

Customer Solution Centers

Innovation Lab



Customer Solution Centers

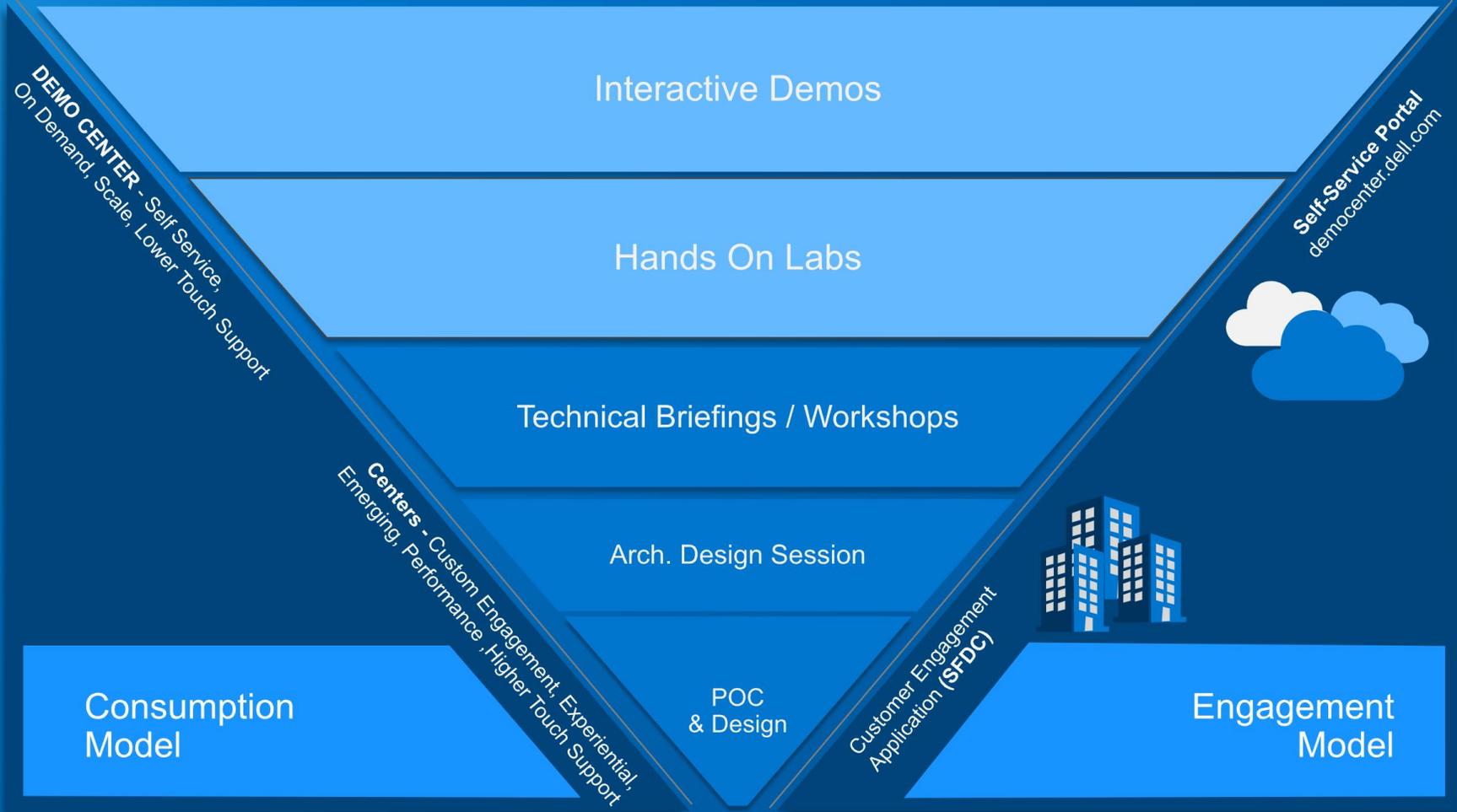
12
Countries

19
CSCs



📍 = Customer Solution Center
📍 = CSC Global Validation Center

Customer Solution Centre – Our Services



CSC Vertical Showcases



Industry
4.0



Fintech



Connected
Healthcare



Connected
Retailer



Connected
Ocean



Command &
Control



Connected
Energy



Digital Cities



Connected
