# Know the Speakers

**Shantanu Kulkarni**

Head of Network Software, STL

Shantanu has more than two decades of experience in the Telecom Domain. He is obsessed with creating products and solutions at the pace of business and technology. Currently, he heads the Software Technology Unit for STL, responsible for Product Management, Product Marketing, and all aspects of Software Product suite development for STL.

**Tilemachos Koulouris**

Vice President, Europe & CIS, STL

A seasoned leader in the technology, media, and telecoms market with more than 22 years of international experience, Tilemachos Koulouris is STL's Vice President for the SW business. During the past two decades, he has been working closely with global CSPs, consulting and helping clients on their digitalization transformation strategy & execution.
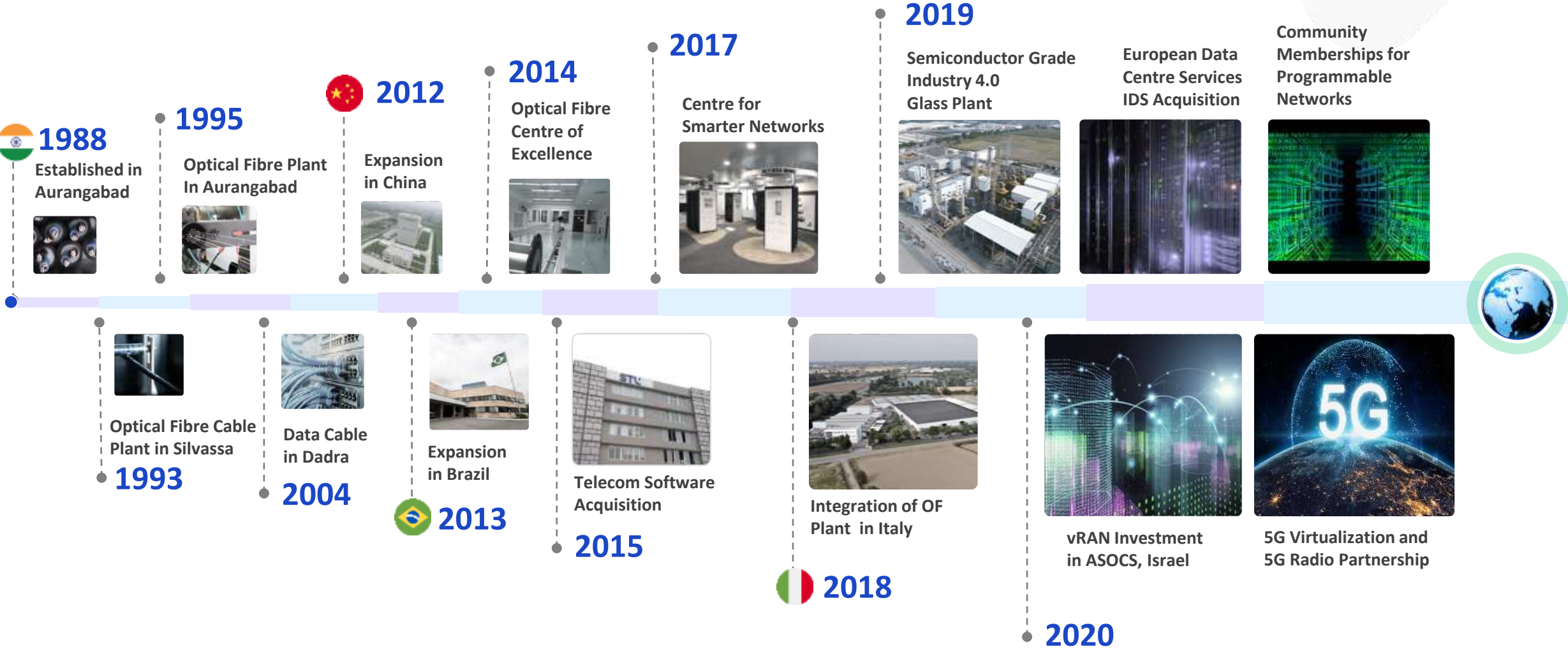
**Ravi Shankar**

Head - Product Management, Next-Gen OSS/BSS, STL

A highly self-motivated, result-driven, passionate leader with 15+ years of experience in Product Management, Engineering and Delivery in B/OSS domain, with proven expertise in building high-performance cross-functional global team.

