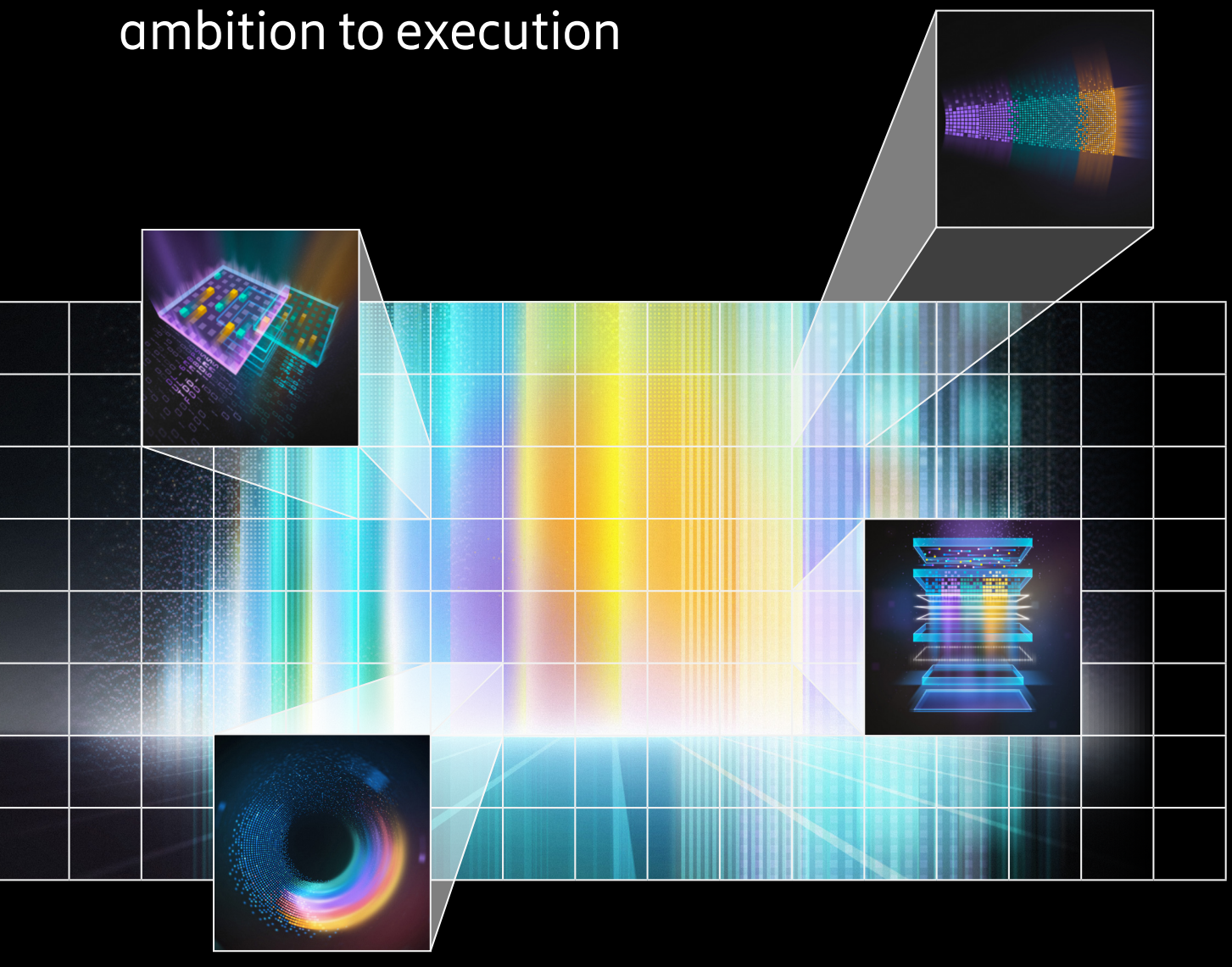
ERICSSON

The Differentiated Connectivity Handbook

Your guide to move from ambition to execution



Last updated: June 2026



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Executive summary

As appetite for premium connectivity experiences grows, major revenue opportunities are ready to be seized by communications service providers (CSPs) launching differentiated connectivity offerings.

Consumers and enterprises have increasingly diverse and distinct connectivity requirements. These are driven by necessity, technological evolution, and the demand for better-assured outcomes and enhanced experiences.

The current best-effort mobile broadband subscription model cannot address this new reality. As a result, it limits CSPs' abilities to generate new revenue, while also negatively impacting user experiences and the performance of business-critical applications.

Research from Ericsson ConsumerLab highlights this gap. More than 40 percent of consumers identify key moments where they would opt for guaranteed network performance.[1] The research also shows that the combined use of smartphones and AR devices will double in the next 5 years, with consumers willing to pay up to 20 percent more for portable AR experiences. Across all sectors and use cases, there is a common pattern – a rising demand for responsive and predictable connectivity tailored to meet specific needs.

These demands can be met through differentiated connectivity, which involves creating multiple connectivity offerings with predictable, deterministic performance characteristics, such as throughput and latency. This is made possible with a framework that leverages 5G standalone (SA) and essential capabilities, including network slicing, advanced radio access network (RAN) features, user-equipment route selection policy, and network application programming interfaces (APIs). Differentiated connectivity enables CSPs to evolve from the best-effort connectivity business model to performance-based and platform business models for revenue growth.

The time to act for launching differentiated connectivity is now. Today, there are 84 commercially available differentiated connectivity offerings around the world, and this number is rapidly growing.[2] In the enterprise services industry, there is a rise in offers that focus on productivity and industrial use cases like secure connectivity for enterprise apps, video conferencing, and IoT use cases. In the consumer segment, on-demand performance boosters and more segmented offerings dominate the scenes, such as gaming, video calling, and premium fixed wireless access. The question posed to the remaining CSPs that have not yet launched differentiated connectivity has shifted from whether they will choose to follow this path, to when they will start.

We are also seeing a rapid emergence of AR and AI applications forming a new class of performance-intensive connectivity services. These applications will benefit from built-in capabilities that dynamically request the most suitable connectivity via mobile network APIs. Enabling this at scale requires closer ecosystem collaboration, with CSPs playing a pivotal role in making this possible.

To deliver powerful, personalized, and profitable user experiences, CSPs must design networks focused on users and application needs. By leveraging a comprehensive toolkit of network capabilities and adopting a performance level framework, CSPs can deliver connectivity with reliable, predictable, and measurable KPIs, including throughput and latency. This also requires increased collaboration between marketing, product, and technology teams. The result is a streamlined process for translating customers' goals into network configuration that backs commercial offers for premium connectivity.

Adopting a differentiated connectivity-focused approach, supported by an industry-proven "Explore–Scale–Monetize" blueprint, will accelerate the transformation of 5G SA networks into launchpads for premium experiences while realizing the value of differentiated connectivity along the way. Embracing this mindset now will ensure that all decisions going forward contribute to long-term growth.

Ericsson's Differentiated Connectivity Handbook is designed to support CSPs on this journey. It serves as a concise, practical guide to help CSPs move from ambition to execution. The handbook is packed with insights on what differentiated connectivity is, why it matters, and how to realize and monetize it. Also included are inspiring stories from customers Singtel, Telstra, and Spark, which demonstrate that these opportunities are not only possible, but there for the taking.

We are in the middle of an exciting period. To turn business objectives into reality, CSPs need a structured approach and an experienced partner. With our leading expertise and end-to-end differentiated connectivity portfolio across RAN, transport, core, and operations and business support systems (OSS/BSS), Ericsson is ready to guide you on your journey toward differentiated connectivity.

[1] Ericsson report, Winning with differentiated connectivity
[2] Ericsson Mobility Report, Mobile service packaging

Key takeaways at a glance



Chapter 1: The journey toward differentiated connectivity

Global momentum is building – 84 differentiated connectivity offerings are already commercially available.

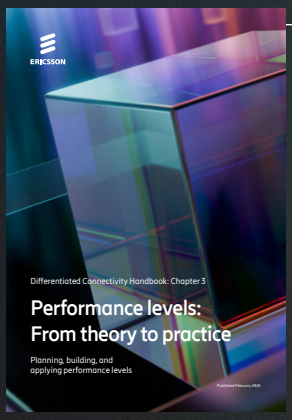
- One-size-fits-all packages are becoming outdated.
- Differentiated connectivity involves the creation of multiple levels of connectivity over a common network infrastructure to deliver deterministic performance at scale.
- Competitive edge and value are built using a proven three-stage blueprint.
  - Explore: Build knowledge with sandbox deployments and expand ecosystem collaboration.
  - Monetize: Focus on return investments and try out new commercialization models.
  - Scale: Expand locations, target groups, and technical capabilities in a controlled way
- These three stages should be should be ongoing and cyclical to achieve business goals.



Chapter 2: Unlock the value of differentiated connectivity

Performance levels specify the connectivity characteristics (such as latency and throughput) needed to ensure reliable and predictable connectivity for optimal application performance.

- These levels are realized end-to-end through tailored software combinations, resource policies, and Quality of Service (QoS) configurations.
- Differentiated connectivity can be monetized through direct (subscription-based) or indirect (API-enabled, pay-per-use) go-to-market models.
- Ericsson's differentiated connectivity portfolio enables scalable service differentiation and monetization, as demonstrated.
- Spark New Zealand is building a network to optimize connectivity for defined traffic and moments.



Chapter 3: Performance levels: From theory to practice

Ericsson's performance levels toolkit consists of features and network capabilities that can be combined on a use case basis.

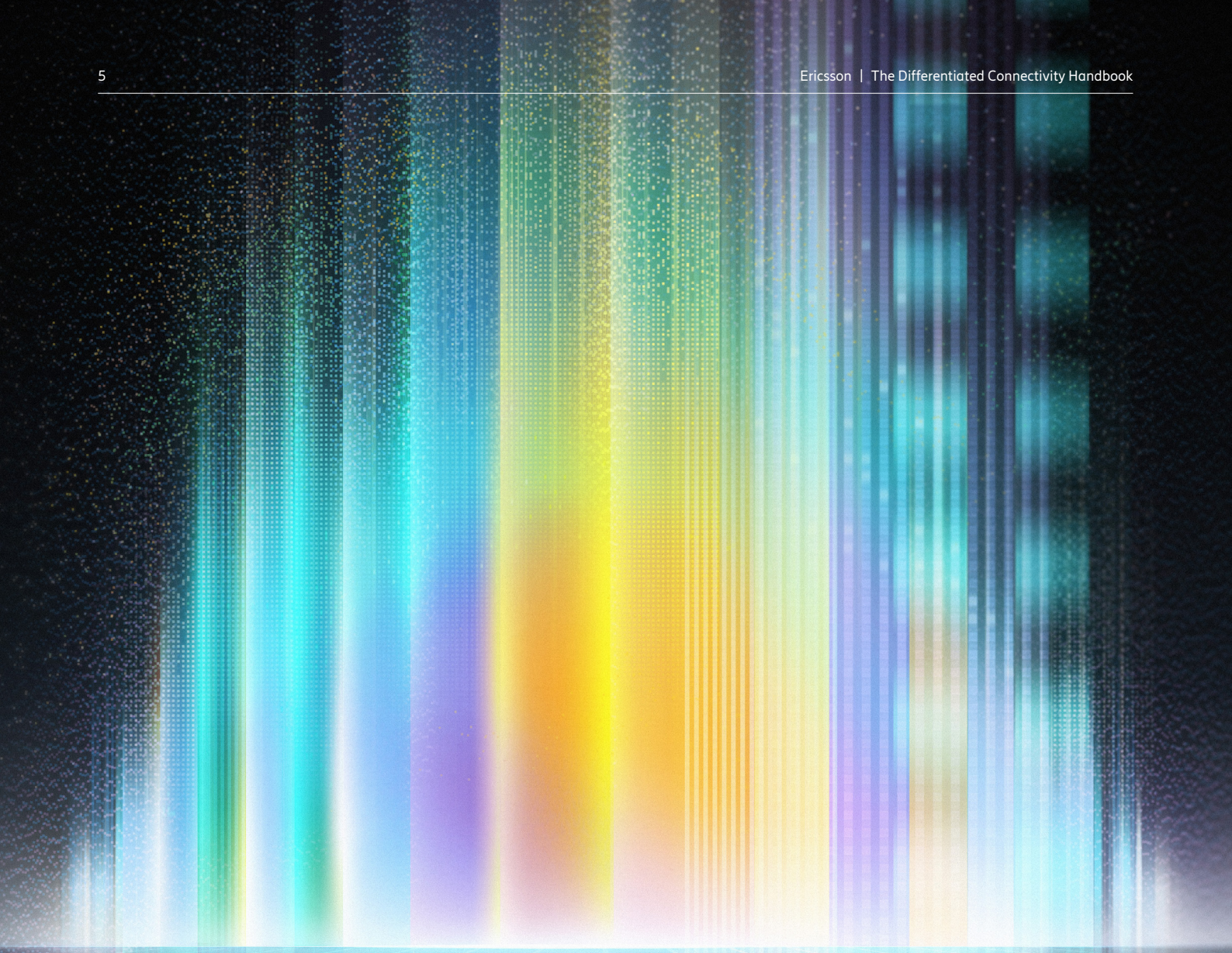
- Aligning technical capabilities with commercial goals starts with effective network planning, as it enables CSPs to define performance level specifications.
- With network planning, CSPs can also allocate resources for prioritized use cases.
- Performance levels fall into three traffic categories defined by their requirements: Premium internet, real-time throughput, and managed latency.
- Singtel is leading a change in the industry by introducing its tiered, performance-driven portfolio.



Chapter 4: Monetizing and scaling differentiated connectivity

An intent-based management framework provides a structured approach to translate business objectives into predictable, scalable network behavior.

- Large-scale monetization requires expanding the breadth and reach of differentiated offerings across locations, target groups, and channels.
- Automation and orchestration reduce complexity and errors while enabling intent-based service life-cycle management.
- Service monitoring and assurance enable sustained monetization and delivery of service level agreements (SLAs).
- Telstra is demonstrating that automation and assurance in network slicing can unlock scalable, SLA-driven differentiated connectivity.



Chapter 1

The journey toward differentiated connectivity

Achieve scalable and sustainable service differentiation

Introducing an industry-wide evolution

Across the globe, enterprises and consumers have rising expectations for more responsive and predictable connectivity. Consider these examples: Industrial and logistics sectors are increasingly using robots to boost productivity – requiring low latency and highly reliable connections. Enterprises seek greater agility and efficiency to drive innovation and growth, relying on secure and predictable wireless solutions for business-critical tasks. In healthcare, alarm buttons for elderly patients or those needing specialized care must enable real-time responses wherever the user is, making high availability and wide coverage essential. Meanwhile, public sector organizations are exploring how advanced technologies, powered by wireless connectivity, can enhance mission-critical applications and improve operational excellence.

Last but not least, consumer behavior is shifting toward premium experiences – such as enhanced video calling, live video streaming, and cloud gaming – and access to exclusive content at events. Research from Ericsson ConsumerLab[3] shows that the combined use of smartphones and AR devices will double in the next five years, and consumers are willing to pay up to 20 percent more for portable AR experiences.

Simply put, there are critical moments for consumers and businesses when network performance matters more, and when there is a surge in willingness to pay for a premium experience.

The opportunities are there, waiting to be seized. More than that, AR and AI applications are rapidly emerging as a new class of performance-intensive connectivity services. These applications will benefit from having built-in capabilities to dynamically request the most suitable connectivity via mobile networks APIs. Enabling this at scale requires closer ecosystem collaboration, with CSPs playing a pivotal role to make this possible.

But why is now the right time to transition? With recent technological advancements in 5G SA, such as new and more advanced radio schedulers and user-equipment route selection policy (URSP), together with technologies such as network slicing and network programmability, we can now enable more granularity when defining connectivity with different and more predictable levels of performance.

To guide CSPs with 5G SA to efficiently reach and monetize differentiated connectivity, and foster the app economy, we have created this differentiated connectivity handbook that outlines a cyclical approach to delivering powerful, personalized, and profitable user experiences. Breaking down the journey will allow CSPs to make incremental changes to the network while reaping benefits along the way.

Our handbook outlines an industry-proven blueprint to accelerate the transformation of 5G SA networks into launchpads for unique and premium experiences, while benefiting from efficient resource utilization. The blueprint outlines how you can first explore small-scale differentiated connectivity deployments in a "sandbox" approach, before transitioning to wider open areas and increasing the user and use case base – with go-to-market models that will provide significant returns on investments.

The shift toward differentiated connectivity is underway, as illustrated by the success stories throughout this handbook. We are delivering innovative solutions that help CSPs create unique connectivity offerings. Through collaborations with chipset makers, device manufacturers, and app developers, we drive industry progress. By accelerating leaders' transitions, we bring benefits to the entire ecosystem, including newcomers. Our CSP partnerships demonstrate that commercializing differentiated connectivity is not just possible, but within reach.

CSPs – we invite you to be curious. Use this handbook to navigate the differentiated connectivity journey and seize opportunities at every stage. With the right tools and Ericsson as your partner, you'll achieve differentiated connectivity with steady investments. Start by leveraging the incredible potential of your 5G SA network.

Differentiated connectivity is the capability through which CSPs create various connectivity offerings with predictable, deterministic performance characteristics, such as throughput and latency. This ensures diverse and distinct needs from consumer and enterprise applications are met.

This is made possible through a framework that leverages 5G SA and essential capabilities including network slicing, URSP, advanced RAN features, network APIs, OSS/BSS capabilities (such as orchestration and assurance), and network programmability.

[3] Ericsson ConsumerLab report, Augmented tomorrow: AR experiences beyond smartphones and AR filters

The current business paradigm, and what lies ahead

Despite increased data consumption, CSPs are unable to grow revenue from consumers and enterprises with the current connectivity services model.

Limitations of the current mobile broadband business model

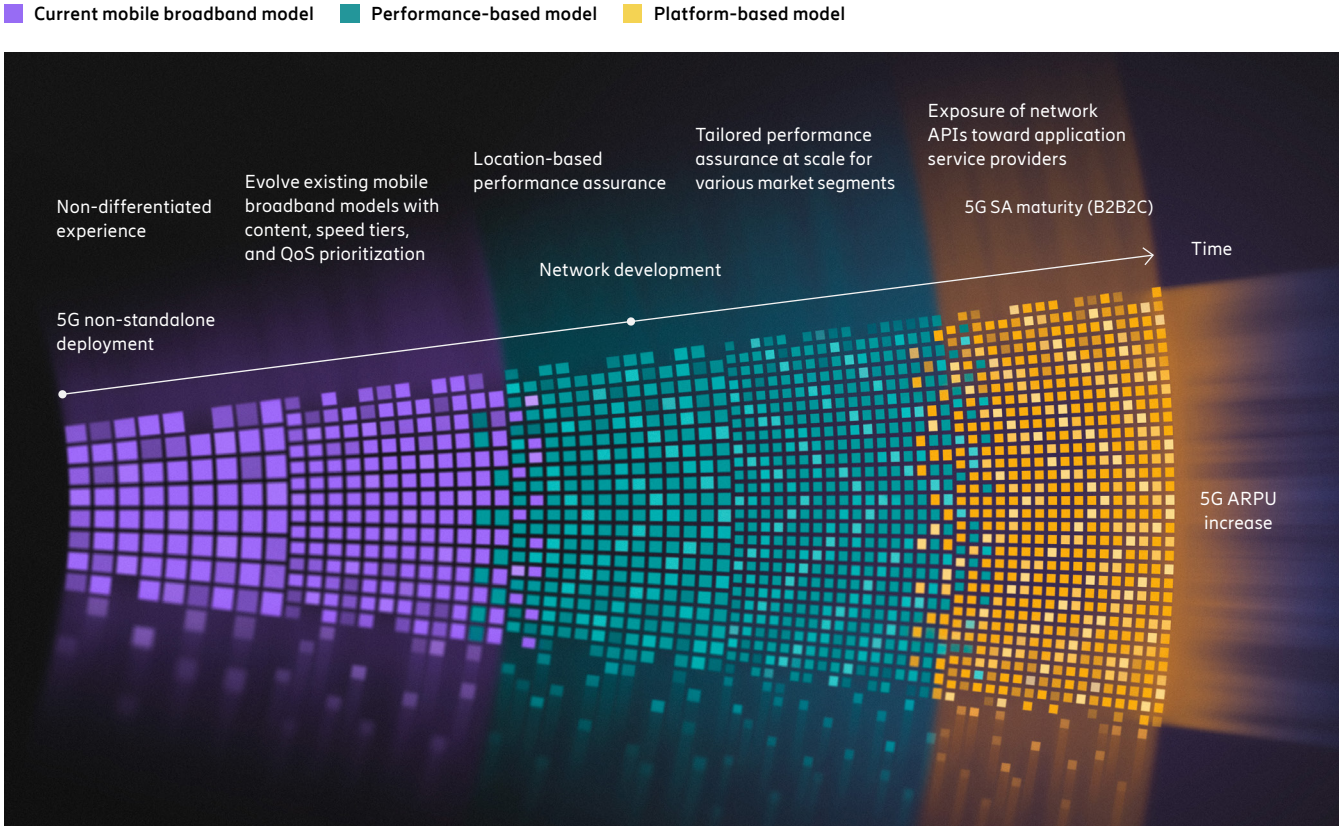
Despite continued growth in 5G subscriptions, CSPs are struggling to increase their average revenue per user (ARPU) and find new revenue streams. This makes it challenging for CSPs to justify investments in new network capabilities.