Transportation



Edge



Telecom



Digital Twin



AI/ML/DL



Analytics



AR/VR



Client / Edge Compute



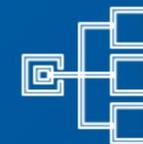
Servers



Storage



Data Protection



Networking



CI/HCI

OEM

Project APEX

Dell Services

Alliance Partners & SIs

Learn more: <https://www.delltechnologies.co...>



Computer vision

Innovation Lab – Virtual walkabout Stops

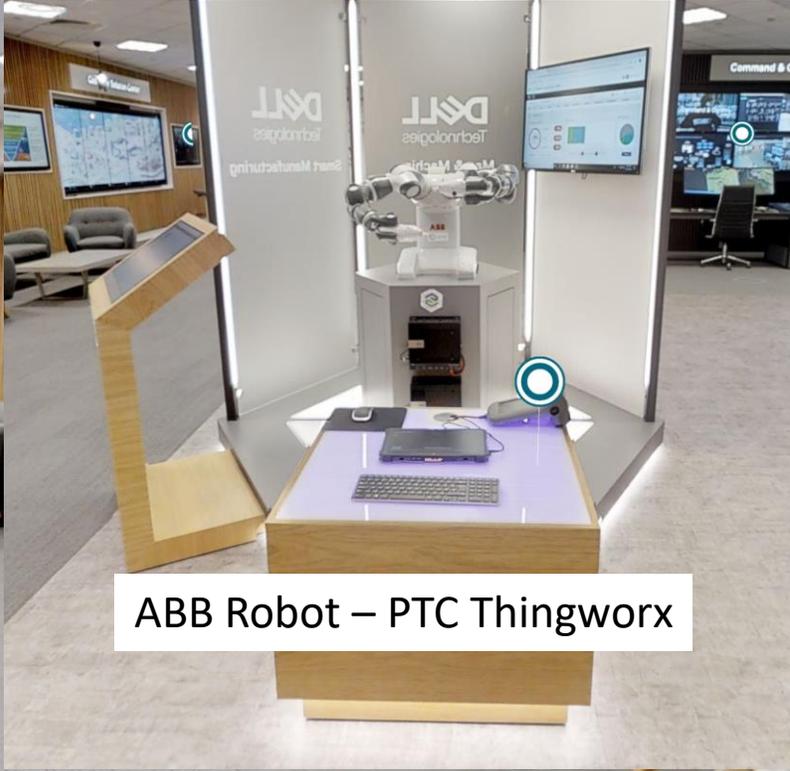


ABB Robot – PTC Thingworx



