operating system are discarded, as these can introduce inconsistencies in performance measurement. These comprehensive quality controls are part of a standardized methodology that aligns with international best practices and ITU-T recommendations, ensuring the consistency, comparability, and technical soundness of MedUX's performance analytics.

MedUX QoE Crowdsourcing Methodology

Representativeness and scale

MedUX's global panel of millions of devices enables a robust and statistically representative view of mobile network performance at national, regional, and operator-specific levels.

The extensive reach of the platform allows for consistent data collection across diverse geographies and user contexts. For each country analyzed, MedUX ensures that the number of samples and users meets the statistical conditions necessary to report with confidence. Specifically, key performance indicators (KPIs) are calculated with a 95% confidence level and a maximum margin of error of $\pm 5\%$, derived from the national-level sample size and distribution.

While this precision may vary for more granular segments, such as regional or technological splits, the methodology ensures that broader national comparisons remain statistically robust and meaningful.

Thanks to the sheer volume, variety, and continuous nature of data acquisition, MedUX delivers near real-time visibility into mobile connectivity trends, enabling stakeholders to make well-informed, evidence-based decisions.

Privacy and data security

User privacy is a foundational principle in MedUX's approach, underpinning every aspect of data collection and processing. At no stage is any personally identifiable information (PII) collected, stored, or analyzed. IP addresses are systematically anonymized or aggregated, and all datasets are pseudonymized to prevent any possibility of user identification, even in cases of large-scale data analysis.

The SDK operates seamlessly in the background, designed to have minimal impact on battery life, data usage, or device performance. It requests only the permissions that are strictly necessary for measurement purposes, following a transparent and consent-based process.

Moreover, MedUX adheres to the highest international standards of data protection, with full compliance to the GDPR and all applicable local regulations. Internal procedures are regularly audited to maintain security, and data is stored and processed using secure infrastructure. This ensures not only compliance, but also builds trust with users and partners by guaranteeing the ethical handling of sensitive network performance data.

Benchmarking Methodology

With the goal of providing an independent and international benchmarking tool, MedUX developed its own QoE ScoreCard to determine and certify the best provider or operator with respect of the services accessed via mobile networks.

This goal is achieved by executing benchmarking tests that represent a major part of the services used by final customers of mobile networks. The results collected are individually and collectively weighted and aggregated into an overall score.

The service category scoring model and its drill-down capabilities makes it exploitable by different stakeholders, from executive management (CxOs) to more technical departments (engineering and optimization). Thus, providers or operators can improve their networks and services offering a better experience to their customers.

To give transparency and a clear interpretation of the benchmarking results, MedUX publishes a description of the scoring methodology, in line with the current state of the ETSI TR 103 559 V1.2.1

In this context we introduce the following terms, Quality of Service (QoS) and Quality of Experience (QoE):

- QoS: “Totality of characteristics of a telecommunications service that bear on its ability to satisfy stated and implied needs of the user of the service.”
- QoE: “Degree of delight of the user of a service. In the context of communication services, it is influenced by content, network, device, application, user expectations and goals, and context of use.”

MedUX propose a model where technical measurements are transformed into perceptive indicators taking into account the human response to mobile service’s events, improvements and degradations.

For further details about the methodology used please visit our blog [Assessing customer experiences with an advanced mobile broadband benchmarking methodology](#)



Quality of Experience – Ranking approach

Our QoE Scorecard is the tool for facilitating benchmarking and reducing the complexity of service quality and performance improvements. We combine different performance indicators into a synthetic indicator or single Global Score.

Global Score

MOS Combination

Overall Experience Score

Synthetic Experience Indicator

- The Global score is a combination of MOSes from all service categories, weighted based on international best practices and industry experience.

MOS

**MOS: MedUX
Opinion Score**

By service

MOS

- The MOS is an aggregation of several QoS/QoE KPIs for each service category, which allows for a more granular QoE analysis.
- Each MOS is characterized by a Qualifier KPI and one or more Differentiator KPIs.

Qualifiers

Differentiators

KPI aggregation

By Test case

KPIs Aggregation

- KPIs are combined into Qualifier and Differentiator indicators to transform network and service quality indicators into a Experience metrics by Service.

Minimum expected performance

Minimum requirements to define a satisfying customer experience

Performance exceeding basic expectations

Additional performance assessment for tests fulfilling the qualifier criteria

Quality of Experience – Ranking approach

MedUX benchmarking approach, based on our QoE crowdsourcing data and QoE Scorecard, assesses network performance and end-user experience in the 5G Era. We revisit criteria and thresholds once a year to consider best practices but also to reflect technology and industry development.

At MedUX we use a set of KPIs and the concept of Mean opinion score (MOS) for most of the rankings, which ratings are algorithmically estimated based on test results, in line with the current state of the ETSI TR 103 559 V1.2.1 and ITU Recommendation ITU-T P.800.1.

•Top Awards:

- **Overall QoE Score** – a combination of availability, accessibility, speed, streaming, and data and OTT experience results.
- **Reliability** — assesses network consistency across all service categories. A test is considered as not successful if it fails or if does not meet minimum service thresholds.

•Experience Awards:

- **Accessibility** (responsiveness) – how long it takes to access the network. Particularly in 5G it measures how long takes to access the 5G network across all testing categories while taking latency and network responsiveness results into account.
- **Value for Speed** (throughput) - how much data can be transferred. Particularly in 5G it measures how is the network capacity when stressing the line (multi-thread and multi-server stress test with our patented Cloud Speed Test).
 - DL Speed
 - UL Speed
- **Video Streaming experience** - it measures the average video experience for each operator while considering video resolution, video loading time, and stall ratio.
- **Data and OTT experience** - a combination of gaming, web browsing and social networks.

3. Benchmark Score

- Mobile Experience Awards
- Benchmark Score Experience
- Benchmark Categories Services
- Benchmark Categories Services & Tests



Mobile Experience Awards

Using our Crowdsourcing solution, we have analysed millions of data points and mobile network samples across France to evaluate the real customer experience on mobile networks.

Our results show that **Bouygues Telecom** delivers the *best overall mobile experience* in the country. **Orange**, on the other hand, achieves the highest scores in the *Data & OTT* and *Value for Speed* categories. Finally, when it comes to *Streaming*, both **Bouygues Telecom** and **Orange** share the top position, demonstrating strong performance in this key area of user experience.

Top Awards			Experience Awards			
	Best Experience	Reliability	Data & OTT	Streaming Experience	Value for Speed	Accessibility
				 		

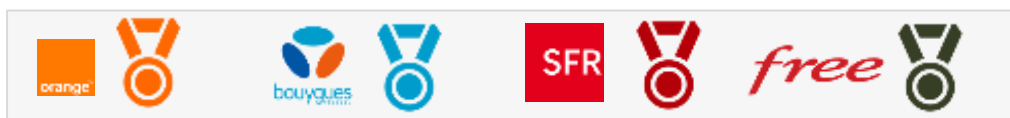
QoE Scorecard:

- 7,5% - Accessibility
- 25% - Value for Speed
- 25% - Streaming Experience
- 42,50% - Data & OTT

Reliability (part of QoE Scorecard):

- 0.21p - Accessibility*
- 0.69p - Value for speed*
- 0.69p - Streaming Experience*
- 1.17p - Data & OTT*

*MOS Reliability is based on 2.75p max

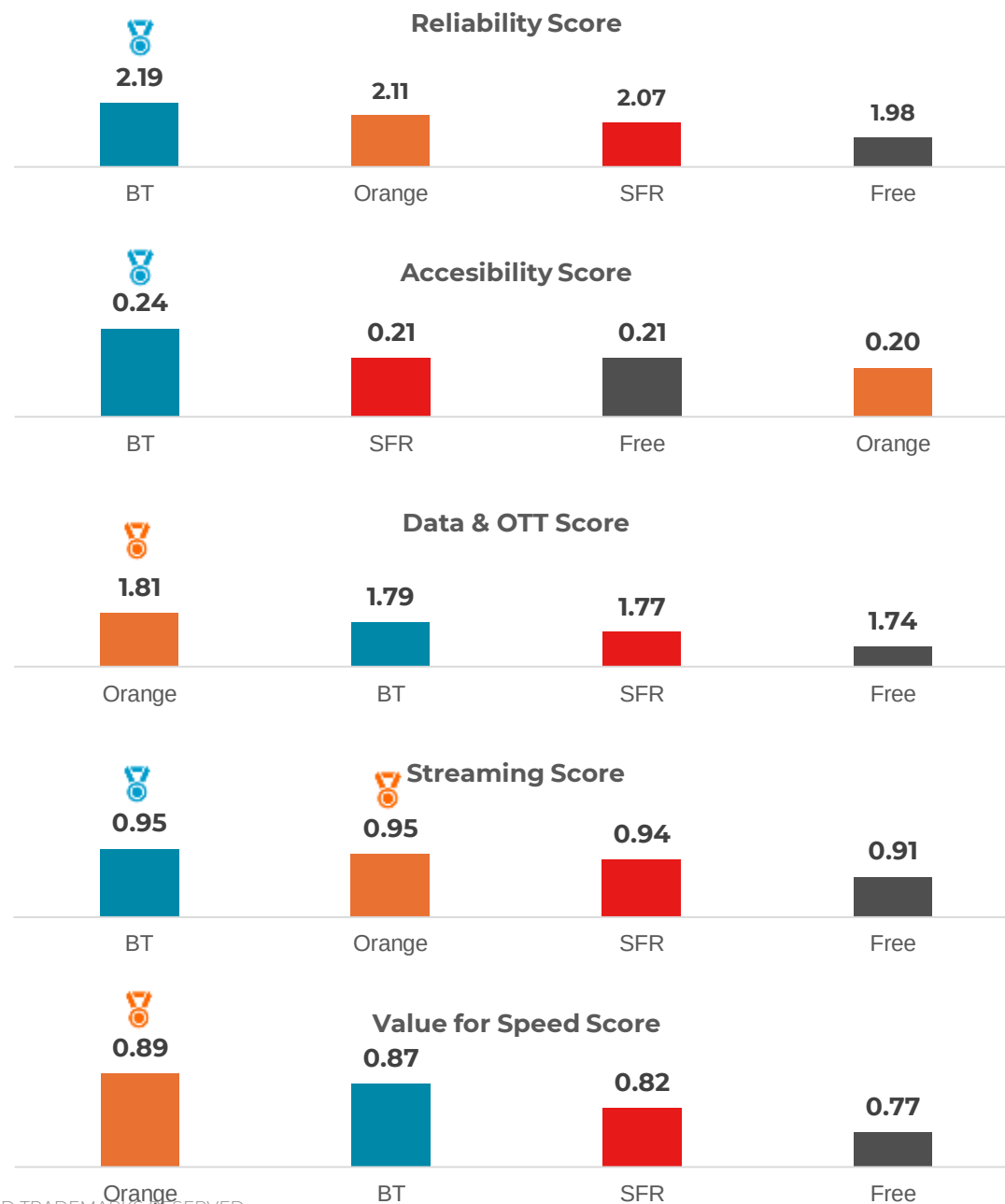
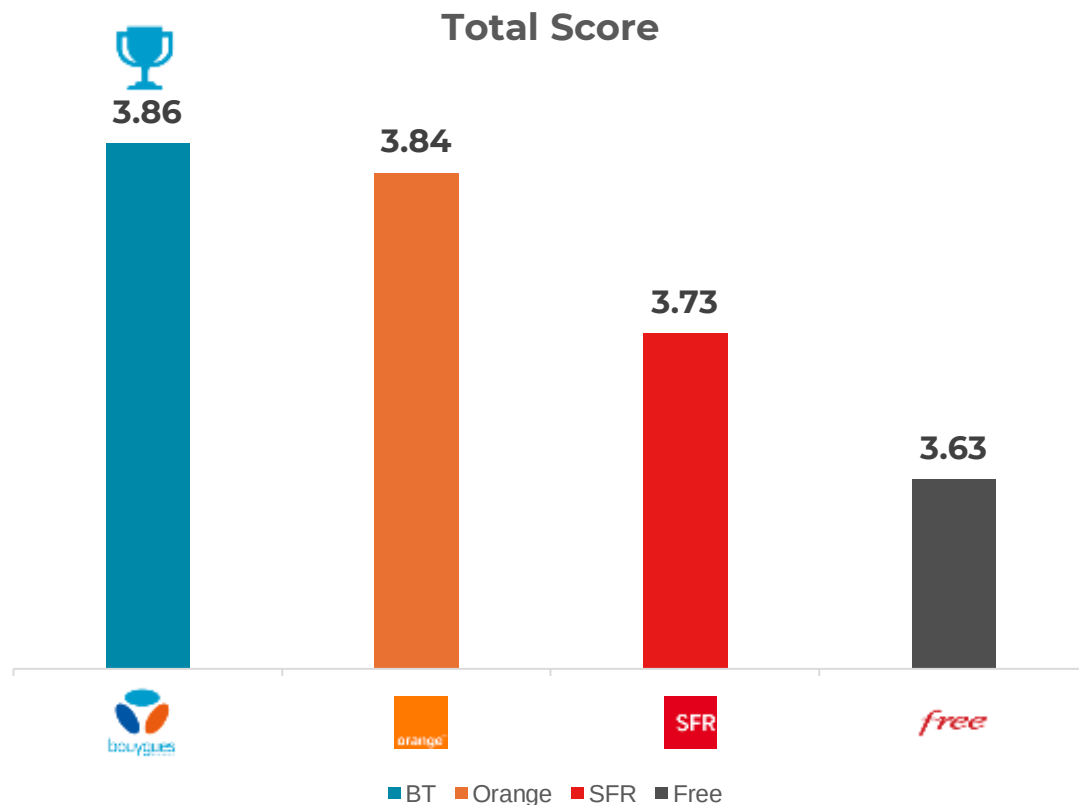


NOTE*: "Co-Best AWARDS" -> Co-leaders (less than 0.5% difference)