# Starting from optical fibres
# We now build digital networks globally

**1988**
Established in Aurangabad

**1995**
Optical Fibre Plant In Aurangabad

**2012**
Expansion in China

**2014**
Optical Fibre Centre of Excellence

**2017**
Centre for Smarter Networks

**2019**
Semiconductor Grade Industry 4.0 Glass Plant

European Data Centre Services IDS Acquisition

Community Memberships for Programmable Networks

**1993**
Optical Fibre Cable Plant in Silvassa

**2004**
Data Cable in Dadra

**2013**
Expansion in Brazil

**2015**
Telecom Software Acquisition

**2018**
Integration of OF Plant in Italy

**2020**
vRAN Investment in ASOCS, Israel

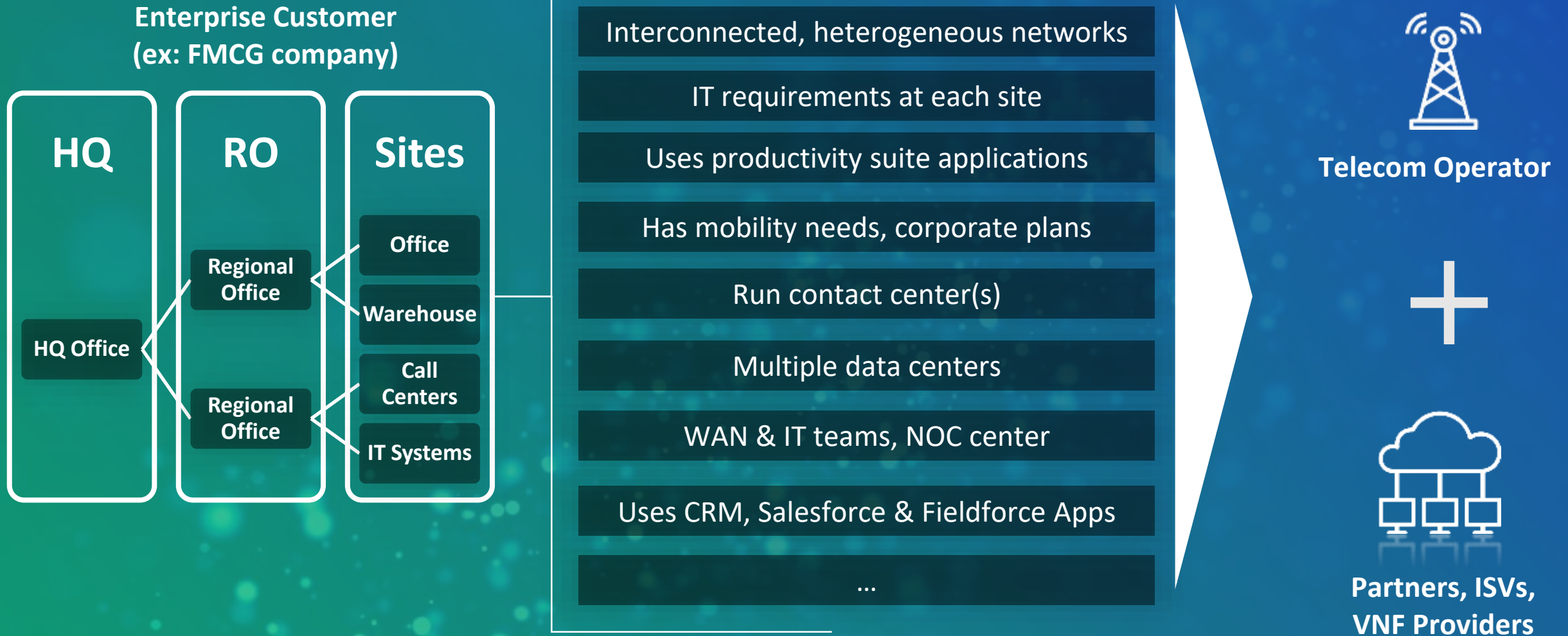5G Virtualization and 5G Radio Partnership

# Agenda

- **Enterprise Market & Industry Trends**
- **Challenges & Opportunities**
- **Recommendations**
- **Q&A**

# **Tell us about yourself**

# Enterprise Market for Telcos

**Enterprise Customer (ex: FMCG company)**

**HQ**
- HQ Office

**RO**
- Regional Office
- Regional Office

**Sites**
- Office
- Warehouse
- Call Centers
- IT Systems

- Interconnected, heterogeneous networks
- IT requirements at each site
- Uses productivity suite applications
- Has mobility needs, corporate plans
- Run contact center(s)
- Multiple data centers
- WAN & IT teams, NOC center
- Uses CRM, Salesforce & Fieldforce Apps
- ...

**Telecom Operator**

+

**Partners, ISVs, VNF Providers**

# Telco Enterprise Business Segment Evolution

**STL'25**
YEARS OF OPTICAL FIBRE

**Connectivity Based**

**Partnership Based**

NaaS, vRAN, CDN, Digital ID, Security & Vulnerability Management, IoT Platforms, Analytics

Security, Cloud Hosting, SaaS, IoT/M2M, Media & Entertainment, VPN, WAN

Contact Centre, Unified Collaboration & Communication

Connectivity

- Private Networks
- Customizable Network
- Network & Software Disaggregation

- **Transformation to become ICT service provider**
- **New Age Digital Products & Services**
- **Platformification**

**Until 2000**  →  **2010s**  →  **2020 +**

## Industry Verticals

Automotive

BFSI

Govt., Public Sector

Life Sciences

Manufacturing

Media & Technology

Retail & Consumer Goods

Transport & Logistics

...

