



Autonomous E2E-Optimized Network Management Technologies

*Su.B.7 – Special – F5G Optical Network Technologies
towards 2025 and 2030 – What, Why and How?*

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First Question

What is from 1984 and has seven layers?





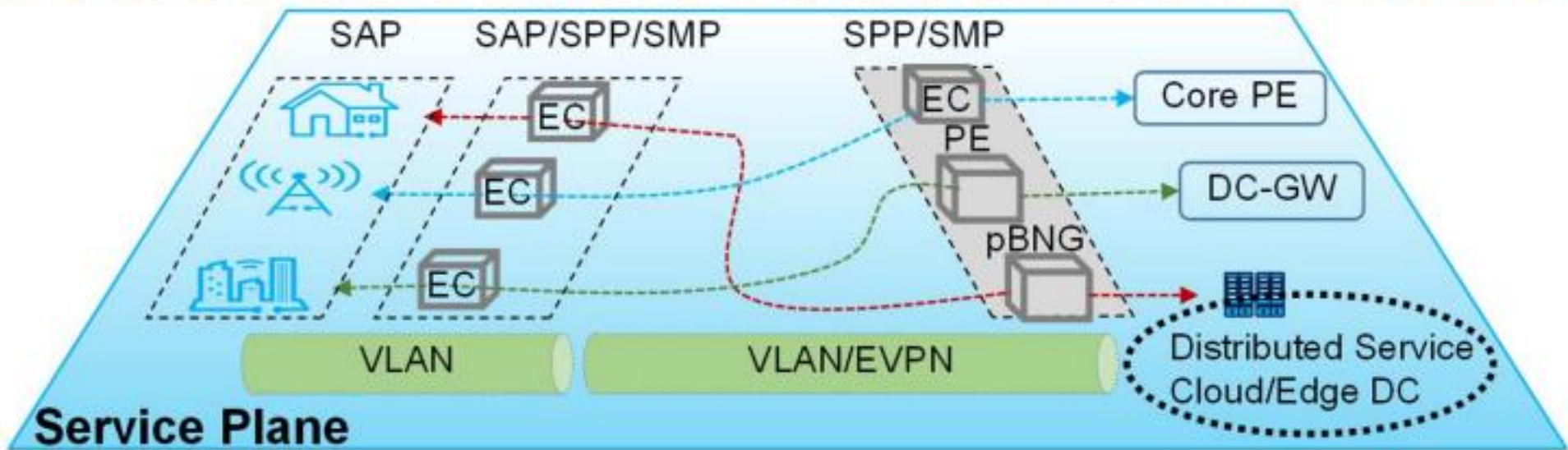
Second Question

What is from 2022 and defines the F5G **E2E management and control architecture** as a subset of the overall F5G MCA Plane?

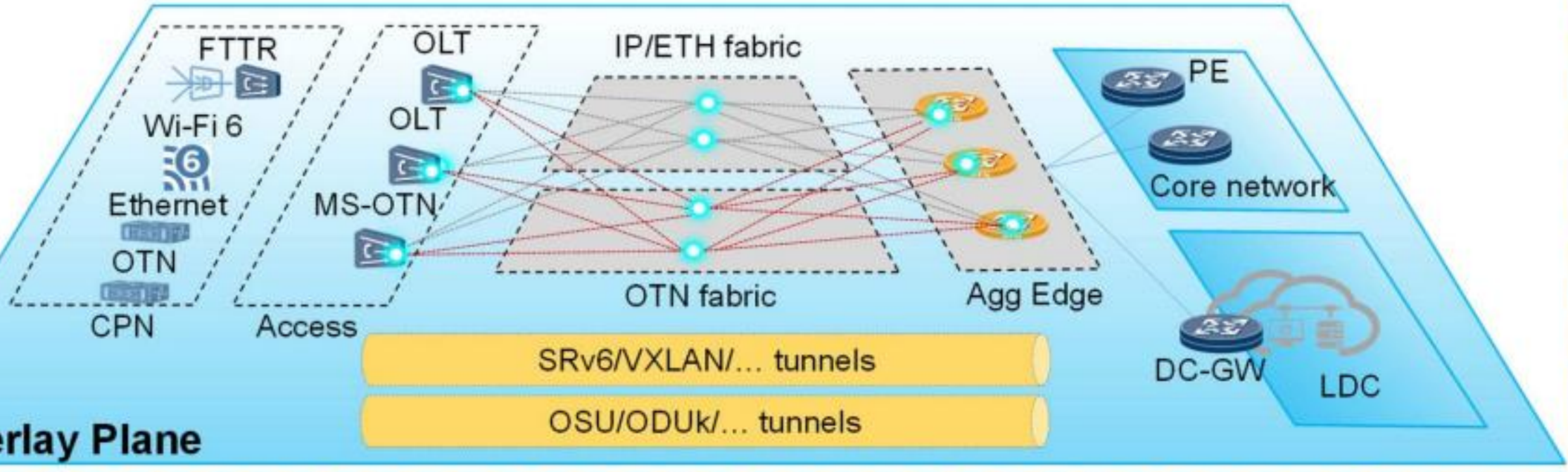
ETSI GS F5G 006 V1.1.1 (2022-09)



