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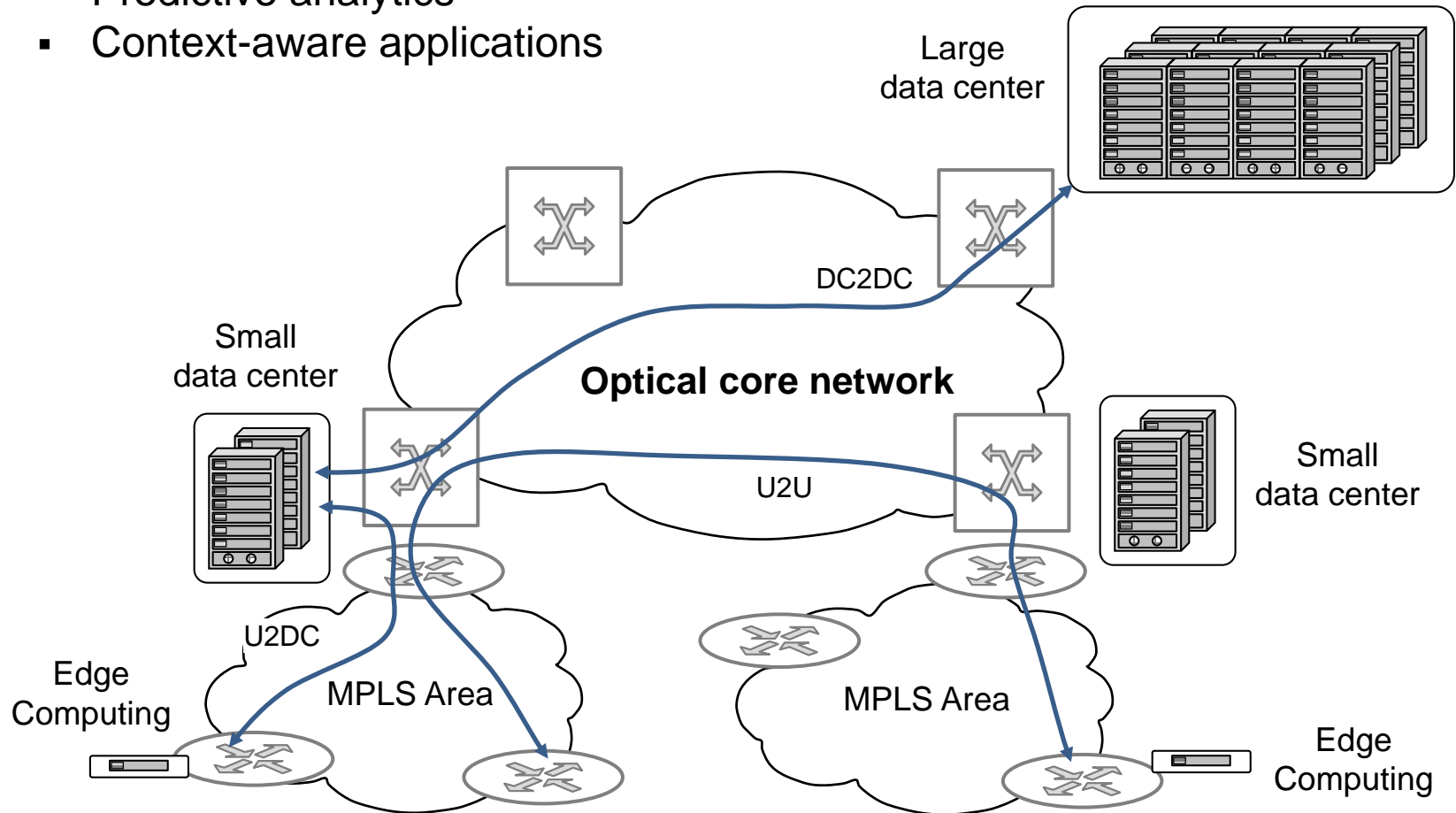
Castor
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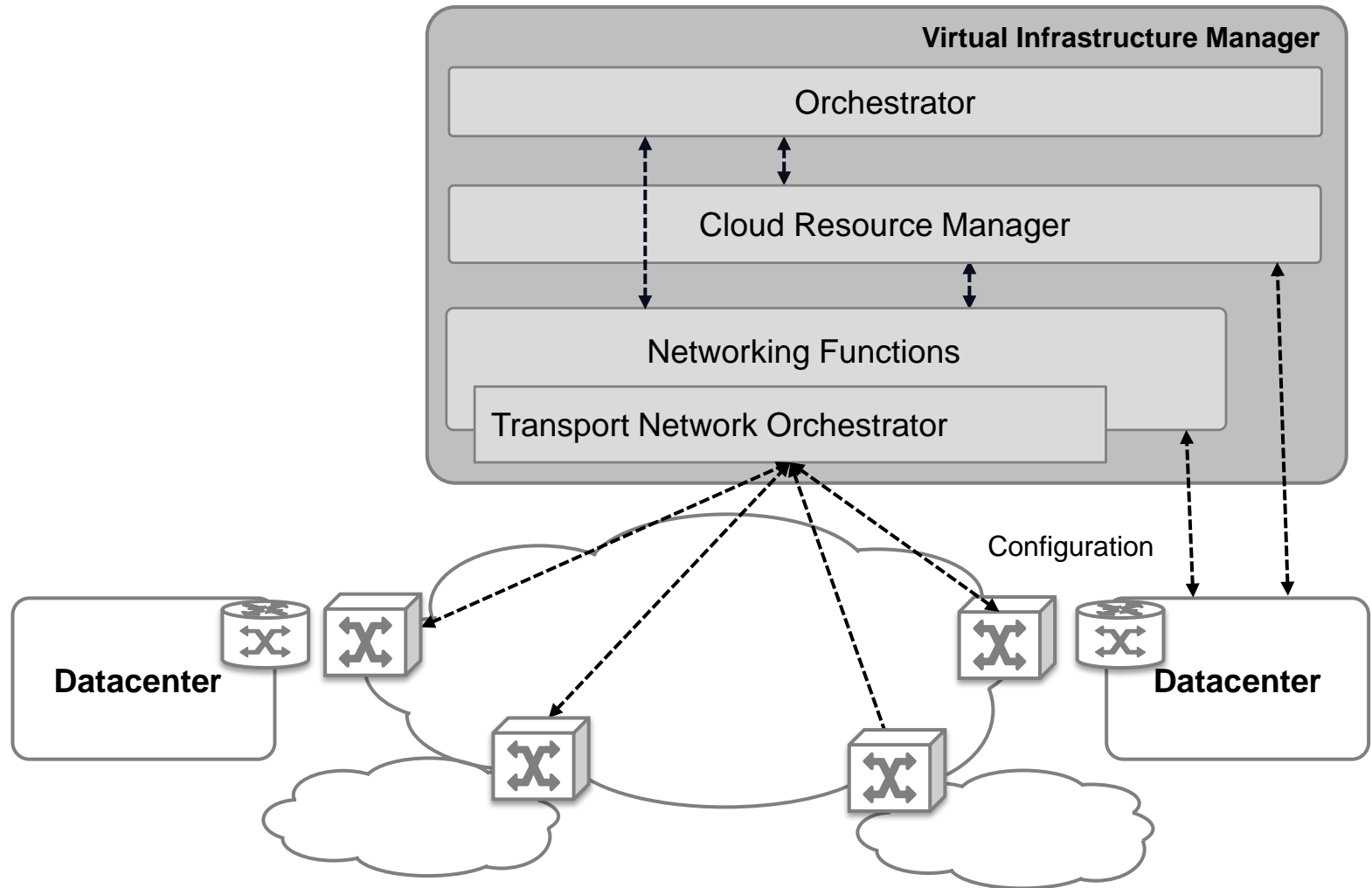
Data Analytics to Support Telecom Cloud Self-Adaptation