Partnerships: Cloud hosting Providers, SaaS Providers, Dev Ecosystems, Car Companies

# Technology Evolution Bringing Unparalleled Control to Business

## Services
- Network slicing, Network-as-a-Service, Connectivity-as-a-Service
- OTT services are delivered as an overlay on the infrastructure

## Software
- Virtualized control & user plane (VNF, VM, Containers)
- Controllers, Orchestrators, Cloud-Native Elements

## Underlay
- COTS for hosting VNFs. – E2E Connectivity
- Network elements - physical or virtual routers, switches, security

## Radio Access Network (RAN)
- 4G LTE, LTE-M, WiFi 6
- 5G Non-standalone and Stand alone architecture

## Multi-Access Edge
- Apps moving closer to the user - enable application centricity
- Distributing 5G network functions - faster traffic-forwarding

## Network Core
- Network Disaggregation
- Control and User plane Separation

### Enabling New Use Cases for Enterprises

vRAN as a Service | SD WAN | Network Slice | Security as a Service | IoT-as-a-Service

Cloud Management As a Service | Bare-Metal-as-a-Service | Fault Management | Performance Management | PCRF as a Service

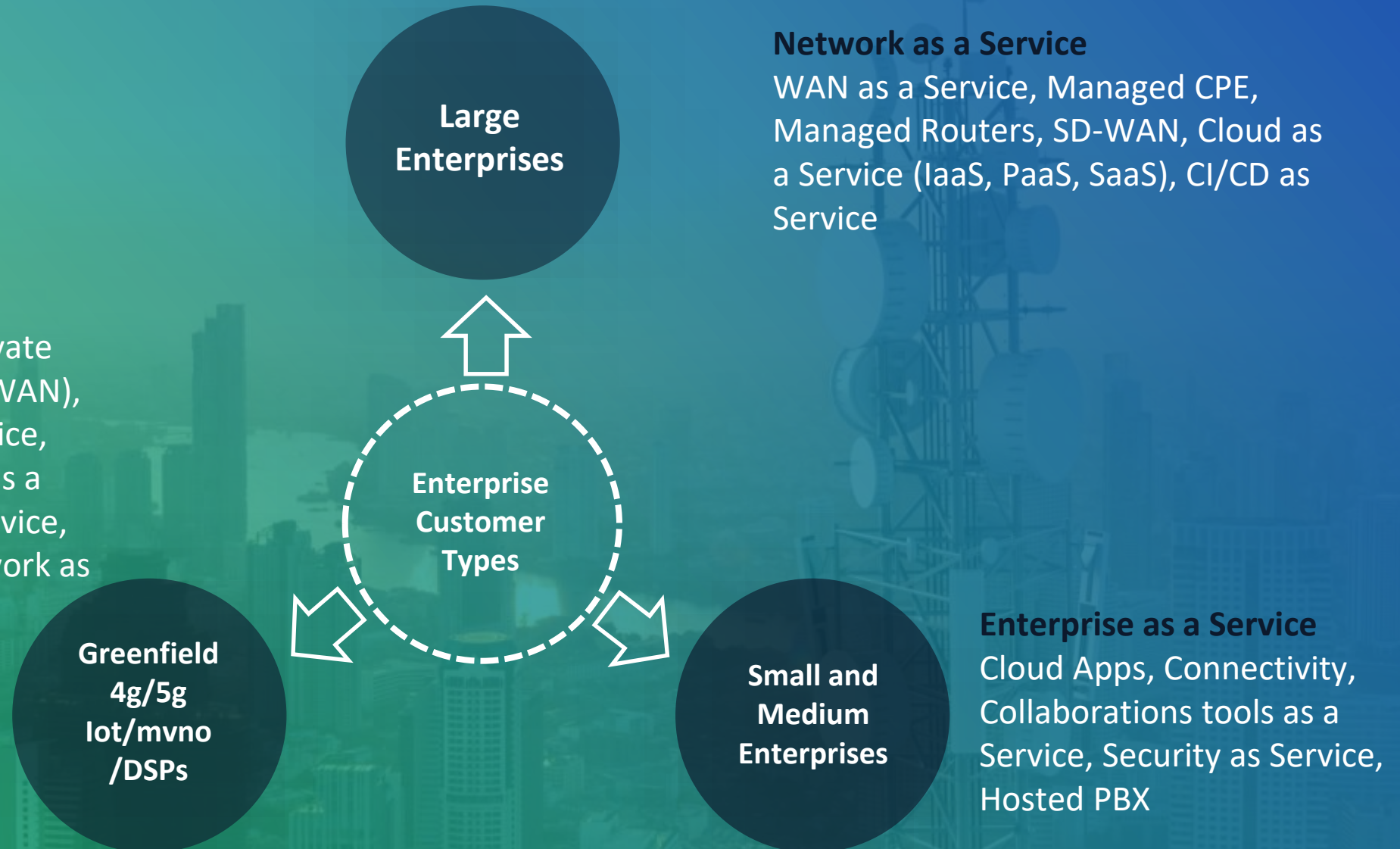### Through Partnerships

Applications    Infrastructure    Integration    API

# Enterprise Market needs vary by segment

**STL'25**
YEARS OF OPTICAL FIBRE

**Large Enterprises**

**Network as a Service**
WAN as a Service, Managed CPE, Managed Routers, SD-WAN, Cloud as a Service (IaaS, PaaS, SaaS), CI/CD as Service

**Private network as a Service**
vRAN as a Service, Private Network (LTE, LORA, WAN), IOT Platform as a Service, NW slicing, Analytics as a Service, CI/CD as a Service, Observability Framework as a Service

**Enterprise Customer Types**

**Greenfield 4g/5g Iot/mvno /DSPs**

**Small and Medium Enterprises**

**Enterprise as a Service**
Cloud Apps, Connectivity, Collaborations tools as a Service, Security as Service, Hosted PBX

# Enterprise Market for Telcos

**Demand for Specialization/ Verticalization**

Connectivity needs are getting specialized
- Connected cars
- Smart grids
- Industry 4.0
- And more…