**Fifth Generation Fixed Network (F5G);
End-to-End Management and Control;
Release #1**



Service Plane



Underlay Plane

Figure 1: F5G network architecture

The green economy



- Climate change
- Geopolitical events

RESULT

Increased focus on *energy per bit*

The rise of coherent pluggables

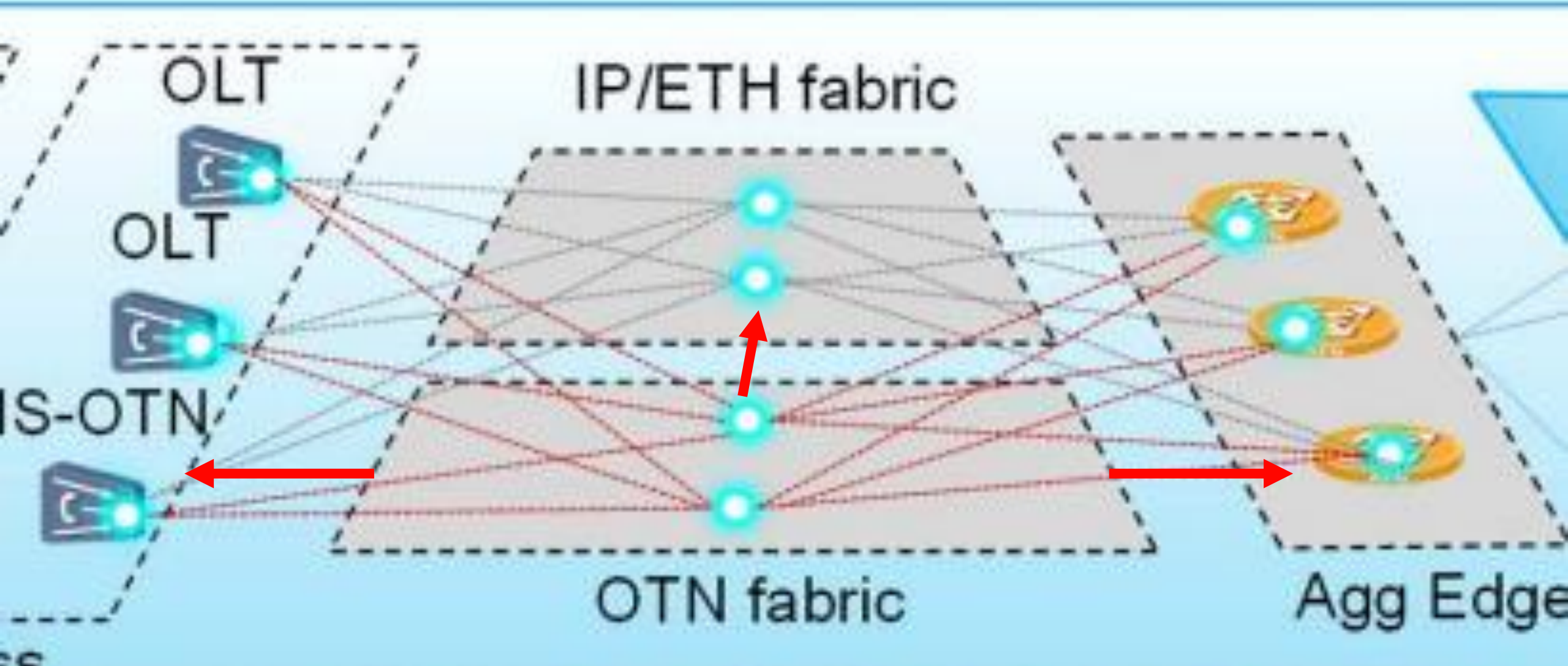


