

How telcos' bold move to the cloud is defining a new operating model

Telcos living in an asset-heavy environment are making a bold move to the cloud for enterprise optimization and intelligent execution, and in the process, they're redefining the operating model.

A large, red metal lattice tower for telecommunications is shown against a dark blue night sky filled with stars and the Milky Way. The tower is angled upwards from the bottom right towards the top left. It has several large, white, parabolic satellite dishes or antennas attached to it. The tower's structure is complex, with many cross-braces and smaller antennas. The lighting is dramatic, with the tower appearing to glow slightly against the starry background.

Introduction

Over the past decade, telcos have been under continuous pressure as their traditional value pools have gradually eroded and new growth horizons have proven elusive, driving return on invested capital (ROIC) ever closer to the weighted average cost of capital (WACC). While telcos rose to the challenge of the global pandemic in 2020—connecting people to work, school, family, and healthcare—COVID-19 accelerated and amplified trends that were already redefining the basis for their success.

Leaders who act now will define the next generation of telcos, risking short-term incumbency advantages to seize untapped growth. The current moment demands a holistic, future-back approach to transformation, in which leaders deliver bold, integrated changes to reset their organization's DNA.

The pandemic accelerates telcos' digital transformation

While telecom operators are experiencing a slowdown in 5G launches and rollouts, they're also seeing network capacity utilization rebound and accelerate, especially with demand for high-speed internet access in the consumer segment. The following trends will accelerate telcos' journey to the cloud:

CapEx spend: According to [Analysys Mason](#), telecoms' CapEx will fall from 2022 onward, but 5G costs will remain stubbornly high, even in a digital era. 5G CapEx recovery will be slower in Europe than elsewhere. The pandemic will reinforce and accelerate existing OpEx trends. In 2022, [North American telcos' revenue and EBITDA](#) will continue to recover from pandemic-related effects, following a modest recovery in 2021.

Acceleration of 5G: There's an increased demand for ubiquitous and reliable high-speed internet access. High-speed access provided by 5G will allow cheaper and quicker high-speed connectivity, satisfying the increased demand driven by new lifestyle patterns and working from home. 5G deployment has accelerated in countries such as the [UK](#) and the [US](#) in response to COVID-19.

Consumer market: Consumer services represent [68 percent of telcos' revenue](#) and are relatively resilient in an economic downturn. Pandemic-related movement restrictions, working from home, and home entertainment have led to consumer services performing relatively well—especially fixed broadband.

B2B market: According to Analysys Mason, [5G will develop on two distinct tracks](#), unlike previous generations of mobile networking. Operators determined to offer new types of B2B and B2B2C services will press on with 5G standalone technology and depend on cloud partnerships to make this work. Other mobile operators will stay with 5G non-standalone technology and a business tied to consumer services.

While 5G needs more than cloud, cloud applications running on a cloud-native architecture reduced time to market (TTM) and respond sooner to customer demands.



The emergence of agile telcos

Today telecom operators are focused on monetizing voice, messaging, and internet access. Next comes the monetization of digital services. While digital services can be very lucrative and open new revenue streams, operators often struggle to keep up with over-the-top players such as Google, Apple, Skype, Amazon, and Netflix. Telecom operators must evolve into digital service providers or be relegated to providing connectivity as a commodity to compete with digital disruptors. To do this, telcos must focus on the following four areas:



Business agility: Gain the agility and efficiency needed to rapidly respond to market demands and harvest time-sensitive opportunities by quickly launching new products and services while cutting operational costs.



Customer experience: Differentiate themselves by delivering a smarter digital customer experience to delight their existing customers and attract new ones.



Revenue growth: Leverage their advantage of connectivity and large customer bases to expand their revenue streams with new digital services such as the Internet of Things (IoT), digital content, and data monetization.



Innovation and cost reduction: Transform back-office processes to reduce operational costs, improve efficiencies, and drive faster innovation with enterprise optimization and intelligent execution solutions.



Why telcos must invest in back-office digital transformation

In developing markets, growth rates are very high. New services need to be introduced quickly and infrastructure must be built swiftly to enable telcos to branch out into new business areas. Additionally, equipment sourcing is becoming more complex. All this ties up working capital. Data, however, can be immensely helpful in optimizing capital allocation. As a telco adds content, services, and different sales models, they need a back office that will enable them to plan and monitor organizational development and growth—and an operating model that will empower them to manage process complexity.

