

Ericsson Telecom AI

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Key Trends In Mobile Networks

source: Ericsson Mobility Report Nov. 2024



6.3 bn

Global 5G subscriptions will reach around 6.3 billion in 2030, equaling 67 percent of total mobile subscriptions.

80%

5G is expected to carry 80 percent of the total mobile data traffic by the end of 2030.

6G

Following on from the launches of 5G SA and 5G Advanced, 6G is expected to arrive during 2030.

40%

By the end of 2024, 5G mid-band population coverage outside of mainland China is expected to reach 40 percent.



Network slicing is still in the experimental stage for many service providers, but T-Mobile in the US has taken the leap from pilots to real-world applications.



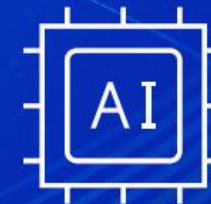
Using 5G SA to power Own Lane FWA, Finnish service provider Elisa is continuing to improve its customers' satisfaction in their network performance.



Saudi Telecom Company (stc) is expanding its 5G coverage in line with national goals, with a multi-NR carrier strategy playing a key role.



5G offers the opportunity to create a digital airspace that enables seamless communications in the skies, fueling innovation in manned and unmanned aviation.



GenAI has the potential to transform how digital content is created and enjoyed. It is particularly important to understand how this could change traffic volumes and characteristics.



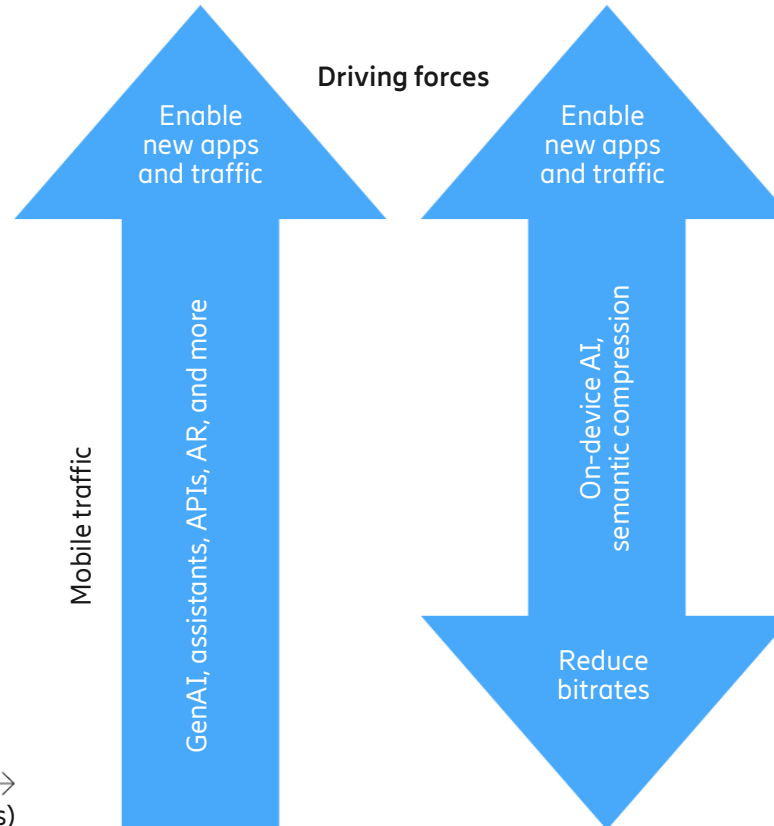
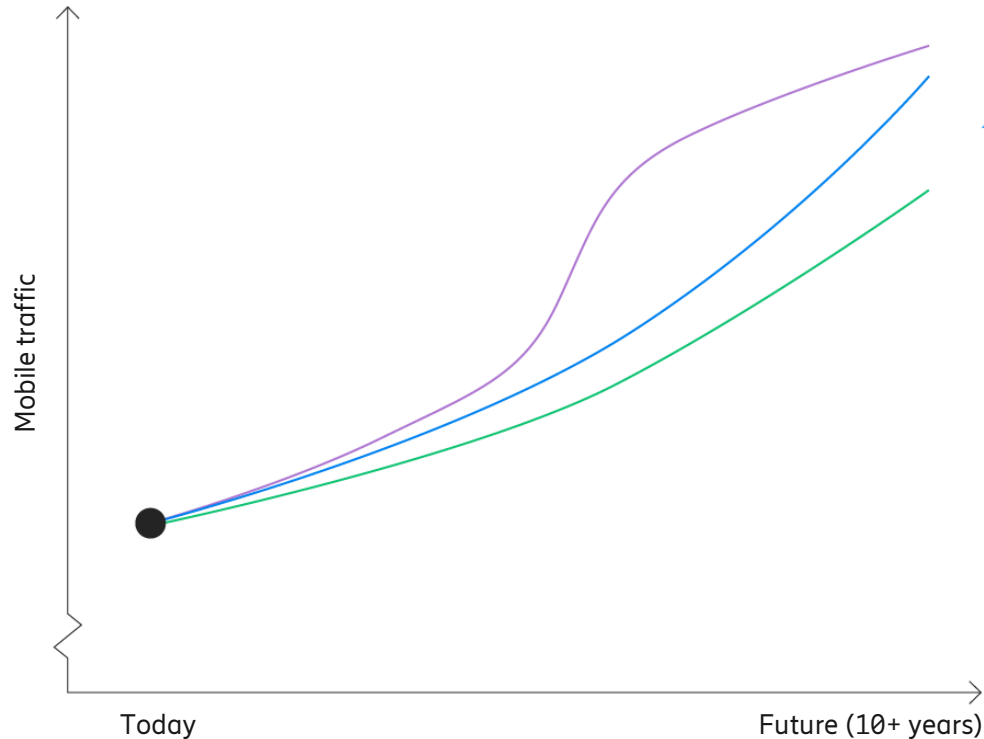
Although use-stage electricity consumption rises 2–3 percent yearly in the ICT sector, a growing share of renewable energy means that greenhouse gas emissions have fallen.