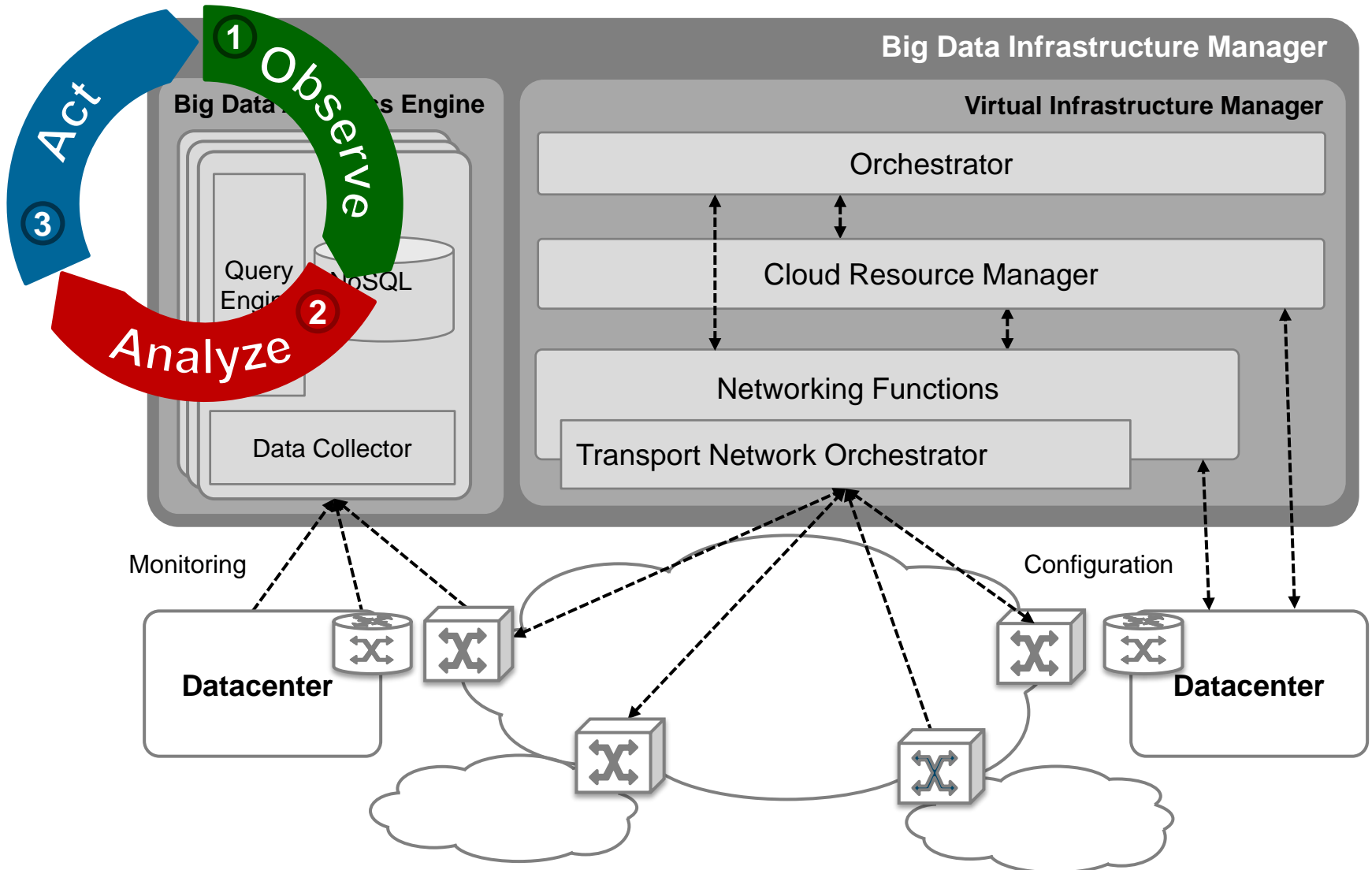
Luis Velasco
(lvelasco@ac.upc.edu)

