

Market Landscape: Core Vendors - 2025

Roberto Kompany

Principal Analyst, Mobile Infrastructure

askananalyst@omdia.com

Contents

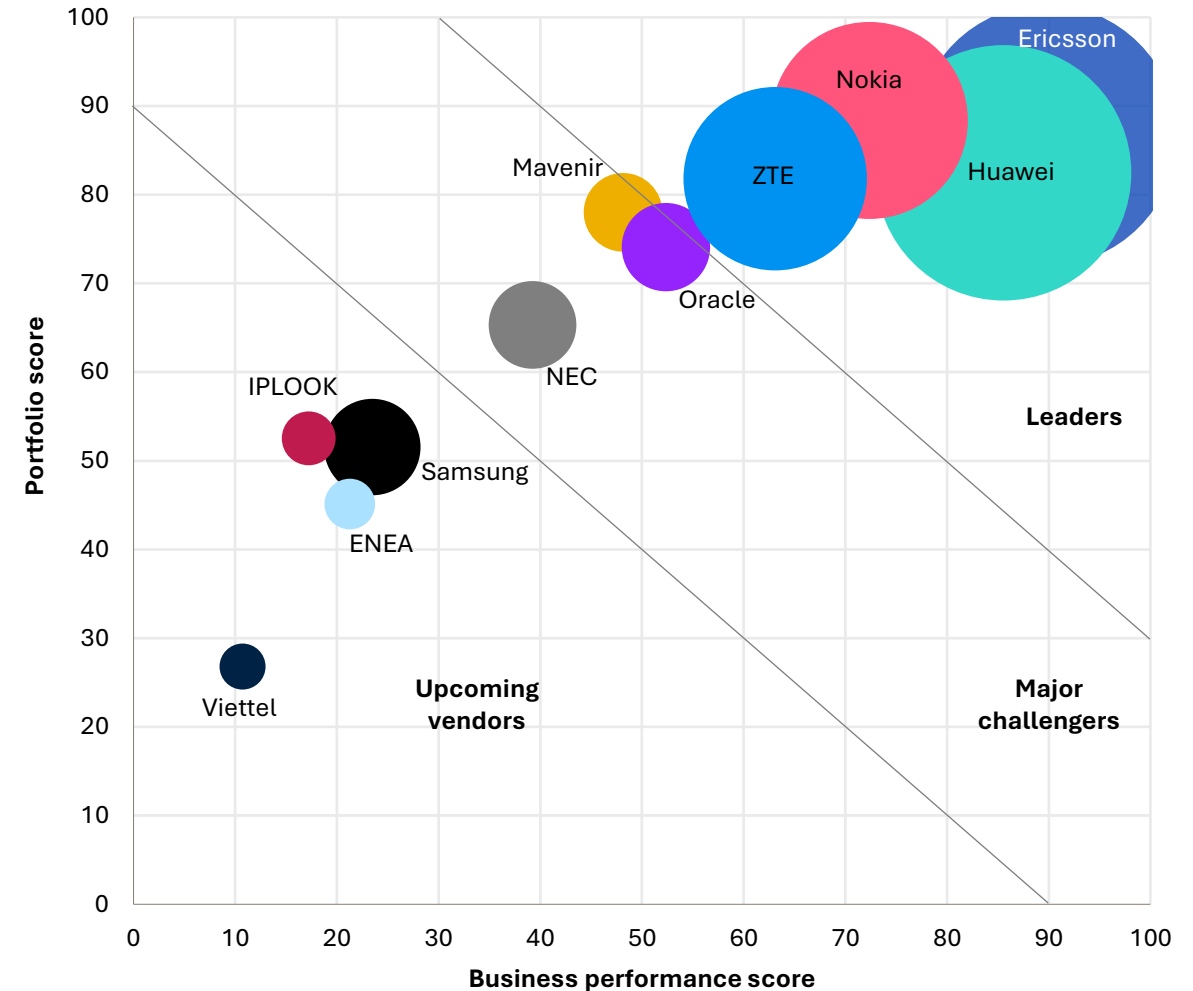
- Summary 3
- Methodology 9
- Business performance 12
- Portfolio assessment 18
- Conclusion 25
- Appendix 27

Summary

Summary (1/5)

- Five vendors essentially control the 4G and 5G core market, with a combined market share of 88.0% in 2024, down from 95.4% in 2020. Within this group, the top three players collectively captured 70.4% of total revenue. With such concentration of market power, each vendor is increasingly focused on asserting leadership, particularly as competition intensifies around the next-generation 5G core. However, measuring market leadership in this space has its challenges.
- Considering two dimensions, their business performance and portfolio, Omdia categorized 11 core vendors into three groups: market leaders, major challengers, and upcoming vendors.
- Compared to the 2024 edition, there is one new vendor that did not participate last year, Viettel, which is in the upcoming vendors’ group.
- The scores indicate the relative position of each vendor in comparison with the others. For example, if a vendor has a lower portfolio score in the 2025 edition than in the 2024 edition, it does not mean that this vendor’s offering is weaker in 2025 than in 2024, but that its portfolio has not improved at the same pace as other vendors.
- Four market leaders emerged in this category this year: Huawei, Ericsson, Nokia, and ZTE. Mavenir, NEC, and Oracle are labeled as major challengers. The positions of the three vendors, Mavenir, NEC, and Oracle, have diminished slightly, so have moved further away from the leaders group.
- Samsung Electronics, and the three new players are in the “upcoming vendors” group. However, caution is required when benchmarking these vendors, given the relatively fewer network functions (NFs) that they develop and the smaller market reach compared to the larger players.

Overall core vendor positioning



Notes: Size of the bubble corresponds to the 2024 core revenue for each vendor.
Source: Omdia

© 2025 Omdia

Summary (2/5)

Summary of categories, score weight, and top three vendors per category

Dimensions and categories	Score weight	#1	#2	#3
Business performance	100	Ericsson	Huawei	Nokia
Total core revenue market share	40	Ericsson	Huawei	Nokia
5G share of total core revenue	15	NEC	ZTE	Oracle
5G core deals with CSPs	30	Nokia	Ericsson	Oracle
New logos	15	Huawei	Ericsson, Nokia	ENEA
Portfolio breadth and competitiveness	100	Nokia	Ericsson	Huawei
Core portfolio breadth	25	More than five vendors with maximum score		
Cloud native readiness	25	Ericsson, Nokia	Huawei, Mavenir	ZTE
Signaling	15	Huawei, Oracle	Ericsson, Nokia	ZTE
Automation	15	Ericsson, Nokia	Huawei, Oracle	Mavenir, ZTE
Core as a service	10	NEC, Nokia	ZTE	Mavenir
Policy and charging	5	Ericsson, Huawei	Oracle	Mavenir, Nokia, ZTE
Analytics and AI/ML	5	Ericsson, Huawei	ENEA, Nokia, ZTE	Oracle

Source: Omdia

© 2025 Omdia

Summary (3/5)

Summary of leaders

Vendor	Summary
Ericsson	Ericsson is the leader in the business performance dimension. It has gained market share, increased the number of 5G deals with CSPs, and the number of new logos in 2025 compared to 2024. Ericsson is the runner-up in the portfolio dimension, and it is the leader or co-leader in several sub-categories. Ericsson’s strengths include cloud native readiness, automation, policy and charging, and analytics and AI/ML.
Huawei	Huawei ranks second in the business performance dimension, where it leads the number of new logos, and has increased the number of 5G deals with CSPs in 2025 compared to 2024. Positioned third in the portfolio dimension, Huawei remains a consistently strong performer across most segments, with leadership or co-leadership in key areas such as signaling, policy and charging, and analytics and AI/ML. Nonetheless, the vendor faces opportunities for improvement in strategic growth categories, notably cloud native readiness and core as a service adoption.
Nokia	Nokia is the leader in the portfolio dimension. It is strong across most categories and its strengths include cloud native readiness, automation, and core as a service. Nokia ranks third in business performance. It leads in capturing 5G deals with CSPs and has made good progress in growing its number of new logos. Furthermore, it had a higher market share in 2024 compared to 2023. Nonetheless, the score for this latter category together with its low 5G share of core revenue has led to a lower business performance score compared to its competitors.
ZTE	ZTE has made good progress in both the business performance and portfolio dimensions since it first entered the leaders tier in 2023. The company has increased the number of 5G deals with CSPs and has also increased its number of new logos in 2024. ZTE has a strong portfolio and leads in the analytics and AI/ML categories in the portfolio dimension and ranks second in core as a service.