In maturing markets, the growth rates are more moderate. However, companies tend to have a legacy of IT systems—often running in parallel—with various levels of clean integration. These legacy IT systems require higher reconciliation and process execution effort as data needs to move from one system to the other. Additionally, network build-out is a crucial issue with 5G, making effective project management a necessity and significantly impacting CapEx and working capital. And typical business models call for devices (including smartphones, routers, and set-top boxes) to be made available, which also leads to high working capital requirements.

5G

5G represents a big investment but also a huge revenue opportunity for operators as it enables them to deliver new services. Operators will invest US\$1.1 trillion in their networks globally between 2020 and 2025, 80 percent (US\$880 billion) of which will be in 5G.

Source: [GSMA](#)





Globally, telecom operators face CapEx scarcity, making it challenging to maximize ROI, return on capital employed (ROCE), and shareholder value. Yet shorter technology cycles and fast-moving challengers drive unprecedented CapEx pressures on network and IT infrastructure. For some operators, internal cash flows aren't enough to fund investments, driving leverage to an all-time high. Telcos often need to spend more than 15 percent of their revenue on network expansion—one of the highest ratios among large industries. That percentage continues to increase year over year. According to GSMA, [telecom operators are likely to invest US\\$1.1 trillion](#) in their networks globally between 2020 and 2025. Even more startling, a recent PwC survey indicates that telecom operators could be wasting up to US\$65 billion a year in CapEx.

Telecom operators own various assets, including passive telecom equipment (for example, wireless towers), active telecom equipment, real estate, and customer premises equipment. One of the primary challenges in investing in and managing network equipment and assets is a lack of well-defined, end-to-end business processes to handle asset planning, building, and maintenance. More importantly, many operators lack the business applications, analytics, and technologies needed to plan and manage the entire process effectively.



The six imperatives of enterprise optimization and intelligent execution for telcos

1 Transform the asset lifecycle

The telecommunications sector is notoriously CapEx intensive. With telecom's CapEx intensity ratio as high as 30 percent and a five-year average ROCE lower than 10 percent, telcos' CapEx may outpace revenue growth depending on their approach to 5G deployment. Some European telcos' ROCE is even below the WACC, according to [McKinsey](#). Telecoms need to optimize their use of network assets and plan new infrastructure investments very carefully.

Oracle Fusion Cloud Supply Chain & Manufacturing (SCM), Enterprise Resource Planning (ERP), and Enterprise Performance Management (EPM) offer an integrated network planning, deployment, and management solution for network equipment rollouts that helps to cut costs and optimize investments at this crucial stage of 5G and fiber rollouts. Here are the five building blocks of a network asset lifecycle management solution for telecom operators.

- 1. Integrated business planning:** Investment and CapEx planning capabilities help telcos make key strategic decisions about network infrastructure projects.
- 2. Demand and supply planning:** Demand planning and supply planning capabilities draw on historical data to predict in detail how markets will develop. This includes network equipment demand and supply planning.
- 3. Project-driven supply chain (PDSC):** This is essential to achieving operational excellence.

4. Asset capitalization to retirement:

A seamless process to capitalize assets, including depreciation and retirement.

- 5. Asset maintenance:** This includes predictive and preventive maintenance

Customer spotlight: [MTN Group](#)

MTN is the seventh-largest mobile operator in the world.

Business challenge

To efficiently source products and services from more than 15,000 vendors worldwide, MTN wanted a modern supply chain management solution that could automate and digitize their supply chain processes on a single platform. The company needed to move fast, so they accelerated deployment of key Oracle Cloud SCM applications.

Benefits realized

MTN shaved 33 days off their sourcing cycles and gained comprehensive visibility across their global supplier base. The company also simplified supplier onboarding, easily adding 1,200 new suppliers and improving the overall resilience of their supply chain. Previously saddled with high maintenance costs for their various financial applications, MTN has lowered their costs by standardizing on one cloud-based platform.

2 Improve project performance and profitability

Telecommunications is an asset-intensive industry, and telcos require supply chain processes to work in the context of specific projects. Examples of such projects include

- High-tech and industrial turnkey installations
- Telecom network build-outs and maintenance
- The delivery of complex products and services to meet unique customer requirements

In such cases, supply chain activities, including order management, procurement, material management, project execution, sales, and service, are segregated by a specific project. This ensures the end-to-end integrity of the supply chain and associated costs.

