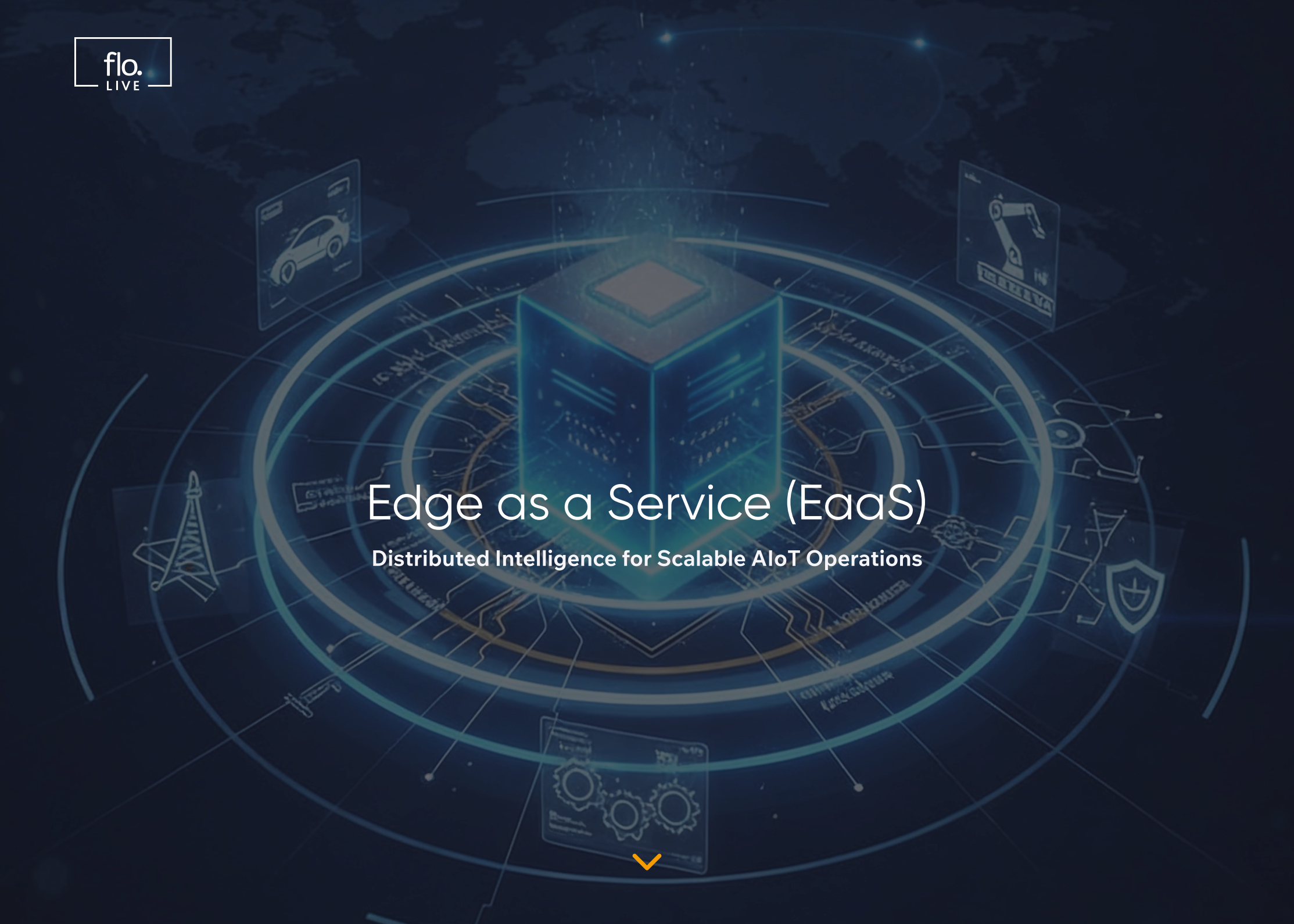
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LIVE
Edge as a Service (EaaS)
Distributed Intelligence for Scalable AIoT Operations

Executive Summary

AI-driven IoT deployments are expanding across automotive, manufacturing, public infrastructure, healthcare, and retail. As these deployments scale, centralized cloud architectures increasingly constrain performance, cost control, and regulatory alignment.

Traditional models route traffic through distant core networks. This creates avoidable latency, inefficient backhaul utilization, and exposure to cross-border data risk.

Edge as a Service delivers a distributed compute and connectivity architecture purpose-built for AIoT. It integrates regional edge processing, localized traffic breakout, distributed mobile core placement, and centralized orchestration within a single managed framework.

- Execute AI inference near the device
- Reduce bandwidth and roaming inefficiencies
- Align operations with regional data mandates
- Improve uptime across distributed fleets
- Maintain centralized policy and operational governance

Edge infrastructure is no longer an optimization layer. It is foundational to scalable AIoT

The Business Challenge

Legacy Architectures Can't Support Modern AIoT

Global AIoT deployments encounter structural constraints
that legacy connectivity models were not designed to address.

