

Open Source  
**MANO**

# OSM Architecture Workshop

NFV World Congress May'17

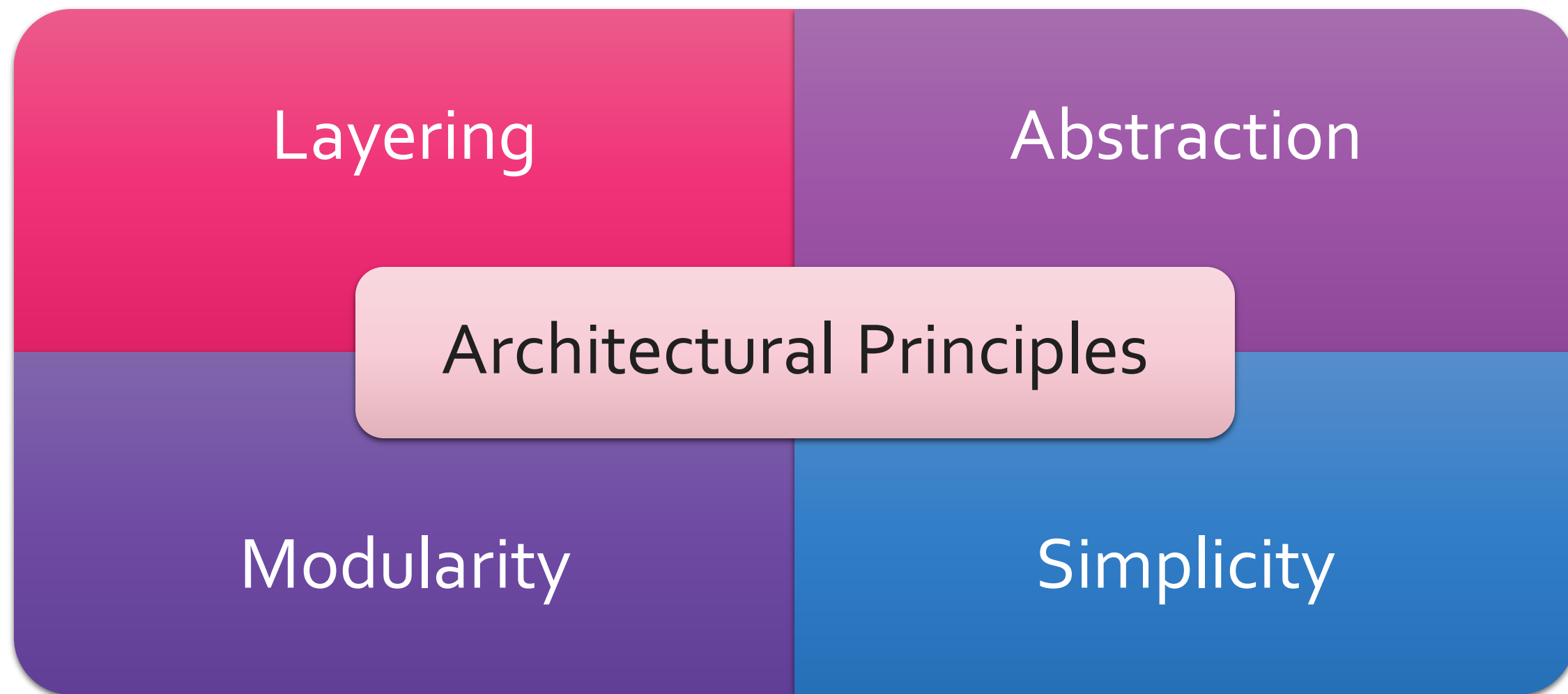
**Adrian Hoban (Intel)**

OSM TSC Chair



# Agenda

- Architectural Principles
- Scope & Mapping to ETSI NFV
- Release TWO Status Update
- Release THREE Goal/Themes