A project-driven approach is used to manage the build of assets such as cellular networks while conforming to the budgets and schedule of a corporate plan and complying with regulatory requirements. Oracle's PDSC solution spans all aspects of the supply chain, including procurement, inventory, project execution, ordering, shipping, costing, integration to ERP projects, and project accounting. It's a powerful extension of Oracle Cloud SCM, illustrating the deep digital integration of Oracle's overall cloud solutions. Oracle's pervasive PDSC capability enables effective project execution at every stage, including the following.



- Segregating, managing, and valuing inventory by project
- Transferring project-specific material
- Purchasing material for multiple projects at project-specific prices
- Compartmentalizing maintenance operations to serve multiple projects from a common set of resources
- Executing a project-specific supply chain without project finance

Customer spotlight: [Veon](#)

VEON is a US\$7 billion-a-year telco headquartered in Amsterdam, with 212 million customers in 10 countries. VEON's departments ran on legacy systems that kept information in silos, which meant VEON couldn't add services and otherwise respond to new customer needs as quickly as they wanted.

Business challenge

Data was distributed around the organization, with individual business units controlling access to their pieces of the company's data. Business units had to request essential information from each other, which slowed down their operations and lowered productivity. For example, supply chain and procurement information was scattered across the organization due to disparate systems, making it difficult to get details and create reports. The company's legacy procurement applications also couldn't enforce policy compliance or fully leverage negotiated pricing with suppliers. This resulted in goods and services being purchased off contract or from nonpreferred suppliers, increasing VEON's costs.

Benefits realized

With Oracle Fusion Cloud Application, VEON created a foundation for growth, efficiency, and disruptive innovation while also delivering immediate benefits. In the short term, VEON was able to transform procurement by reducing maverick spending and speeding up the purchase requisition approval cycle by more than 60 percent. Additionally, increased visibility allows employees across the organization to better understand how their business is operating. For example, Oracle Cloud SCM gave VEON Uzbekistan (which operates as Beeline and where Oracle Cloud was first implemented) the ability for key people across the organization to see supply chain details without having to ask the procurement team to do research and create one-off reports.



3 Improve customer experience with customer premises equipment

A large portion of telecom assets includes customer premises equipment (CPE) and devices. However, the geographical distance between CPE suppliers and the consumer market makes it difficult for telecom operators to manage the distribution and logistics of CPE and devices. Here are some of the challenges that telcos face in distribution—with both forward and reverse logistics.

- Difficulty managing customer experience due to inefficient processes
- Difficulty tracking returns of equipment from end customers through warehouses, contracted manufacturers, and customer service centers
- Disconnected data from multiple vendor applications, impeding multitier visibility and efficiency
- High return merchandise authorization (RMA) costs driven by customers expecting easy product returns or replacement
- Inability to track specific item locations down to the serial number
- Lack of visibility into data such as products sold, warranties, inventory, and locations
- Lack of tracking capability to predict cost of returns and minimize the risk of financial impact

CPE and device logistics processes cover four important solution areas: Receiving, bundling, distribution (forward logistics), and reverse logistics. Oracle offers an end-to-end solution for managing CPE and device logistics that provides the following:

- Data hub for product and order information
- Order hub to orchestrate, fulfil, return, and replace
- Digitally connected system to monitor delivery, warranty, transportation, inventory, and billing
- Intelligent track and trace, sensors, and connectivity to monitor, troubleshoot, or repair products in the field and minimize the need for consumers to send products back
- Ability to design connected products with software and operating systems that can be updated or troubleshoot from anywhere, using easy-to-replace hardware and components that can be sent to consumers for self-repair
- Data to predict the flow of returns, including return volume, product condition, return reasons, and the percentage of sales/dollar amounts, and the ability to build logistics solutions to minimize cost—for example by combining delivery and return pickup