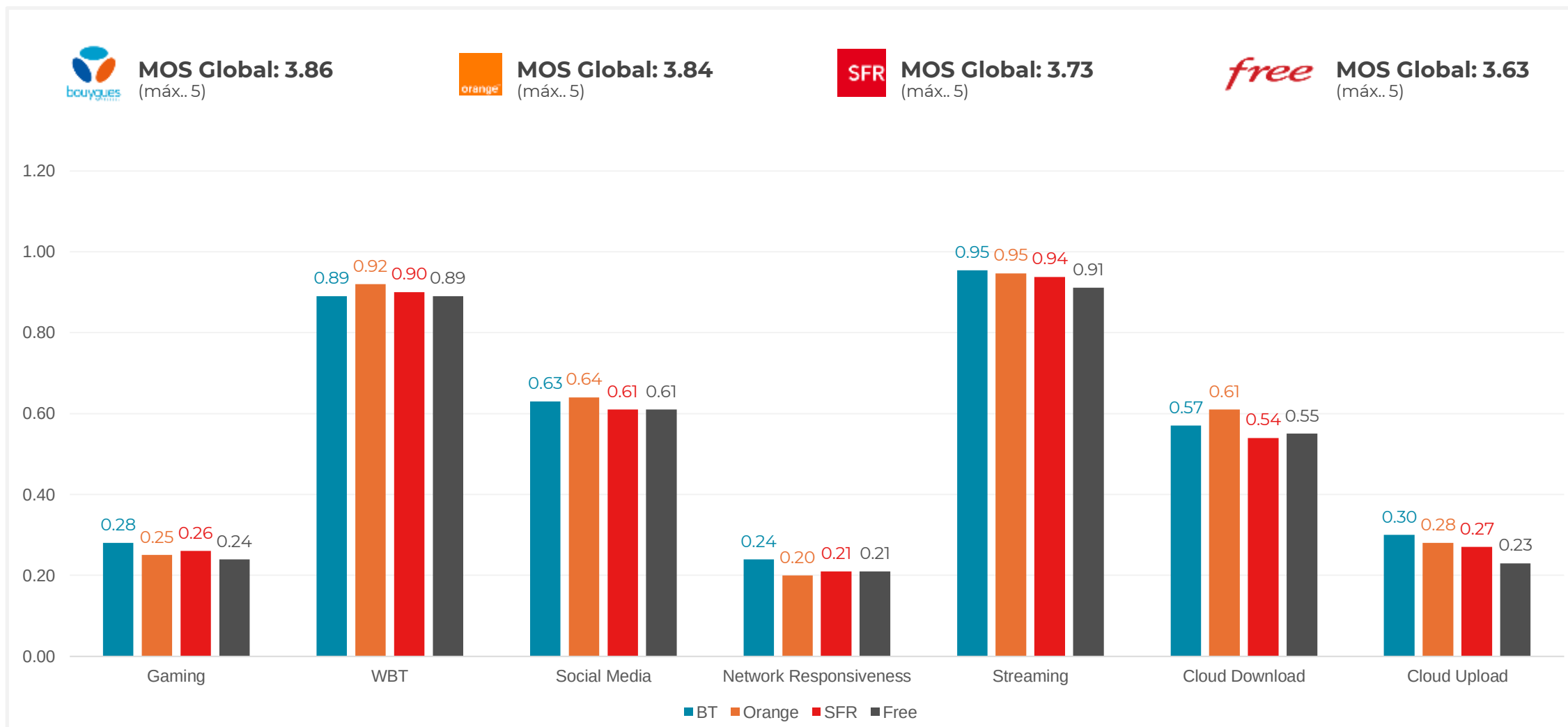


Experience Score

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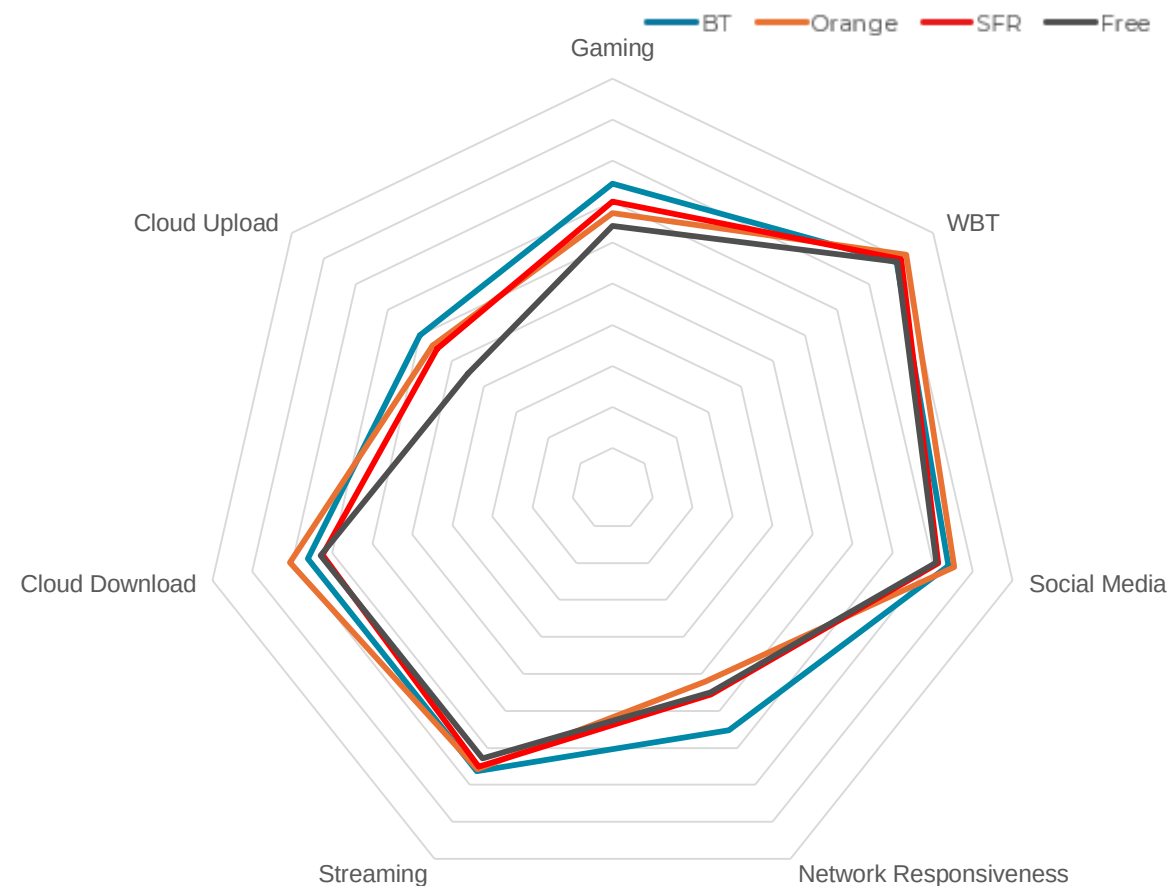
Experience Score – Service Categories



Experience Score – Service Categories & Tests


free

Categoría	BT		Orange		SFR		Free	
	Value	(%)	Value	(%)	Value	(%)	Value	(%)
Accessibility	0,24	65.3%	0,20	52.1%	0,21	55.5%	0,21	55.0%
Network Responsiveness	0,24	65.3%	0,20	52.1%	0,21	55.5%	0,21	55.0%
Data and OTT	1,79	84.4%	1,81	85.1%	1,77	83.4%	1,74	81.7%
Gaming	0,28	74.3%	0,25	67.2%	0,26	70.0%	0,24	64.1%
Social Media Test	0,63	83.9%	0,64	85.4%	0,61	81.3%	0,61	80.9%
Web Browsing Time Test	0,89	88.6%	0,92	91.5%	0,90	89.9%	0,89	88.8%
Value for Speed	0,87	69.7%	0,89	70.9%	0,82	65.3%	0,77	61.8%
Cloud DL	0,57	76.2%	0,61	80.7%	0,54	72.4%	0,55	73.0%
Cloud UL	0,30	60.0%	0,28	56.1%	0,27	54.7%	0,23	45.0%
Streaming	0,95	76.3%	0,95	75.7%	0,94	75.0%	0,91	72.9%
Youtube	0,95	76.3%	0,95	75.7%	0,94	75.0%	0,91	72.9%
Total	3.86	77.3%	3.84	76.7%	3.73	74.7%	3.63	72.5%
Total Reliability	2.19	79.6%	2.11	76.7%	2.07	75.3%	1.98	72.0%



Overview of Mobile QoS & Service Performance KPIs: France

Mobile QoS KPIs

Operator	Avg DL (Mbps)	P90 DL (Mbps)	Avg UL (Mbps)	P90 UL (Mbps)	Avg Latency (ms)	Avg Jitter (ms)	Avg Packet Loss (%)
Bouygues	86.1	206.3	19.5	46.3	28.3	11.4	1.09
Free	88.0	210.4	16.2	40.7	31.1	12.4	1.36
Orange	105.5	235.7	20.5	49.5	30.2	11.2	1.55
SFR	80.0	194.0	18.5	44.4	28.8	12.2	1.44

Service Performance: Streaming

Operator	Avg VideoLoadSpeed (Mbps)	Avg StartTime(ms)	Avg stallingRatio (%)	Avg Stalling Time (ms)
Bouygues	67.8	2392.6	0.17	14.8
Free	66.7	2440.8	0.26	21.4
Orange	71.8	2268.8	0.13	11.4
SFR	65.5	2465.8	0.23	18.5

Service Performance: Social Media

Operator	Avg PageloadSpeed (Mbps)	Avg TTFB(ms)	Avg DNS Lookup (%)	Avg fullyLoaded (ms)
Bouygues	26.7	479.3	46.9	2878.6
Free	25.3	524.5	56.3	2996.4
Orange	27.5	484.7	49.9	2724.1
SFR	26.3	487.9	43.8	2993.7

Service Performance: Gaming

Operator	Avg Latency (ms)	Avg Jitter (ms)	Avg Packet Loss (%)
Bouygues	33.7	32.7	0.27
Free	32.3	22.1	0.41
Orange	32.9	31.4	0.37
SFR	32.1	21.5	0.31

Service Performance: Web Browsing

Operator	Avg PageloadSpeed (Mbps)	Avg TTFB(ms)	Avg DNS Lookup (%)	Avg fullyLoaded (ms)
Bouygues	14.2	407.3	39.0	1425.2
Free	14.3	406.9	44.1	1471.3
Orange	15.5	382.3	38.5	1335.4
SFR	14.8	389.5	35.3	1453.2



Overview of Mobile QoS & Service Performance KPIs: France

Test	MOSes' Weights	KPI Type	KPI Name	KPIs' Weights	Orange	Bouygues Telecom	SFR	Free
Gaming Test	7.5%	Qualifier	% of samples w/o errors and RTT < QT2	55%	95,82%	97,13%	96,28%	95,16%
		Differentiator	% of samples Jitter < 20 ms	15%	84,95%	85,86%	84,43%	85,62%
		Differentiator	AVG Latency (ms)	30%	32,95	33,73	32,14	32,31
Web Browsing Time Test	20%	Qualifier	% of samples w/o errors and Web Browsing Time < QT1	55%	99,44%	99,35%	99,24%	99,31%
		Differentiator	% of Sessions AVG TTFB < 600 ms	23%	92,56%	88,20%	92,29%	90,64%
		Differentiator	% of Sessions AVG DNS Delay < 100 ms	14%	97,62%	97,24%	97,35%	95,69%
		Differentiator	AVG WBT (ms)	9%	1.335,4	1.425,2	1453,2	1.471,3
Social Media Test	15%	Qualifier	% of samples w/o errors and Session Duration < QT1	55%	98,03%	97,81%	97,52%	97,54%
		Differentiator	% of Sessions SD < 6 s	35%	94,95%	94,68%	94,10%	94,20%
		Differentiator	AVG TTFB (ms)	10%	484,67	479,29	487,93	524,54
Ping Test	7.5%	Qualifier	% of samples w/o errors and P.Loss < QT1 && RTT < QT2	55%	91,99%	94,26%	92,50%	92,57%
		Differentiator	% of samples Jitter < 50 ms	15%	96,58%	96,94%	95,93%	96,97%
		Differentiator	AVG Latency (ms)	30%	30,17	28,34	28,75	31,05
Streaming Test	25%	Qualifier	% of samples w/o errors and (Startup Delay < QT1 && Stalls < QT2 && Total Stall Duration < QT3)	55,0%	98,74%	98,75%	98,51%	98,30%
		Differentiator	AVG Startup Delay (ms)	13,5%	2.268,75	2.392,64	2.465,76	2.440,80
		Differentiator	% Playouts Stalls < 1	9,0%	99,30%	99,13%	99,00%	98,85%
		Differentiator	% Playbacks 4K	22,5%	34,61%	29,18%	26,56%	28,76%
Medux Cloud SpeedTest DL	15%	Qualifier	% of samples w/o errors and DL Speed > QT1	55,0%	99,35%	99,26%	99,01%	98,50%
		Differentiator	% of samples > 100 Mbps	13,5%	31,58%	25,93%	21,74%	28,35%
		Differentiator	% of samples > 20 Mbps	22,5%	79,90%	74,51%	71,69%	75,21%
		Differentiator	P90 DL Speed (Mbps)	9,0%	235,67	206,34	193,98	210,43
Medux Cloud SpeedTest UL	10%	Qualifier	% of samples w/o errors and UL Speed > QT1	55,0%	94,13%	94,91%	94,19%	92,71%
		Differentiator	% of samples > 5 Mbps	13,5%	75,26%	74,58%	71,34%	68,21%
		Differentiator	% of samples > 2 Mbps	22,5%	88,36%	88,20%	86,60%	84,63%
		Differentiator	P90 UL Speed (mbps)	9,0%	49,53	46,28	44,37	40,68



4. 5G Deployment Insights

- Status of 5G take-up
- Status of 5G availability
- Status 5G SA deployment

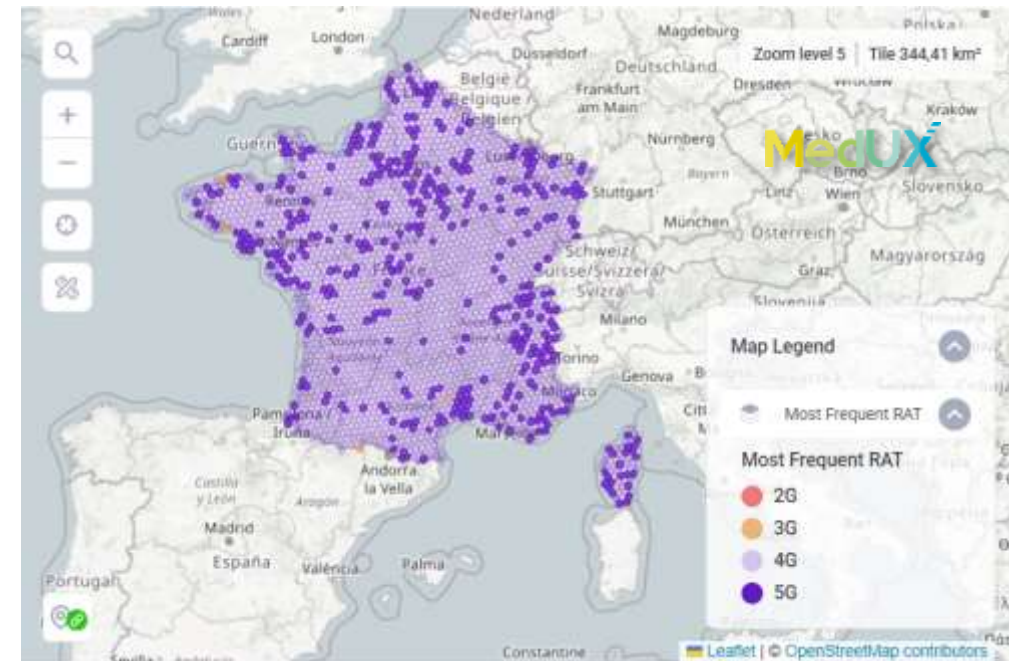
Progress toward the Digital Decade Targets – 5G Availability

5G Availability is far from universal when we consider not only urban, but also suburban and rural areas (*)

5G Availability



Predominant Radio Access Technology (All devices)