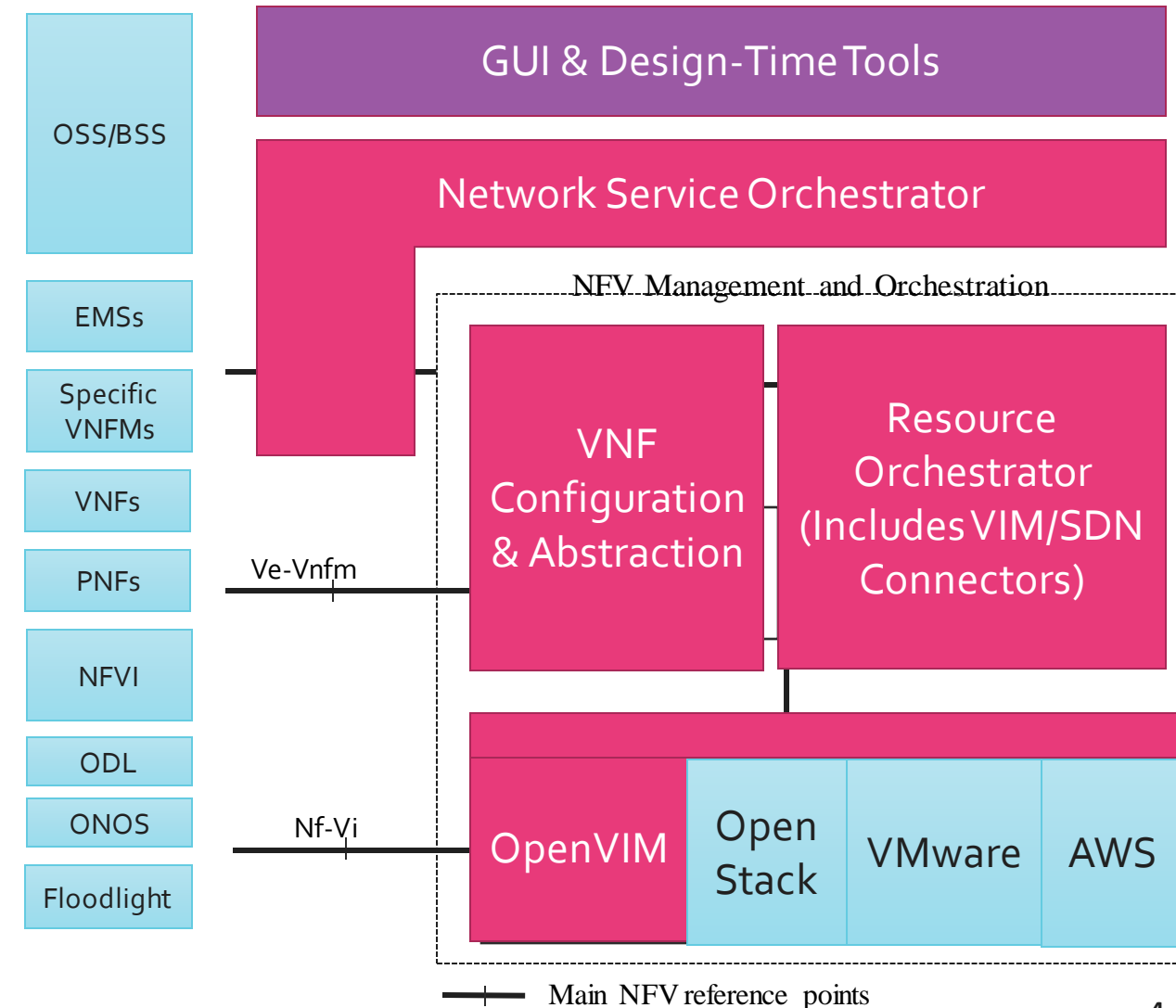
# OSM Scope & Mapping to ETSI NFV MANO

## Run-Time Scope

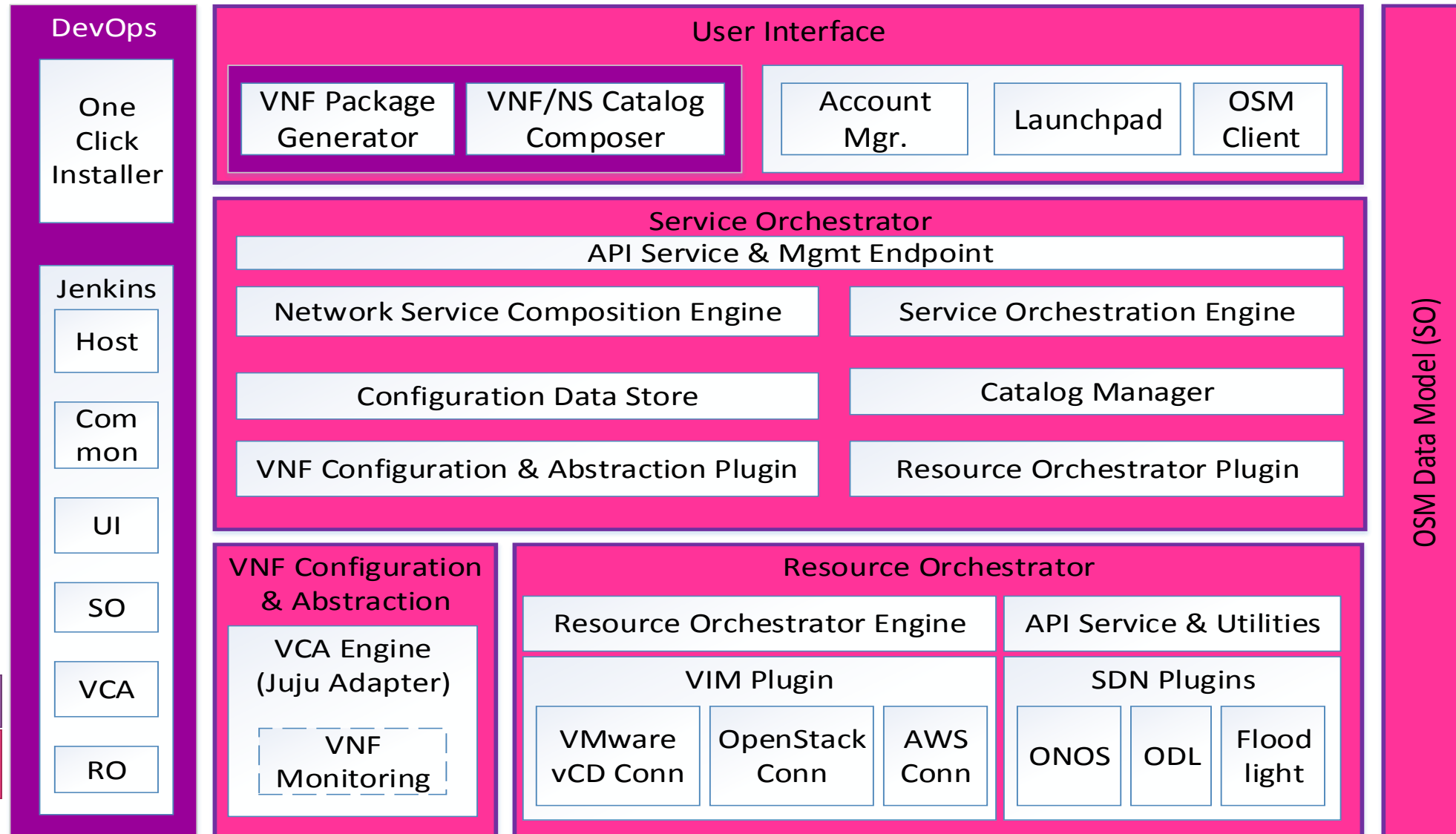
- Automated end-to-end Service Orchestration
- Superset of ETSI NFV MANO
- Plugin model for integrating multiple SDN controllers
- Plugin model for integrating multiple VIMs
- Integrated Generic VNFM with support for integrating Specific VNFs
- Support for Physical Network Function integration
- Greenfield and brownfield deployments

## Design-Time Scope

- Network Service Definition (CRUD operations)
- Model-Driven Environment with Data Models aligned with ETSI NFV
- VNF Package Generation
- GUI