Source: Omdia

© 2025 Omdia

Summary (4/5)

Summary of major challengers

Vendor	Summary
Mavenir	Mavenir improved its portfolio score in 2025 compared to 2024 and has a mature portfolio of cloud native NFs. Mavenir ranked second in the cloud native readiness category and third in several other portfolio categories, such as automation. However, it saw a decline in its business performance due to a lower number of 5G deals with CSPs compared to its competitors.
Oracle	Oracle improved its portfolio score and ranks first in the signaling category. Oracle’s strengths also lie in automation and policy and charging in the portfolio dimension. Oracle saw a slight decline in its business performance due to lower 5G deal numbers with CSPs and new logos compared to its competitors. Oracle’s 5G core strategy remains tightly focused on select NF categories—notably, routing and selection, policy and charging, and analytics and automation. Given this targeted approach, we should be cautious when benchmarking Oracle’s portfolio against that of larger vendors that develop all core NF capabilities. For key functions such as the packet core, which Oracle does not develop in-house, the company relies on partnerships with other players. Additionally, Oracle’s 5G core is available in the Oracle Cloud. However, the vendor faces opportunities for growth in core as a service offerings.
NEC	NEC focuses on a limited number of NFs. Nonetheless, it has made good progress in terms of business performance, where its strength lies in 5G share of total core revenue. However, while it gained four new CSP logos, it had fewer 5G deals with CSPs than its competitors and its activities are limited mainly to its home market in Japan, which automatically reduces its addressable market. NEC also focuses on the enterprise market with its core network, which is where its strength in core as a service lies. NEC has scope to strengthen its capabilities in signaling and expand its portfolio of NFs, particularly in emerging areas such as network data analytics functions (NWDAFs).

Source: Omdia

© 2025 Omdia

Summary (5/5)

Summary of upcoming vendors

Vendor	Summary
Samsung	<p>Samsung improved its portfolio score in 2025 compared to 2024. Samsung focuses on the packet core NFs only and therefore does not have its own signaling, policy, and charging for CSPs, NWDAF, or a core as a service solution. We should be cautious when benchmarking its solutions against those of the larger vendors that develop all core NF capabilities. Furthermore, Samsung is absent from entire regions, which automatically reduces its addressable market and both potential revenue and deals. Samsung could move into the major challengers category once it wins more 5G deals with CSPs, grows market share, and develops in categories where it is currently lacking.</p>
IPLOOK	<p>IPLOOK improved its business performance and its portfolio dimension score in 2025 compared to 2024. It is a provider of 4G and 5G RAN and core solutions, including packet core for CSPs, MVNOs, and private networks. The latter is its largest market; however, for the purpose of this study, the focus is on its CSP deals and activities. Some of IPLOOK’s strengths lie in cloud native readiness but also, to a lesser degree, core as a service and automation.</p>
ENEA	<p>ENEA improved its score in both the business performance and portfolio dimensions. ENEA increased the number of 5G deals with CSPs and new logos. In the portfolio dimension, ENEA was ranked second in the analytics and AI/ML category. Unlike the leading vendors, ENEA provides only a few core NFs, which include policy control function (PCF), subscriber data management (SDM), unified data repository (UDR), and security edge protection proxy (SEPP). Nonetheless, it ranks relatively well on cloud native readiness and overall automation.</p>
Viettel	<p>Viettel ranks well in the portfolio dimension given its limited scope. It develops 4G and 5G packet core NFs, network repository functions (NRFs), and network slice selection functions (NSSFs) for the Viettel Group. It is also developing network exposure functions (NEFs) and NWDAFs. Furthermore, it has developed a converged charging system in one platform to support all generations. Viettel will improve its position if it wins 5G deals with other CSPs.</p>

Source: Omdia

© 2025 Omdia

Methodology

Methodology (1/2)

- The core network as covered by Omdia in this report includes only software. Services and other solutions in other network domains, such as radio access networks (RANs) and transport networks, are not included.
- This report focuses on seven categories in the portfolio section for which vendors were sent a detailed questionnaire. These responses were then converted into measurable and comparable metrics, using the information provided by vendors themselves, rather than the analyst's or a third-party's perceptions and opinions. Omdia also underlines some of the key caveats associated with the metrics that are used so that the reader is aware of limitations where they exist.
- Omdia selected two main dimensions for this evaluation: the core business performance and the core portfolio breadth. Each dimension is assessed by looking at different categories and metrics. Metrics have different priorities for different vendors, and what one vendor perceives as important (specific geography, technology, or type of product) may not be as important to other vendors.
- For business performance, the categories are the global packet core revenue market share, the 5G share of each vendor's total core revenue, the number of 5G commercial deals with CSPs, and the number of new logos.
- For the portfolio dimension, Omdia took several subcategories into consideration, such as the portfolio breadth (the categories of core NFs), cloud native readiness, signaling, automation, core as a service, policy and charging for 5G core, and analytics and AI/ML. Details for each category and their weighting in the total score are introduced in relevant sections of the report.
- A caveat to this methodology is that the business performance score is largely based on revenue from evolved packet core (EPC) and 5G packet core, but the portfolio score is based on a broader scope.
- Price competitiveness is critical when an operator selects a vendor, but pricing information is highly confidential and specific to each client and each project. For this, Omdia uses total revenue for market share.

Methodology (2/2)

- Solutions' performance demonstrated during trials is another critical point of differentiation, but Omdia does not have the tools or resources to conduct lab or field tests to measure performance.
- In this 2025 report, Omdia made small changes in the methodology and only slightly modified the weighting for some subcategories to reflect market trends and operators' priorities. The new logos weight was increased from 10 to 15 points, and the 5G share of core revenue weight was reduced from 20 to 15 points.
- A new analytics and AI/ML category was added to the portfolio dimension. The policy and charging weight was decreased from 10 to 5 points, and the analytics and AI/ML category was given 5 points.
- Patent portfolios and contributions to standards are other interesting metrics, but claims from different vendors tend to be contradictory, and comparisons are difficult. Omdia also believes that these criteria are not as important as those included in this assessment. Essential patents matter but Omdia argues that they are important for other reasons, not so much when it comes to assessing a vendor's position and competitiveness.
- For the 2025 iteration of the report, a survey questionnaire was sent to 16 vendors. Those that participated were ENEA, Ericsson, Huawei, IPLOOK, Mavenir, NEC, Nokia, Oracle, Samsung, Viettel, and ZTE. Some vendors that were contacted chose not to participate. More vendors could be included in future editions of this report, with the door firmly open for their participation.

Business performance

Business performance

Summary of categories, score weight, and top three vendors per category

Dimensions and categories	Score weight	#1	#2	#3
Total core revenue market share (for 2024)	40	Ericsson	Huawei	Nokia
5G share of total core revenue (for 2024)	15	NEC	ZTE	Oracle
5G core deals with CSPs	30	Nokia	Ericsson	Oracle
New logos	15	Huawei	Ericsson, Nokia	ENEA
Total business performance	100	Ericsson 90/100	Huawei 86/100	Nokia 72/100

- There are some caveats to basing leadership totally on market share, but market share is important and a generally accepted way of measuring market leadership. Of all categories across the two dimensions considered in this report, market share carries the largest weight (40% of the business performance score and 20% of the grand total).
- Omdia uses revenue for market share because revenue is the most common indicator of business performance, and revenue data tends to be more reliable. The revenue market share shows a company’s scale, its business momentum, and its ability to win new business.
- Omdia also looks at the number of commercial 5G core deals with CSPs (excluding free trials, non-revenue-generating activities, and non-CSP deals). If a vendor has several 5G contracts with the same operator in the same country, it is counted only once, but in the case of multi-country deals with one telecom group (e.g., Vodafone UK and Vodafone Germany), each country counts as one deal.
- Omdia considers the number of deals to be less important than revenue in assessing leadership and, therefore, applies a smaller weighting to deals when calculating scores. Not all deals are equal: a deal with a Tier 1 operator in a big country tends to be worth more in monetary value than multiple deals with Tier 2 and Tier 3 operators in smaller countries.
- Nonetheless, deals are another indication of a vendor’s reach and capacity to win requests for proposals (RFPs) and, more broadly, of its business momentum, so deals are worth looking at.
- Overall, Ericsson was the leader in business performance in 2025 with a score of 90/100, followed by Huawei (86/100) and Nokia (72/100). The main difference between the performance of the first and second positions is due to Ericsson’s total core revenue and number of new logos.

