

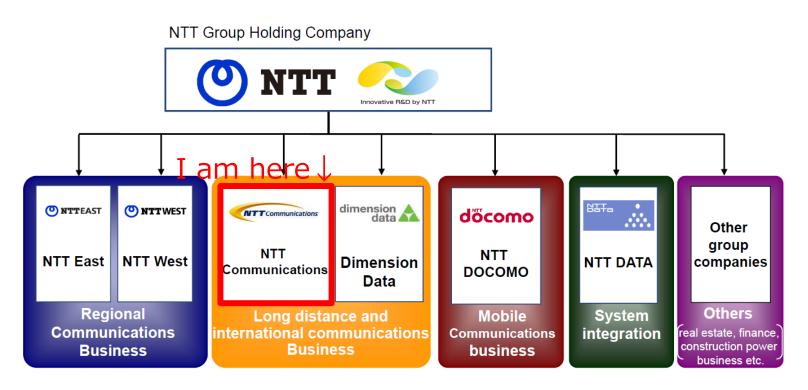
CORD Activities in NTT Group

Dai Kashiwa

Director, NTT Communications Board member of ONF Board member of ONOS/CORD

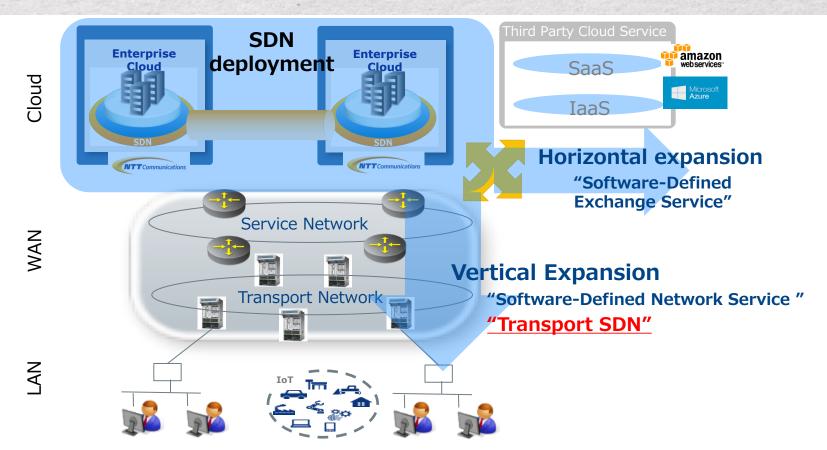
Transform your business, transcend expectations with our technologically advanced solutions.

NTT Group Business Domains



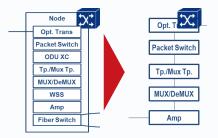
Copyright©2017 NTT corp. All Rights Reserved.

SDN Deployment Expansion in NTT Communications



Technical Challenges

- Disaggregated devices
 - Speeding up technical innovation
 - Inventory optimization



- Open SDN Controller
 - Customizability
 - Faster time to market
 - Interoperability
 - **CAPEX/OPEX reduction**



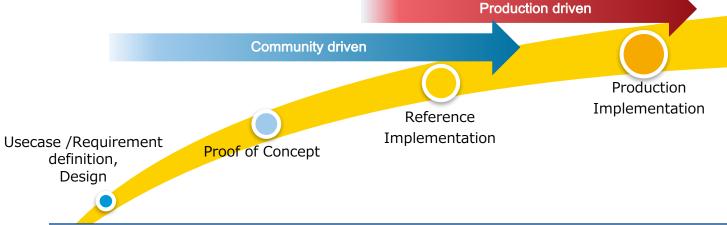
- 3 Value-added VNFs
 - Fully and advanced automation & Visualization
 - Telemetry
 - AI / Deep learning







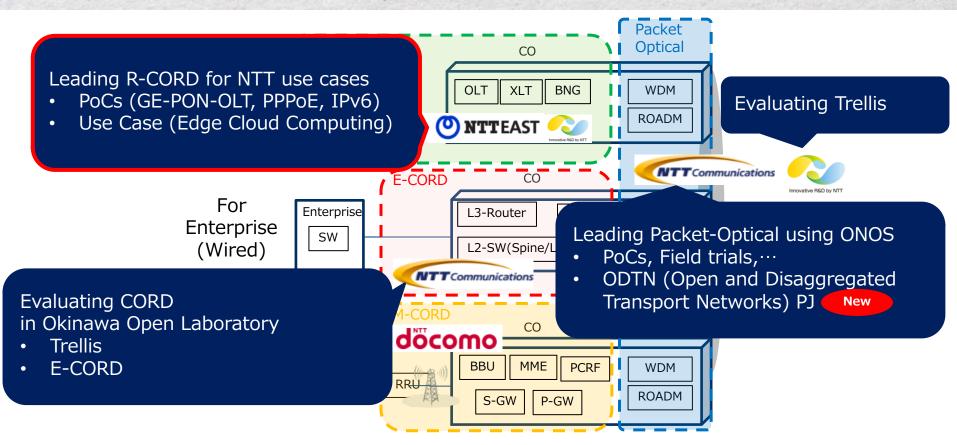
Expectations for ONOS/CORD Maturity Level Enhancement



Requirement	PoC	Reference	Production
Easy installment, Documents		. 4.4	:4:4(4)
Functions			:4:4(d)
Usability/Operability		. 4	.A.A(A)
Performance/Scalability		. 4	:4:4(4)
Quality/Availability		ĿĠ	.4.4(4)

Excellent	
Sufficient	
Minimum	
N/A	

Use Case Mappings



ODTN (Open and Disaggregated Transport Networks)

Technology Reference Architecture Component Community **YANG Service** Open **ROADM**) Model Common T-API, ONOS intent, **Data** OpenROADM service, Model **Dynamic Config** Compiler & Run-Data time Service to Model **YANG** device Language application Distributed Config Open Store **Source ONOS** Controller **YANG Device OPENCONFIG** Open Model **NETCONF / gNMI** Open ROADM **Protocols** Legacy & Disaggregated ROADM **Device Layer Open Line System**

Ref) CORD Evaluation at Okinawa Open Laboratory

- Purpose
 - Evaluate CORD from the perspective of production network deployment
- Action Plan
 - Step 1: Build and evaluate Trellis
 - Step 2: Construct VNF Platform with E-CORD
 - Step 3: Field trial at Okinawa
 - Step 4: Install CORD into production network

Now we built Trellis environment and started testing several items for Trellis.

Details will be presented in E-CORD Track on Thursday:

"Service Provider Experiences with E-CORD: NTT Communications & OOL" November 9 3:00pm— 3:30pm