

A Solutions & Business Partnership

Delivering the open infrastructure for 5G networks

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DELLTechnologies

Usage Trends → Diverse Demands → New Approach

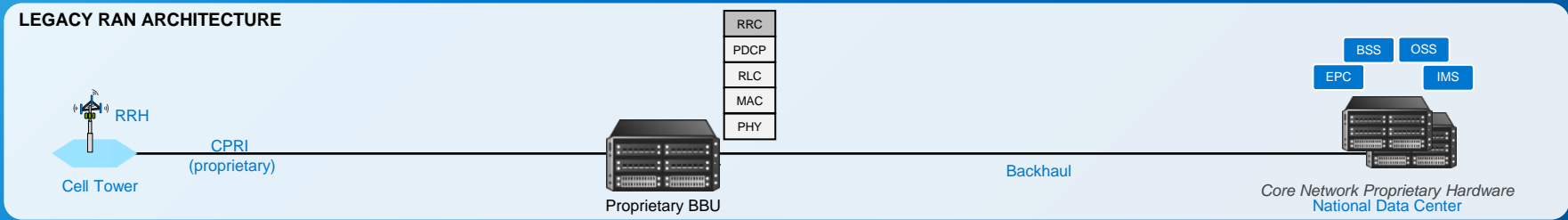
Usage trends are percolating from an urban/sub-urban phenomenon to a nation-wide reality including rural



Network Architecture: Based on functional hierarchy → TO → Based on service consumption location

Legacy to ORAN Architecture Evolution

Provides flexibility and cost efficiencies when building out 5G or consolidating LTE

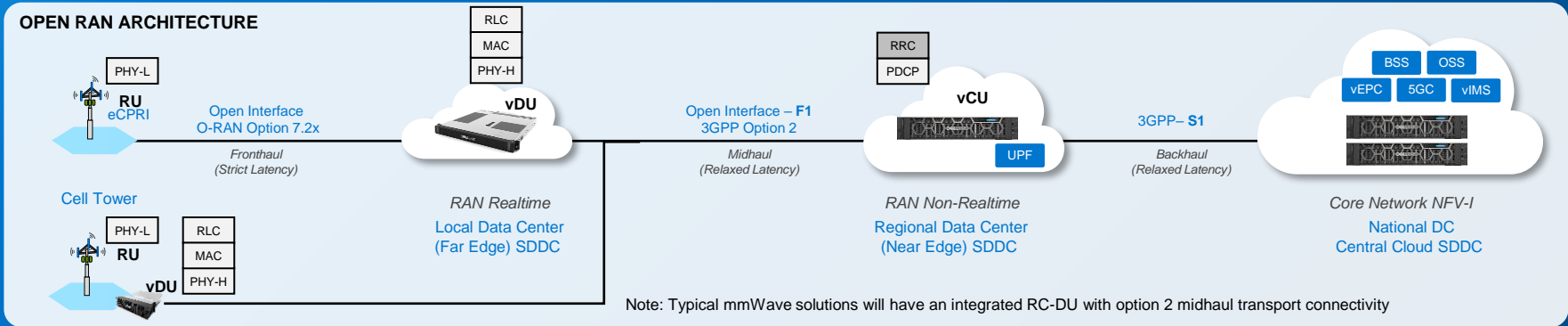


- Network Disaggregation
- Hardware & Software Separation
- vRAN software-only vendors



- RAN Ecosystem disruption
- Innovative RAN applications
- RIC (Radio Intelligent Controller)