# OSM Architecture



# Release TWO Highlights



## Interoperability



Packaging, Distribution & Installation



Usability



Data Modelling



Security



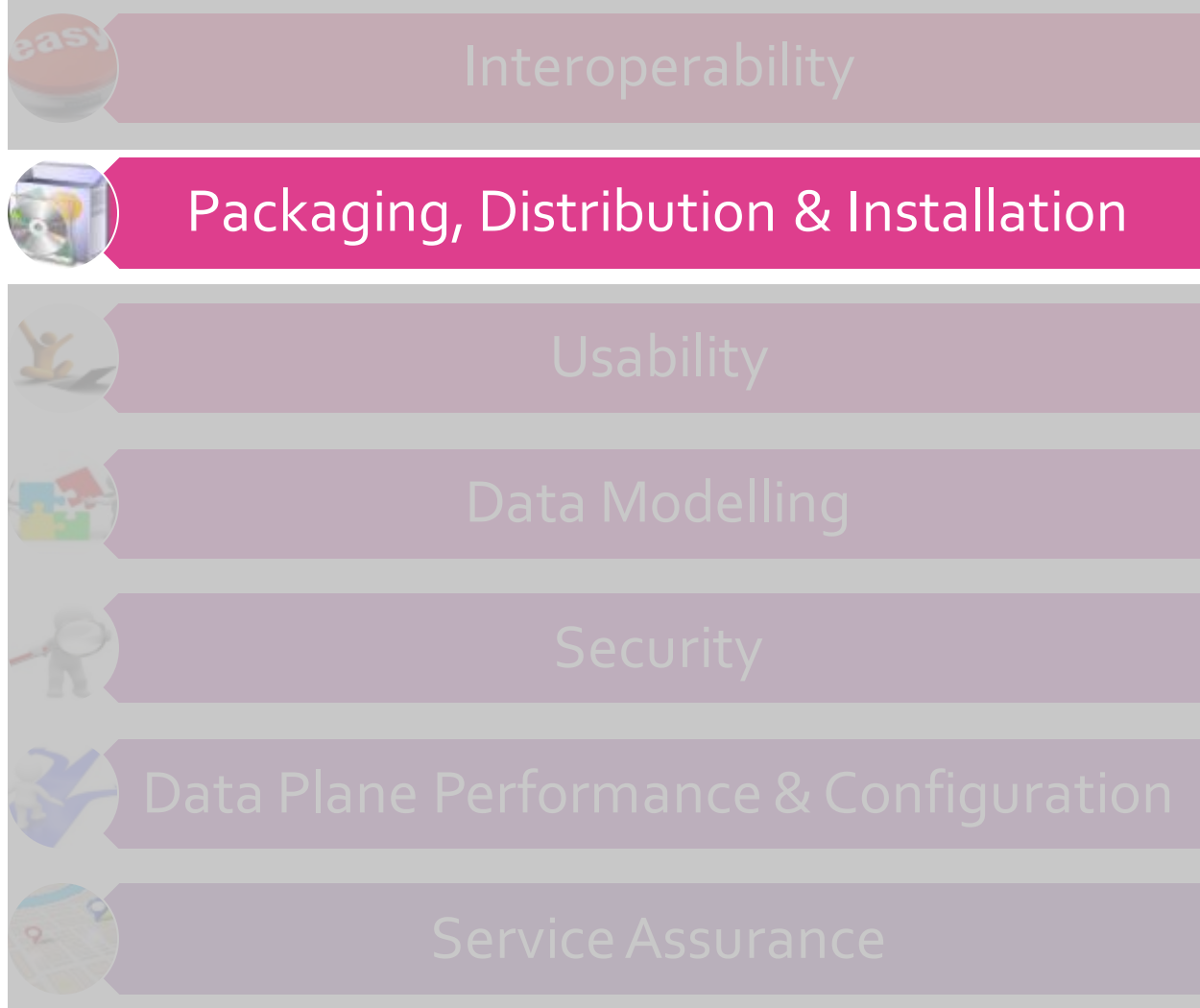
Data Plane Performance & Configuration



Service Assurance

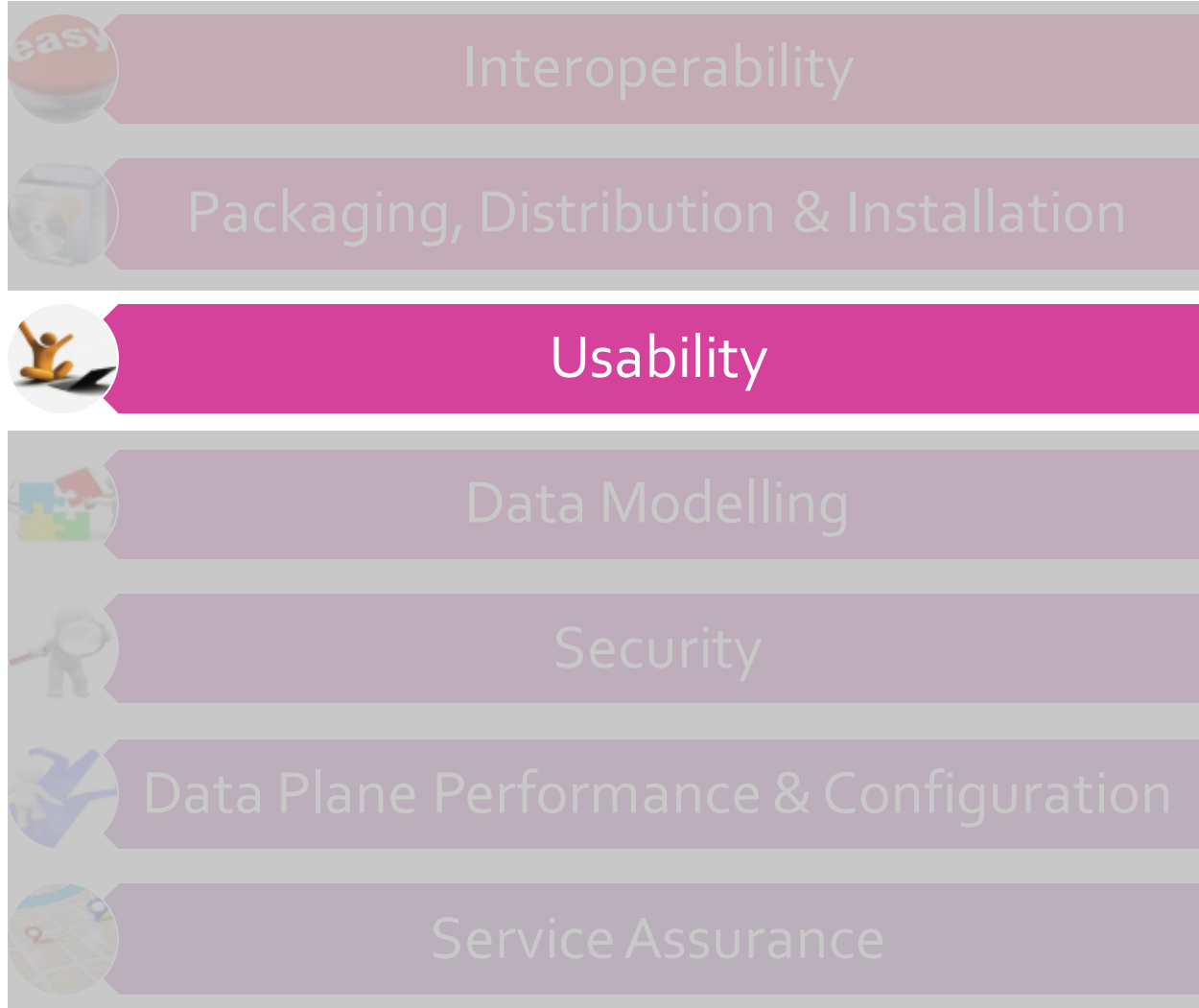
- ETSI NFV Plugtest
- AWS Public Cloud
- Multi-disk Support
- OpenStack v3 API
- VNF On-boarding
- VMware vCloud Director Connector Improvements

# Release TWO Highlights

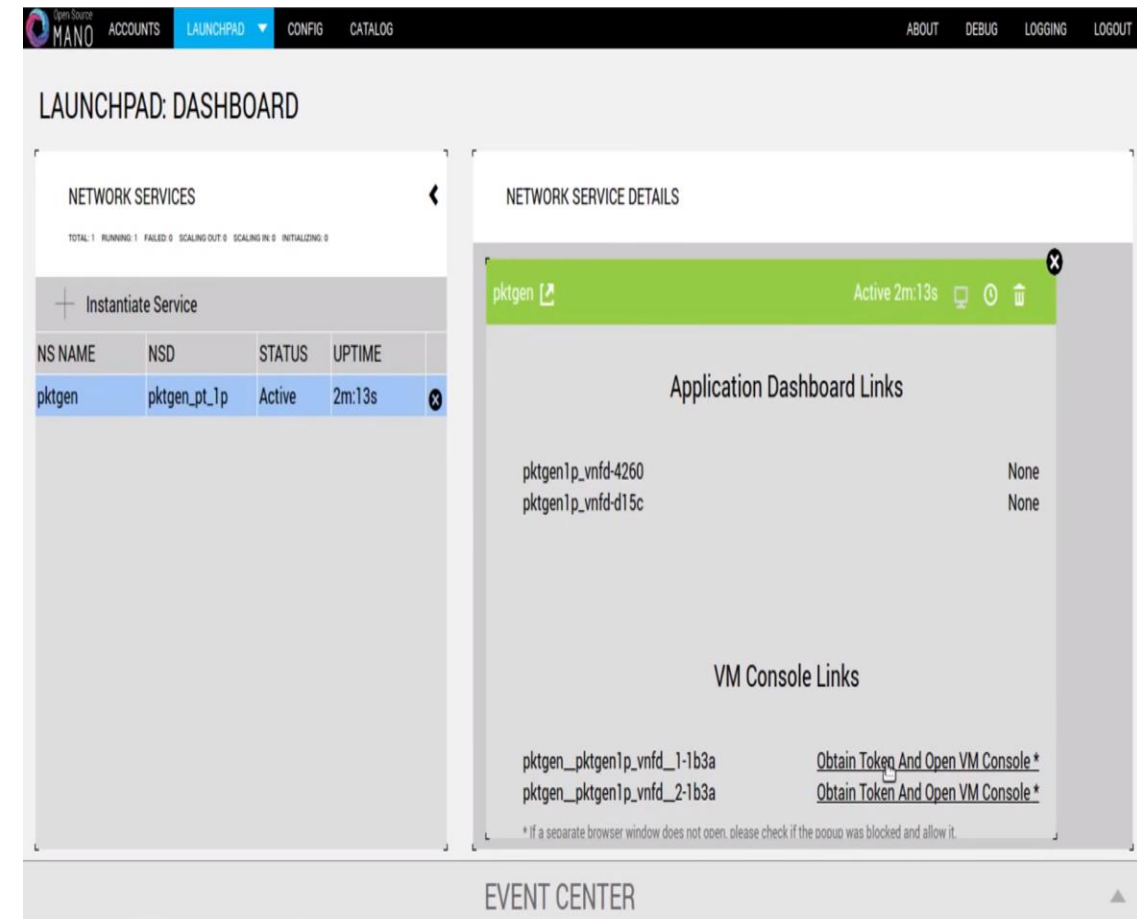


- Docker
- OSM Installation Size Reduction (>50%)
- Package Management
- UI composer

# Release TWO Highlights



- VNF console



LAUNCHPAD: DASHBOARD

NETWORK SERVICES

TOTAL: 1 RUNNING: 1 FAILED: 0 SCALING OUT: 0 SCALING IN: 0 INITIALIZING: 0

+ Instantiate Service

NS NAME	NSD	STATUS	UPTIME
pktgen	pktgen_pt_1p	Active	2m:13s

NETWORK SERVICE DETAILS

pktgen [link] Active 2m:13s [stop] [refresh] [delete]