**Everything as a Service is proven**

XaaS models provide faster time to market, efficiencies and most importantly scalability

**Enterprise is expected to grow multi-fold**

XaaS estimated to grow to $400B by 2025*

Network as a service to increase by 40% by 2025**

Anything as a service to increase by 53% by 2025*

**Finally….it is not an option anymore!**

Unprepared telcos run the risk of missing out on important growth opportunities

*Source: Technavio; Markets and markets; Bain and company          **Source: Global Market Insights

**What are the challenges in setting up XaaS for Enterprise Customers?**

# Challenges in setting up X-as-a-Service

## Providing right experience

## Generating monetization opportunities

## Building platforms for agility

Onboarding & self-management for enterprise customers & partners.

Complexity and diversity in the type of offerings and ordering process.

People dependent, offline processes with long running orders.

Limited pricing and business models, restricted by legacy billing systems.

Time consuming contract negotiations and settlement cycles with accuracy and transparency issues.

Payment channel inefficiencies.

Inflexibility in modeling and orchestration of software driven disaggregated products & networks.

Speed mismatch between IT and Network. IT layer not designed for elasticity, scale and isolation.

# A Marketplace Driven Platform

**Partnerships & Partner Journey**

**Enterprise customer journey**

**Intent to Purchase Conversion Acceleration**

**Contracts Agreements, & Quotations Automation**

**Business Models (SaaS models)**

**Digital Payment Channels & Flexibility**

**Near Real-time Settlements**

**Technology & Platform (Open, Disaggregated, Cloud Native)**

# Why Marketplace?
## Fully digitized platform for enterprise customers

## For Enterprise Customers

### Fast Discoverability

- 1 stop platform to purchase Telco and Enterprise offerings
- Intuitive navigation (top selling, featured, partner products, categories).

### Simplification

- Simplifying complexities of B2B use cases
  - Enterprise customer registration
  - Organization units and hierarchies
  - Workflow approvals
  - Milestone based payments

### 360 Degree view for Self care

- 360 degree view dashboard and self care
- Same platform for post purchase updates

### Dropped link and Assisted Sale support

- Customer can continue from where he stopped the last time
- Assisted sale support where agent can not only guide customer but complete the journey on behalf of customer

### Differentiated Customer Experience

- Digital identity Management and Personalized Experience
- Additional Benefits for High Value Customers

# Why Marketplace?
## Fully digitized platform for accelerated partnership and co-creation

## For Partners

### Differentiated Experience

- Provides benefits to partners with strategic product partnerships or top selling products
- Provides different options for revenue agreements

### Launch Services Faster

- Inbuilt content management and product approval workflows to strengthen effective go to market strategy
- Unified Product Catalogue to create bundled services of Telecom and Enterprise offerings with discounts

### Onboarding to Settlement - all in 1 Platform

- 1 stop platform for partner registration, settlements and analytics
- API catalogue and monetization framework

### Dedicated focus for Partner Offerings

- Dedicated home page for partner offerings
- Rate and review to differentiate partner offerings

### 360 Degree Insights

- 360 degree view dashboard
- View product performance, customer behaviour, analytics and reports from dashboard

**How likely is independent software/hardware vendor to participate in CSP's hosted marketplace for enterprises?**
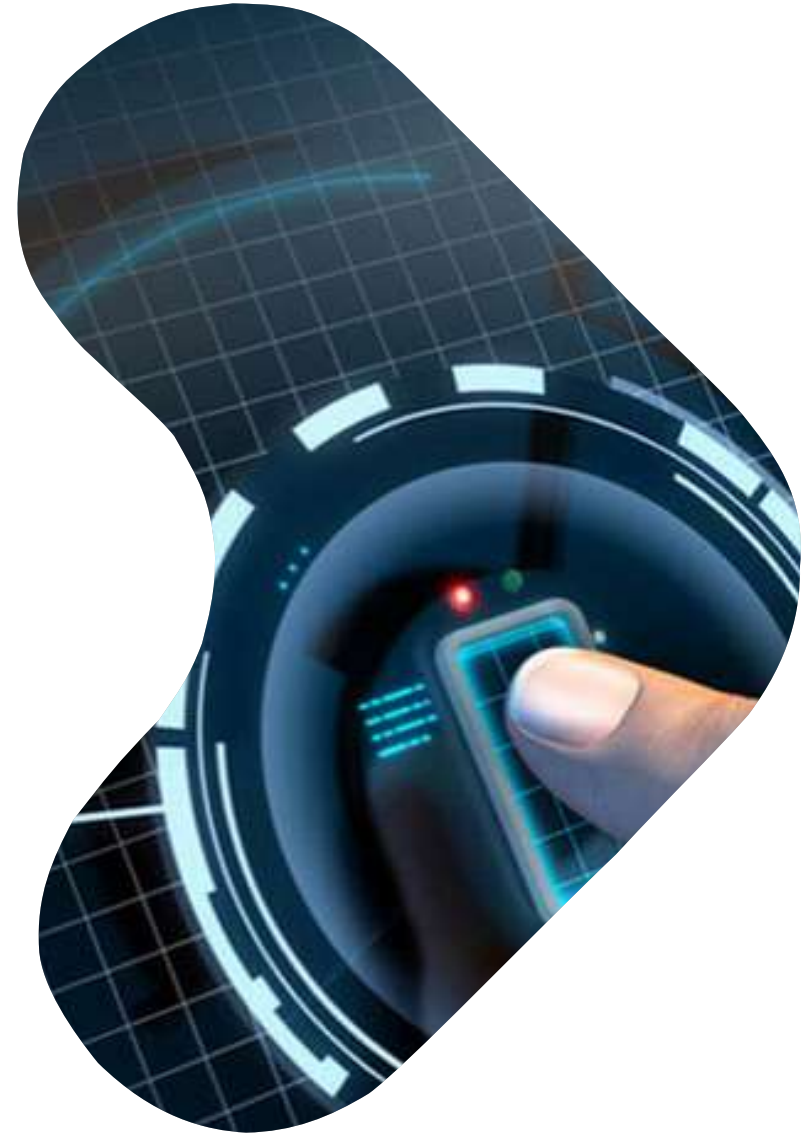
# Recommendations

