

2026 Outlook: AI, Sovereignty, and the Reordering of Global Digital Infrastructure

Overview. This annual note synthesizes our observations on the rapidly evolving technology landscape following attendance at several flagship 2026 events: the Pacific Telecommunications Council (PTC), Mobile World Congress (MWC), and Satellite 2026. A fourth event, NVIDIA's GPU Technology Conference (GTC), warrants its own dedicated Note.

Across mobile, satellite, data centers and subsea infrastructure, three forces shaped the 2026 landscape: deep AI integration, rising sovereignty pressures, and the widening gap between vertically integrated and legacy development models.

Geopolitics and macroeconomic pressures continue to exert outsized influence across telecom, satellite, and data center sectors. The push for digital and technological sovereignty is now producing broader and more tangible adverse effects including market fragmentation, duplicated infrastructure, and elevated costs that are increasingly overshadowing any perceived strategic benefits. Financing constraints continue to affect telecom and broadband, and pressures are now becoming evident in AI infrastructure as well, where developers are increasingly turning to structured credit and off-balance-sheet funding vehicles to support deployment. U.S. tariffs, now a year in effect, are fully reflected in cost models and supply chain decisions. Compounding these pressures, two major ongoing wars continue to drive volatility in oil prices and raise supply chain risks.

Against this backdrop, the dominant theme across all events was the deep integration of artificial intelligence into infrastructure,

MWC Key Themes

While traditional telecom infrastructure and connectivity remained the bedrock of the event, they increasingly faded into the background as the industry pivoted toward a new era of intelligence and autonomous systems. This year's key themes include:

- **The Telco AI Playbook:** Can operators move beyond "providing the pipes" to capture AI value? Discussions focused on GPU-as-a-Service, expanding into the application layer through professional services, and hosting Sovereign AI clouds to meet national data-residency requirements.
- **Ascendance of Agentic AI:** AI was the defining theme of the show, with attention shifting from passive chatbots to Agentic AI, where autonomous systems reason, decide, and act across complex networks.
- **The Rise of Embodied Intelligence:** AI moved into physical form. Embodied AI demonstrations, including AGIBOT's humanoid fleet serving dim sum and coffee, highlighted some of the potential of AI-driven robotics.
- **The NTN Revolution:** Non-Terrestrial Networks advanced to mainstream, particularly following recent MSS spectrum acquisitions by SpaceX and AST SpaceMobile. Economics and financing were central as MWC 2026 showcased the commercial readiness of direct-to-cell connectivity.
- **Quantum's Practical Shift:** Quantum technology shifted from theory to engineering. Exhibits featured live demonstrations of quantum-safe cryptography for critical infrastructure and the first multimodal quantum data centers integrating quantum and classical compute stacks.

networks, and operations. The following sections capture the most significant developments and strategic implications observed.

MWC2026: AI Native Network Architecture

MWC 2026 highlighted how mobile networks are evolving toward intelligence-centric architectures, even as operators and private equity investors remain cautious with capital deployment.

Benefiting from AI Wave. A recurring theme was renewed focus on telco techno strategies as operators looked for ways to participate more directly in the AI value chain. With limited 5G monetization and continued pressure on connectivity revenues, operators are evaluating moves closer to compute and applications, from GPU as a Service and AI hosting to vertical specific application layer offerings. These efforts are still early but signal a broader shift toward capturing value higher in the stack as AI workloads and data flows reshape network economics. Success in this transition tends to favor vertically integrated operators that combine network, cloud, and AI capabilities, as seen in Japan, Korea, and China where carriers operate unified infrastructure and service platforms that blur the line between telecom and technology provider.



Figure 1. The 'Telco to Techco' shift was in full force at MWC 2026. Beyond internal efficiency, operators are carving out their roles in the AI value chain through GPUaaS infrastructure, sovereign-AI hosting for regulated industries, and high-value professional services at the application layer.



Figure 2. AI was by far the theme that dominated MWC 2026, visible everywhere on the show floor. Agentic AI was a driving theme, marking a definitive shift from passive "chatbots" to autonomous agents capable of sensing, reasoning, and taking independent action across networks and devices.

