

Predicts 2024: CSP Technology and Operations Strategies

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By Analyst(s): Amresh Nandan, Enrique Hernandez-Valencia, Jouni Forsman, Juha Korhonen, Mike Edholm, Mounish Rai

Initiatives: [CSP Digital Transformation and Innovation](#)

Communications service provider CIOs and tech leaders are investing in technologies (e.g., the cloud, artificial intelligence and machine learning) that scale operational efficiency. They need a long-term business vision, an appropriate operating model and organizational capabilities evolution.

Overview

Key Findings

- CIOs and tech leaders at communications service provider organizations are investing in technologies (e.g., the cloud, artificial intelligence and machine learning) to scale operational efficiency. They need to develop a long-term business vision and an operating model, well as organizational capabilities. CSPs are adopting popular, but less-understood industry constructs, such as netco, servco, platformco and techco, often applying them without analyzing their relationship with their future business vision and internal change requirements.
- Industry/market trends, such as delayering, cost of cloud adoption and techno-nationalism, can impede CSPs in scaling capabilities for new growth opportunities, unless they respond to these by revising their technology strategies.
- Changing consumer patterns requiring on-demand (closer to modern cloud consumption models), increasingly customized services and technology skills challenges puts CSP CIOs and technology leaders in a central role to drive organizations' future vision for relevant platforms and operating models.

Recommendations

To execute digital transformation and innovation for their organization's future vision, CSP CIOs should:

- Embark on significant capability developments or change management journeys only after gaining sufficient clarity of their future business ambitions by developing a shared vision of the future state of business and an appropriate organizational construct among key stakeholders.
- Move to an in-depth annual review and update of your long-range tech strategy, using business outcome as guardrails through a relevant set of key performance indicators to tie all tech investments and capability development initiatives to relevant operational outcomes.
- Shape your technology operating model (focusing on skill requirements, enabling democratization of technology, agile decision making and automation) and organization structure by design as you invest in technologies, such as the cloud and AI/ML.

Strategic Planning Assumptions

Through 2027, 30% of CSPs will include a software engineering practice in their organization, which is an increase from 5% in 3Q23.

By 2028, a global market for communications equipment will devolve into two or more regional markets, each with its own technology stack.

By 2028, 70% of current CSP workforce technical skills will be made obsolete by automation, augmented intelligence and layering.

By 2028, CSPs will adopt cloud-native technologies for 50% of network functions, compared with fewer than 5% in 2022.

By 2025, 70% of CSPs will implement optimization tools and practices to reduce cloud operations cost, compared with 5% in 2022.

Analysis

During the past few years, CSPs are modernizing their systems, including transitioning to 5G stand-alone core networks, cloud-native technologies and virtualization. CSPs are also investing in digital transformation, and the application of new and emerging technologies in their operations. These investments should mean significant improvement in operations efficiency and some growth; however, CSPs financial results don't indicate such progress. The reasons lie in:

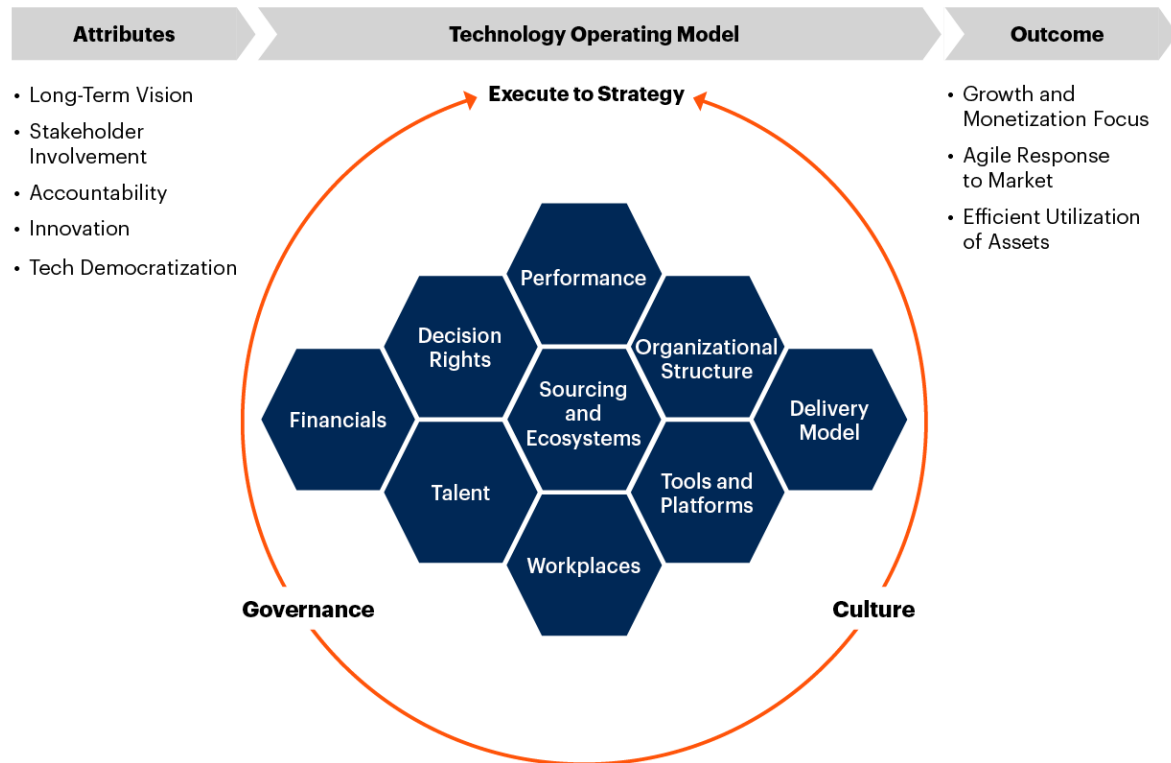
- The economic headwinds and high inflation in many markets
- A risk-averse approach to significant changes at the organizational/enterprise level
- The development and launch of digital services with legacy operating models
- A focus on technology, rather than customer-centricity, with 5G as a clear example, and monetization strategies that are not aligned with consumer and enterprise demand
- Skills and talent shortages that affect scaling for new and emerging technologies
- The limited influence of tech modernization on operational outcomes, due to patchy/insufficient business process reengineering and automation