Pump – Predictive maintenance

Edge is Everywhere

Education



Retail



Logistics



Connected Buildings



Safety & Security



Telco / 5G



Finance



Smart Cities



Military



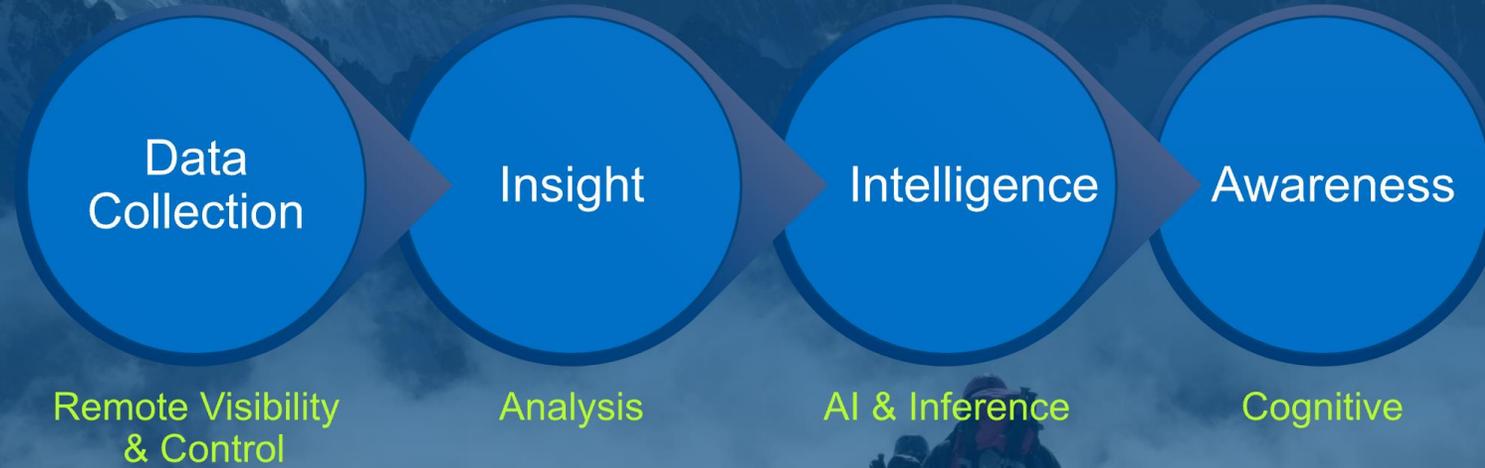
Manufacturing



Health Care



Edge Data Flow



Challenges & Requirements at the **EDGE**



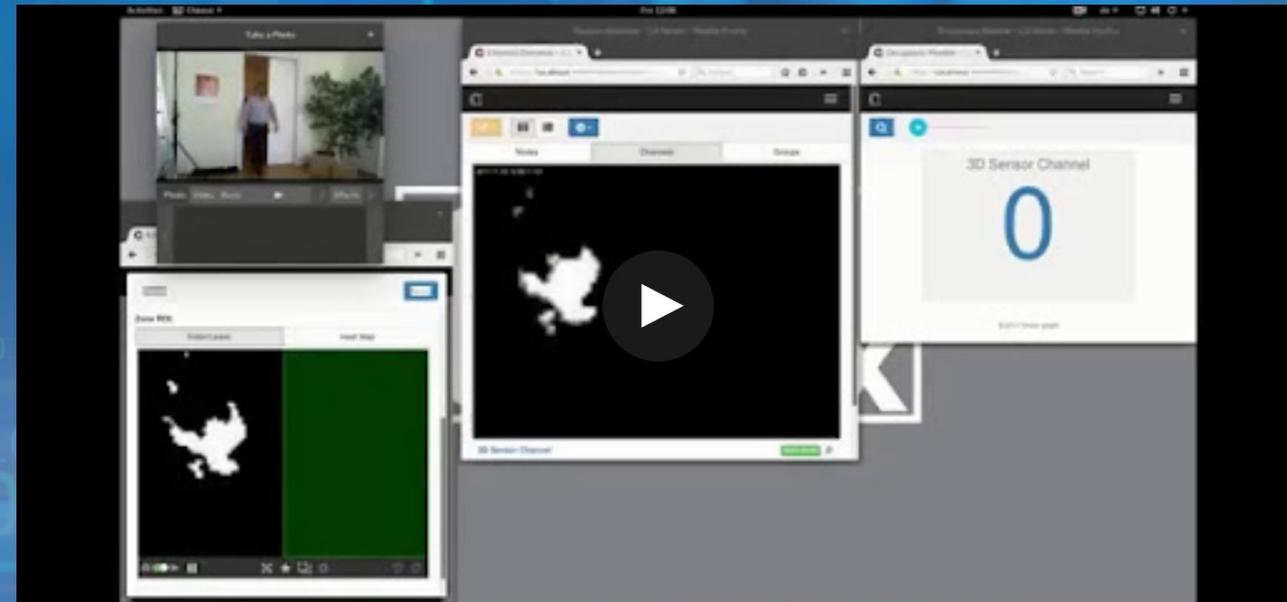
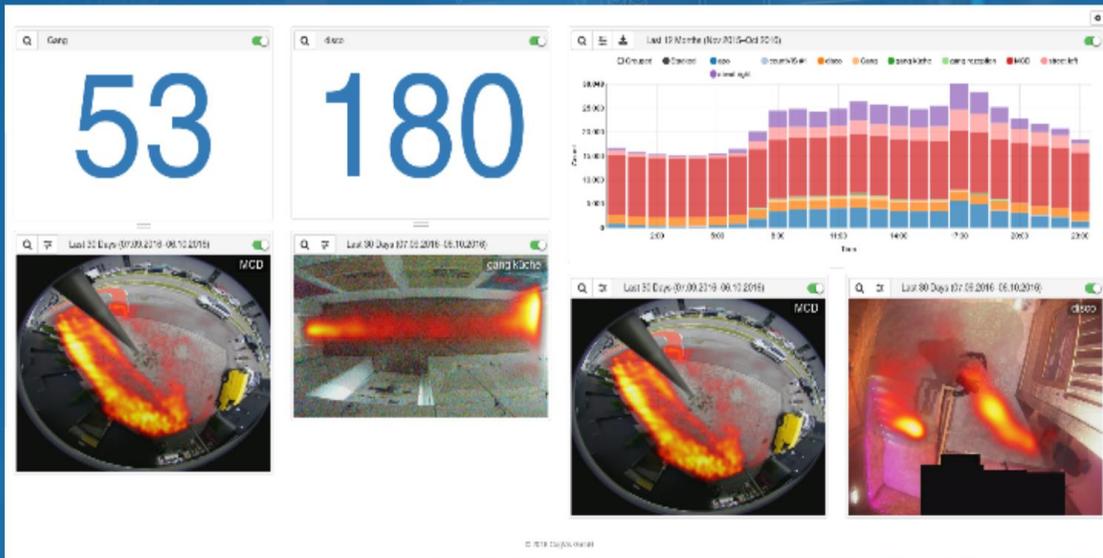
SAIMOS® – 2D/3D Counting