Application Dashboard Links

pktgen1p_vnfd-4260	None
pktgen1p_vnfd-d15c	None

VM Console Links

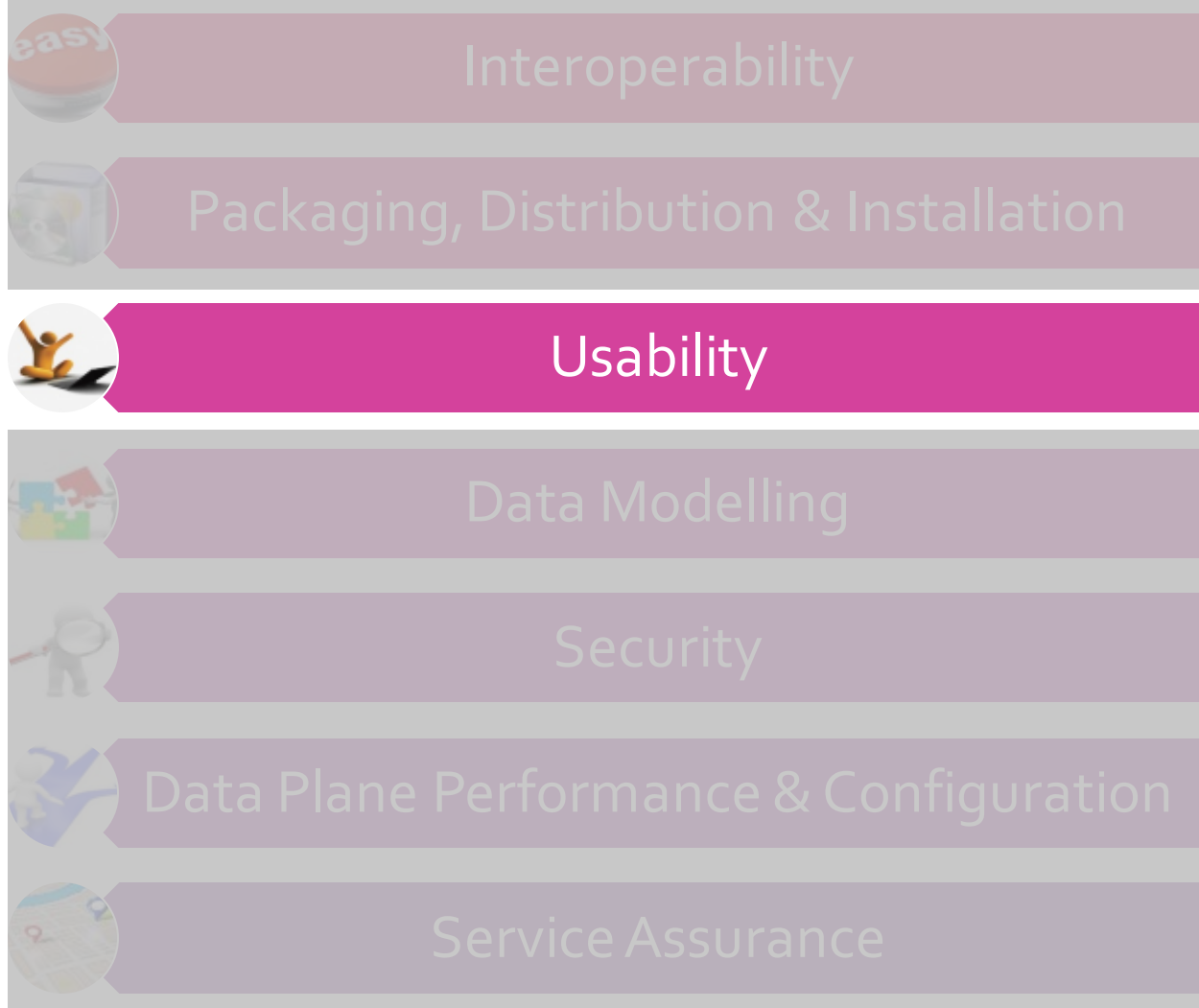
pktgen__pktgen1p_vnfd__1-1b3a	<a href="#">Obtain Token And Open VM Console *</a>
pktgen__pktgen1p_vnfd__2-1b3a	<a href="#">Obtain Token And Open VM Console *</a>

\* If a separate browser window does not open, please check if the popup was blocked and allow it.

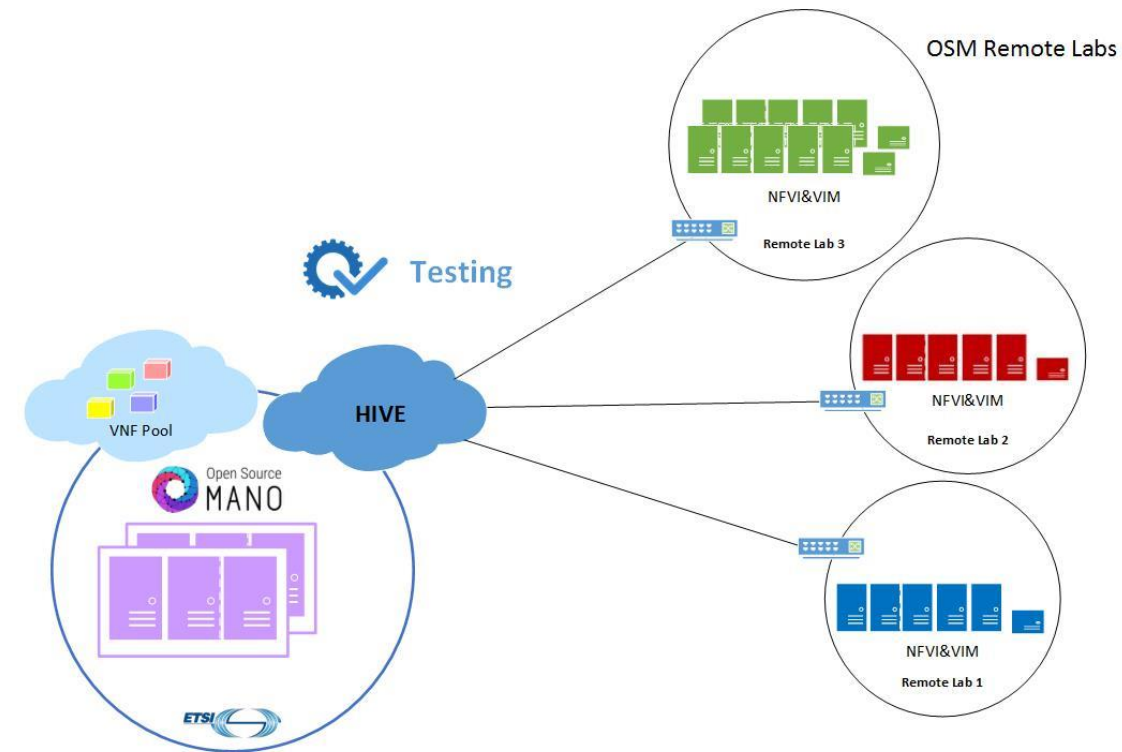
EVENT CENTER



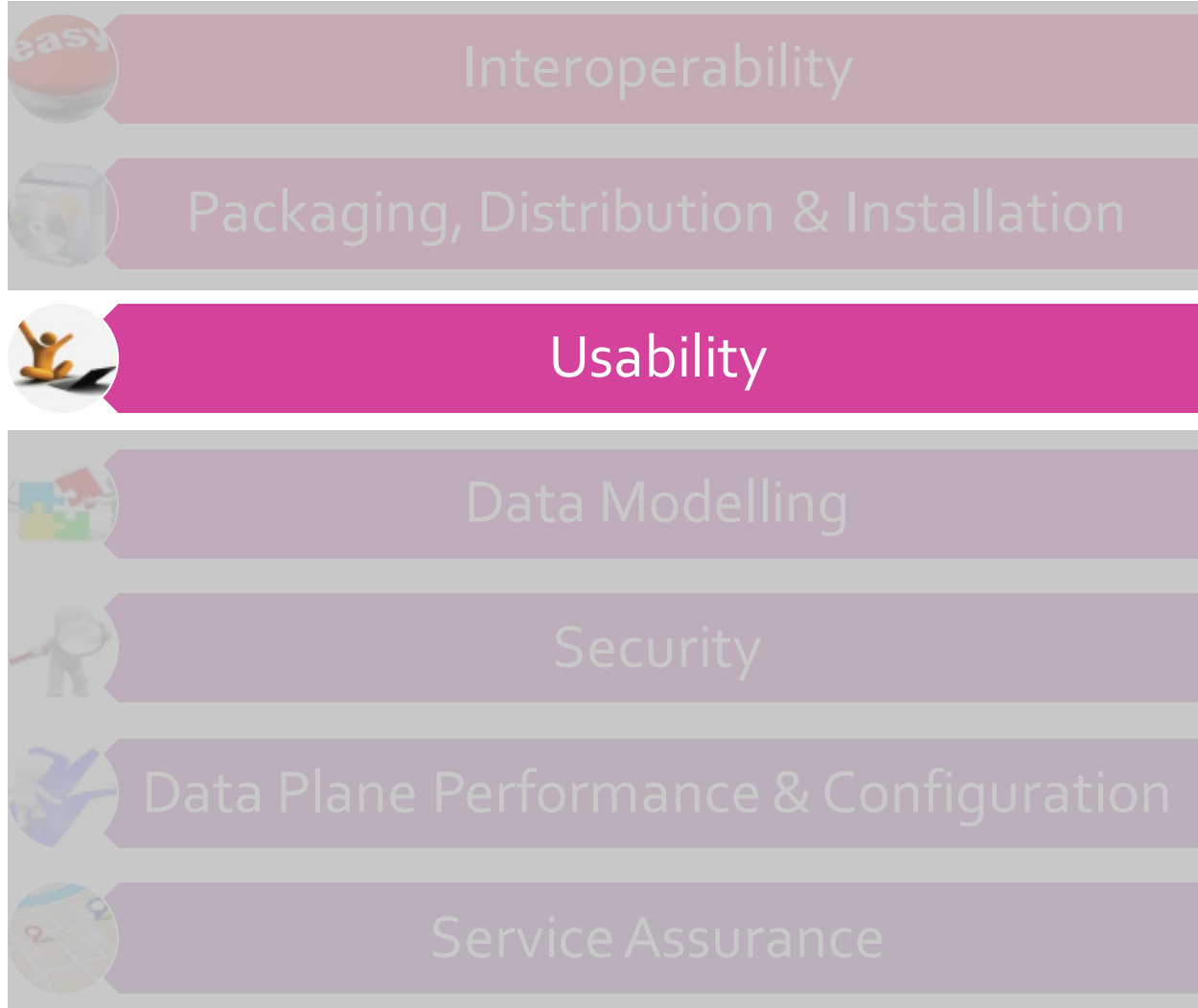
# Release TWO Highlights



- VNF console
- Remote Labs (HIVE)