These factors point to the need for a strong operating model focus, while modernizing technology, executing transformation or making strategic investments.

There are several challenges to operating model changes, such as lack of clarity of business vision and goals, and a lack of stakeholder participation. [Predicts 2023: CSP Technology and Operations Strategies](#) recommended doubling down on digital acceleration. As we look into the next three- to five-year horizon, there is a need to structure and focus on operating model changes (see Figure 1).

Figure 1: Factors Influencing Technology Operating Model Change

Factors Influencing Technology Operating Model Change



Source: Gartner
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Gartner

As CSP CIOs and technology executives focus on evolving their technology operating models, they should address the barrier of adequate cultural shift across the enterprise, not just in tech departments. If CSPs fail to achieve a culture of agile operations (e.g., faster decision making, accountability at every level, outcome orientation and innovation), they will not be able to change their operating models and enable new business models. To do so, CIOs and technology executives should make a concerted effort to:

- Develop a shared vision of digital acceleration with other stakeholders in the organization.
- Shoulder the responsibilities of culture change beyond the tech departments.
- Reprioritize initiatives through a strategic portfolio management approach — through a trade-off across value, risks and cost.

- Develop software engineering capabilities and practices in the organization to take control of operations change and product portfolio evolution.
- Execute change programs through a well-defined set of metrics, measuring periodically to calibrate when required.
- Ensure that future technology capabilities can handle the increased complexity of the business environment by using composable architectures, while managing legacy modernization.

What You Need to Know

This Predicts 2024 research captures the key areas that CIOs and technology executives should focus on to navigate some of the likely situations in a three- to five-year time frame. The objective is to steer their technology organizations toward delivering on a business vision and associated goals.

The strategic planning assumptions detailed in the next section point to:

- **The need to develop software engineering capabilities and practice:** To leverage ecosystems, diversify product portfolio, use analytics and artificial intelligence/machine learning (AI/ML) effectively and achieve autonomous operations, CSPs should not depend on partners altogether. They need to develop in-house capabilities and establish a software engineering practice to complement enterprise architecture practices.
- **Prepare to source, operate and navigate in a world divided by techno-nationalism:** Nationalistic tendencies are affecting the technology world more than ever, influencing standards, technology evolution and regulations. CSPs need to keep a close eye on two or more worlds to ensure they are not at a risk.
- **Huge impact of AI/ML and GenAI on tech and operations, as well as the culture of the organization:** CSPs need a centralized and top-focused approach to scaling AI/ML and GenAI in the organization. Scaling these technologies can bring a host of benefits but can also disturb the organization if not managed properly.
- **Cloud-native adoption is becoming a necessity:** Apart from the business and technological requirements of moving to a cloud-native architecture, vendors ending support on their monolithic legacy applications means that CSPs need to fast-track cloud-native adoption.

- **Need of a cost-management approach as CSPs move to cloud:** As CSPs move their applications and data to the cloud, they face upfront costs of transformation. With the cloud-first approach adopted by many CSPs, there is a need to apply a cost management approach for successful transformation.

Strategic Planning Assumptions

Strategic Planning Assumption: Through 2027, 30% of CSPs will include a software engineering practice in their organization, which is an increase from 5% in 3Q23.