AI Native Networks. AI shifted from an add-on to a foundational design principle. Traditional topics such as Open RAN, edge computing, IoT, and small cells were reframed within broader AI-driven narratives around automation, efficiency, and intent-based operations.

Agentic AI and Autonomous Network Capabilities. Widespread visibility of agentic AI concepts was a standout development: autonomous, decision-making systems capable of sensing conditions, reasoning, and acting with minimal human intervention. As a practical implementation, Nokia and AWS in collaboration with Orange and du, showcased an agentic AI-powered network slicing solution. This used real-time analysis of factors such as location, events, traffic patterns, and external data sources to enable dynamic, adaptive slicing. Other examples included Ericsson's AI rApps and Intelligent Automation Platform for RAN optimization, which have demonstrated gains in spectral efficiency and up to 75% reduction in optimization time, as well as SoftBank's Autonomous Agentic AI-RAN system and Huawei's Autonomous Network L4 advancements.

AI RAN and Multi-Vendor Demonstrations. AI-RAN occupied notable narrative space previously associated with Open RAN. The AI-RAN Alliance made its exhibitor debut with

33 multi-vendor demonstrations highlighting AI embedded across network layers, from the physical layer to orchestration and edge applications. These focused on performance improvements, energy and spectral efficiency gains, and automation.

Incremental Operator Adoption. While large-scale infrastructure upgrades remain unlikely in the near term due to mature 5G investment cycles, operators are adopting AI-driven capabilities incrementally. Particular interest lies in areas delivering clear operational efficiency gains, such as predictive fault detection, intelligent resource allocation, automated optimization, and closed-loop automation. Initiatives like the TM Forum's AI-Native Blueprint and GSMA's Open Telco AI further support moving from pilots toward production-grade deployments.

Pre-Standard 6G Technology Demonstrations. 6G technology demos were presented by major vendors, though these remain pre-standard concepts as the 3GPP is targeting March 2029 for its initial specifications in Release 21. These demos focused on aspects of how 6G could improve upon 5G performance or address known limitations. For instance, they explored efficient

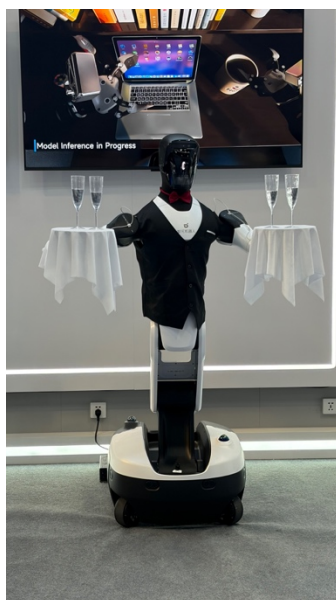


Figure 3. Embodied AI emerged as the definitive frontier at MWC 2026 moving beyond digital chatbots into physical form. The exhibition floor was dominated by AGIBOT's humanoid fleet serving everything from dim sum to coffee highlighting the question of how fast these "AI workers" will integrate into our daily lives.



Figure 4. Quantum technology moved into the infrastructure layer at MWC 2026, marking a shift from theory to industrial utility. Showcases featured live demos of quantum-safe cryptography for critical systems and the introduction of multimodal quantum data centers integrated with classical supercomputing.

implementation of dynamic spectrum sharing to smooth the migration to 6G, scaling Massive MIMO as well as implementing more sophisticated techniques (distributed and cell-free MIMO), exploring new waveforms and advanced error correction combined with machine learning techniques for better performance and operational efficiency, or introducing architectural enhancements to further reduce latency.

Integrated Sensing and Communication. ISAC featured in several demos, pushing toward significantly higher accuracy for environmental perception and object tracking. These capabilities reflect a broader shift in 6G toward networks that combine connectivity with spatial awareness. Centimeter wave (cm-wave) bands, particularly in the 6 to 8 GHz range, also received considerable attention. These bands are widely viewed as a strong candidate to carry a substantial portion of 6G traffic in the future. They offer a compelling balance of high capacity and better range and coverage compared to mmWave.