Customer spotlight: A large Canadian telecom operator

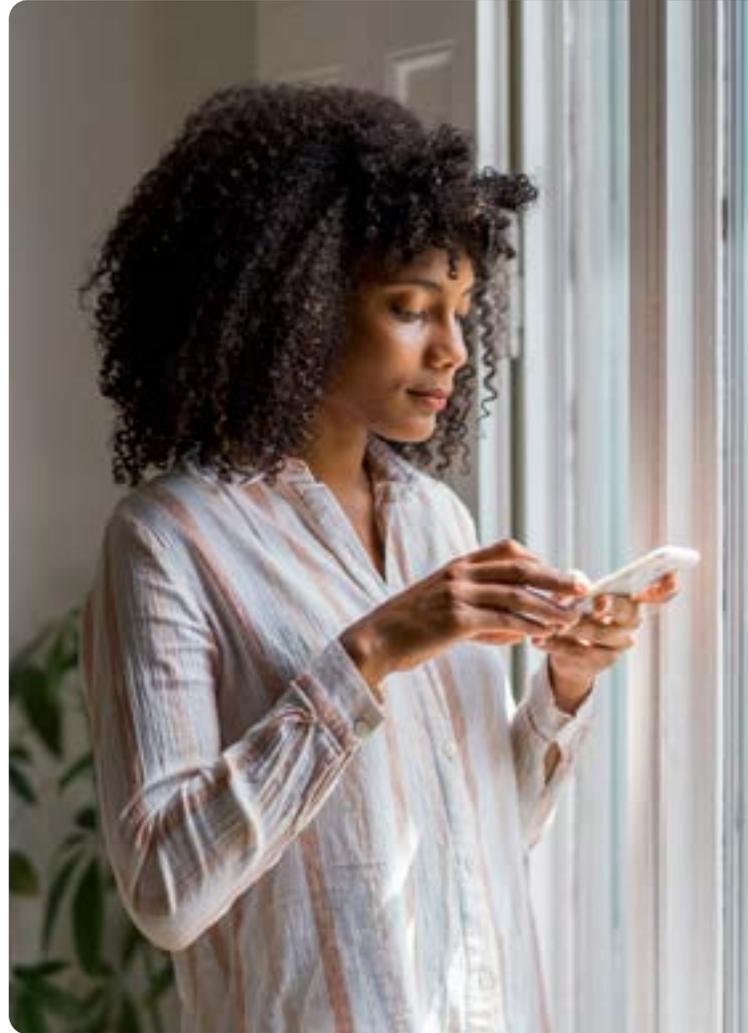
This telecom operator has grown to become Canada's leading network and content experience company, delivering the highest-quality consumer, business, and content products.

Business challenge

The company lacked an automated and systematic process to manage movement of their inventory across various nodes of the supply chain. They were also without the ability to track inventory across all nodes of the supply chain and were dealing with an increase in inventory in the supply chain due to lack of centralized monitoring.

Benefits realized

- Ability to reduce spend on new inventory by harvesting existing refurbished inventory prior to buying new equipment
- Centralized inventory visibility
- Standardized supply chain planning processes across multiple lines of businesses



4 Improve decision-making with connected enterprise planning

By 2024, Gartner expects traditional corporate finance-led financial planning and analysis to evolve to extended planning and analysis (xP&A). Gartner describes xP&A as an enterprise planning strategy that combines and extends financial and operational planning by using the same composite vendor platform and architecture. xP&A, or what we're referring to as connected enterprise planning, breaks down the silos between financial and operational planning processes, combining them on one consistent planning platform. This aligns the entire organization with telco goals and delivers new transformative value.

Here are four processes we consider to be key elements of connected enterprise planning.

1. **Scenario modeling:** In a continually changing environment, scenario modeling has become more critical than ever. Finance teams can use this tool to effectively capture a range of possible outcomes and translate these scenarios into credible decisions involving all key lines of business.
2. **Workforce planning:** Strategic workforce planning, which involves cross-functional teams creating and managing strategic talent plans in collaboration with HR, is a vital element of the enterprise planning process. Having your end-to-end strategic workforce and workforce planning process totally integrated across human capital management (HCM) and finance allows you to perform effective talent demand and supply matching, retention analysis, and attrition analysis with visibility into the bottom-line impact.
3. **Project financial planning:** Integrating the project planning process with project execution helps finance make the right project investment decisions and constantly monitor actual project costs versus forecasts, making project portfolio adjustments as needed.
4. **Integrated business planning:** With disruptions to supply chains accelerating, telcos are looking for ways to minimize the impact on costs and service. Truly agile telcos can successfully connect financial planning, sales and operational planning, and supply chain planning with operational execution to provide executives with the right decision criteria at the right time, reducing decision latency and enhancing global visibility.



Customer spotlight: [MTN Group](#)

Business challenge

Johannesburg-based MTN offers cellular, internet, and mobile money-transfer services to 300 million subscribers in 23 African and Middle Eastern countries. Dependent on spreadsheets for much of their budgeting, financial reporting, and tax compliance, they ran into data-entry errors, differing calculations, and numbers that had been updated in some places but not others. As a result, their financial processes were too slow and error prone, especially for a company that needed to become increasingly digital and agile. MTN wanted to simplify their application portfolio and standardize their processes to move faster, increase accuracy, and ultimately boost workforce effectiveness.