Analysis by: Amresh Nandan

Key Findings:

- Many CSPs aspire to transform themselves from telcos to a techcos, with impetus on software development capabilities to enhance their product development, management and operations.
- In recent years, some Tier-1 CSPs have adopted the approach of insourcing and/or in-house development for some of their technology applications requirements.
- Cloud-native architectures and platform-based operations, a focus on monetization through APIs, open radio access networking (RAN), and greater application of advanced analytics and AI/ML mean many CSPs will need to enhance in-house software engineering maturity.
- Although the majority of CSPs have an enterprise architecture (EA) team and, often, an EA practice, they lack a practice for software engineering that can guide the organization in evolving its development practices.

Market Implications:

As some CSPs diversify their product portfolios and move toward becoming information and communications technology (ICT) services players, they see the need to enhance their software design, development, test and release capabilities. This need is particularly seen in Tier-1 CSPs across the markets focusing on B2B market segments and their ICT requirements. A variety of cloud services, Internet of Things (IoT) products and flexible bundling of products from different sources mean CSPs should enhance their product management practices through software engineering capabilities. In addition, CSPs need to enhance automation in various functions, and silos to hyperautomation and autonomous operations also add to the importance of disciplined software engineering.

CSPs such as Elisa and Deutsche Telekom have been focusing on software engineering skills and organizational capabilities for many years. They directed these capabilities to achieve operations automation. Others, such as Vodafone, have announced plans to increase the number of software engineers in their organizations.

We expect CSPs to continue to leverage in-house software engineers and those from partners, such as IT services companies. As CSPs work toward hiring, training, leveraging partners' software engineers for utilization across many areas of their technology stack, they will need to evolve a software engineering practice to complement their EA practices. The scope of software engineering practices will include identification and use of software development and test tools, development-test-release guidelines, API strategy, security and release management practices. In addition, CSPs will also need to broaden their intellectual property (IP) management to include software engineering practices.

Recommendations:

- Develop a consensus among enterprise architects, solution architects and other technical resources on the need for a disciplined software engineering practice.
- Start from your EA practice resources to develop the software engineering practice, but quickly ramp it up with experienced software engineering experts to lead the practice.
- Develop a charter for the practice, aligning the activities to the organizational goals of techco, platforms, hyperautomation, etc.
- Include talent and skills strategy development and execution as key responsibilities of this practice, besides the mainstream activities of design, development, test, release-related tools, practices and guidelines.
- Encourage the software engineering practice to engage with industry forums and software engineering research bodies, such as the Association for Computing Machinery (ACM), IEEE Computer Society, IEEE Computer Society, and the Computing Research Association (CRA).

Related Research:

[Software Engineering Practices Primer for 2023](#)

[3 Steps to Kickstart Platform Engineering in Your Organization](#)

[The Impact of AI and ML on Software Engineering](#)

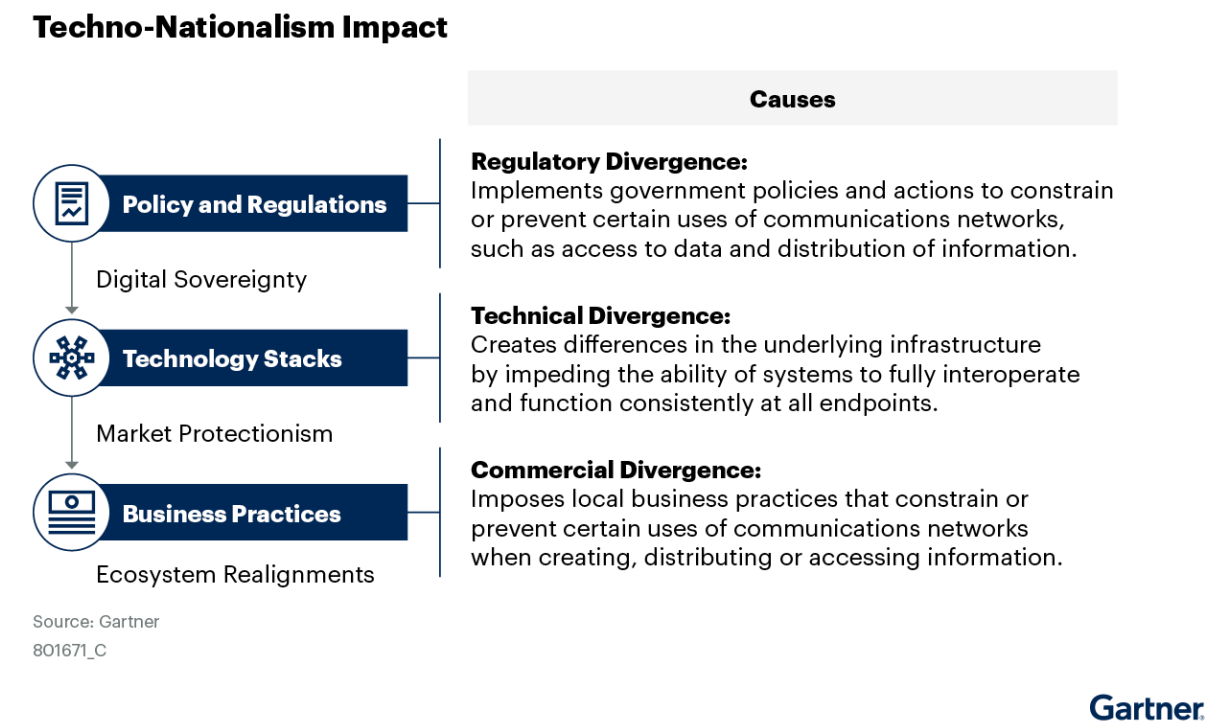
Strategic Planning Assumption: By 2028, a global market for communications equipment will devolve into two or more regional markets, each with its own technology stack.