Vendor and Operator Positioning on 6G. MWC 2026 marked a clear acceleration in purposeful 6G discussions. Vendors used the

event to showcase concrete pre-standard prototypes and partnerships such as Ericsson with MediaTek and Qualcomm as they seek to influence the future standard and steer development in directions that play to their strengths. Operators, by contrast, showed more tempered enthusiasm, focusing on monetizing existing 5G and 5G-Advanced networks, improving return on investment, and highlighting practical use cases built on current infrastructure.

Non-terrestrial networks featured prominently at MWC, providing a natural bridge to the satellite and NTN themes discussed next.

Satellite 2026: Convergence and Sovereignty as Defining Forces

The satellite sector reflected many of the same pressures seen at MWC, but with a sharper focus on sovereignty, vertical integration, and the accelerating convergence with terrestrial networks.

Mobile-Satellite Convergence. 5G NTNs were a forefront topic at both MWC 2026 and Satellite 2026. Notably, Satellite 2026 saw, for the first time, a more visible presence of terrestrial mobile and RAN focused vendors on the exhibition floor, underscoring the ongoing convergence between mobile and satellite network domains. This convergence has accelerated over the past year, set against a broader backdrop of spectrum acquisition strategies by players such as SpaceX and AST SpaceMobile. Across the satellite ecosystem, from operators to terminal and ground-station developers, companies are increasingly building NTN into their product and service strategies. Spectrum strategy was also a prominent theme, particularly with WRC-2027 approaching.

Market Polarization and Direct-to-Device. The continued scaling of Starlink, including its push into direct-to-device services, together

Mergers, Acquisitions & Divestments

We highlight key transactions since our last update in March 2025 that illustrate strategic shifts, infrastructure expansion, and ongoing consolidation:

Mobile and fixed access service providers:

- EchoStar sells spectrum valued at roughly \$40 bn to AT&T and SpaceX and exits the mobile operator business.
- Charter Communications announces a \$35 bn merger with Cox Communications.
- AT&T acquires Lumen's mass-market fiber business for \$5.75 bn.
- Poste Italiane bids €10.8 bn to take Telecom Italia private.

Satellite:

- France blocks Eutelsat's €550 mn ground-antenna sale to EQT and increases its stake, underscoring the strategic value of satellite ground infrastructure.
- Lynk Global and Omnispace plan to merge, with SES as a major strategic shareholder to accelerate global D2D and IoT services.
- AST SpaceMobile has raised more than \$2 bn since March 2025 through multiple equity and convertible-notes offerings.

Infrastructure (Tower) transactions:

- MTN Group to acquire the remaining 75% of IHS Towers for ~\$6.2 bn.
- Macquarie acquires IHS's South American assets for ~\$685 mn (8,500 Brazil; 270 Colombia).
- ATN International sells 214 Southwestern U.S. towers to an Everest affiliate for up to \$297 mn.
- SBA Communications explores a tower-portfolio sale after interest from major infrastructure funds.

Vendor transactions:

- Amphenol acquires CommScope's CCS unit for ~\$10.5 bn, strengthening its fiber-optic and broadband portfolio.
- TransDigm is acquiring Stellant Systems, a maker of high-power space and defense amplifiers, for \$960 mn.

with Amazon’s LEO system moving toward commercial service after its beta phase, is creating major barriers to entry, increasing capital intensity, driving market polarization, and lowering the cost of capacity. For mobile ecosystem players, understanding potential disruption of D2D operations over MSS spectrum was a central focus. For satellite operators, the emphasis was on the implications for business models and product strategy.

Orbital Data Centers (ODC) — data centers operating in space — emerged as a discussion point, triggered by SpaceX’s filings for up to 1 million satellites designed to process and store data in orbit. Starcloud’s proposal for 88,000 ODCs gave the sense that space-based compute is moving from speculative concept to structured planning. Assessing this depends on how a data center in space is defined, since some basic data and AI processing has already been occurring on satellites for several years. Scaling these capabilities to the level implied by ODC concepts is a very different story, and evaluating that feasibility was a recurring sideline topic throughout the event. We will publish our view in a dedicated Insight Note.