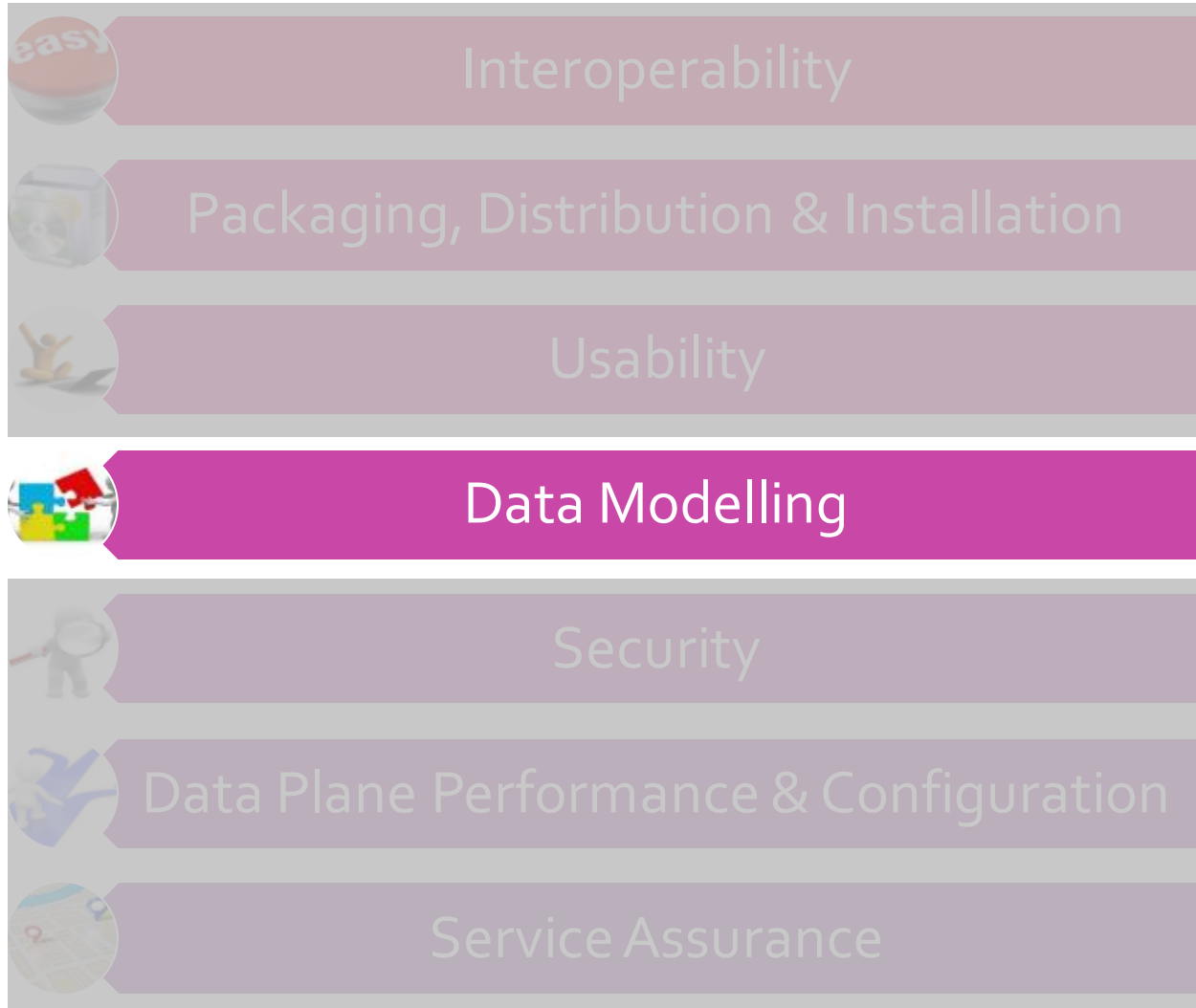


# Release TWO Highlights

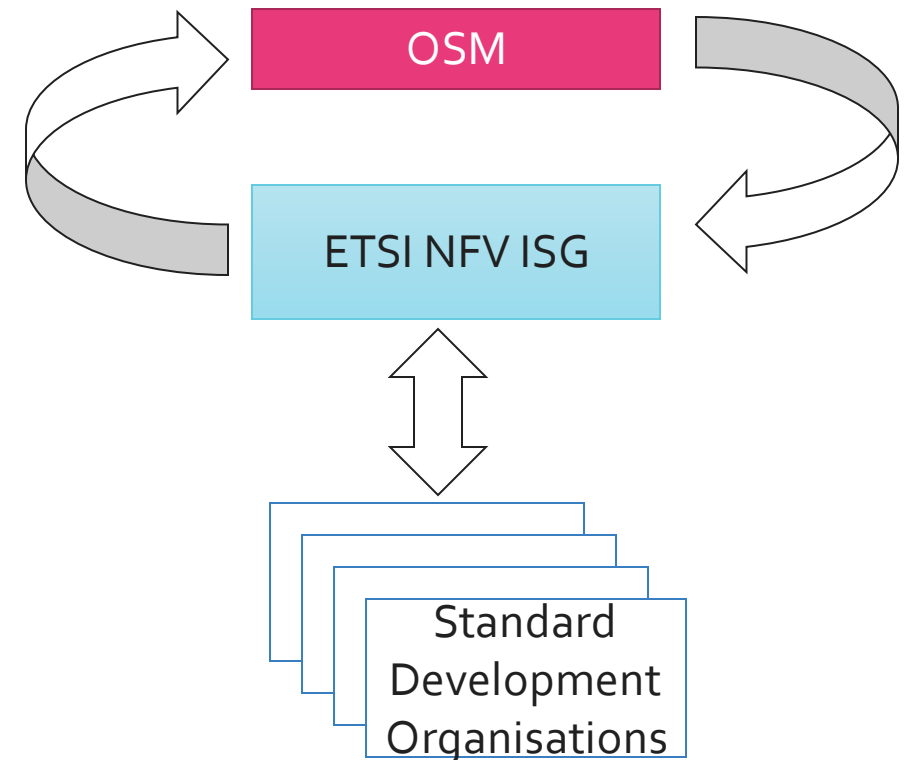


- VNF console
- Remote Labs (HIVE)
- cloud-init
- Common Logging & Exception Handling

