Zero-touch network operations with AI-powered automation

IBM Cloud Pak for Network Automation

Errol Binda, Product Marketing

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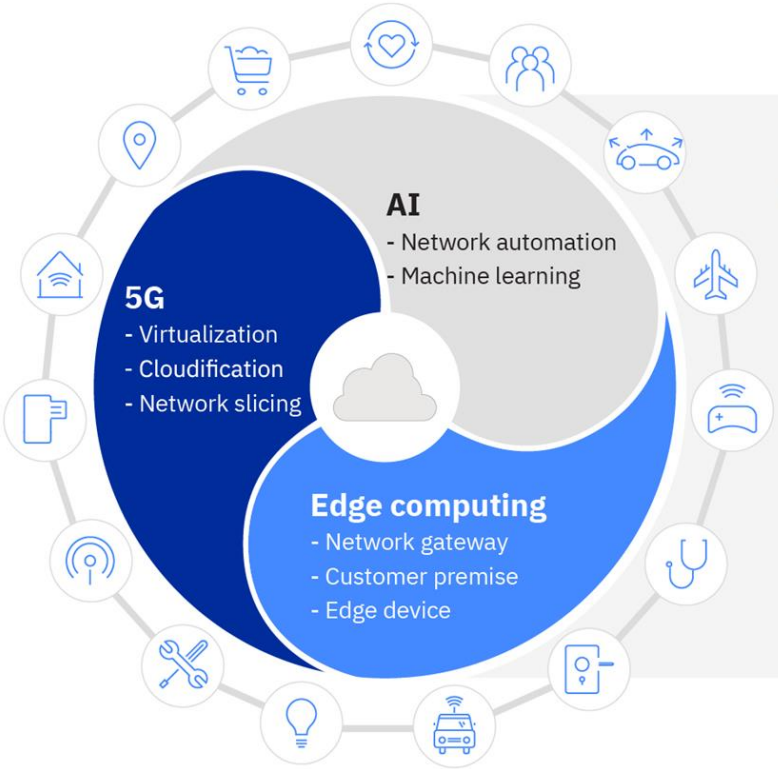
“Government subsidies will stimulate 5G deployments as societies and enterprises accelerate digital transformation amid the new normal”

Quote from TBR - 5G Telecom Market Landscape Report, Aug 2020

5G, Edge Computing and AI



eMBB
(enhanced Mobile Broadband)

mMTC
(massive Machine-Type Communications)

URLLC
Ultra-Reliable Low-Latency Communications

Examples of 5G applications

- Smart factories
- Agricultural drones
- Robotic surgery
- Smart homes
- AR/VR shopping
- Assistive robots
- Collaborative gaming
- Smart cities
- Autonomous cars

*IBM Institute of Business Value Report: Telecom's 5G future: Creating new revenue streams and services with 5G, edge computing, and AI (2020)

“Ultimately 5G is about the move to software at the center of the network”

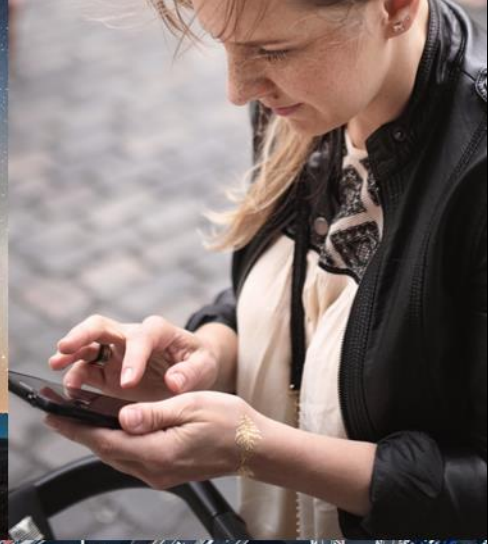
Quote from Appledore Research Whitepaper, 2020

