# Webinar: Telecoms in the Fast Lane? How AI will impact network traffic and operations

STL Partners webinar

18th September 2025

In partnership with:

elisa POLYSTAR

STL PARTNERS

# Agenda

| | | |
|---|---|---|
| 1 | **Introduction and housekeeping** | 13:00 – 13:05 |
| 2 | **STL Partners research presentation** | 13:05 – 13:20 |
| 3 | **Elisa Polystar presentation** | 13:20 – 13:35 |
| 4 | **Panel discussion and Q&A** | 13:35 – 13:55 |
| 5 | **Wrap-up** | 13:55 – 14:00 |

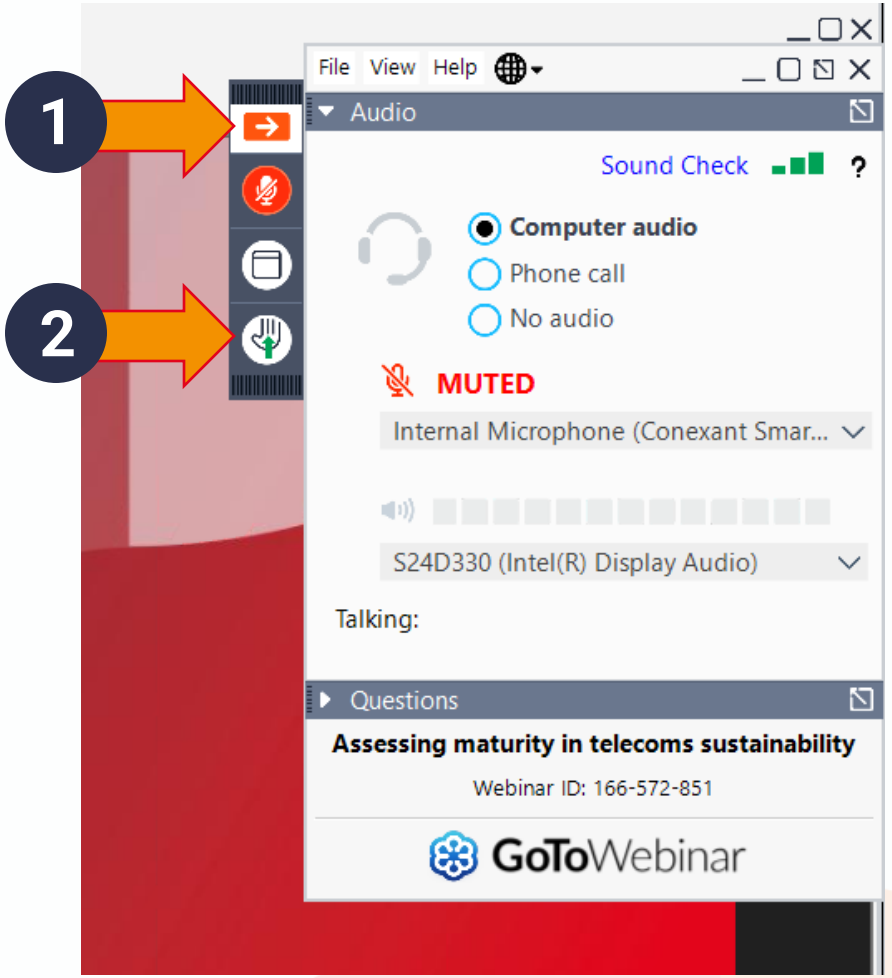
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# GoToWebinar

- You’re in listen only mode
- If you need us, please type a comment
- Feel free to type questions throughout the session for the Q&A at the end
    - Any questions that we don’t answer live will be answered offline and shared in a summary Q&A document
- We’ll send you the slides and a recording shortly after the session, please do share with colleagues



# Our speakers



**Jonas Topp-Mugglestone**

Consultant

**STL Partners**



**Tilly Gilbert**

Consulting Director & Edge Practice Lead

**STL Partners**



**Thomas Nilsson**

Chief Product Officer

**Elisa Polystar**



**Abir Hossain**

Vice President,

Technology and Operations Development

**Elisa**

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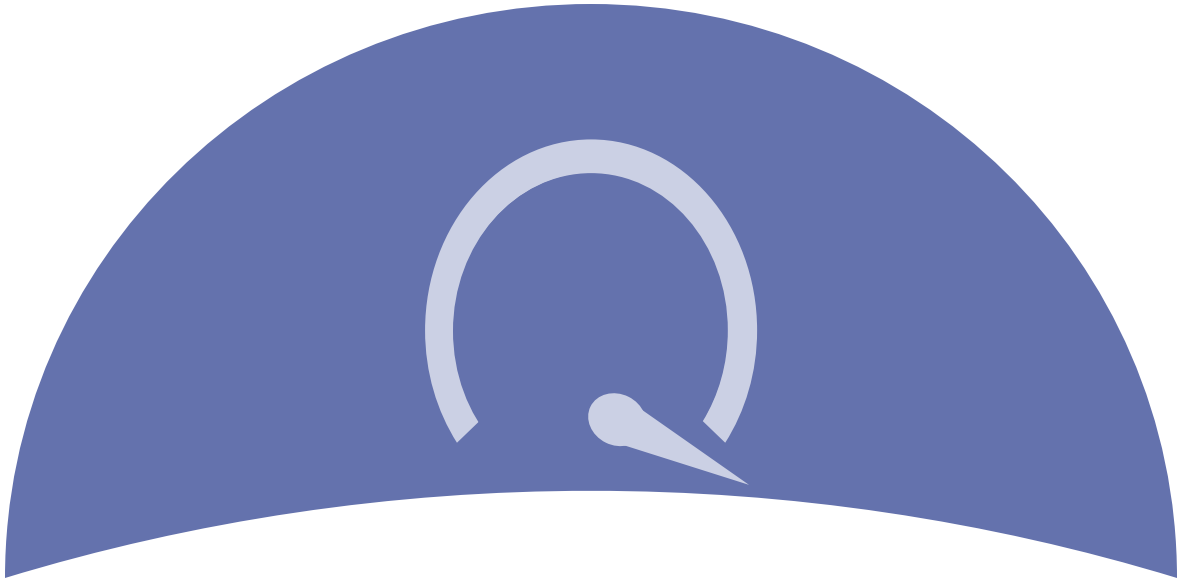
# Operators face both great opportunity and significant risk as AI reshapes industries and consumer behaviour



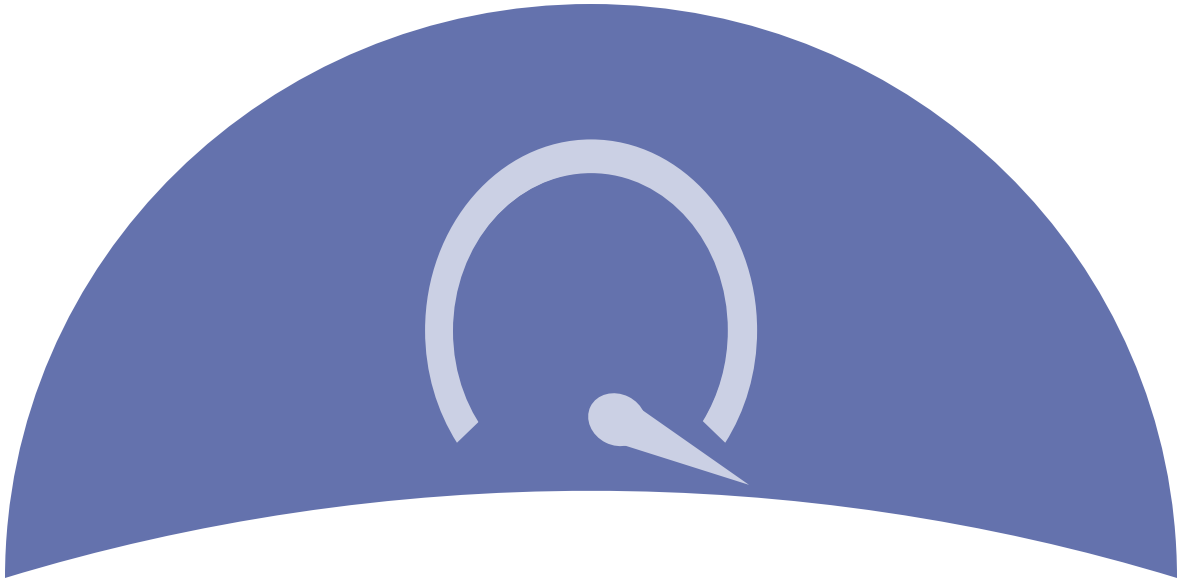
# What will - and won't - put telecom traffic in the fast lane?