The current best-effort mobile broadband subscription model has reached its limit in terms of generating additional revenue, and this also negatively impacts subscribers' service experiences and the performance of applications and business-critical use cases. Research reveals that consumer expectations are shifting. More than 40 percent of consumers identify key moments where they would opt for guaranteed network performance.[4]

Other technical issues must also be addressed, such as the requirement for a wide variety of traffic types for different kinds of connectivity performance. For example, consistent throughput and latency are important for high-quality video calls. However, there is less demand when watching on-demand video, which can preload blocks of content. In short, helpful functionality in one instance is often highly unsuitable in another.

This model also limits CSP capabilities when it comes to harnessing service innovation to address newly emerging applications. Examples include mobile cloud gaming, remote inspection drones, and productivity or security applications for enterprises. These examples all have increased connectivity demands, which require reliable and trusted services with deterministic performance characteristics.

Figure 1: The evolving business model for connectivity services



[4] Ericsson report, Winning with differentiated connectivity

Consumer behavior is changing; an increasing number of users are looking for alternative payment models, rather than the subscription model. Notably, 25 percent of 5G users would favor in-app purchases, apps with built-in elevated connectivity, or devices bundled with QoS features as alternatives to monthly subscriptions.[5] For CSPs, having the capability to provide differentiated connectivity services with guaranteed performance SLAs is pivotal for revenue growth.

The value of a performance-based business model

By shifting how connectivity services are sold, CSPs can find more effective ways to bring them to the market, which are closely aligned with user needs and purchasing preferences.

The subscription model will remain significant for differentiated connectivity, targeting "Performance Strivers" who are willing to pay a premium for a more satisfying 5G service. Research reveals that generative AI apps will drive increased needs for higher uplink speeds and low latency, with one in four generative AI users prioritizing performance.[6]

Those same users are willing to pay an additional 35 percent for real-time responsiveness. However, as shown in Figure 1, the turning point for CSPs to get back into the revenue growth curve is when they start to expand with new performance-based and platform business models, offering connectivity on a pay-per-use basis.

To reach this point, CSPs need to work closely with the ecosystem to understand their needs and application requirements in terms of mobile connectivity performance. This will then allow CSPs to launch connectivity services that best address those requirements. Work here has already started, with CSPs and telco vendors taking a leading role. With consistent standards of network performance and guaranteed performance assurance, app developers can create applications that deliver a more satisfying user experience that matches specific requirements, and is backed by SLAs for QoS. The reliability, increased network efficiency, and simpler communication with application service providers (ASPs) are critical for meeting the needs of users and applications. CSPs will also be able to refine their offerings as their networks become more capable.

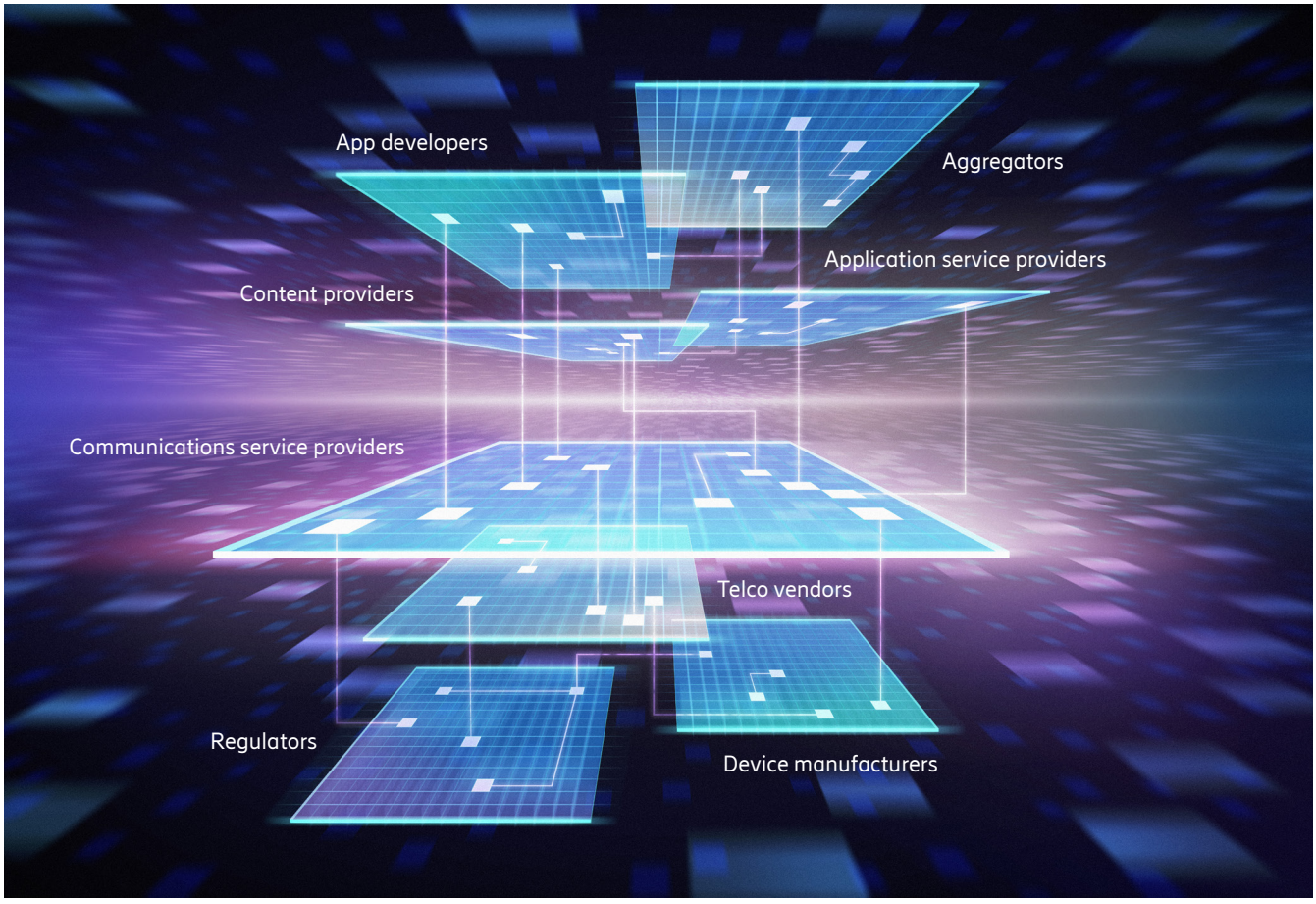
With access to network features through API exposure, ASPs (via aggregators) can evolve their applications in ways they can understand. This promotes efficiency and gives developers an incentive to engage fully with the ecosystem, which is crucial in ensuring performance-based business models are adopted across the industry. Once pay-per-use models are established, CSPs can achieve new revenues by charging aggregators for differentiated connectivity usage per consumption unit, such as units of time (hour) or data (MB).

In turn, the aggregators will be able to package connectivity from several CSPs into global APIs and provide these to developer platforms. These platforms can then package these global APIs into developer services, reselling them to global app developers.

In the future, applications will be able to request additional network resources for users willing to pay for premium experiences, opening up new revenue streams for application developers and CSPs.

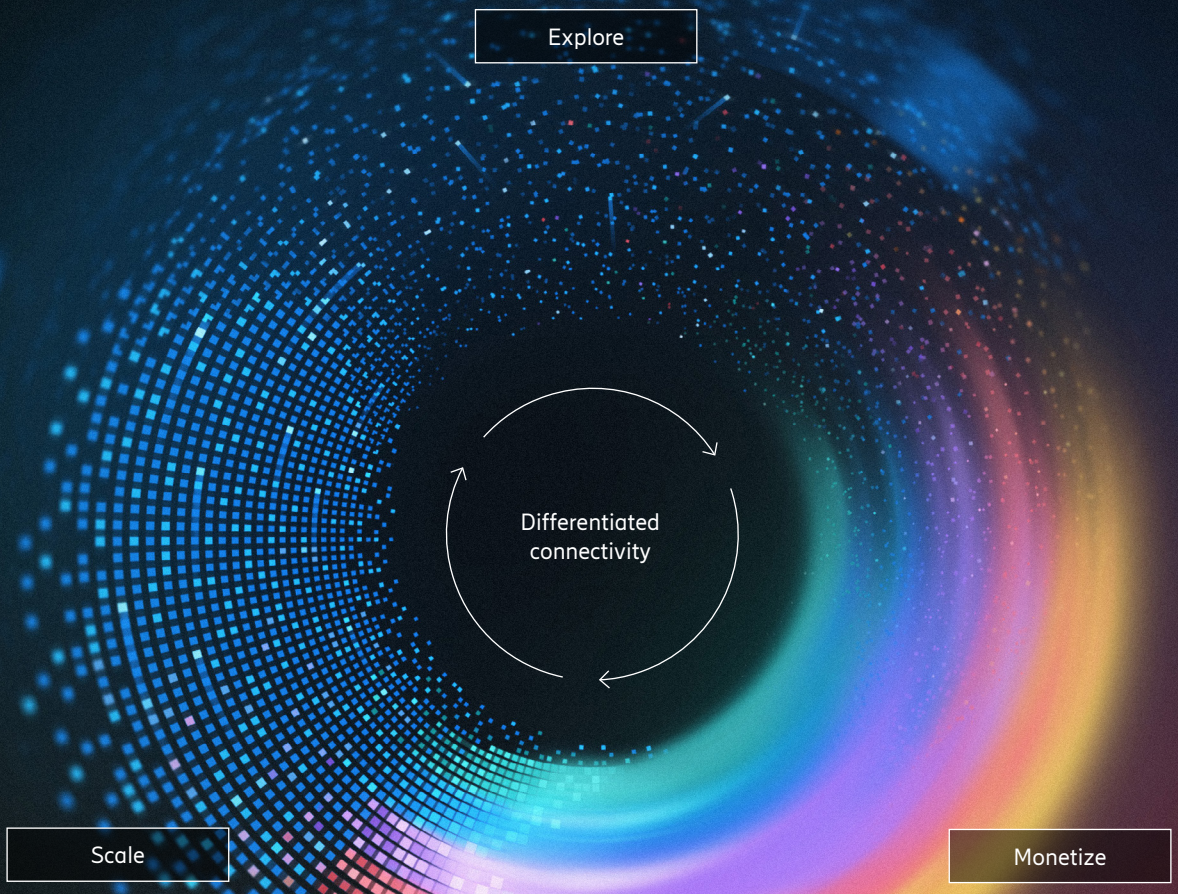
Let's dive into our recommended approach for enabling differentiated connectivity.

Figure 2: The ecosystem for services innovation



[5,6] Ericsson ConsumerLab report, Elevating 5G with differentiated connectivity

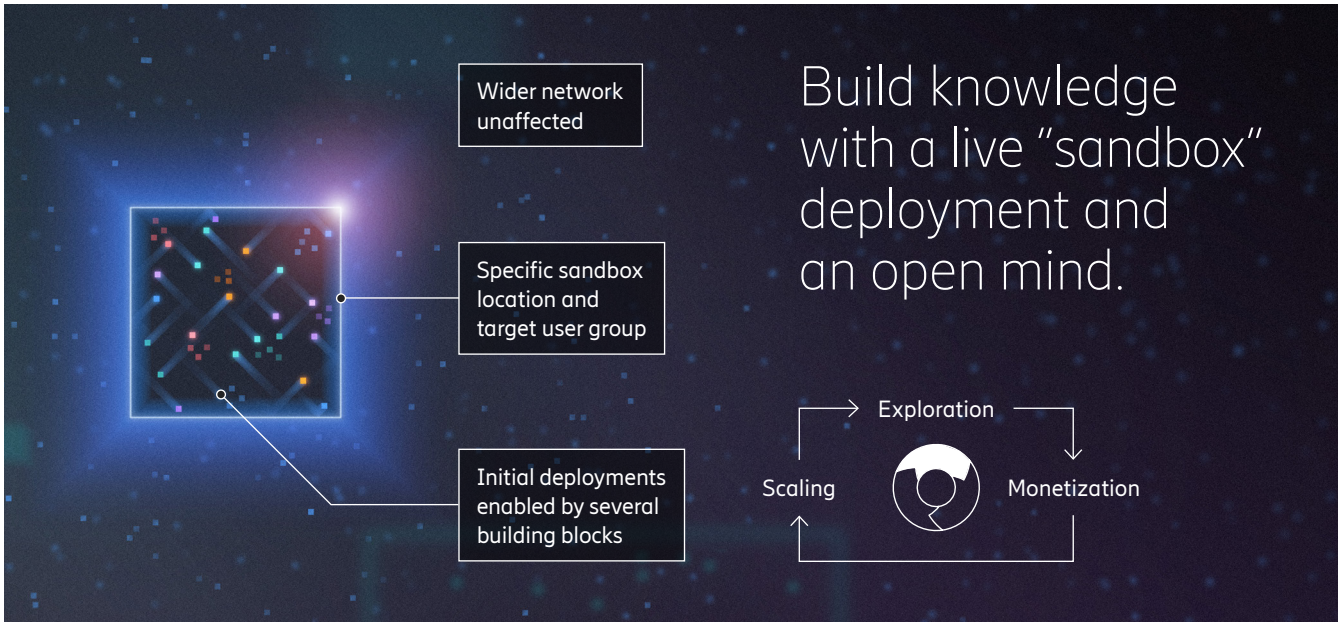
The differentiated connectivity blueprint



At this point, CSPs are often eager to learn more about how to get started and what it takes to realize differentiated connectivity service offerings. While the focus of Chapter 2 in the handbook is on digging deeper into the technical aspects, it's important to first focus on the journey into differentiated connectivity.

Leveraging expertise acquired through collaborations with the majority of early 5G SA pioneers, Ericsson has identified a proven cyclical framework for accelerated progress while realizing the value of differentiated connectivity along the way.

Exploration



This is the time to embrace challenges with an open mind and an intrepid approach. From the outset, CSPs need to get acquainted with the fresh capabilities available on their 5G SA networks to learn how best to provide a greater number of unique experiences.

This work must be supported by a foundation of technical readiness with the 5G SA network. Therefore, it is vital to foster early collaboration between marketing, technical, and product development teams, which will ensure capability exploration, enable the creation of differentiated connectivity offerings, and lead to market readiness. It is also important to adopt a thorough understanding of the end-to-end requirements and resource mapping.

Although the form of exploration is unique for every CSP, it will typically start with identifying one or more use cases that can be explored with a location-centric approach: Relatively confined segments of the network using a "sandbox" approach, usually a specific location, with one target user being either a select group of consumers or a single enterprise. Network slicing is often used, with one or two slices created to deliver differentiated capabilities that prioritize throughput, latency and reliability. These slices treat traffic differently compared to regular network users.

The key here is to explore use cases where premium and predicable performance would not be possible without network slicing-enabled differentiated connectivity.

A small-scale, real-world deployment that offers consumers a choice of connectivity levels will provide clearer, defined value propositions for each target segment. This is an exciting chance for CSPs to gain insights into how best to use the network to build knowledge ahead of scaling.

The challenge here is striking the balance between providing the required efficiency for the use cases served by differentiated connectivity without adversely impacting any commercial service to the existing network users, all while navigating the network's conditions and resource availability.

Opportunities for CSPs

- **A new world of insight:** Gain a comprehensive understanding of customer needs and expectations, and how to align them with the new network capabilities and resources.
- **Connect internal teams:** Strengthen collaboration with the marketing team to align network slicing solutions with customers' business needs, and learn how to effectively communicate value proposition and solution differentiation to target segments.
- **Refine new procedures:** Streamline new processes to plan, design, configure, and manage network slicing capabilities, as well as monitor and optimize performance and quality to cope with diverse needs from different users.

Essential network capabilities to consider:

- **A 5G SA network:** An adaptable and agile network architecture that supports dynamic adaptations of connectivity parameters.
- **RAN:** Network slicing support including new, advanced radio schedulers.
- **Transport network:** Network slicing support via VPNs over IP-MPLS, SR-MPLS or SRv6.
- **5G Core network:** Network slicing support that is enabled on AMF, SMF, UPF, PCF and UDR network functions.

Monetization



Effective monetization begins during exploration. From the outset, BSS capabilities allow CSPs to define and manage product offerings, bundle services, and establish eligibility rules for different customer segments. This ensures that differentiated connectivity can generate revenue from initial deployments.

The primary focus is on achieving a significant return on investment as enterprises and consumers realize their CSP can deliver connectivity which meets their precise needs, and that they can start paying accordingly for its value. Offer a service that the market needs, and the customers will follow.

When "monetizing", CSPs are poised to start the wide-scale commercialization of differentiated connectivity capabilities and use cases implemented in "exploration" – processes are streamlined and stronger ties in the ecosystem have been built.

It's time to craft innovative go-to-market models for the new connectivity offering.

This also enables CSPs to try out new commercialization models such as a performance-based model. This is pivotal for testing market acceptance and stimulating further investments. This will also pave the way for a future platform-based model enabled by API collaborations. This will allow CSPs to expand into collaborations within a much broader ecosystem, with multiple stakeholders including vendors, device manufacturers, and application developers.

Seamless integration with BSS is vital for handling the complexity and diversity of 5G services and customers. BSS can provide functionalities such as service orchestration, billing, charging, customer relationship management, and analytics. Flexible and dynamic pricing models, including B2C, B2B, and B2B2X, can be enabled, such as pay-per-use or pay-per-service, depending on the SLAs and the value and quality of the service they reflect.

A customer's willingness to pay a premium depends on a CSP's capability to transparently demonstrate that they are delivering on the agreed performance SLAs. It is crucial that the BSS offers transparency and accountability for both you as a CSP, and your customers. So, service assurance and monitoring are foundational elements of monetization, alongside accurate and timely invoices and payments.

With an automated and intelligent provisioning and billing system, CSPs can streamline operations, reduce costs, enhance customer satisfaction and loyalty, and unlock new revenue streams.

Service differentiation will vary depending on the application. While the commuting gamer would use connectivity for enjoyment, a healthcare-focused use case involving remote surgery or patient monitoring would require ultra-reliable, low-latency communication as a priority.

For the manufacturing sector, enhanced mobile broadband and IoT would enable the automation required by smart factories, with wider applications including manufacturing and education.

The type of experience expected by end users will have a direct impact on the go-to-market model chosen by CSPs. While the business goals and service requirements are defined when designing the solution, they are put into practice when monetizing.

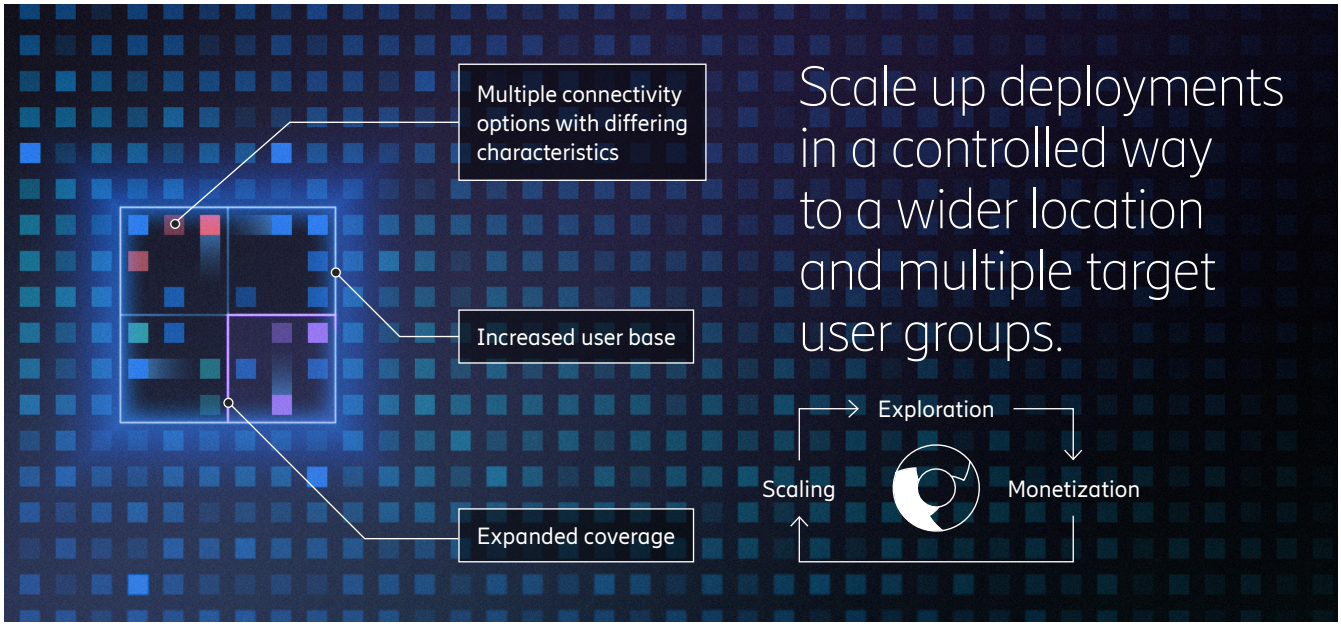
Opportunities for CSPs:

- **Capitalize on premium offerings:** Provide differentiated connectivity services to meet the varying needs of a growing and demanding market, to profit from the proper value of the service that is being provided.
- **Strengthen relationships:** Increase collaborative and trusting relationships with customers and ecosystem partners.