**1.**

### Get your architecture right

For a multi-tenant, multi-sided business where APIs and disaggregation enable new use cases on the platform.

**2.**

### Use pricing innovations to create new business models

Exploit monetization possibilities created by platform and partnership.

**3.**

### Digitize your processes

From journey modeling to using agile DevSecOps processes, digitization is the key

**4.**

### Start building partnerships

Define your partnership priorities and focus on creating a frictionless partner onboarding.
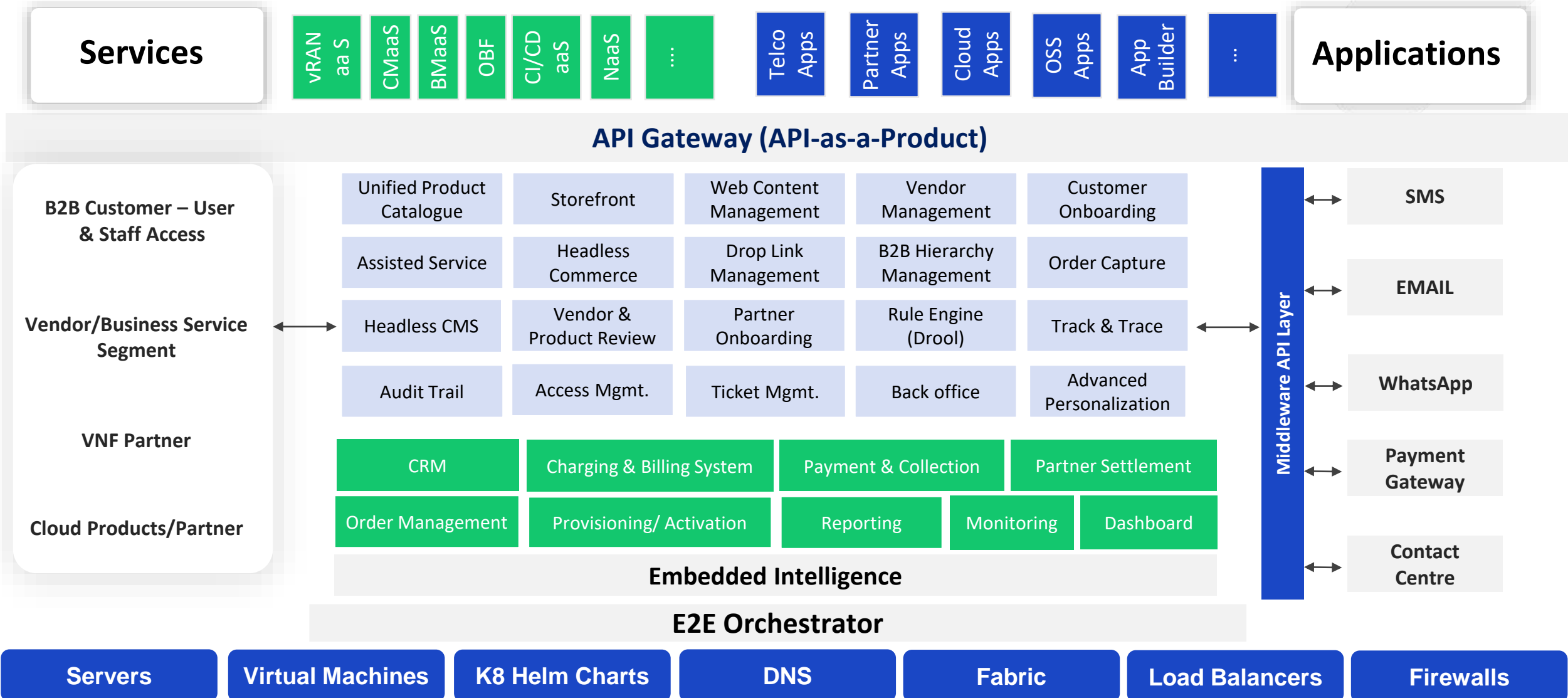
**5.**

### Build skillset & mindset

Digital skills, aside from mindset for co-creation, collaboration are critical for platform success.

