Leveraging Technology to Enhance and Futureproof OSS & BSS

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CSPs face a barrage of challenges

- Changing Customer Needs
- Consolidation, M&A, Partnerships
- Data Consumption Growth
- Commoditized traditional services (Service evolution)
- Non traditional competition / New Business Models
- Operational Efficiency
Journey towards Digital Service Provider (DSP)

Customer Experience & Engagement

Insights, Data Driven, AI

Simplify, & Automate, ODA

Next Generation Workplace, Culture

Innovate (5G, IoT, NFV, SDN, & NFV)

Collaborate

New Business Models, Digital Eco System
Guiding Principles for B/OSS, NMS evolutions
Constructs of Digital Service Provider (DSP) stack

Customers

Channel Experience

UX & Omni-Channel / Digital Customer Experience

API First Strategy

Digital Experience & Enablement Platform

Customer / User profile management
360 Customer View
Central Rules Management
Partner On-boarding & Management
Offer & Sales Catalog
Basket Persistence
Channel Marketing
Location & IP Services

Open APIs & Micro Services
Open Digital Architectures (ODA)

LOB / OpCo / M&A Stacks

Customer Management
Order Management
Product Catalog

Network, Cloud & Operations stack

Services Management
Network Services
Capacity Management

Partner Stacks

Customer Management
Order Management
Product Catalog

Agile OSS

Network

Physical
Virtual
Hybrid

SDN / NFV evolution; 4G, 5G move, Network Slicing, IOT, Adopt Open Network Architectures
Focus on seamless customer experience across channels,

- Omni-channel; Cross channel experience; Digital world (digital bundles)
- Self-service
- Guided service
- Personalized and Contextualized experience
- New Channels - BOTS
Introduce digital experience and enablement layer with

- Micro services architecture
- Open APIs
- Cloud allied technologies (for elasticity)
- Open Source (for innovation) to provide a seamless experience

Provide support for launch of

- Digital and partner service bundles
- New brands and multiple operating companies in cases where service providers have cross country operations

Dynamic eco system of Digital Partners, M&A, Divestitures
Move BSS systems towards

- Modular plug-n-play architectures
- Key capabilities like product catalog, offers, ordering by embracing Micro services
- Cloud variants
- Adopt Open Digital Architectures (ODA)
Adoption of Micro Services Architecture

Build Ready to use Telco Industry specific micro services in Cloud technology architectures for CSPs moving to Digital Service Provider

Key Characteristics

- Discrete micro-services supports individual business capability
  - Example – Offer, Order Decomposition, Product, Catalog, Payment
- Pass-through micro-services to support legacy integrations, e.g., integration with Mainframe systems
- Orchestration micro-services supports workflows and calls of multiple discrete micro-services
  - Example – Cart, Part of Order Orchestration, Telco – Digital product bundles
- Use BPM for more complex workflows
- Support distributed data source – increase scalability
- Enable extreme Automation for CI/CD (DevOps)
Opt for agile OSS

Blurring of fulfilment and assurance layers to support

• Intent based modeling
• Closed loop automation
• Predictive Assurance of services offered
Event driven, Closed Loop, Predictive Assurance
Evolve NMS to autonomous & well integrated domain management solutions support

- Open Network Architectures
- SDN / NFV, 5G, IOT and hybrid networks to offer new digital services

Blurring of OSS and NMS in the software defined, virtual network world

Event driven, Dynamic usage and SLA based charging for virtual functions.
Adopt DevOps + NetOps with seamless development and integration of capabilities in Continuous Integration (CI) and Continuous Delivery (CD) from online channels to IT systems to Networks
Leverage Machine Learning (ML) and Artificial Intelligence (AI) techniques at enterprise level to support automation and build Next Generation Software Defined Operations
Data driven, AI enabled Evolved B/OSS platform

Software Defined Operations (SDO)

- Predictions Integrations
- Intelligent Business Process Orchestrator (Closed Loop Automation)

Analytics

Data Lake
(Customer, Product, Offer, Resource, Service, Network, Tickets)

Machine Learning

- Supervised
- Un-Supervised
- Hybrid

- Regression, Classification, Clustering, Dimensionality reduction, Anomaly detection
- Rules Engine
- Supervised
- Un-Supervised
- Hybrid
- Regression, Classification, Clustering, Dimensionality reduction, Anomaly detection

Customer Problem Management

Customer Experience Management

Service Problem Management

Service Quality Management

Machine Learning

- Supervised
- Un-Supervised
- Hybrid

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Customer Journey Views

Channels & Customer Experience

AI based Automated Operations, RPA

Predictive Analytics, Insights

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Focus on cyber security and digital identity for customers and new age devices and network elements

Explore new technologies like Blockchain that brings in innovative, simplified process, agility and trust in complex and dynamic partner ecosystems
Establish high performance self-contained teams taking complete accountability of specific domains

Align organizational structure and its culture to embrace digitalization
New business models, Market place for not only for OTT services, but also at network layer like VNF, 5G network slicing licensing
Market Place for new and emerging services
Questions

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