Essential network capabilities to consider:

- **BSS network:** Service commercialization capabilities include managing the product catalog and enabling modeling of any B2B, B2C, B2B2X, and wholesale/partner service. Charging/billing capabilities manage revenue shares in partner models, aggregate revenues in enterprise hierarchies, and expose account information to customers.
- **OSS network:** Monitoring capabilities for SLA management with continuous oversight of service performance.
- **Service exposure capabilities:** API exposure capabilities make differentiated services accessible for the ecosystem.

Scaling



The scene is now set for growth. The initial wins in the exploration and monetization stages will have built a foundation of confidence and knowledge. At this point, the focus is on scaling up deployments in a controlled way to a wider location and multiple target user groups.

The scaling phase means starting to offer multiple connectivity options with differing characteristics to address specific audiences, locations and/or use cases with optimized network resources.

So, each CSP must build on the differentiated service offerings implemented in the previous phase, broadening its coverage, extending its usage to other similar locations, and/or increasing its user base.

When scaling, it also becomes more evident that reaching large-scale service differentiation – with multiple use cases being served by multiple performance levels – will increase the complexity to synchronize requirements across network and organizational domains. Therefore, automation and orchestration capabilities become essential for enabling higher scalability of differentiated connectivity services. Automation reduces errors and accelerates deployment, setting the stage for scalable growth. Orchestration tools serve as the central mechanism for translating business requirements into network configurations, ensuring that resources are allocated efficiently and services are provisioned in accordance with defined goals and performance criteria.

The insights gained at this stage will build confidence and assurance that the network can handle the additional complexities and demands.

Harnessing valuable experiences from the previous stages, CSPs are better prepared to design the network and deploy resources, informed by market insights about the expected customer base for each use case, along with its needs and expectations.

Scaling is not the end of the journey but a delineator between recurrent loops within the journey. "Explore–Monetize–Scale" is a continuous flow where new use cases and network capabilities for service differentiation will constantly be implemented, tested, validated, monetized, and scaled, bringing incremental benefits to CSPs.

Opportunities for CSPs:

- **End-to-end requirements:** Better define use case needs based on anticipated traffic volume, latency, bandwidth, availability, security, and QoS levels.
- **Resource mapping:** Align requirements to network resources and functions across the RAN, transport, and core domains, as well as design slice creation templates and profiles for efficient deployment.
- **Automation:** Automate processes for onboarding and offboarding subscribers, devices, and applications to network slices, and enable price and quote capabilities for network slicing.

Essential network capabilities to consider:

- **RAN network:** Features to support multiple slices and traffic types, such as priority-based admission control (PBAC), relative priority scheduling (RPS), rate-controlled scheduler (RCS), and latency improvements.
- **Transport network:** QoS management and traffic steering principles to support multiple paths. Domain-specific software-defined network (SDN) controllers and transport orchestrator for effective network slice creation, deployment, resource mapping, and delivery of SLAs.
- **5G Core network:** URSP functionality supports devices switching between slices on an application basis.

Access to network slicing and different QoS categories, routing principles, and charging parameters need to be configured on the user control planes and the data management elements.

- **OSS network:** Multi-domain service orchestration and dynamic network slicing life-cycle management based on the service demands and network conditions. Provisioning and de-provisioning of the device connectivity offers, as well as service-level and subscriber data that is used by PCF to generate URSP.
- **L4S:** Support for Low Latency, Low Loss and Scalable Throughput (L4S) to avoid congestion delays by ensuring the application adjusts transmissions.

From network potential to profit

With a gradual and scaled approach to launching differentiated connectivity services, CSPs can ensure a smooth transition and maximize impact.

By following the cyclical nature of the blueprint, CSPs will be realizing the true value of differentiated connectivity at all stages in the journey. As CSPs begin to start exploring new net revenue possibilities, we suggest focusing on the following opportunities that allow business goals to be achieved with a scalable approach.

By focusing on foundational opportunities that are easier to achieve and then expand upon with additional features, CSPs can launch more transformative possibilities.

Foundational opportunities

A CSP's journey toward differentiated connectivity begins with foundational opportunities that are simple to execute and easy to implement. Applications in this category are ideal starting points and can be thought of as low-hanging fruit.

- Network performance boosters: Providing high-speed internet access to consumers and businesses as an add-on to their existing service plan, or as a bundle on top-tier service plans
- Video production: High-capacity, high-reliability uplink services to enable wireless cameras and centralized video production, revolutionizing broadcasting operations
- Photojournalism: Reliable uplink capacity to shorten time-to-market for journalists
- Fixed Wireless Access (FWA): Guaranteed bandwidth and latency with premium 5G FWA services
- Sports events and concerts: Enhancing the 5G experience at major events

CSPs can quickly deploy these services, generating immediate value and creating a solid base to build upon with more complex applications.

Expanding opportunities

As CSPs gain confidence and expertise with 5G SA, they can move on to innovative solutions that require more advanced capabilities, like URSP and 5G Advanced features, and integration and testing.

- Remote-driven cars, automated fleet management, and industrial automation: Features include enhanced situational awareness, remote control, and telemetrics
- Enterprise 5G laptop connectivity and security: Secure access to cloud-based services
- Cloud mobile gaming: Handling processing and rendering remotely on the cloud
- Point of sales: Dedicated connectivity services with reliable performance and increased security to process payment transactions without interruption
- Video conferencing: Enhanced conference services to business users on-the-go or working remotely

This is the point at which partnerships become pivotal — CSPs must develop standardized collaborations with both partners and the wider ecosystem.

Game-changing opportunities

The advancements in network API exposure and the uptake of differentiated connectivity APIs by the industry ecosystem will enable a new wave of applications and the adoption of a pay-per-use connectivity services model that will maximize the value of 5G connectivity.

- Immersive AR experiences: This is a holistic approach to implementation involving extensive customization.
- Agentic systems: Powered by AI-native architectures,[7] agentic systems deliver ultra-responsive behaviors for industrial automation, robotics, and autonomous mobility with precision, security, and scale. This will impact how data is consumed, increasing the requirements for connectivity.

These applications require aggregator models and a critical mass of CSPs with Quality on Demand (QoD) API integration to ensure predictable performance. Application use cases involve requesting and managing connectivity.

Charting the path forward

By adopting a phased onboarding strategy for deploying applications of differentiated connectivity based on network capabilities versus application complexity, CSPs can effectively enter the journey toward differentiated connectivity while capturing its value at each step. Utilizing the specified use cases means CSPs can develop a solid strategy to increase revenue and foster innovation within the industry.

A scaled approach to launching differentiated connectivity allows business goals to be achieved.

[7] Ericsson, A detailed study of the AI Native concept

Global momentum in commercial differentiated connectivity services

Commercial differentiated connectivity services are accelerating worldwide, with strong growth in both scale and diversity of offerings.[8]

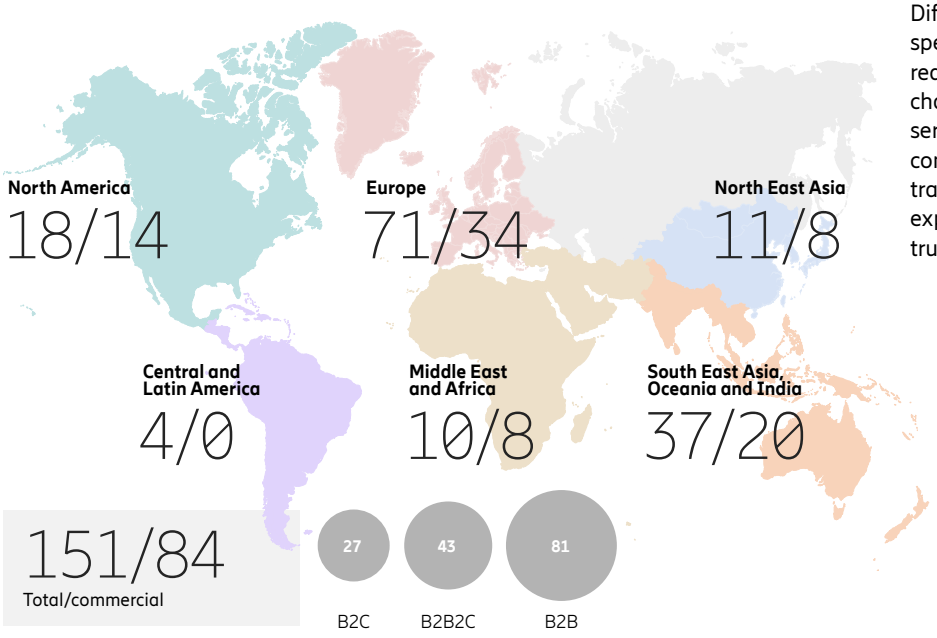
Over 90 CSPs have commercially deployed 5G SA, with 151 documented cases of network slicing supporting some sort of differentiated connectivity offering. Of these, 84 are commercially available either as a subscription service, an add-on package, or in the B2B and B2B2C space as a packaged, deployment-ready service. In the B2C sphere, application or situation-focused services such as video calling, gaming, event-specific packages, and premium FWA subscriptions make up most of all offerings. In the B2B area, vertical markets like public safety, transport and logistics, defense, and general enterprise use cases dominate.

While the number of CSPs deploying 5G SA and starting to use network slicing to create differentiated connectivity offerings is increasing at pace, CSPs that were first to introduce differentiated connectivity, some as early as 2022, have now scaled up their deployments and started to broaden their reach.

This scale-up indicates that the initial exploration has been successful enough to justify scale-up. The variety of current business models – from guaranteed service tiers for broadcasters to secure connectivity for defense applications – shows both the adaptability of the approach with differentiated connectivity offerings and the market's appetite for specialized solutions.

Speed, bandwidth, general performance, or stability improvements are still being highlighted as user benefits in many of the cases. There are some new areas being highlighted, however, like latency or improved experiences when using a specific service or app. In many cases, multiple benefits are communicated and combined to enhance the value proposition. The word "guarantee" has seldom been used in marketing by CSPs, but a form of performance guarantee is expressed in some cases. These could be guarantees for a maximum latency for gamers, minimum bandwidth on FWA or when using video conferencing, or for businesses buying a "productivity slice" with the mobile private network (MPN/VPN) solution.

Figure 3: Global instances of network slicing



Source: Ericsson analysis of public data.

Momentum is real and global

Differentiated connectivity is no longer a speculative field, it is a growing commercial reality across regions and sectors. The challenge may no longer be whether these services can be launched, but how best to communicate their unique benefits to users, transforming technical capabilities into experiences and outcomes that customers truly value and are willing to purchase.

[8] Ericsson Mobility Report, Mobile service packaging (2026)



Chapter 2

Unlock the value of differentiated connectivity

How to capture the full revenue potential of 5G by offering service differentiation

Enabling differentiated connectivity in networks

CSPs must design networks focused on application needs, using performance levels to deliver consistent and reliable performance that will enable applications to reach their full potential.

Putting application needs into focus

Applications will determine the performance requirements for differentiated connectivity, regardless of whether this is for a consumer application (such as video calling, video streaming, or gaming) or a more specialized enterprise application (such as broadcasting, remote machine control, or drone surveillance). Today, developers design applications for "best-effort" connectivity scenarios due to a lack of deterministic and reliable performance from mobile networks. With differentiated connectivity, CSPs have the opportunity to design and build networks in a way that enables an application's full potential to be reached. Currently, there are several CSP initiatives to commercialize differentiated connectivity that utilize network slicing with prioritized performance characteristics dedicated for each use case or application. However, the exponential growth of dedicated slices in networks can impose enormous challenges when managing its complexity in the long term.

Many applications share similar performance needs, and could therefore be served by similar types of optimized connectivity. Globally available applications are also expected to perform at their best on different networks. With this in mind, Ericsson advocates for the industry to align on a set of common guidelines and performance levels. This would simplify the approach for CSPs, so they can then focus on creating new service offerings and network investments.

Common guidelines and levels will also attract maximum interest from the broader application developer community. This simplification will influence the approach of aggregators and developer platforms, enabling the creation of coherent global network API offerings.



Realizing differentiated connectivity service offerings

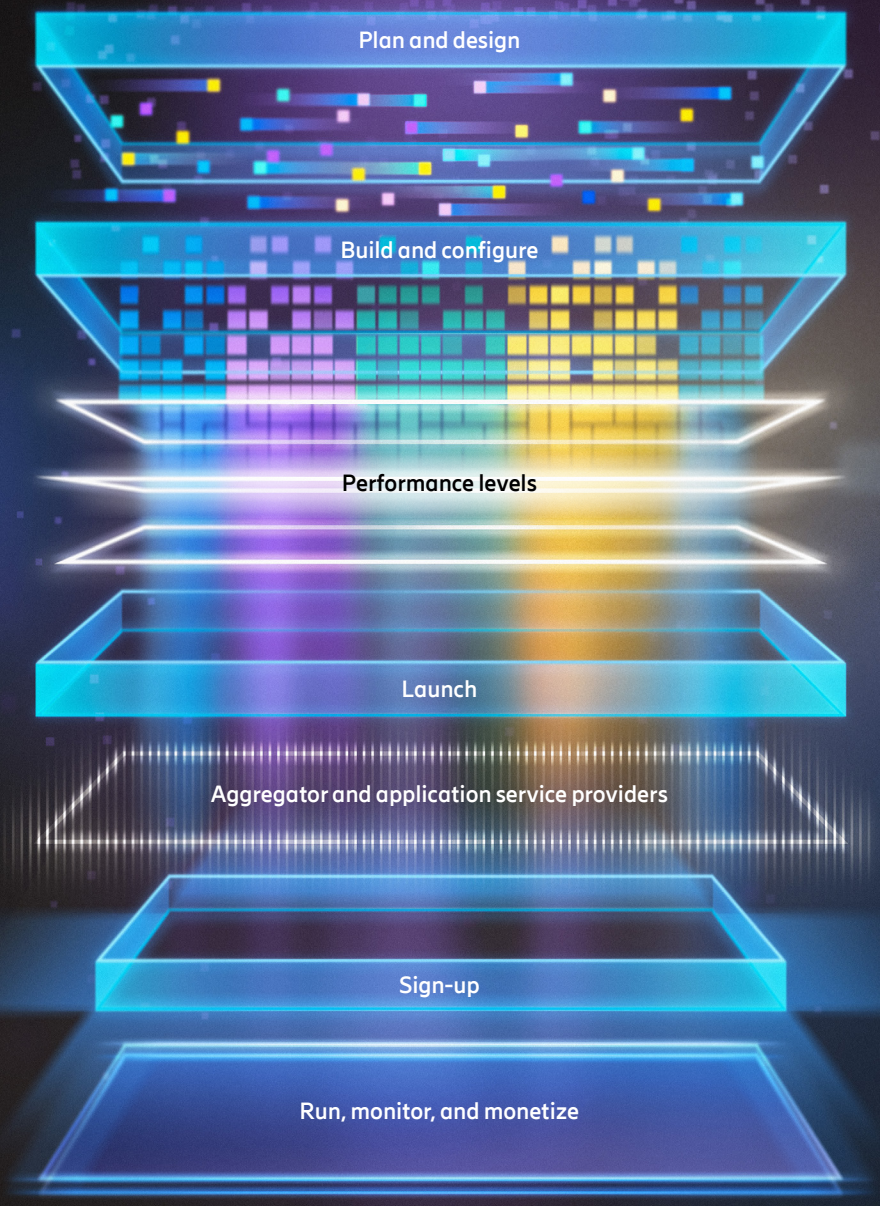
Identify the business needs and connectivity requirements through market research and collaboration. Design the network to meet them through market understanding and service targets.

Boost and configure the network infrastructure to meet required service specifications through performance levels and enable APIs.

Go to market through direct subscriptions and/or pay-per-use models through applications using APIs.

Users sign up for the services via direct subscription, or indirectly via ASPs.

Ensure distinct traffic goes through the right performance levels and that target service KPIs are fulfilled.



Essential differentiated connectivity network capabilities

End-to-end network capabilities:

- Network slicing support
- URSP
- Network-initiated quality of service (NI-QoS)
- L4S

Domain-specific capabilities:

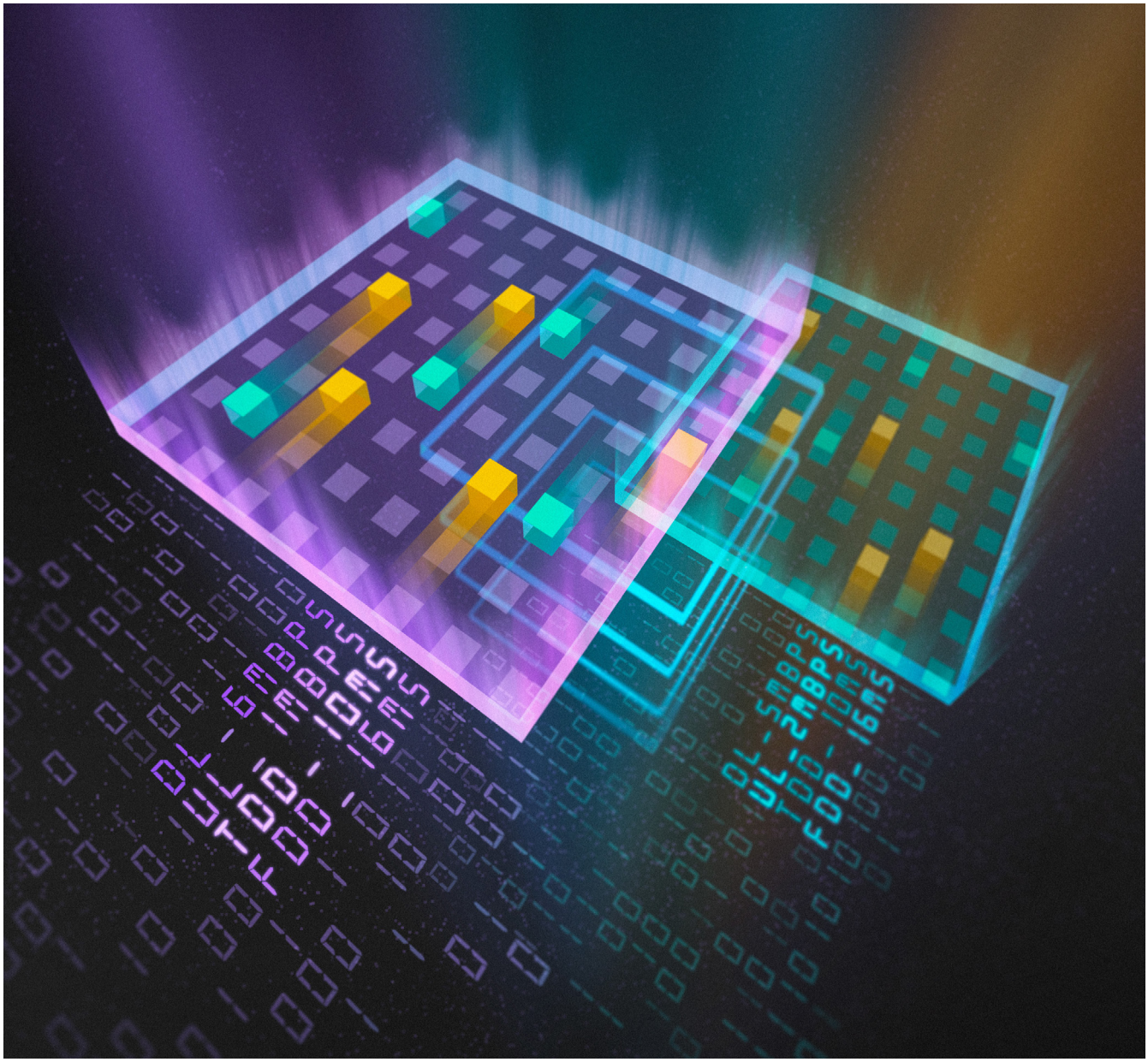
RAN
- Slicing and QoS framework
- Advanced scheduling
- Advanced traffic steering and mobility
- High load handling
- Enhanced observability
- RAN intent management

Transport
- QoS management features (such as H-QoS)
- SDN management and orchestration

Core network
- Network slicing data and session management functions (AMF, SMF, UPF, NSSF, PCF and UDR)
- URSP rules
- Policy control functions
- NI-QoS related packet filter

OSS/BSS
- Monitoring capabilities
- Multi-domain service orchestration and assurance
- Service commercialization, charging, and billing
- Intent management and AI-based automation

Service exposure
- Exposure functionality, including underlying network support
- CAMARA APIs



Performance levels: Ensuring reliable and predictable connectivity for optimal application performance.