Multi-Orbit Architectures. Multi-orbit remains a central topic, with approaches varying by operator and application. SES continues to advance its GEO–MEO strategy augmented with Lynk’s LEO D2D layer, Eutelsat is aligning its GEO assets with its OneWeb LEO services, and Blue Origin’s Terrawave is pursuing hybrid architectures that blend LEO and MEO capabilities. Across this sector, hybrid constellations are being designed to optimize coverage, capacity, and latency, while inter-constellation and inter-orbit services are advancing through increasingly capable user terminals that can track and switch between orbits. Discussions at Satellite 2026 highlighted that mobility, D2D, and government-focused applications are key drivers, and that multi-orbit orchestration and spectrum management



Figure 5. The economics and financing of LEO constellations emerged as a central theme at both MWC and Satellite, where Xona Partners helped shape the industry dialogue through its active participation and its co-organization of a dedicated workshop with i2CAT.

remain critical enablers for these emerging services.

Vertical Integration and Development Cadence. The pressure exerted by LEO operators was a consistent undercurrent across both events. The scale and deployment cadence of SpaceX and Amazon were frequently referenced in discussions around cost structure and time to market. Their ability to control large portions of the value chain, from satellite manufacturing to launch and network operations, enables a development model that is materially faster and more iterative than traditional approaches. An expected SpaceX IPO would further amplify this advantage by giving the most integrated player in the market access to even larger pools of capital, reinforcing its pace of development and widening the gap with legacy GEO operators.

In contrast, incumbent geostationary operators such as SES and Eutelsat continue to operate within a supply chain and procurement structure that extends development timelines. This gap was openly acknowledged in panels and operator discussions, particularly in the context of responding to new demand segments such as mobility and direct to device connectivity.

Practical examples of this divergence were evident. The consortium driven structure of

IRIS² reflects a multi stakeholder approach that prioritizes policy alignment and industrial participation, but introduces complexity in execution. At the same time, partnerships and initiatives involving players such as Lynk Global illustrate how incumbents are attempting to accelerate entry into emerging service models without fully replicating vertically integrated capabilities. The net result is a growing divide between highly integrated LEO systems and more distributed, slower moving development models.

Sovereignty and Market Fragmentation. Sovereignty is playing an increasingly influential role in shaping market structure. At Mobile World Congress 2026, European stakeholders emphasized digital autonomy and the need for regionally controlled infrastructure. At Satellite 2026, the focus was more explicitly tied to national security, assured access, and defense integration. This shift is beginning to translate into tangible market effects. Sovereignty requirements are driving fragmentation, higher costs, and in some cases duplication of infrastructure. While these dynamics create protected environments in which certain regional players can operate, they run counter to the economics of satellite constellations, where global scale is a key determinant of profitability. Eutelsat’s decision to halt its GSaaS initiative following pressure from the French government was cited as a clear example of how sovereignty considerations can directly limit strategic flexibility and constrain participation in emerging service models.

As a result, government and defense demand is becoming central to the financial model of many systems discussed at both events. There was a clear recognition that commercial broadband alone is unlikely to sustain the growing number of constellations. Instead, long-term public sector contracts are emerging as a stabilizing factor, even as the global market continues to separate into a limited number of competing geopolitical blocs.

PTC 2026: AI Data Centers Shaping Global Infrastructure Planning

PTC provided the connective tissue across subsea, data center, and AI infrastructure, highlighting how global traffic patterns are being reshaped by AI workloads, resiliency and cybersecurity.

AI Driven Subsea Expansion. The bulk of subsea fiber deployment is increasingly driven by hyperscalers, as they interconnect regions to create path diversity, improve resiliency, and add capacity across key global routes. At PTC 2026, this buildout was consistently linked to AI workload requirements, which are reshaping traffic patterns and infrastructure priorities. Large scale training workloads reinforce demand for high capacity, data center-to-data center connectivity, while inference workloads are pushing compute closer to the edge.

The Subsea to Edge Continuum. The AI-driven architecture is giving rise to the “subsea-to-edge continuum,” where compute, storage, and connectivity are more tightly integrated across geographically distributed environments. In this model, subsea and long-haul fiber deliver bulk capacity into core regions, while edge infrastructure supports latency sensitive AI inference closer to end users. The central challenge is orchestrating workloads and data flows across this continuum while balancing performance, cost, and power constraints.