Analysis by: Mike Edholm, Juha Korhonen

Key Findings:

A trend away from globalization and toward mercantilism is causing global markets to become increasingly local. Policy decisions are driving countries toward implementations of restrictive digital sovereignty regulations, causing heightened risk of divergence in next-generation technology stacks. Regional or national use of locally acceptable components and subsystems, systems and platforms, as well as application and services, are forcing the disruption of supply chains (see Figure 2).

Figure 2: Techno-Nationalism Impact



For example, in Europe, several governments have expressed a desire for a type of sovereign cloud that uses the technology and offers the functionality (including the security functionality) of leading global cloud providers. In addition, they promise isolation from extraterritorial legal interference by foreign countries by having the service delivered by a local service provider.

Governments are now seeking arrangements whereby the technology of a global cloud provider is provided in-country, while supervised or even fully operated by a domestic service provider partner. In several cases, national or regional CSPs are taking or considering this role of domestic service provider partner with a global hyperscale cloud provider for the technology.

This constitutes a fundamental change in the cloud “as a service” model, which both parties — and their customers — must fully understand and embrace.

Market Implications:

Mercantilists are supporters of and advocates for increased R&D efforts, guided by the state. They believe the exploration, innovation and exploitation of technology are critical components for the prospective growth of a nation.

- **Mercantilist Policies Cause a Divergence in Regulations:**
 - Sovereign data strategies and regulations grow in scope and accelerate in most major markets.
- **Mercantilist Policies Cause a Divergence of Technology Stacks:**
 - Techno-nationalist restrictions create separate spheres of innovation, and increase the cost of developing new products and services.
- **Mercantilist Policies Cause a Divergence in Business Practices:**
 - Mercantilist nations strive for self-sufficiency, and they strive to disengage from global trade agreements in favor of bilateral agreements.

Table 1 shows the impact of techno-nationalism on CSP business operations.

Table 1: The Impact of Techno-Nationalism on CSP Business Operations

(Enlarged table in Appendix)

<i>Business Operations</i> ↓	<i>Scale of Impact</i> ↓	<i>Scope of Impact</i> ↓
Product and Services	High	Products and services must align with local regulations
Customers and Buyers	Medium	Customers are increasingly served by channels
Operations and Processes	Medium	Manufacturing processes and complexity as operations localize
Competitive Landscape	High	National champions replace global competitors
Partners and Ecosystems	Very High	Local partnerships force ecosystem realignment
Talent and Resources	Low	Local resources are handled by partners
Footnote : Definitions of scale of impact Very High = More than 75% of business operations affected for all tech providers High = 50% to 75% of business operations affected for all tech providers Medium = 30% to 50% of business operations affected for all tech providers Low = Less than 40% of business operations affected for all tech providers		

Source: Gartner (December 2023)

Recommendations:

To manage the impact of increasingly techno-nationalist behavior in their areas of operations, CSP CIOs revise ecosystems and partnerships to closely align with local regulations and national champions in many jurisdictions:

- Increase emphasis on agile strategic planning and include techno-nationalism risks (e.g., supply chain risks) in the enterprise risk register. Take these risks into account in your operations reviews.
- Develop ready-response menus of activities by taking into account diverging regulations and technology stacks.
- Where necessary, include national champions to expand the scope and nature of sourcing partnerships, but cease any partnership and consider a market exit if that provider moves into your market space.

- Update risk registries related to vendor country origin requirements, check the life span of technology investments at risk and align the procurement policy with the changed competitive environment.

Related Research:

[Top Tech Provider Trend for 2023: Techno-nationalism](#)

[Emerging Tech: Business Impact of Rise of Techno-nationalism and U.S.-China Geopolitical Tensions](#)

[Cloud Sovereignty and IT Services: New Rules for the Next Evolutionary Stage of the Internet](#)

Strategic Planning Assumption: By 2028, 70% of current CSP workforce technical skills will be made obsolete by automation, augmented intelligence and delayering.