Impact of Gen AI on mobile network traffic



A conceptual illustration of different mobile traffic growth impacts due to GenAI

■ Future 1 ■ Future 2 ■ Future 3



Future 1: Adoption of GenAI at scale.

Future 2: Accelerated consumer uptake of GenAI.

Future 3: GenAI consumer uptake will explode – Industry adopts efficient video compression technologies, including potential introduction of semantic compression

AI is set to have high impact across mobile networks



Ericsson is accelerating AI value with field-proven use cases

18%

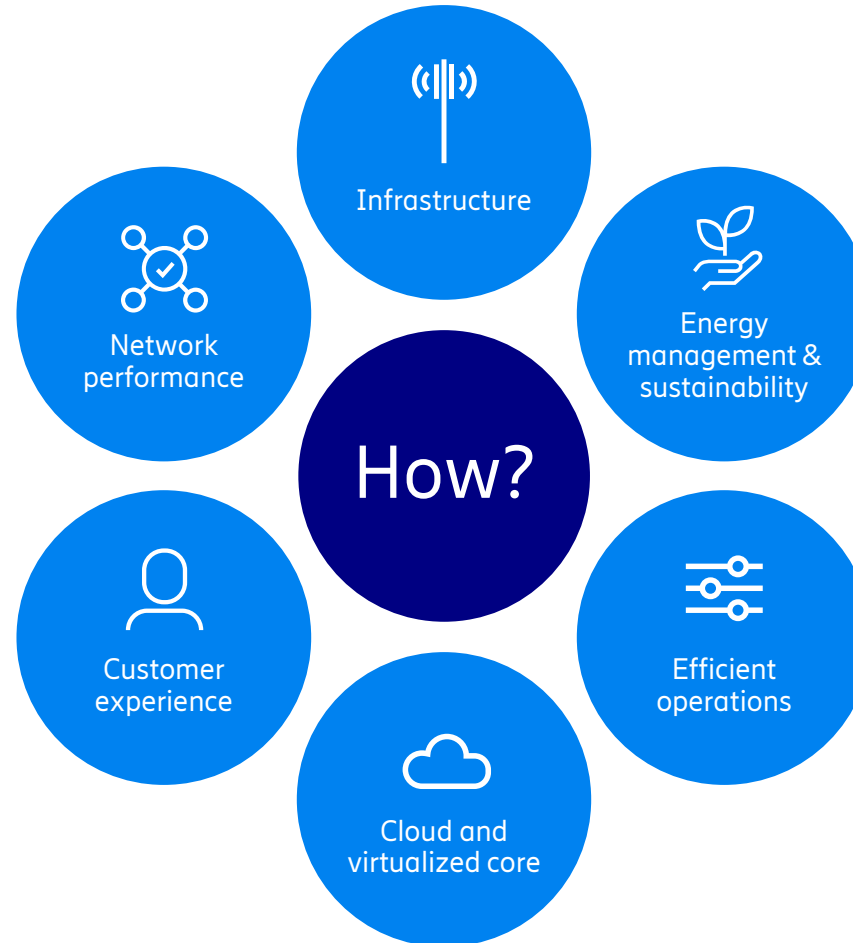
Network load redistribution –
more efficient use of resources
Self-Organizing Network