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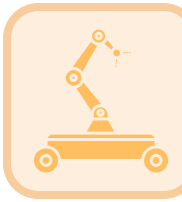


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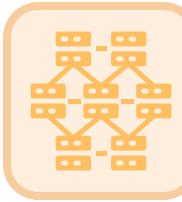
**AI-enabled AR wearables**

- **Enterprise AR**: Demands continuous **4K video uplink (20-30 Mbit/s**) for field maintenance, public safety, and remote training
- **Consumer smart glasses**: Projected to generate **135 MB uplink traffic/device/day** (~4 GB/month) by 2030 with 110,000,000 estimated to be in circulation by 2028
- **Real-time AI**: Video enhancement and AR overlays create **uplink-heavy traffic** as models run remotely



**AI-enabled robotics and digital twins**

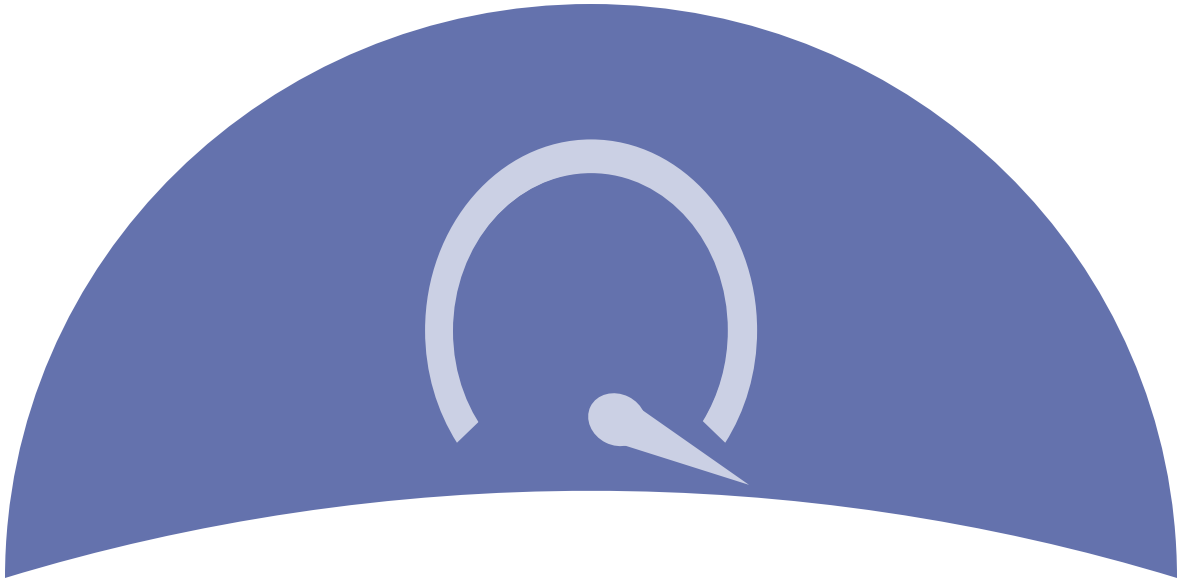
- **Digital twins and robotics**: Require **constant bi-directional data streams** for factory and logistics hub operations
- **High-definition video:** High-definition video use cases, especially those involving real-time streaming, will place significant demands on network traffic
- **Performance needs**: Drives demand for **ultra-low latency** and **high-capacity links**



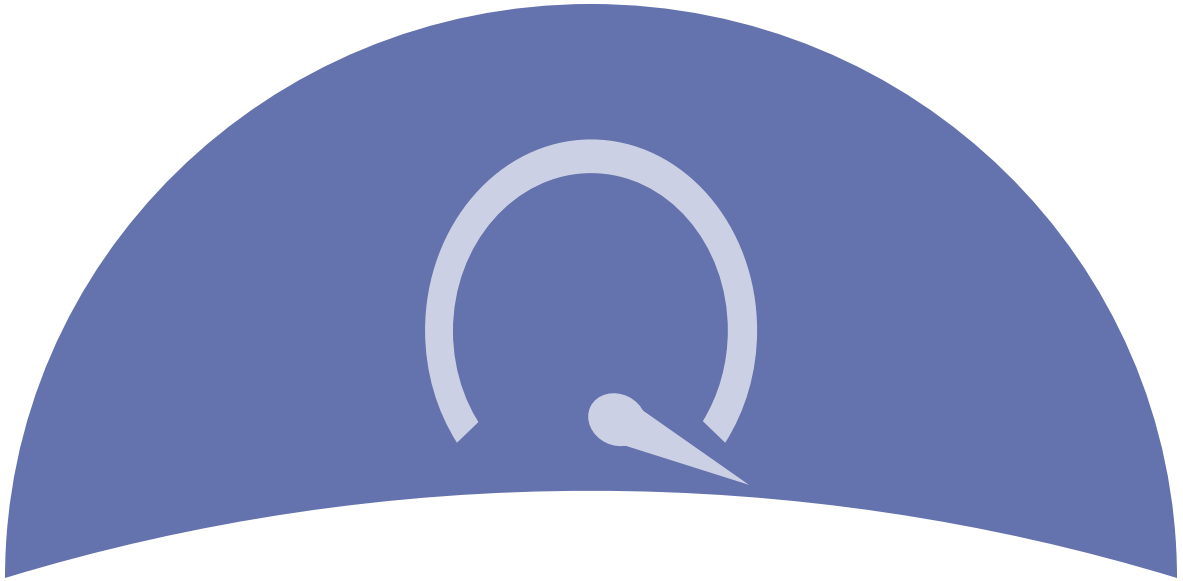
**Increased distribution of AI compute**

- **Distributed AI compute**: Traffic uplift from AI will grow as inferencing shifts from central data centres to distributed edge nodes – requiring **greater distribution** of connectivity routes.
- **Latency-sensitive applications**: Critical to support real-time applications (e.g., AR field work, drones, industrial automation), introducing **enhanced network SLAs** in certain instances.

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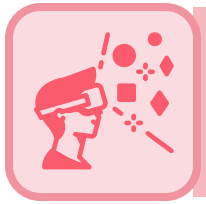
**IoT devices**

- **IoT accounts for <1% of total data traffic** despite huge connection growth.
- Most IoT devices transmit only small bursts of data, limiting overall traffic impact, a trend likely to continue (even as AI-integration accelerates).



