

VMware Telco Modernization Services Overview



Fundamental Shift in
The Telco Landscape >

Telco Modernization
Framework >

Modernization >

Network
Automation >

Monetization >

Transformation
Outcomes >

Fundamental Shift in The Telco Landscape

Telcos are facing an increasingly complex market. They are seeing declining growth of core services while seeing an increasing demand for new digital and enterprise services. Unfortunately, most communication service providers (CSPs) are unable to effectively meet these new challenges due to rigid hardware-based network infrastructures that limit efficient operational processes and that have a high cost to build and operate.

To be able to compete effectively, telcos must transform to a modern software-based network that offers more agility, automation, and operational efficiency. If the transformation is done correctly, telcos will be able to bring services to market much more quickly and create new revenue streams for themselves and their customers.

5G communications has arrived, ready to transform the operations of almost every industry on the planet. Along with it, customers expect new highly performant and customizable services that will require modern and unified multi-cloud networks. With higher bandwidth, lower latency, and higher capacity, 5G has limitless possibilities in how cellular technology is used. Telcos must take advantage of this market inflection and reinvent their customer relationships. Now is the time for telcos to design a new network and operating model that not only addresses current market conditions but also prepares them for future offerings not even thought of yet.



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Telco Modernization
Framework

Modernization

Network
Automation

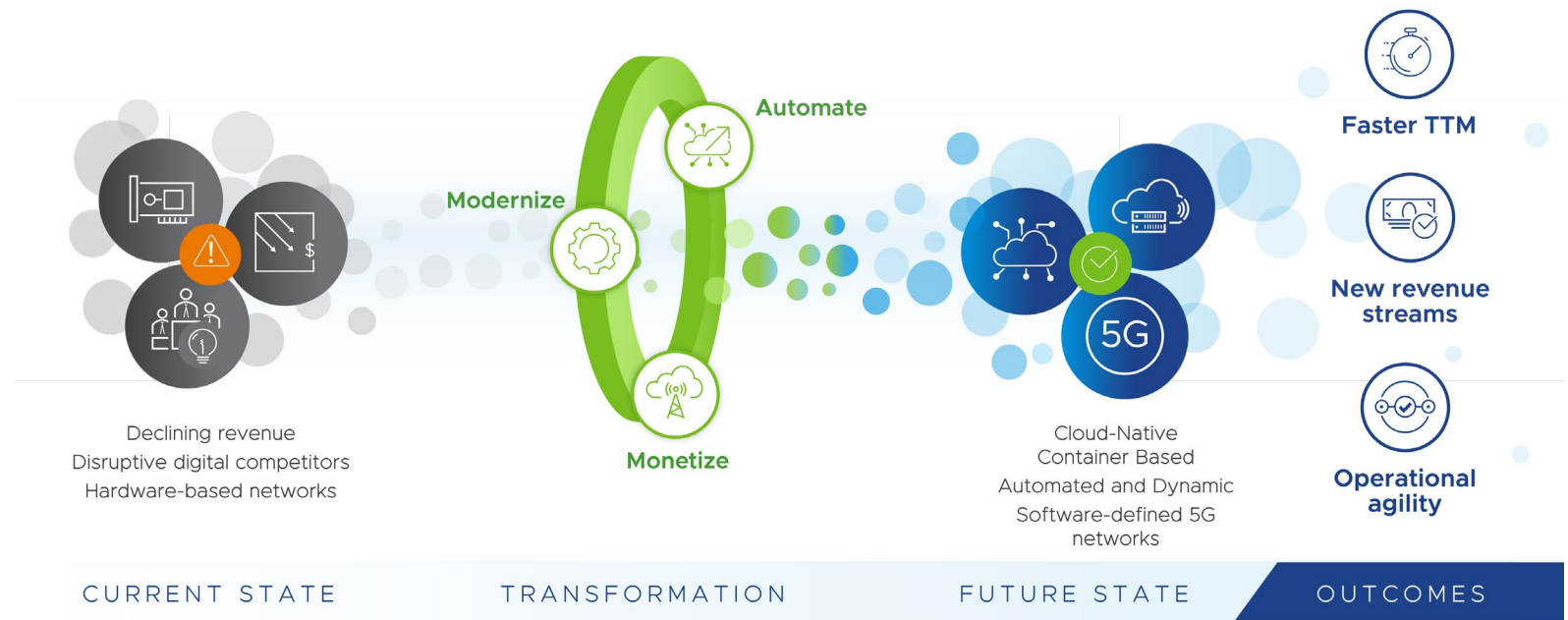
Monetization

Transformation
Outcomes

Telco Modernization Framework

VMware Professional Services is here to help you with the transformation to a modern 5G network. We have developed a telco cloud framework that allows telcos to deploy cloud-native and virtual network functions for 5G networks without disruption to achieve a streamlined, cloud-native network. Using our Telco Modernization Framework, we can help you transform your network through a modernize, automate, transform process. At the end of the transformation process you will have a flexible, agile network that can scale fast while still achieving telco-grade networking and performance. Our unique approach means that you acquire skills while we work collaboratively with your team to modernize apps and infrastructure. Together, we will start small, working iteratively to achieve quick, measurable outcomes, and establish the tools, processes, and patterns to help you scale fast and realize value in a matter of days and weeks, not months or years.

Create a cloud-native network that is open, software-defined, and optimized for 5G and new digital services through **modernization**, **automation**, and **monetization**.



Fundamental Shift in
The Telco Landscape >

Telco Modernization
Framework >

Modernization >

Network
Automation >

Monetization >

Transformation
Outcomes >

Modernization

Modernization means replacing purpose-built single vendor hardware-based networks with virtualized software-based best-of-breed components. Once services are virtualized, they can be run on a cloud infrastructure creating more flexibility in how the network can be deployed, automated, and utilized.

VMware's Professional Services team is uniquely positioned to help you design, deploy, and operate a cloud-first network. We can help you adopt the people, processes, and technology to effectively establish an open, disaggregated, and vendor-agnostic ecosystem so that you can streamline 5G service delivery from design to lifecycle management automation.