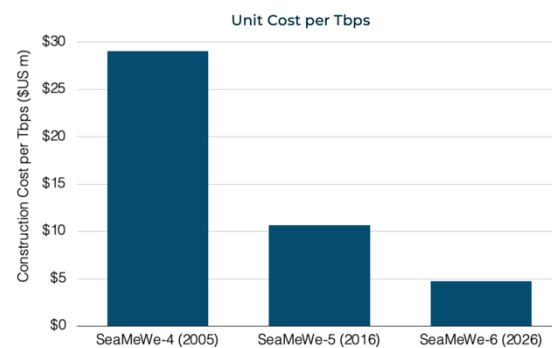


Figure 6. High fiber-count tech is lowering the unit cost per Tbps, making massive capacity more affordable even as total infrastructure investment grows. [Source: Telegeography]

Hybrid Fiber-Satellite Architectures. Another prominent topic is the integration of submarine fiber and satellite networks into hybrid architectures. At PTC 2026, LEO constellations were consistently positioned as a complementary layer to subsea fiber, particularly in remote and underserved regions where fiber deployment is impractical or cost prohibitive.

The industry is moving away from an “either or” approach toward architectures that are designed together from the outset. In this model, fiber provides high-capacity backbone connectivity, while satellite extends coverage, enables rapid deployment, and enhances network resilience. Multi-layered strategies combining fiber and satellite are therefore becoming essential to deliver ubiquitous and reliable services. The focus is increasingly on orchestrating these layers seamlessly to meet performance, cost, and coverage requirements across different geographies and use cases.

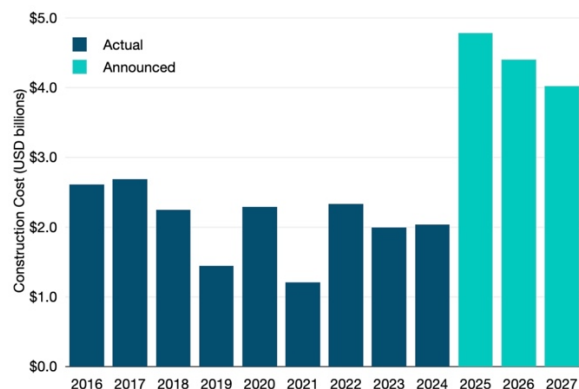


Figure 7. Submarine cable construction costs are forecasted to reach \$13 billion over the next three years (2025–2027), a level of investment not seen since the 2000–2001 peak. This surge is largely driven by increased spending in Asia and a strategic shift toward building diverse network paths. [Source: Telegeography]

Subsea Fiber Market Highlights

- Global bandwidth prices continue to fall as new high-capacity cables increase supply, with the steepest declines in Latin America and Africa. Price erosion is slower on routes affected by geopolitical constraints or delayed builds, including Europe–Asia.
- The market is shifting toward 400G and dark fiber as demand for higher-capacity services from hyperscalers and content providers grows.
- Hyperscalers drive most international bandwidth demand, accounting for 74% of global usage in 2024 as data center-to-data center traffic accelerates across their private networks.
- Industry discussions pointed to constraints in cable-laying vessel availability and heightened geopolitical challenges in securing subsea permits.
- Integration of subsea fiber and satellite networks gained attention, with LEO constellations framed as a complementary layer for regions where fiber buildout is not feasible.
- The industry continues to demonstrate resilience, with capacity concerns addressed through innovations such as higher fiber counts and early multicore fiber developments. Despite heightened media focus on cable sabotage, global repair activity has fallen even as total cable kilometers have expanded by more than 50%.

Investment Implications

Capital is concentrating around vertically integrated models, AI centric infrastructure, and platforms that can orchestrate workloads across distributed environments. Traditional players in both mobile and satellite markets face pressure to adapt, partner, or reposition as scale and integration become more decisive. Sovereignty requirements are driving fragmentation and duplicated infrastructure, elevating costs and complicating cross border deployment. Tariffs and volatile energy prices, amplified by ongoing geopolitical conflicts, continue to influence cost models and supply chain decisions, particularly for large scale data centers.