# 1 Architecture for Marketplace Platform

| Services | vRAN aaS | CMaaS | BMaaS | OBF | CI/CD aaS | NaaS | … | | Telco Apps | Partner Apps | Cloud Apps | OSS Apps | App Builder | … | Applications |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

## API Gateway (API-as-a-Product)

| B2B Customer – User & Staff Access | Unified Product Catalogue | Storefront | Web Content Management | Vendor Management | Customer Onboarding | | SMS |
|---|---|---|---|---|---|---|---|
| | Assisted Service | Headless Commerce | Drop Link Management | B2B Hierarchy Management | Order Capture | Middleware API Layer | EMAIL |
| Vendor/Business Service Segment | Headless CMS | Vendor & Product Review | Partner Onboarding | Rule Engine (Drool) | Track & Trace | | WhatsApp |
| VNF Partner | Audit Trail | Access Mgmt. | Ticket Mgmt. | Back office | Advanced Personalization | | Payment Gateway |

| | CRM | Charging & Billing System | Payment & Collection | Partner Settlement |
|---|---|---|---|---|
| Cloud Products/Partner | Order Management | Provisioning/ Activation | Reporting | Monitoring | Dashboard |

Contact Centre

## Embedded Intelligence

## E2E Orchestrator

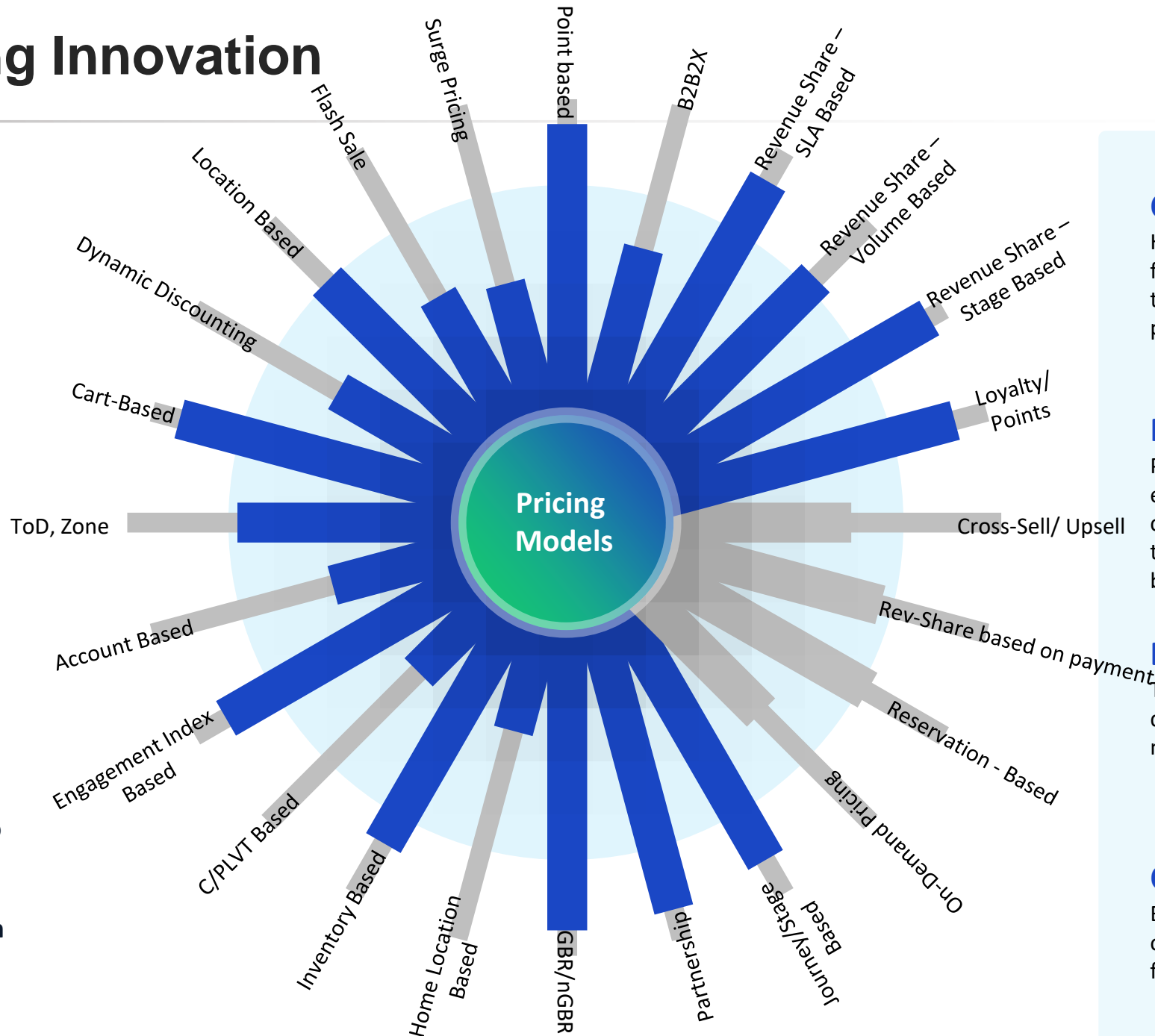| Servers | Virtual Machines | K8 Helm Charts | DNS | Fabric | Load Balancers | Firewalls |
|---|---|---|---|---|---|---|

# 2 Use Pricing Innovation



## 1. Build new revenue models

## 2. Address overall complexities

**Legacy platforms not ready to support new pricing and business models - are becoming biggest deterrent in 5G monetization.**