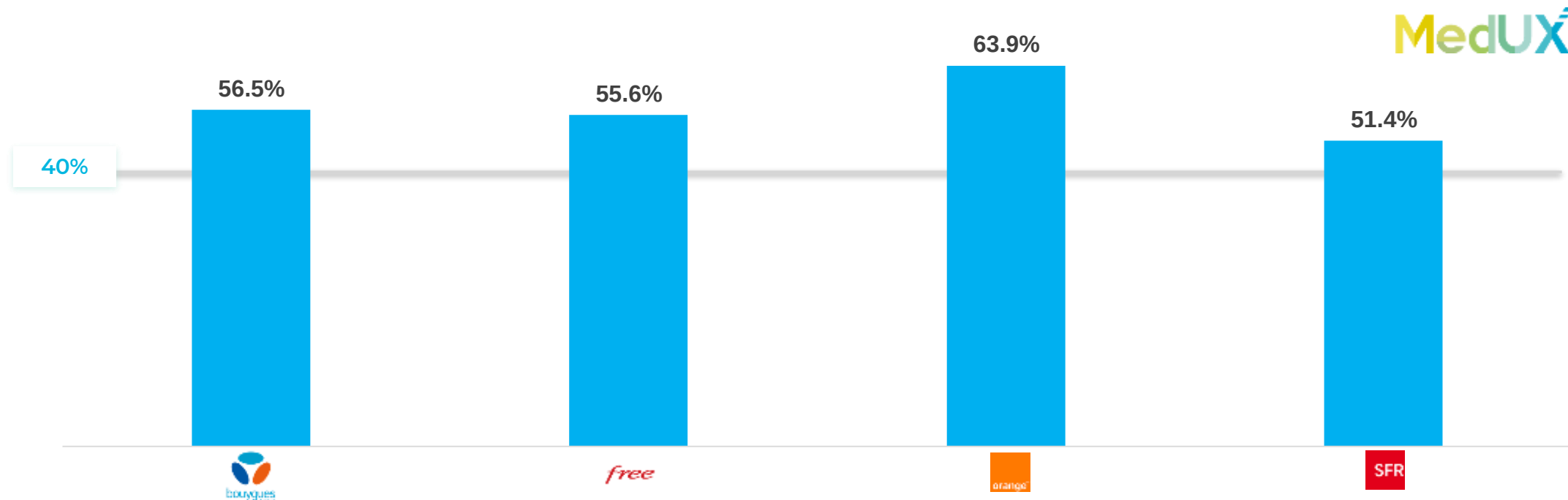


- 5G availability in France is widespread in urban areas, but coverage weakens significantly in suburban and rural zones, especially in the east and center of the country. This gap highlights the challenge of delivering consistent connectivity beyond major cities.
- Despite considerable 5G deployment, 4G remains the predominant radio access technology in most regions, indicating that user devices or networks still default to 4G — a sign that 5G is not yet the primary experience for most users.

Progress toward the Digital Decade Targets – 5G Take-up

5G Take-up is a challenge based on our estimations of users with 5G-capable devices

%5G Capable Devices per operator (Estimated proportion of users)

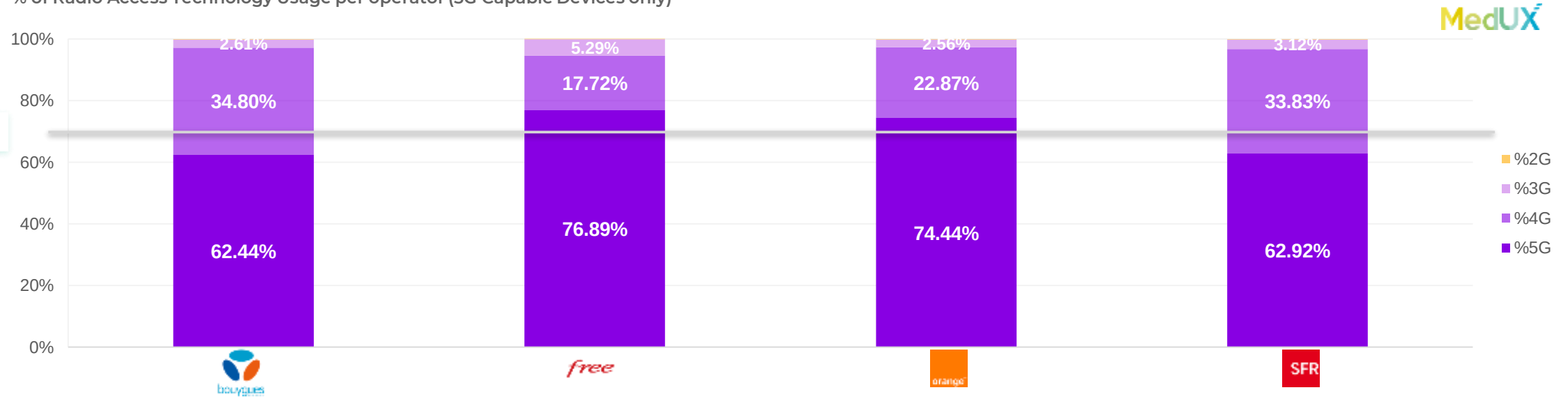


- Based on the percentage of 5G Capable devices, significant differences in take-up rates can be observed. Orange shows the highest penetration, followed by BT and Free, with SFR in fourth place. All operators exceed the **European average, which stands at 40 %**.
- Nordic Countries and Switzerland lead in general this “take-up” ranking. If we consider only the users with 5G-capable devices, the previous 5G Availability snapshot would be closer to the reality of 5G deployments (but less representative of overall average user experience).

Progress toward the Digital Decade Targets

And there is a long way to go, especially when it comes to universal 5G...

% of Radio Access Technology Usage per operator (5G Capable Devices only)



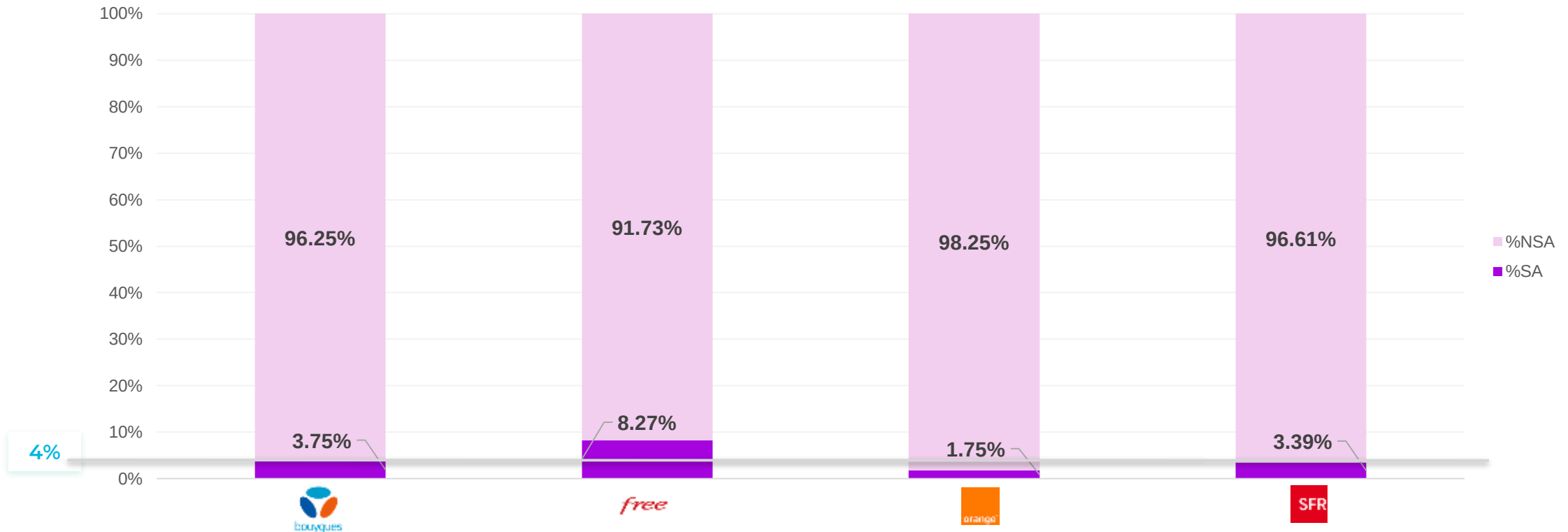
- **Free and Orange** lead the transition to 5G in France, with over 74% of connections from 5G-capable devices already using 5G networks — above the symbolic 70% threshold.
- **Bouygues and SFR** still rely on 4G, with more than one-third of their 5G-capable device traffic falling back to previous technologies — highlighting a slower 5G take-up..
- Despite broad 5G availability, the **user experience differs significantly across operators** — pointing to disparities in network maturity, deployment strategies, and device-network optimization.

Progress toward the Digital Decade Targets

... and even more when it comes to universal 5G Stand-Alone

MedUX

5G Technology Mode: % 5G SA per operator (% of 5G samples)



- **5G SA adoption in France remains very limited**, with all major operators still relying heavily on NSA deployments — over 95% of 5G usage remains Non-Stand-Alone (NSA).
- **Free leads in 5G SA deployments**, with over 8% of 5G samples running in Stand-Alone mode — more than double the percentage seen in other French operators.

5. Quality of Service Insights

- QoS operator-level comparisons



Throughput



Scope

The **Speed Test** evaluates the performance of an internet connection by measuring download and upload speeds — providing a reliable view of how fast and responsive the network really is for the end user.

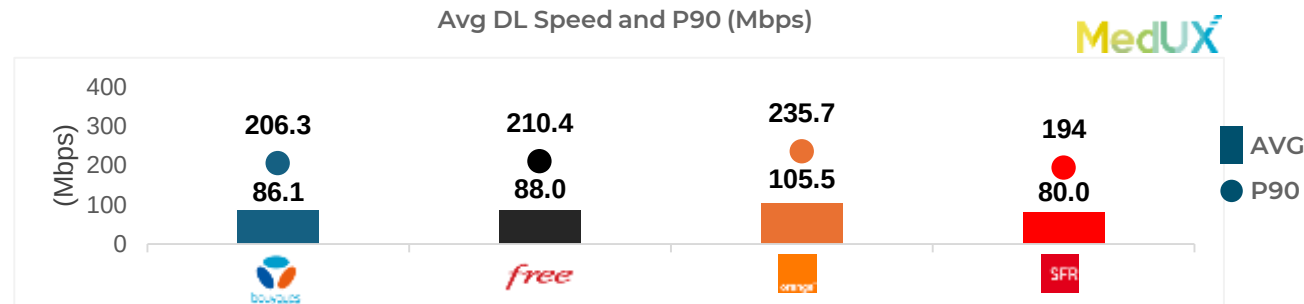


Main Throughput KPIs

Download & Upload Speed

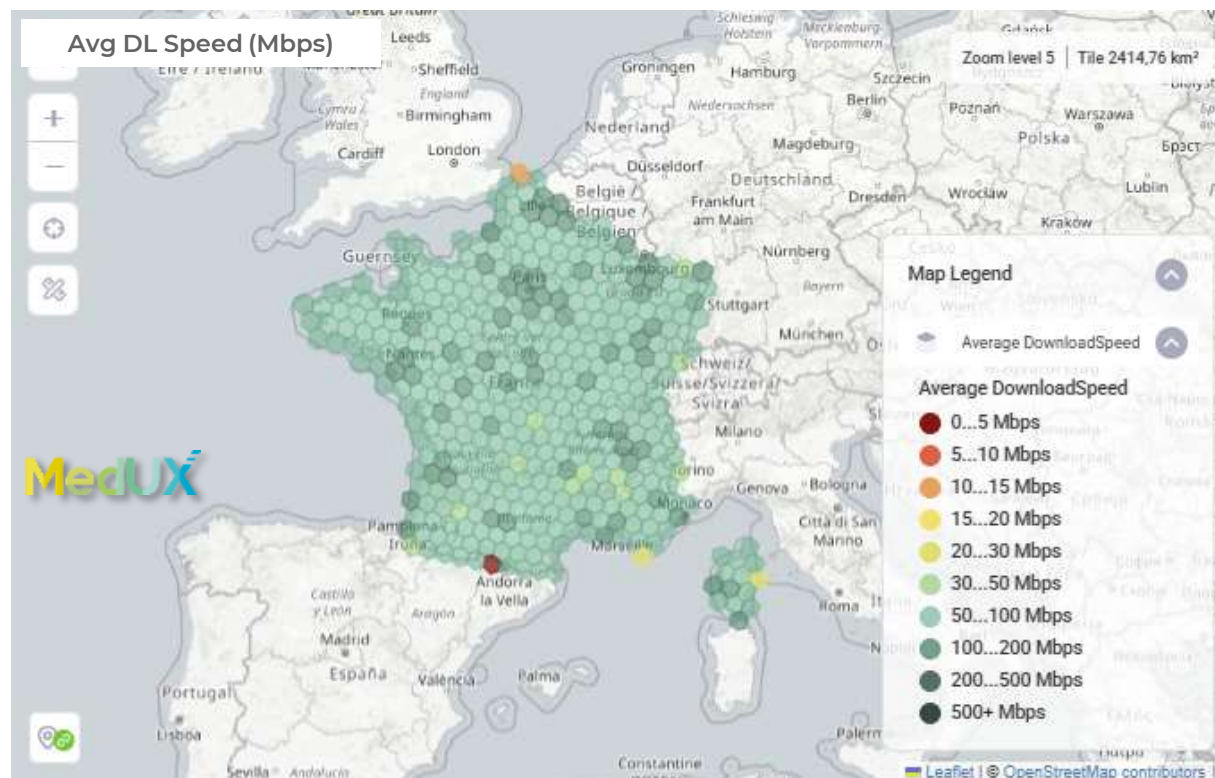


QoS Country-level comparisons | Speed Metrics - Avg DL Speed

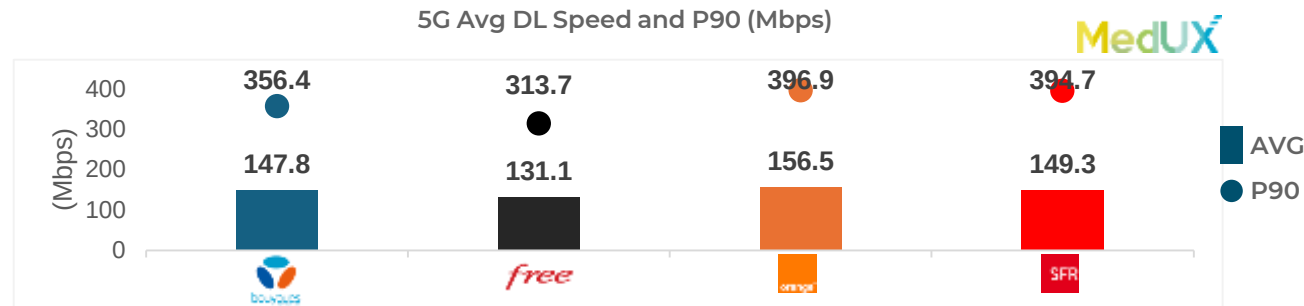


Orange leads in download speed performance in France, achieving average speeds above 100 Mbps across all technologies combined.