**VR and 8K video**

- **8K streaming is data-intensive** (200–300 Mbit/s), but adoption is limited by cost, usability, and niche interest.
- **VR adoption remains low** due to high costs and limited consumer appeal (even as consumer AR usage increases)

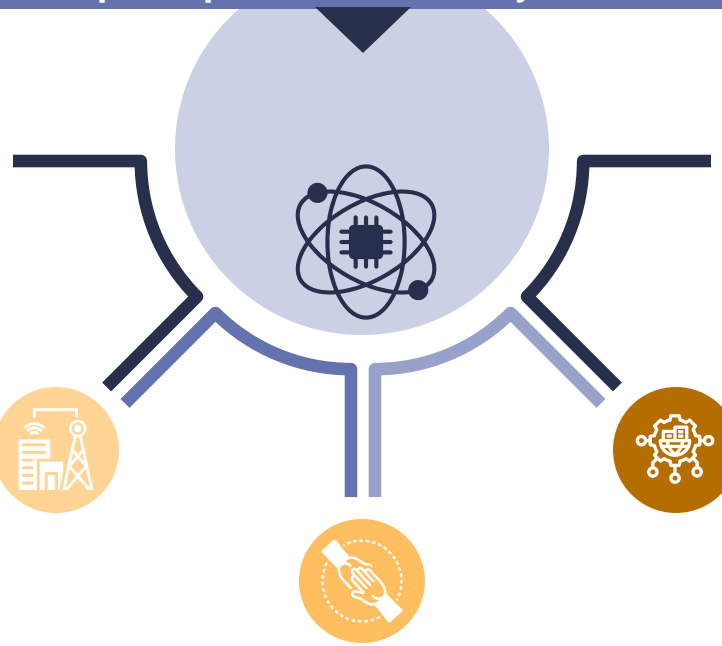


**The Metaverse**

- **The metaverse has not yet translated into sustained traffic growth.**
- Its' impact is negligible unless directly integrated with AI-driven AR/VR experiences
- Telcos are increasingly divesting from the metaverse (e.g. SK Telecom)

# Success in the AI era requires operators to grasp both the impact on traffic and their strategic position

**AI-driven use cases will reshape network demand. To capture this opportunity, telcos must decide how deeply they want to participate in the AI ecosystem:**

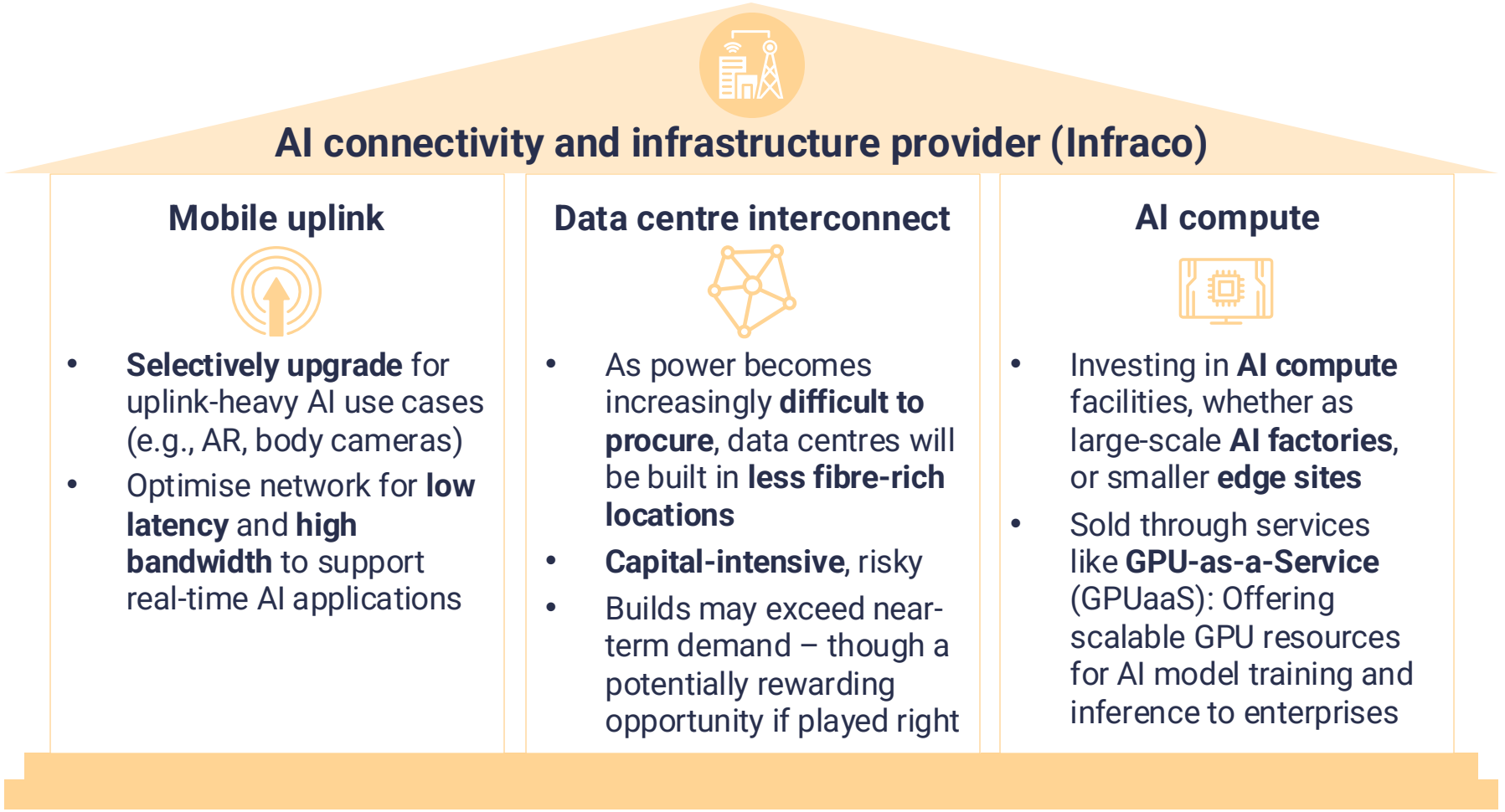


**AI connectivity and infrastructure provider (Infraco)**

**AI company: Deep integration into the AI value chain (Techco)**

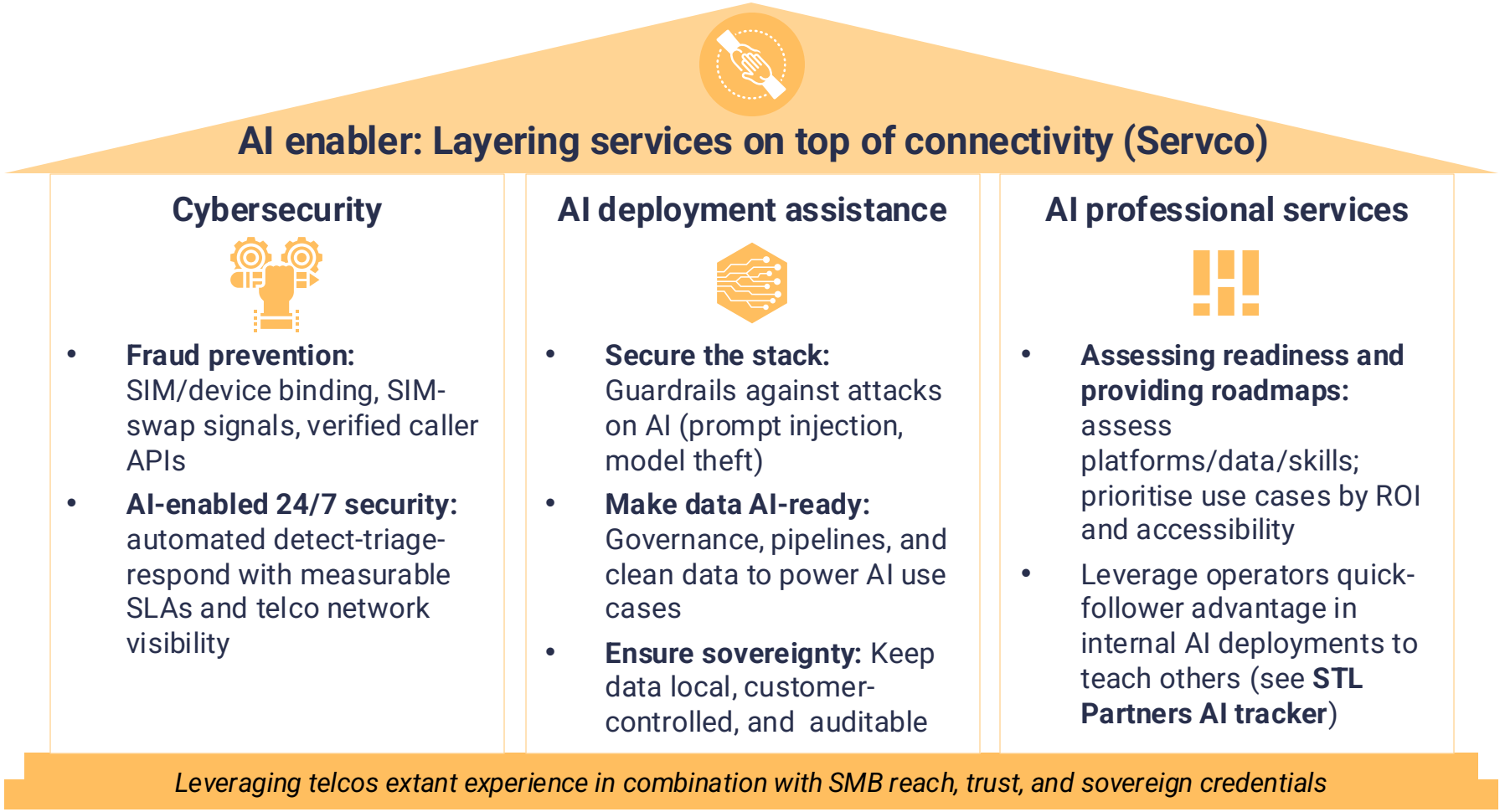
**AI enabler: Layering services on top of connectivity (Servco)**