Labels around the wheel (Pricing Models):
Surge Pricing · Point based · B2B2X · Flash Sale · Revenue Share – SLA Based · Location Based · Revenue Share – Volume Based · Dynamic Discounting · Revenue Share – Stage Based · Cart-Based · Loyalty/Points · ToD, Zone · Cross-Sell/ Upsell · Account Based · Rev-Share based on payment · Engagement Index Based · Reservation - Based · C/PLVT Based · On-Demand Pricing · Inventory Based · Journey/Stage Based · Home Location Based · Partnership · GBR/nGBR

**Pricing Models**

## Customers
Have been spoiled with the flexibilities and choices by the e-commerce marketplace platforms.

## Partners
Partners have no different expectation than retail customers. They expect real-time settlements, pricing and bundling.

## Enterprises
They need solutions that are quick, and enabling them in managing their challenges.

## Competitors
Beyond traditional telecom operators, the competition is from new age digital players.

# 3 Start Building Partnerships

| Partners | Retail Entertainment | Hardware players Software providers | Education Healthcare | Automakers Security providers | Network software provider Enterprise software provider | Cloud Platform Provider |
|---|---|---|---|---|---|---|

| Pillars | Connectivity | Collaboration | Platform |
|---|---|---|---|

| Outcomes | New Business Models New Partnership Models | New Revenue Streams Capture bigger portion of market share | Monetize investment in 5G Launch personalized services faster to the market |
|---|---|---|---|

**Insights driven**
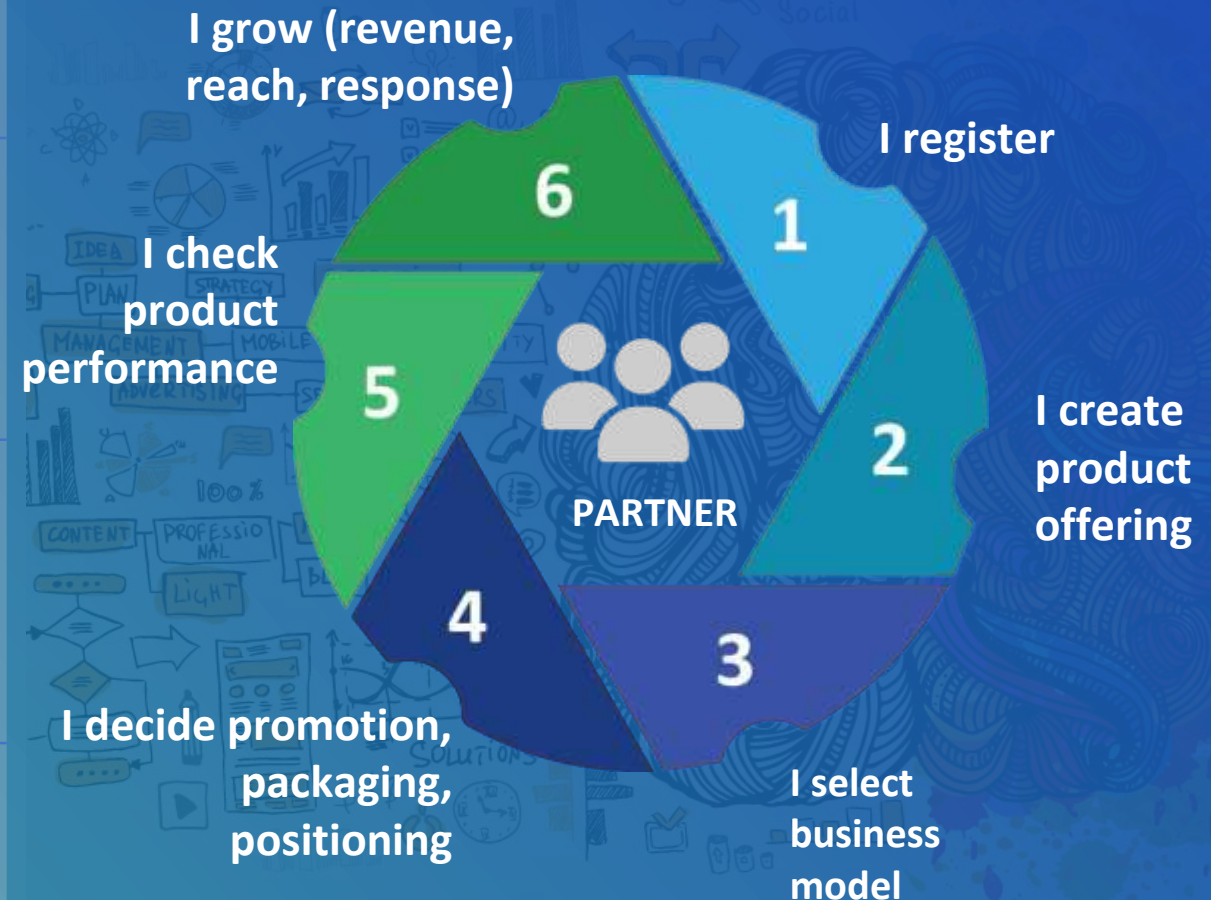**Customer & partner**
**interaction**

**Quick prototype**
**UX/UI Changes and Configuration**
**driven Process Changes**

**Design Thinking led**
**Biz DevOps for**
**Concept-to-Market**

**A/B testing based on**
**Behavioural Science**

I grow (revenue, reach, response)

I register

I check product performance

6

1

5

2

PARTNER

I create product offering

4

3

I decide promotion, packaging, positioning

I select business model

# 5 Focus on building Skillset, Mind-set

CSPs are very well positioned to exploit their presence, trust & relationship with the enterprise customers, however they **must act now** before enterprises move to hyperscalers.