Benefits realized

MTN estimates that Oracle Cloud EPM has helped them reduce their head-office budget preparation time by 50 percent because when their people were emailing spreadsheets around, every time a number changed, someone had to reconsolidate and reaggregate the numbers. What's more, company finance leaders and other executives now have access to the same accurate numbers. Meanwhile, by implementing Oracle Cloud EPM's tax reporting application, MTN has shortened the reporting cycle and strengthened tax-provisioning oversight across their 23 operating geographies.



5 Improve purchasing performance

Telecom operators are facing strong financial pressures due to shrinking commercial margins and rising operating costs and investment demands. As in other industries, telecom operators have established procurement departments to obtain significant savings through negotiation and panel rationalization. According to [Oliver Wyman](#), external spend—OpEx and CapEx—is a major component of the cost base, accounting for up to 40 percent of revenue, and can often be leveraged during difficult times. However, traditional sourcing optimization initiatives seem to be reaching their limit in the face of more-diversified and complex purchasing portfolios, more-concentrated supplier markets, and faster technological shifts. Today, very few operators have successfully boosted purchasing performance through more-sophisticated approaches on a large scale.

The procurement function has become more complex for telecom operators. The purchasing portfolio of operators has become increasingly diverse, evolving from relatively simple network elements (for example, switches and routers) to a much wider array of products and services (for example, software, maintenance, full solutions, TV content, set-top boxes, and IT equipment for resale). Also, procurement addresses multistage construction projects with contractual payment schedules based on milestones or time. Technologies, too, are more complex, and technological shifts are very rapid, requiring operators to be flexible and react quickly. Suppliers' markets dynamics are also changing, and telecom operators are now dealing with industries with low profit levels.



By using Oracle Fusion Cloud Procurement to gain visibility into the supply chain, procurement professionals can identify categorized business spend and savings opportunities and consolidate their supplier base around reliable, ethical suppliers around the globe to maximize value and increase profitability. Data analytics opens up new visibility across spend categories with the ability to make data-driven sourcing and supplier management decisions that increase value and improve business outcomes. Oracle Fusion Analytics Warehouse provides procurement analytics and offers insights into deep and long-term trends that more superficial monitoring might miss.

Oracle Cloud Procurement meets the following specific requirements of telecom operators:

- Ability to complete projects without excessive inventory while ensuring the availability of components to build and fill project orders
- Advanced supplier collaboration
- Centralized sourcing with decentralized execution
- Decreased waste with improved planning for project needs across the supply chain
- Efficient procurement of unplanned items for project work orders
- Improved sourcing and procurement visibility
- Improved spend visibility
- Improved insight into supplier performance
- Integrated sourcing and contract management
- Self-service supplier profile management

Customer spotlight: [MTN Group](#)

Business challenge

MTN faced various business challenges in the procurement function. They needed to ensure their suppliers were complying with corporate policies and improve their visibility into key supplier characteristics and capabilities. They also wanted to reduce the risk of supplier-related issues and improve their sourcing decisions by considering relevant supplier factors.

Benefits realized

- Cross-functional collaboration for better results
- Enhancement of MTN's negotiation strategies
- Streamlined supplier negotiation process
- Ability to drive competitive behavior from suppliers
- Minimized training and ongoing support needs
- Help determining the best award decisions
- Groupwide visibility and reporting enhancements
- On-time delivery of components to remote sites to ensure adherence to construction schedules.

6 Personalize the employee experience

In the telecom industry, employees are on the front lines of providing better customer experience. Employees expect their work experience to mirror their consumer experiences, and to meet their expectations, a modern HCM system is no longer a nice to have—it's a must-have. The latest digital technology not only has the power to optimize work and reduce errors, but it can also positively impact the employee experience. HR must recognize the unique needs of each employee and use specific knowledge about them (including their role, preferences, interests, and intent) to personalize their experiences—for example, by offering tailored learning and career development opportunities. Additionally, the mix of required skills and proficiencies are ever changing for telcos, and HR needs the tools and technology to help their employees upskill and reskill at scale and to recruit new talent.

Oracle Fusion Cloud Human Capital Management (HCM) is a cloud solution for every HR process that helps telcos shift from merely surviving to thriving. One unified cloud for HR, finance, supply chain, and customer experience provides a single view of the business, enabling compliance, faster planning, and cost reductions. Oracle Cloud HCM helps improve employee engagement with embedded AI, digital assistants to help employees get questions answered and complete tasks, and one user experience that can be accessed from any device—from the shops to the call center. Now HR teams can be at the center of innovation, with the freedom to tailor their own solutions to support all employees, anywhere around the globe.