Analysis by: Mounish Rai

Key Findings:

- CSPs have accelerated their automation efforts across services and networks to drive down costs and drive up operations efficiency, amid the worsening macroeconomic climate. Augmenting staff, infrastructure and automation with advanced analytics and AI is enabling CSPs to tackle persistent complexity across the business, IT and networks.
- Traditional integrated telcos are transforming into servco, netco and TowerCo. Netco and TowerCo are independent businesses focused on improving asset utilization, performance and capture growth. Resulting delayering is leading to optimization across organizational hierarchies.
- In a Gartner 2023 CIO and Technology Executives Survey, nearly 79% of respondents said they would have deployed distributed cloud and AI during the next two to three years. The cumulative effects on the CSP workforce (i.e., business, IT and networks) will result in skills and roles obsolescence, paving requirements for new skill sets and restructuring.

Near-Term Flag (Optional):

- During the next two years, more Tier-1 CSPs indicate potential job cuts, aiming to build a leaner business that leverages technology to simplify operations and gain efficiencies.
- CSP leaders flagged automation and AI initiatives as drivers to downsize organizations and build leaner businesses. For instance, BT Group announced ambitions to embrace AI opportunity, announcing 55,000 jobs cut by 2030 ¹. Vodafone unveiled plans to ax 11,000 jobs in an effort to reverse its waning performance ².
- In a 2022 Gartner CIO and Technology Executives Survey, nearly 50% respondents said they would increase investments in AI/analytics and cloud platforms. These investments are aimed at technology-driven cost optimization and growth.
- Delayering has gained pace since the inception of TowerCo (e.g., American Towers, Vantage Towers, Cellnex Telecom, etc.) — an independent owner and operator business managing wireless and broadband infrastructure. Industrywide adoption of cloud-native, open API and emerging open RAN initiatives is expediting delayering across CSPs.

Market Implications:

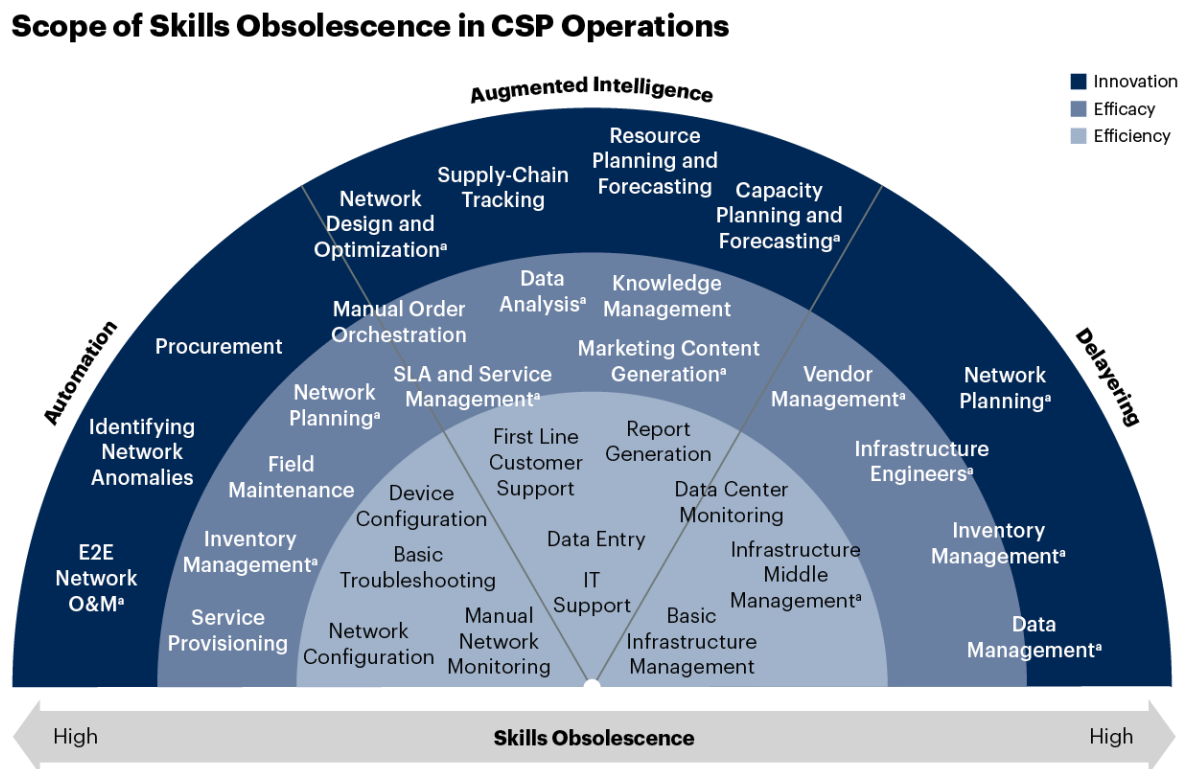
Gartner predicts that automation, augmented intelligence and delayering will influence the obsoleting of nearly two-thirds of the current CSP workforce skills, as present business processes, repetitive tasks and activities are displaced by algorithms and machines. Companies such as Orange, AT&T and TEF have announced proactive strategic talent management initiatives to reskill their workforces; however, a broader industry wide awareness appears to be lean.