OFC 2017

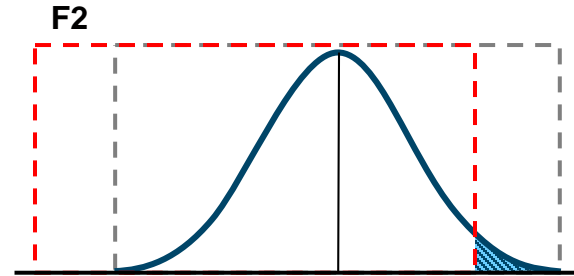
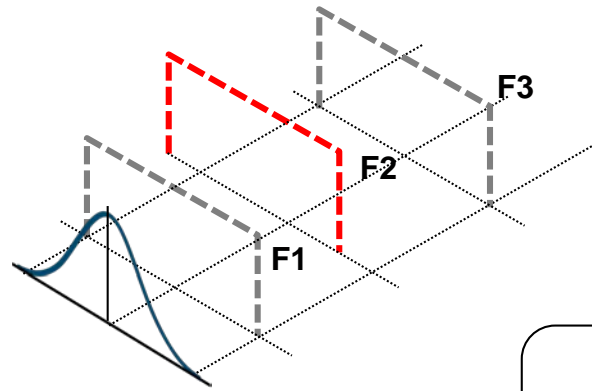
- New Business models
- Introduce new attractive data-driven services
 - Predictive analytics
 - Context-aware applications



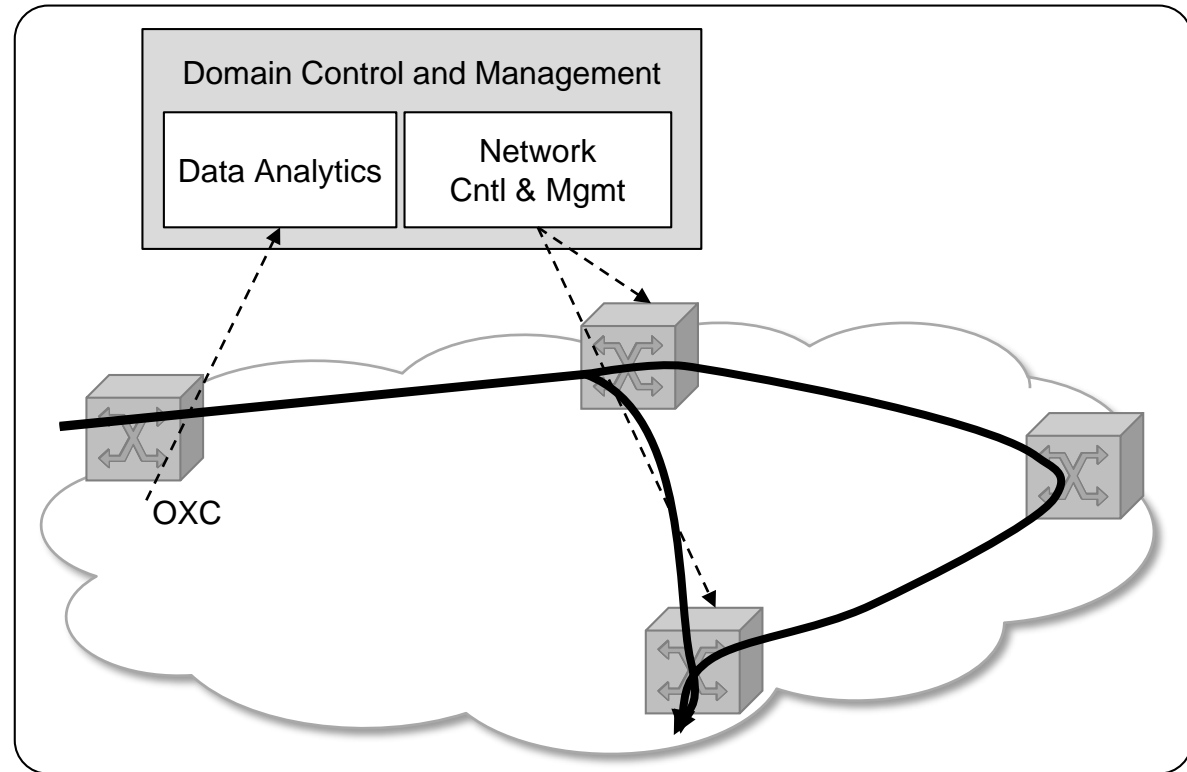
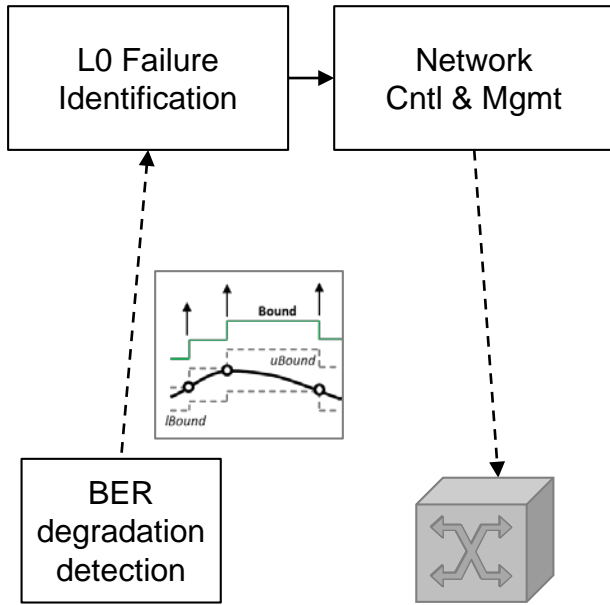