15 min

vs 1 week
to automatically classify 100 000
cells with **Cell Issue Classifier**

80%

Reduced signaling with **machine
learning assisted paging**



25%

Better 5G coverage with
5G-aware traffic management

14%

Energy savings with
Augmented MIMO sleep

>95%

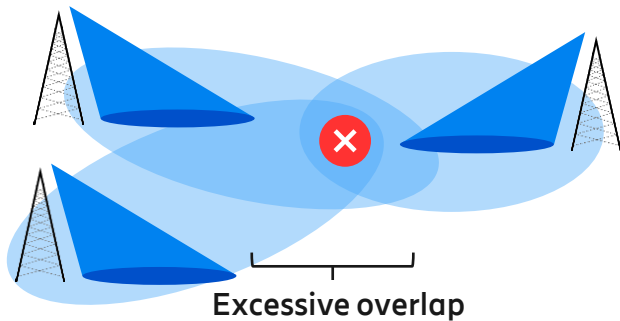
incidents prevented with **RAN KPI
degradation prediction**

AI in Control

Energy saving without impacting experience

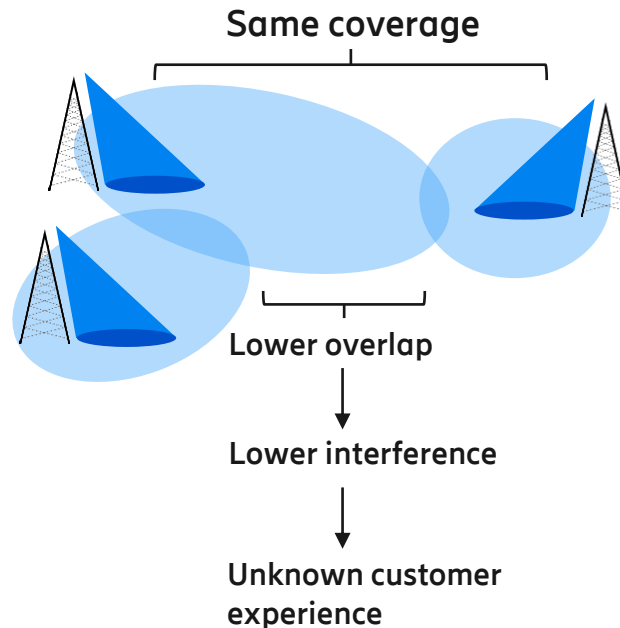


Radio network baseline

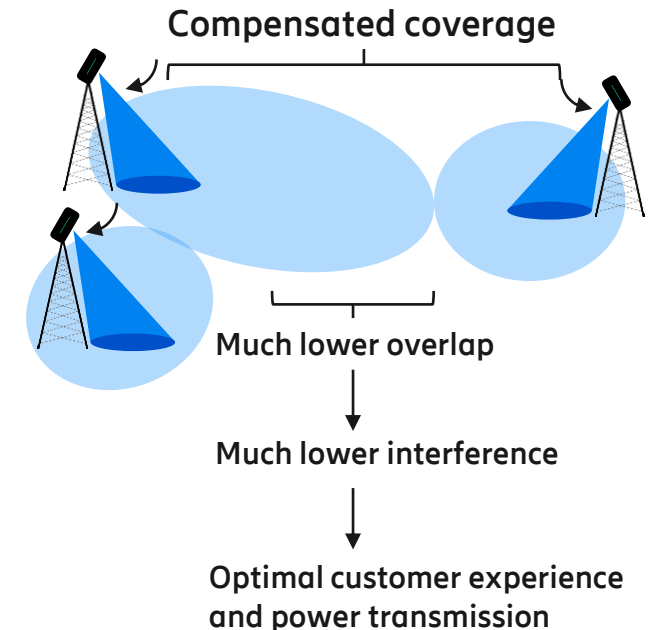


Opportunity to save energy and improve customer experience

Use-case 1: Power optimization



Use-case 1: Power optimization + Use-case 2: Antenna tilt optimization



AI can solve complex optimization problems such as balancing intent to increase bandwidth and coverage while reducing power consumption. AI is orchestrating a set of simultaneous AI driven actions.