- People Counting with camera or 3D sensor (higher accuracy)
- Accurate and reliable with flexible deployment options:
 - Counting & Heatmapping
 - Occupancy monitoring (statistics & alerts)
- Detection of tailgating and abandoned objects

Stereo Camera
Vivotek SC8131



ToF Depth Sensor
Argos3D - P2 Series



Smart Factory in a Connected Ecosystem



Smart Buildings

- AI, sensors and BMS integration **optimize energy usage**.
- Edge analytics and video analytics optimize building **utilization, safety and security**.



Transportation & Logistics

Real-time monitoring and predictive analytics to coordinate land and sea fleets of vehicles / ships, **optimizing loads, reducing emissions and increasing supply chains efficiency**.



Factory Floor

- AI-powered robots and cobots **increase agility & productivity**.
- Predictive Maintenance **reduces operational downtime**.
- Machine vision improves **Quality & Safety**.



Natural Resources / Mining / Oil & Gas

Deploy sensors, mobile telemetry and connect assets to enable **remote asset monitoring and predictive field services**



Power & Utilities

Smart interconnected Factories **optimize energy use & harness energy recovery**

Smart metering, sustainability and demand side response **enable operational cost reductions via clean energy generation**

Augmented Reality – AR



vuforia™



ptc

Vuforia AR, part of PTC Thingworx, gives you the ability to digitally overlay physical objects and environments with contextual information



- Improve Operators Understanding & Efficiency
- Accelerate Complex Instructions
- Increase Manufacturing Throughput
- Accelerate Training
- Improve Safety



Computer Vision Use Cases in Manufacturing

Machine Intervention

Operators

- getting close to dangerous machinery
- Reaching into restricted enclosures
- Approaching critical control panels
- Line interactions,
ie removing product from the line for sampling



Safety Compliance

Operators

- Compliance of wearing safety equipment
- Movement patterns of people & Vehicles
- Heat mapping
- Entering restricted areas



Product Quality

- In Line repeatable product observation and comparisons.
- Highlight of known defects
- AI model for anomaly detection
- Waste management
- Operator - Productivity



IoT Integration

- Sensor integration for additional data points.
 - Atmospheric Data, LIDAR, PIR
- Object tracking, goods tracking.
- Physical Line Stops, and Notifications – visual, SMS, Email.
- AI model integration
- AR overlays



Remote monitoring

- Visibility to hard to reach areas – inside machinery, or remote locations.
- Thermal cameras for abnormal heat or gas escapes.