**Think big**

**Start small & Fail fast**

**Scale up**

Map out the sweet spot of value enhancement and business model disruption

Begin with a PoC
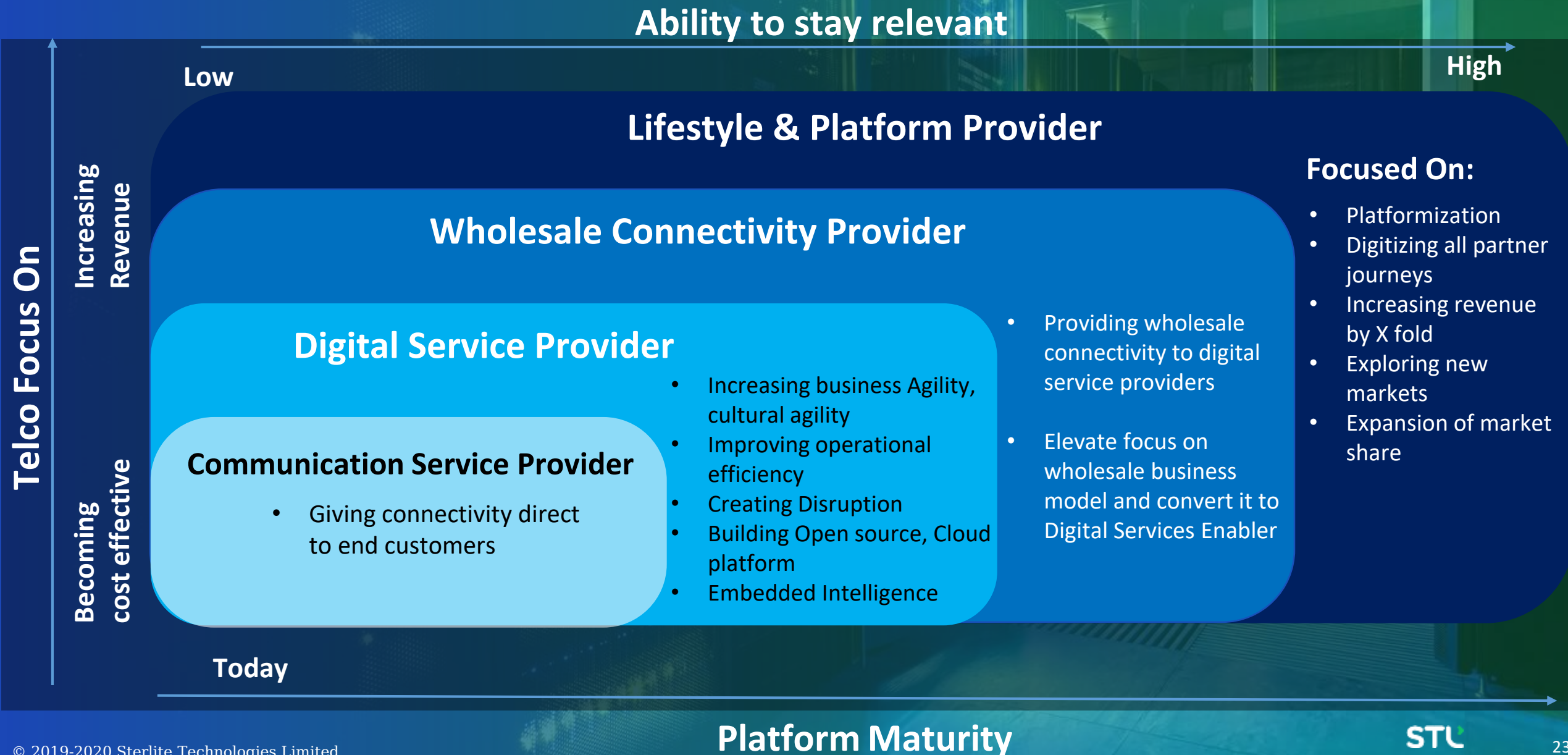Iterate Ditch (if needed) and start all over again

Expand, augment

**3P Framework**

| Platform | Processes | People |
| --- | --- | --- |

# Time for you to choose where you want to be

**Ability to stay relevant**

Low → High

**Telco Focus On**

Increasing Revenue

Becoming cost effective

## Lifestyle & Platform Provider

## Wholesale Connectivity Provider

## Digital Service Provider

### Communication Service Provider

- Giving connectivity direct to end customers

- Increasing business Agility, cultural agility
- Improving operational efficiency
- Creating Disruption
- Building Open source, Cloud platform
- Embedded Intelligence

- Providing wholesale connectivity to digital service providers

- Elevate focus on wholesale business model and convert it to Digital Services Enabler

**Focused On:**

- Platformization
- Digitizing all partner journeys
- Increasing revenue by X fold
- Exploring new markets
- Expansion of market share

Today

**Platform Maturity**

# Q&A