# Infracos enable AI by delivering specialised infrastructure across connectivity, interconnect, and compute

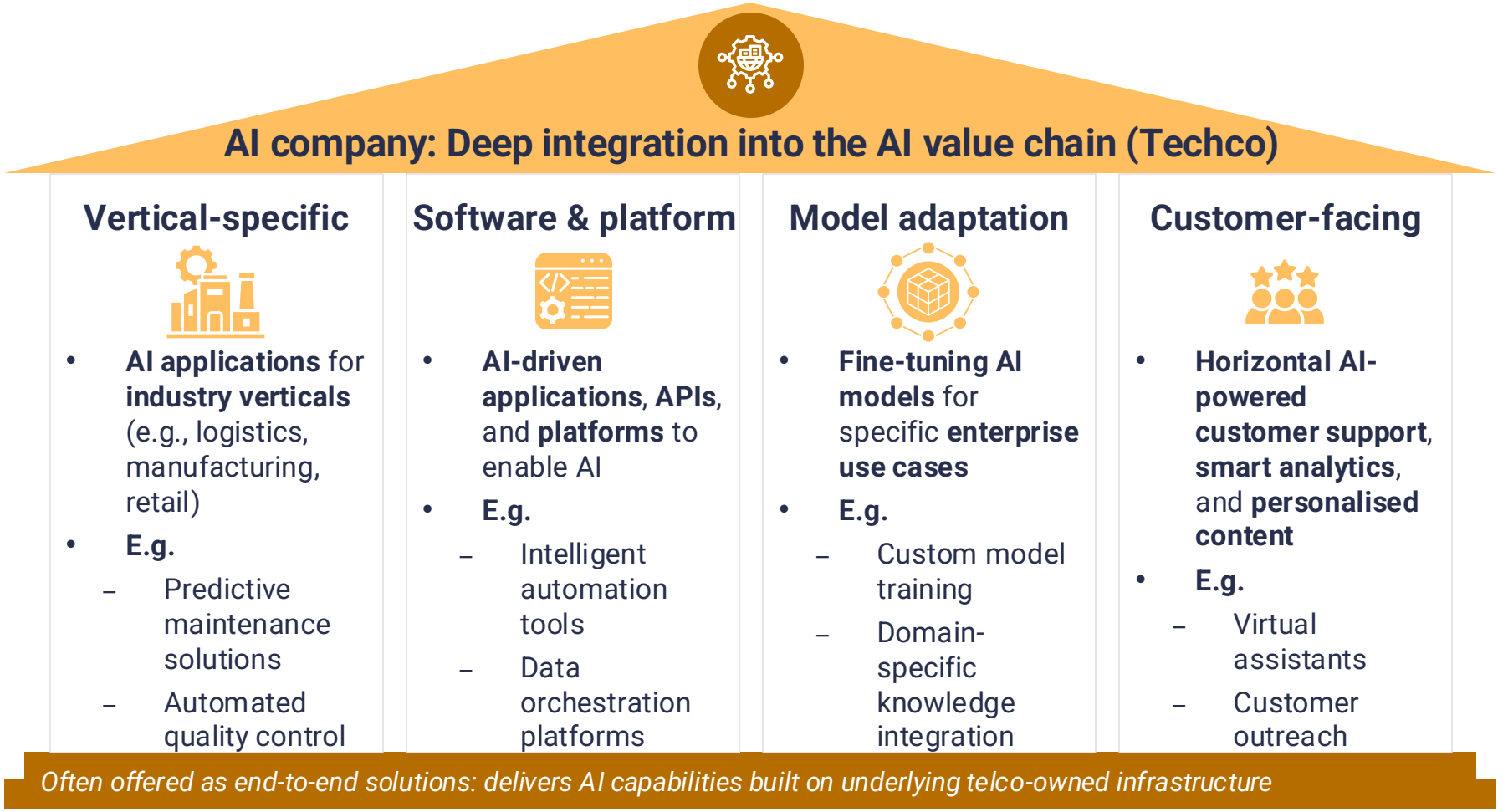



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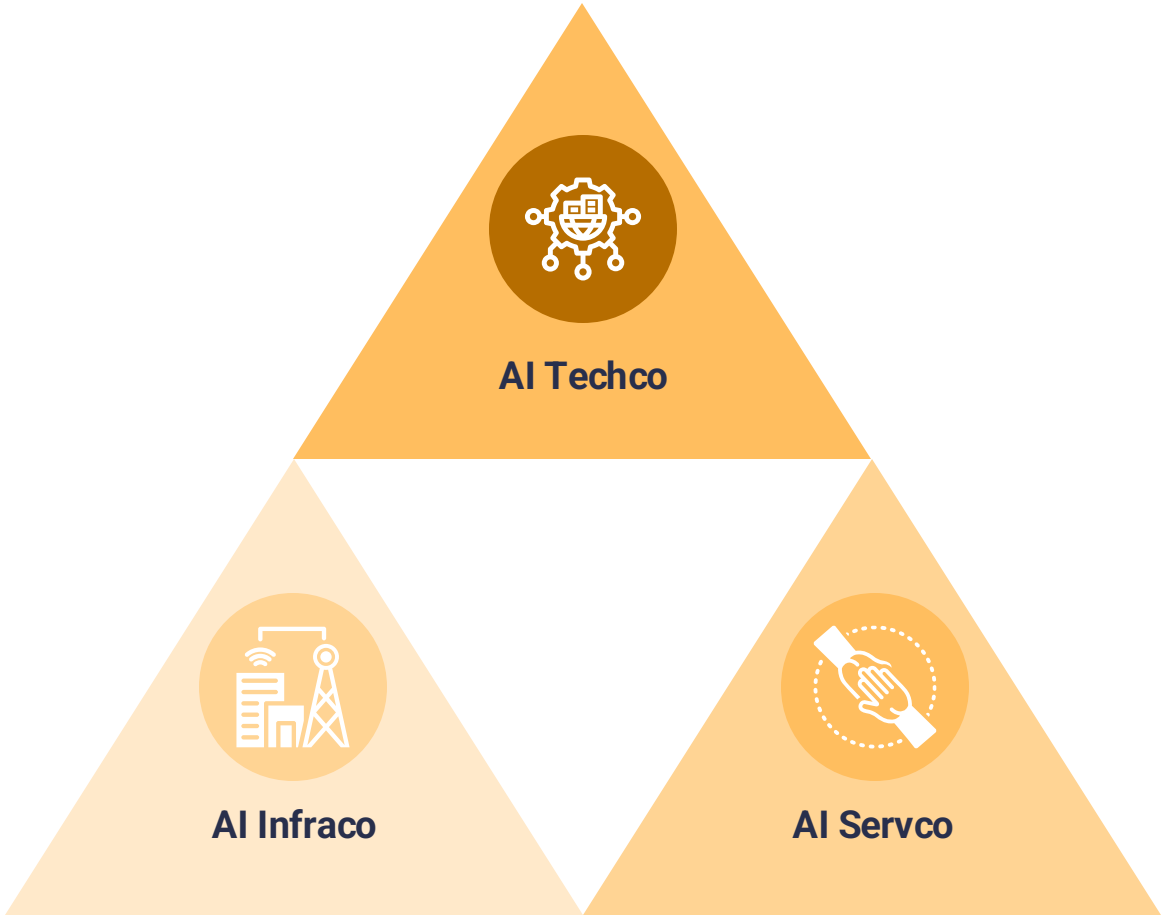
# Servco's move beyond connectivity and infrastructure to offer AI-specialised services for enterprises