Network transformation imperatives

Deliver innovative 5G and edge services, faster

Reduce operational costs

Improve customer experiences

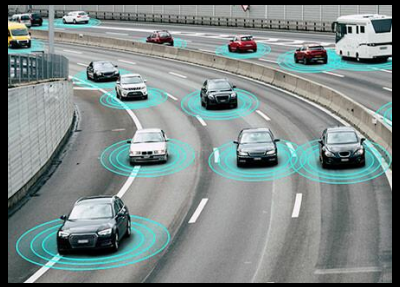


Poll Question

Which of the following do you believe is the most compelling CSP network transformation driver:

1. Deliver innovative 5G and edge services faster
2. Reduce operational costs
3. Improve customer experiences
4. Other

Network transformation is reshaping every industry



Connected Experiences
Low latency, on-demand services and applications

IT Modernization
Secure remote wireless software updates with real-time diagnostics

Industry 4.0
High availability solutions to improve productivity and quality

Asset Management and Supply Chain
Automated inventory control and delivery

Need to deliver high value services and experiences from core to edge

Automation and AI are critical to CSP network transformation

84%

Identified faster time-to-market of new services as the most important KPI for successful automation initiatives*

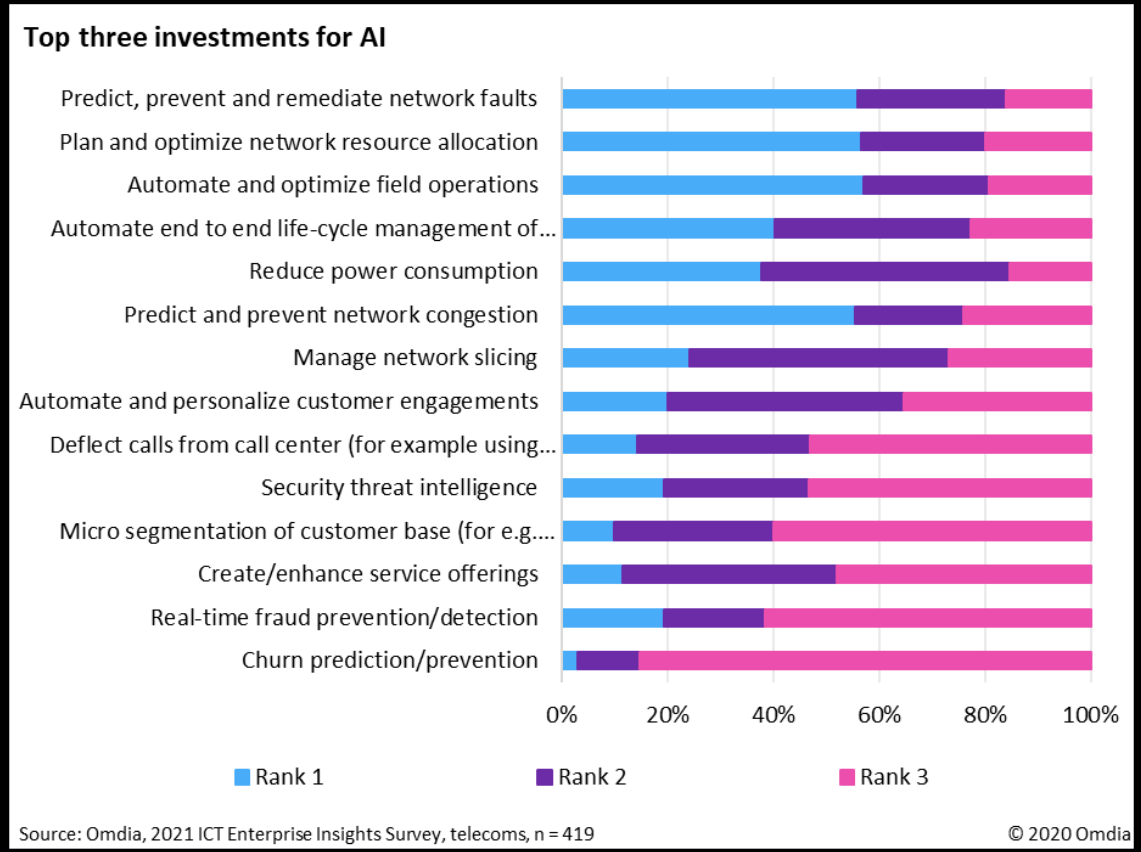
76%

Plan to use AI to automate self-diagnostics and problem detection to reduce OPEX and improve customer satisfaction*