Defining performance levels
A performance level is designed to offer a reliable and predictable connectivity performance. It specifies the characteristics of a bi-directional network connection and is defined by KPIs (such as latency and throughput) that application traffic reaches when a network connection with that level is used. For example, a performance level for video calling could be designed for delivering stable uplink and downlink of 6 Mbps and maximum 50 ms of one-way latency.

Higher levels, with lower latency and a higher data rate, can be defined as networks become increasingly capable. For example, an initial performance level can be introduced to the network, followed by a second, higher performance level for particularly demanding application flows.

These levels provide a measurable framework to differentiate their capabilities and characteristics. The levels equate to starting with statistically measured performances over a specified geographical area and can be offered as subscription services or accessed through APIs. Moreover, one performance level can serve multiple applications or users with similar connectivity requirements. This approach simplifies how CSPs build their networks to deliver optimized connectivity for different users and applications, leading to more organized and efficient usage and management of network resources.

We anticipate industry-wide exploration of different performance level-based offerings. As this progresses, alignment will emerge on a few selected performance levels, which will become widely known and available across markets. These performance levels will enable ASPs to design demanding applications that scale beyond a single CSP.

Ericsson's strategy for implementing performance levels

When a CSP wishes to offer a performance level-based connectivity service to customers for use with certain application flows, they will need to design corresponding connectivity services based on their needs and business targets, and dimension and configure the network to meet agreed SLAs.

The end-to-end realization of performance levels can be achieved through unique combinations of software features and configurations. This secures the desired performance considering both capacity and coverage for both downlink and uplink, network identifiers such as 5QI(s), Single-Network Slice Selection Assistance Information (S-NSSAIs), URSP rule templates, if applicable, and NI-QoS related packet filters such as for L4S.

It also includes defining resource policies and QoS configurations throughout RAN, transport, and core, including offering this service and others in parallel to achieve the desired network behavior even when there is congestion (where all KPI targets of all connections cannot be fulfilled). This will be familiar for CSPs already offering multiple connectivity services, such as mobile broadband and FWA.

The network design also needs to factor in BSS impacts, to ensure the new service can be purchased, activated, assured, and billed.

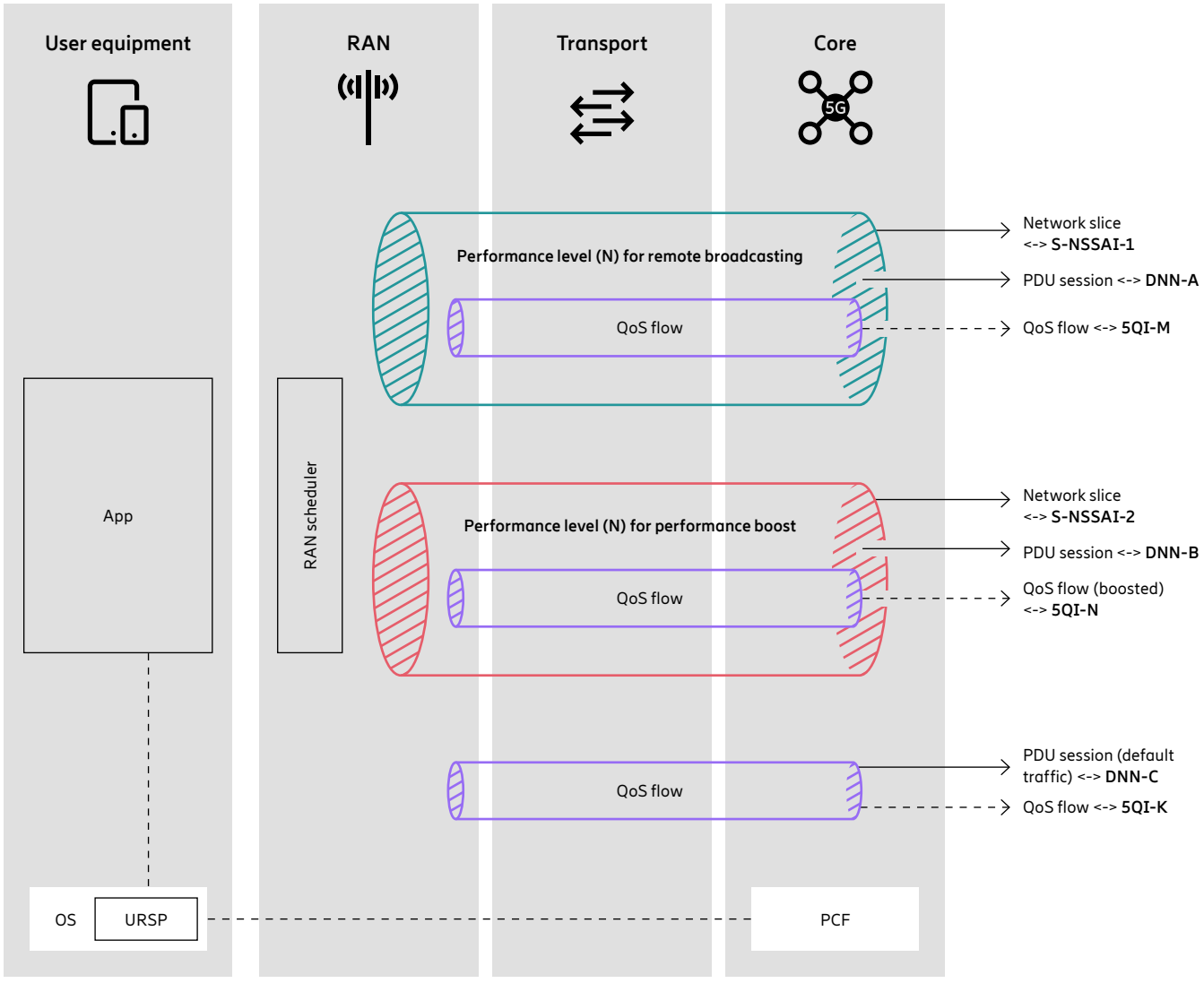
There are multiple ways of realizing those network performance levels – network slicing with URSP is a common ground for getting started.

Two approaches exist for CSPs to start with performance levels. When a new differentiated connectivity service is going to be offered to consumers via regular subscription mechanisms, the simple approach is to deploy the service using a slice matching to the service characteristics (see Figure 4). For the network API track, a CSP should start with the current QoD mechanisms for network APIs. With this model, QoD enables applications to activate performance levels on demand, based on QoS profiles and subscription modifications, which improves quality within an ongoing connectivity service (PDU session). QoD today works by changing the QoS for the whole user equipment (UE), while we foresee that in future, it might evolve to support more fine-granular differentiation, through slice-based and QS flow differentiation. For applications and use cases that cannot viably support QoD, differentiated subscriptions may be the best alternative, such as optimized subscriptions for video calling or gaming.

As the ecosystem matures, URSP adoption by networks and devices will progress. This will enable performance levels per application to change on an on-demand basis. URSP technology pushes required network configurations onto devices and API implementation will also follow this approach.

Leading CSPs have already begun using network slicing, URSP, and QoD to build ecosystems with QoS flows during their early explorations of differentiated connectivity and are now looking into evolving their offerings with the adoption of performance levels.

Figure 4: End-to-end realization of performance levels



Bringing differentiated connectivity to the market

Whether sold directly to consumers and enterprise customers, or indirectly through integration with an application, differentiated connectivity will define a new era for the wireless connectivity industry.

Transforming the value chain for connectivity

We see three main device or user segments driving how differentiated connectivity can be implemented.

- **Consumer devices:** These are consumer smartphones and tablets featuring applications which are distributed via an app store.
- **Enterprise-managed devices:** These are typically smartphones, or, for example, a 5G router with applications that are downloaded and managed through a company's application store and IT department.
- **Full-stack systems:** These include devices with built-in connectivity that feature apps controlled and installed by the manufacturer or integrator of the device or system, such as a car or a TV camera for broadcasting.

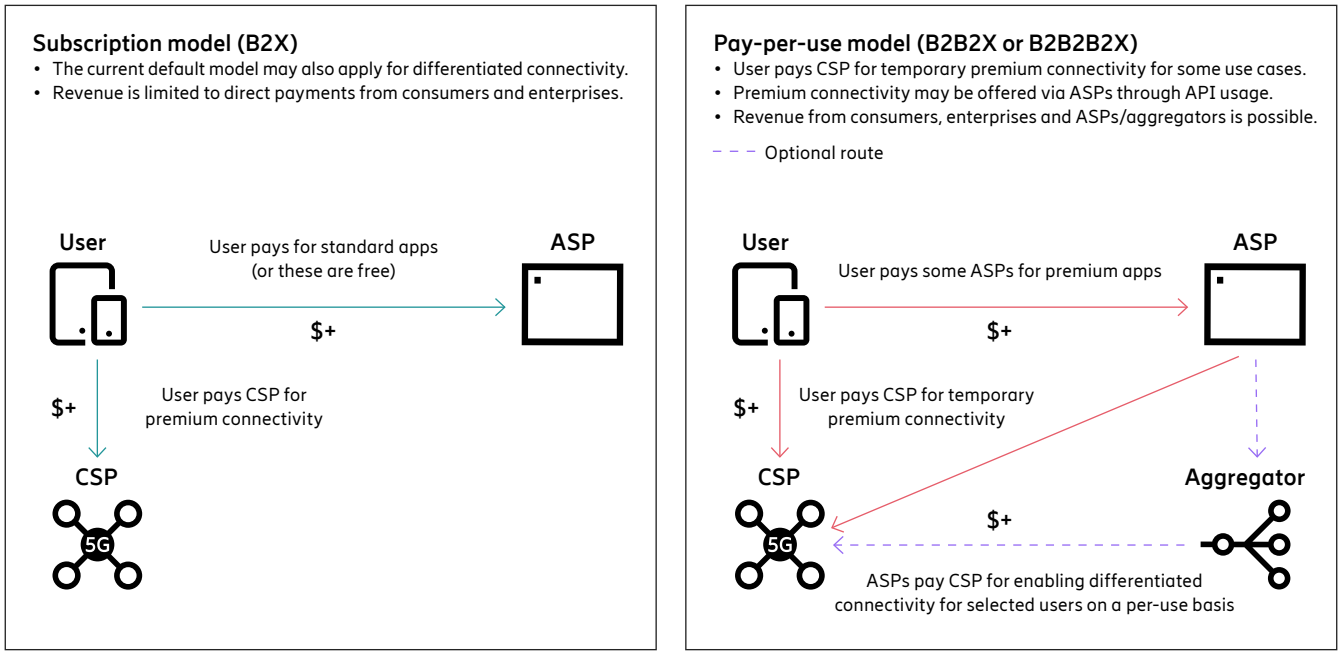
In the direct sales model, consumers would pay for a monthly or top-up subscription fee for a premium connectivity service from which to run all their applications. This model offers a quick path to start capturing the value of differentiated connectivity as it requires simpler implementation, less integration with external parties, and is already familiar to users.

Following this, we see the advent of the indirect model, where revenue would be realized from a consumer perspective either as in-app purchases, or as part of a monthly app subscription fee. This would allow for higher connectivity differentiation on an application basis, as well as resonating better with customer appreciation and willingness to pay for concrete services. For consumer devices, the most common and efficient way to implement the indirect model, and to achieve scalability, will be by integrating differentiated connectivity capabilities through APIs into the applications.

Moving toward enterprises with enterprise-managed devices, both models can be applied where enterprises buy their IT applications integrated with differentiated connectivity (likely for off-the-shelf applications), or in a direct CSP sales model (likely for in-house applications). Full-stack integrators will also use both direct and indirect models and will likely be the user/device group with the highest share of direct CSP sales.

The indirect model will require the adoption of industry-harmonized connectivity service APIs and expansion of the connectivity value chain to ASPs and developers, as depicted in Figure 5. Both direct and indirect, as well as the traditional mobile broadband model, are able to coexist.

Figure 5: The go-to-market differentiated connectivity models





Bridging the gap between CSPs and application developers

There are different ways of realizing performance levels in a network. But this should only be a concern for CSPs – application developers do not need to know the details, but rather, they should understand how the available levels can serve their application needs. In this sense, differentiated connectivity and APIs are linked because the latter represents how application developers can leverage the network capabilities offered by the CSPs.

For this to happen, there is a need to develop differentiated connectivity-related APIs that are tied to the performance levels and standardized within the ecosystem. Leveraging on APIs, applications will be able to "communicate" the required connectivity service based on their network requirements, providing an enhanced service experience. APIs will also be used to manage the life cycle of connectivity services and the service runtime, as well as monitoring the quality of the service being delivered. There are some essential steps for realizing differentiated connectivity APIs within the telco industry:

- **Develop and standardize APIs:** It's crucial that some specific APIs are easy and intuitive for application developers to understand and use, and these APIs need to be standardized across the industry for improved compatibility.
- **Engage with the ecosystem:** To create a market for the new connectivity services, CSPs should work closely with the application ecosystem to understand their needs. Additionally, this will encourage potential partnerships to be formed.
- **Collaborate on best practices:** Ericsson actively drives API development and standardization for differentiated connectivity, as well as harmonizing API exposure in 5G networks together with other telco vendors. Examples of these vendors include CAMARA and GSMA.

Ericsson's role in driving the adoption of differentiated connectivity APIs

At Ericsson, we are actively working on differentiated connectivity APIs to bridge the gap between network capabilities and application requirements. Our efforts include working with the following groups:

- **CSPs:** To facilitate market adoption, we supply CSPs with service exposure solutions and APIs that are abstract to the telco world and are more aligned to what developers understand.
- **Regulators and standardization bodies:** We contribute to API development and standardization for differentiated connectivity, as well as harmonizing API exposure in 5G networks together with other telco vendors.
- **ASPs:** We interact with various ASPs, directly or through our partnered CSPs, to understand what mobile network characteristics their applications require.
- **Application developers:** Through developer platforms such as Vonage, we facilitate seamless integration between network APIs and developers, with the developer platform evaluating ASPs to decide whether to accept or veto them in the marketplace.
- **Aggregators:** Together with some of the world's largest telecom operators, Ericsson has established Aduna, a joint venture which offers a multi-CSP integration and aggregation platform to unlock easy access to global network APIs to more developers.[9]

[9] Ericsson, Global leaders redefine telecom industry with network APIs

Ericsson's comprehensive portfolio to support differentiated connectivity

Ericsson's portfolio supports with increasing the perceived value of differentiated connectivity, as well as establishing future-proof business models for CSP revenue growth.

Ericsson's leading portfolio for differentiated connectivity is designed to empower CSPs to deploy and monetize service differentiation through performance-based business models and APIs in a scalable and sustainable way. Covering the RAN, core network, OSS/BSS, and service exposure platforms, it includes capabilities that are industry proven by leading CSPs worldwide who are already exploring differentiated connectivity.

Essential differentiated connectivity-related capabilities that are part of Ericsson's portfolio include:

Network slicing
This capability enables the creation of separate virtual logical networks on a shared physical infrastructure. Each virtual network, or "slice", is designed to meet the specific requirements of different applications or services. This approach offers significant benefits, such as increased flexibility, improved efficiency, traffic separation, and deterministic performance. By leveraging network slicing, connectivity services can be delivered based on performance levels, making it an essential element for the realization of performance levels. Ericsson's end-to-end network slicing solution comprises enablers in the RAN, transport, core networks, OSS/BSS, and cloud infrastructure domains, as well as support for traffic steering mechanisms like URSP.[10]

L4S
L4S technology optimizes throughput, minimizes latency, and reduces packet loss, meaning it will have a significant impact on delivering differentiated connectivity. Similarly to network slicing and URSP, L4S also requires end-to-end support in the mobile network – and Ericsson's portfolio offers that support.

RAN
Ericsson RAN provides essential capabilities to dynamically optimize radio resource allocation according to traffic conditions. These include QoS-handling capabilities in the scheduler for supporting targeted bitrates such as RCS, latencies through latency prioritized scheduling (LPS), or simply weighting with RPS, as well as features for logical isolation of resources between different performance levels, such as radio resource partitioning (RRP) and automated radio resource partitioning (A-RRP).

The slicing framework provides full flexibility to configure the desired connection handling, such as scheduling priority and scheduling strategy or other functionality such as L4S or Uplink Configured Grant, for the QoS to flow independently for each end-to-end network slice.

Our RAN portfolio also includes service-level observability features with automation functions that can offer observability of the network management layer, as well as the triggering of RAN radio resource management functions for dynamic adjustment to meet the performance level requirements. In the long term, these objectives will be achieved via intent functions.

Additionally, the RAN network is capable of prioritizing users when they're accessing the network, or in the process of being admitted, with features such as unified access control (UAC) and PBAC being key tools to use.

Transport network
Ericsson's transport portfolio ensures efficient network slice creation and SLA fulfillment by mapping traffic from network slices to transport resources using proper identifiers. It supports network slicing with enablers like VPNs over IP-MPLS, SR-MPLS or SRv6.

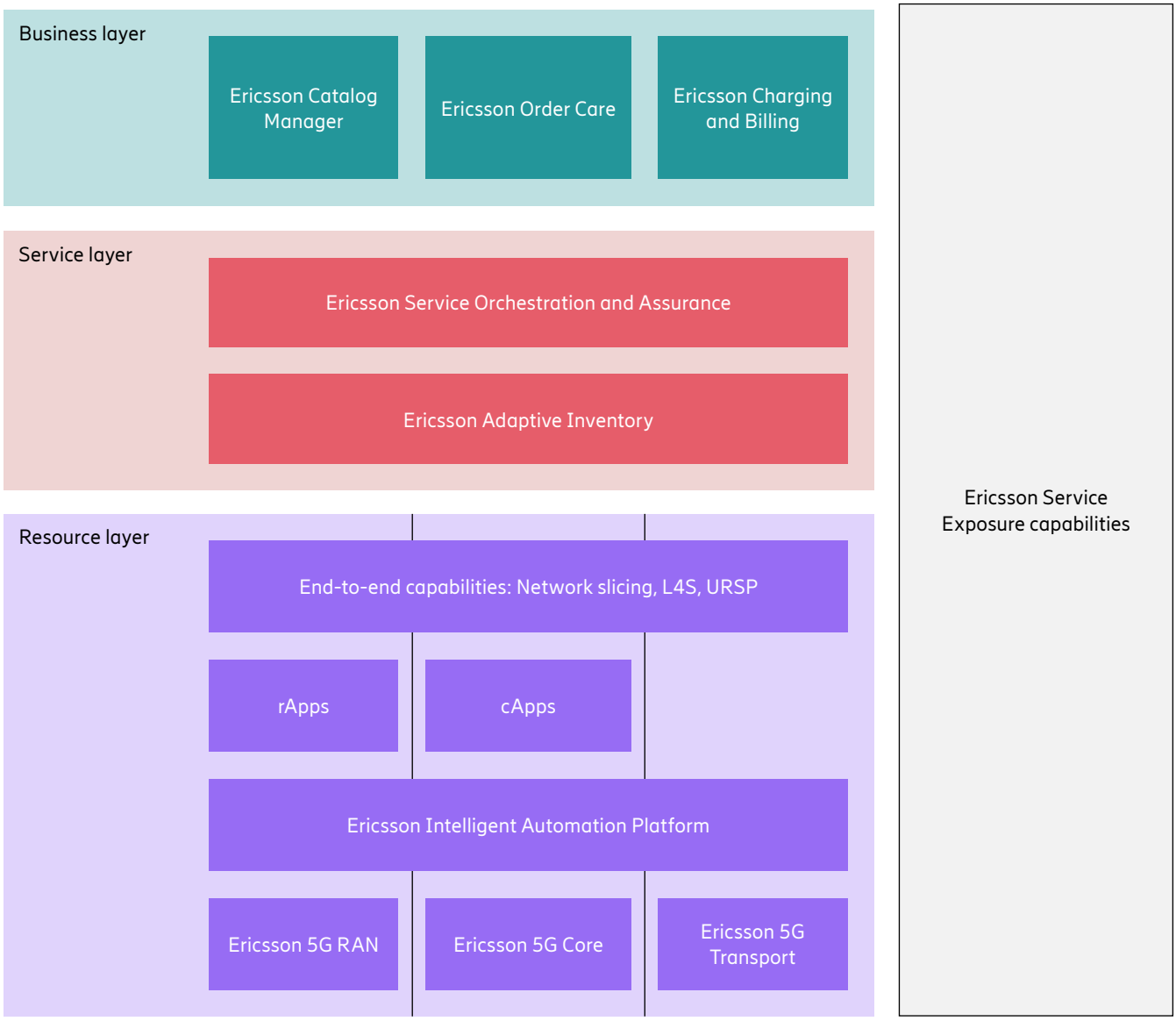
QoS management and traffic steering principles are essential for multiple paths. Domain-specific SDN controllers and transport orchestrators assist in effective slice creation, deployment, and resource mapping. H-QoS at transport edge ensures service differentiation for users. For slices with specific SLA requirements, traffic steering is necessary if multiple paths exist. Management and orchestration using SDN controllers and hierarchical transport orchestrators are recommended.