Use Case 1: L0 Failure Detection and Localization

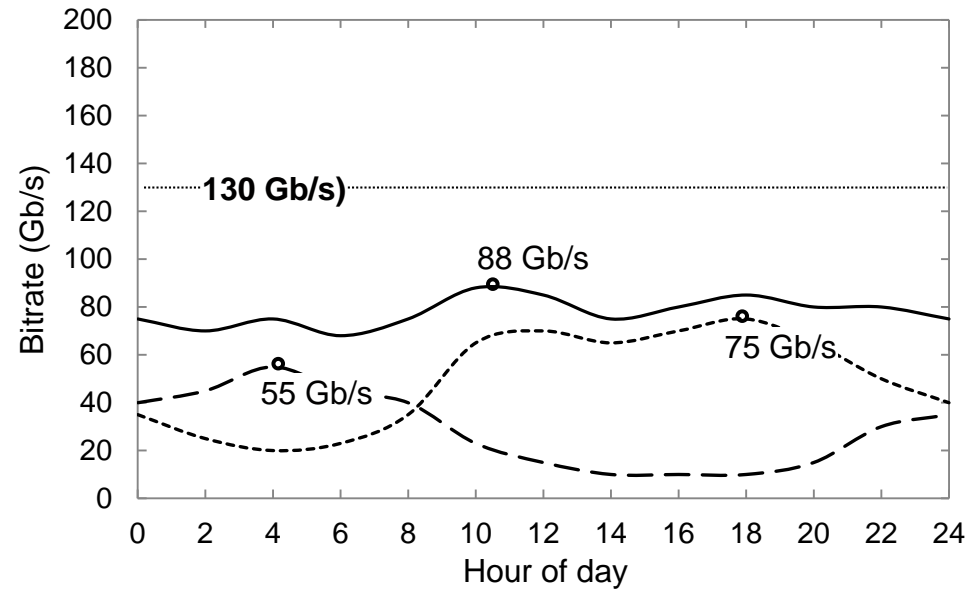
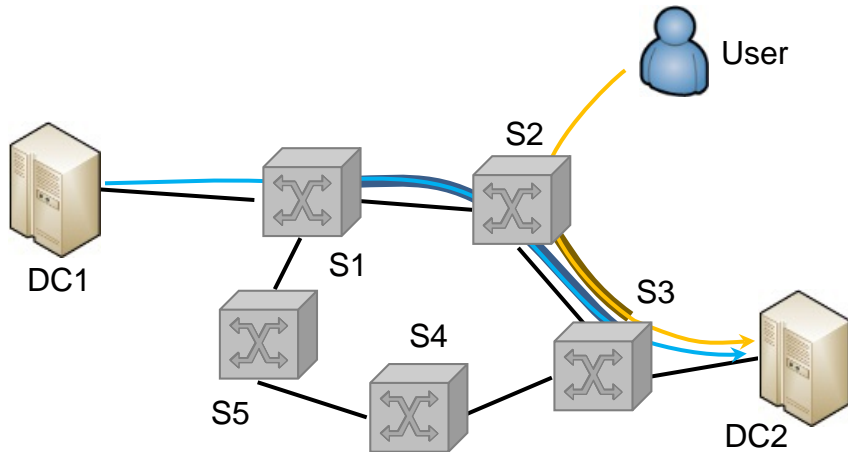


OAA loop



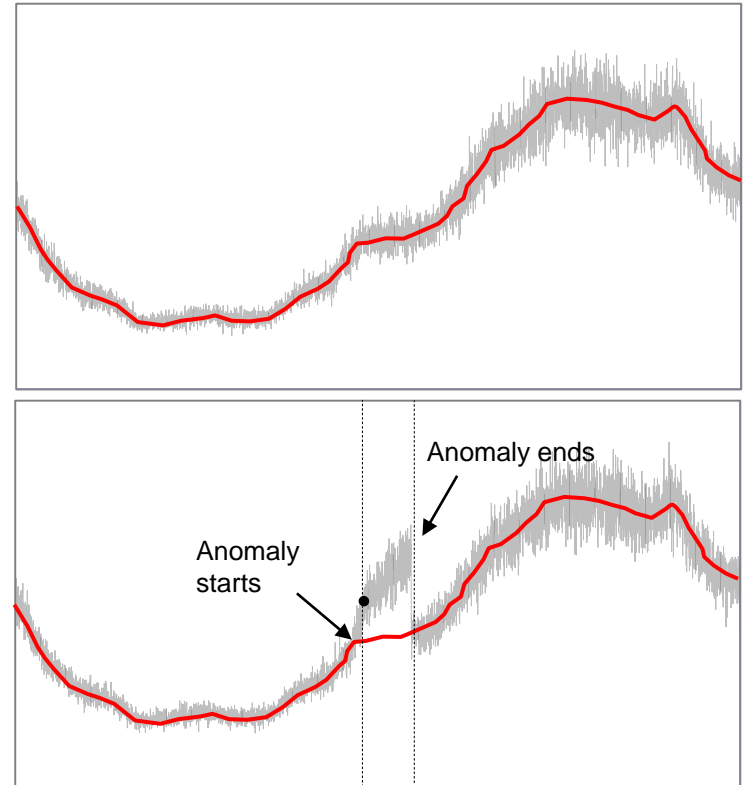
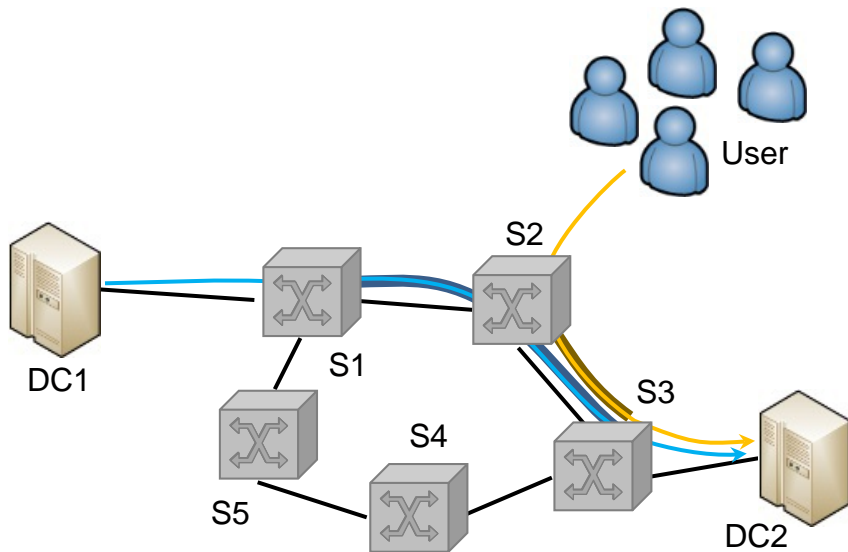
A. P. Vela, "Early Pre-FEC BER Degradation Detection to Meet Committed QoS," OFC 2017.