- Service-bus Architecture
- Control & User Plane Separation



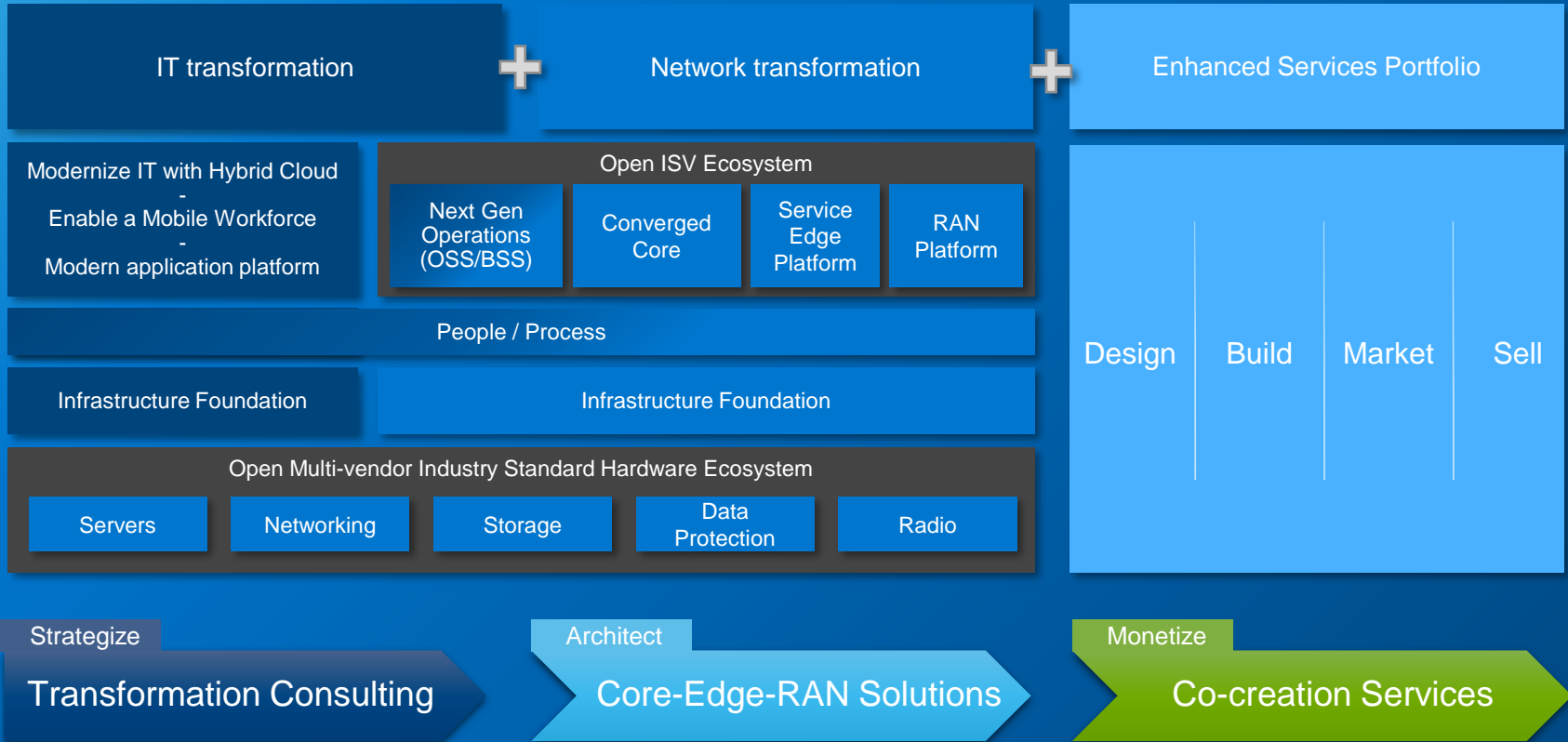
Service differentiation

Secure the telecom supply chain

The promise of lower TCO

Operator control

CSP Transformation: The Dell Technologies Difference



Establishing Dell in the Open RAN Ecosystem

Nurturing the ORAN ecosystem with collaboration and facilitation



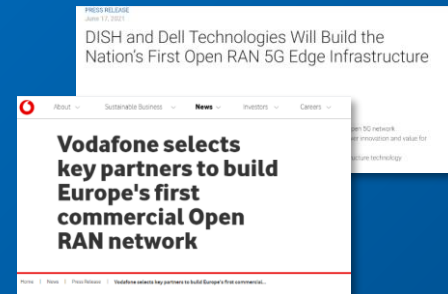
Founding member, Open RAN lobby group
US/Global policy & promotion of Open RAN interoperability & secure supply chain