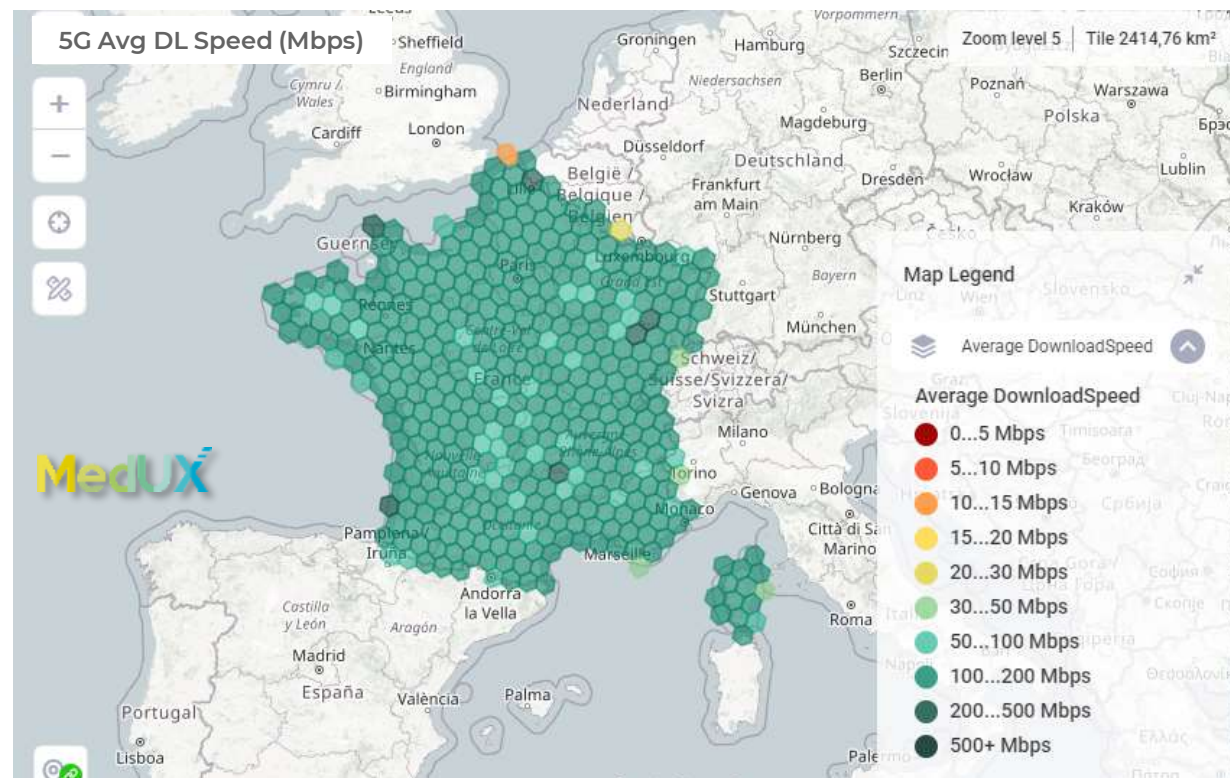
- **Orange** records the highest average download speed (105.5 Mbps), well ahead of Free, Bouygues and SFR taking in consideration all mobile technologies.
- **Free** and **Bouygues** deliver similar performance levels, remaining close to the 85–90 Mbps range.
- **SFR** shows the lowest average performance, staying below 80 Mbps nationwide.
- **Speed performance varies significantly across the country** — regions in central and western France display higher averages, while southern and peripheral areas show lower speeds.



QoS Country-level comparisons | Speed Metrics – 5G DL Speed

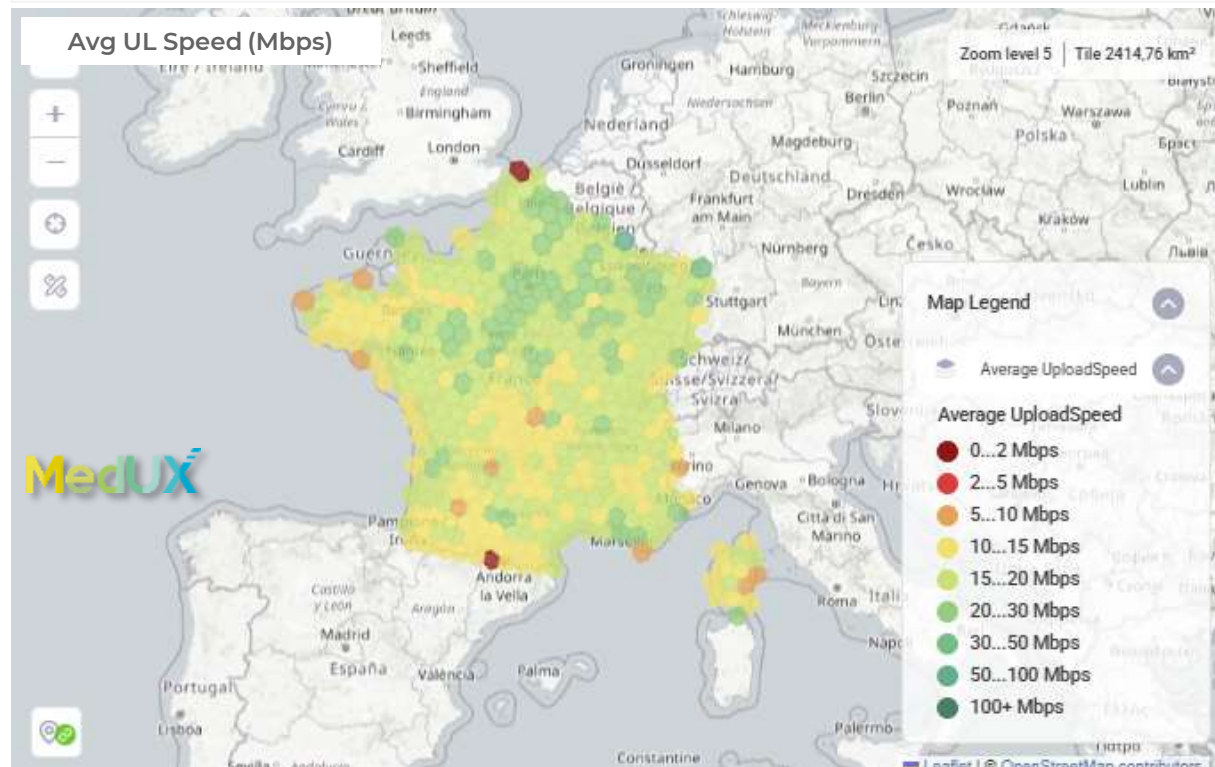
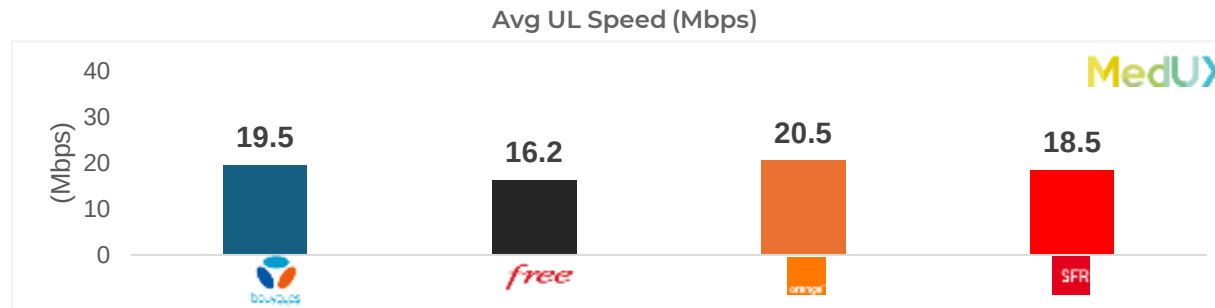


Orange leads as well in 5G download speed performance in France, achieving average speeds above 150 Mbps.



- **Orange** records the highest 5G average download speed (156.5 Mbps) and the highest P90 value (396.9 Mbps), closely followed by **SFR**, ranking second.
- **SFR and Bouygues deliver similar 5G average performance levels**, but speed distribution seems to be better for SFR (higher P90).
- **Free now shows the lowest average 5G performance** (instead of SFR for the blended speed), staying around 130 Mbps nationwide.
- **5G Speed performance also varies across the country** — regions in central and peripheral areas show lower speeds.

QoS Country-level comparisons | Speed Metrics - Avg UL Speed



Orange also leads upload speed performance in France, closely followed by Bouygues considering all technologies combined

- Orange reaches the highest average upload speed (20.5 Mbps), slightly ahead of Bouygues, SFR and Free.
- Differences between operators are narrower than in download speeds, indicating a more balanced performance across networks.
- Regional variability remains visible on the map, with central areas generally performing better than some southern and peripheral regions where upload speeds drop below 10 Mbps.



Network Responsiveness



Scope

The Network Responsiveness Test measures how quickly and reliably the network reacts to user requests — helping assess the real-time quality of the connection, essential for activities like web browsing, gaming, or video calls.

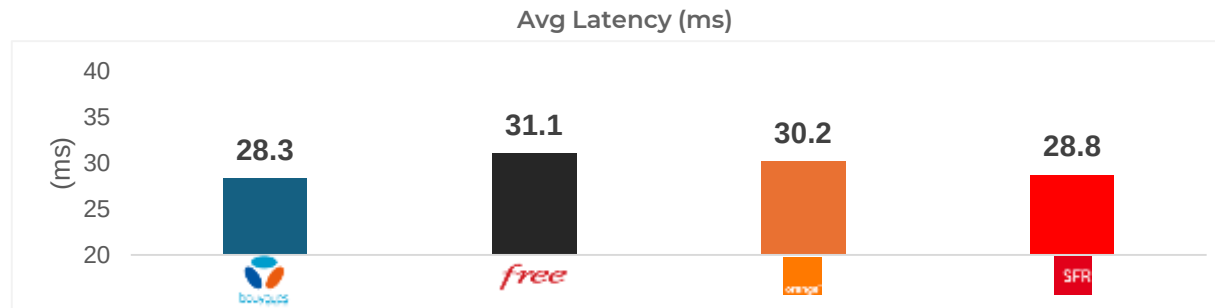


Main Network Responsiveness KPIs

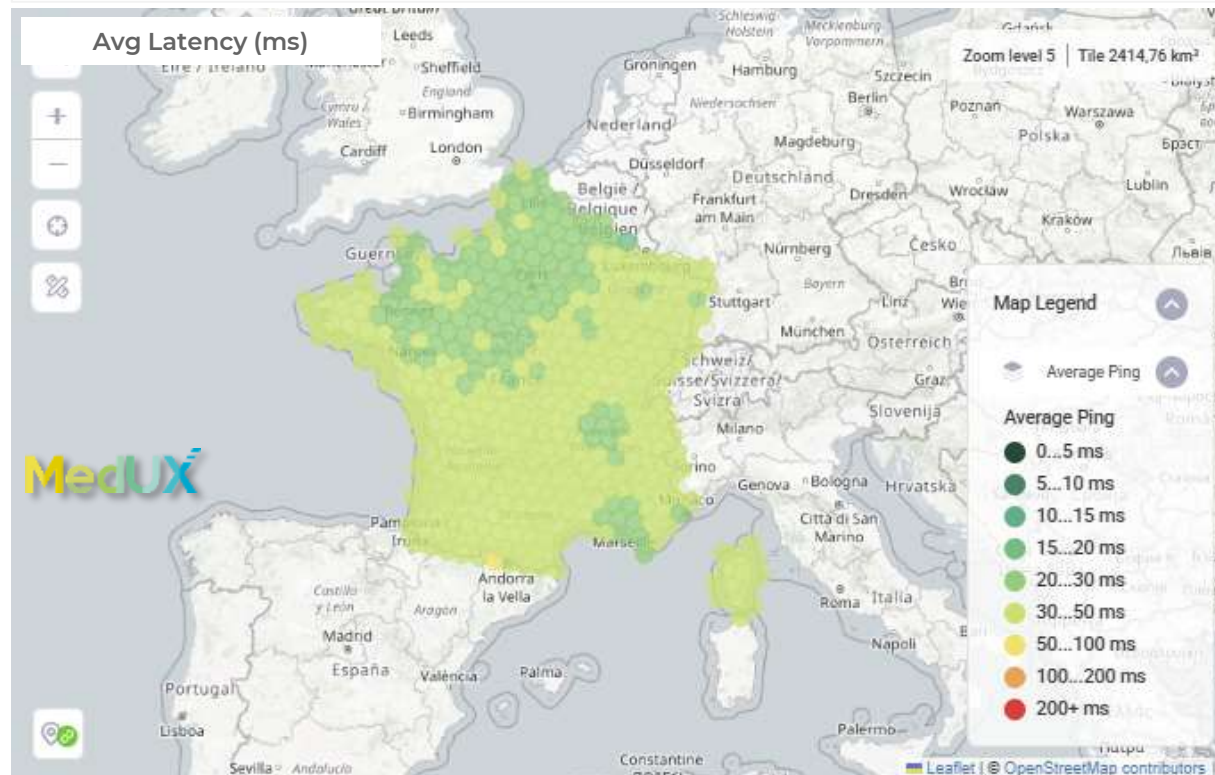
Avg Latency, Jitter & Packet Loss.



QoS Country-level comparisons | Responsiveness Metrics: Avg Latency

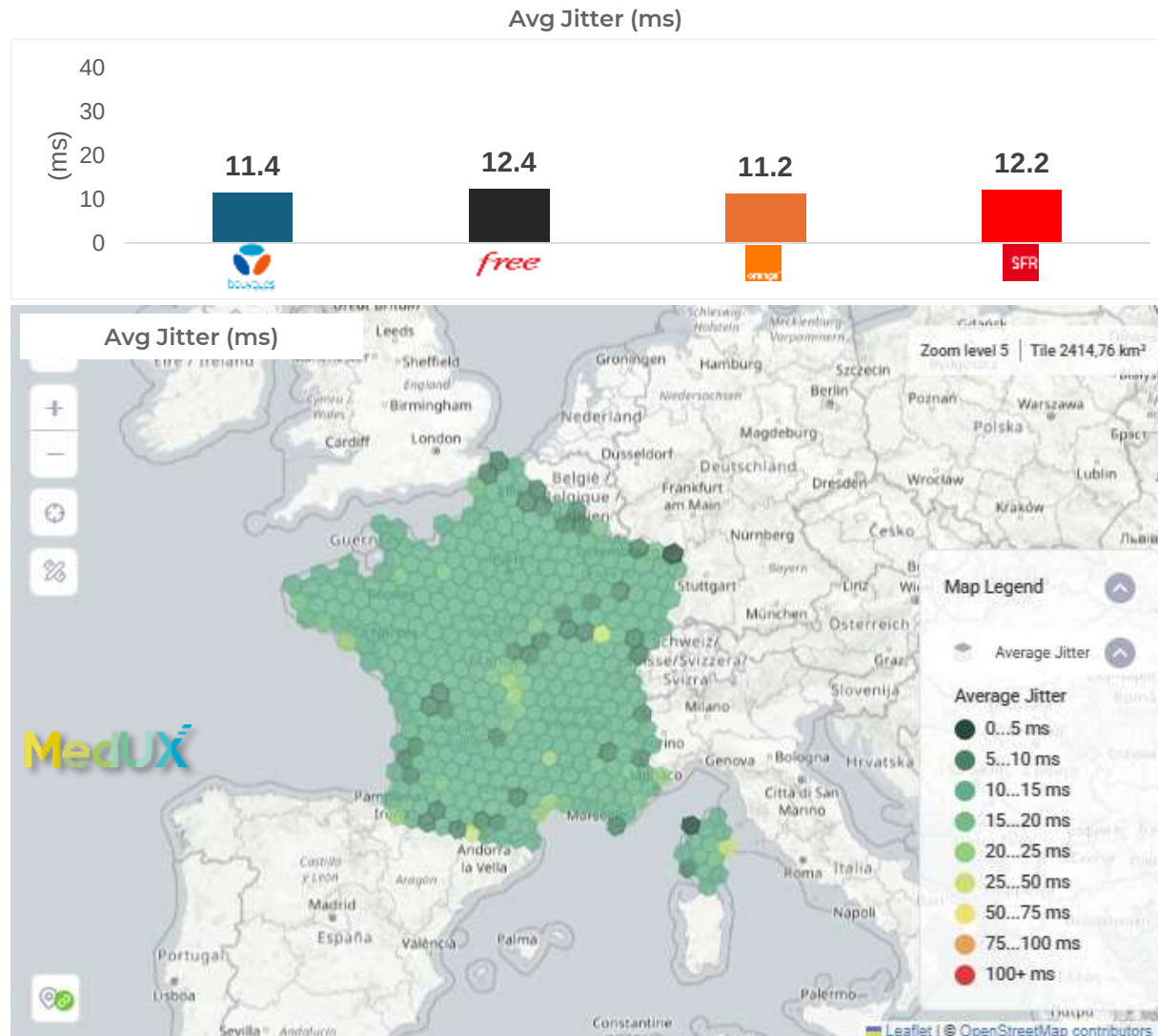


Bouygues offers the lowest average latency in France, with SFR close behind.