Use Case 2: L2 VNT self adaptation



LI. Gifre, "Experimental Assessment of Node and Control Architectures to Support the Observe-Analyze-Act Loop," OFC 2017.

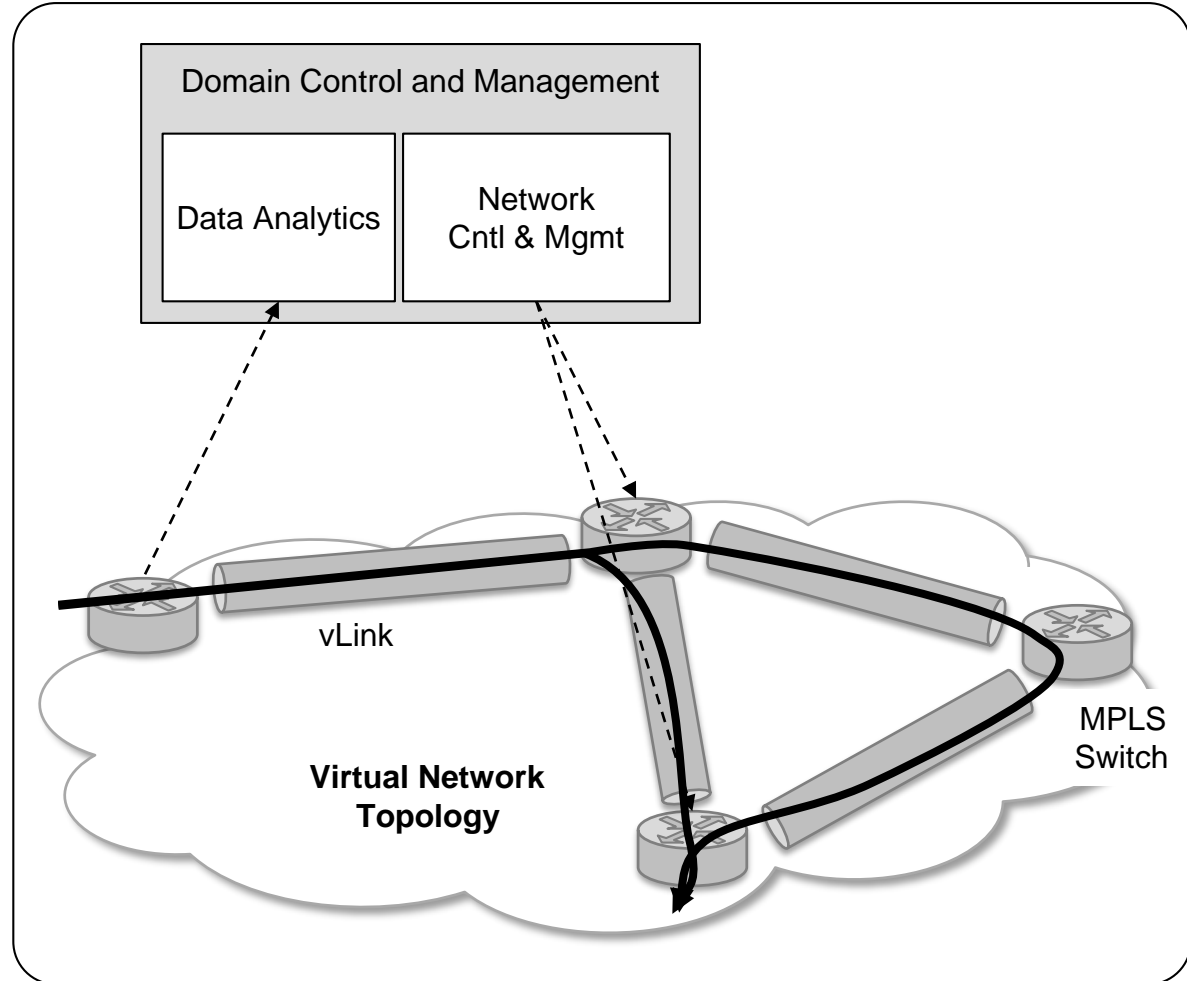
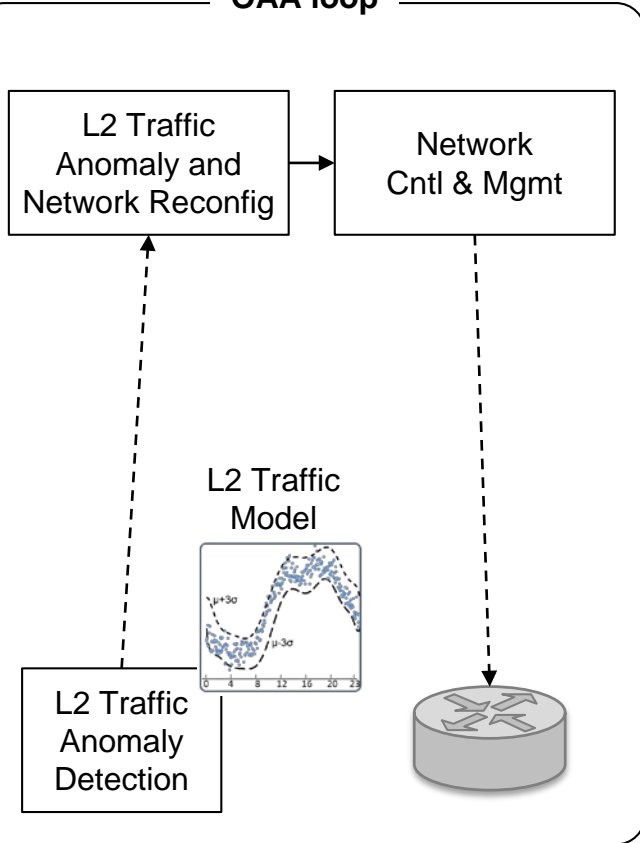
Use Case 3: L2 traffic anomaly detection