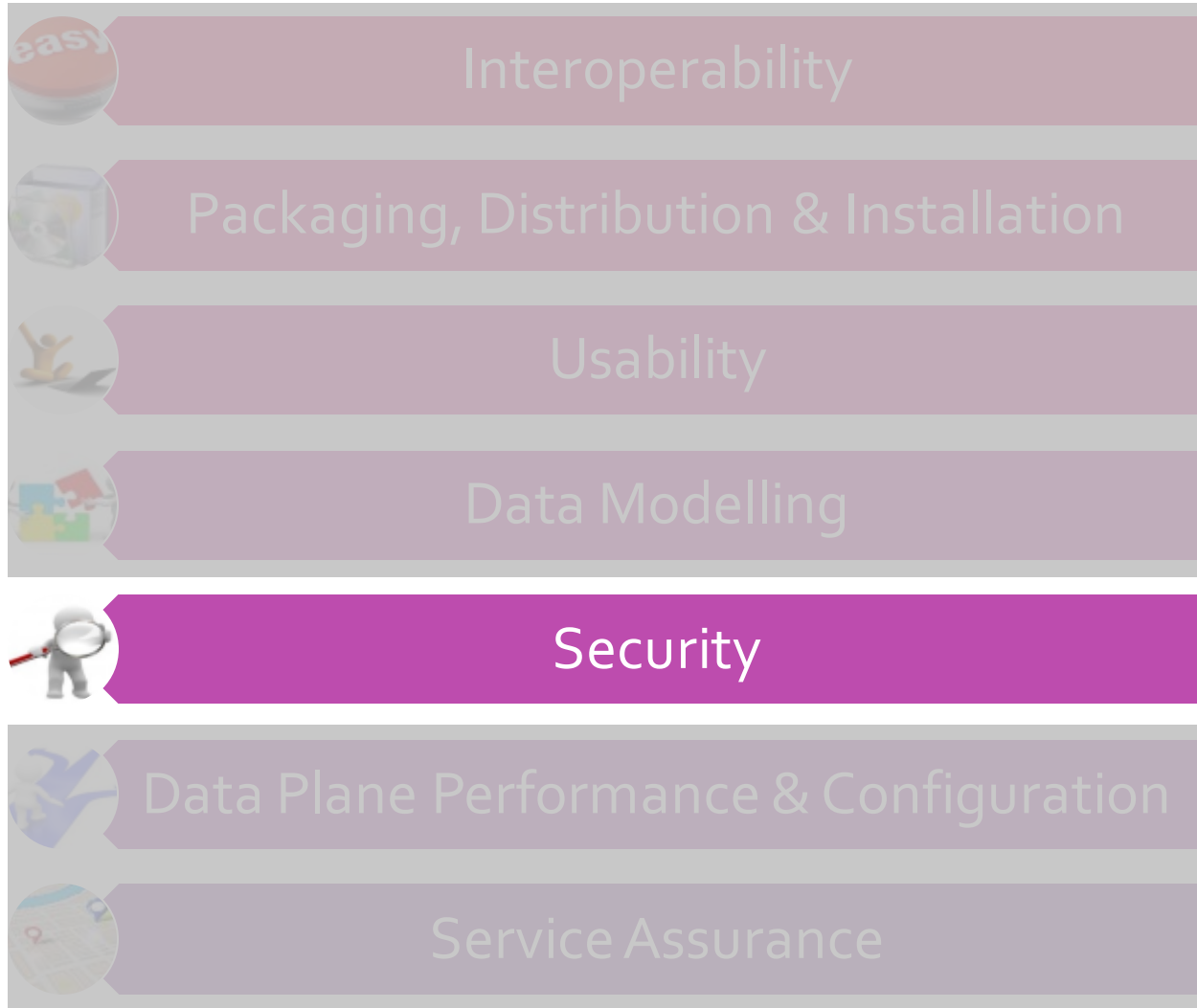
# Release TWO Highlights



- Data Model Attribute Coordination with the Industry

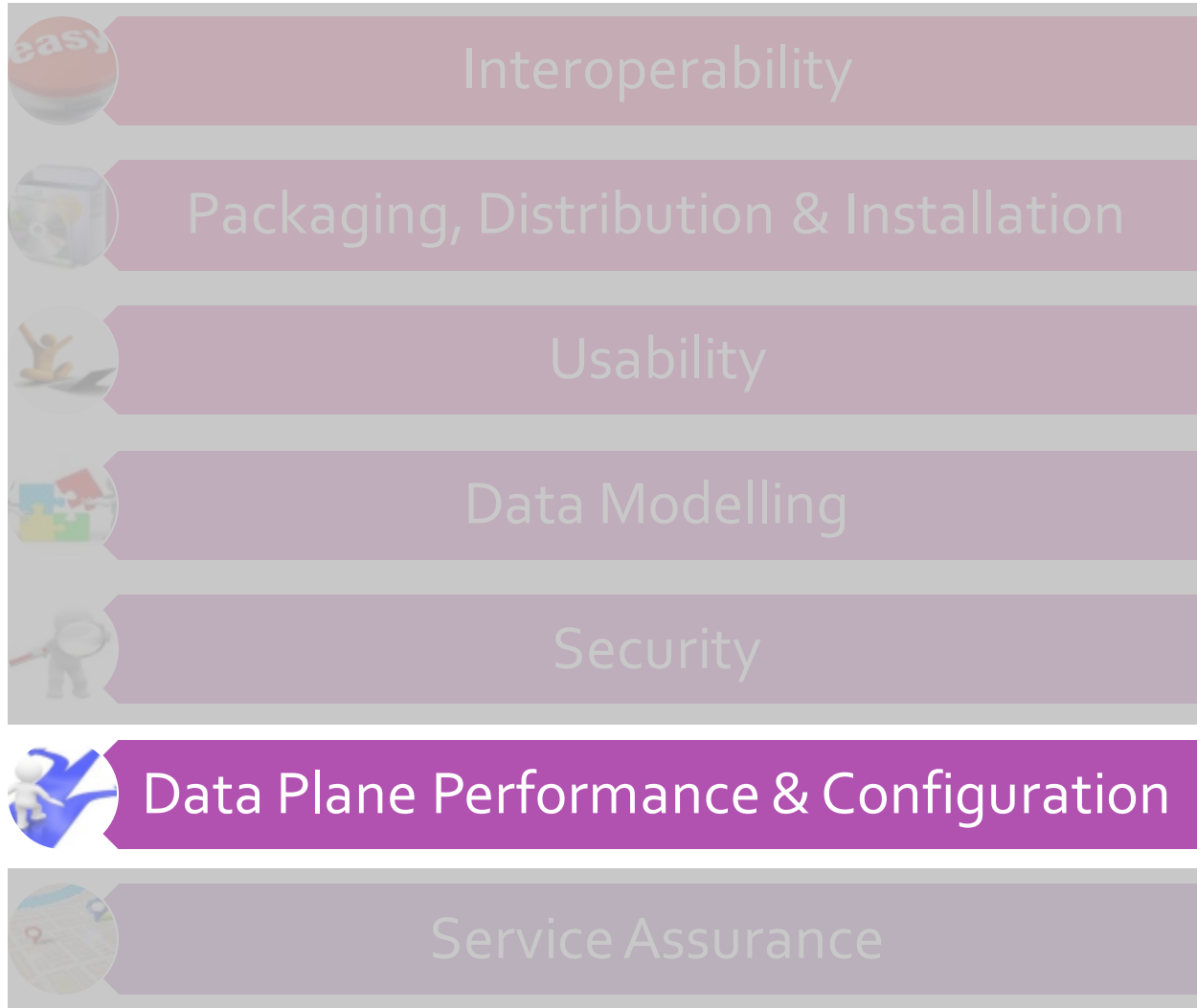


# Release TWO Highlights



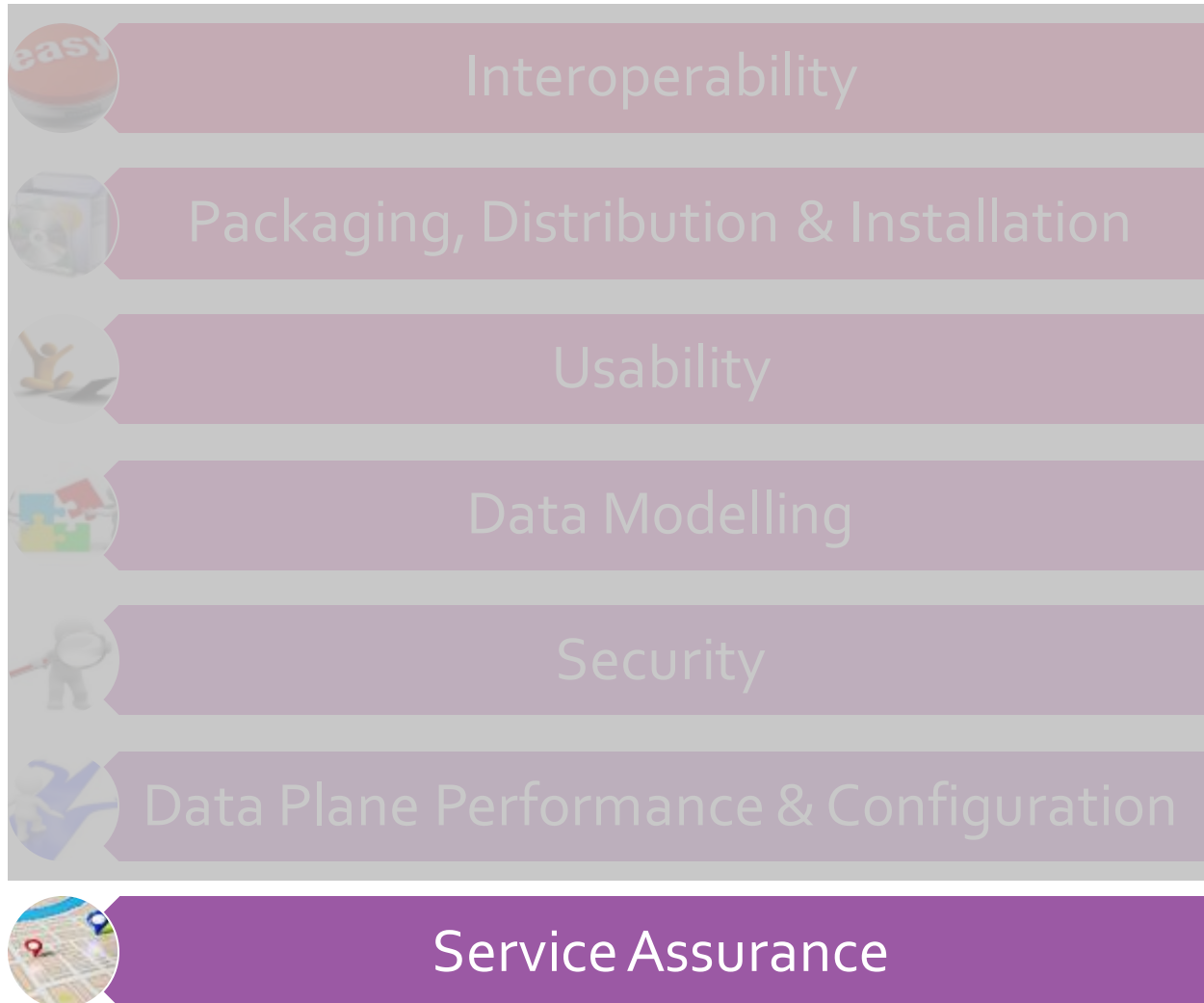
- Unfiltered Interfaces