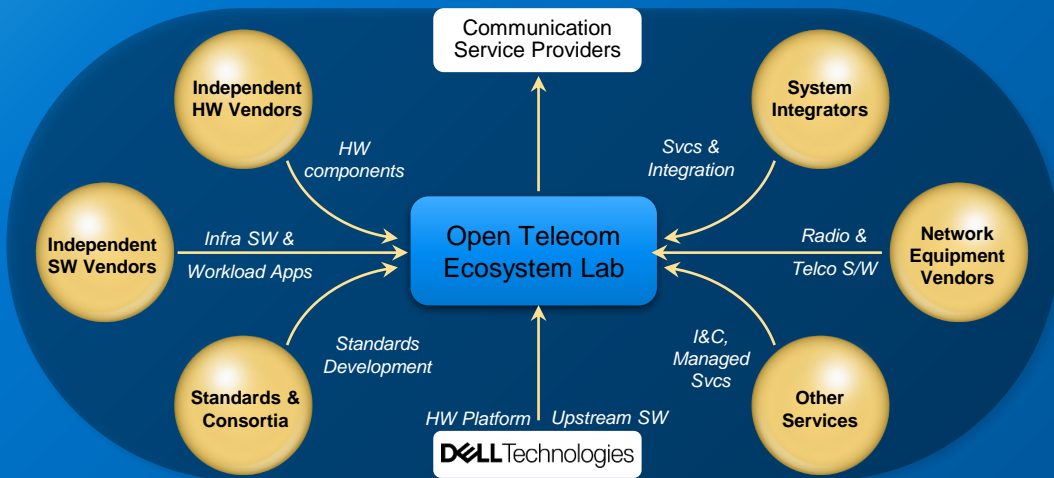
Active in OpenRAN, CU/DU lab
Engaged in DCSG, Evenstar projects



Focus in workgroups 1, 4, 6
Active in Germany, France OTIC labs



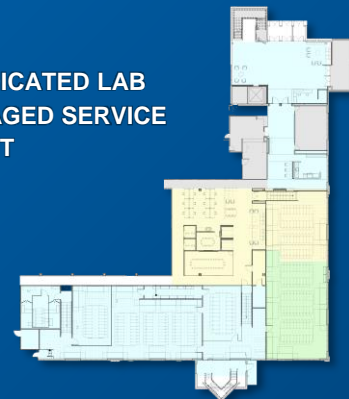
Strong market presence in the early O-RAN market



CERTIFICATION
SOLUTION DEVELOPMENT
JOINT PARTNER LAB/DEDICATED LAB
CUSTOMER LAB MANAGED SERVICE
PROOF OF CONCEPT

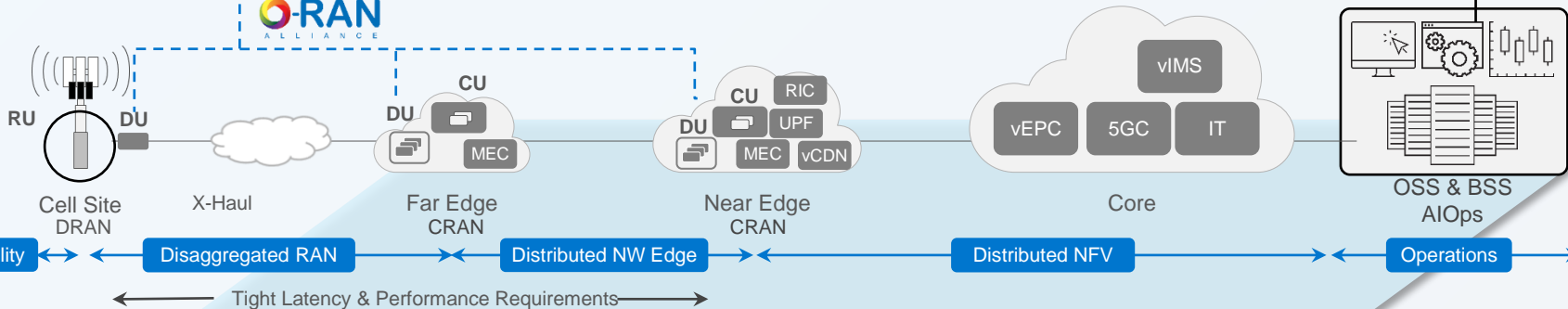
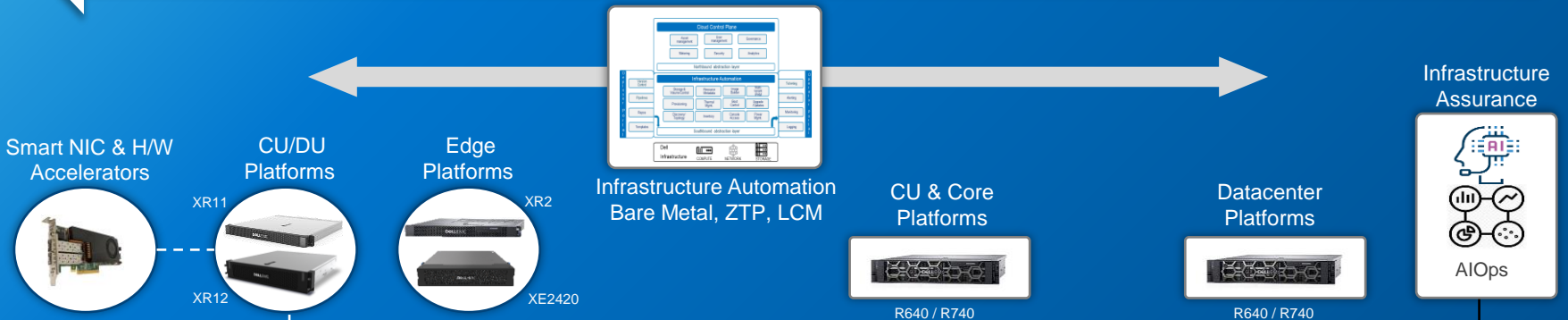