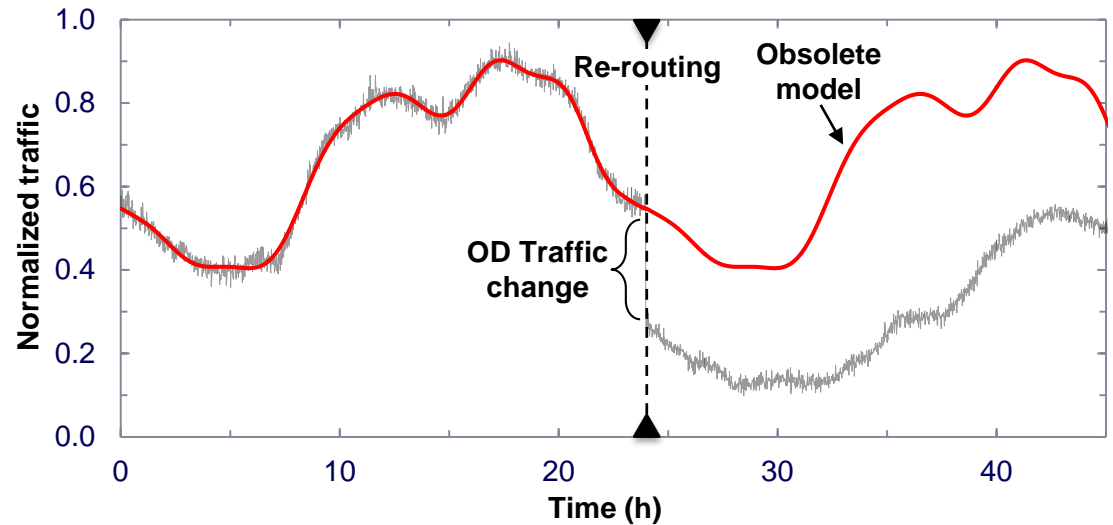
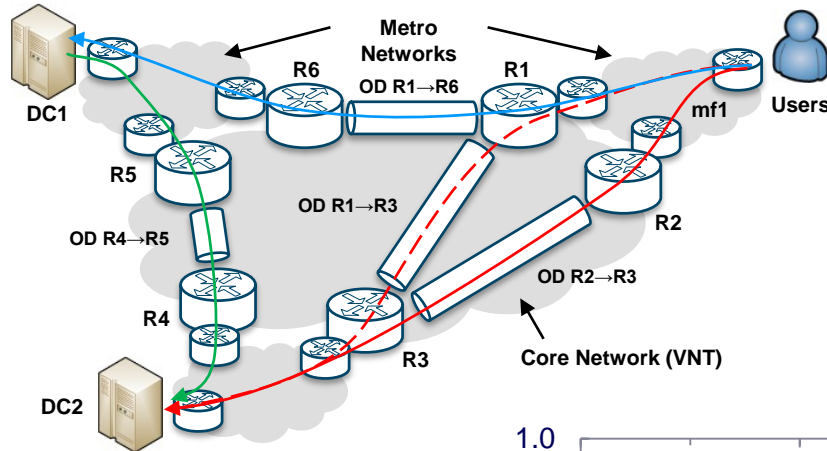
A. P. Vela, "Bringing Data Analytics to the Network Nodes", ECOC 2016.