*IBM Institute of Business Value Report: Re-envisioning the CSP network: How adaptable, thinking networks pave the way for 5G

CSP Adoption Accelerating

"The pandemic has forced CSPs to rethink how the network is managed, leveraging automation to drive more proactivity in dealing with unexpected changes in the use of the network" (Omdia)



Omdia's ICT Enterprise Insights: Telecoms survey of 419 Telcos, published in Q4 2020

Poll Question

Which of the following areas do you believe is most critical for network automation to address:

1. Speeding up network design, test and deployment
2. Proactively identifying and remediating incidents
3. Discover hidden trends to optimize performance/SLAs
4. Provide insight to improve business decisions

Automate networks to deliver zero-touch operations

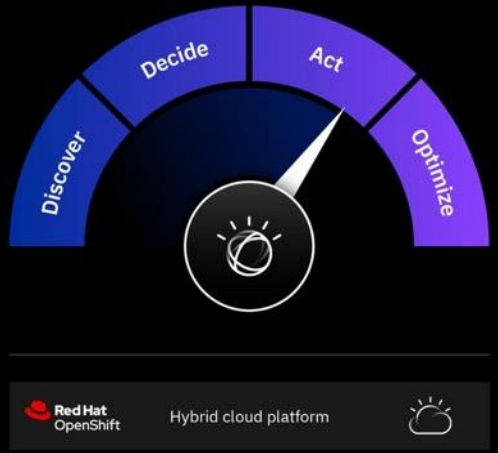
Discover
Discover hidden patterns and trends to continuously fine tune network operations and performance

Decide
Empower both telecom business and network organizations to execute data driven decisions to improve top and bottom lines

Act
Automate network and services design, deployment and operations with intent-driven orchestration and closed loop operations

Optimize
Detect and remediate incidents proactively to improve customer SLAs and experiences