- **Bouygues achieves the best latency performance (28.3 ms)**, ahead of SFR, Orange and Free.
- **Differences between operators are relatively small**, indicating consistent network responsiveness across major providers.
- **Latency distribution is fairly uniform nationwide**, though **northern regions stand out with lower latency values (< 25 ms)**, indicating stronger network performance and stability in that area.

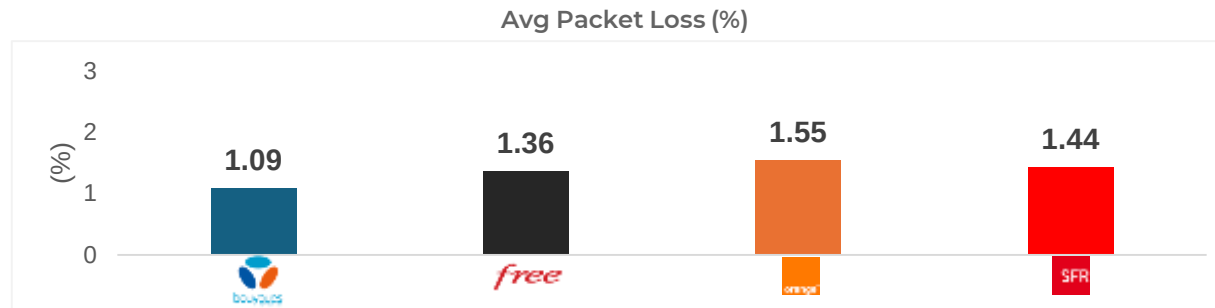
QoS Country-level comparisons | Responsiveness Metrics: Jitter



Jitter values remain homogeneous across operators — all around 11–12 ms — suggesting consistent short-term network stability.

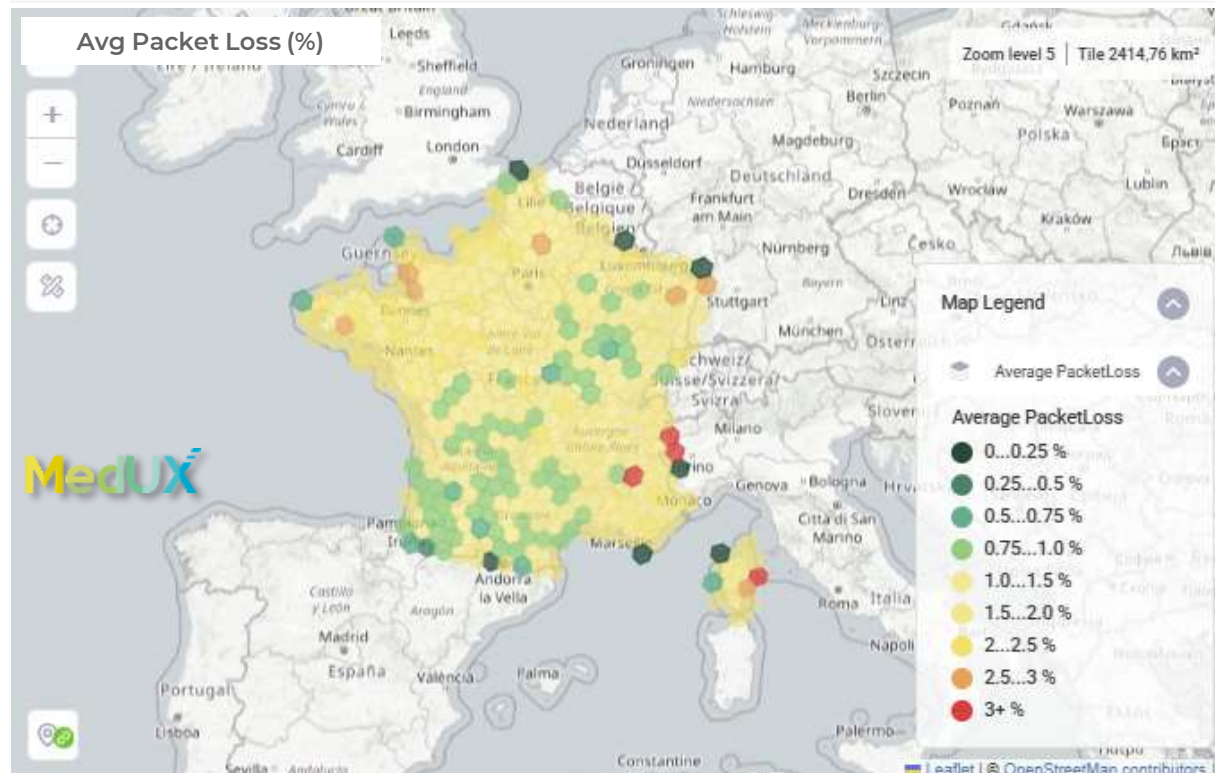
- **Orange and Bouygues record the lowest average jitter (≈ 11 ms),** while Free and SFR are only slightly higher — showing minimal variability overall.
- **The narrow gap among operators reflects homogeneous short-term network stability,** essential for latency-sensitive services like video calls or streaming.
- **Geographically, most regions show jitter below 15 ms,** with slightly better values in northern and central France, confirming solid real-time network consistency.

QoS Country-level comparisons | Responsiveness Metrics: Packet Loss

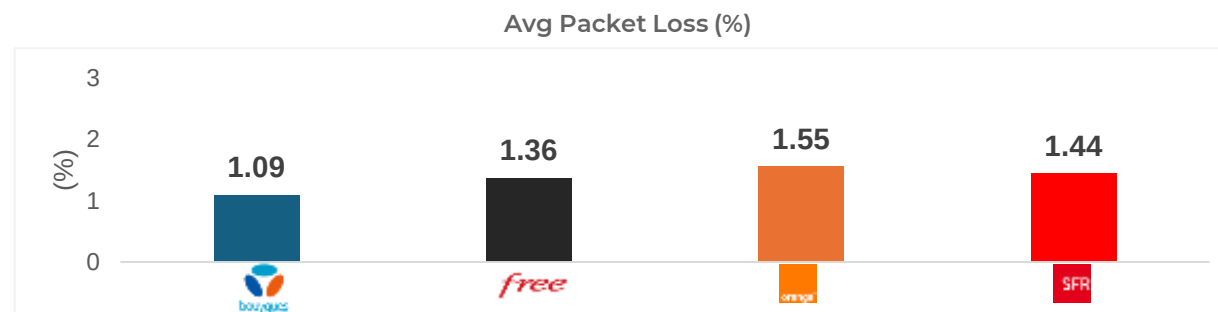
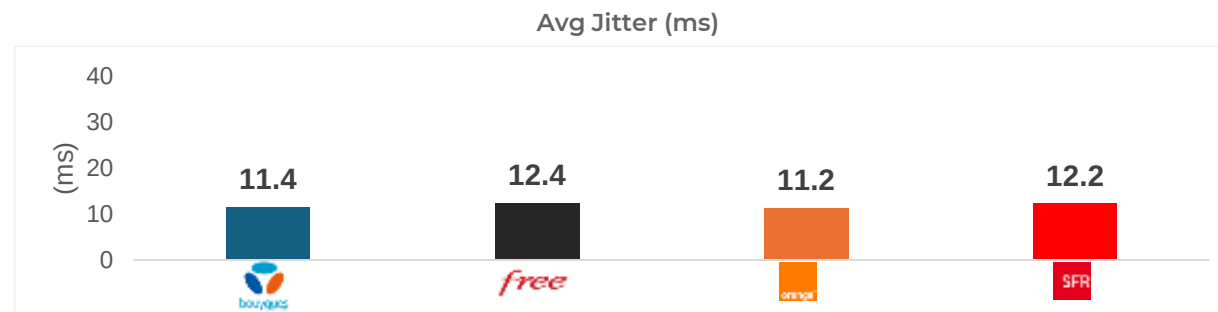
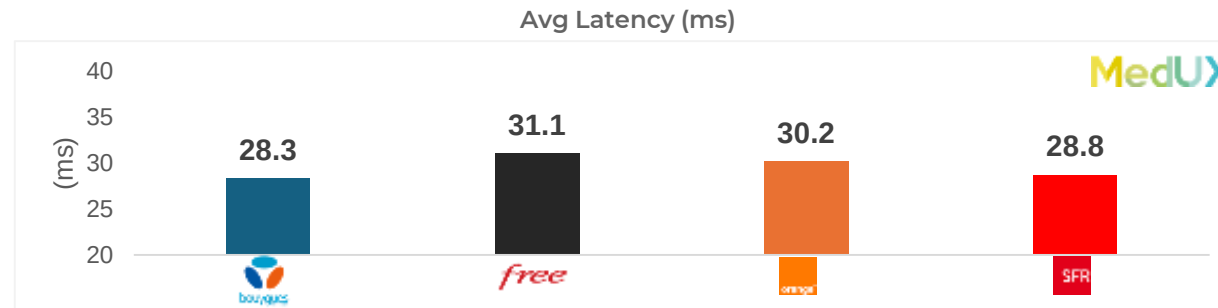


Bouygues records the lowest packet loss in France, while Orange shows highest values.

- **Bouygues achieves the best packet loss rate (1.09 %)**, followed by Free and SFR, while Orange records the highest loss.
- **The gap between operators is small but relevant**, as even minor differences in packet loss can affect real-time applications such as video calls or gaming.
- **Geographically, packet loss is lowest in southern and southeastern regions**, while northern areas show slightly higher loss, indicating localized performance degradation.



QoS Country-level comparisons | Responsiveness Metrics



Bouygues delivers the most stable network experience in France, with the lowest latency and packet loss.

- **Bouygues leads in latency (28.3 ms) and shows the lowest packet loss (1.09%),** confirming strong network responsiveness and reliability.
- **Jitter values remain fairly homogeneous across operators** — all around 11–12 ms — suggesting consistent short-term network stability.
- **Orange stands out for higher packet loss (1.55 %),** despite maintaining competitive latency and jitter levels, which could affect real-time applications such as video calls or gaming.

6. Quality of Experience Insights

- Service performance (streaming, gaming and social media experience)





Streaming Experience



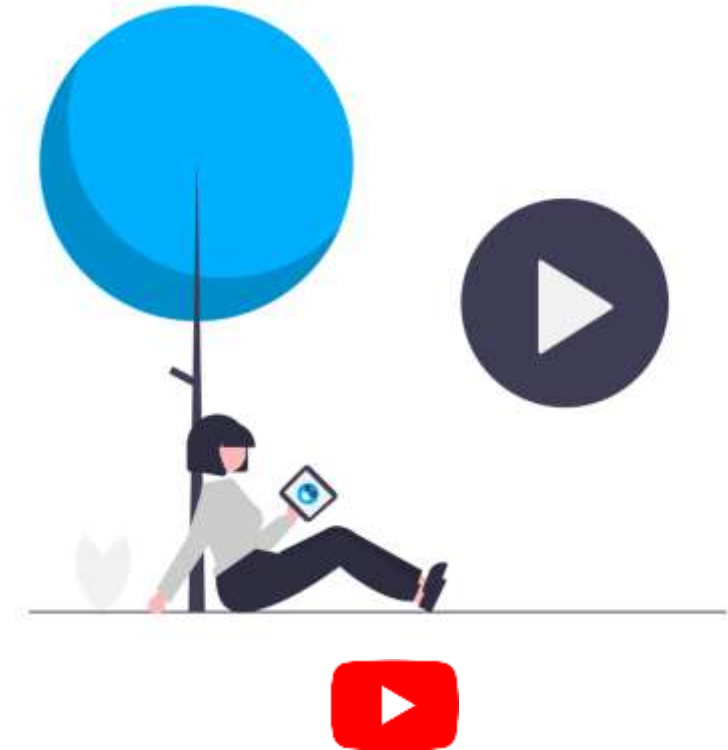
Scope

The Video Streaming Test checks how well video streams are delivered to end-users. We play the requested video stream and evaluate the video playback and exploring the different phases



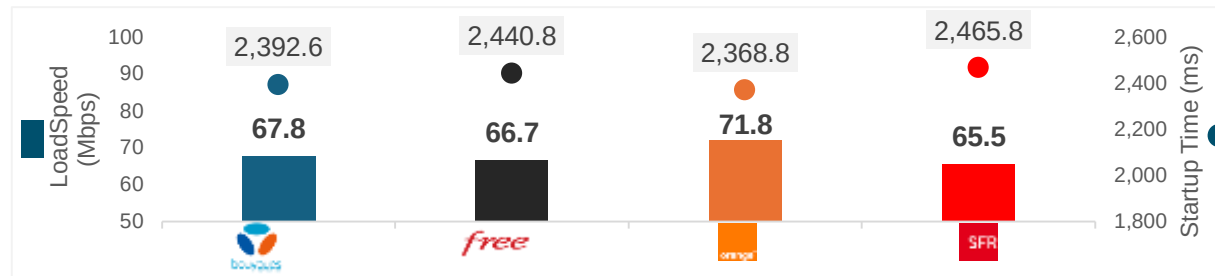
Main Streaming Experience KPIs

Video download speed, Video streaming bitrate, Video startup time, Number of rebuffering events, Video Stalling Ratio or Dominant Streaming Bitrate



