Building an AI, AR & API Platform Economy on 5G – An Ericsson Silicon Valley View

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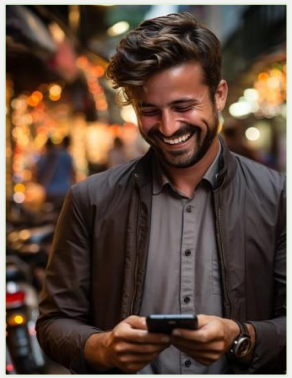
01
Market Trends

New World: Emergence Of AI-Native Use-Cases

AI & GenAI underpin many public indoor and outdoor use-cases

Consumer-Centric

Smart Phone

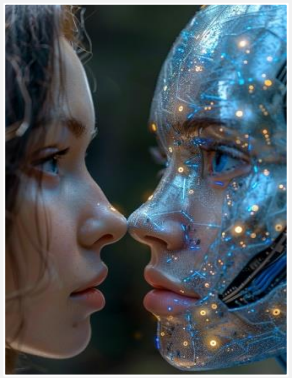


(Gen)-AI enabled hyper-personalized content may increase retention further.

XR Devices

Uplink-heavy compute offload; usage of AI Gaussian Splatting, etc.

AI Agents



Emergence of uplink-heavy video/multi-modal LLMs and AI Agents / Assistants.

Industry-Centric

Laptops

5G-connected laptops will drive significant UL (EVCN launched in 2025!).

AVs

Autonomous vehicles require UL & DL telemetry; effect of UL already felt!

Droids

AI autonomous droids with heavy uplink; industry and later consumer use.

UL and DL increase: 5G SA / 5G-Advanced will provide initial capabilities; 6G will provide scale.

Images and video shown for educational purpose only.

Downlink: To Double Over Next Years

Measurements keep confirming that telco is very much alive!

Still a lot of room for data growth

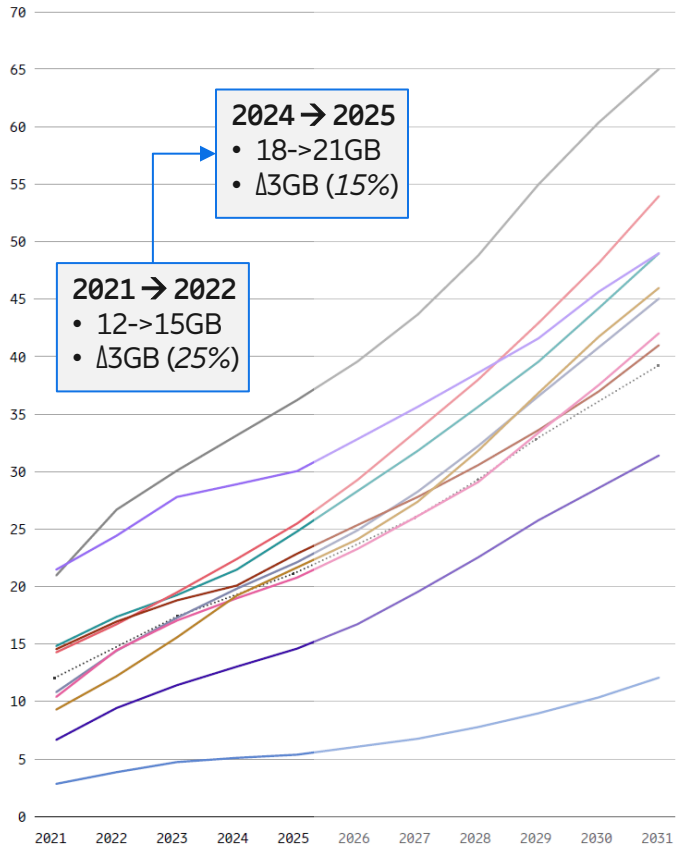
1. Reason — **Better Content**: Hyper-personalized content – due to AI generation and recommendation – will grow engagement DL per user.