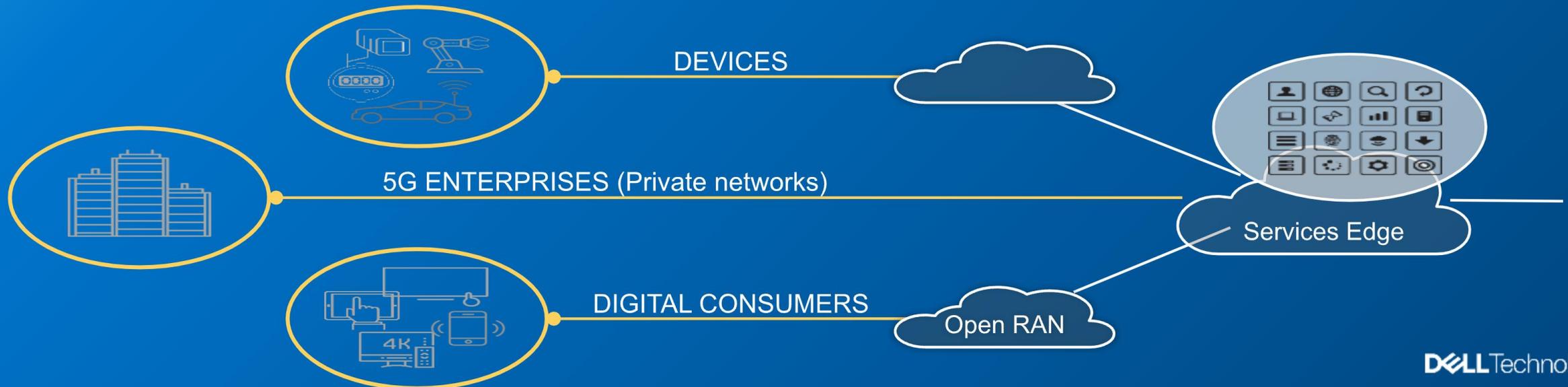
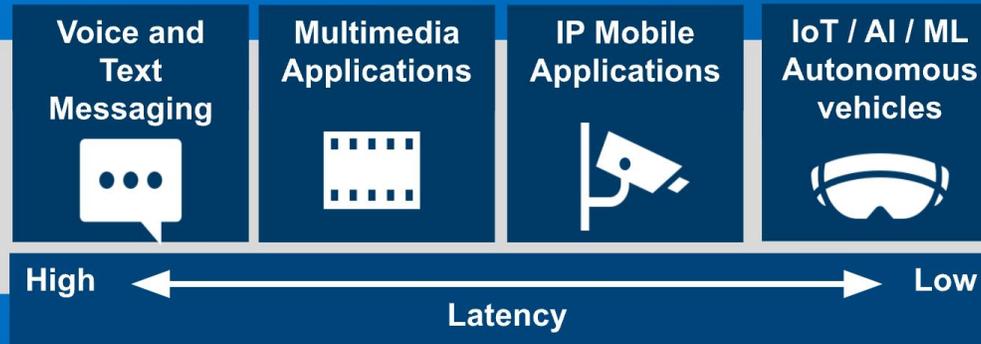


Telecom Transformation at the Edge

Go Beyond Connectivity

Low Latency

Quality of Service



The PowerEdge XR11 & XR12 Servers

*“Edge Servers
for Rugged Environments”*

iDrac Management

Short Depth
(400mm)

Front or rear
connectivity



Optional
Dust Filter

CERTIFIED
RUGGED TO
OPERATE FROM
-5C TO 55C

REAL-TIME BIOS SCANNING AND
SILICON ROOT-OF-TRUST
PROVIDES ROBUST SECURITY

CERTIFIED RUGGED TO
MILITARY, MARINE &
TELCO STANDARDS
(MIL-STD, NEBS Level 3
and DNV-GL)