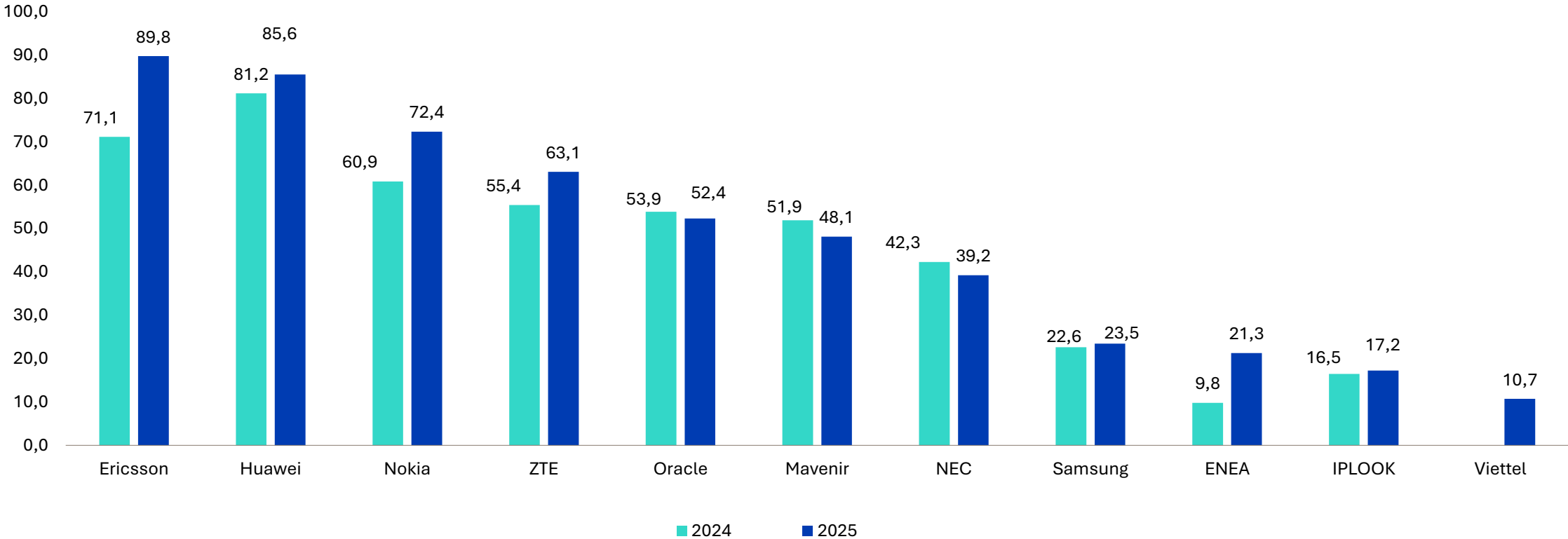
Source: Omdia

© 2025 Omdia



Business performance scores, 2024 and 2025

Business performance scores (maximum 100 points)



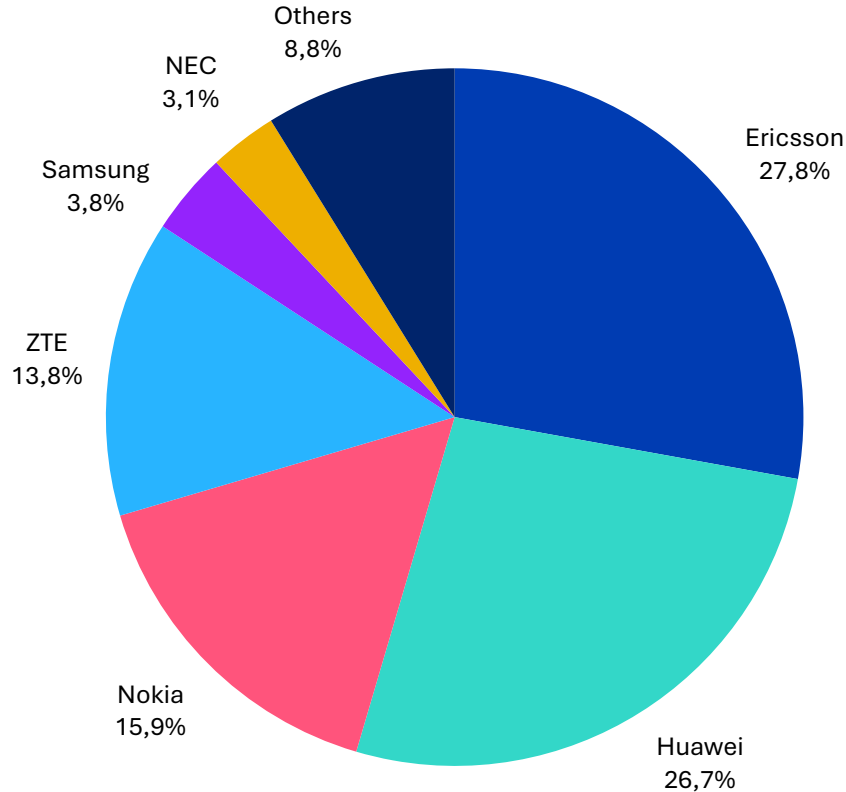
Notes: Scores are relative. If a vendor has a lower score than in the previous edition, it does not mean that this vendor’s performance was necessarily weaker than before, but that the status of each vendor relative to the others has changed.
Source: Omdia



Revenue market share

- In 2024, Ericsson was the market leader, followed by Huawei, Nokia, ZTE, and Samsung Electronics.
- Ericsson, Huawei, and Nokia captured a combined 70.4% of global core revenue in 2024 compared to 70.3% in 2023. When ZTE and Samsung Electronics are added, the top five companies generated 88.0% of total core revenue in 2024 compared to 87.6% in 2023. This is very high but still less than the 95.4% captured by these vendors in 2020, which indicates that upcoming vendors are collectively gaining market share.
- Compared with 2023, Ericsson, Nokia, and ZTE gained market share. Ericsson benefited mostly from market share gains in North America and Asia & Oceania. The reduced spending by CSPs in China impacted Huawei’s revenue.
- Market share remains an important component of vendor strategy. Some vendors deliberately trade short-term margins for increased share, leveraging competitive pricing to secure new business, especially within the 5G core space, which presents fresh monetization opportunities. Conversely, others may prioritize margin protection over top-line growth, consciously sacrificing share to maintain profitability. A single vendor might deploy both approaches, depending on the geography, project scope, or timing.
- For 4G and 5G core revenue, Omdia does not include CSPs’ spending in NF virtualization infrastructure (NFVi) or server and management software.
- Market shares also determine the size of the bubbles on the summary chart on **slide 4**. Omdia provides extensive market share data and analysis on a quarterly basis in its *Mobile Infrastructure Core Market Tracker* report series (see **Appendix**).