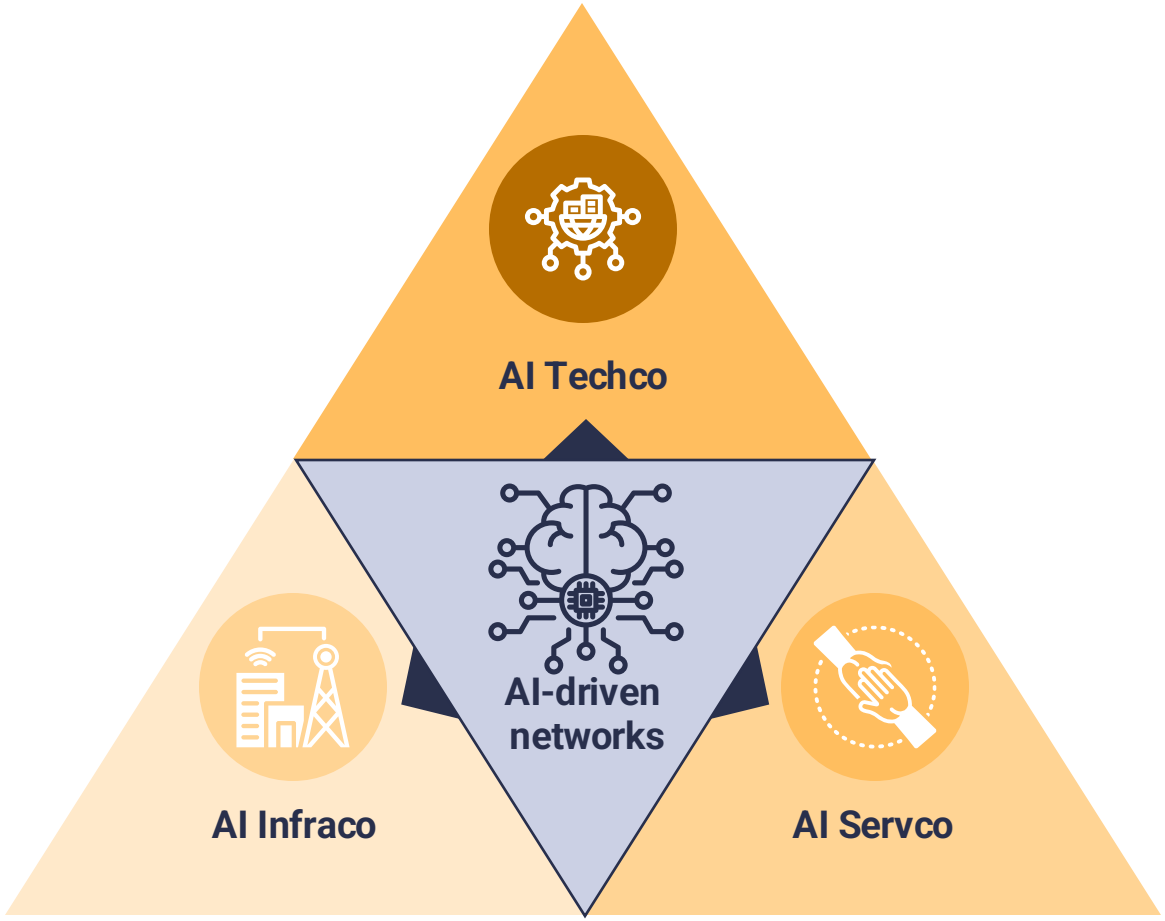
# By integrating infrastructure with AI services, Techco's provide end-to-end AI solutions for enterprises



# Internal adoption of AI-driven networks is the bedrock of future strategic AI-centred models



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AI-driven networks

AI-driven networks are a **high priority for future telco strategies** as they are essential for handling volatile AI-driven traffic, achieving cost reduction, and enabling future-facing AI services and products.

1. Autonomy underpins all telco roles (Infraco, Servco, Techco) by ensuring **agility and efficiency** to capitalise on emerging AI-driven demand.

2. AI-driven traffic can be **volatile and unpredictable**, requiring networks that can self-optimise and adapt dynamically without manual intervention.

3. Autonomy is key to **cost reduction (opex)** and faster time-to-market for AI-based services.

**NaaS**: Provides programmable, on-demand network capabilities for AI workloads. Supports 'bursty' nature of specific AI interactions (e.g. model updates)



**AI-powered assurance:** Enables predictive maintenance, real-time analytics, automated fault resolution. Key to freeing resources to spend elsewhere



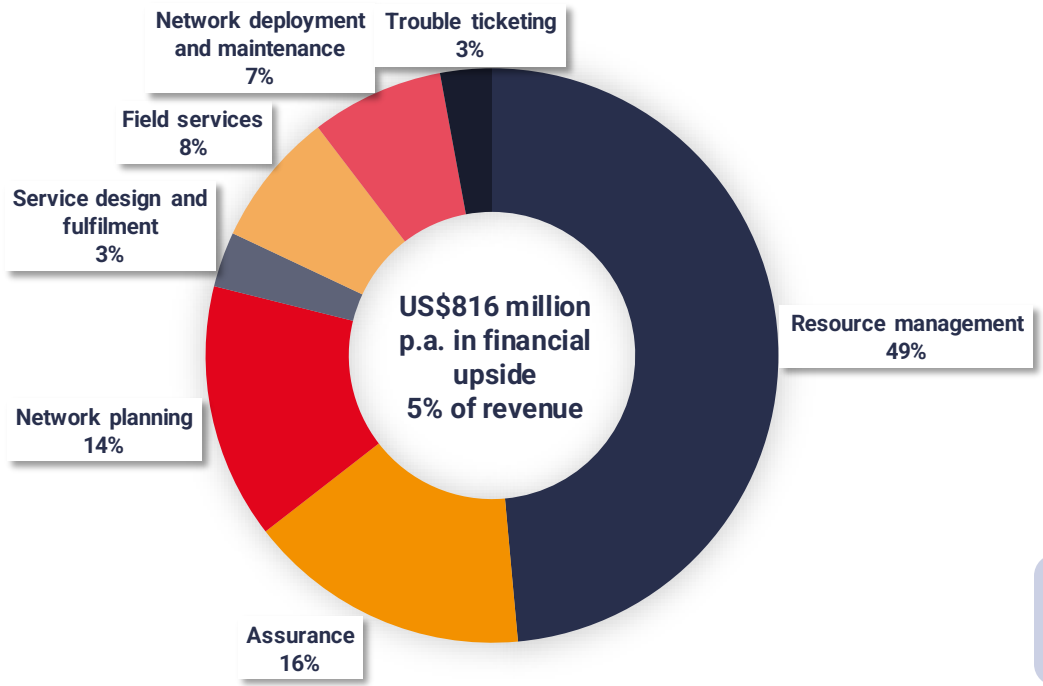
**SDN & orchestration**: Dynamic traffic steering for AI inferencing closer to users. This is an aspect which will become increasingly crucial in enabling AI applications and technology