In satellite markets, a critical tension has emerged where long term government contracts are essential to sustain constellation economics, yet the industry simultaneously requires agile development to keep pace with rapid innovation cycles. This creates a complex balancing act between the bureaucratic stability of public funding and the high velocity engineering needed to compete with hyperscale actors. Operators are also exploring how to move up the value stack to participate in the AI market, from GPU as a Service to application layer offerings, reflecting a shift toward service models built around compute and intelligence rather than pure transport.

Emerging frontiers such as Non Terrestrial Networks, orbital data centers, and embodied intelligence add further optionality but increase capital allocation complexity. The tension between innovation, agility, and sovereignty will shape investment priorities and determine where value is created over the next several years.

Key Takeaways

General Landscape

- **Sovereignty Reshapes Market Structure:** National security and assured access requirements are driving duplication and higher costs, further segmenting the global satellite market into geopolitical blocs.
- **Government and Defense as Anchor Customers:** Long-term public sector demand is becoming central to the financial viability of satellite constellations as commercial broadband alone cannot sustain current market structures.

Mobile Networks, 5G Advanced, and 6G

- **Telco Techno Expansion:** Operators are actively exploring how to participate in the data center value chain, from GPU-as-a-Service and AI hosting to application-layer services, reflecting a broader push to move up the stack and capture new revenue pools.
- **AI Dominates Mobile:** Traditional telecom topics were reframed within AI-driven automation and intent-based operations.
- **Rise of Agentic AI:** Agentic, decision-making systems featured prominently in exhibits and discussions, signaling the industry's direction toward networks that can sense conditions, interpret intent, and act with limited human intervention.
- **Incremental Operator Adoption:** Operators are prioritizing AI capabilities that deliver measurable operational efficiency, such as predictive fault detection and closed-loop automation.
- **6G Emerges but Remains Distant:** Vendors showcased early pre-standard concepts, while operators stayed focused on monetizing 5G and 5G Advanced, viewing meaningful 6G investment as still years away.

Satellite and Non-Terrestrial Networks

- **Mobile–Satellite Convergence Accelerates:** For the first time, terrestrial RAN vendors had a visible presence at Satellite 2026, reflecting the rapid convergence between mobile and satellite networks.
- **Orbital Data Centers Emerge:** SpaceX’s filings for up to 1 million satellites capable of in-orbit processing sparked widespread debate on feasibility and strategic rationale.
- **LEO Scale Reshapes Competition:** Starlink’s expansion and Amazon’s LEO progress are creating major barriers to entry, increasing capital intensity, driving market polarization, and lowering the cost of capacity.
- **Vertical Integration Gap Widens:** SpaceX and Amazon’s control of manufacturing, launch, and operations enables faster iteration, while GEO incumbents face slower, consortium-driven development cycles.

Fiber, Subsea, and Edge Infrastructure

- **Hyperscalers Drive Subsea Expansion:** AI workloads are reshaping global fiber deployment as hyperscalers build for path diversity, resiliency, and data center–to–data center connectivity.
- **The Subsea-to-Edge Continuum:** Subsea and long-haul fiber deliver bulk capacity into core regions, while edge sites handle latency-sensitive AI inference. The central challenge is coordinating workloads and data flows seamlessly across this continuum.
- **Fiber–Satellite Hybrid Architectures:** LEO constellations are increasingly positioned as complementary to subsea fiber, enabling coverage extension, rapid deployment, and resilience.

About Xona Partners

Xona Partners (Xona) is a boutique advisory services firm specialized in technology, media and telecommunications. Xona was founded in 2012 by a team of seasoned technologists and startup founders, managing directors in global ventures, and investment advisors. Drawing on its founders’ cross-functional expertise, Xona offers a unique multidisciplinary integrative technology and investment advisory service to private equity and venture funds, technology corporations, as well as regulators and public sector organizations. We help our clients in pre-investment due diligence, post investment lifecycle management, and strategic technology management to develop new sources of revenue.

E-mail: advisors@xonapartners.com | Web: xonapartners.com