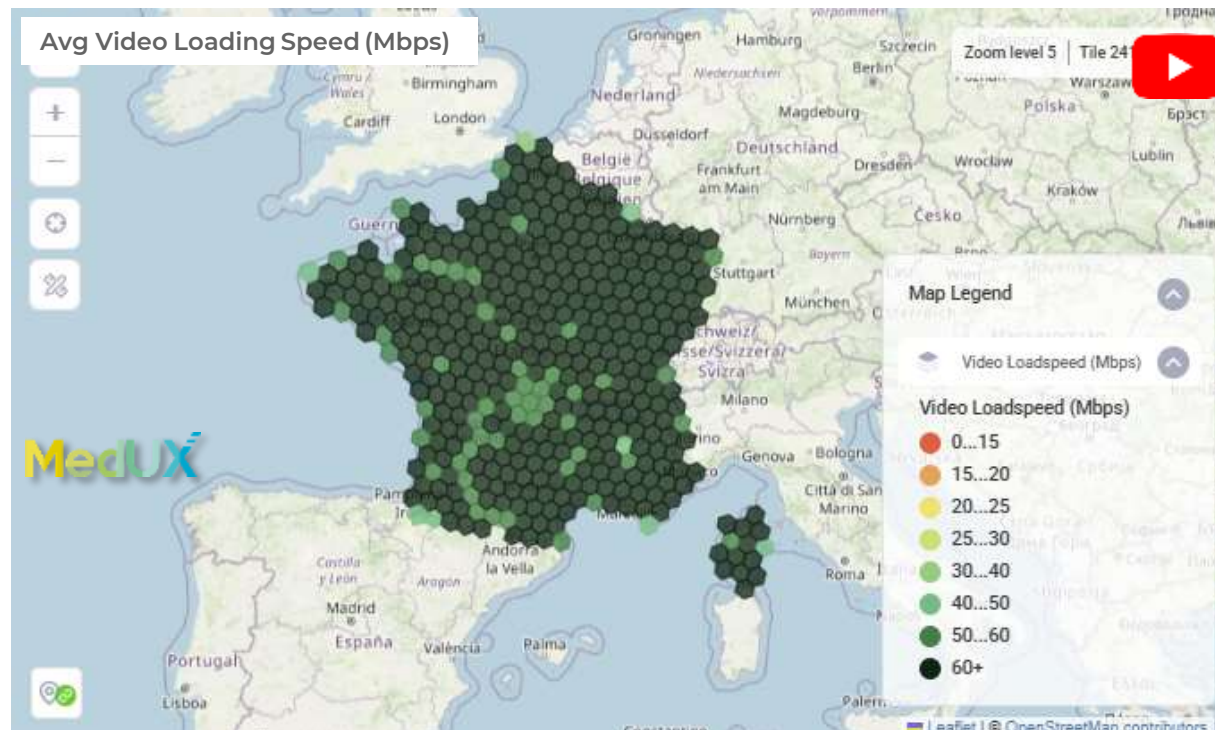
Service performance | Streaming: Video Loading Speed and Start Time

Avg Streaming Video Loading Speed (Mbps) and Startup Time (ms)



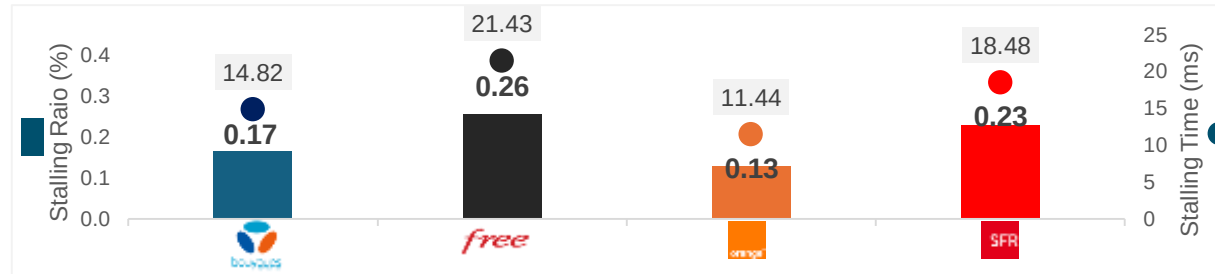
Orange delivers the fastest YouTube video loading speed and Startup time in France. SFR has the higher plays in 4K quality.

- **Orange leads in average video loading speed (71.8 Mbps)**, outperforming Bouygues, Free, and SFR.
- **Startup times are relatively close across operators**, ranging between ~2,300–2,500 ms, with Orange showing the lowest value.
- **Bouygues demonstrates a very stable and balanced performance** across all Streaming KPIs, resulting in a tie with Orange in the overall score
- **Geographically, performance is consistent across most of France**, with dense areas showing higher speeds, reflecting strong overall streaming capability nationwide.



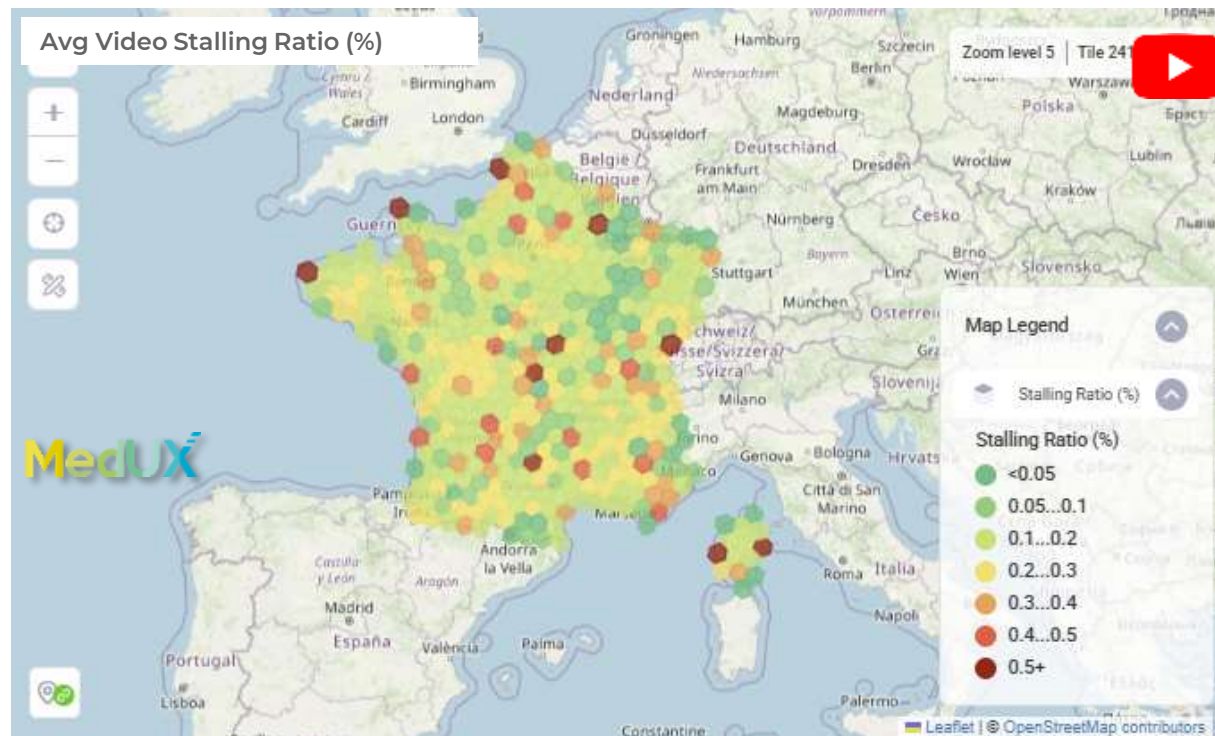
Service performance | Streaming: Video Stalling Ratio and Time

Avg Streaming Video Stalling Ratio (%) and Stalling Time (ms)



Orange delivers the lowest Youtube Stalling Ratio and Stalling Time in France, while Free records the worst values

- Orange leads in Stalling Ratio (0.13%) and Stalling Time (11.4ms) outperforming Bouygues, Free, and SFR.
- Free records the worst values, closely followed by SFR.
- There is a **high** heterogeneity in the values of Stalling Ratio across France.

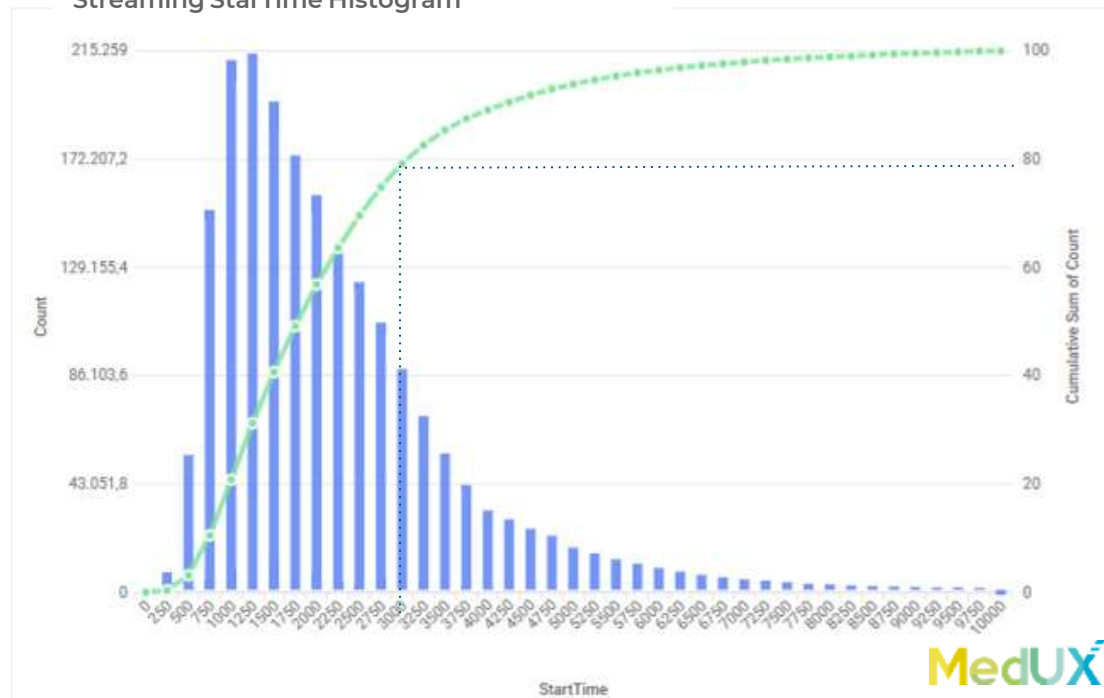


Service performance | Streaming: Video Quality Rate

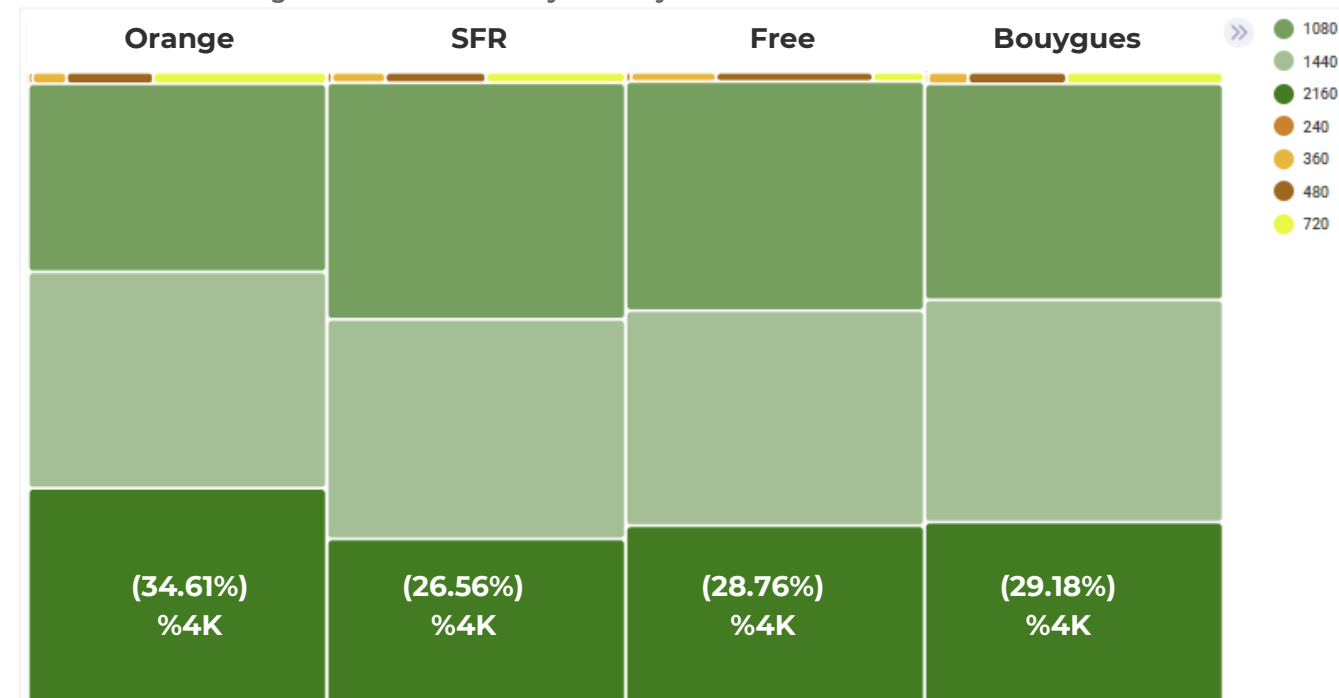
Video start times show strong performance across France, though Ultra HD quality still has room to grow.

- Around 80% of streaming sessions start in under 3 seconds, confirming a generally fast and smooth playback experience. The remaining 20% exhibit longer delays, suggesting that some regions or networks still face occasional startup performance issues.
- Regarding video streaming quality, **Orange stands out with over 34% of sessions delivered in Ultra HD**, while the majority of video streams are played in HD resolution or higher.

Streaming StarTime Histogram



Streaming Dominant Bit Rate by Country





Gaming Experience



Scope

The Gaming Experience Test evaluates how well real-time online games perform by measuring key metrics such as latency, jitter, and packet loss, using some of the most popular gaming destinations like Epic Games and Riot Games.