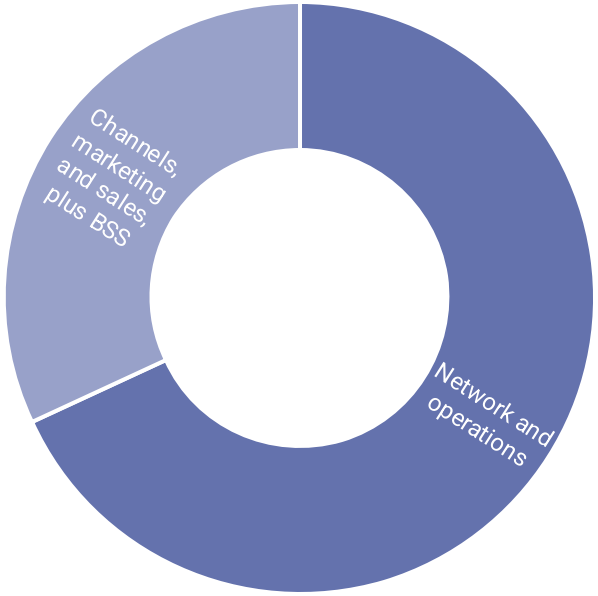
# Adopting AI internally represents a significant opportunity for telecoms operators to enhance financial upside

Internal AI adoption in telecom networks and OSS offers a **significant financial boon**, estimated at **~5% of current revenues**, enabling **enhanced services** and **capital reallocation** for new AI domains.

## Overview of the potential financial value of AI for telcos in the network and OSS




## Share of value, by use case family

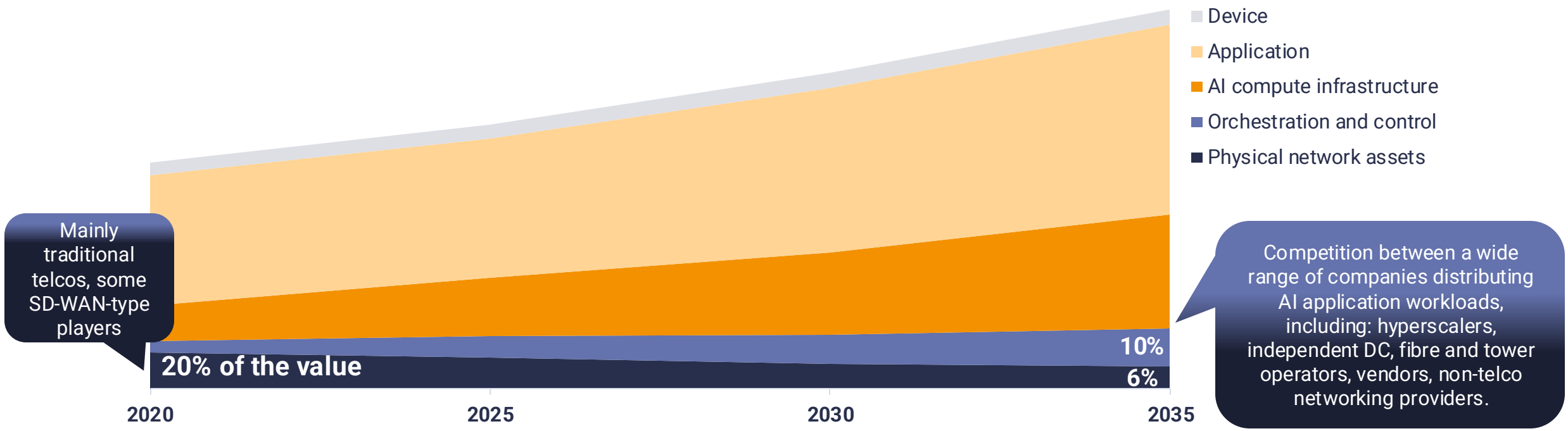



! The majority of value for telecoms operators from internal AI adoption will come from use-cases across network and operations

*Source: STL Partners, Charlotte Patrick Research*

# Internal AI-driven orchestration presents a key differentiator for operators in a crowded AI market

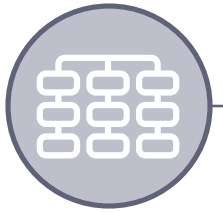
- **Physical network assets are diminishing in value**: Providing non-differentiated physical networks will become increasingly less valuable over time, as more dynamic and advanced network requirements proliferate.
- **Automation critical for telcos**: Investing in AI and automation for network orchestration is crucial for telcos to capture value in the control layer.



# To succeed in capitalising upon the AI revolution operators must understand the following...



**1. Telcos need to be selective and evidence-led in their AI network investments:** While AR wearables, real-time AI video, and industrial AI will drive demand, many other use cases remain niche, particularly when looking at impact on the access network



**2. Telcos need to define their AI role:** The choice between being an Infraco, Servco, or Techco determines how they engage in the AI value chain, from connectivity and NaaS to AI services and full-stack AI solutions



**3. AI-driven networks are non-negotiable:** To capitalise on AI opportunities, telcos must embed automation and intelligence into their own infrastructure first - enabling agility, cost-efficiency, and readiness for dynamic AI workloads.

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# TELECOMS IN THE FAST LANE? HOW AI WILL IMPACT NETWORK TRAFFIC AND OPERATIONS