- Shannon's limit is looming
- Inflection point: optimize for space & power

RESULT

Big impact on hardware architectures

Architecture Needs to Adapt to Hardware Implementation



Workforce demographics

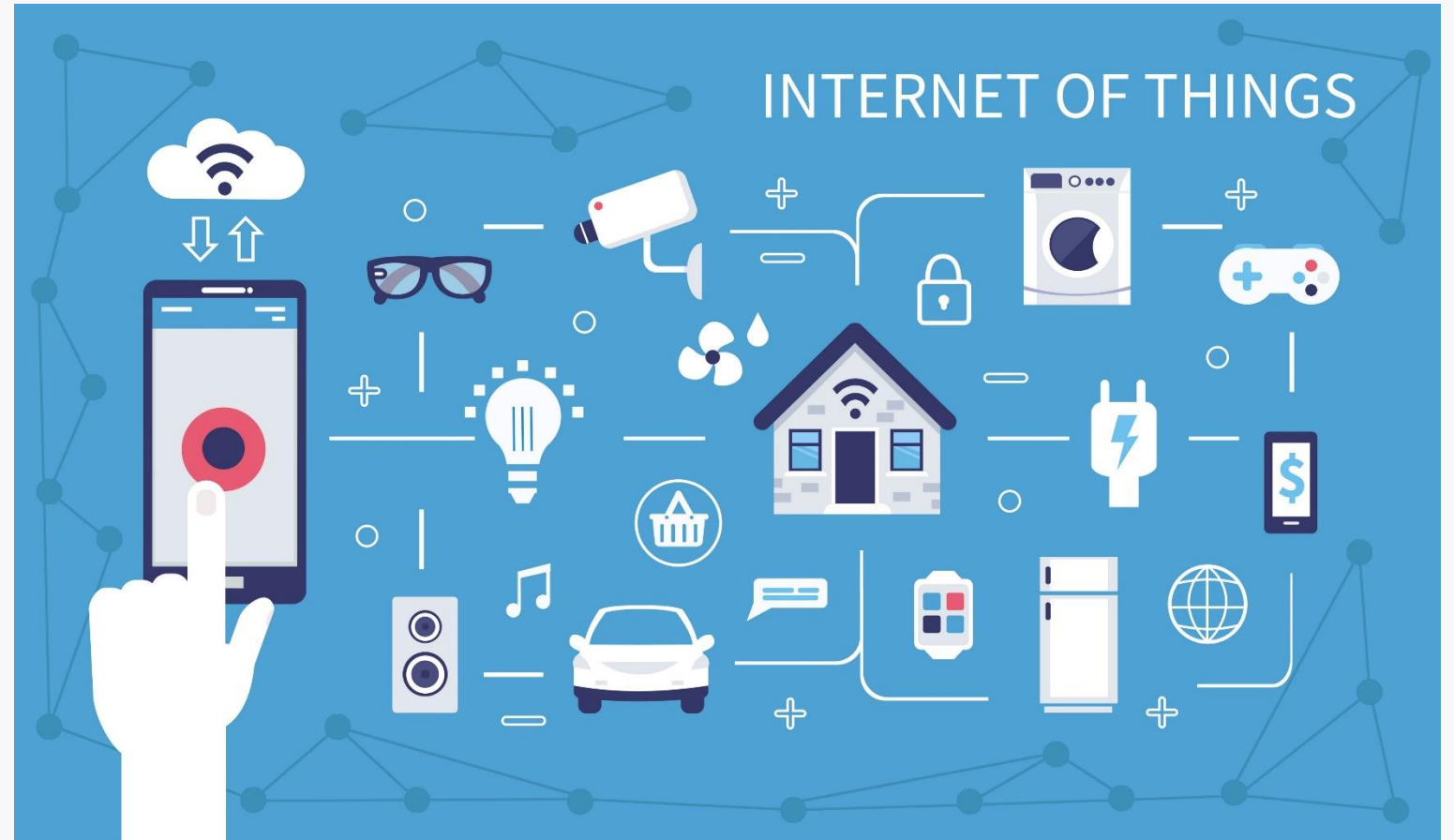
- Telecom boom in the 1990s
- Supplier consolidation in the 2000s