VxRail at the Edge

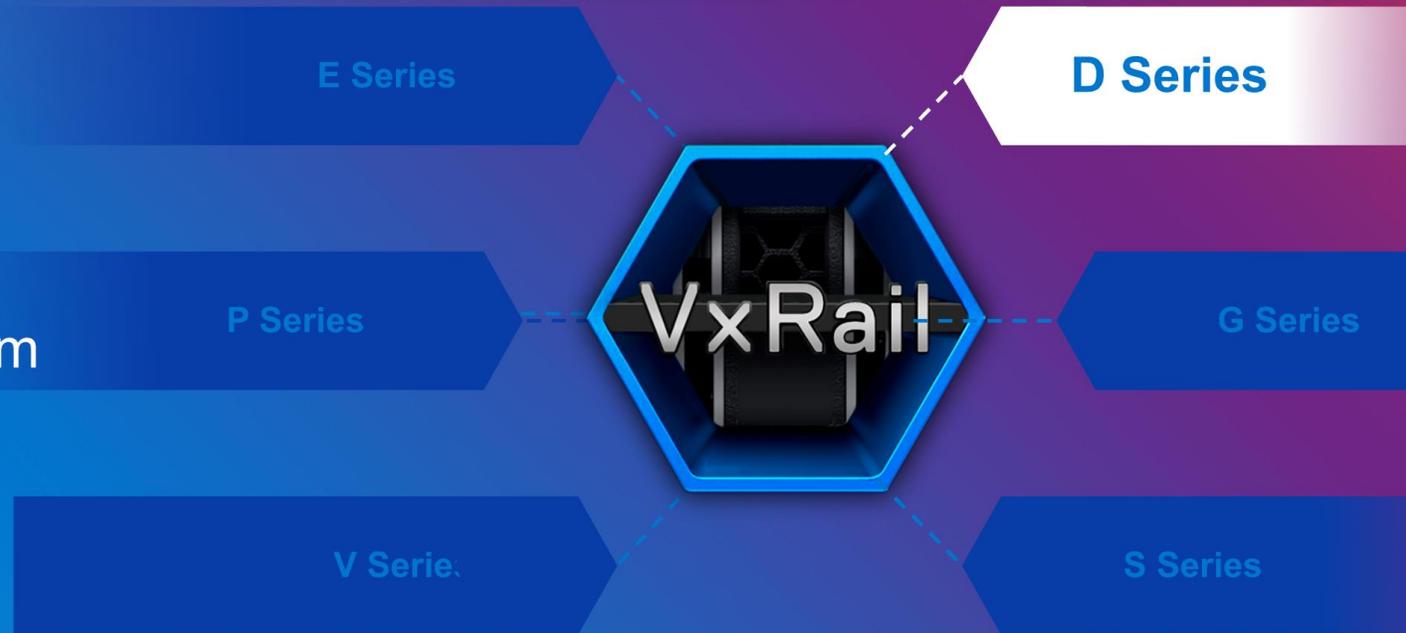
Extend the agility, scalability and simplicity of VxRail beyond the datacenter to space-constrained, remote, and harsh environments without compromising on performance.

Reduced footprint, ruggedized HCI platform that is temperature resilient, shock resistant, and easily portable

Comprehensive security by design

EAL2+ / NIST Certified/ Secure boot/ FIPS 140-2 Level 1 validated cryptography

Resilience with the D-series



2-Node vCenter | Witness



The 6U Micro-Datacenter at the Edge

By Schneider Electric



- Up to 3U of Dell EMC servers
- EcoStruxure IT software for remote equipment management, temperature and Humidity monitoring, providing transparency as well as analytics to optimize performance, at scale.

Wall Mount / or Casters

EcoStruxure Monitoring

UPS

Switch

PDU

Ventilation

Dust Protection



 Innovation at the Edge - Faster, Flexible, Scalable!



Customer Solution Centre – How we help

Experience



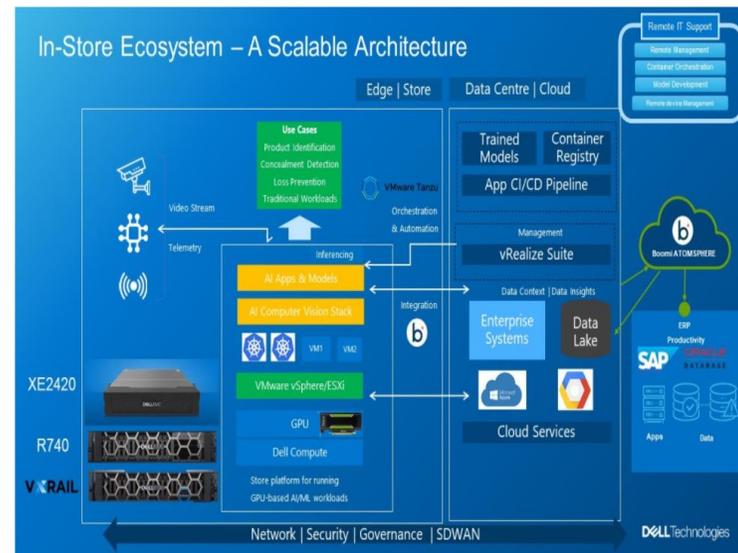
SEE how Dell Technologies & our partners build solutions focused on your specific industry's requirements

Create



Work with our architects & partners to **DESIGN** a solution to fit your business needs

Test



Working with specialists to create, **BUILD** and test a POC solution that will deliver your business goals

CREATING YOUR FUTURE