Market shares for combined 4G and 5G core in 2024



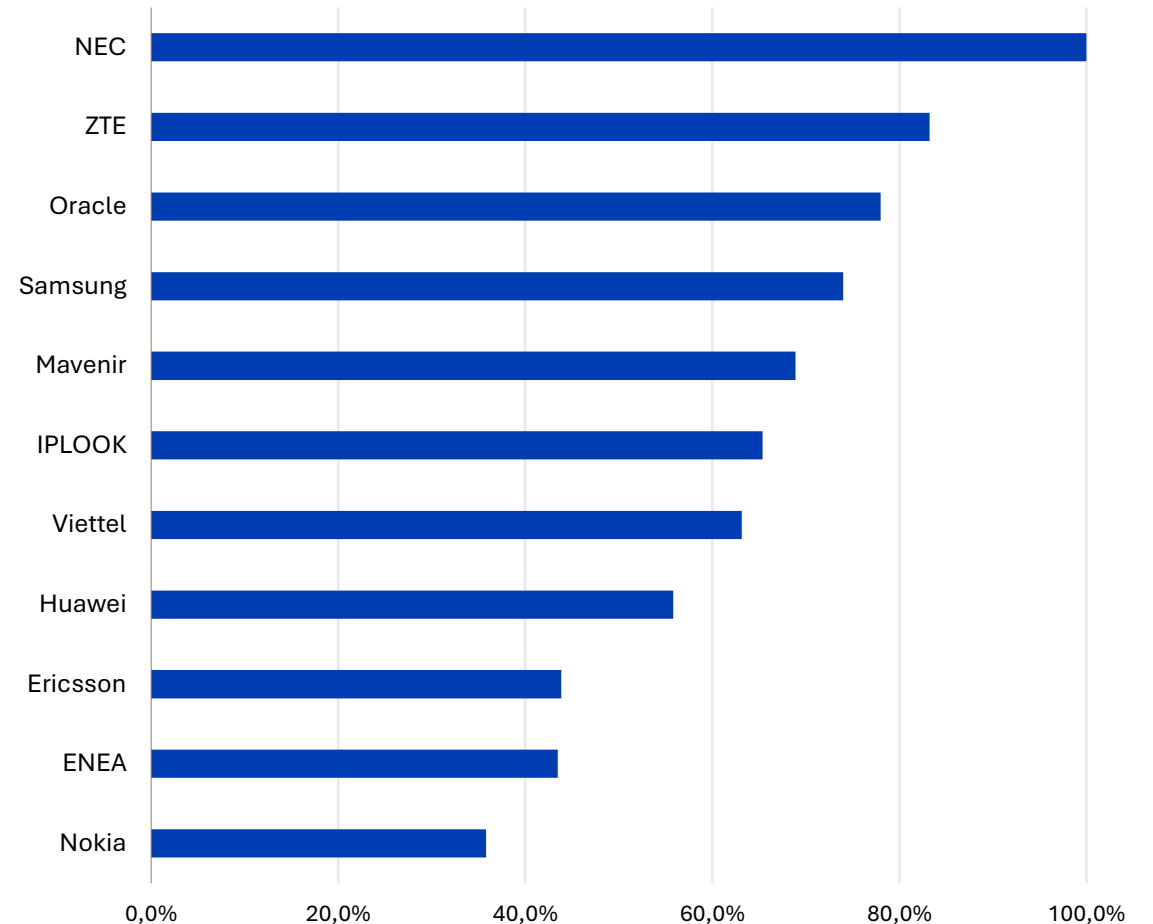
Source: Omdia

© 2025 Omdia

Vendors' 5G revenue split

- To complement the revenue market share analysis (**slide 15**), Omdia also considers the share of 5G as a percentage of each vendor's total core revenue in 2024. (Please note, this is not vendor 5G core market share.)
- A dollar or yuan from the sale of 4G software is worth the same as a dollar or yuan from the sale of 5G software; nonetheless, Omdia and many of our readers consider 5G revenue to be a relevant indicator of a vendor's commercial momentum and how fast the vendor can shift its revenue mix toward 5G—that is, the fastest (and only) growing segment of the core market. It is worth noting that products initially deployed for 4G EPC can often be upgraded to 5G via software. Revenue allocation may vary from one vendor to another.
- Vendors' 5G share was higher in 2024 than in 2023, reflecting the continued momentum of 5G core deployment. As more CSPs adopt multi-vendor strategies for their 5G core networks, opportunities are expanding for a wider range of vendors to secure component-level deals beyond the packet core.
- This metric largely depends on each vendor's revenue geographical mix. NEC benefited from the strong 5G business in its domestic market, Japan; ZTE similarly benefited from 5G deployments in China—both were early 5G-adopting countries, where most investment has already shifted from 4G to 5G.
- In contrast, vendors such as Ericsson, Huawei, and Nokia operate with a more diversified client base and revenue mix, spanning both advanced and late-adopter 5G core markets. This broader footprint tends to dilute percentage-based metrics. However, their global presence across developed and emerging markets offers clear advantages in other dimensions, such as total core revenue and deal volume.

5G share of total vendor core revenue in 2024

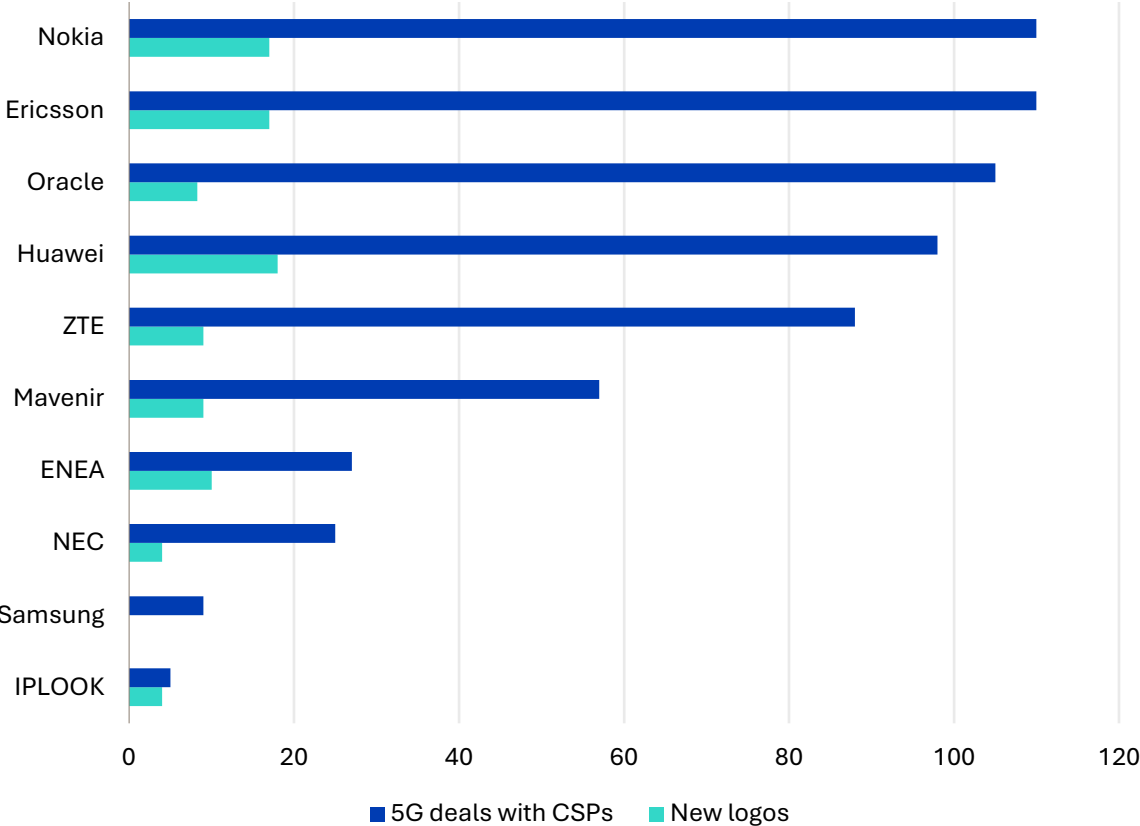


Source: Omdia

© 2025 Omdia

5G deals with CSPs and new logos

Number of 5G commercial deals with CSPs and new logos (2024)



Source: Omdia

© 2025 Omdia

- Huawei, Nokia, Ericsson, and Oracle had over 100 5G deals each in 2024. Nokia, Ericsson, and Oracle have a strong focus in Europe where the market is both diverse and fragmented. The high number of operators in the region means that a significant number of deal opportunities are available. Huawei has a strong presence in Asia & Oceania, the Middle East & Africa, and Latin America & the Caribbean. ZTE continues to expand its presence, especially in emerging markets.
- The new logo metric indicates whether a vendor has gained 5G business at the expense of a competitor or with a greenfield 5G deployment. With non-standalone (NSA) 5G, most operators use their existing 4G EPC vendor to upgrade the core. Given the tight relationship between 4G and 5G in NSA, winning 5G contracts where a vendor did not already provide 4G is a strong endorsement of its solutions. This shows an operator is willing to either rip-and-replace an incumbent 4G vendor by building a new, more advanced cloud native platform that services both 4G and 5G or go through the challenges of interoperability between the two vendors.
- Three vendors, Mavenir, Nokia, and Oracle, have more than 40 new logos each. The CSPs’ desire to build their 5G core with a multi-vendor architecture gives the challengers, such as Oracle, Mavenir, and NEC, the opportunity to win new logos, even if the deals do not encompass a full suite of 5G core NFs. Nonetheless, both Ericsson and Nokia are also winning deals to deliver one or more core NF groups.
- The 5G core is widely considered more strategic than its predecessors, given its role in enabling advanced NFs, monetization models, and national digital sovereignty goals. This elevated status has, in some cases, led to policy-driven advantages for non-Chinese vendors, particularly in countries such as those in the Five Eyes alliance (comprising Australia, Canada, New Zealand, the UK, and the US) and Europe, where security and geopolitical considerations influence procurement decisions. Meanwhile, Chinese vendors have maintained momentum, securing significant 5G core deals in emerging markets, sometimes at the expense of Western vendors.