Fundamental Shift in
The Telco Landscape >

Telco Modernization
Framework >

Modernization >

Network
Automation >

Monetization >

Transformation
Outcomes >

Modernization is a four step process.



PLAN

Our team will help you build a business case based on your short- and long-term corporate goals, and create a strategy for transforming your network. We assess end-to-end deployment and automation requirements, assist with site planning, perform a gap analysis, create an integration plan, and create a roadmap to help keep everyone aligned on this modernization journey. Our plan will include day-to-day operations of your new network.



BUILD

We will help implement the best infrastructure to help you fulfill the vision of delivering an application on any cloud anywhere. To help you track that the network is operating efficiently we will install TCO reporting, admin UI, and design and implement data collectors. We will use proven best practices to implement validate your system. To round out implementation, our team will create CI/CD to automate certification, validation, performance, and interoperability testing and to automate rollout.



OPERATE

Once implementation is complete, our team helps transition and prepare you for day-to-day operations. Our engineers will help align organizations and processes to enable automation, integration, and service delivery. In addition, we will help onboard Virtual Function (VNF)/Cloud Native Network Functions (CNF) to the telco cloud for easy expansion and upgrades. To keep the network running smoothly, we will set up a policy-based automated release, configuration management, and workload placement. To give you visibility and keep things running smoothly we develop custom reports and dashboards. We also offer Site Reliability Engineering services to raise the bar on operational excellence.



OPTIMIZE

To help with ongoing operations, our team will help perform reviews and continually help you to optimize your network. We do this by helping to integrate all systems into OSS/BSS and other internal systems. Our team can help plan for capacity and performance infrastructure health checks, VNF troubleshooting, design review, capacity planning, and reporting. To be sure your investments are working, we can integrate TCO with NOC and operations frameworks.

Fundamental Shift in
The Telco Landscape >

Telco Modernization
Framework >

Modernization >

Network
Automation >

Monetization >

Transformation
Outcomes >

Network Automation

Deploying new monolithic hardware-based equipment and services is very manual. With the shift to software-based networks, you can start to automate network deployment and provisioning allowing you to base your networks on cloud-native principles. The new architecture of multi-cloud allows you to provision workloads in a more efficient fashion and to roll out new services more quickly and efficiently. With virtualized and container platforms, services can be scripted and automated to create a completely autonomous service delivery where the network is self-tuning, self-healing, and can dynamically deliver services.

To be sure your network can scale and that you can deploy new services quickly, our team will help determine an automation strategy. Our team will help with the deployment and validation of your automation plan through design, automation, and an in-depth knowledge transfer. With telco cloud automation we can set policies and dynamically adjust the type of services enabling you to monetize different characteristics of the services that are being provided. We can create a policy-based end-to-end automated service delivery. We also enable service orchestration which helps you to dynamically provision workloads and manage the entire system end-to-end.