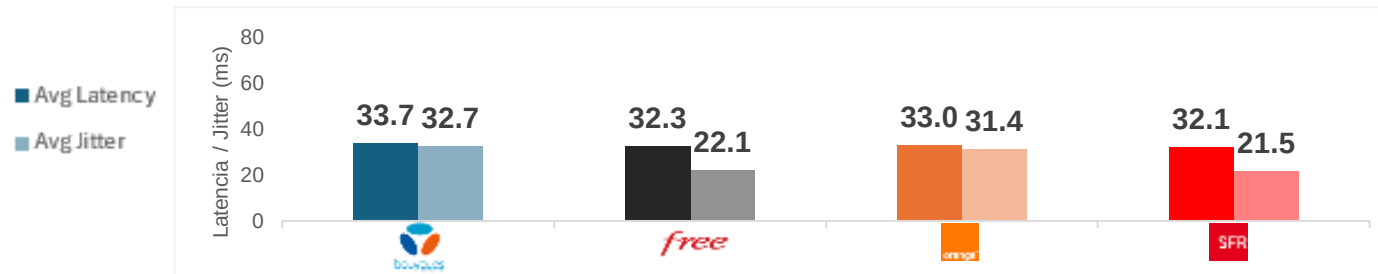
Main Gaming Experience KPIs

latency, jitter, and packet loss



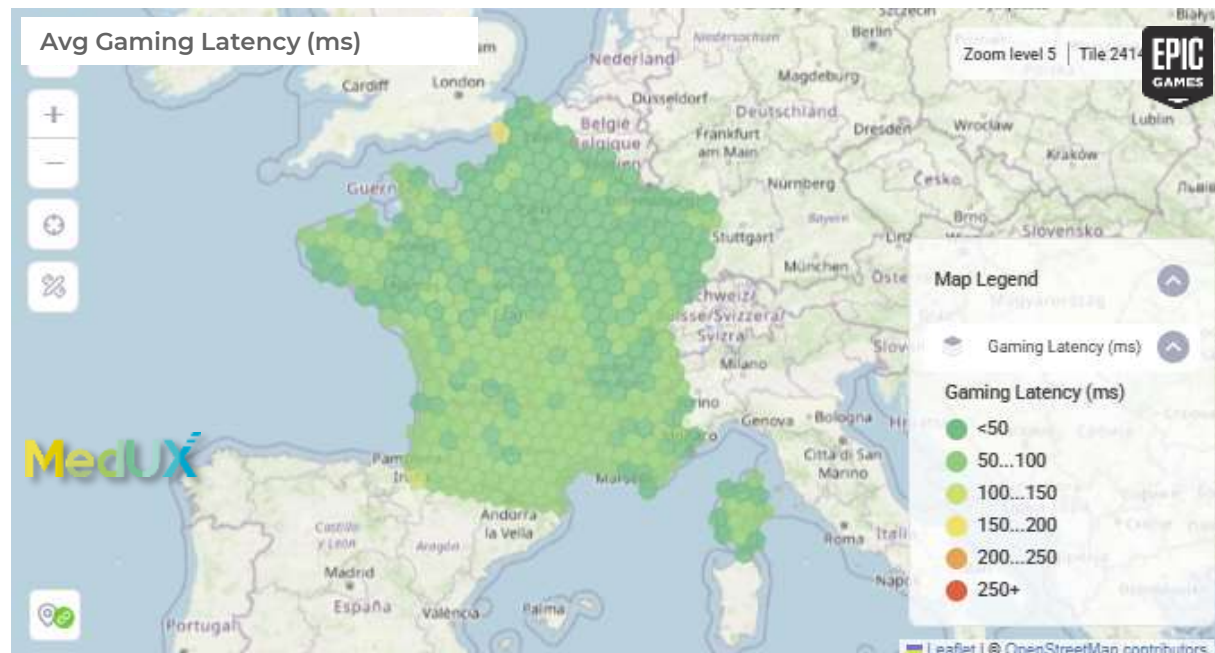
Service Performance | Gaming: Latency

Avg Gaming Latency (ms)



SFR and Free achieve the best gaming latency performance in France, and also both show good figures in Jitter.

- SFR records the lowest gaming latency (32.1 ms) and the lowest jitter (21.5 ms), followed closely by Free — both providing very good conditions for online gaming.
- Bouygues shows the highest latency (33.7 ms) and significantly higher jitter (32.7 ms), but it offers the highest availability of access to gaming platforms and maintains stable jitter across all samples.
- Geographically, latency remains well below 50 ms across most of France, indicating widespread suitability for gaming, with only minor variability between regions.





Social Media Experience



Scope

The Social Media Experience Test measures how quickly and smoothly social media platforms load by analyzing key browsing metrics when accessing popular destinations like Facebook, Instagram, and TikTok.

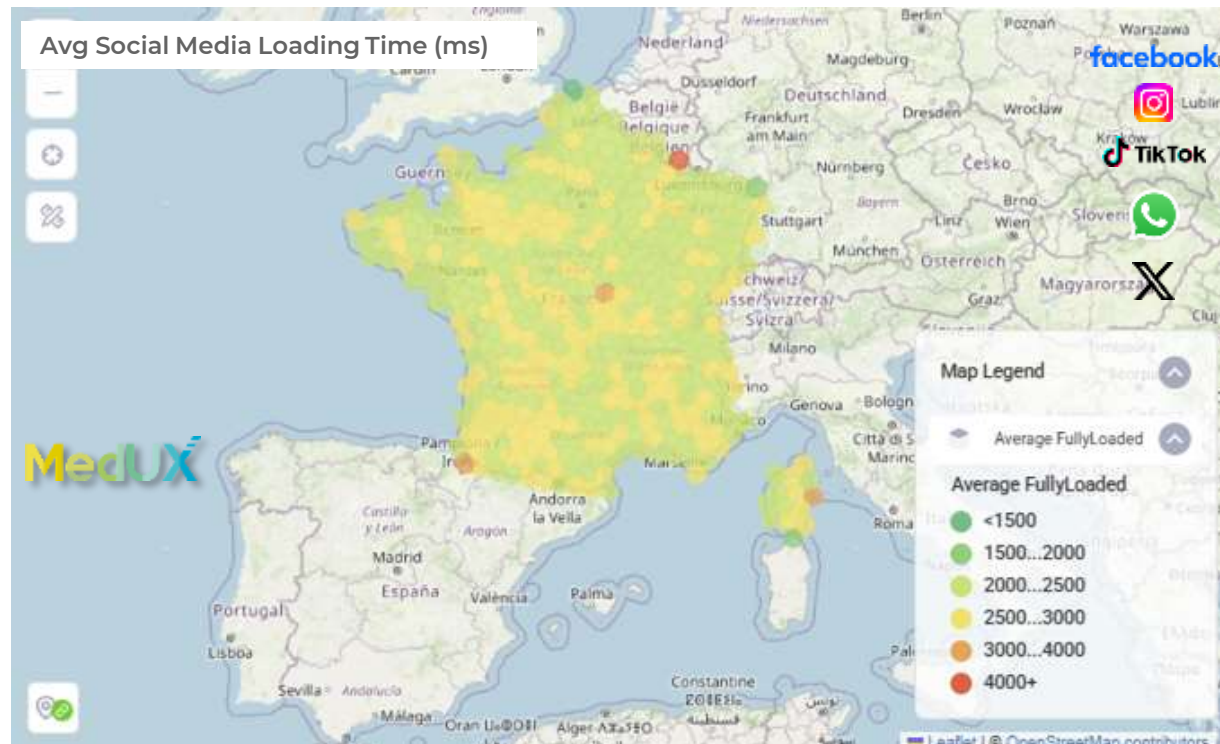
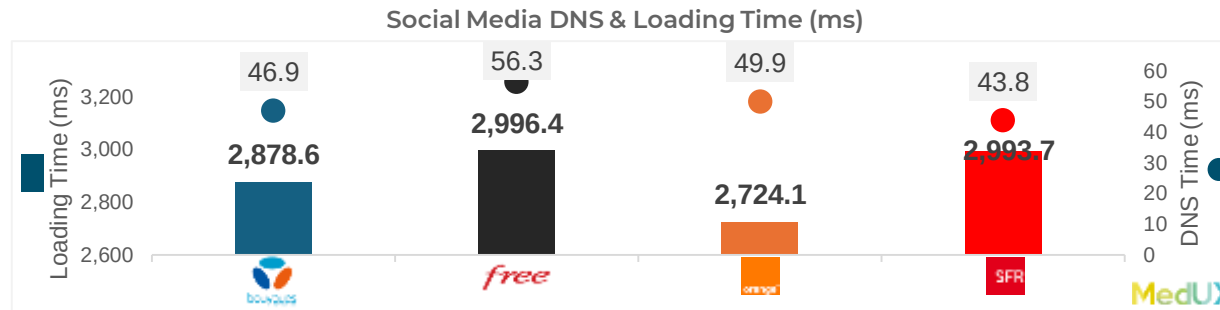


Main Social Media Experience KPIs

Social Media Avg Loading Time, Avg DNS Time, Avg Fully Loaded or Number of Resources.



Service Performance | Social Media: Loading and DNS Lookup times



Orange provides the fastest social media loading experience in France, while SFR leads DNS performance and Free shows room for improvement.

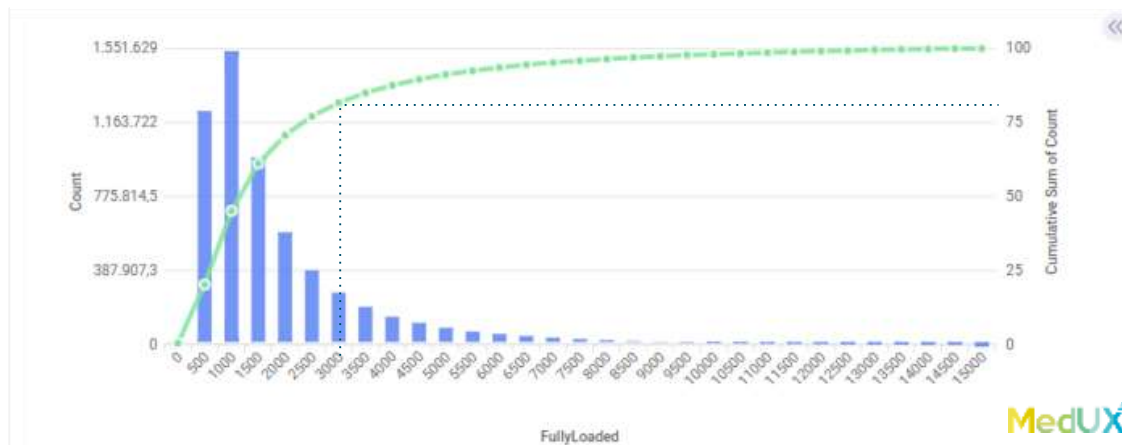
- **Orange records the lowest average loading time (2,724 ms)**, outperforming Bouygues, Free, and SFR, ensuring faster access to platforms like Instagram, Facebook, TikTok, Whatsapp or X.
- **SFR records the best DNS resolution time (43.8 ms)**, followed by Bouygues and Orange, while **Free stands out with a notably higher DNS delay (56.3 ms)**, indicating slower initial connection setup.
- **Geographically, loading times remain consistent across France**, with solid web-browsing responsiveness nationwide.

Service Performance | Social Media KPIs

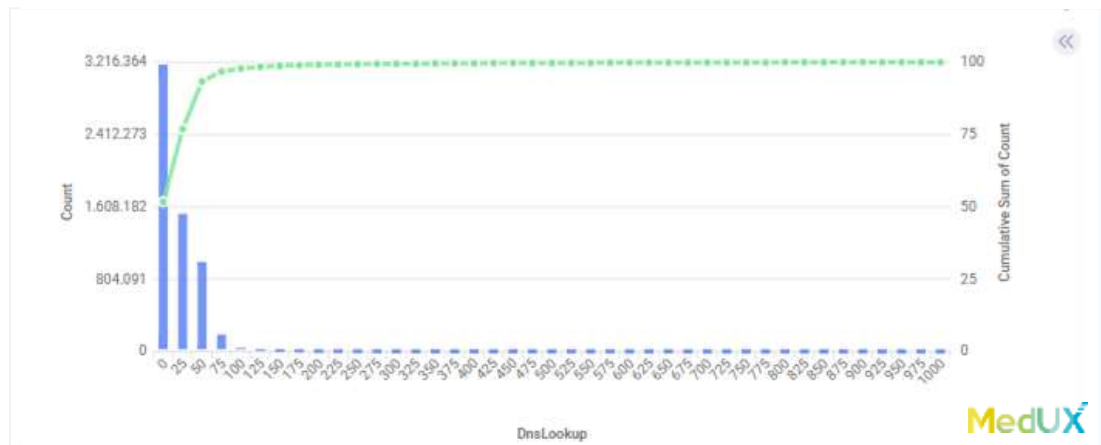
Instagram offers the best social media experience, with faster loading and DNS times compared to other platforms.

More than 20% of social media sessions exceed the 3-second loading threshold — highlighting persistent experience gaps even on modern networks. Instagram loads ~30 % faster than TikTok or X, and has in general a better experience.

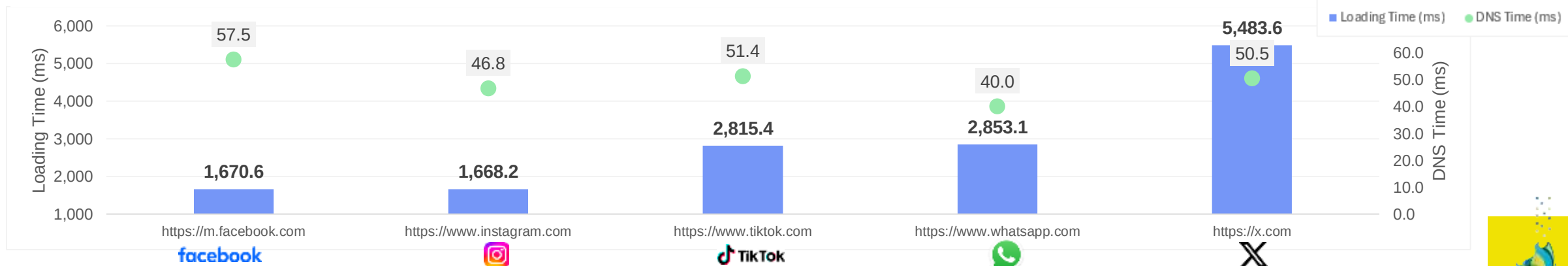
Social Media Loading Time Histogram (ms)



Social Media DNS Time Histogram (ms)