TURNING COMPLEXITY INTO OPPORTUNITY

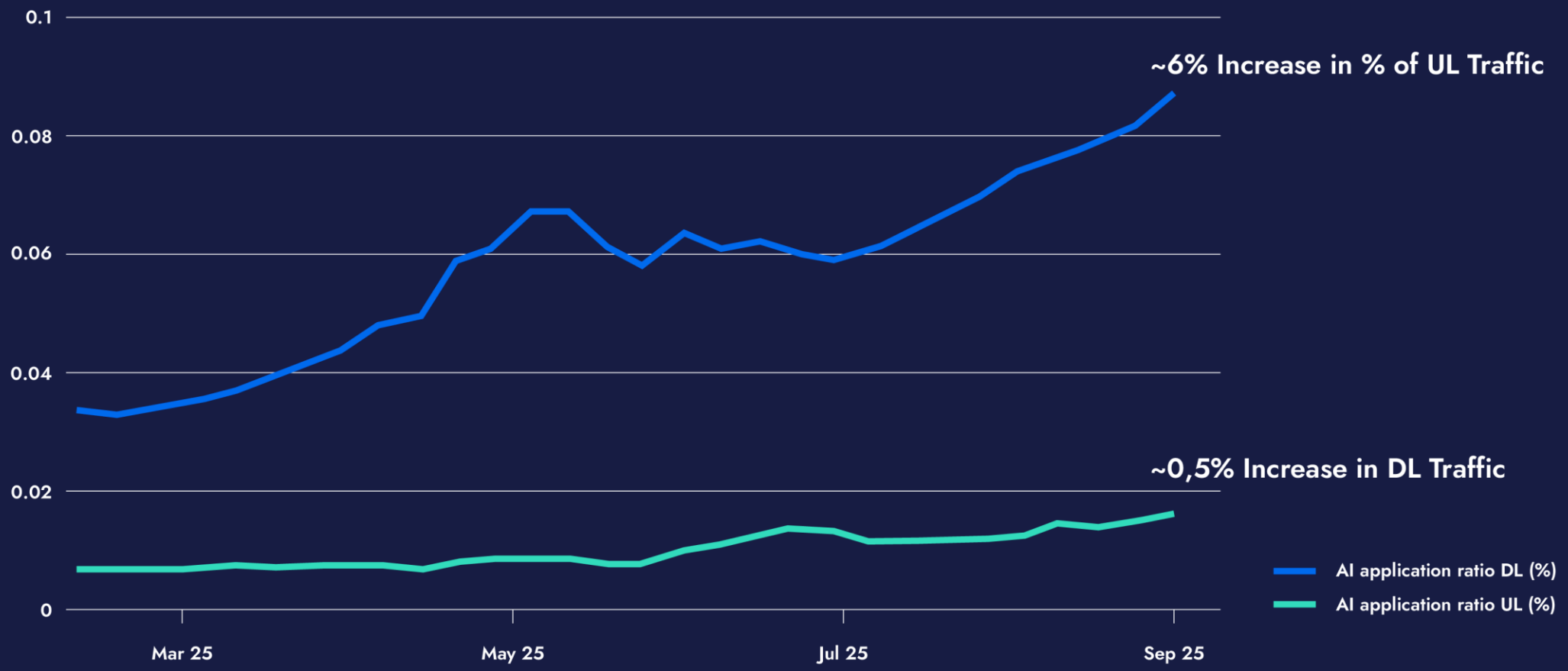


**THOMAS NILSSON**

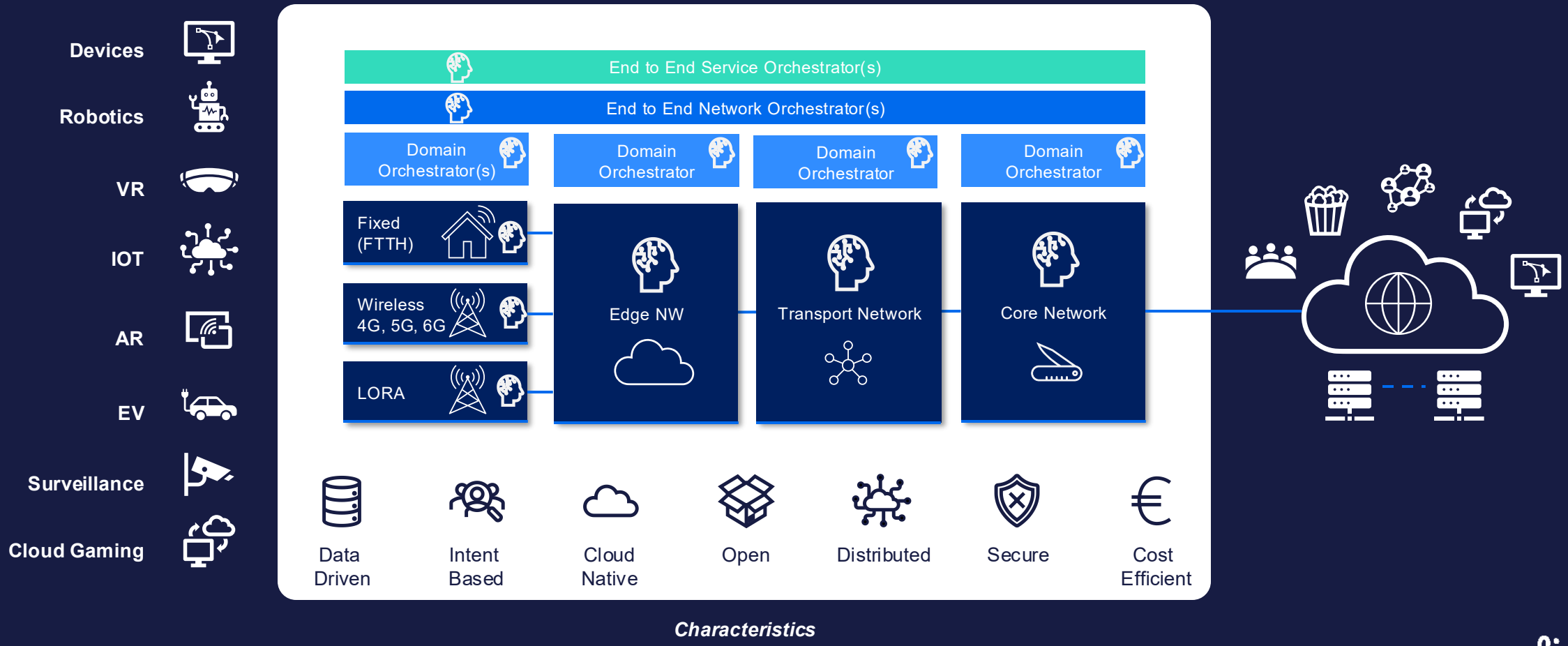
Chief Product Officer

elisapolystar.com

# HOW DOES IT LOOK TODAY IN THE NETWORKS, DO WE SEE ANY CHANGE IN THE NETWORK TRAFFIC PROFILES FROM AI?

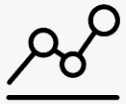


# THE COMPLEXITY OF FUTURE NETWORKS DRIVES NEED OF AI EVERYWHERE TO EFFECTIVELY MANAGED THE COMPLEXITY




***Characteristics***

# WHERE OPERATORS NEED AI MOST IN OPERATIONS



**Network Optimization & Forecasting**



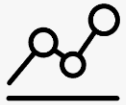
**Automated Fault Detection & Resolution**



**Predictive Maintenance**



**Proactive Customer Experience Management**



**Digital Twins Simulations**



**Automated Customer Service & Chatbots**



**Fraud Detection & Security**

These investment areas represent the foundation of modern telecom operations, where AI serves as the critical enabler for operational excellence and customer satisfaction.

# FROM REACTIVE TO PROACTIVE: AGENT-OPS DRIVEN ASSURANCE

Evolution from traditional reactive support to proactive, AI-driven assurance represents a paradigm shift in telecom operations service assurance domain. Agentic AI systems operate as autonomous, goal-oriented agents that can execute complex tasks without constant human oversight.

01

## Automated Diagnosis & Troubleshooting

AI agents identify and resolve common network issues autonomously, potentially reducing mean time to resolution by up to 70%.