Use Cases 2-3: L2 traffic anomaly detection and VNT self adaptation

OAA loop

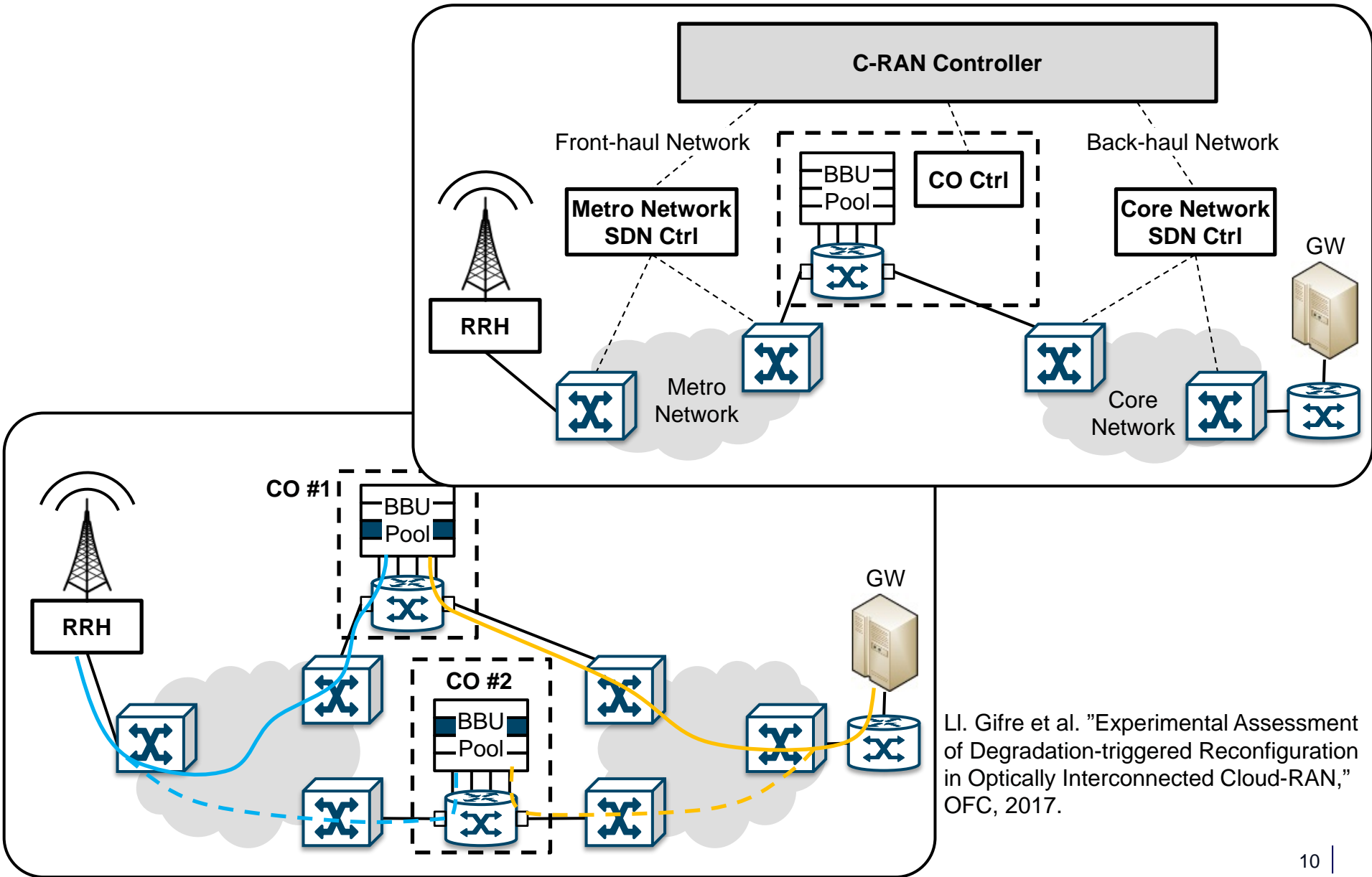


Use Case 4: Traffic models aggregation



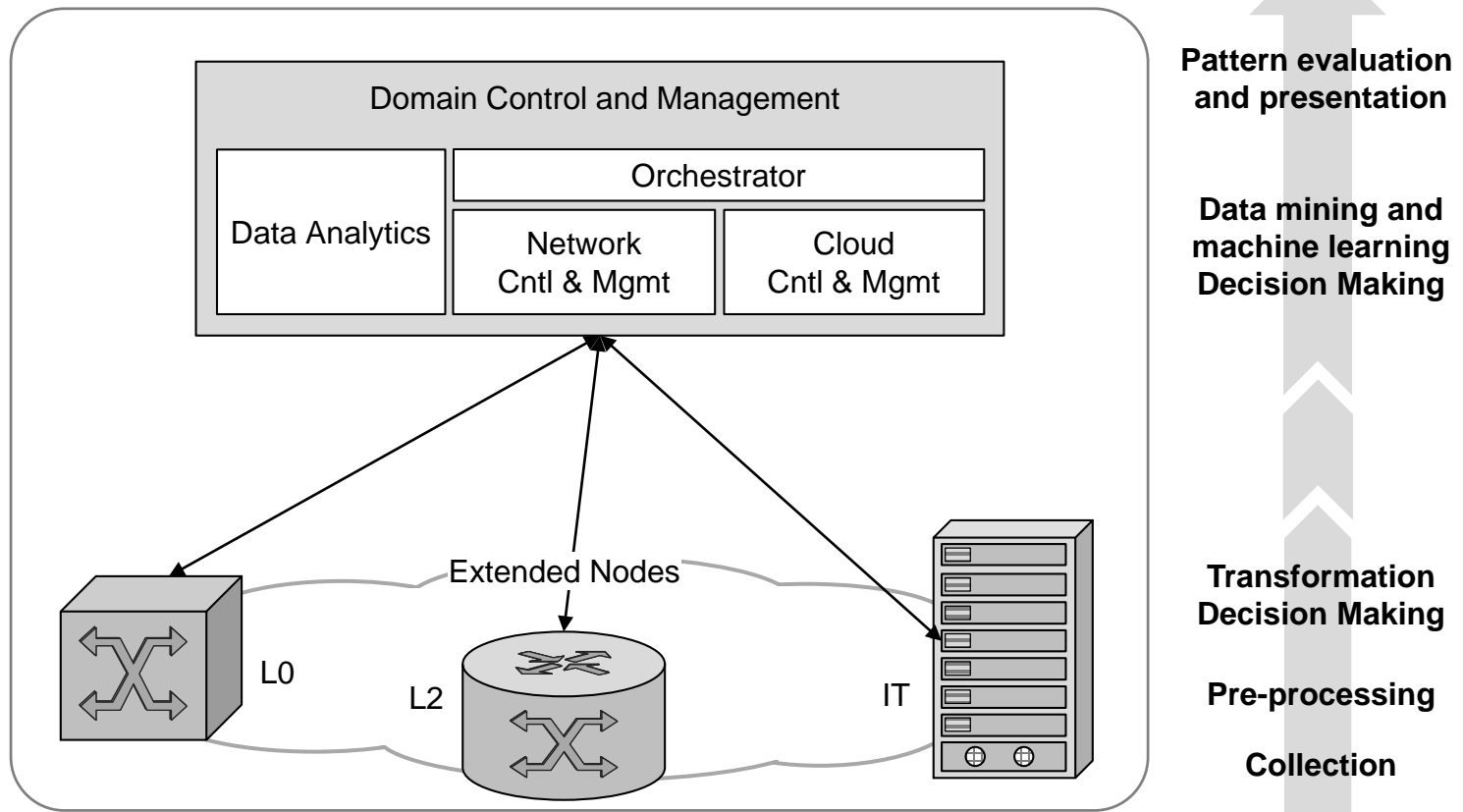
F. Morales et al., "Core VNT Adaptation Based on the Aggregated Metro-Flow Traffic Model Prediction," OFC, 2017.