RESULT

Opportunity / challenge as veterans will start retiring

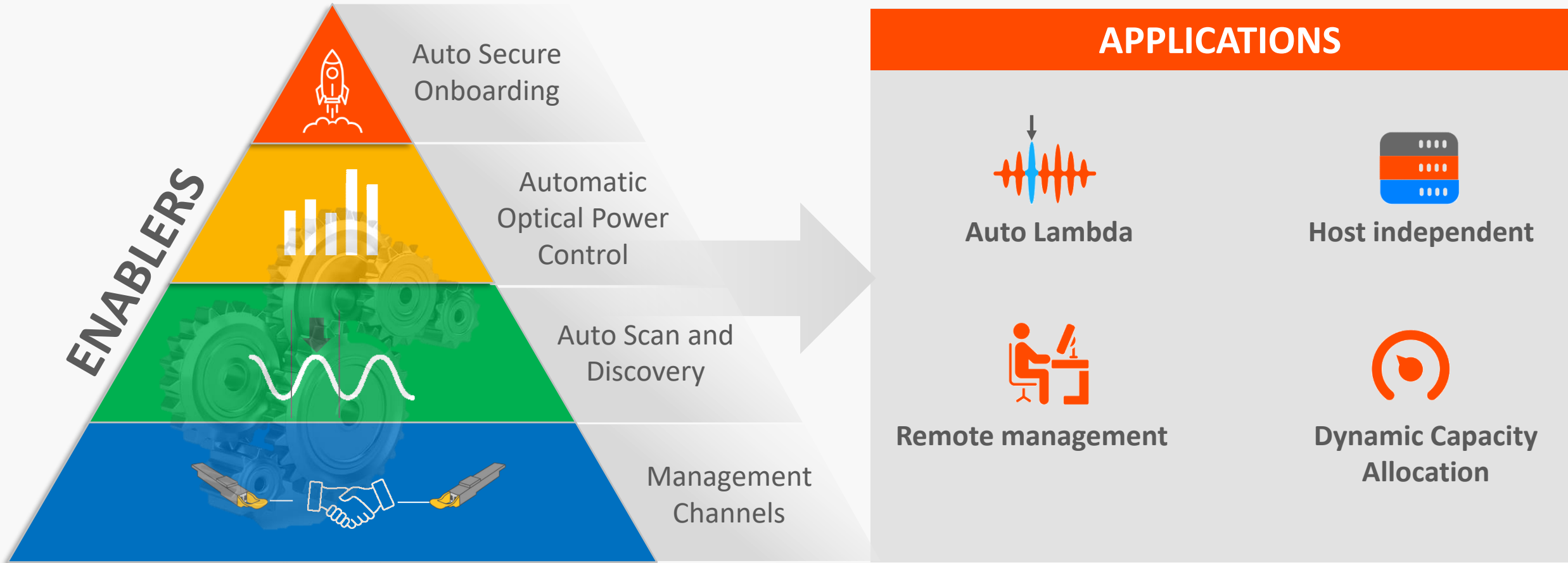
Taking Cues from Adjacent Markets II



Taking Cues from Adjacent Markets I



Example: Infinera Pluggables with Zero-Touch Provisioning



Wrap-up



- Leverage new software tools
 - Attractive to new employees
 - Improves productivity
- Take inspiration from adjacent fields
 - Solutions may already be at hand

Thank You