Industry standardization initiatives such as GSMA Open Gateway, TM Forum Open Digital Architecture (ODA) and MEF Lifecycle Service Orchestration (LSO) are driving loosely coupled, cloud-native, open, API-driven architectures for hosting, integrating and managing telco infrastructure and applications at scale. Hyperscalers and vendors are embedding these technological advancements in their products and services. This has marshaled delayering efforts focusing on asset consolidation and the removal of redundant organizational hierarchies — especially lower or middle management layers.

Historically, automation was aimed at tasks performed by low-cost labor (or) business-critical areas that are sensitive to human error. This includes the adoption of traditional (predictive) AI accelerated automation and digitization. The emergence of generative AI (GenAI) will further expedite automation and AI augmentation, this time aiming for more-sophisticated tasks that are typically performed by staff with specialized skills. Gartner research found that nearly 20 relevant GenAI use cases in telecommunications industry across different capability areas. In a Gartner 2023 CIO and Technology Executives survey, nearly 90% of CSPs said they would have deployed distributed cloud and AI during the next three years.

Figure 3 illustrates a set of potential skills or job roles that are likely obsoleted by advancement in these three areas.

Figure 3: Scope of Skills Obsolescence in CSP Operations



Source: Gartner

^a Consolidation and productivity gains from above three factors is expected to cause reduction in overall manpower and increase need for upskilling retained staff.

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Although skills in certain business functions become obsolete (e.g., back office), the aforementioned technological advancements will also increase need for new skills, help elevate productivity and performance, enhance organizational ability to manage large amounts of data (e.g., IoT, 5G), and react faster to dynamic markets.

Assessing the exact impact of skills obsolescence and accurately timing it will be difficult. However, as the telecommunications industry grapples with growth (amid consolidation, delayering and employing advanced technologies), the cost of doing nothing, ignoring workforce reconfiguration and future state requirements will be catastrophic.

Recommendations:

- Consider a data-driven talent management approach, instead of mass redundancies or lay-offs, this will help preserve critical and latent organizational knowledge that underpins effective soft skills.
- Assess value delivered by each job role, augment learning initiatives to enhance value, and eliminate tasks and activities that no longer add value.
- Promote organization wide skills discovery initiatives to assess existing skills, skills gaps, future technology-specific roles (e.g., AI architects and ML model specialists) and capabilities needs.
- Recalibrate or curate job responsibilities, promote continuous learning, explicitly link learning and experimentation with long-term business objectives.
- Invest in diverse tactics such as upskilling the existing workforce (professional training, certifications), nontechnical to technical skills uplifting, internal transfers, hiring new talent and hiring external consultants.

Related Research:

[Future of Work Trends: The Agile Learning Imperative](#)

[Plan for Generative AI's Impact on Jobs](#)

Strategic Planning Assumption: By 2028, CSPs will adopt cloud-native technologies for 50% of network functions, compared with fewer than 5% in 2022.

Analysis by: Enrique Jose Hernandez-Valencia

Key Findings:

Major Tier 1 CSPs have been designing, planning and, more recently, deploying cloud-native capabilities for their new generation of telco cloud platforms. The deployments, initially targeting their private and hybrid cloud environments, are taking place in support of the next wave of technology investment on mobile core and converged transport modernization, based on the 5G specifications. Major network equipment vendors, independent software vendors (ISVs), hyperscalers and technology innovators have been proactively engaging in these network modernization initiatives in support of the CSP's digital transformation efforts.

As a result, leading technology and solutions vendors have embraced cloud-native technologies and operational principles for the design and implementation of the new generation of 5G network functions and related support systems. These cloud-native network products and infrastructure management solutions are built using container technology, Kubernetes orchestration and DevOps/gitops tools for continuous integration/continuous delivery (CI/CD). Hence, they incorporate modern software design patterns and management practices that enable the flexible decomposition of network functionality and increasing application portability across on-premises and public cloud infrastructure.

The new telco cloud platforms being deployed by leading CSPs to host these products also incorporate the same cloud-native technologies and operational principles. They use these capabilities to create a computing environment that delivers increasing levels of infrastructure modularity, visibility, observability and composability. These are intended to ease the ability to innovate, increase service agility and automate life cycle.