# Release TWO Highlights

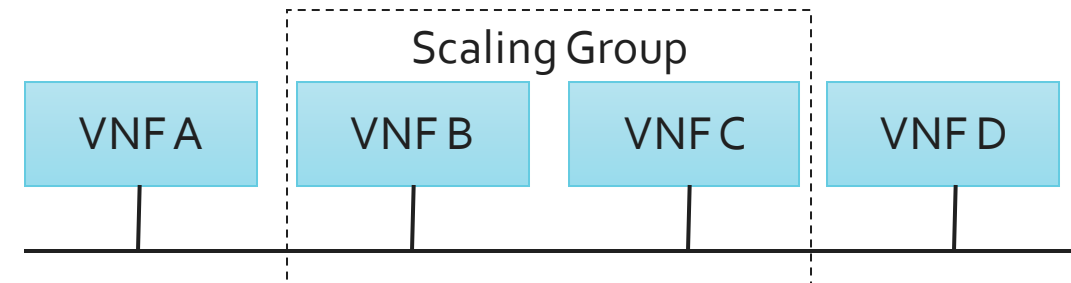


- OVS Support added to OpenVIM.
- Underlay Network Mgmt from RO.

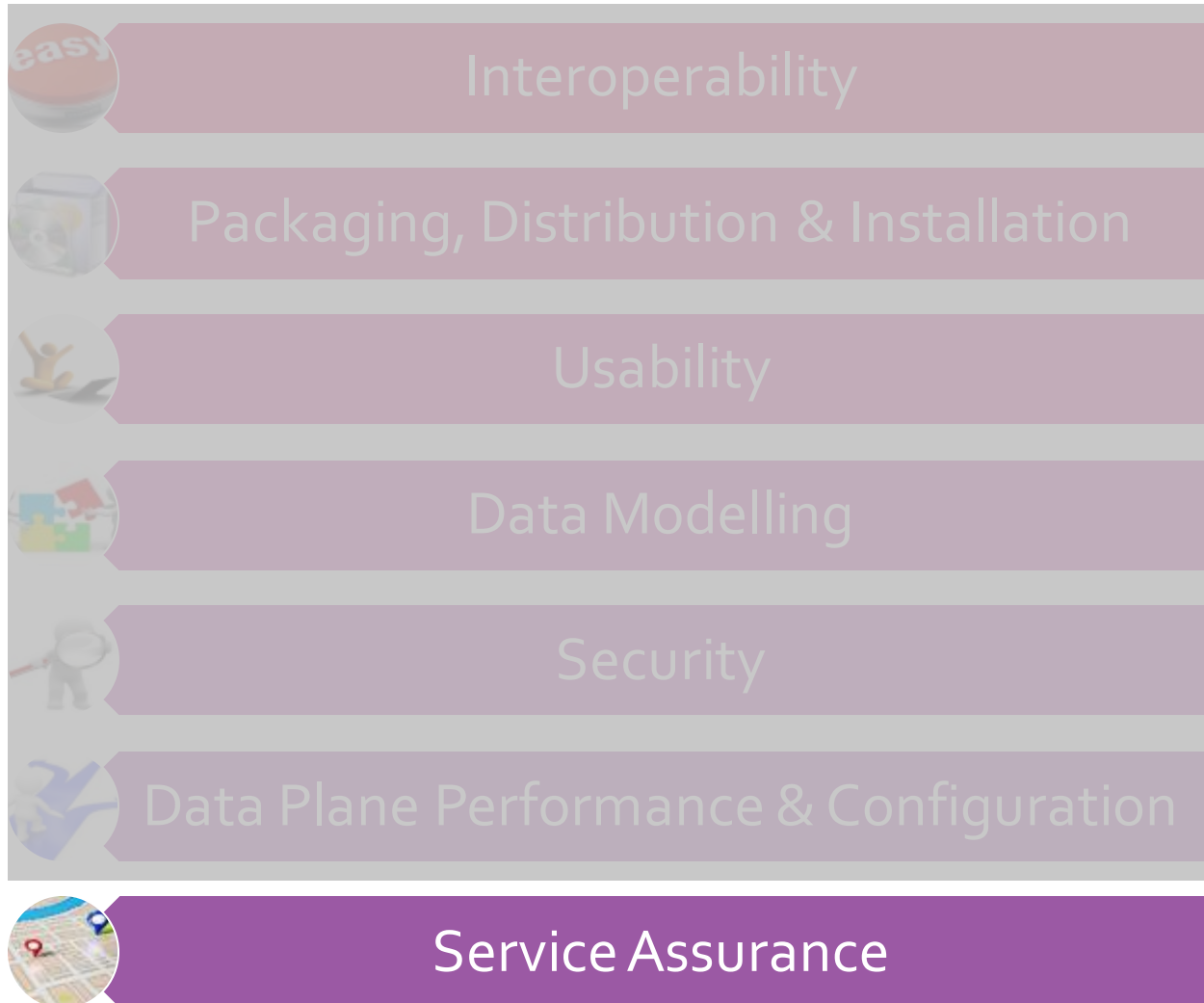
# Release TWO Highlights



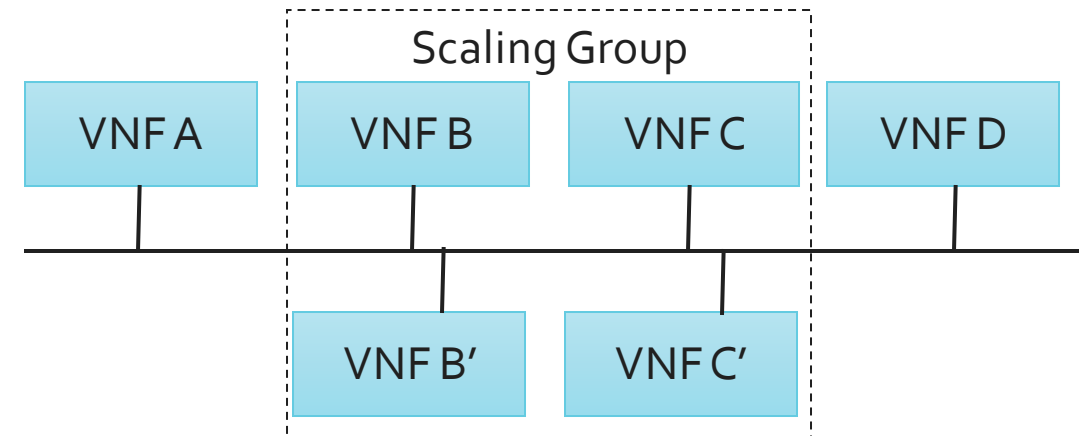
- NS scaling (Experimental)
  - Adding/Removing VNF (Groups) from a running NS.