Customer spotlight: [Airtel](#)

Airtel, which operates in 17 countries across South Asia and Africa, provides a range of consumer telecom services to more than 480 million customers, including 4G/4.5G broadband, fixed lines, fiber with speeds of up to 1 GB/sec, streaming services that span music and video, digital payments, and financial services. For enterprise customers, Airtel offers a range of solutions, including cloud and data center services, cybersecurity, IoT, advertising tech, and cloud-based communications.

Benefits results

With integrated Oracle Cloud ERP, Oracle Cloud HCM, and Oracle Cloud SCM applications, Airtel is transforming their shared services operations, which focus on driving productivity and agility across the company. The applications will enable Airtel to automate manual processes, gain an on-demand, 360-degree view of their financial data, and streamline human resources, procurement, and supply chain management.



The inevitable shift to the digital future

Oracle's cloud applications use a common data model to present information through a consistent user interface and ensure that data isn't trapped in silos. This integrated approach simplifies data management and makes it easier to protect sensitive data, even as business needs change and evolve. Business users in finance and operations functions at telcos gain consistent access to cutting-edge capabilities that allow them to respond quickly to customers' needs.

Why is this so critical? The pandemic placed a renewed emphasis on the importance of rapid response. When disruptions shook the global supply chain, integrated applications allowed telcos to connect with suppliers and procure the necessary parts to repair essential infrastructure in a fast, secure, and controlled manner. Digital services make it easier to plan capital-intensive projects, track progress through better financial modeling, and manage reporting.

Whether you want to improve an existing business process, innovate in one key area, or reduce data silos with a unified suite of applications, Oracle supports telcos with the following key capabilities:

Oracle Fusion Cloud Enterprise Resource Planning (ERP) provides finance teams with advanced capabilities, such as AI to automate the manual processes that slow them down, analytics to react to market shifts in real time, and automatic updates to keep information systems current and secure.

Oracle Supply Chain & Manufacturing (SCM) helps you respond quickly to changing demand, supply, and market conditions. Seamlessly connect your supply chain to create a resilient network and process built to outpace change.

Oracle Fusion Cloud Enterprise Performance Management (EPM) helps you model and plan across finance, HR, supply chain, and sales; streamlines the financial close process; and drives better decisions. Seamlessly connect finance with every part of your operation to achieve enterprisewide agility, alignment, and insights. Oracle helps you analyze, plan, budget, forecast, and generate reports by using embedded intelligence to drive better decisions, complete with scenario modeling and built-in, advanced analytics.



Oracle Fusion Cloud Procurement helps you get better results faster by streamlining procurement processes to increase collaboration with your suppliers. Oracle provides an integrated source-to-settle suite that automates business processes, enables strategic sourcing, improves supplier relationship management, and simplifies buying to lower risk, improve savings, and increase profitability.

Oracle Fusion Cloud Maintenance helps you increase reliability and uptime while reducing overall maintenance costs with predictive maintenance. Oracle can transform your maintenance processes with an integrated and intelligent enterprise asset management system written for the cloud and designed for the Internet of Things.

Oracle Fusion Cloud Human Capital Management (HCM) is a complete solution connecting every human resource process from hire to retire. This software application delivers a consistent experience across devices, provides one source of truth for HR data, and empowers you with market-leading innovation to address your needs today and in the future.



Oracle Cloud Infrastructure (OCI) has all the services you need to migrate, build, and run all your IT, from existing enterprise workloads to new cloud native applications and data platforms. Security is critical when information crosses boundaries between cloud applications, as is the case with integrations and extensions to SaaS applications. Fusion applications are powered by OCI, which was developed with a focus on security first. An isolated design improves data protection, scalability, and performance. As part of a global ecosystem, the suite can connect securely to multicloud environments and other systems.



Tying it all together

For telcos, increasing agility through innovation is critical. And whether it's addressing strategic investments, automating tasks to ensure safe and reliable operations, moving data out of silos, or developing an operating model that can thrive in today's ever-changing environment, the right technology will be essential.

Digital transformation has become a strategic imperative for telecom providers as they respond to disruptive market forces that are significantly impacting their business. Globally, telcos are beginning to understand the power of moving to the cloud as part of their digital transformation journey. As technology continues to advance at a rapid rate, the old methods of continuously updating customized on-premises infrastructure and operating with disconnected business applications may no longer be sufficient. To outpace change and be prepared for the future, telcos should modernize their operations with fully integrated Oracle Cloud Applications.

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