Portfolio assessment

Core portfolio

- Omdia breaks down the core network portfolio into seven categories, where core portfolio breadth targets both 4G and 5G NFs but the remaining five all target the new 5G core. The six categories are cloud native readiness, signaling, automation, core as a service, policy and charging, and analytics and AI/ML.
- Omdia believes that core portfolio breadth and cloud native readiness are the most important categories. The cloud native readiness category accounts for the work done by vendors to deliver 5G core container network functions (CNFs).
- Signaling NFs will enable vendors to support CSPs' efforts to reduce 5G core deployment costs, while automation will help reduce opex and manual activities during core NF lifecycle management.
- Software as a service (SaaS), traditionally applied to IT workloads, is now emerging as a new category within telecom infrastructure. Select vendors are advancing a vision for deploying 5G core NFs as a service, hosted within hyperscaler environments, managed directly by the vendor, and monetized via subscription or consumption-based models.
- As stated previously, these rankings are based on portfolio offerings and detailed vendor descriptions, but not on actual performance in the field because Omdia lacks the means to test vendors' software.
- For this report, Omdia collected information from 11 core vendors, which includes one new vendor, where each was asked detailed questions about each category.
- Nokia moved to first position, which constitutes industry leadership for the core portfolio, with a score of 88/100, followed by Ericsson (87/100) and Huawei (83/100).

Summary of categories, score weight, and top three vendors per category

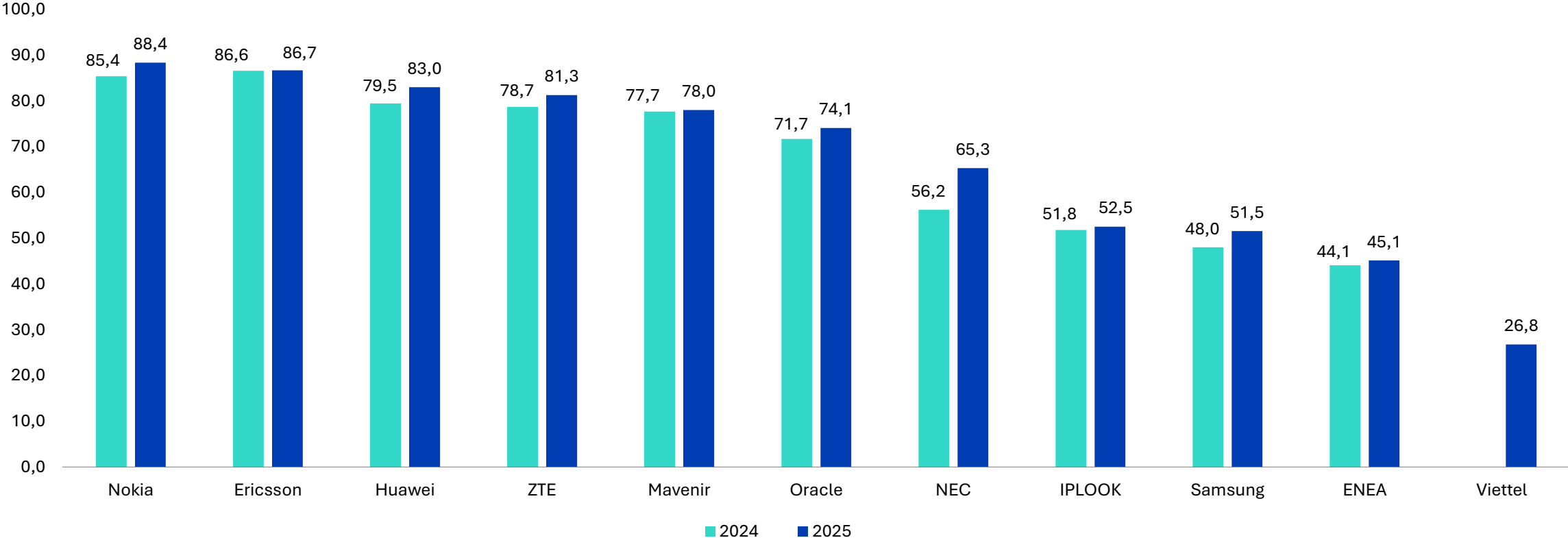
Dimensions and categories	Score weight	#1	#2	#3
Core portfolio breadth	25	More than five vendors with maximum score		
Cloud native readiness	25	Ericsson, Nokia	Huawei, Mavenir	ZTE
Signaling	15	Huawei, Oracle	Ericsson, Nokia	ZTE
Automation	15	Ericsson, Nokia	Huawei, Oracle	Mavenir, ZTE
Core as a service	10	NEC, Nokia	ZTE	Mavenir
Policy and charging	5	Ericsson, Huawei	Oracle	Mavenir, Nokia, ZTE
Analytics and AI/ML	5	Ericsson, Huawei	ENE, Nokia, ZTE	Oracle
Total core portfolio	100	Nokia 88/100	Ericsson 87/100	Huawei 83/100

Source: Omdia

© 2025 Omdia

Core portfolio scores, 2024 and 2025

Core portfolio scores (maximum 100 points)



Notes: Scores are relative. If a vendor has a lower score than in the previous edition, it does not mean that this vendor’s portfolio is weaker in 2025 than 2024, but that the status of each vendor relative to the others has changed. Weighting has also slightly changed, and a new category added, which affects the total score.
Source: Omdia

Core portfolio breadth

- The core portfolio category considers the availability of 3GPP-compliant 4G and 5G core NFs. Results from Omdia’s *Service Providers Core Networks Survey – 2024* indicated that 75% of CSPs will want to build a multi-vendor 5G core that includes two or more vendors. They will therefore need to be able to choose best-of-breed NF solutions from more than one vendor.
- Omdia divided the NFs into subcategories, which include packet core, subscriber data management, routing and selection, security and roaming, policy and charging, and automation, orchestration, and analytics, for which vendors were surveyed to better understand their strengths.
- The 4G EPC NFs and vendor strengths were part of the survey research; however, Omdia research indicates that as CSPs plan their core migrations, they are interested in vendors’ 5G core solution strengths. Furthermore, given the industry move to virtualized solutions, most vendors (except for Ericsson and Nokia) stopped providing 4G core based on proprietary hardware in 2021 and instead focused their efforts on virtualized or cloud native EPC solutions only.
- Some of the new vendors surveyed for this report, including ENEA, Samsung, and Viettel provide a limited set of NFs. Similarly, Oracle does not provide 4G or 5G packet core NFs and has focused its efforts on routing and selection, policy and charging, analytics, and automation subcategories. Therefore, we should be cautious when benchmarking these vendors’ solutions against those of the larger ones. More than five vendors in this category obtained the maximum score.

Cloud native readiness

- It is important that vendors develop their NFs using an efficient set of microservices, where, to reduce footprint and increase agility, these can be shared among various NFs. In this report, several new questions were put to the vendors to better gauge their cloud native readiness. Some of these were about the use of open source software tools and cooperation with silicon vendors.
- CSPs may choose to deploy NFs on the vendor’s own cloud environment (known as a single stack solution); however, a more complex multi-vendor scenario would be to deploy the NFs from different vendors on the third-party cloud for their private buildout. Some examples of private cloud environments are Red Hat Openstack (for virtual machine [VM]-based NFs), Red Hat OpenShift (for container-based NFs), SUSE, and VMware Tanzu.
- CSPs may also choose to build their 5G core on a combination of clouds. An example includes building an instance of 5G core on the public cloud providers (PCPs), such as AWS, Google Cloud Platform (GCP), and Microsoft Azure. In most cases, however, the public cloud instance is built within the CSPs’ own premises, such as the case with AT&T.
- For the overall category, Ericsson and Nokia were the leaders based on the details given on fulfillment of cloud native requirements, NFs certified on multiple cloud platforms, and container architecture. Huawei and Mavenir were the runners-up, followed closely by ZTE.

Signaling

- The 5G core is built as a service-based architecture (SBA) where the goal is to ensure consumer NFs can communicate efficiently and request services from producer NFs. Nonetheless, this will require the availability of a service-based interface (SBI) that acts as an abstraction, allowing NFs to discover other NFs connected to the same interface link.
- Four models, A to D, are devised by 3GPP in order of decreasing new NF rollout complexity to help alleviate CSPs' NF integration work. While model A was for lab trials, B was used in early rollouts; however, it is not considered an efficient architecture in the long term. 3GPP Release 16 introduced the service communication proxy (SCP) used in model C and D; however, deploying the target architecture of model D requires a performant SCP.
- Vendors reported that there are still many CSPs that are using model B, where these were the fast movers that deployed 5G core early and many of them are considering deploying the SCP to migrate to model C. In a multi-vendor environment, unless the SCP can manage protocol adaptations to translate different vendors' messages, models C and D would not be feasible. Some vendors reported that their solution does not support this.
- Nonetheless, most vendors claim that they can deliver models C and D and have demonstrated their solution and are engaged in pre-production works. A few vendors, such as NEC and Samsung, said that they use partners to deliver the SCP. Huawei and Oracle obtained the top position in this category due to the improvements made to its SCP functionalities and models C and D deployments, while Ericsson and Nokia were the runners-up, followed by ZTE.