2. Reason — **Longer Usage**: Demographics of digital-native users is naturally growing, and thus average usage times.

3. Reason — **Higher Resolution**: Growth of 5G phones drives growth of more UHD (and later in 6G) 4K content streaming.

Downlink to grow at 11% CAGR (excluding FWA)

Figure 12: Mobile data traffic per active smartphone[1] (GB per month)



Regions	2025	2031	CAGR 2025–2031
India, Nepal and Bhutan	36	65	10%
Western Europe	25	54	13%
North America	25	49	12%
Gulf Cooperation Council	30	49	8%
Middle East and North Africa[2]	21	46	14%
Central and Eastern Europe	22	45	13%
South East Asia and Oceania	21	42	12%
North East Asia	23	41	10%
Global average	21	39	11%
Latin America	14	31	14%
Sub-Saharan Africa	5	12	15%

Ericsson Mobility Report Nov 2025.

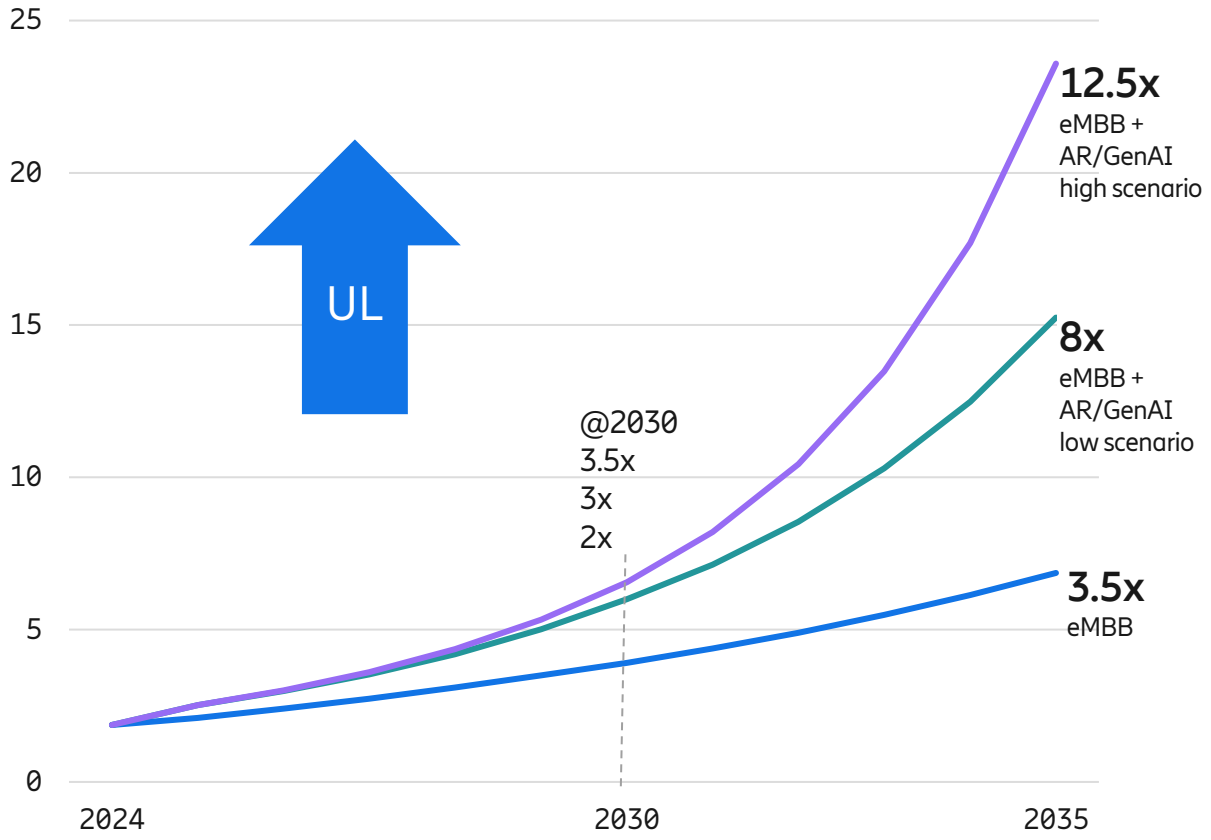
Uplink: Telco's *New Currency*

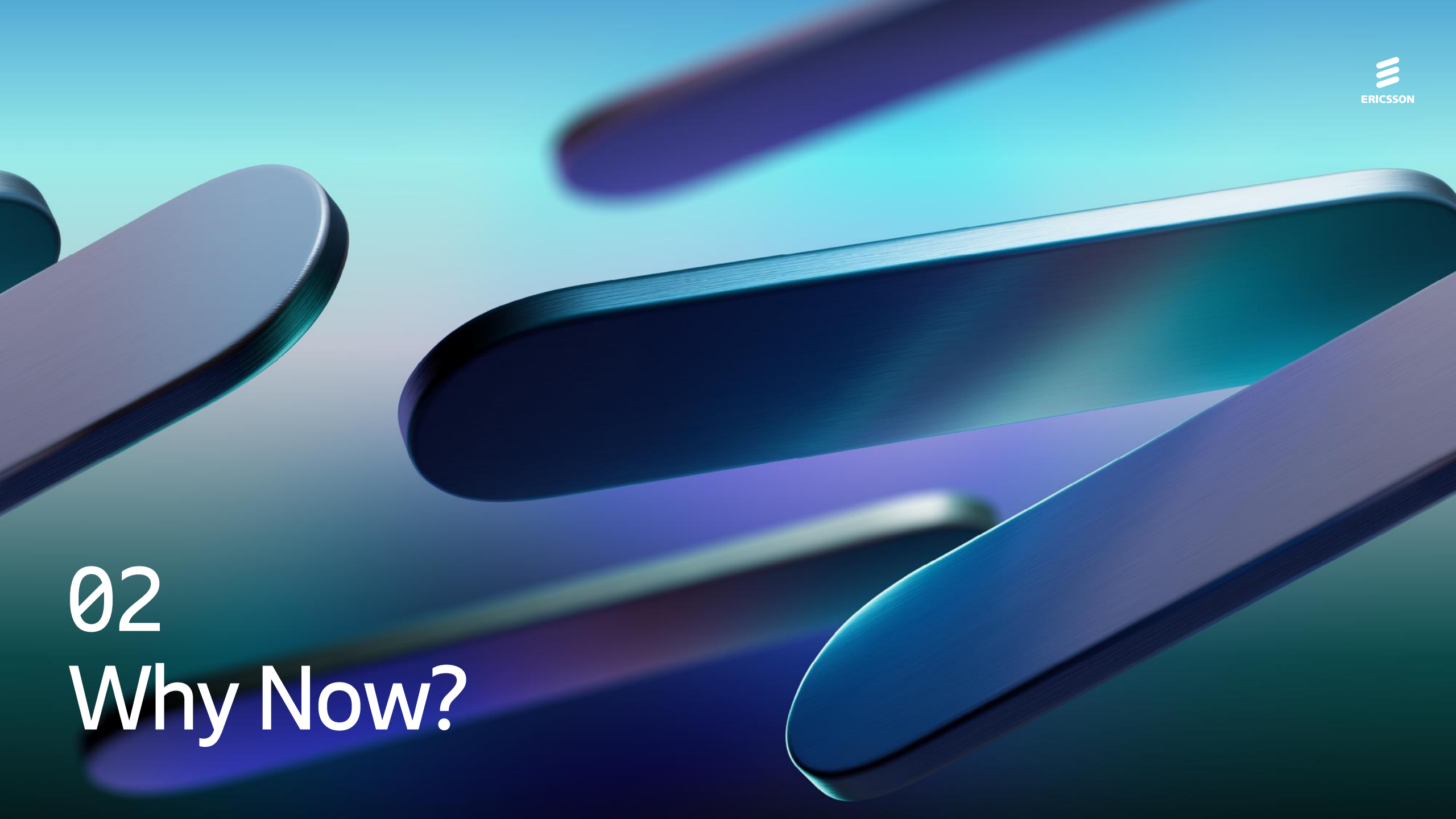
Convergence of {networks, devices, applications} indicates disruption

Emerging use cases to drive significant UL traffic

Short term	**AI glasses**	Early adopters of AI glasses / AI-enabled devices, providing proactive assistance.
Mid term	**GenAI + AR**	Scale of consumer usage of AI Assistants on smartphones, AI/AR glasses, etc.
Long term	**Droids, AVs**	Emergence and scale of autonomous vehicles (AVs), humanoid droids, etc.