Nonetheless, most CSPs are still behind in their adoption of cloud-native technologies, architectures and operations support systems. Even if most CSPs may claim they are already using virtualization technologies in their current 4G infrastructure, it has largely been deployed on virtual machine (VM) technologies that are managed like the legacy monolithic systems they replaced.

Near-Term Flag (Optional):

In North America, the 5G SA implementation by T-Mobile represents an emblematic large-scale deployment of 5G mobile core infrastructure based on cloud-native principles. Verizon has recently announced the completion of the migration of the Verizon Cloud Platform from a VM-centric telco cloud platform to cloud-native architecture, in preparation for the company's 5G mobile core deployment.

T-Mobile US and Verizon represent the first-wave of significant investment in cloud-native technologies for network infrastructure. Most of their key vendors are the same product and solutions providers that have been preannounced for many of the 5G SA deployments by leading European and Asia/Pacific (APAC) region operators. Other CSPs worldwide will be increasingly exposed to new cloud-native technologies and operational practices by their vendors that will highlight skills gaps and the lack of operational readiness to efficiently and effectively manage cloud-native products.

Market Implications:

- Consolidation of product portfolio of traditional technology vendors around cloud-native solutions to simplify and harmonize product and service portfolio evolution, given the complexities and costs of managing multiple implementations of the same solutions for CSP customers.
- Significant changes in the types of technical skills and operational practices that will be required from CSPs to manage future telecom services and network infrastructures.
- Growing pressure on other CSPs to follow suit with similar infrastructure modernization and transformation projects to minimize being competitively disadvantaged and reduce cloud-native technology adoption risks.

Recommendations:

- Reduce the risk of service portfolio obsolescence by pursuing a cloud-friendly approach to the planning, design and development of new end-user products and services.
- Proactively define, initiate and engage in proofs of concept (POCs) and limited trials to better understand cloud-native product capabilities, the mix of support staff skills, and required changes to support systems to operate and manage new infrastructures and services.
- Demonstrate to customers a commitment to technical and operational excellence, and gain trust, by providing a clear and timely roadmap for the availability of cloud-focused capabilities for existing and new end-user services.

- Maximize value capture by prioritizing the adoption of cloud-native capabilities and principles that deliver increasing levels of efficiency, productivity and safety for the network infrastructure (e.g., telco cloud) and the delivered end-user services (e.g., Smart-X and network as a service [NaaS]).

Related Research:

[Communications Industry: 2023 Top Tech Trends for CSP CIOs](#)

[Key Principles for the Design and Implementation of a Cloud-Native Telecom Infrastructure](#)

[CSP CIO Guide to a Business-Focused Cloud Strategy](#)

Strategic Planning Assumption: By 2025, 70% of CSPs will implement optimization tools and practices to reduce cloud operations cost, compared with 5% in 2022.

Analysis by: Jouni Forsman, Mounish Rai

Key Findings:

- CSPs increasingly deem the cloud to be critical to future efficiency and growth. CIOs see cloud technologies as critical to delivering their digital and growth ambitions. According to a 2023 Gartner CIO and Technology Executives Survey, 79% of CSPs would have deployed a distributed cloud by 2025, making the cloud central to the CSP technology stack.
- CSP CIOs are finding cloud financial management (CFM) problematic. Cloud budgeting and understanding the value it delivers is complicated. Cloud consumption is dynamic and scattered across business and technology functions. Hidden costs are not well-understood. Much of the value is embedded in productivity increases and agility improvements. It remains misaligned with dynamic cloud consumption by different business functions, complicating the realization of ROI
- Concentration of IT and network functions in the cloud will challenge the “cloud is cheaper” notion, forcing CSPs to cast increased focus on understanding the cost-of-cloud.

- Price increases from most cloud vendors on many cloud products and services in 2022 drove CIOs in many industries in 2023 to launch internal projects aimed at optimizing the use of cloud products and services. These projects investigate the configuration and monitoring of cloud environments and, in many cases, have led to renegotiations with existing cloud vendors or more-optimized products.

Market Implications:

CSPs are treating the cloud as the first choice deployment destination for such new capabilities as 5G SA core, data and new AI/ML and IoT technologies, and software development. Even the industry de facto Blueprint ODA is based on cloud principles. Regardless of the cloud approach (hybrid vs. private vs. public), the capabilities to monitor, document and act on planned-vs.-actual spending (on infrastructure, infrastructure as a service [IaaS], platform as a service [PaaS], third-party management, transit costs and O&M) are increasingly important for CSP financial health.