Automation dial



82% reduction in cost to onboard new services

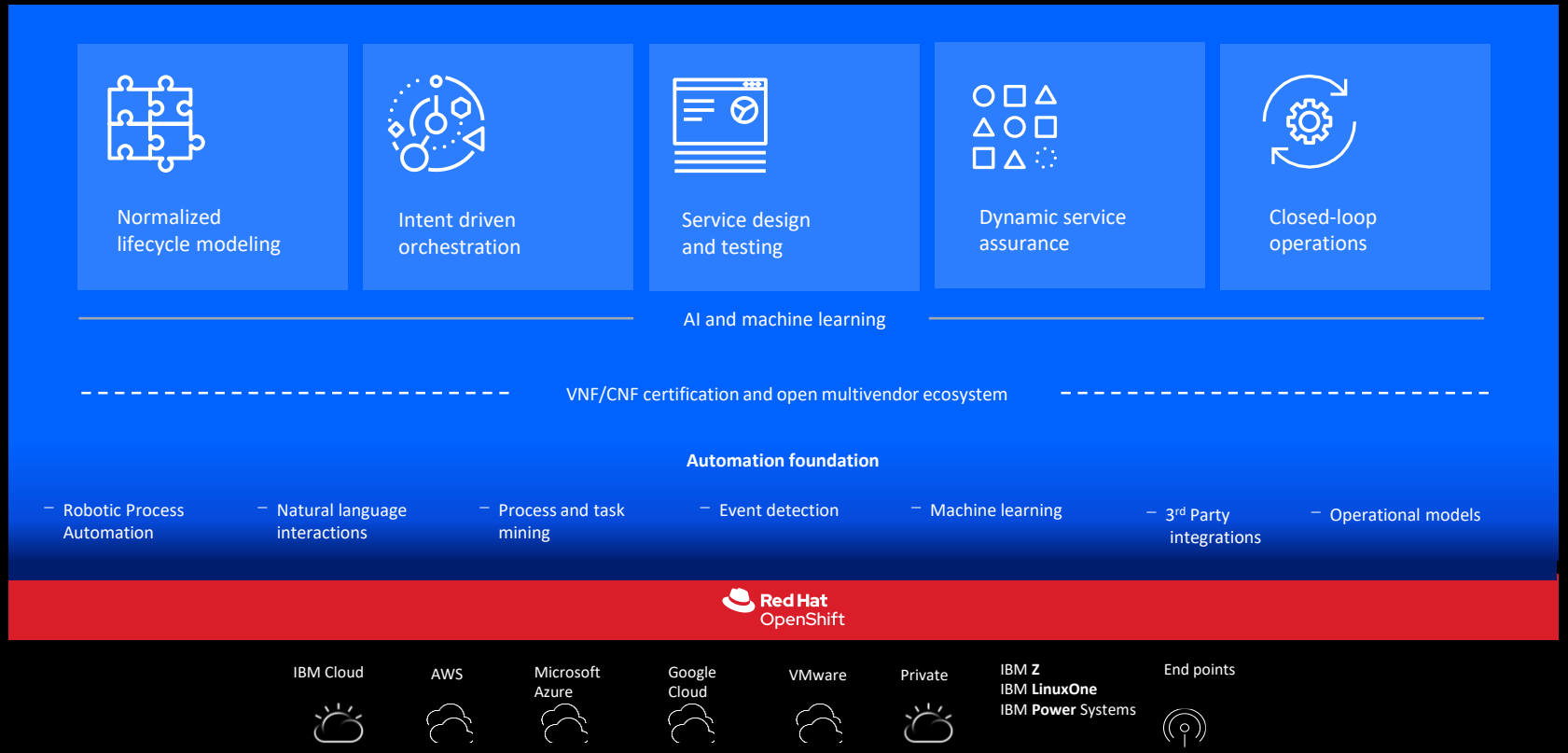
6x reduction in customer service response time

IBM Cloud Pak for
Network Automation

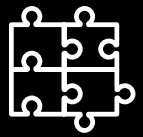
*82%: IBM TCO Study; 6x based on Nextel case study

IBM Cloud Pak for Network Automation

Enables zero-touch network transformation for CSPs



IBM Cloud Pak for Network Automation: capabilities



Normalized lifecycle modeling

Standardized operations for all xNFs to enable model-driven automation with CI/CD toolchains

Intent-driven orchestration

Models the desired service operational state rather than pre-programming workflows

Service design & testing

Automation for the service itself and underlying resources for test, pre-production, and production environments