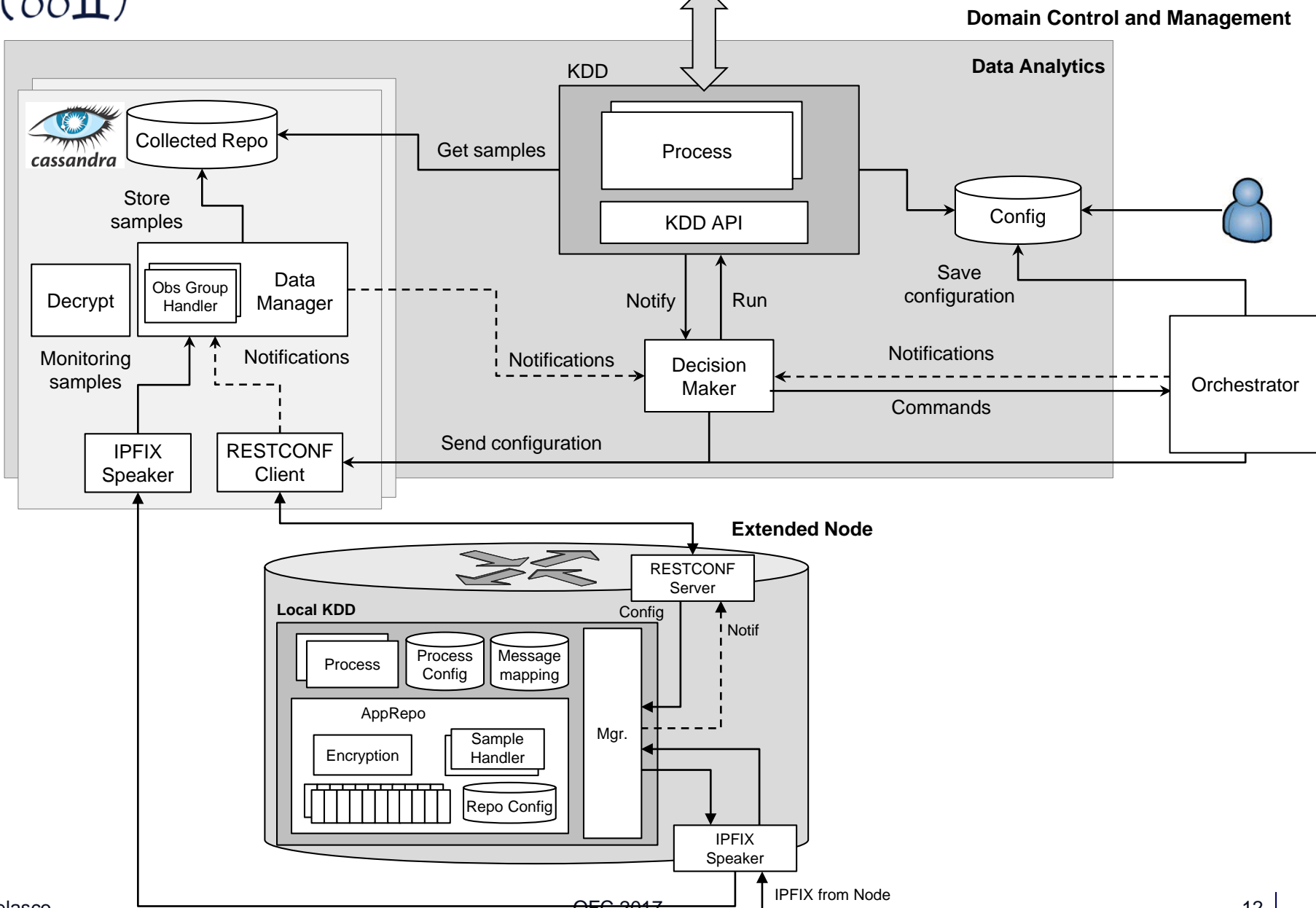
Use Case 5: C-RAN reconfiguration



LI. Gifre et al. "Experimental Assessment of Degradation-triggered Reconfiguration in Optically Interconnected Cloud-RAN," OFC, 2017.

- Single monitoring and data analytics architecture for the whole infrastructure
- Castor connects virtualized components together and enables secure data exchange among them.







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Castor

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Thank You!

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2017