Although some CSPs ascribe cloud cost management and optimization responsibility to central finance departments, this has resulted in limited success, due to the lack of organization wide visibility of needs or usage by different business units. This variance triggers budget mismanagement, overrun, indirect costs and poor ROI. Lack of business maturity to monitor and analyze, identify and map usage to consuming business units will inhibit CSPs ability to craft prudent cloud agreements, negotiate discounts or renewals, and avoid vendor lock-in.

On the other hand CSPs that run projects on monitoring cloud environment optimization can get offerings more well-suited to their needs from their cloud providers.

Enterprise customers will expect similar cloud cost management capabilities from CSP cloud and hosting services. The real-time visibility of costs and ability to adapt consumption to enterprise business needs will become a key differentiator.

Cloud cost management will also impact vendor go-to-market strategy. CSPs will expect effective real-time cost management tooling embedded in vendor service or product offerings.

Recommendations:

- Create a centralized cloud center of excellence (CCOE), and craft and communicate a compelling long-term cloud strategy, outlining a clear business vision, intended objectives and expected cloud value.
- Create a continuous cloud management data-driven internal business capability driven by a cross-functional team, with access to adequate cost management, optimization and forecasting tools.
- Promote transparency and visibility by enabling organization with access to unified real-time spending (who, what and why) management dashboards.
- Deploy adaptive governance for managing overall cloud governance, setting responsibilities, skills management and enforcing guardrails on cloud spend
- Validate each cloud initiative (business, IT and networks) for its strategic fit-for-purpose and alignment with business objectives.

Related Research:

[CSP CIO Guide to a Business-Focused Cloud Strategy](#)

[Quick Answer: Do You Actually Need FinOps to Manage Your Cloud Costs?](#)

[Overcoming 3 Unavoidable Barriers to Cloud Cost Management](#)

[Forecast Analysis: IT Spending, Worldwide](#)

A Look Back

In response to your requests, we are taking a look back at some key predictions from previous years. We have intentionally selected predictions from opposite ends of the scale – one where we were wholly or largely on target, as well as one we missed.

On Target: 2021 Prediction – Through 2024, network-based CSPs who evolve their cloud network-as-a-service using platform initiatives, marketplace and automation will increase from 5% in 2020 to 40%.

NaaS through a platform initiative is a key initiative in most of the Tier-1 CSPs focusing on B2B market segments. Many CSPs have already invested in platforms to stitch together a customer portal, network slicing solutions and customer journey orchestration. These initiatives being multiyear in most cases are on track as predicted.

On Target: 2021 Prediction — Through 2024, the number of CSPs implementing platforms for effective participation in digital ecosystems will rise from 10% in 2020 to 50%.

As CSPs grapple with growth challenges, ecosystem leverage has become a key approach to diversify and enhance product portfolio. CSPs are increasingly enhancing their ecosystems, investing in solutions to develop a platform approach and bundle a variety of products and services from a third party. With the bundling of content, media, information and other OTT solutions, while evolving a platform approach, the prediction is on track.

Missed: 2022 Prediction — By YE24, CTIOs will spend three times more on end-to-end service orchestration over the 2021 level to combat zero-touch operational challenges.

We see an increase in the number of CSPs focusing on end-to-end service orchestration and operating model change, while the majority still grapple with various issues to make significant changes. We expect this prediction to take longer (possibly YE26) than stated in our 2022 analysis.

Evidence

This research is based on a combination of CSP-OT forecast assumptions, quarterly forecasts, input from CSP technology leaders during the last year and analysis of CSPs' transformation efforts. It also includes insights from analysis of client inquiries and discussions with tech suppliers during 2023.

Document Revision History

[Predicts 2023: CSP Technology and Operations Strategies - 8 December 2022](#)

[Predicts 2022: Reshaping CSP Technology and Operations Strategies - 1 December 2021](#)

Recommended by the Authors

Some documents may not be available as part of your current Gartner subscription.

[Routes to the Future for CSP CIOs: Invest in Platform Capabilities to Shape Business](#)

[Communications Industry: 2023 Top Tech Trends for CSP CIOs](#)

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Table 1: The Impact of Techno-Nationalism on CSP Business Operations

<i>Business Operations</i> ↓	<i>Scale of Impact</i> ↓	<i>Scope of Impact</i> ↓
Product and Services	High	Products and services must align with local regulations
Customers and Buyers	Medium	Customers are increasingly served by channels
Operations and Processes	Medium	Manufacturing processes and complexity as operations localize
Competitive Landscape	High	National champions replace global competitors
Partners and Ecosystems	Very High	Local partnerships force ecosystem realignment
Talent and Resources	Low	Local resources are handled by partners
Footnote : Definitions of scale of impact Very High = More than 75% of business operations affected for all tech providers High = 50% to 75% of business operations affected for all tech providers Medium = 30% to 50% of business operations affected for all tech providers Low = Less than 40% of business operations affected for all tech providers		

Source: Gartner (December 2023)