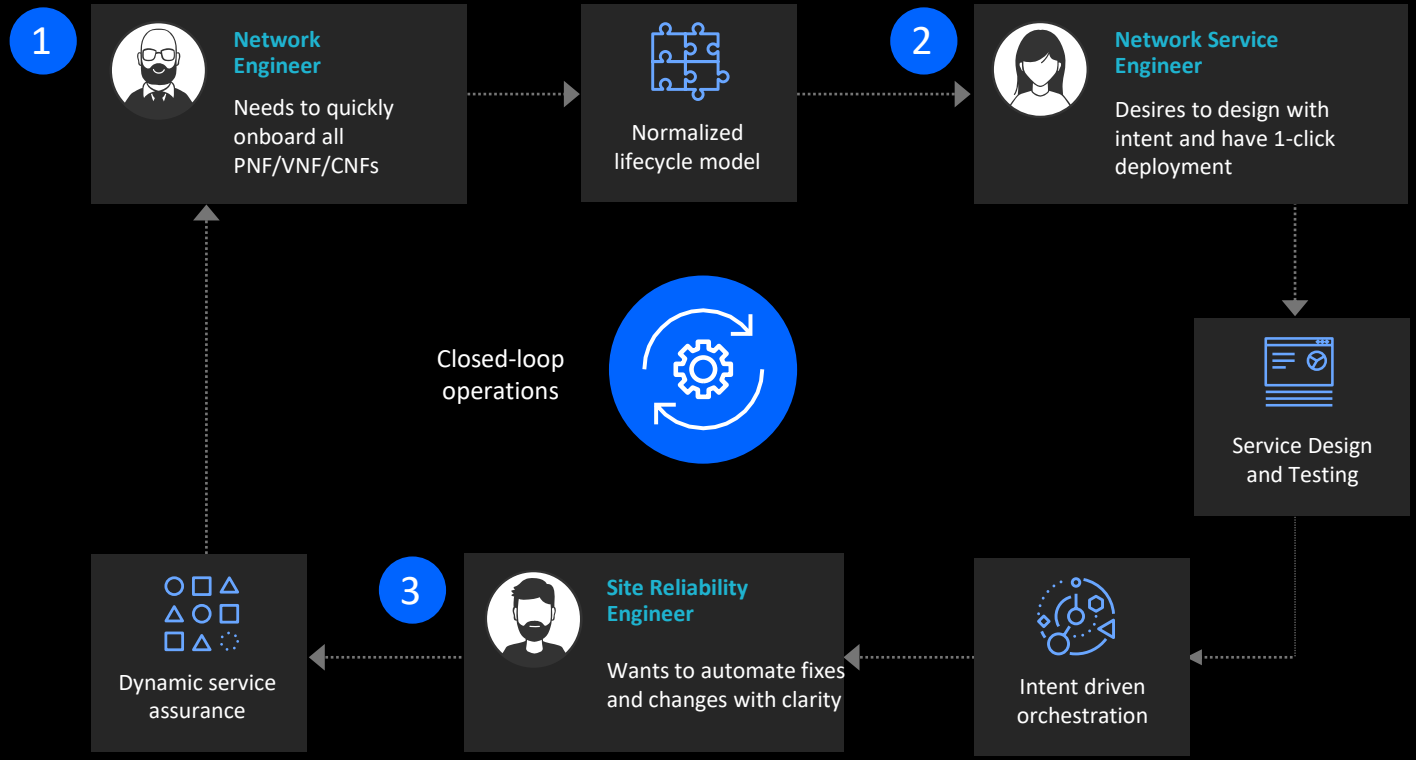
Dynamic service assurance

Real-time view of network and cloud infrastructures using AI to drive decision making and process automation

Closed-loop operations

Automated feedback loop between assurance and orchestration to enable zero touch operations

Comprehensive service lifecycle management benefits all teams



Automate, innovate and transform today

Network site deployment

Standardize and automate cloud buildout across multivendor infrastructures to speed service delivery

4G/5G telco cloud platform

Manage both existing 4G and emerging 5G core and RAN services with a single open and scalable telco cloud platform

NFV lifecycle management

Create an automated open NFV platform and ecosystem while lowering costs and evolving to cloud-native

Prepare networks for the future

5G Network Slicing

Automated lifecycle management for differentiated enterprise 5G virtual network services on top of a shared physical infrastructure

vRAN / Open RAN

Turnkey deployment and management of open and virtualized radio access networks across multi-vendor systems

Multi-access Edge Computing (MEC)

End-to-end management for new low-latency enterprise network applications enabled by extending the telco cloud to the edge

Poll Question

Which of the following emerging applications do you believe is most pressing to address:

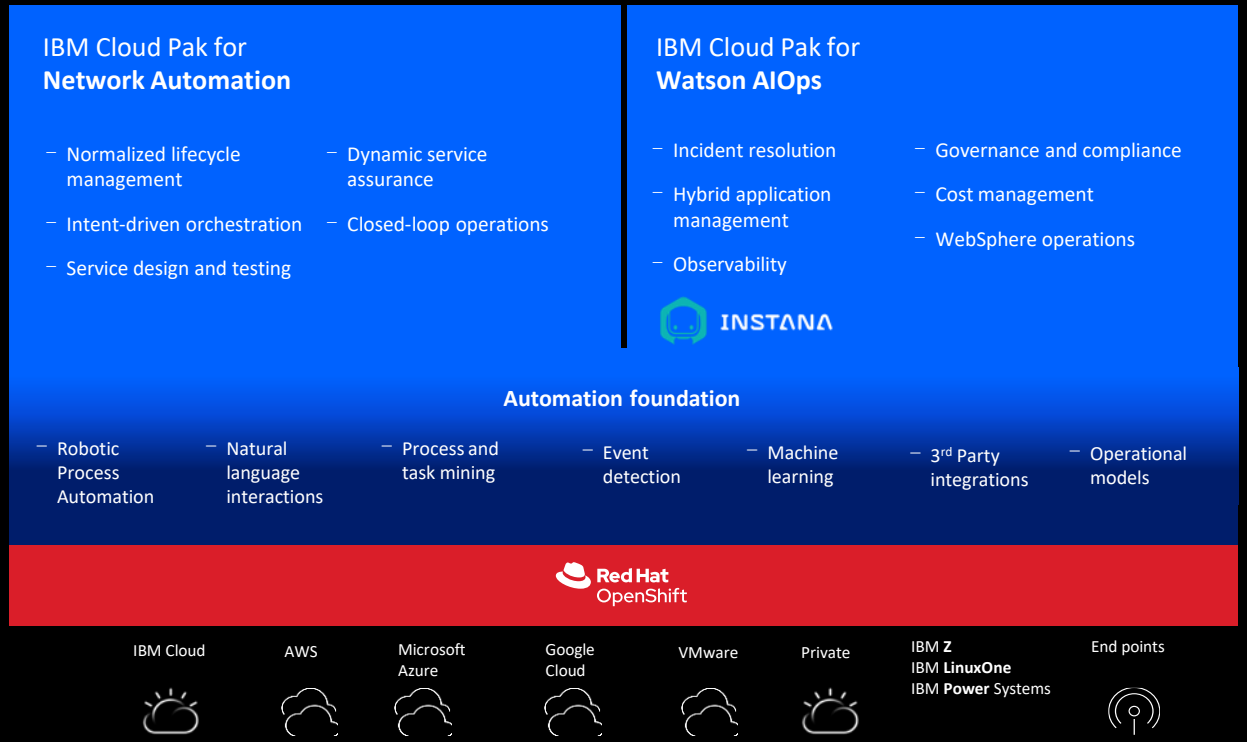
1. 5G network slicing
2. Virtual open RANs
3. Multi-access edge computing
4. Other

Deliver proactive telco network transformation:

IBM Cloud Pak for Network Automation and IBM Cloud Pak for Watson AIOps

AI-powered preventive intelligence:

- Anomaly detection
- Patented AI entity linking
- Fault localization & blast radius
- Change risk management
- Runbook automation