Core network
Ericsson's 5G Core solution, built on a cloud-native architecture, enables distribution and allocation of dedicated resources to realize varied slices over one common infrastructure. It implements the 3GPP enablers for slice selection assistant information and data network name, as well as routing principles and session management functions that are necessary for realizing end-to-end performance levels.

The data management layer handles users, permitting them access to different performance levels. Policy control functions care for NI-QoS handling and related packet filtering, and URSP management rules dynamically place UE on a slice and steer traffic from one slice to another depending on the application.

[10] Ericsson, The essential building blocks of E2E network slicing

Figure 6: Ericsson's comprehensive portfolio for differentiated connectivity



Operation and business support systems
Ericsson's OSS/BSS capabilities enable service differentiation by providing comprehensive monitoring, multi-domain service orchestration and assurance, and service commercialization. This includes:

- Ericsson Service Orchestration and Assurance monitoring ensures real-time visibility and performance optimization across networks. Multi-domain service orchestration and assurance automate the design, creation, and life cycle management of connectivity services, ensuring seamless integration and SLA compliance across access, transport, and core networks.
- Service commercialization is a set of capabilities, realized by Ericsson Catalog Manager and Ericsson Order Care, that enables CSPs to create differentiated connectivity offerings, set price levels, and expose them to customers in B2B, B2C, and B2B2C context.
- Ericsson Charging and Billing empower CSPs to fully monetize their differentiated connectivity offerings via subscription or pay-per-use (via ASPs and aggregators) business models.
- Ericsson Adaptive Inventory offers a real-time view of the network. It automates critical processes and uses AI tools to enhance resource usage.
- Ericsson Intelligent Automation Platform provides a RAN and core automation platform, including all network management, orchestration, hosting rApps and cApps for open- and closed-loop automation, and analytics.
- Ericsson's rApp and cApp portfolios enable AI-based automation across the RAN and core domains, covering the complete network life cycle. Addressing areas like high resiliency, high performance, and premium experiences, they support specific automation needs including network deployment, evolution, optimization, and healing.

Service exposure
The service exposure domain is the enabler of indirect, application-driven sales models for differentiated connectivity through ASPs and aggregators. Ericsson's service exposure portfolio includes exposure functions in Cloud Core Exposure Server (CCES) – which implements 3GPP Network Exposure Function (NEF) and capabilities of external service exposure platforms.

The implementation of industrialized APIs is pivotal for differentiated connectivity revenue generation throughout the ecosystem. Our portfolio supports an expanding range of APIs, including CAMARA APIs and underlying capabilities, which enable CSPs to make their differentiated services capabilities accessible for the ecosystem, benefiting developers, ASPs, and enterprises.

Real-world success case: Spark

Pioneering differentiated connectivity in New Zealand

With its "It's better with Spark" platform, Spark is turning its 5G SA network into a revenue engine. It's built around the simple idea that when customers choose Spark, they enjoy a premium service in the moments that really matter to them – whether it's always-on connectivity, trusted and secure experiences, timely access to the support they need, or keeping mission-critical workflows running when it matters most. Working closely with Ericsson, Spark's strategy is to demonstrate technology leadership and provide differentiated services for their customer base.

When connectivity quality changes, outcomes change

Connectivity underpins every aspect of life for consumers and businesses across New Zealand – from payments and logistics to customer service, entertainment, safety systems, and real-time work on the move. When connectivity quality changes, outcomes change. That reality defines the challenge Spark is solving.

Within Spark's platform, the Better Network pillar sets a clear ambition: To deliver a network that is reliable, trusted, and advanced, especially when customers need it most. Meeting that ambition is an increasingly demanding task. Reliability and coverage are no longer differentiators. Customers expect consistency in real-world conditions when and wherever they operate, without needing to understand the technology behind it.

The challenge for Spark is protecting that trusted foundation while evolving the network to support more demanding, performance-sensitive use cases. Spark's investment in advanced 5G SA capabilities is a response to this challenge, enabling more predictable connectivity while keeping trust and reliability at the core.

Building the foundation with trust and reliability

Building a better network means delivering mobile connectivity that customers can depend on every day, performs consistently in real-world conditions, and "just works" when they need it. It also means building a network that customers can trust, where safety and security are built in as fundamentals, not added later. Reliability, coverage, and safety are baseline expectations.

5G SA enables Spark to move beyond single best-effort connectivity to a network that can deliver predictable performance outcomes when and where they matter most. Rather than simply making the network faster, 5G SA turns it into a more configurable platform, allowing performance to be engineered around specific needs. This allows Spark to shape connectivity for defined traffic and critical moments, providing assured performance for use cases that cannot tolerate variability – such as transactions, safety systems, logistics operations, live production, and essential communications. The value is not peak speed, but predictability and resilience, especially under high-demand conditions.

From a business perspective, this creates a pathway to new value creation and commercial models. Differentiated connectivity allows Spark to move beyond a volume-led model, toward one where customers pay for predictability, choice, and performance guarantees. Over time, this extends past static product tiers into more flexible, on-demand models aligned with application needs and embedded into customer workflows. In this way, connectivity evolves from data allowances to network value, reinforcing the Better Network promise with tangible proof.

From capabilities to customer belief: Communicating the value of 5G

In late 2025, Spark began building customer understanding and confidence in what advanced 5G can enable. A key milestone was Spark Accelerate in October 2025, where government and enterprise customers were introduced to emerging 5G capabilities such as network slicing and private 5G. The event confirmed strong, cross-industry interest in deterministic performance, mobility, and security for automation, operational technology, and critical workflows. The event also helped Spark shape how these capabilities should be taken to market, which was in the form of practical tools for better outcomes, not abstract network features.

Since then, Spark has moved from concept and demonstration to tangible customer deployments, particularly in private 5G, partnering with Ericsson to deliver dedicated on-site networks.

Reliability, coverage, and safety are baseline expectations.



Alongside this progress, Spark introduced 5G+ as a clear, scalable way to communicate its enhanced 5G era, uniting propositions such as 5G+ Assured and 5G+ Private Network. This foundation in education, proof, and clear language set the stage for demonstrating differentiated connectivity under real-world peak conditions.

What has set Spark apart is the deliberate effort in bringing together policy, marketing, product, sales, and engineering teams into a single monetization conversation. Rather than treating 5G SA as a technology roadmap item, Spark elevated it to a strategic business question that goes beyond just what the network can do. Instead, it asks: "What are our customers' goals, and how can these be packaged into an experience that customers are willing to pay for because of the business outcomes it enables?"

Proving public network differentiated connectivity in the real world

To make differentiated connectivity tangible, Spark chose to demonstrate it in environments where best-effort connectivity is naturally stressed. One such setting was the Synthony festival in Auckland during March 2026.

Broadcasting from locations not designed for livestreams presents many challenges. These include the cost and disruption of deploying temporary cabling, complex connection set-ups, and the need to maintain consistent performance under heavy load. Live production relies on a stable uplink performance and predictable throughput. A temporary outdoor venue and a congested, best-effort network create challenging conditions for guaranteeing connectivity.

At Synthony, Spark used slicing capability to support the live streaming of artists' performances directly to the YouTube New Zealand homepage, reaching hundreds of thousands of viewers. The demonstration showed that a high-value, time-sensitive uplink can be delivered wirelessly, even in demanding conditions where fixed infrastructure can be impractical.

A new model for connectivity

Spark's view of the future of connectivity aligns with its Better Network ambition: A shift from generic, volume-led connectivity to connectivity delivered and valued through customer outcomes. Rather than relying on a single connectivity model, the future is fit for purpose. Different use cases demand different types of connectivity, from public network mobility and protected performance to dedicated private networks and new forms of reach and resilience. These types of connectivity are chosen based on the outcome required.

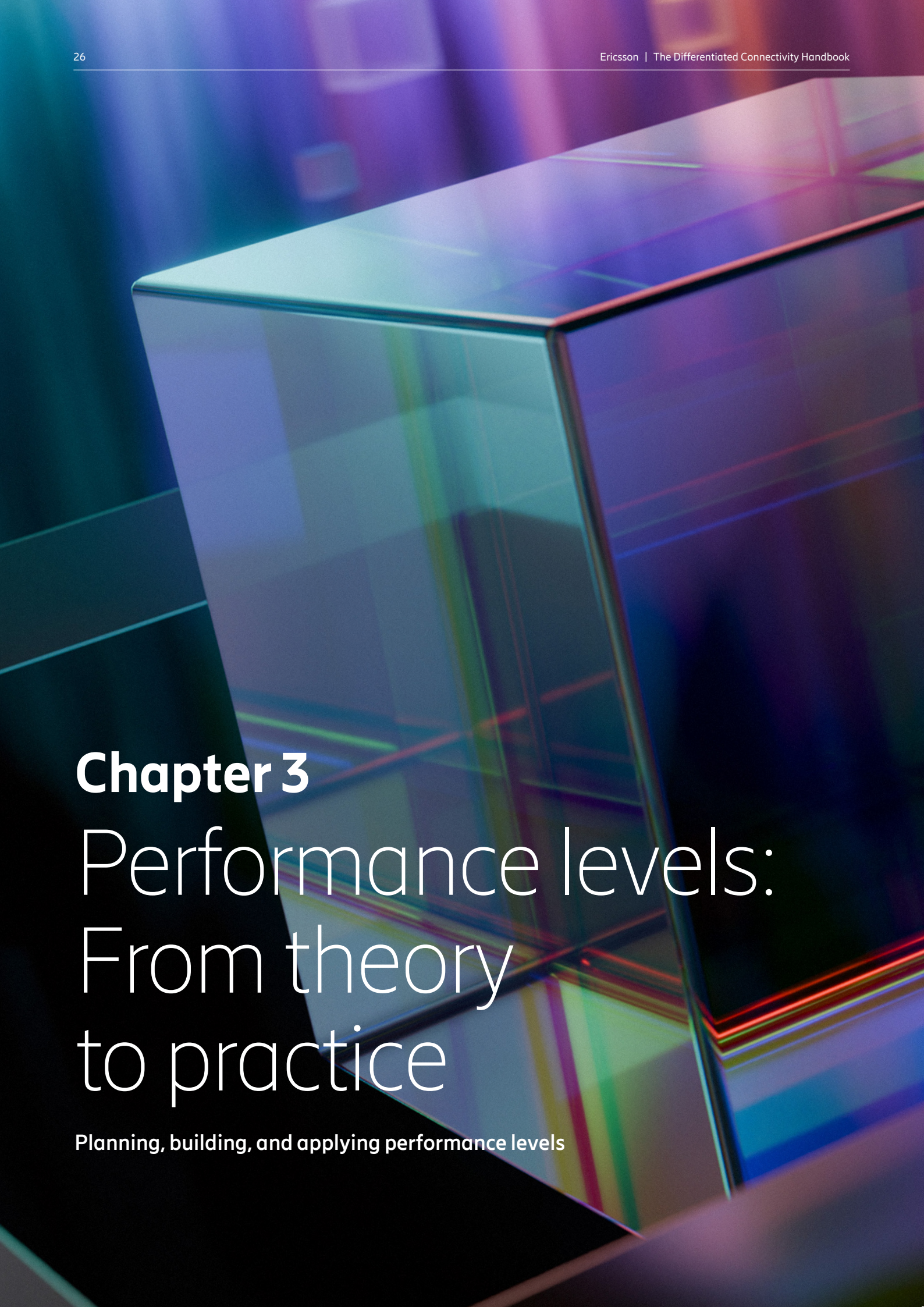
As 5G SA matures, networks become more configurable and closer to customer workflows. This enables performance to be aligned with application needs rather than forcing customers into one-size-fits-all experiences. From a commercial perspective, this evolution creates a path beyond data volume toward value-based monetization, where customers pay for predictability, priority, and performance guarantees. Over time, this opens the door to more flexible models that reflect usage, timing, and delivered outcomes — marking a shift from data allowances toward true network value.

Better as a strategy, not a slogan

"It's better with Spark" is an organization-wide ambition that connects Spark's brand promise to its business priorities. It's a commitment to make the experience genuinely better for customers not just in the everyday, but in the moments where connectivity directly affects the outcome. That is why Spark's Better Network pillar is deliberately two-part: Protecting the fundamentals of trust, reliability, and security that customers rely on, while also investing in advanced capabilities that unlock new value over time.

Seen through that lens, Spark's move into differentiated connectivity is not an isolated technology program. It is a deliberate part of delivering on "better" — bringing improved performance where it matters most for New Zealanders, from consumers trying to stay connected in high-demand situations, to organizations running workflows where performance variability creates real cost, risk, or disruption.

To make this shift clear and scalable, Spark introduced 5G+ as a group-wide portfolio: A single customer-facing language for advanced 5G capabilities, including differentiated services such as 5G+ Assured and 5G+ Private Network. At Synthony, one of Auckland's busiest event settings, Spark supported a live broadcast uplink — a tangible proof point that a better network can enable better performance under pressure. The message is simple: Spark is building a network that doesn't only perform well on average, but performs better when it counts.



Chapter 3

Performance levels: From theory to practice

Planning, building, and applying performance levels

Planning performance levels

Network planning is crucial when it comes to delivering differentiated connectivity successfully. This section outlines the key considerations.

As introduced in the infographic featured in Chapter 2, titled "realizing differentiated connectivity service offerings", CSPs striving to deliver differentiated connectivity require effective network planning. This is the critical foundational step that ensures new services can be introduced without compromising existing performance, while enabling CSPs to allocate resources strategically for prioritized use cases.

By aligning technical capabilities with commercial objectives, CSPs can create performance tiers that meet diverse application requirements, from everyday internet access to mission-critical operations, at the same time as maintaining overall network efficiency. The following section explores key considerations that are essential for planning and implementing performance levels.

Network planning

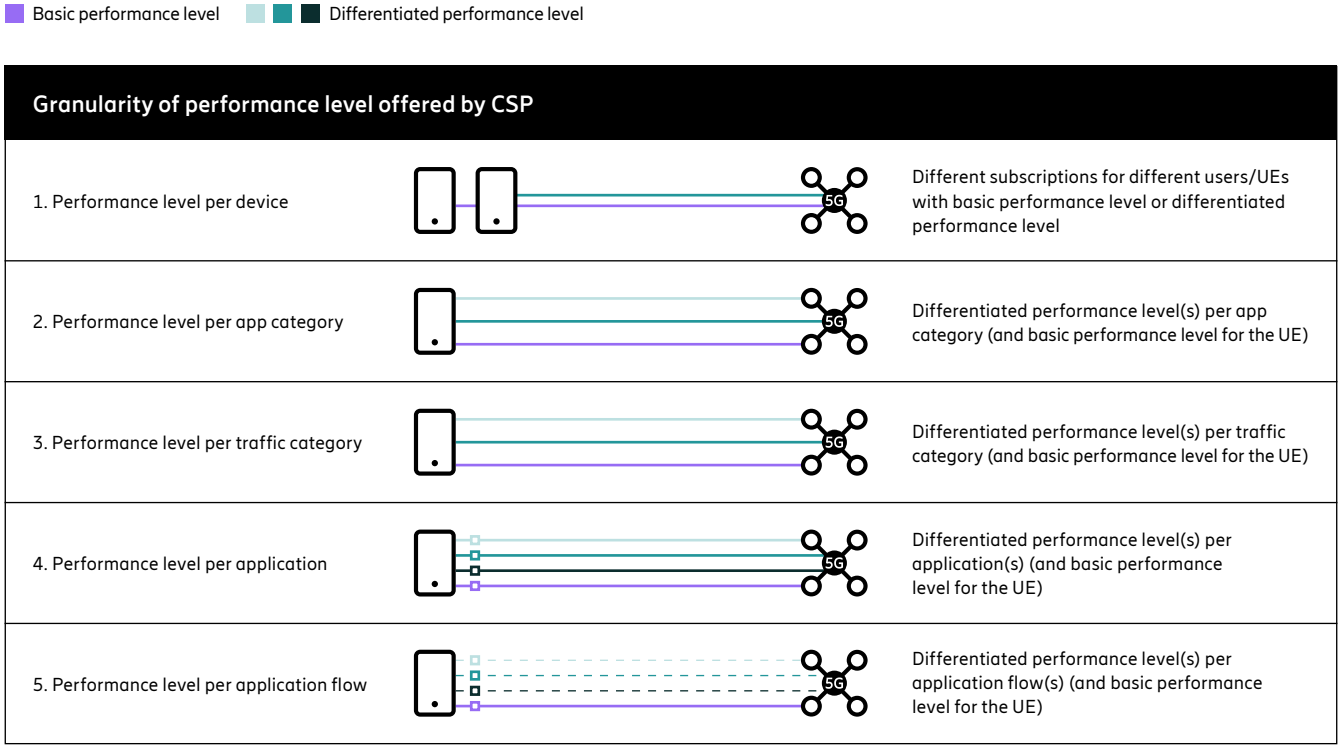
When planning performance levels, CSPs must first assess existing network capacity and coverage to ensure new services can be supported where needed without exceeding available resources, and to determine how much can be allocated to prioritized services without negatively impacting current users. If the planned offerings require either more capacity than is currently available, or the extension of 5G SA coverage to new areas, network expansion may be necessary. A thorough analysis of service requirements – including throughput, latency, and reliability for both uplink and downlink – is essential to determine whether single or multiple performance levels are needed.

Capacity planning involves evaluating which use cases are feasible, deciding where to introduce new services, and identifying the need for targeted investments in certain areas, such as for remote-driven cars or premium video services. CSPs can also reallocate a portion of existing best-effort capacity, which is typically 10–20 percent, to prioritized services while minimizing impact on current users.

Another important factor in setting the service specifications for a performance level is how they are going to be used in relation to users and applications. We foresee five different options, as shown in Figure 7.

Creating multiple service tiers, like premium and standard connectivity, is another way to enable differentiation in quality and pricing for consumers and enterprises.

Figure 7: Performance level granularity



Planning is iterative and requires coordination between technical and marketing teams to align service requirements with network and device capabilities. Therefore, adjustments may be needed as new services are introduced, or requirements evolve. Before building performance levels, CSPs should use a checklist to determine whether differentiation is needed at the device, traffic/application category, application, or flow level, and define the corresponding connectivity characteristics. These considerations ensure that performance levels are technically feasible and commercially viable, supporting differentiated services while maintaining overall network efficiency.

Performance level categories

Another important aspect to consider during the planning process is the type of application traffic that needs to be handled by the performance level. These categories are essential for enabling differentiated connectivity, allowing CSPs to optimize network resources and deliver the appropriate QoS for a wide range of use cases. By classifying traffic into categories such as premium internet, real-time communication, and managed latency, CSPs can ensure that applications from web browsing and video streaming to interactive gaming and mission-critical controls, can all receive the required network performance. Understanding these categories is fundamental for designing, planning, and delivering services that meet both technical and commercial objectives.

1. Premium internet

This category encompasses general-purpose connectivity optimized for responsiveness and high throughput when capacity is available, but without strict delivery guarantees. It is characterized by best-effort service, where the average waiting time for responses is minimized, though no firm deadlines are enforced. Examples include web browsing, non-interactive gaming (where data is uploaded after a level is completed), document sharing, emails, chat messages, and over-the-top (OTT) services such as video or voice calls that are not specifically optimized. Non-interactive video streaming services like Netflix, YouTube, and TikTok also fall under this category, as they rely on buffering to handle variations in bandwidth.