02

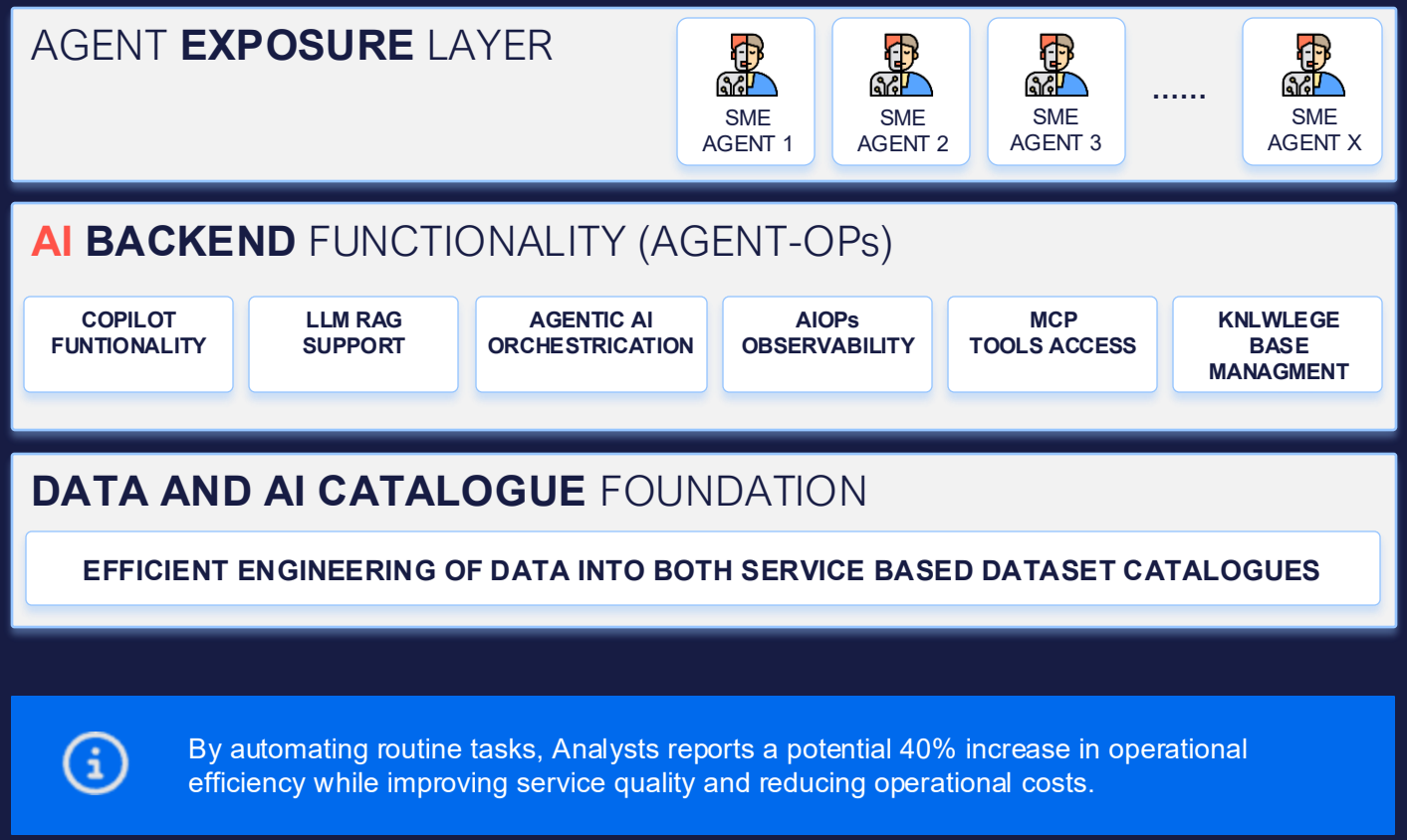
## Intelligent Ticket Triage

Smart categorization and prioritization of service tickets ensures critical issues receive immediate attention.

03

## Expert Resource Optimization

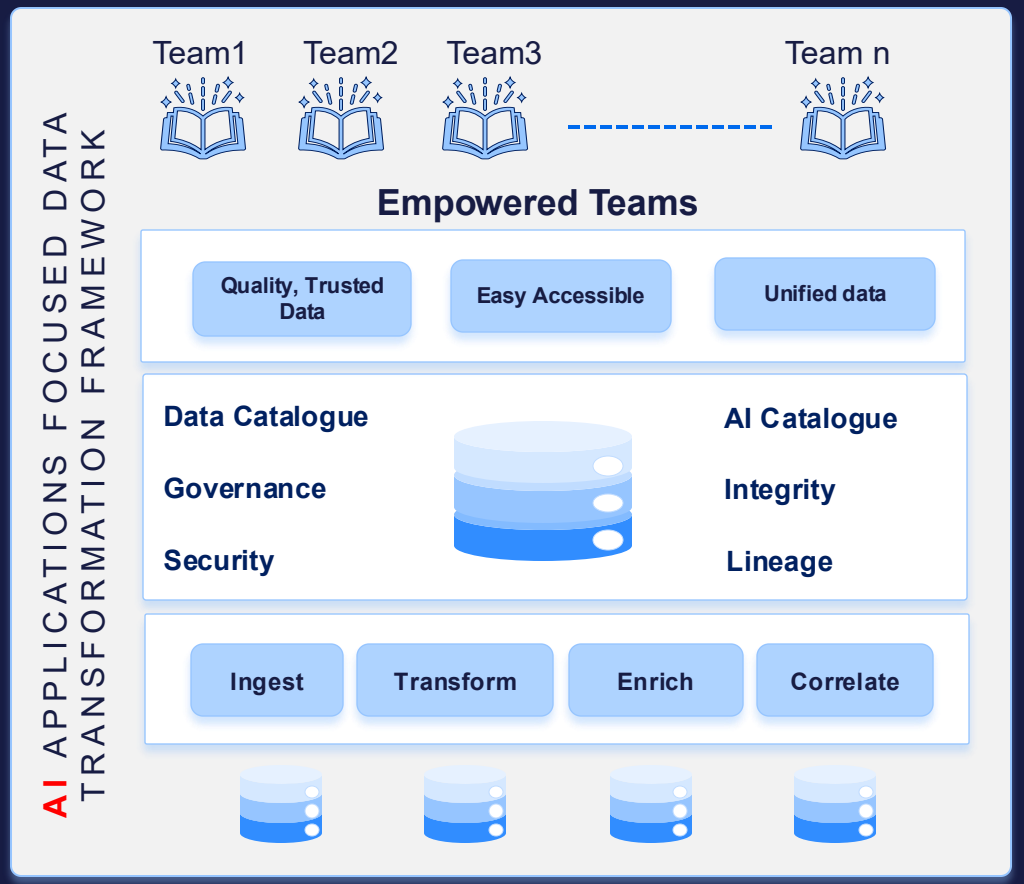
Human engineers focus on complex, high-impact problems that require creative problem-solving and strategic thinking.




By automating routine tasks, Analysts reports a potential 40% increase in operational efficiency while improving service quality and reducing operational costs.

# THE COMPLEXITY OF FUTURE NETWORKS DRIVES NEED OF AI EVERYWHERE TO EFFECTIVELY MANAGED THE COMPLEXITY

- **Democratize** data and empower teams across the entire organization by enabling AI-driven analytical and decision-making capabilities.
  - Operations & Engineering
  - Sales & Marketing
  - Product Management
  - …
- **Break** data silos, abstract network complexity, and use AI to turn data into strategic assets for monetization and insight.
- **Adopt** a horizontal, cloud-agnostic data strategy to unify, catalogue, and activate data across vendors for AI-driven value."



# THE FUTURE OF TELECOM: AI AS A STRATEGIC IMPERATIVE

The telecommunications industry stands at a transformative inflection point where complexity becomes opportunity through strategic AI implementation. What once represented operational challenges now serves as the foundation for competitive differentiation and sustainable growth.

## OPERATIONAL EXCELLENCE

AI-driven automation and predictive capabilities transform network operations from reactive maintenance to proactive optimization, ensuring superior service quality and reduced operational costs.

## REVENUE INNOVATION

Data monetization creates entirely new business models, enabling operators to generate value from their unique position at the intersection of connectivity and consumer behavior.

## STRATEGIC PARTNERSHIP

Collaborating with experienced AI solution providers like Elisapolystar accelerates implementation timelines and ensures best-practice deployment across complex telecom environments.

**”Operators embracing AI today will define the competitive landscape of tomorrow. The question isn't whether to adopt AI, but how quickly you can transform complexity into competitive advantage."**






**THOMAS NILSSON**

Chief Product Officer

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# READY FOR TRANSFORMATION?

We have done it, now it's your turn

elisa POLYSTAR | A SUSTAINABLE FUTURE THROUGH DIGITALISATION

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# Our panel discussion

***Moderator***



**Jonas Topp-Mugglestone**

Consultant

**STL Partners**

***Panellists***



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# For our Q&A...

Please submit any questions using the GoToWebinar control panel



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For any other questions, please contact:


- Tilly Gilbert, *tilly.gilbert@stlpartners.com*
- Jonas Topp-Mugglestone, *jonas.topp-mugglestone@stlpartners.com*