Automation

- To enhance network agility, reduce costs, and stay competitive in the cloud-driven era, CSPs are increasingly turning to automation. Mirroring the rapid service deployment capabilities of PCPs, CSPs will need robust automation tools to test and launch new services quickly.
- Several new questions were put to the vendors in this report to better gauge vendors' automation strategies, from implementation of CNF-specific artifacts for automation, such as helm charts, to whether product upgrades will impact services and if NFs need to be emptied in advance before an upgrade.
- In the cloud era, there will be many software releases, from those for cloud and hardware layers to NFs and urgent security patches. CSPs will need CI/CD pipelines and Git-based solutions to deliver the software, carry out acceptance testing and product upgrades using in-service software upgrade (ISSU) to reduce maintenance windows, and shorten time-to-market for new services.
- Given the growing demand for AI/ML tools in automation, a few new questions were added to also gauge how these tools, such as chatbots, are used to help automate configuration tasks and simplify complex operations. Several vendors have commented that they are engaged in a wide range of AI-based use case deployments to enable intelligent planning and design, deployment, upgrades, and deliver proactive monitoring and improve operations.
- Ericsson and Nokia obtained the top position in this category for the work done on their product upgrade automation solutions, while Huawei and Oracle scored the same as runners-up, followed by Mavenir and ZTE.

Core as a service

- Understanding how vendors define core as a service is important. Omdia defines core as a service as a core network solution provided on a scalable public cloud infrastructure, where the vendor is responsible for both the operation and the maintenance of the software and for ensuring that the cloud-based infrastructure can deliver the required network performance. The customer pays for the service on a subscription-based or consumption-based model.
- Many vendors' definitions included parts of the definition above but occasionally missed an important aspect—for example, what the payment model looks like or that the solution should be managed by the vendor. The latter is an important aspect of this new way of providing core solutions given that the CSPs can classify the investment as opex rather than capex, and there is no upfront cost. Organizations, such as cable operators with no mobile telecom skillsets or enterprises wanting a private network solution, could depend on core as a service for their 5G core to enter these markets.
- Managing and maintaining 5G core networks is complex and requires specialized skill sets. Yet not all CSPs will have the in-house resources to manage such complex teams and deliver on their KPIs. Even some of the well-known Tier 1 CSPs that have been on the journey for several years do not find the transformation trivial.
- NEC and Nokia have traditionally been the market leaders in this segment and scored the highest given their understanding of the concept and their trial engagements. These vendors, together with ZTE as the runners-up, were followed closely by Mavenir. Only Nokia, NEC, and ZTE claimed that they had deployed commercially, whereas both Nokia and NEC specified AWS as the cloud environment.

Policy and charging

- Policy and charging are two critical elements of CSP 5G monetization. 5G networks with a standalone core will offer a wide range of services beyond the traditional mobile broadband, available through 5G NSA architecture, where some of those will be delivered through network slicing. CSPs can acquire the NFs as separate components or as a combined converged charging system (CCS) to support different services, customers, and metrics.
- Some of the questions in this segment related to the type of solution, the number of CSP customers where they had deployed their products, and how CSPs could purchase these, whether separately or as part of a bundle with other core network NF suites.
- Omdia's survey indicated that there were significant similarities between the solutions that the top vendors provided. Some of the differentiating factors, however, were about the ease of use, how the solutions were sold as part of a packet core suite, a CCS, or a dedicated offer, as well as the number of live commercial deployments each had.
- Ericsson and Huawei obtained top scores for this category, with Oracle as the runner-up, followed by NEC, Nokia, and ZTE.

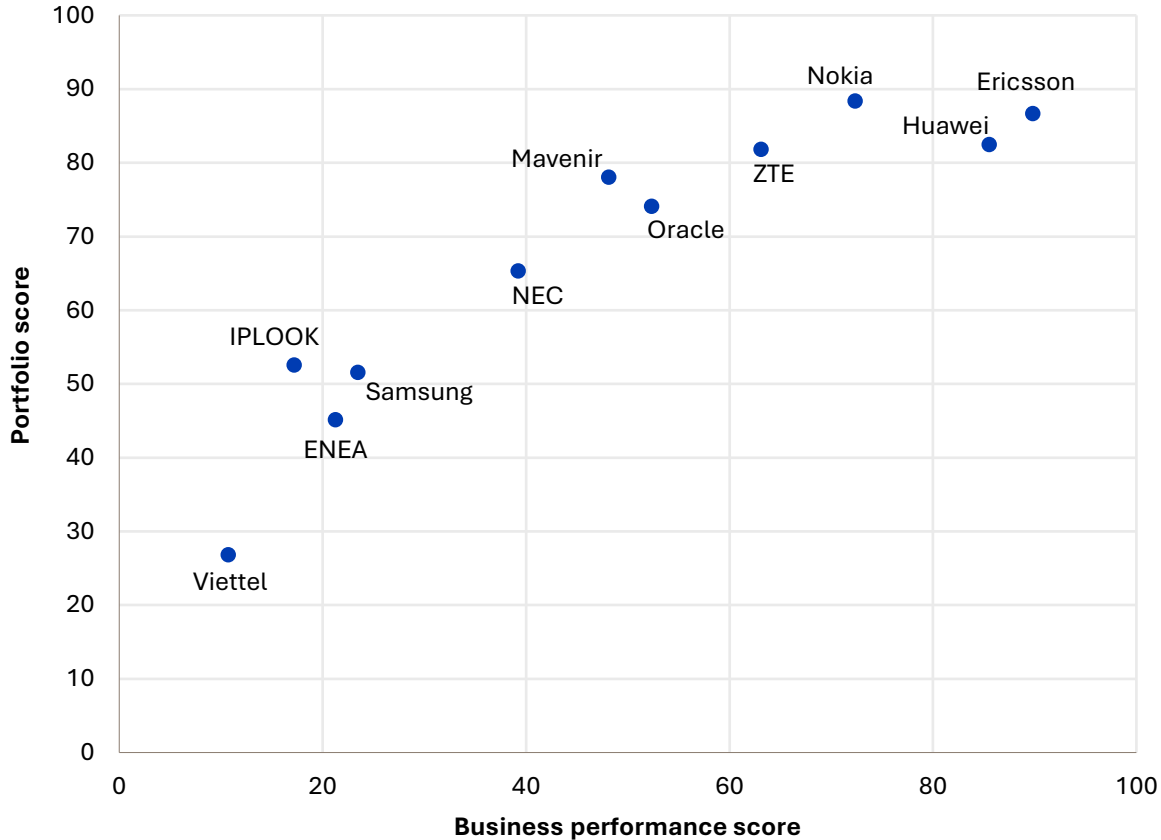
Analytics and AI/ML

- This is a new category added this year because analytics and AI and ML have gained significant traction in the core network over the last year and use cases continue to mature.
- CSPs are implementing intent-based networks and moving toward higher autonomous network levels with the goal of reaching Level 4, as described by the TM Forum, in the next one to two years. On this journey, CSPs will leverage the vendors' solutions, including classic AI, generative AI, and agentic AI, to increase operational efficiencies and network monetization.
- Some of the efficiency creating and optimization use cases that vendors are exploring together with their CSP partners include traffic load prediction several hours in advance, AI operations (AIOps), network and service assurance, and leveraging network large models to enhance control and user plane utilization.
- To create monetization opportunities, the NWDAF together with AI tools can help CSPs to improve traffic classification and deliver better service quality of experience (QoE) for premium paying customers through closed-loop service assurance.
- Ericsson and Huawei obtained the top position in this category for the work done with CSPs in this space, while ENEA, ZTE, and Nokia scored the same as runners-up, followed by Oracle.