Uplink to grow at 30% CAGR (excluding FWA)





02
Why Now?

Devices: Notable Shift Among Consumers

Novel consumer devices are entering the market and enjoying a notable uptake

AI Glasses & AI Devices	AR Glasses
	
"Hey Meta, tell me all about [...] you see." **Live conversation** using GenAI in the cloud, with voice & image/video in uplink; voice only in downlink.	*"Hey Meta, visually navigate me to [...]."* **Personalized AI Agent** using GenAI in the cloud, with voice & image/video in uplink; video in downlink.

Images & video are shown for educational purpose only, © is with Meta, Smart Voice Studio, Meta and Nathie.
Camerabuds is a rumored product by Meta & io has been acquired by OpenAI.
👓 Smartglasses, SDKs & Controllers by Oscar Falmer - Last Update: Sept 22, 2025 - Google Drive.

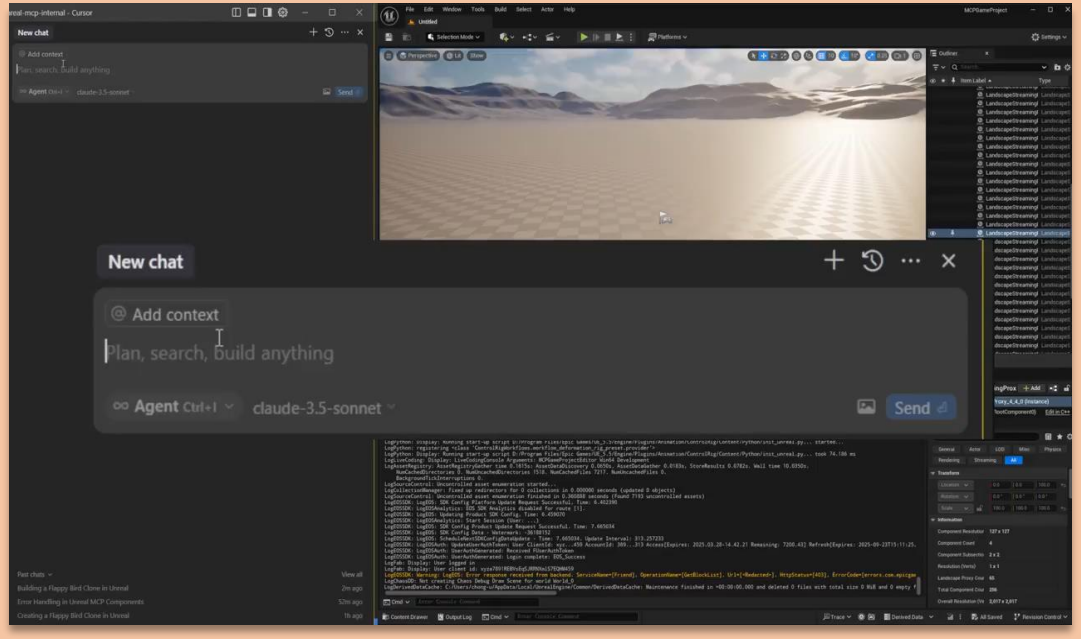
Applications: Renaissance Of App Creation

Volumetric hyper-personalized experiences can be created at scale using AI

Volumetric Experiences

© Gracia.AI / J Tiedtke [ref]