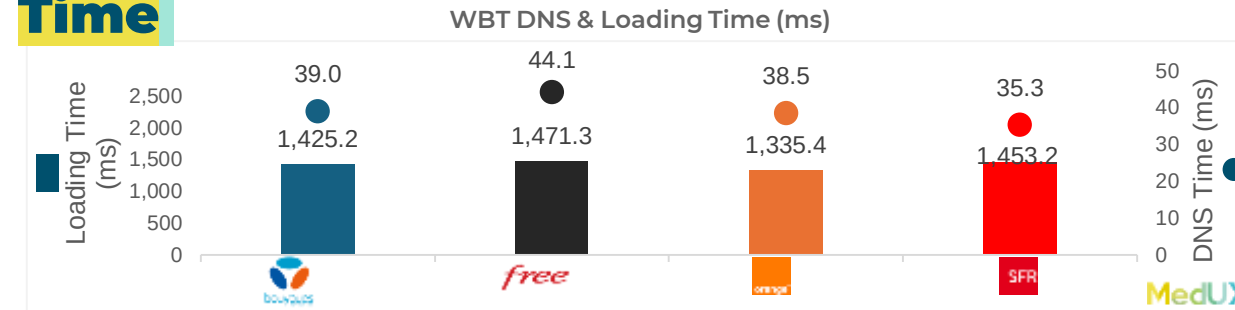


Loading Time (ms) & DNS Time per Social Media Target



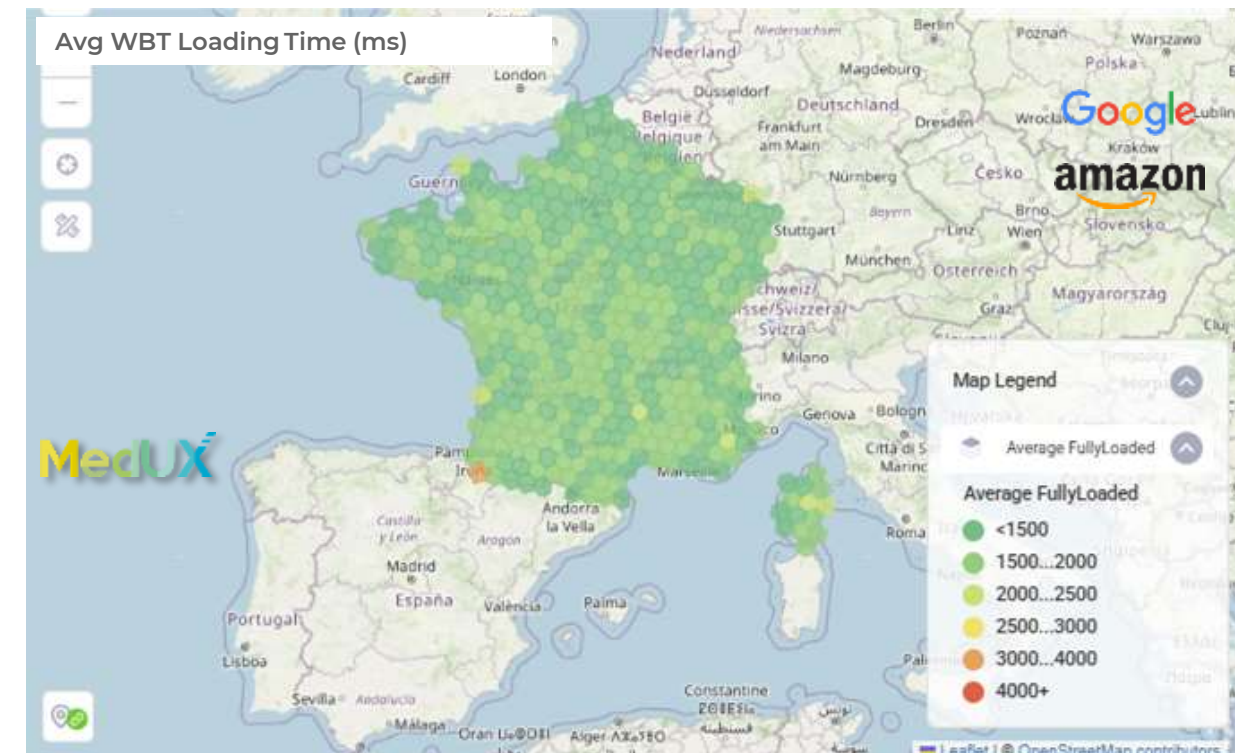
Service Performance | Web Browsing: Web Loading and DNS Resolution

Time



Orange delivers the fastest web browsing performance in France, while SFR leads DNS responsiveness and Free shows slower resolution times.

- Orange achieves the lowest average page loading time (1,335 ms), ahead of Bouygues SFR and Free, providing the smoothest browsing experience on major sites like Google or Amazon.
- SFR records the best DNS resolution (35.3 ms), followed by Orange and Bouygues, while Free shows the highest DNS time (44.1 ms), which may slightly delay the initial page load.
- Performance is consistent across most of France, with widespread areas below 1.5 s in average loading time, confirming strong overall web browsing quality.

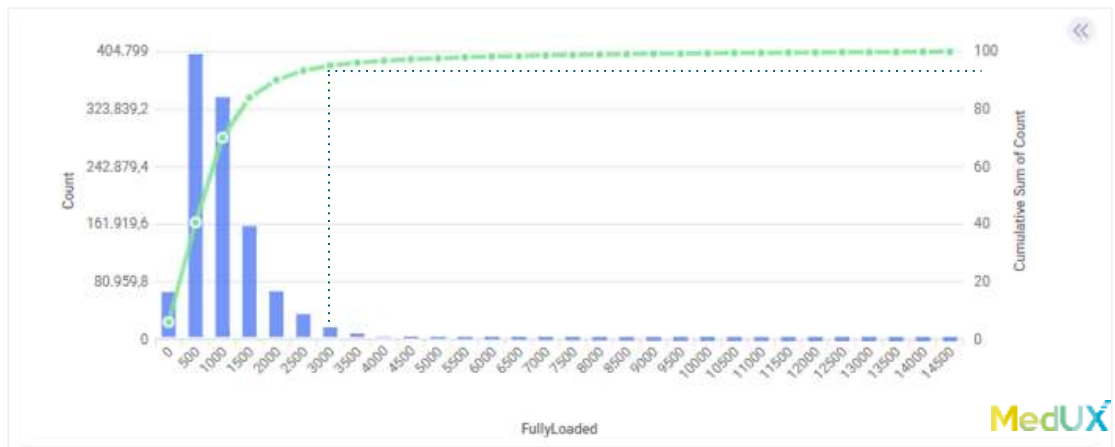


Service Performance | Web Browsing KPIs

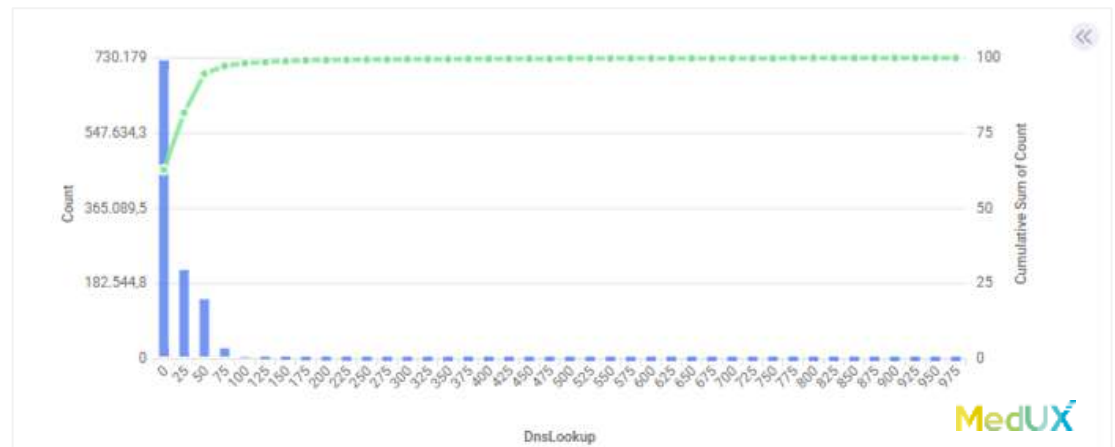
Google offers the best social media experience, with faster loading and DNS times compared to other platforms.

Less than 10% of web browsing sessions exceed the 3-second loading threshold.

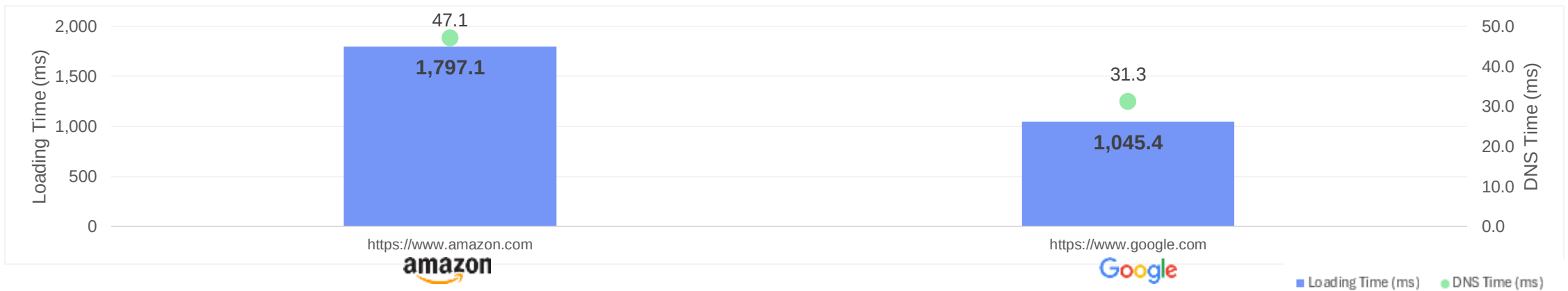
WBT Loading Time Histogram (ms)



WBT DNS Time Histogram (ms)



Loading Time (ms) & DNS Time per Social Media Target



6. MedUX, a trusted partner

The internet **Quality of Experience** testing and monitoring company.

QoE Everywhere in the digital Era.

Why MedUX?

“What if you could get a unique ecosystem that provides a comprehensive multi-play **one-stop-shop QoE** suite for Telecommunications...

...so that you can get the **network insights** that you need from a **customer perspective**, through the field-data generated by our robots or gathered directly from the end-user's devices with agents

For example, testing, monitoring and optimizing **network performance**, ensuring **quality and regulatory compliance** to improve the customer's experiences.

And that's not all, a group of **specialized professionals** will work closely with your team to ensure we provide the **maximum value** for you with our advanced analytics tools.”



The internet integral **Multiplatform** testing and monitoring company.

For

- Communication service Providers
- Telecom Regulators
- Digital Enterprise

Multi
platform


Mobile & Home Robots


Agent App


SDK & Crowdsourcing


Advanced Analytics

Multi
technology


Fixed


Mobile

Multi
network

WiFi

xDSL

Fiber

FWA

2G

3G

4G

5G

Our solutions

1**5G****Benchmarking****Wholesale control****2****Regulatory
compliance****Anomaly Detection****3****Grand scale QoE
monitoring****Massive field-data
monitoring****4****In-Home
performance****CPE
performance**

Our clients



Communication service
Providers

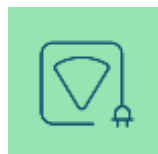
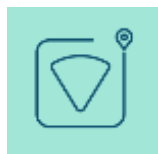


Telecom Regulators



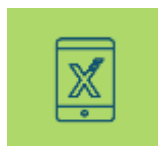
Digital Enterprise

Multiplatform QoE Suite



Mobile & Home Robots

Mobile network monitoring
and In-Home QoE
measurements from real
end-user perspective.



Agent App

Available on iOS, Android
and Harmony; supports
various QoE
measurements.



SDK & Crowdsourcing

QoE insights from real
world end users. Collects
information on the mobile
network.



Advanced Analytics

Offers Agile tools for
monitoring network
services and discovering
insights in real time.



QoE Revolution.

Since 2014, MedUX has been revolutionizing networks and services testing from the **customer perspective**. Our figures have not stopped growing.



10.000

Robots

Active testing
devices
all over the world.



+20 Billions

Of Samples

Analyzed in real
time, without
integration and 100%
operated by us.



+4000M

People

Covered by MedUX
deployments.



+50M

Agents

SDK Agents and
APPs collecting
insights from any
device.



Global Trusted Partner.

+ 30 Countries

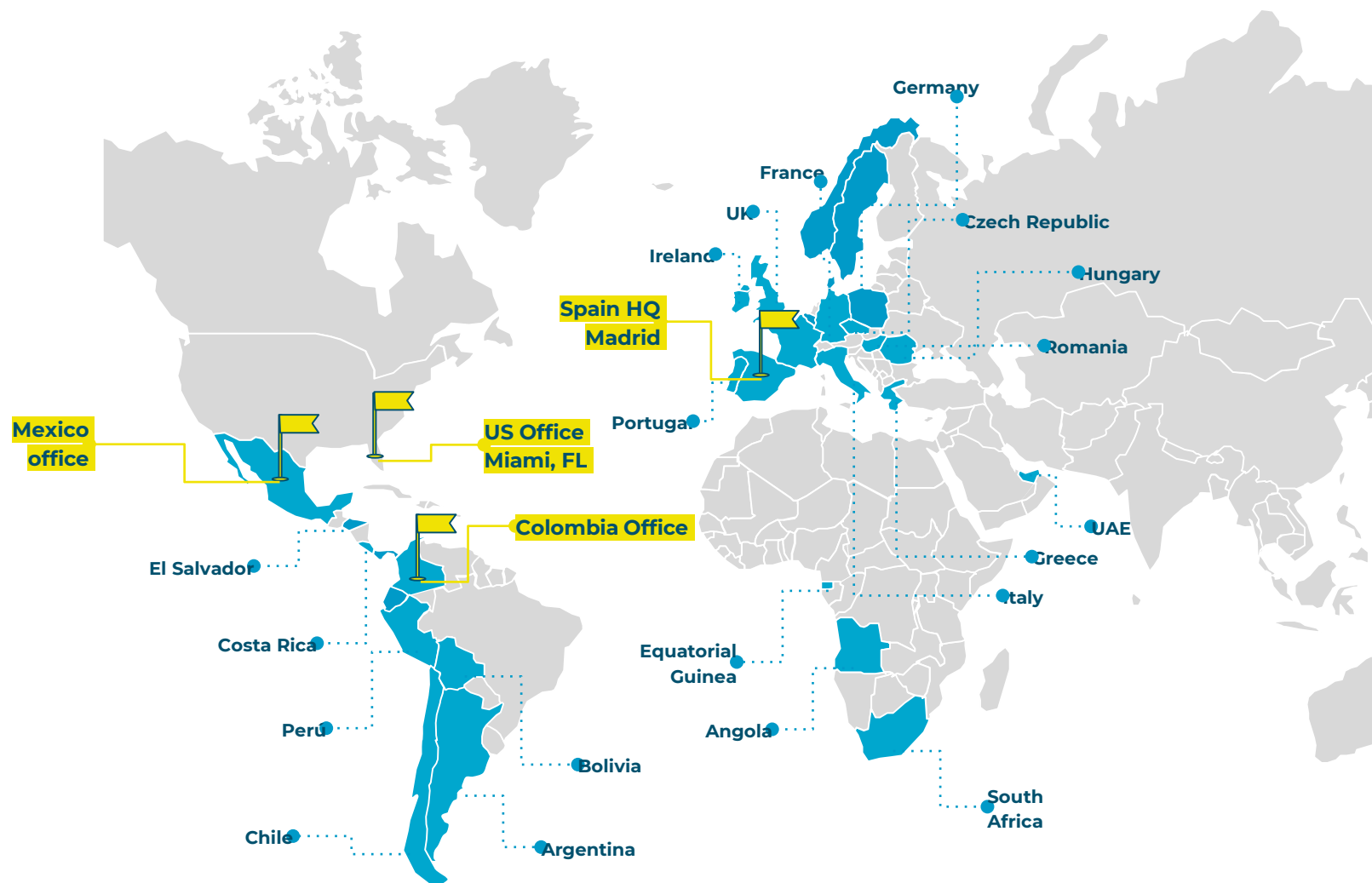
International presence.

Global presence.

Centers of excellence
throughout the world.

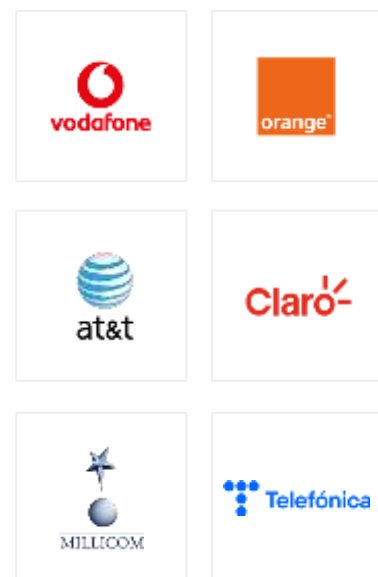
 **Projects**

 **Offices**



Success Stories

Global TELCOs



Governments



Other Carriers



QoE Everywhere in the Digital Era



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