# Release TWO Highlights

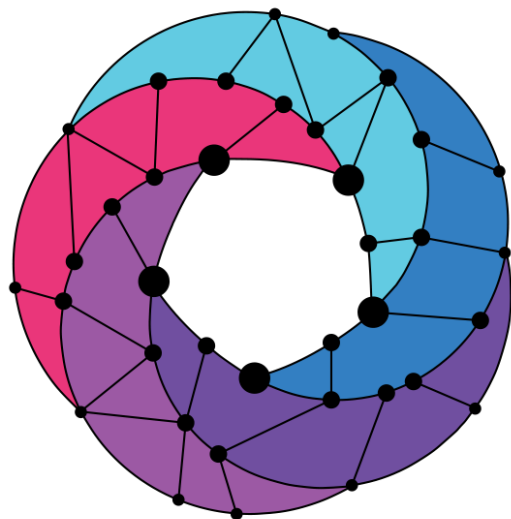


- NS scaling (Experimental)
  - Adding/Removing VNF (Groups) from a running NS.



- Goal
  - Production Readiness
- Themes
  - Service Assurance (e.g. scaling NS/VNF, SFC, state mgmt, fault mgmt)
  - Usability (e.g. logging, metrics, installation, data centre capabilities, APIs, PNF)
  - Security (e.g. RBAC, project views, key mgmt)
  - Resiliency (e.g. scalability and recovery of OSM)
  - CI/CD (Improved Testing Framework, Installation)



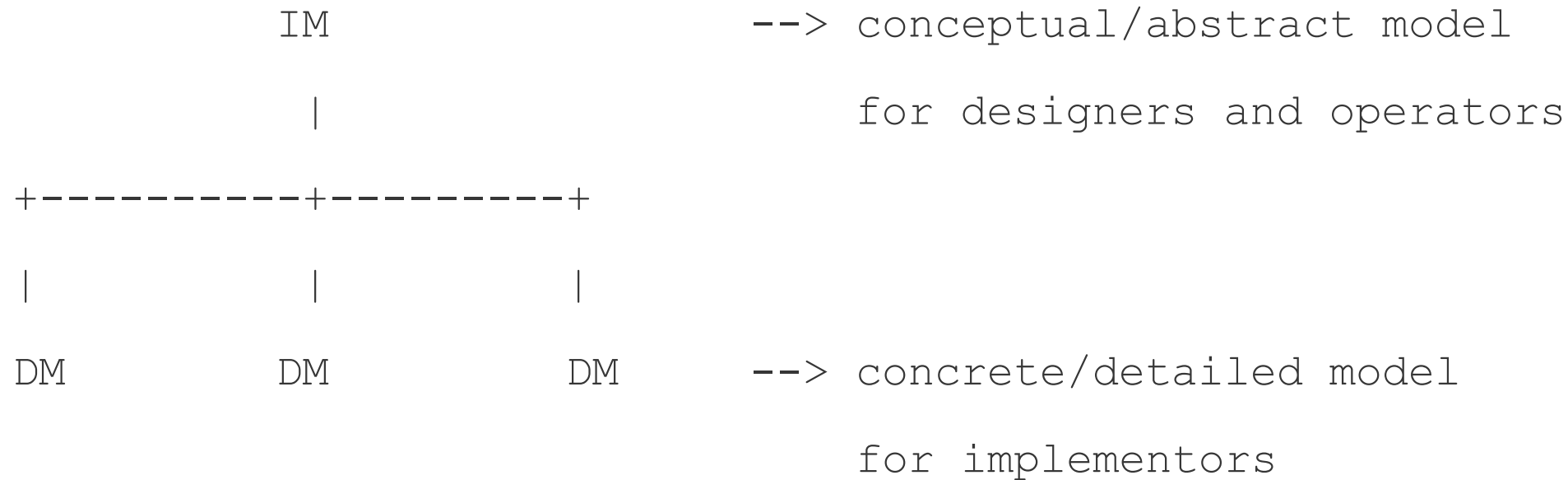


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MORE INFORMATION AT:

[osm.etsi.org](http://osm.etsi.org)

# Information Vs Data Models



\*Extracted from: <https://tools.ietf.org/html/rfc3444>

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Aligned with ETSI NFV ISG Phase 1 Information Models

Analysis underway on ETSI NFV ISG Phase 2 Information Models

- Will work with the NFV community for clarifications, bug fixes (sightings) and feature advances.
- Possible intersect with OSM Release THREE

## OSM INTERNALS

OpenMANO VNFD

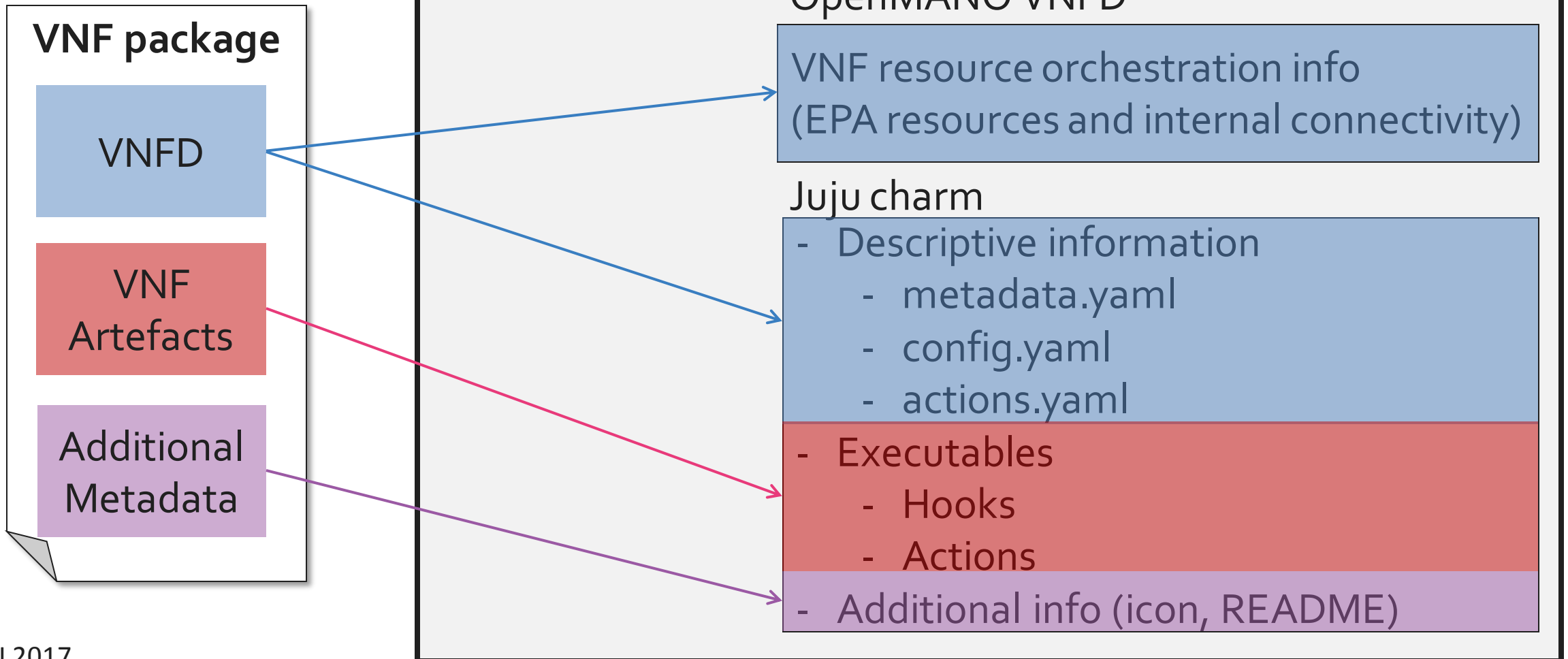
VNF resource orchestration info  
(EPA resources and internal connectivity)

Juju charm

- Descriptive information
  - metadata.yaml
  - config.yaml
  - actions.yaml
- Executables
  - Hooks
  - Actions
- Additional info (icon, README)

# DIRECT MAPPING FROM MODELS AT THE UI

## OSM INTERNALS



# ARCHITECTURE SUPPORTS MULTIPLE DATA MODELS

## OSM INTERNALS