01 Latency Undermines Deterministic Systems

Autonomous vehicles, robotics, industrial automation, and V2X applications require consistent low-latency performance. Cloud round-trips introduce delay variability that affects control loops and safety logic.

02 Backhaul Economics Break at Scale

High-resolution video, telemetry, and sensor streams routed to centralized regions inflate bandwidth consumption and operating expense.

03 Data Sovereignty Requirements Intensify

Regional regulations restrict cross-border data movement. Many roaming architectures continue to route traffic internationally, creating compliance exposure.

04 Roaming Architecture Inefficiencies Persist

Even multi-IMSI deployments frequently route traffic back to a home core network. This increases latency and limits routing control.

05 Operational Fragmentation Slows Scale

Managing compute, SIM lifecycle, carrier contracts, routing policies, and compliance across countries introduces overhead and execution risk

These are architectural constraints, not incremental tuning problems.

The Solution

Edge as a Service

Edge as a Service unifies distributed compute and intelligent connectivity into a single operational model.

Core Components

Distributed Edge Compute

- AI inference at or near the device
- Real-time filtering and analytics
- Local continuity during network disruption

Local Breakout

- In-region traffic exit
- Reduced latency and backbon congestion
- Lower backhaul dependency

Distributed Core Architecture

- Regional user-plane deployment
- Optimized LTE and 5G data paths
- Improved jitter consistency

Multi-IMSI and eSIM (SGP.32)

- Multi-operator resilience
- Automated network selection
- Centralized lifecycle control

Centralized Orchestration

- Policy-driven routing
- Fleet-wide observability
- Secure over-the-air updates
- Unified global provisioning

This architecture addresses both compute placement and data path design. Most edge strategies solve only one side of the equation.

Operational Model

Edge as a Service aligns three coordinated layers.

Device Laye

Vehicles, sensors, cameras, gateways, and industrial systems.

Edge and Network Layer

- Regional edge nodes
- Local breakout points
- Distributed mobile core functions
- Private APNs and secure tunnels

Control Layer

- Centralized policy engine
- Connectivity management
- Traffic steering
- Compliance enforcement
- Unified monitoring

AI processing occurs locally | Control remains centralized | Data flows according to policy and geography

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Business Outcomes

Capability	Enterprise Impact
Local AI inference	Faster and more predictable decisions
Local breakout routing	Reduced bandwidth and roaming costs
Distributed core placement	Lower latency and improved performance stability
Multi-operator redundancy	Higher uptime across regions
Data localization	Alignment with regulatory requirements
Centralized orchestration	Simplified global operations

The outcome is structural performance improvement with controlled operational complexity.

Where EaaS Delivers Immediate Impact

Autonomous and Mobility System

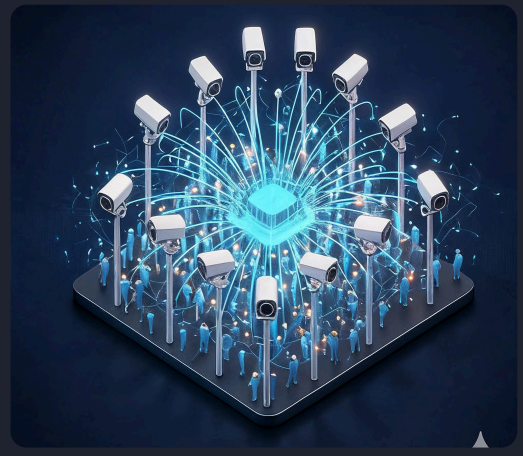
Environments where milliseconds affect safety, coordination, and real-time decision logic.

Industrial Automation and Robotics

Closed-loop control systems requiring deterministic latency and localized data processing.

Regulated Data Environments

Healthcare, public infrastructure, and other sectors operating under strict data residency requirements.



High-Density Sensor Deployments

Video and telemetry-intensive systems where centralized backhaul becomes economically unsustainable.

These scenarios share a common requirement: distributed intelligence combined with controlled data routing.

Competitive Positioning

Traditional MNO and MVNO Models

- Single-operator dependency or conventional roaming
- Centralized core networks
- Limited routing transparency
- Country-specific contracting

Edge as a Service

- Cloud-native distributed core
- Regional traffic control
- Local breakout architecture
- Multi-IMSI and eSIM orchestration
- Centralized global governance
- Carrier-agnostic deployment

This is not an overlay on legacy connectivity.
It is a re-architecture designed for AI-driven, globally distributed systems.

Market Context

Edge connectivity

Several industry shifts make distributed edge connectivity a structural necessity:

- AI inference moving closer to devices
- 5G-enabled low-latency applications
- Digital twin deployments
- Expansion of autonomous operations
- Enforcement of regional data localization

Edge compute without intelligent connectivity still inherits centralized routing inefficiencies. EaaS addresses both dimensions simultaneously.

Closing Perspective

Centralized architectures were built for cloud workloads and human communication patterns.
They were not designed for autonomous, AI-driven fleets operating across regulated geographies.

Edge as a Service aligns compute placement, network design, and operational governance into a unified model.

AI inference moving closer to devices

5G-enabled low-latency applications

Digital twin deployments

That combination defines the next phase of enterprise IoT infrastructure.

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