AI in Action

Use cases and customer cases

Video 1: "5G Saving Lives"



AI in Action

Use cases and customer cases

Video 2: "AI For High Resiliency"

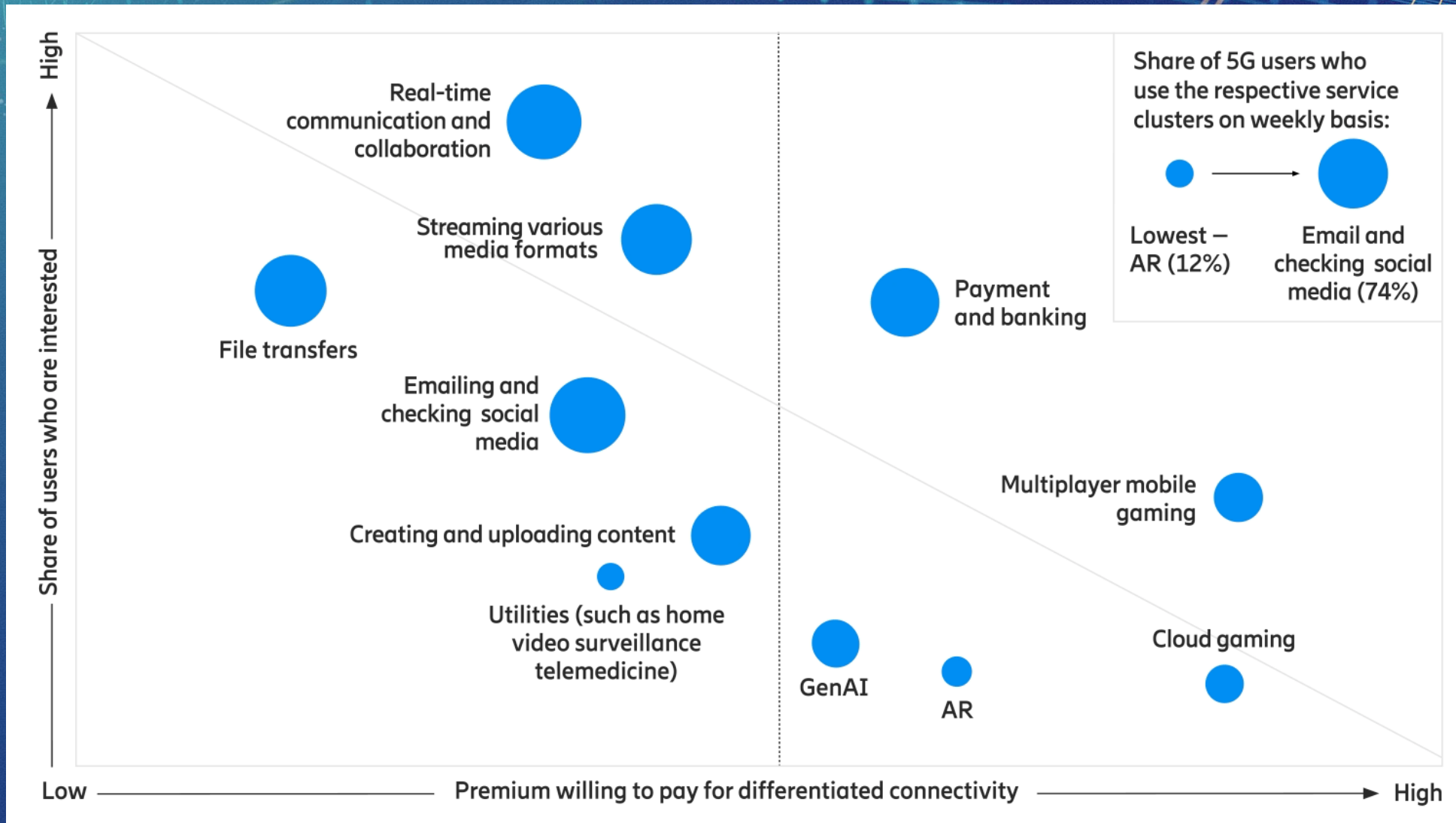


AI in Action

Use cases and customer cases

Video 3: "AI For Frauds Detection"

35 percent of 5G users today show a growing appetite for elevated connectivity beyond standard 5G performance





<https://www.ericsson.com/en/ai>