Fundamental Shift in
The Telco Landscape >

Telco Modernization
Framework >

Modernization >

Network
Automation >

Monetization >

Transformation
Outcomes >

Monetization

Monetization should be approached from two perspectives. The first is how to make money from the network and the second is how to enable customers to monetize the use of the telco platform. With the flexibility of a new software-based network, you can more easily roll out new services to increase revenue and thus making the network more valuable to the end-users. With software-based networks, you can quickly roll out and try new services, see what works, succeed or fail fast. You can accelerate time to market in terms of new services and choices for your customers.

Transformation is an iterative process that is done in phases with new services rolled out as systems are modernized and automated.

SUPPORT NEW SERVICES

- Internet of Things
- Virtual Reality
- Smart Cars
- Gaming
- Advanced Healthcare
- Enhanced Agriculture
- Artificial Intelligence



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Modernization

Network
Automation

Monetization

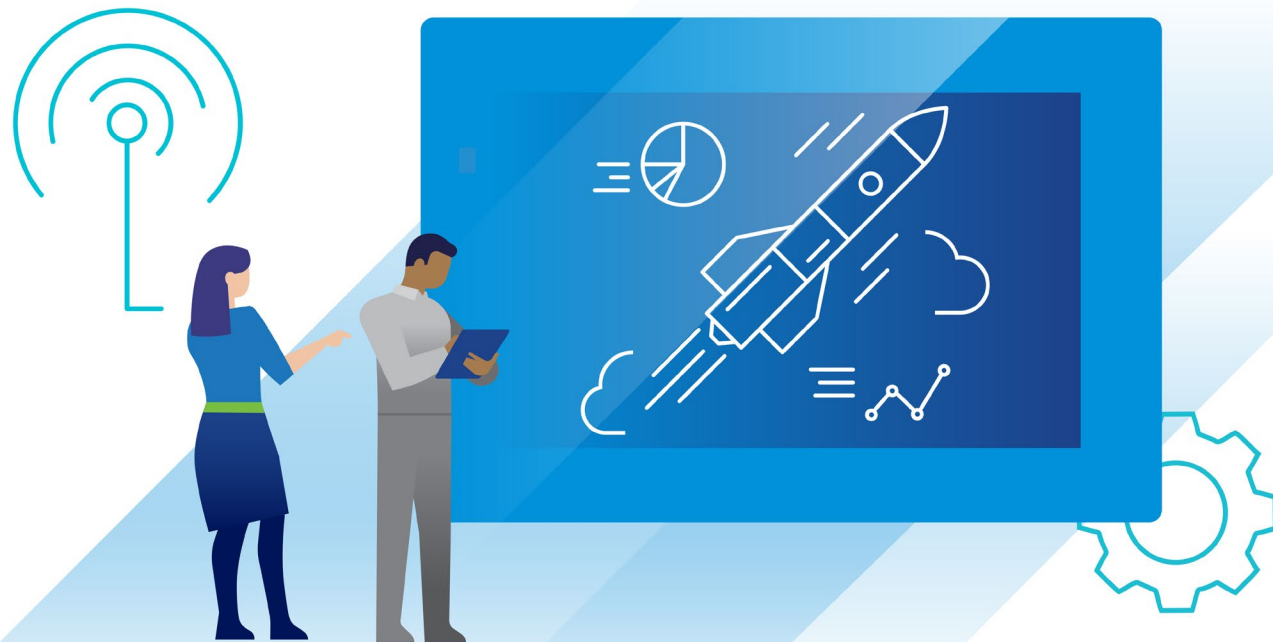
Transformation
Outcomes

Transformation Outcomes

Our Telco Modernization Framework enables you to have a more efficient network that allows automated delivery of core services. The new network is open, software-defined, intelligent, and cloud native laying the groundwork for 5G and new digital services. This new network supports core and RAN connectivity functions for 4G, 5G and supports a digital marketplace for new digital services from an ecosystem of partners.

YOU WILL EXPERIENCE

- **Faster Time to Market:** Launch new services faster, operate traditional services more efficiently.
- **New Revenue Streams:** Leverage the cloud native platform for launching new digital services with an ecosystem of partners to create new revenue streams for you and your customers.
- **Operational Agility:** Through automation of new network elements, and by tying into legacy systems such as OSS/BSS telco can achieve greater agility to lower cost and speed deployment.



Fundamental Shift in
The Telco Landscape >

Telco Modernization
Framework >

Modernization >

Network
Automation >

Monetization >

Transformation
Outcomes >



VMware Professional Services has a proven track record of enabling digital service providers by delivering agility, scalability, and resiliency end-to-end.

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