Within this category, subcategories can also exist. For instance, connectivity designed for applications that can tolerate significant delays and make use of extended buffering can be optimized for transmitting data opportunistically, often when network resources are available, and can be delayed by hours or even a day without impacting the service. An example would be uploading surveillance camera footage to a central server for later review, where real-time access is not required, so data can be transmitted when network load is low.

2. Real-time communication

This category is intended for applications requiring timely, often bidirectional, communication with defined throughput with specified packet delay budget to ensure a responsive experience. It supports both in the uplink and in the downlink optimization, depending on the use case, and is suitable for scenarios where throughput disruptions can affect the service.

Examples include interactive video conferencing, video broadcasting, real-time cloud gaming (where video is streamed downlink and user controls are sent uplink), and remote-controlled vehicles (such as cars), where video streams and control signals must be delivered promptly to maintain synchronization and safety.

3. Managed latency

Managed latency is designed for low-bandwidth, high-priority communications that require strict guarantees on the delivery time of small data packets. This category ensures that critical control or transactional data is delivered within a specified timeframe, supporting applications where predictability and reliability are paramount. Examples include remote control actions for vehicles (such as steering commands); stock trading transactions; payment terminal communications in crowded locations such as at events; AR glasses for field technicians and control of hospital equipment; as well as control commands in the uplink for mobile gaming. In these cases, the timely and reliable delivery of commands or data is essential for correct operation.

Each category is defined by its specific requirements for throughput, latency, and reliability, and applications may utilize different categories for different aspects of their operation depending on the criticality and timing of the data involved.

Figure 8: Outlining the performance level categories

Category	Premium internet	Real-time communication	Managed latency
Objective	General connectivity for most applications	Support interactive or time-sensitive applications	Guarantee delivery within strict time constraints
Traffic characteristics	Best-effort, high throughput, no strict latency guarantees	Low latency, bidirectional or unidirectional, prompt delivery	Very low latency, firm scheduling
Observability conditions	Received data rate	Received data rate within specified packet delay budget	Packet inter-arrival time

Building performance levels

Ericsson's toolkit for performance levels leads the way when it comes to configuring network infrastructure to enable differentiated connectivity.

The next step is to build and configure the network infrastructure to meet the required service specifications through the planned performance levels. For this, CSPs must follow a structured process that aligns service requirements with network capabilities, leveraging a set of technical building blocks that we refer to as the toolkit for performance levels.

Toolkit for performance levels
The toolkit includes different features and network capabilities in the performance levels framework as seen below, which are further explained in Figure 9.

Use case examples
To make this more tangible, we have outlined use case examples for each type of performance level category, and how the toolkit can be applied to satisfy their connectivity performance requirements.

Figure 9: Outlining the performance levels toolkit

Technical building block	The enabled capability
5G QoS identifiers (5QIs)	Define specific behaviors for data flows concerning latency, packet loss rate, reliability, and priority, ensuring the required service quality for different applications
Rate-controlled scheduler (RCS)	Scheduler pattern that secures a minimum rate
Relative priority scheduler (RPS)	Differentiate services and UE based on configured relative priorities within the scheduler
Latency prioritized scheduling (LPS)	Scheduling algorithm designed to identify and give higher priority to time-critical data traffic, reducing delays
(Automated) Radio resource partitioning (RRP)	Create dynamic logical partitions of radio resources that can be dedicated to specific services based on defined performance level targets
UE route selection policies (URSP)	Enable efficient traffic steering and routing for applications in mobile networks, allowing dynamic selection of network slices and optimizing traffic management
Priority-based admission control (PBAC)	Optimize system accessibility by prioritizing specific UE
Low latency and low loss, scalable throughput (L4S)	Maintain smooth performance under varying network conditions by significantly reducing latency and packet loss in high-bandwidth, time-critical applications. This improves responsiveness for rate-adaptive apps

Example use case 1: Premium mobile broadband (premium internet)

The premium mobile broadband use case represents an evolution from traditional best-effort connectivity toward a performance-driven model. It is designed to deliver predictable and superior network performance with high throughput for applications and scenarios where standard mobile broadband cannot guarantee the required QoS, but without strict delivery guarantees.

A typical user of this type of connectivity would perform activities such as web browsing, document sharing, emailing, chat messaging, and OTT services such as video or voice calls and video streaming that can rely on buffering to handle variations in bandwidth. These users could be consumers aiming at a premium service, fans at events, or even small businesses that wish to provide better connectivity for their employees but without stricter requirements on a stringent SLA.

Typical connectivity requirements:
20 Mbps on the downlink and 1 Mbps on the uplink with no strict latency requirements.

Examples of applicable toolkit capabilities:
- Pre-provisioned network slice with enhanced default 5QI connectivity
- RPS to prioritize traffic higher than regular users
- L4S can be applied depending on specific service requirements



Example use case 2: Professional streamer (real time)

Professional streamers, individuals, or media teams need to deliver high-quality, real-time video content to large audiences from diverse locations such as live events, concerts, or outdoor venues. Unlike casual streaming, professional streaming demands consistent uplink capacity, low latency, and minimal jitter to maintain uninterrupted broadcast quality and viewer engagement. These requirements stem from the nature of live content delivery, where any degradation in performance can result in frame drops or buffering.

Best-effort connectivity cannot guarantee the stringent performance needed for professional streaming, especially in congested environments like stadiums or event zones. It requires a real-time throughput performance level to ensure stable uplink throughput, prioritized resource allocation, and resilience under network load, enabling streamers to deliver immersive experiences without compromise.

Typical connectivity requirements:
0.4 Mbps on the downlink, 3 Mbps on the uplink, and <200 ms round-trip latency for 1080p video using H.264 codec.

Examples of applicable toolkit capabilities:
- RPS to prioritize the UE
- URSP for mapping different traffic within a UE to a specific slice
- RCS to guarantee constant throughput to the video uplink
- PBAC to prioritize users who have signed up for the service
- Security and network separation can be applicable depending on the case



Example use case 3: Point-of-sales (POS) terminals (managed latency)

POS terminals need to provide secure, reliable, and low-latency payment transactions in retail environments, event venues, and other high-traffic locations. These terminals handle critical financial operations where transaction speed and success rate directly impact customer experience and business revenue. Any delay or failure in connectivity can lead to payment disruptions, long queues, and loss of sales opportunities.

To meet these requirements, POS terminals demand predictable performance with managed latency, and stable uplink/downlink throughput. Best-effort connectivity cannot guarantee these conditions, especially during times of network congestion, therefore a performance level with managed latency is needed. Security and network separation can also be applied to safeguard sensitive payment data.

Typical connectivity requirements:
1 Mbps on the downlink, 1 Mbps on the uplink, and 280 ms round-trip latency.

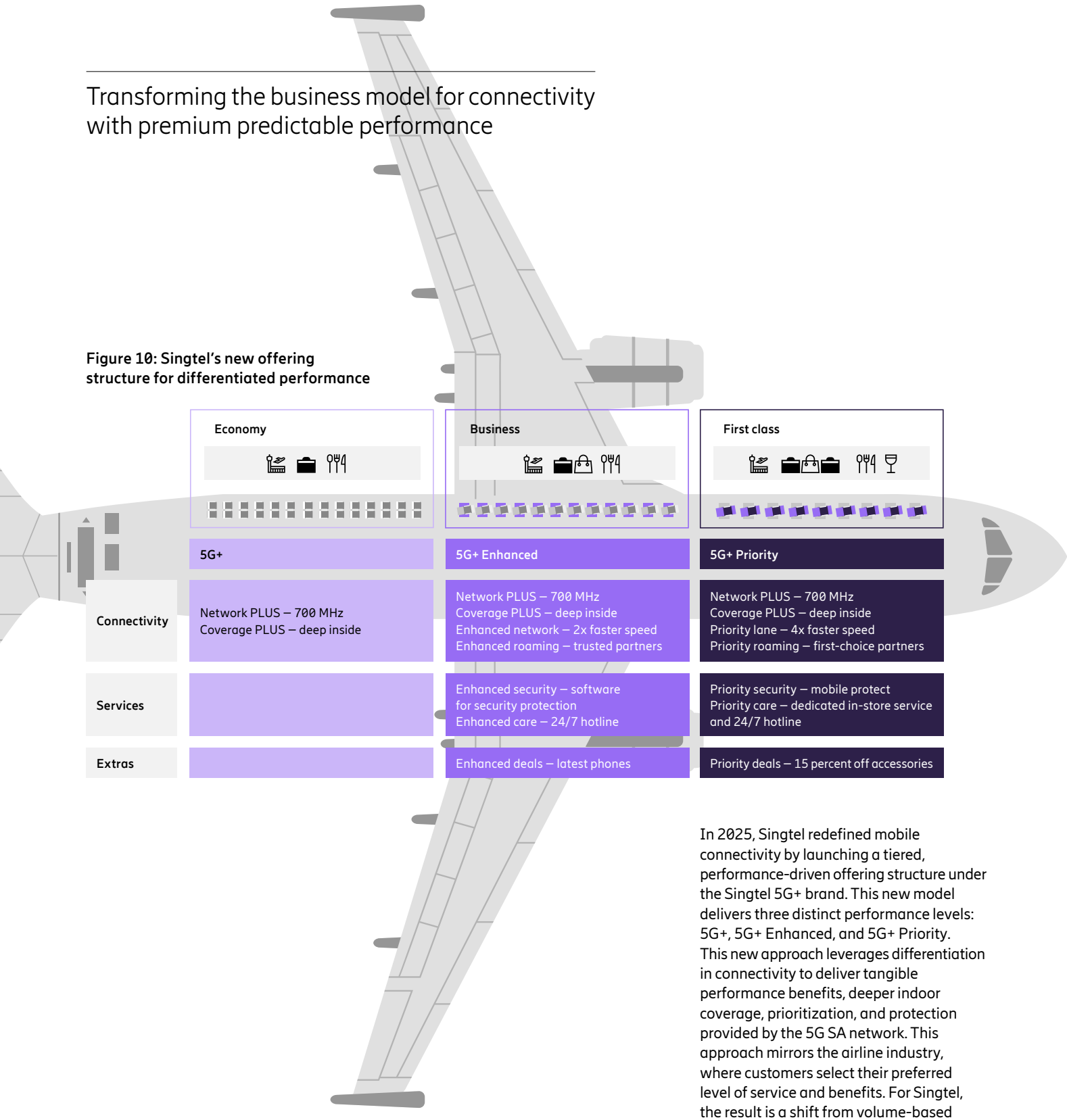
Examples of applicable toolkit capabilities:
- URSP for mapping different traffic within a UE to a specific slice
- RCS to guarantee constant throughput for the transactions or LPS to ensure the latency is kept within specific time bounds
- PBAC to prioritize users who have signed up for the service
- Security and network separation can be applicable depending on the case



Real-world success case: Singtel

Transforming the business model for connectivity with premium predictable performance

Figure 10: Singtel's new offering structure for differentiated performance



In 2025, Singtel redefined mobile connectivity by launching a tiered, performance-driven offering structure under the Singtel 5G+ brand. This new model delivers three distinct performance levels: 5G+, 5G+ Enhanced, and 5G+ Priority. This new approach leverages differentiation in connectivity to deliver tangible performance benefits, deeper indoor coverage, prioritization, and protection provided by the 5G SA network. This approach mirrors the airline industry, where customers select their preferred level of service and benefits. For Singtel, the result is a shift from volume-based to performance-based offerings, creating new business opportunities and encouraging increased consumer loyalty.

The challenge: Breaking free from the volume-based model

For more than a decade, CSPs' main offering has been the data bucket, with the volume of data as the key value proposition. However, as the buckets have gradually increased in size, the traditional model is losing applicability. The larger data buckets hold little appeal for users, who typically do not consume their full monthly allowances. The result is a market where CSPs mainly compete on price, putting downward pressure on ARPU.

The rise of high-bandwidth, latency-sensitive applications (such as cloud gaming, AI, AR/VR) exposed the limitations of a "one-size-fits-all" approach. Consumers expect not only more data, but better, more reliable, and more personalized connectivity experiences.

Transformation through differentiated connectivity

Singtel, in partnership with Ericsson, achieved over 95 percent nationwide 5G SA coverage significantly ahead of regulatory targets.[11] This enabled Singtel to start exploring network capabilities for enabling differentiated connectivity, such as network slicing and advanced RAN features, allowing the creation of multiple performance levels with guaranteed performance for different user groups and applications.

Singtel went through a staged journey that started by exploring a simple performance level and gradually scaling its usage, as well as adopting new network capabilities which enable the realization of more complex use cases for service differentiation. Throughout this journey, Singtel validated these capabilities in high-demand environments:

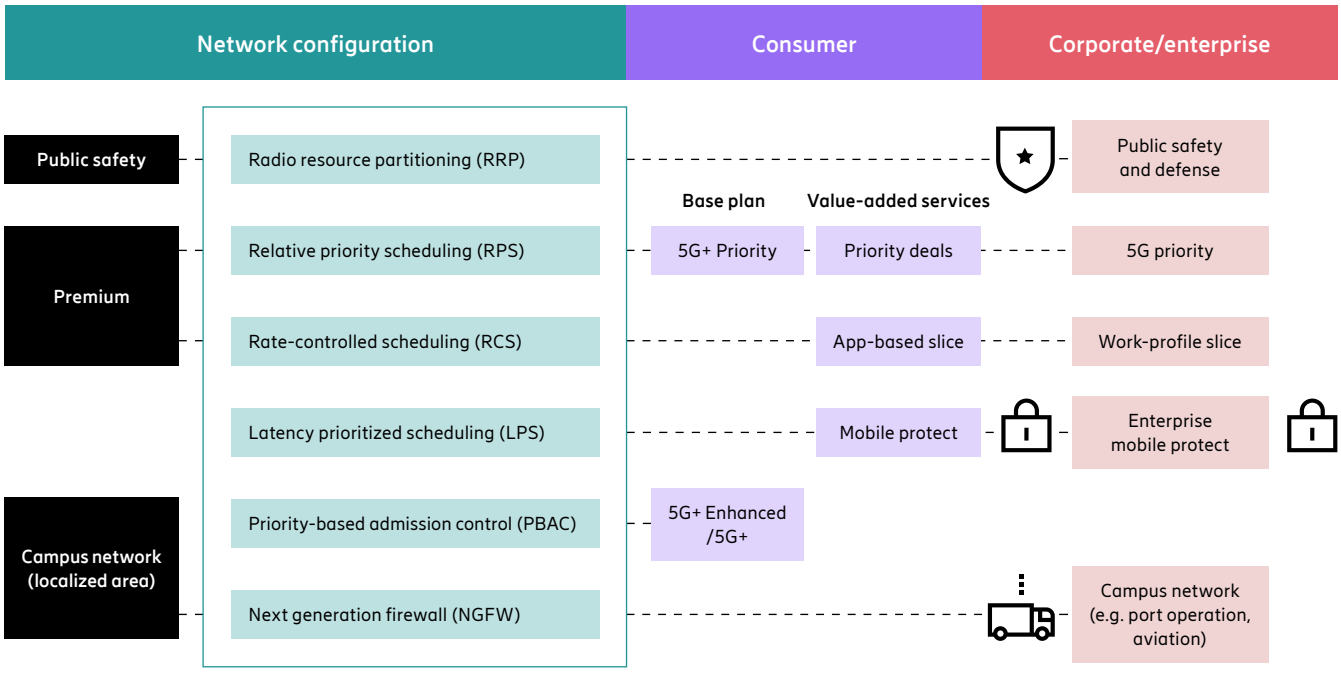
- **Singapore Grand Prix (2022):** A performance level with a dedicated end-to-end network slice through radio, transport and core networks, and the RRP RAN feature, ensured that selected fans could view the race from anywhere on their devices, experiencing the high-speed connectivity and ultra-low latency, in a high-traffic environment.
- **National Day Parade (2023):** Two different performance levels and new capabilities such as the PBAC feature prioritized public safety, event organizers and spectators, guaranteeing mission-critical communications when around 40,000 attendees lined the streets to commemorate the public holiday.
- **5G data boost for events and security slice (2024):** Launch of 5G data boost packages for customers to improve their experience during concerts and specific events, using the RCS, as well as the "Mobile Protect" offering to provide a dedicated slice for subscribers wanting a protected slice for their data traffic.
- **5G+ subscriptions launched (2025):** Launch of a new tiering model where differentiation is inherent in the different "classes" using all the aforementioned tools – RPR, PBAC and RCS – to ensure that premium subscribers get a differentiated experience compared to other groups of subscribers.

What followed these validations was an era of exceptional innovation with new offerings such as Priority Event Passes being commercialized, and new technologies like URSP being implemented in the network, which have collectively led to where Singtel is today. Singtel's transformation into tiered, performance-based connectivity has set a new industry standard. By focusing on differentiated performance levels, Singtel has not only enhanced customer experience and loyalty but also settled the foundations to unlocking new monetization opportunities and operational efficiencies, which provides a roadmap for CSPs worldwide. This is a testament of how a leading CSP that is continuously navigating the blueprint of "Explore–Monetize–Scale" when it comes to differentiated connectivity is transforming its business while shaping the industry.

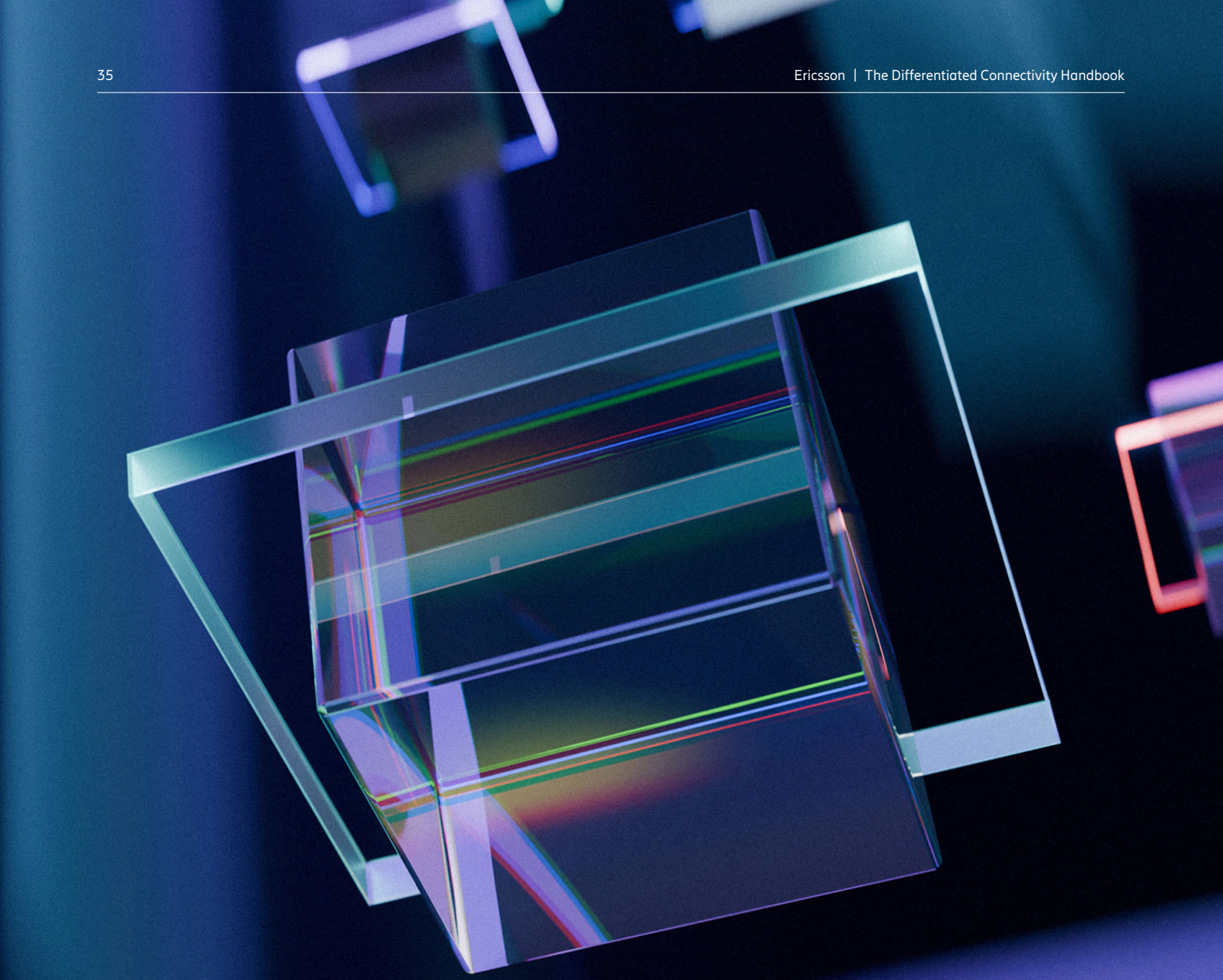
Outcomes and benefits:

- **Monetization:** Singtel has successfully shifted from volume-based to performance-based monetization, unlocking new revenue streams and business opportunities.
- **Customer experience:** Consumers now have clear choices and tangible benefits, driving loyalty and upselling.
- **Operational efficiency:** Network resources are optimized, matching performance to user and application needs.
- **Industry recognition:** Singtel's leadership has been recognized with international awards and serves as a blueprint for other CSPs.