Conclusion

Conclusion

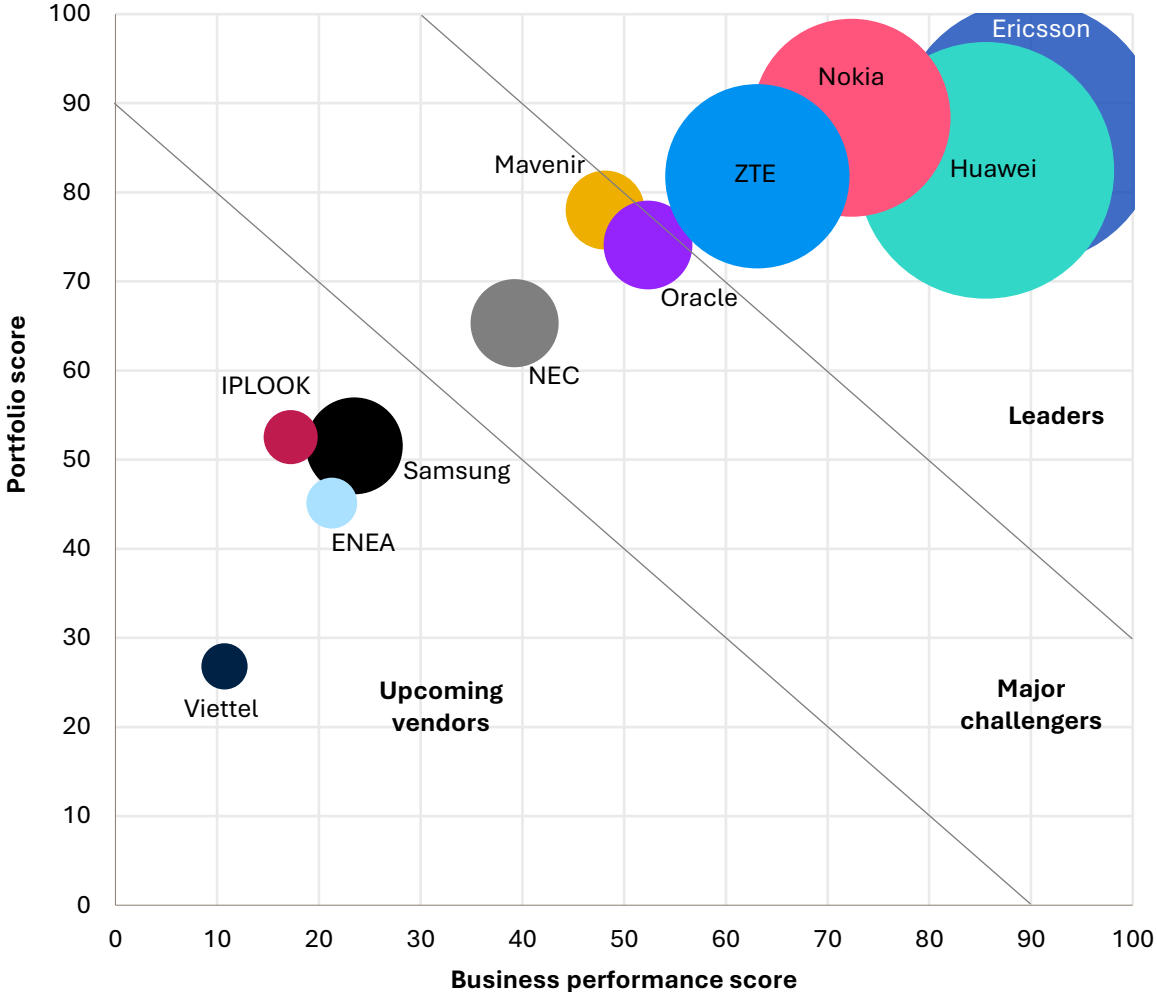
Overall core vendor positioning (same-sized bubbles)



Source: Omdia

© 2025 Omdia

Overall core vendor positioning



Notes: Size of the bubble corresponds to the 2024 core revenue for each vendor. Source: Omdia

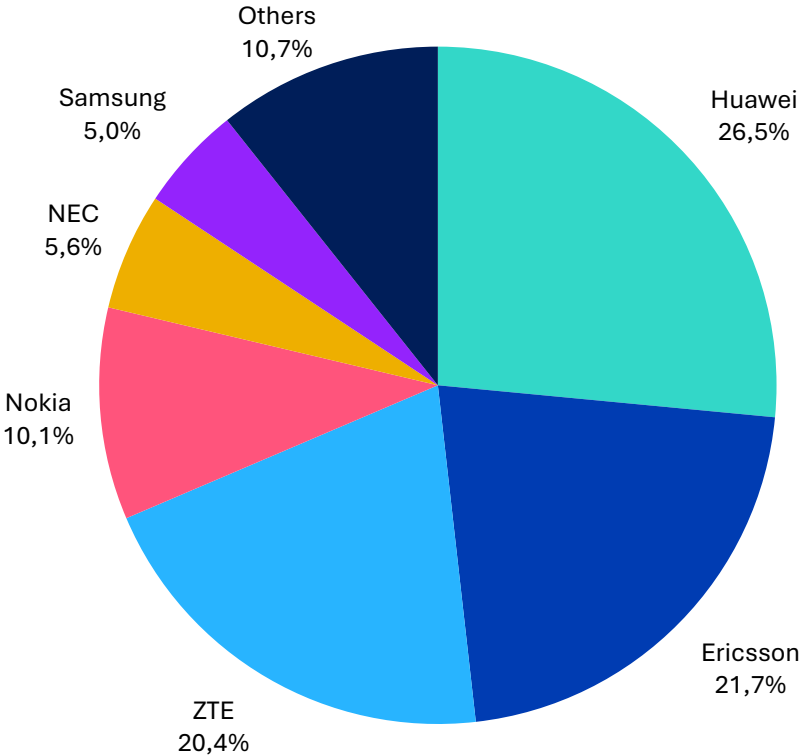
© 2025 Omdia

Appendix

5G core revenue market share

- In 2024, the market leader for 5G core was Huawei, followed by Ericsson, ZTE, and Nokia.
- Huawei, Ericsson, and Nokia captured a combined 58.3% of global 5G core revenue in 2024 compared to 57.5% in 2023. When ZTE and NEC are added, the top five companies generated 84.3% of total core revenue in 2024 compared to 81.2% in 2023. This is because more CSPs are deploying the 5G core network, which translates to higher revenue for these vendors.
- Compared with 2023, Ericsson, Nokia, and ZTE gained market share. Ericsson continued to emphasize that CSPs must build their 5G core using cloud native technologies to best deliver on total cost of ownership (TCO) reduction goals by leveraging the automation tools that cloud native enables.
- For its part, Nokia won new deals and expansion projects, some of which include using appliance-based solutions that it says will help CSPs on their TCO reduction journeys. Nokia also continues to benefit from swapping out other vendors, including Affirmed Networks’ and Metaswitch’s products, from CSP networks.
- ZTE had good growth in 2024, thanks in part to some delayed revenue recognized from 5G core expansion projects carried out in 2023 for the three major CSPs in its home market.

Market shares for 5G core in 2024



Source: Omdia

© 2025 Omdia

5GC and 4G EPC NFs (1/2)

Network function	Description	4G equivalent
Access and mobility management function (AMF)	Supports the termination of nonaccess stratum (NAS) signaling, NAS ciphering, and integrity protection, registration management, connection management, mobility management, access authentication and authorization, and security context management.	Mobility management (MME)
Session management function (SMF)	Handles NAS for session management and interacts with the decoupled data plane by creating, updating, and removing protocol data unit (PDU) sessions and managing IP session context within the UPF.	Packet gateway for control plane (PGW-C)
User plane function (UPF)	Following on from the introduction of the control and user plane separation (CUPS), the UPF is an evolution of the 4G core PGW-U and will process and forward packet data so it can be distributed between the RAN and the wider data network.	Packet gateway for use plane (PGW-U)
Authentication server function (AUSF)	Used for device authentication and security processes between trusted 3GPP access and untrusted non-3GPP access. It stores authentication keys and provides AMF with the necessary authentication services.	New function
Network data analytics function (NWDAF)	Real-time monitoring and analytics of services, network-slice instances, and other core resources to provide insights as well as closed-loop automation.	New function
Charging function (CHF)	Supports online and offline charging features for multiple services, including 5G and 4G core integration.	New function
Policy control function (PCF)	This is an evolution from the 4G PCRF and supports a unified policy framework, such as providing policy rules to control-plane functions, and access to subscription information for policy decisions in UDR.	Policy and charging rules function (PCRF)

Source: Omdia

© 2025 Omdia

5GC and 4G EPC NFs (2/2)

