As users demand more from networks, operators face growing restrictions from limited available resources, decline in revenues from legacy services such as voice and messaging, the threat of over-the-top services and the need to support a growing device ecosystem as wearables, M2M and the Internet of Things begin to compete for network resources.

Changes in the way users interact with mobile networks enable new business models, provide operators with a greater ability to differentiate their offerings based on network capabilities and gain greater returns on investment with more cost effective solutions.
Introducing
“The New Network Experience”

With a growing wealth of new devices, device types and services to leverage them, the era of connected devices promises to change nearly every aspect of our daily lives – both seen and unseen. Networks will face new challenges and network operators will play a critical role in enabling transformation in user experience for consumers and across many newly connected industries.

As the number one motivator behind technology innovation, users consistently seek to incorporate technology into more aspects of their lives. Samsung places prime importance on ensuring that its solutions have a positive impact on the end user, better enabling technology-life integration.

Because service providers are the critical link between users and the services they seek, the greatest burden is placed squarely on the shoulders of network operators. Samsung is driven to provide the solutions that operators need to meet and exceed the expectations placed on them in an ever-evolving, connected world.

Innovation needs an industry to drive it, and true innovation, in turn, guides industry forward. Samsung’s New Network Experience recognizes this, believing in innovation that is both relevant across the industry and innovation which encourages positive ecosystem growth.

Networks do not exist in a single point in time. Technology and the way we use it is a never-ending machine of change, growing and evolving alongside the people and societies who use it. Samsung applies its visionary innovation practices to its mobile networks business practices. The future is never certain, but it can always be made better.
Shifting towards Experience-Driven Networks

Networks are increasingly defined by those who use them. Users have become greatly invested in and dependent upon the devices they interact with on a daily basis, and networks are now seen as a critical component of our daily lives. From a user perspective, a network should “just work”, anywhere and any time; coverage gaps and service degradation are more apparent than ever and threaten to affect customer loyalty. This presents a unique challenge for network operators to build networks that effectively deliver quality user experiences.

For many operators, ubiquitous coverage is already a reality. Gone are the days of mobile networks as deliverers of voice service. Users demand engrossing services, with sharing and delivery of video and other media content a predominant trend.

In order to meet these needs Samsung solutions include heavy-lifting carrier aggregation and the flexible deployment capabilities of small cell solutions. These enable reliable scalability of capacity and ensure that users enjoy the experiences they want and operators can confidently deliver.

The way that users think of mobile services has shifted drastically. Devices are more capable than ever and for many they have become an extension of one’s own arm. Connected services are expected to be responsive and available without delay. The explosion of the Internet of Things on the horizon will also introduce hundreds of new services and applications, some of which will require mobile connectivity that works without fail.

Samsung solutions emphasize flexible and simple densification capabilities so that operators can focus on service evolution and not simply service delivery.

Network resources are limited, and users are consuming media-rich content at an explosive pace. Service providers must find innovative ways to not only meet user expectations, but to monetize their resource investments.

By developing an awareness of the who, what, where, why and when of both the content and the users that consume it, not only can operators greatly improve the efficiency of their network infrastructure, but that can develop compelling new services and profitable business models to support the next generation in networks.
Smart Networks Portfolio

Samsung Smart LTE solutions combine high performance hardware capability and feature-rich software to deliver a high performance solution that can meet the complex challenges placed on today’s networks. Samsung’s advanced, first-to-market LTE innovations emphasize smart functionality that give operators the tools they need to create truly differentiated mobile services. Leveraging important synergies between our mobile device and network research and development, we bring the benefits of a solution portfolio that is truly driven by end-to-end experience, and this has resulted in industry-recognized world-first achievements in carrier aggregation, voice over LTE and SON technologies – just to name a few.

Products include **Smart Carrier Aggregation, Smart SON, Smart VoLTE**

Samsung's portfolio of small cell solutions seeks to plug the gap between data demand and available capacity, without the headaches associated with densification. Cost-effective and easy to deploy, Samsung's small cell solutions support advanced interference mitigation features allowing operators to fully enjoy the benefits of their small cell network investments.

Products include **Small cells for indoor and outdoor, Smart HetNet**

Samsung’s Single RAN(SRAN) solutions offer flexible architecture integration in a compact form factor so that operators can modernize their deployments with LTE, without the need to manage more than one physical network. With a shared BBU, single transport and SDR-based radio units, footprint requirements are kept to a minimum, saving space and reducing the cost of site operation. The SRAN baseband unit is compact, featuring unified O&M and a combined control plane, reducing the number of hardware modules required at a typical site. Samsung SRAN supports high performance radios providing high power output for improved coverage and capacity. Wide-band radios are also available to flexibly support spectrum needs – even if available spectrum is fragmented.

Products include **GSM, CDMA, WCDMA, LTE (FDD, TDD)**

As the most central group of components within the mobile network, core products need to be robust and both high performance and scalability are important concerns with today’s growth trends and the Internet of Things on the horizon. Virtualization is also a critical opportunity for gains in network performance and cost reduction. Samsung core solutions provide carrier-grade performance and reliability in a common hardware platform designed to meet your migration and network expansion strategies. Samsung’s core solutions are built with industry advancement in mind with an NFV-ready hardware design.

Products include **PS and CS core elements, IMS, vEPC, vIMS**
The way that users interact with their devices is rapidly evolving, and this, in turn, is shaping new experiences between users and the services they seek. For network operators, ensuring a consistent and quality user experience is a necessity. Recognizing the need to build such Experience-Driven Networks, Samsung’s solutions place considerable emphasis on technologies that offer advanced interference mitigation, high throughput and intelligent network management.

For most operators, voice and messaging revenues are no longer carrying their own weight, while the growth of OTT services threatens to squeeze the profitability of data. Operators need new, compelling services to improve their bottom lines, attract subscribers and improve ARPU. Taking advantage of the flexibility of LTE, Samsung enables new services potential with VoLTE and eMBMS, while advanced analytics, caching and our InteractIV solution create monetization opportunities with third party players while protecting and expanding existing revenue.

Data consumption is exploding. Much of what we do online involves high quality visual content, whether it’s sharing our 21 megapixel vacation photos with family and friends or streaming our favourite TV shows. And with larger and higher resolution devices in our hands, our online usage habits are shifting to the mobile network. Samsung offers solutions which ensure networks are prepared to meet growing data demands, from advanced MIMO to carrier aggregation, as well as network analytics and caching to allow operators to get the most out of their infrastructure.

Building and managing mobile networks is not an inexpensive endeavour. Between costly spectrum licenses and ongoing site rental/maintenance expenses, operators face increasing pressure to get the most out of their infrastructure spending. Our solutions strive to alleviate this pressure through gains in resource efficiencies. Our Smart SON and C-RAN solutions focus on autonomous and centralized network management to minimize OPEX, while our advanced HetNet and eMBMS solutions extend the value of spectrum holdings.

Innovation is important for operators because it is important to users. As devices become more capable and services evolve at a rapid pace, users are often very quick to shift their usage habits. Operators therefore need confidence that their infrastructure is future-ready and that they can depend on the availability of new innovations. With world first deployments of LTE small cells, VoLTE, carrier aggregation and eMBMS, Samsung is committed to innovation leadership and bringing cutting edge technologies to market.
SAMSUNG SMART NETWORKS

The New Network Experience
Technology Leadership | Reliable Partner | Global Services Capability