Figure 11: Singtel's differentiated connectivity framework



[11] Ericsson, Singtel's journey into differentiated connectivity



Chapter 4

Monetizing and scaling differentiated connectivity

From business vision to configuring, selling, and monitoring

Scaling differentiated connectivity

As CSPs move from initial deployments to large-scale differentiated connectivity offerings, the limitations of manual configuration and management will become increasingly apparent.

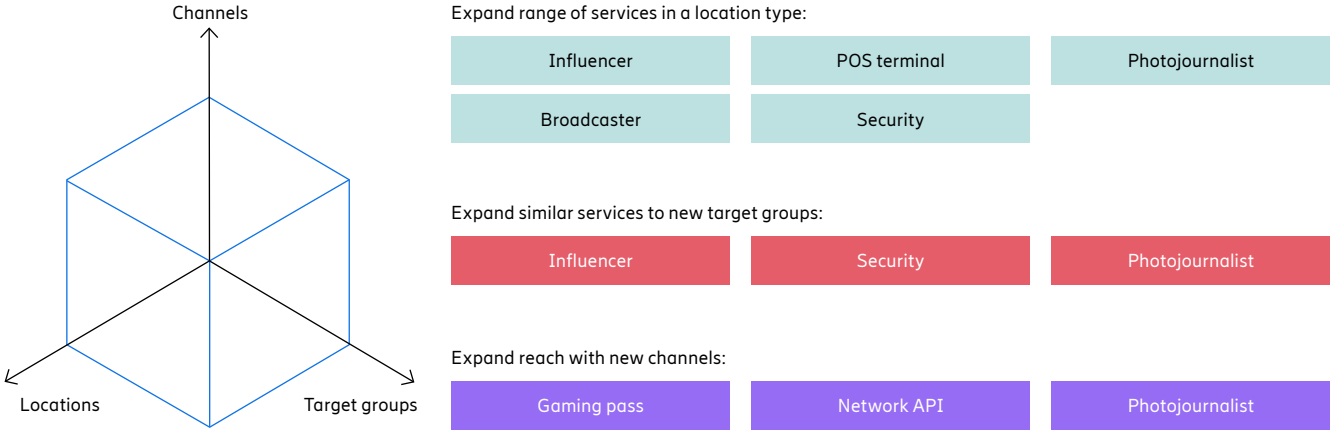
Scaling differentiated connectivity involves expanding both the breadth and reach of a CSP's service portfolio. This includes new performance-based service offerings beyond traditional data buckets, as well as new use case-driven offerings tailored to specific customer needs. Scaling also means extending these service offerings across new locations – such as stadiums, airports, factories, cities, or defined areas within cities – and to broader target groups, including multiple enterprises with similar requirements and large numbers of users running comparable application types. In parallel, CSPs must expand distribution through additional channels, including wholesale partnerships.

While manual approaches can support early exploration and small-scale deployments, they are inherently slow, labor-intensive, error-prone, and difficult to coordinate across network and organizational domains. These limitations constrain both service scalability and the ability to monetize differentiated offerings.

Therefore, delivering differentiated connectivity at scale requires a progressively higher level of network automation. As CSPs broaden their portfolios with performance-based services and address a greater number of customer groups, channels, and locations, automation becomes essential in maintaining consistent performance, operational efficiency, and sustainable growth. These capabilities also represent important building blocks on the path toward future autonomous networks.

Automation and orchestration should be embedded from the outset of the differentiated connectivity journey, rather than introduced as a later optimization. Early adoption of automation reduces operational complexity, minimizes errors, and accelerates deployment – all of which create a solid foundation for large-scale growth.

Figure 12: Scaling differentiated connectivity offerings



From business objectives to network behavior

As differentiated connectivity scales, CSPs need a structured approach in order to translate business objectives into consistent and automated network behavior.

A key challenge for CSPs is responding to on-demand service requirements that vary by location, time, and usage context, while also maintaining overall network performance and operational stability.

As discussed in Chapter 3 of this handbook, manual service design and operation quickly become limiting factors as differentiated connectivity scales.

A structured approach is therefore required to systematically translate business objectives into predictable network behavior. An intent-based management framework provides this structure by separating business objectives from service behavior and resource realization.

The intent-based approach described in this chapter represents a future-oriented framework. However, CSPs do not need to implement it fully to begin scaling differentiated connectivity. Value can be realized immediately by introducing intent decomposition – clearly separating business objectives, service behavior, and resource realization – while progressively increasing automation and autonomy over time.

Business intent expresses the desired outcome from a commercial or operational perspective, using business-oriented language without technical detail. It defines the goals of the customer or enterprise.

Service intent translates the business outcome into the required connectivity service behavior. It defines which characteristics the service must exhibit, such as reliability, priority, throughput, latency, location awareness, and security level. In addition to business intents, service-level operational intents may also be defined to ensure service stability and performance, even when not directly derived from a specific business request.

Resource intent defines how the service intent is realized technically. It specifies how network resources across the RAN, transport, and core domains must be configured and governed to fulfill the service intent. This includes both physical and virtual resources, such as allocating Physical Resource Blocks in RANs, adjusting transport and core capacity, and applying resource control policies. Resource intent is handled within domain-specific automation layers and represents the closest layer to real-time enforcement of differentiated connectivity.

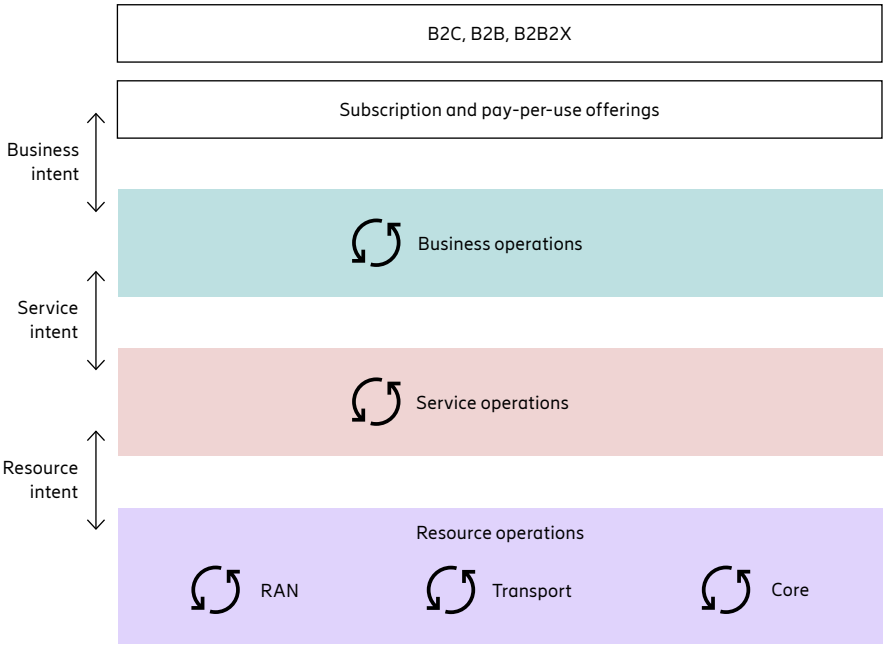


Example: POS terminal

The following example illustrates how intent decomposition can be applied in practice, without requiring a fully autonomous or intent-driven network from day one.

- **Business intent:** Ensure payment transactions in all stores are processed quickly and reliably, even during busy periods.
- **Service intent:** Provide a connectivity service with predictable throughput for transaction traffic, low jitter, prioritization over best-effort traffic, and secure data exchange.
- **Resource intent:** Configure a performance level with guaranteed uplink capacity for transaction bursts, apply traffic prioritization rules in the 5G Core, set URSP rules for POS application traffic, and monitor latency to meet defined thresholds.

Figure 13: Differentiated services creation flow



This example demonstrates how business requirements can be translated into service behavior and network configuration through intent decomposition, while shielding business users from network-level complexity.

Orchestration plays a central role in this flow in terms of preparing the network to support the desired service behavior. It translates service intent into coordinated resource requests, establishes connectivity paths, and ensures that performance levels are created and maintained across domains.

Service-level intent is continuously tracked against customer-facing KPIs and commercial SLAs, while resource- and domain-level intents are independently monitored and enforced through local closed-loop control. For instance, domains autonomously optimize resources like scheduling, load balancing, and interference management.

Intent fulfillment and assurance operate across domains through the service layer to perform cross-domain assurance, resolve conflicts across services or slices, and ensure fulfillment of the business objectives.

Business modeling and charging are integral to scaling differentiated connectivity. CSPs must support multiple go-to-market models, including direct enterprise subscriptions, indirect models via aggregators, and partner-based offerings with revenue-sharing arrangements. Large enterprises, for instance, may require usage aggregation in hierarchies and usage indication per department on invoices. The charging and billing system must be flexible enough to cater to all types of charging models, and capable of measuring consumption in any unit type.

In summary, this framework defines how the network should behave on an end-to-end basis in order to meet the business and services objectives.



Orchestration: Coordinating intent across domains

Orchestration provides the coordination and control needed to execute intent across network domains, ensuring that differentiated connectivity services are delivered, assured, and evolved consistently over time.

Orchestration plays a key role in coordinating intent across layers and domains, rather than acting as a centralized system that directly configures the network. It is responsible for structuring and distributing service-level intents, maintaining awareness of topology and available resources, and ensuring alignment across domains such as RAN, transport, and core.

Each domain interprets and fulfills its portion of the intent using domain-specific automation, control loops and resource-specific logic. Resource allocation and configuration are therefore not centrally imposed, but emerge from the interaction between local domain optimization and cross-domain coordination.

In parallel, the network management system provides the required observability of both network and service performance. This enables multi-layer assurance, feasibility evaluation, and continuous refinement of intents as conditions, demands, or business priorities evolve. Through orchestration and automation, CSPs can deploy, adapt, and retire differentiated connectivity services mode rapidly, allowing business intent to steer connectivity with greater agility.

Example: Orchestrating the life cycle of performance levels

Orchestration is applied across the full life cycle of a performance level. This life cycle includes modeling service characteristics, provisioning offerings associated with the performance level, monitoring and assuring KPIs against SLA commitments, as well as eventually modifying or retiring offerings as requirements change.

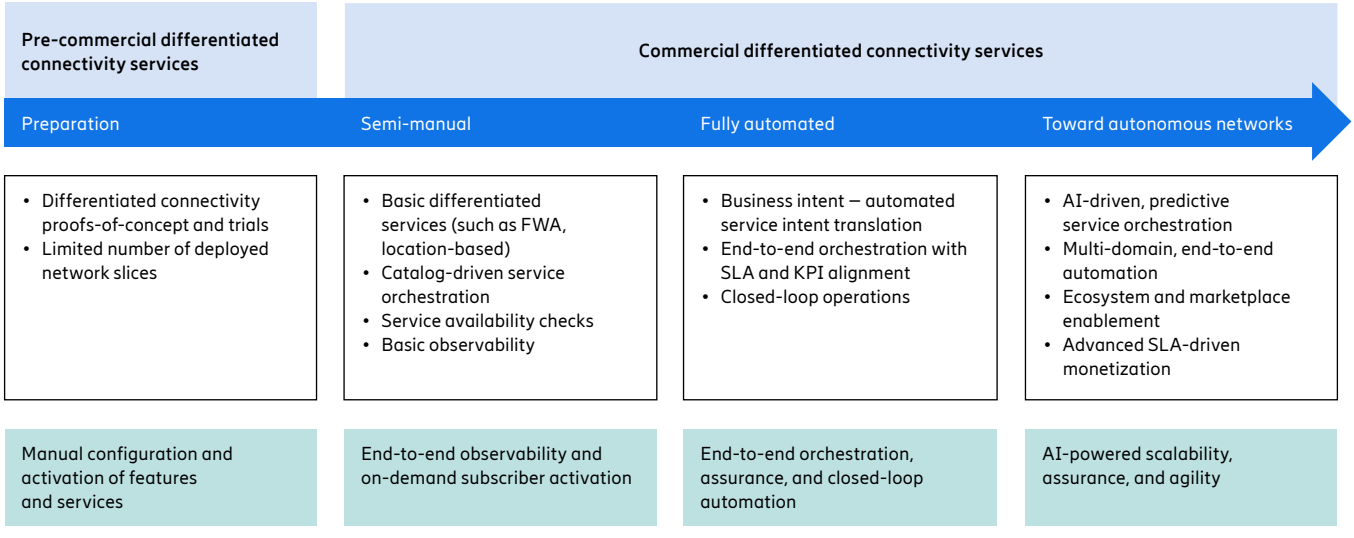
When signing up to a service, orchestration also ensures that users or applications are correctly mapped to the appropriate performance level in the network. Each of these stages involves multiple activities operating at different time scales. Automating these processes can significantly reduce operational effort and risk compared to manual execution, while improving consistency and speed.

Automated orchestration accelerates deployment and life cycle timelines, and reduces both configuration errors and operational inefficiencies across service creation, activation, and assurance.

The orchestration journey

The orchestration journey should be approached as a progression from semi-manual to increasingly automated processes. In early exploration phases, use cases are often limited in scope and geography, such as event connectivity for fans or location-specific broadcasting. At this stage, CSPs can pre-provision a small number of performance levels using existing network management systems. The orchestration system then discovers these preconfigured performance levels and becomes differentiated connectivity aware.

Figure 14: The orchestration journey to support differentiated connectivity scale-up



In turn, this enables automated subscriber provisioning and service-to-performance level mapping. This approach allows CSPs to introduce differentiated connectivity services with controlled automation while maintaining operational control.

As differentiated connectivity offerings scale in number, complexity, and geographical reach — including regional or national deployments — orchestration must evolve to support a flexible life cycle for performance levels. Integration with commercial management systems through product catalog management and order handling becomes essential to support service commercialization. Charging capabilities must also be integrated to ensure that new offerings can be monetized efficiently as they are introduced.

At more advanced stages, orchestration should extend beyond provisioning to include life-cycle management and assurance. This includes real-time monitoring and support for closed-loop automation, which enables the network to automatically detect deviations from defined goals or SLAs and initiate corrective actions without human intervention. These capabilities will allow CSPs to maintain operational efficiency and service compliance, even as the size and complexity of their service portfolio increases.

Visibility, control, and closed-loop operation

Maintaining visibility and control across the network is fundamental to effective orchestration. By providing capabilities such as inventory management, topology discovery, observability, actuation, coordination, management, and real-time analytics, OSS platforms support CSPs to adapt connectivity as services evolve. These capabilities allow CSPs to track the status and performance of all differentiated services end to end, understand resource utilization across domains, and make informed decisions about service evolution and optimization.

Closed-loop automation further strengthens this model by enabling the system to detect deviations from intended goals, thereby providing a tool to help CSPs close the gap between business expectations and connectivity performance.

The orchestration journey should align with a CSP's business strategy and scale ambitions. CSPs with clear monetization objectives and large-scale deployment targets should adopt advanced orchestration capabilities early, while others may start with simpler, semi-manual approaches and evolve over time. In all cases, having an orchestration layer with the capability to integrate with OSS and BSS while supporting end-to-end service management is critical for successfully deploying and commercializing differentiated connectivity services at scale.



Building and commercializing service offerings

Differentiated connectivity creates new monetization opportunities, provided CSPs can package, price, and commercialize services with sufficient flexibility and speed.

Effective monetization begins at the exploration phase, long before services reach the point of scaling. From the outset, BSS capabilities allow CSPs to define and manage product offerings, bundle services, and establish eligibility rules for different customer segments. This early commercial focus ensures that differentiated connectivity can generate revenue from initial deployments, across both enterprise and consumer use cases.

BSS platforms provide the core capabilities required to support monetization, including commercial catalog management, commercial order care, charging, revenue sharing, and billing. Through catalog management, CSPs can create and maintain a portfolio of connectivity offerings aligned to specific performance levels, use cases, or market segments. Commercial order care supports the customer journey from offer selection through to activation and fulfillment, while charging systems enable flexible business models across B2C, B2B, and B2B2X use cases.

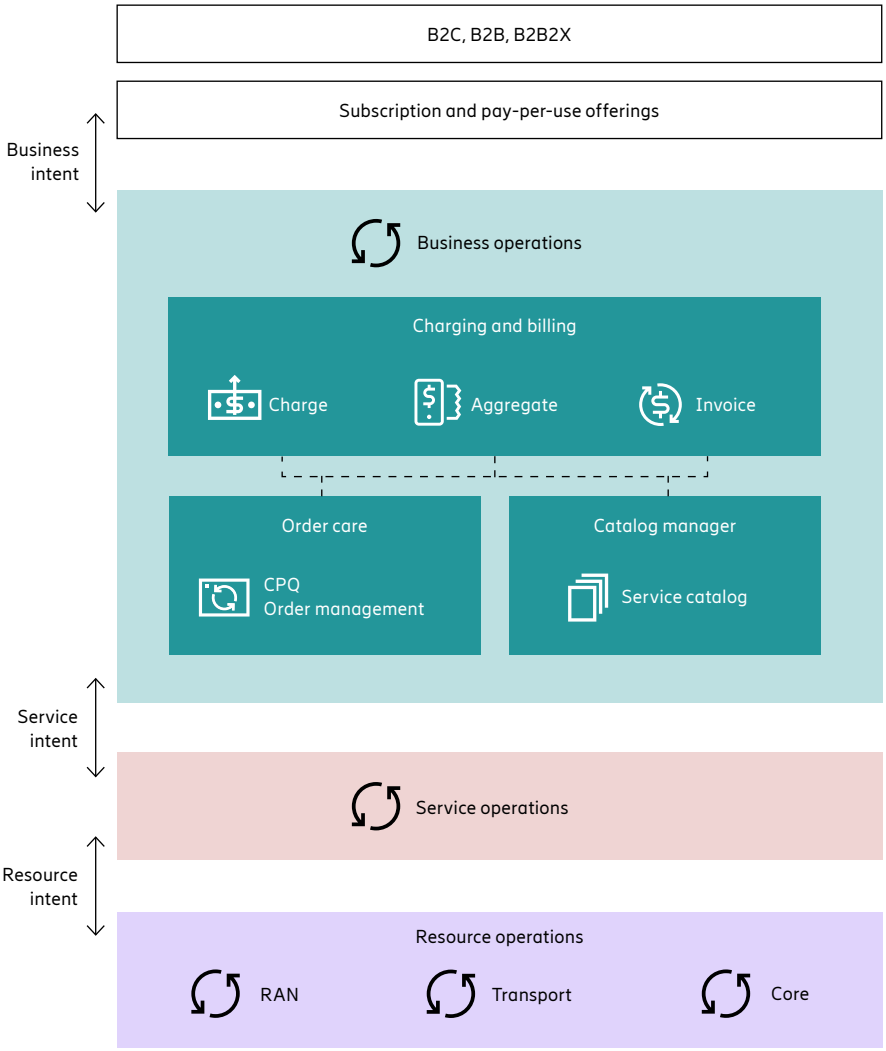
Once a service is ordered, orchestration executes commercial intent by interpreting the configured service specifications, generating workflows, and provisioning the network. This ensures that the selected service offering and associated performance level are consistently instantiated in the network.

As differentiated connectivity services evolve, automated BSS processes will allow CSPs to refine existing offerings, introduce new bundles and adapt commercial structures with minimal operational overhead costs.

This flexibility is essential for responding to ever-changing market needs, experimenting with new business models, and maximizing revenue opportunities over time.

Integration with partner ecosystems is another key aspect of monetization. BSS platforms facilitate seamless collaboration with ASPs, aggregators, and other third parties, enabling CSPs to expose differentiated connectivity services through standardized interfaces and APIs. This supports indirect sales channels and ecosystem-driven offerings, expanding the reach of CSP services while enabling innovative, revenue-sharing models.

Figure 15: BSS key components for monetizing differentiated connectivity services



Assuring excellence: Delivering and monitoring SLAs

Service monitoring and assurance are foundational for ensuring that differentiated connectivity services consistently meet contractual commitments and sustain monetization over time.