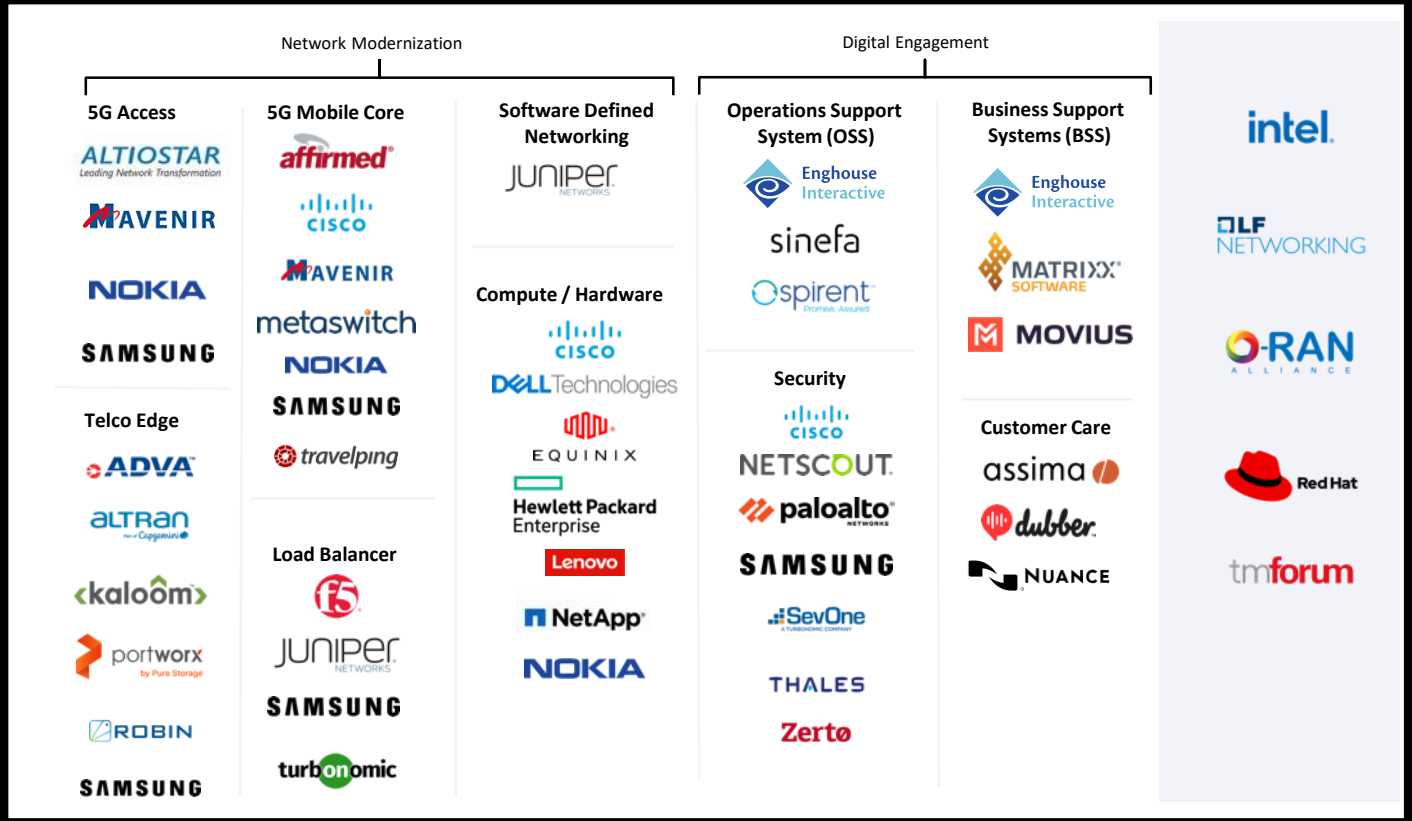


IBM Cloud Pak for Network Automation open ecosystem

Built on open standards: ETSI MANO and ONAP aligned

VNF/CNF interop ecosystem jointly established by IBM and Red Hat

IBM Cloud for Telecommunications unifying architecture with ecosystem of 50+ industry partners



https://cms.ibm.com/industries/telecommunications/network-automation

Why IBM Cloud Pak for Network Automation

Unmatched expertise

- 85% of Forbes 1000 telecoms are IBM clients
- 450+ SMEs focused on telco network cloud

Technology leadership

- AI, ML, analytics, automation
- Hybrid cloud and edge computing

IBM + Red Hat

- Fully open, avoids vendor lock-in
- Open-source industry leadership and ecosystem

Get started

Explore
and schedule a free virtual consultation with an expert

With IBM Cloud Pak for Network Automation, you can evolve to zero-touch network operations with AI-powered automation

Lower Costs

Improves business process and service assurance while lowering operations costs

Deploy Faster

Accelerates the delivery of networks and services through AI-powered automation

Run Anywhere

Runs on any cloud, anywhere, and manages any network vendor infrastructure

https://www.ibm.com/cloud/cloud-pak-for-network-automation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