Network function	Description	4G equivalent
Unified data repository (UDR)	A repository of subscriber information used to service other 5G core network functions, such as the PCF and UDM.	New function
Network exposure function (NEF)	This function did not exist in the 4G core; it supports exposure of capabilities and events, secure provision of information from external applications to the 3GPP network, and translation of internal/external information.	New function
Network repository function (NRF)	Provides a record of all network functions available on the platform, together with a profile of each and the services they support.	New function
Service communications proxy (SCP)	Introduced in 3GPP release 16, it is the central point that mediates high volume of control plane signaling and messages in real time, especially for the discovery requests sent to the NRF and other load balancing and traffic prioritization.	New function
Security edge protection proxy (SEPP)	A new security proxy between different operator networks, where all signaling traffic is expected to cross it. It provides authentication between SEPPs and enables filtering of incoming traffic from interconnect.	New function
Unified data management (UDM)	This provides a centralized way to process 5G user data. It also provides access authorization and registration.	Home subscriber services (HSS)
Application function (AF)	A similar function to the AF in 4G EPC. It retrieves resources through NEF and interacts with PCF for policy control.	New function
Network slice selection function (NSSF)	Designates network resources, such as the appropriate AMF, to different slices that deliver services to the end user devices.	New function

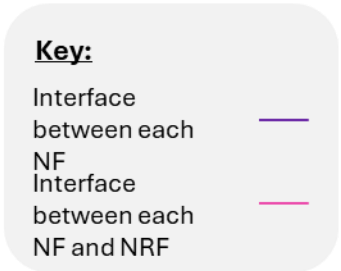
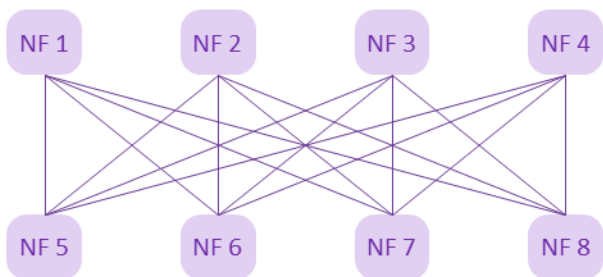
Source: Omdia

© 2025 Omdia

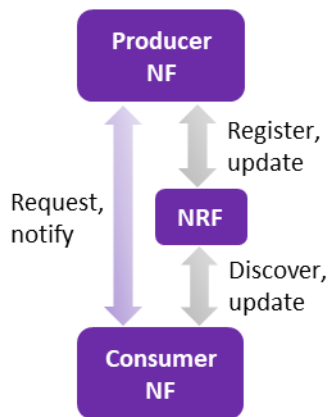
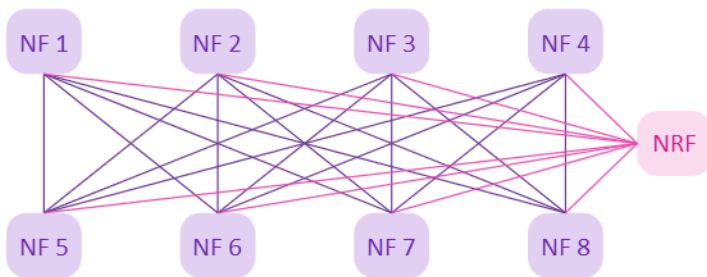
Without the SCP, CSPs' 5G core signaling will not benefit from the dynamic configuration and scalability that SBA can offer

5G signaling models A and B

(a) Signaling model A



(b) Signaling model B

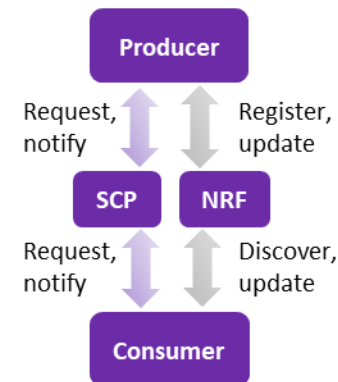
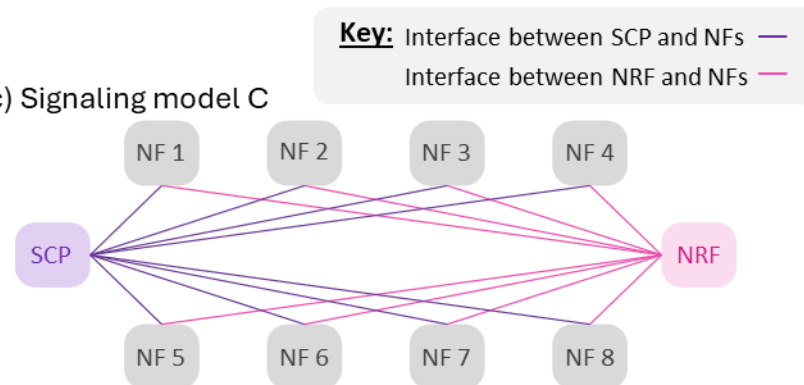


Source: Omdia

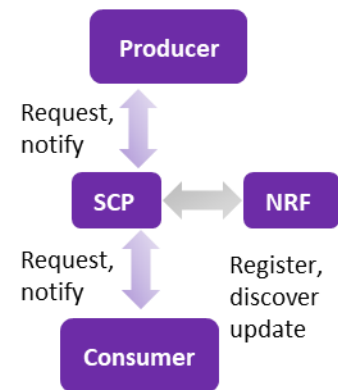
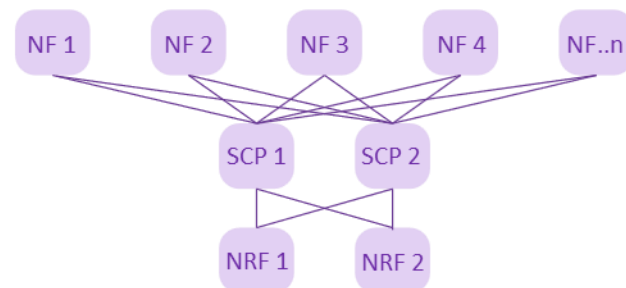
© 2025 Omdia

5G signaling models C and D

(c) Signaling model C



(d) Signaling model D



Source: Omdia

© 2025 Omdia

Appendix

Methodology

This report draws on extensive research with network operators, network vendors, and Omdia’s tracker and data resources and forecasts.

Further reading

[Core Market Tracker – 1Q25 Analysis](#) (June 2025)

[Core Market Tracker – 1Q25 Data](#) (May 2025)

[Tech Trend: CSPs’ Path to Automated Network Slicing](#) (May 2025)

[“MWC 2025 takeaways: Core networks”](#) (March 2025)

[2025 Trends to Watch: Core Networks](#) (October 2024)

[Service Providers Core Networks Survey – 2024](#) (October 2024)

[Tech Trend: The Vendor Opportunity for 5G Core Network Functions Beyond Packet Core](#) (May 2024)

Author

Roberto Kompany, Principal Analyst, Mobile Infrastructure

askananalyst@omdia.com

Appendix

Omdia Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Omdia’s consulting team may be able to help you. For more information about Omdia’s consulting capabilities, please contact us directly at consulting@omdia.com.

Citation Policy

Request external citation and usage of Omdia research and data via citations@omdia.com.

Disclaimer

The Omdia research, data and information referenced herein (the “Omdia Materials”) are the copyrighted property of TechTarget, Inc. and its subsidiaries or affiliates (together “Informa TechTarget”) or its third party data providers and represent data, research, opinions, or viewpoints published by Informa TechTarget, and are not representations of fact.

The Omdia Materials reflect information and opinions from the original publication date and not from the date of this document. The information and opinions expressed in the Omdia Materials are subject to change without notice and Informa TechTarget does not have any duty or responsibility to update the Omdia Materials or this publication as a result.

Omdia Materials are delivered on an “as-is” and “as-available” basis. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness, or correctness of the information, opinions, and conclusions contained in Omdia Materials.

To the maximum extent permitted by law, Informa TechTarget and its affiliates, officers, directors, employees, agents, and third party data providers disclaim any liability (including, without limitation, any liability arising from fault or negligence) as to the accuracy or completeness or use of the Omdia Materials. Informa TechTarget will not, under any circumstance whatsoever, be liable for any trading, investment, commercial, or other decisions based on or made in reliance of the Omdia Materials.

Get in touch

Americas

customersuccess@omdia.com

08:00 – 18:00 GMT -5

Europe, Middle East & Africa

customersuccess@omdia.com

8:00 – 18:00 GMT

Asia Pacific

customersuccess@omdia.com

08:00 – 18:00 GMT + 8