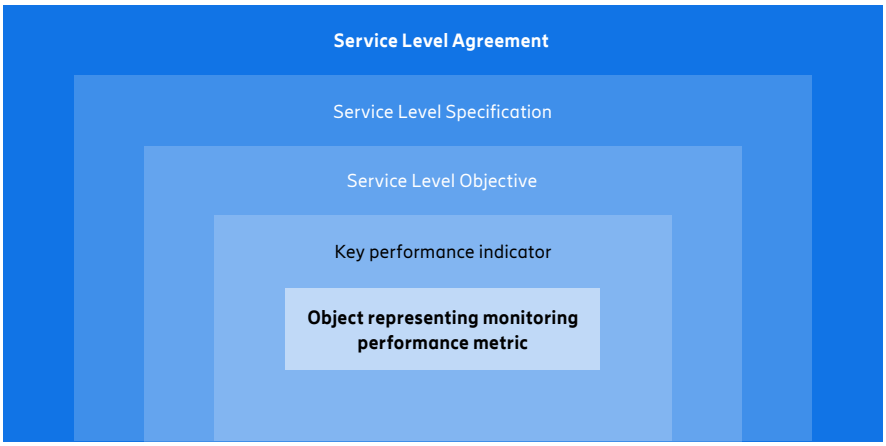
Enterprises and consumers increasingly show willingness to pay for elevated connectivity[12] with predictable performance, increasing a CSP's need to manage more stringent and granular SLAs. These SLAs may be of different types – for example, they could be measured at a performance level for a single UE, or for a group of UE using the same performance level. SLAs represent a promise of quality and performance, establishing trust and accountability. Monetization is therefore inseparable from a CSP's ability to monitor, report, and manage service quality.

There are multiple challenges in SLA assurance that CSPs should not overlook.

- **Clear definition of measurable KPIs that accurately reflect delivered service quality:** It can be difficult to identify KPIs that accurately reflect service quality delivered by the network.
- **Siloed monitoring systems:** Legacy environments may lack unified, cross-domain visibility, leading to blind spots and delayed responses.
- **Complexity of correlation:** Connectivity often spans multiple domains and partners, complicating root-cause analysis and assurance.
- **Customer expectations:** Enterprises expect transparency and rapid resolution, which raises the bar for CSPs' operational maturity.
- **Scalability:** As differentiated offerings proliferate, ensuring consistent, automated assurance across all services becomes increasingly demanding.

Standardization initiatives, such as those from TM Forum, define SLA frameworks complemented by Service Level Objectives (SLOs) and Service Level Specifications (SLSs). SLOs define measurable targets for service performance, while SLSs describe the criteria for how performance is delivered and measured. Together with KPIs, these elements form a cohesive framework for governing service delivery and assurance.

Figure 16: TM Forum-defined SLA framework



Effective SLA management requires continuous oversight of service performance across all relevant network domains. Through real-time data analytics, service KPIs are continuously monitored and deviations from agreed performance targets are detected. When potential SLA breaches are identified, remediation workflows can be triggered automatically, which protects revenue and strengthens customer trust and satisfaction.

Transparent reporting is essential for SLA assurance. OSS platforms generate detailed, auditable records of service performance, enabling CSPs to demonstrate verifiable compliance with contractual commitments. This transparency is particularly critical for enterprise customers, who require clear evidence that their connectivity needs are being met. Closed-loop automation also ensures continuous alignment between intended service objectives and delivered performance, while respecting domain autonomy. Each network domain independently monitors and optimizes its behavior through local control loops. When a domain cannot resolve a deviation within its allowed constraints, the issue is escalated to the service layer for coordination across domains. This hierarchical approach ensures rapid local optimization that allows the network to adapt to changing conditions, with the aim of maintaining service quality and operational efficiency even as demand fluctuates or network failure events occur.

Closed-loop actions can only be executed within the boundaries of the contractual agreement. If demand fluctuations exceed the parameters defined in the SLA, resulting performance degradation falls outside the CSP's contractual accountability. Therefore, it is essential to continuously monitor KPI thresholds and proactively generate alerts for both the CSP and its customers when consumption approaches predefined warning levels. This proactive approach supports transparency, shared accountability, and informed decision making for service evolution.

[12] Ericsson ConsumerLab report, Elevating 5G with differentiated connectivity

Real-world success case: Telstra

Enabling differentiated connectivity for Australian enterprises

Telstra strives to deliver the best connectivity experience for its customers. To serve Australia and its businesses with the next generation of wireless services and expediate 5G monetization, the modernization and digitalization of processes that help build and control the network environment and expose it to customers is fundamental for Telstra.

To achieve this, Telstra partnered with Ericsson to launch a fully automated and operationalized 5G network slicing-based service solution. This included capabilities to enable programmable, slice-based connectivity services tailored to specific enterprise needs, enabling network slices to support the efficient utilization of radio resources. The solution also created the ability to automate discovery of the entire Telstra 5G RAN topology. This was achieved using the Ericsson Service Orchestration Assurance capability of network topology, which was enhanced with real-time discovery, and Telstra's in-house, purpose-built analytics engine that allows a novel, performance-based pricing structure.

In addition, Telstra exposed services through its network-as-a-service layer, aligned with the Telstra Reference Architecture Model, using standardized TM Forum APIs. This promoted reusability and supported an API-first strategy, enabling seamless integration and service delivery. The solution also leveraged the latest technologies to drive automation and scalability, allowing Telstra to quickly deploy additional network configurations and features on demand through a fully automated process.

An orchestration and assurance framework was implemented to support dynamic, end-to-end network slicing, including purchase-to-order and order-to-activate flows. Supporting systems were integrated to manage service qualification, inventory, subscription provisioning, and assurance, ensuring enterprise customers could rely on guaranteed SLAs to support critical orchestration flows.

The benefits were substantial. Telstra achieved faster time-to-service, particularly in scenarios where fiber deployment would have caused delays. For example, construction sites were connected within days, enabling the immediate use of CCTV, collaboration tools, and data services. Operational efficiency improved through simplified provisioning and asset reuse.

Ultimately, Telstra's implementation of network slicing enabled differentiated connectivity at scale, delivering SLA-backed services tailored to enterprise needs and establishing a flexible, future-ready platform for innovation and growth.

Further reading
Telstra: Open OSS/BSS and network slicing - Ericsson

Telstra and Ericsson partner to orchestrate wireless services



Looking to the future: The rise of autonomous networks

As the telecom industry continues to evolve, intent-driven automation and AI-based optimization are foundational enablers for increasing network autonomy. These capabilities will play a key role in unlocking the next generation of differentiated connectivity.

Autonomous networks[13] represent a foundational shift in how networks perform, operate, and are optimized. They move beyond traditional, rule-based automation, and toward operations that can sense, learn, adapt, and make decisions with significantly reduced human intervention, while remaining aligned with business objectives and operational constraints.

Autonomous networks are built on the key pillars of agentic closed-loop automation, intent-driven interactivity and interoperability, intelligent data management, open platforms, and APIs. At the foundation are the network's autonomous domains, each equipped with self-X capabilities that enable domains to deploy, configure, monitor, maintain, and retire by themselves. Monetization acts as a control point in CSPs' autonomous networks to ensure that innovation translates into revenue, while maintaining simplicity and operational efficiency across B2C, B2B, and partner ecosystems.

Through autonomous network operations, the dots are connected. Active intent management and agentic AI, closed-loop automation ensure that high-level business objectives are translated into network updates. These include analyzing intents, adapting to changing conditions, and resolving conflicts to orchestrate and maintain the delivery of advanced services across all OSS/BSS layers, vendors, and network domains.

Autonomous networks, powered by AI and intent-driven closed-loops, will bring several critical benefits.



[13] Ericsson, Autonomous networks explained

Scalability
Autonomous networks scale through distributed optimization across well-defined control boundaries and timescales. Each layer and domain maintains its own representation of intent and performs the optimization best suited to its scope, while higher layers coordinate what must be resolved end to end. This structure allows differentiated connectivity services to grow in number and diversity, without introducing proportional increases in operational complexity. As a result, the network can continuously adapt to evolving demands while remaining efficient and stable.

Assurance
This is realized through multi-layer fulfillment and continuous closed-loop control. Each domain evaluates and enforces its own intent based on local conditions, while the service layer aggregates these insights to ensure alignment with end-to-end objectives and customer-facing SLAs.

This enables a more proactive approach to maintaining performance, where the system can detect emerging constraints, assess feasibility, and adjust behavior or priorities to sustain service quality across domains.

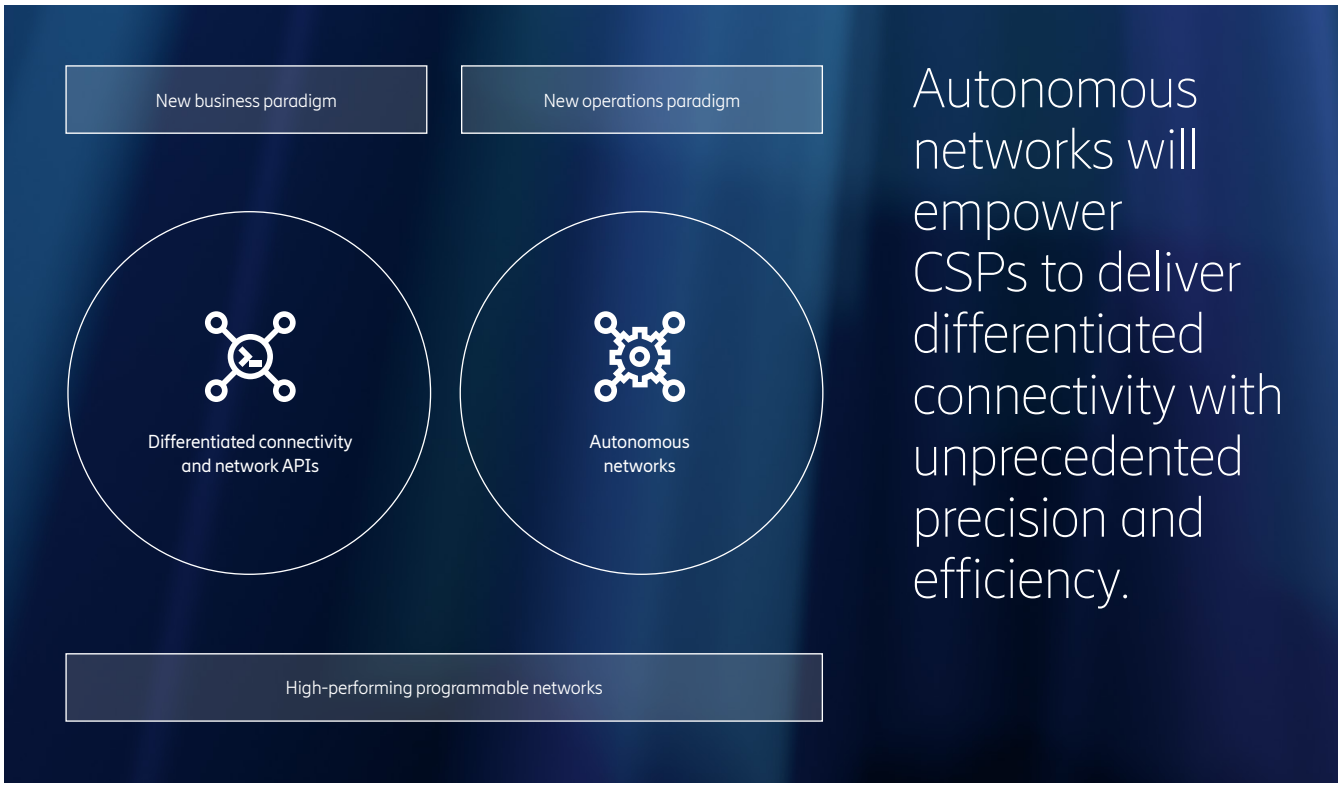
Agility
This is enabled by decoupling intent definition from domain-specific execution, allowing business and service objectives to evolve without tightly coupling changes to underlying network configurations. Service-level intents are translated into domain and resource intents, which each domain interprets and executes within its own control scope. This enables independent yet coordinated adaptation across RAN, transport, and core, supporting faster introduction of new services and the incremental evolution of existing ones. Agility is further sustained through a structured exchange of feasibility and priority information between layers, allowing intents to be refined, reprioritized, or reissued in a controlled manner. This ensures adaptation remains aligned, scalable, and operationally stable over time.

AI optimization: The differentiator
AI is a key capability behind autonomous networks. AI-powered analytics and decision engines will enable predictive resource allocation, anomaly detection, and proactive optimization. For differentiated connectivity, this means networks can anticipate traffic patterns, preemptively allocate resources, and ensure consistent service quality – even in complex, multi-tenant environments.

AI also supports more intuitive interaction with the network by translating human intent expressed in business or operational language into actionable system directives. For example, a CSP can define a differentiated connectivity intent for a live event, and the network and management systems can autonomously evaluate feasibility, determine the optimal realization, and allocate resources through programmable network capabilities. Once activated, the intent is continuously monitored and assured, with corrective actions taken autonomously to maintain fulfillment.

End-to-end, multi-domain service orchestration and assurance remain critical to ensure that business objectives – such as differentiated connectivity or enhanced user experience – are fulfilled consistently and sustainably.

Figure 17: The convergence of new business and operations paradigms



Conclusion

There are times when consumers and enterprises have a strong need for assured outcomes or an enhanced experience from their mobile network connectivity. This can be driven by the need to increase productivity, run more advanced and demanding applications, or simply the desire for a more enjoyable and premium experience. These are the moments when customers are willing to pay more, because performance truly matters to them.

Differentiated connectivity enables CSPs to capture these opportunities by delivering predictable, SLA-assured, and application-optimized connectivity that meets market demand at scale.

The telecom industry is on the verge of evolving from the current best-effort mobile broadband subscription model – built on ever-growing data buckets with limited revenue growth – into a new era of performance- and platform-based business models that will offer significantly higher returns on investment.

Technological advancements are already available in 5G SA networks, such as new and more advanced radio schedulers and URSP. Together with technologies such as network slicing, network APIs, and advanced network programmability, these advancements are fueling this transformation. The CSPs leading the way possess a bold vision, are willing to explore, and have already acted to adopt these technology enablers.

That is why Ericsson is proud to be such a vocal champion of differentiated connectivity, together with our partners. Earlier in this handbook, you were introduced to a phased onboarding strategy that balances network capabilities with the related underlying complexity. This approach enables you to embark on the differentiated connectivity journey while capturing value and growth opportunities along the way, and to achieve return on investments at the early stages. This means now is the time to act. Today, there are 84 commercially available differentiated connectivity offerings from multiple CSPs around the world, and this number is rapidly growing.[14] The customer success cases presented in this handbook illustrate how early adopters are leading and shaping differentiated connectivity in their respective markets.

The "Explore–Monetize–Scale" blueprint outlined in this handbook is based on the learnings from the successful journeys of Ericsson and its partners with differentiated connectivity. By following this blueprint, CSPs will gain a practical guide that simplifies a complex journey and explains how to convert vision into scalable and tangible value. Network planning plays a crucial role, and Ericsson suggests a standard, structured framework of performance levels – defined by throughput and latency performance metrics. This will not only enable the successful implementation of differentiated connectivity for CSPs, but also drive adoption from application developers through network APIs, unlocking greater services innovation.

Programmable RAN network capabilities – including real-time adaptation of scheduling, traffic steering, and admission control – combined with observability, are critical for delivering the required throughput and latency, particularly during congestion when differentiated connectivity creates the most value.

Achieving significant revenue growth will also depend on a CSP's ability to design an appealing portfolio of performance-based offerings that can be efficiently sold, delivered, assured, and monetized. Gradual automation of business and operational processes is essential to increase salability and accelerate time-to-market, while improving overall operational efficiency for new differentiated connectivity services.

[14] Ericsson Mobility Report (2026)

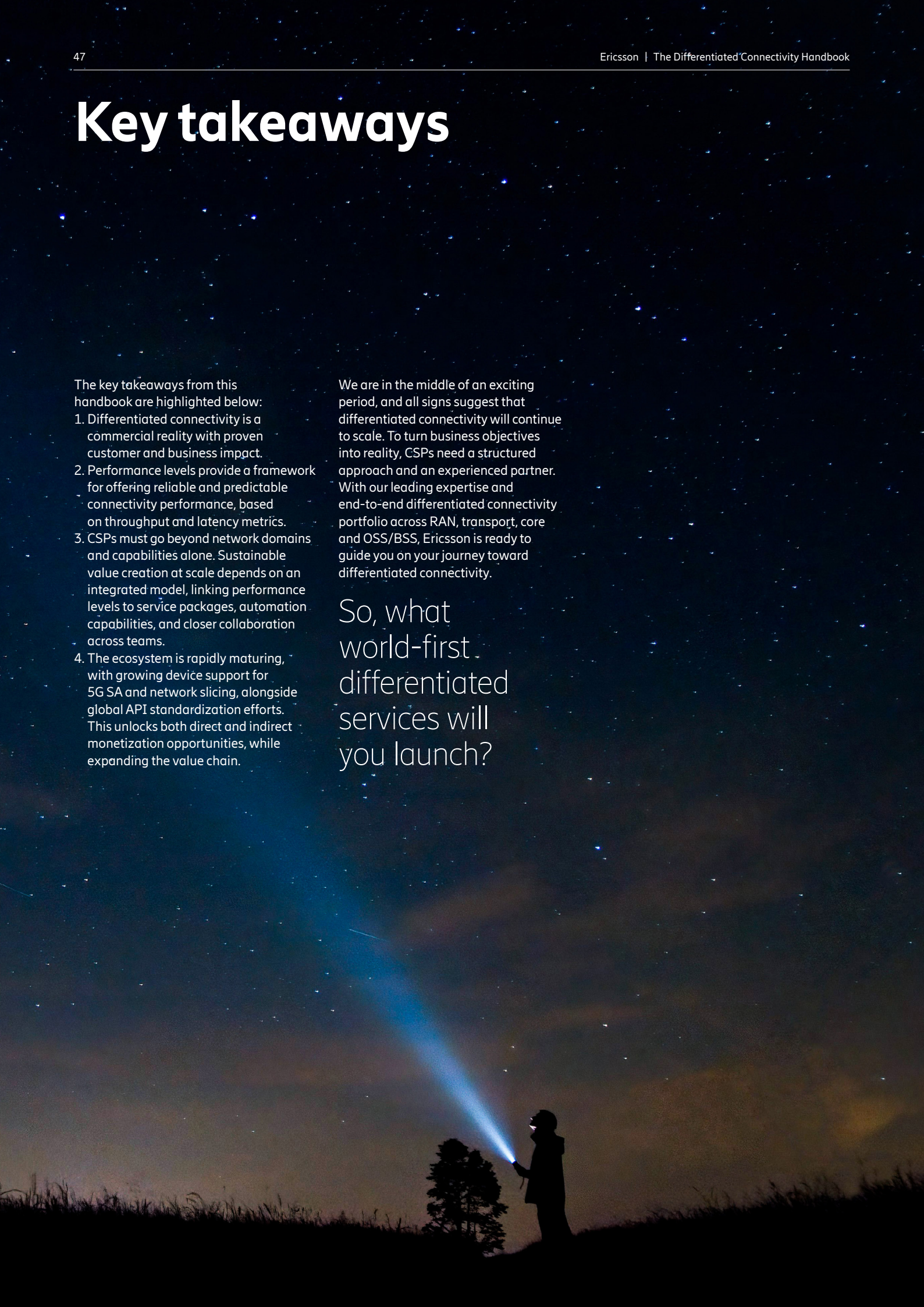
Key takeaways

The key takeaways from this handbook are highlighted below:

1. Differentiated connectivity is a commercial reality with proven customer and business impact.
2. Performance levels provide a framework for offering reliable and predictable connectivity performance, based on throughput and latency metrics.
3. CSPs must go beyond network domains and capabilities alone. Sustainable value creation at scale depends on an integrated model, linking performance levels to service packages, automation capabilities, and closer collaboration across teams.
4. The ecosystem is rapidly maturing, with growing device support for 5G SA and network slicing, alongside global API standardization efforts. This unlocks both direct and indirect monetization opportunities, while expanding the value chain.

We are in the middle of an exciting period, and all signs suggest that differentiated connectivity will continue to scale. To turn business objectives into reality, CSPs need a structured approach and an experienced partner. With our leading expertise and end-to-end differentiated connectivity portfolio across RAN, transport, core and OSS/BSS, Ericsson is ready to guide you on your journey toward differentiated connectivity.

So, what world-first differentiated services will you launch?



About Ericsson

Ericsson's high-performing, programmable networks provide connectivity for billions of people every day. For nearly 150 years, we've been pioneers in creating technology for communication. We offer mobile communication and connectivity solutions for service providers and enterprises. Together with our customers and partners, we make the digital world of tomorrow a reality.

www.ericsson.com

Ericsson
SE-164 80 Stockholm, Sweden
Telephone +46 10 719 0000
www.ericsson.com

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