AI-Generated Content



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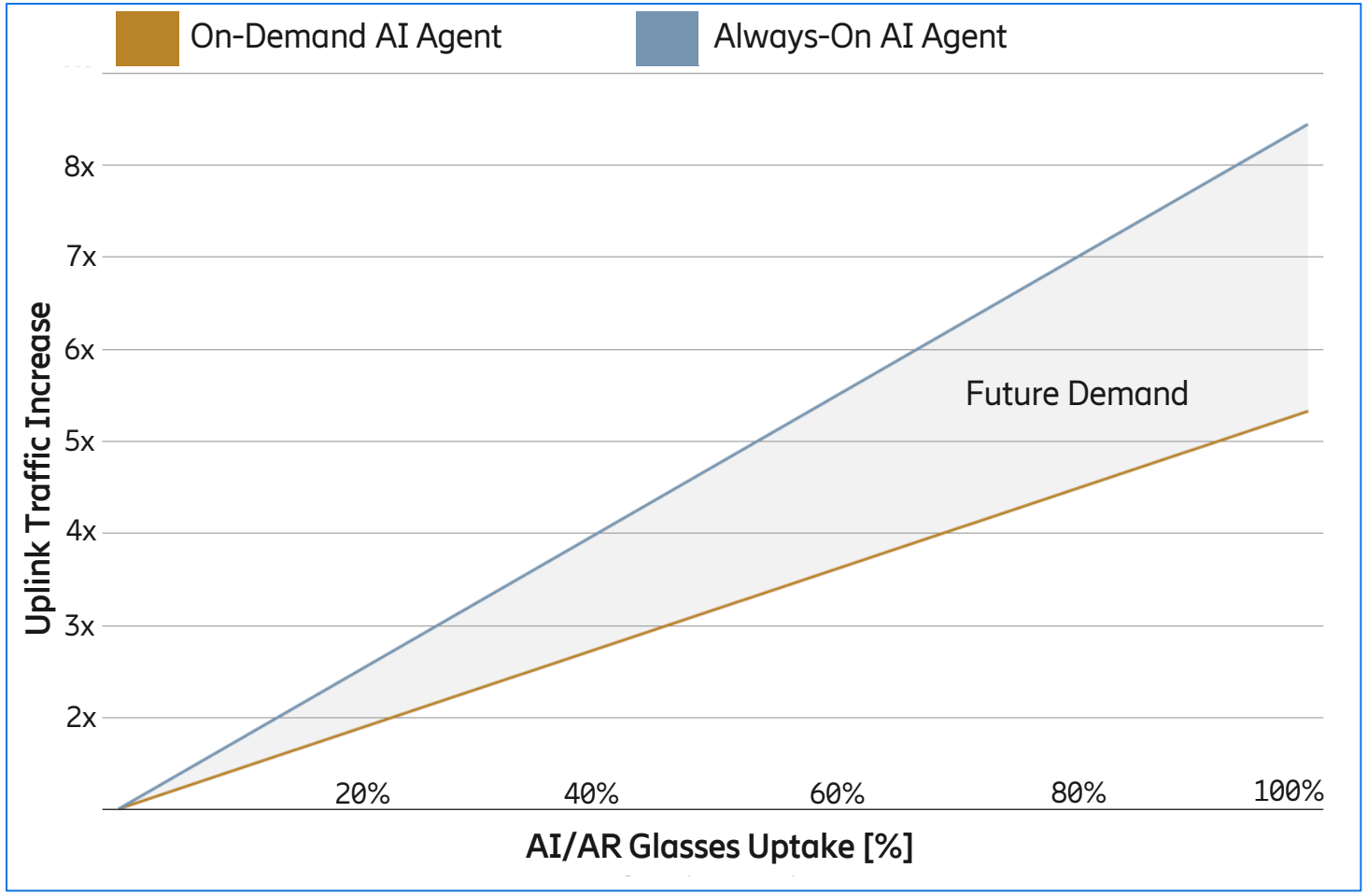
XR App Growth 2023->2024: AR apps 20k->30k; VR 400->10k; 3D Scans 5M->10M

Videos shown for educational purpose only.
LLM = Large Language Model; MCP = Model Context Protocol;
A2A = Agent-to-Agent; AG-UI = Agent-User Interaction Protocol

Traffic Impact: Significant UL Increase (glasses only!)

UL will increase depending on uptake and usage (on-demand vs always-on)

- **Today's AI Smart Glasses:** video capture resolution is 1,440 x 1,920 pixels, but is expected to increase over the coming years.
- **On-demand use:** ~1.4 Mbps uplink at 5 FPS video; average use ~28 min/day driven by mix of power and ordinary users.
- **Always-on use:** ~0.14 Mbps uplink at ~0.1 FPS image capture for ~8 hours/day.
- **Impact:** Both modes notably increase uplink traffic relative to today's ~2 GB/month baseline.