State of the art, 13,000 sqft lab in RoundRock, TX



Harmonized Platform Offerings

Disaggregation & Containerization | 5G Core SBA & Edge move to Kubernetes / Cloud Native | Bare Metal Automation / Orchestration



Network Modernization Solution Portfolio

NEXT GEN OPERATIONS



Accelerate digital transformation through advanced analytics, AI / ML and platform automation use cases wherever needed.

CONVERGED CORE



Deliver lower risk, faster cloud native NFV deployments at data center scale with pre-validated VMware or RHOS ready solution & architectures.

SERVICE EDGE PLATFORMS



Transform how people and devices interact with edge digital services enabled by development platforms deployed wherever data demands.

RAN PLATFORMS












Simplify and lower RAN costs, build high performance, open CU / DU systems, and implement open X-haul networking.

Open RAN Ecosystem Partners

Collaborating with partners to bring innovative alternatives to the CSPs



Open RAN and 5G Core Engagements

<p>Dell Technologies</p>  <ul style="list-style-type: none"> Selected for Open RAN CU/DU with AltioStar, Mavenir & VMware XR11 for DU Nationwide build-out 2021-2022 	<p>Dell Technologies</p>  <ul style="list-style-type: none"> Open RAN MOU / PoC in lab 'ORAN Town' multi-vendor open RAN trial Selected for 2021 trials 	<p>Dell Technologies</p>  <ul style="list-style-type: none"> Providing CU/DU and Core infrastructure in 5G SA trial (Project Pikeo) Active in O-RAN Alliance OTIC lab in France 	<p>Dell Technologies</p>  <ul style="list-style-type: none"> Open RAN MOU/PoC with Mavenir in VF lab Selected June 2021 for Open RAN HW (XR11) provider in UK build-out 	<p>Dell Technologies</p> <p>Tier 1 (Greenfield) in Germany</p> <ul style="list-style-type: none"> Dell Hardware for core and RAN servers 	<p>Dell Technologies</p>  <ul style="list-style-type: none"> Selected for Open RAN / vRAN Lab trials in 2H2022
<p>Dell Technologies</p>  <p>5G Cloud Native Platform</p> <ul style="list-style-type: none"> Selected 5G Cloud-Native Core infrastructure & storage build-out nationwide 	<p>Dell Technologies</p>  <p>5GC & Telco Cloud</p> <ul style="list-style-type: none"> 5G Cloud native and CNF infrastructure deployment and testing 	<p>Dell Technologies</p>  <p>5G Core</p> <ul style="list-style-type: none"> Selected for 5G Core infrastructure deployment, server and storage 	<p>Dell Technologies</p>  <p>Complete Multi-Cloud</p> <ul style="list-style-type: none"> TIM's NFV-I Servers, IT Server and TIM Cloud (B2B) 		

Dell Technologies as a Services Partner

- With its deep expertise in product development and lifecycle management as well as ability to scale coupled with an industry-leading services delivery organization, we are well-suited for supporting your ORAN plans

End to End Program Management

Day 0 – Design/Build/Integrate

- ✓ Solution Analysis and vendor qualification support
- ✓ Multi-site Telco Cloud Platform for core & edge
- ✓ Systems Lab Design and Deployment
- ✓ Integrate workloads vertically with the Telco Platform
- ✓ Integrate vendors horizontally across network functions
- ✓ Network Design (Core, Ran, Transport)
- ✓ Network equipment swap plan

Day 1 - Production

- ✓ Deploy Telco Cloud Platform for core & edge and hydrate with VNFs
- ✓ Cell Site Conversion
- ✓ Site Acceptance
- ✓ Coverage verification
- ✓ Performance optimization

Day 2 - Operate

- ✓ Knowledge Transfer to Handover
- ✓ Managed Operations
- ✓ Optional Managed Services

Multi-site Telco Cloud Platform for Core & Edge with Next-gen Automation and Service Enablement



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