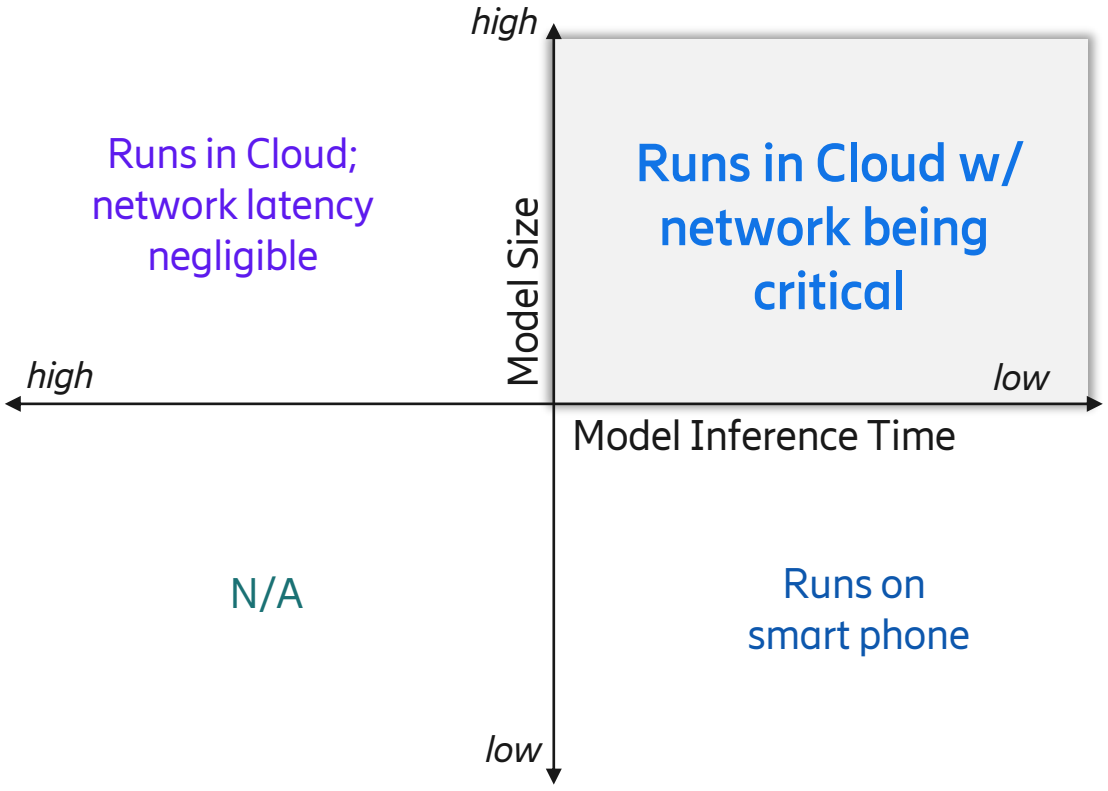


Ericsson Mobility Report Nov 2024 & June 2025 & Nov 2025.

03
Value Creation

Bundle 1: Gen-AI Optimized Slicing

Focus on scalable GenAI apps that have large model sizes yet quick inference



- **Learnings from video over cellular:**
  - Video codecs with eg rate controller were only introduced after unreliable networks
  - Let's not give time to GenAI companies to develop models that work with poor networks
- **Personal estimate 16% TAM for mobile:**
  - 80:20 GenAI apps on phone vs cloud
  - 80:20 low vs high inference time in cloud
  - → 16% low latency GenAI in the Cloud
- **GenAI examples needing protected UL:**
  - Google Gemini Live audio agent
  - Enterprise video security analysis using video-GenAI

Develop GTM and monetization strategies for GenAI-optimized network slices.

TAM = Total Addressable Market

Call For Action: Unique Value-Creation Window

Similar to AAA-batteries, let's super-charge telco with "AAA": AI + API + AR

5G/6G Network Design

- High Performance
- Differentiated Connectivity
- Lower Energy Consumption

Emerging Enablers

AI
Better efficiency & new business opportunities

API
Monetization, innovation and scale

AR
New use-case with societal benefits