

Orchestration, Automation and Virtualisation: Architectures

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GÉANT Infoshare – Orchestration,
Automation and Virtualisation in the
NRENs. Ready, Steady, Go!

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Towards Digital Platforms



Self-service



Agility



Flexibility



Interoperability



Collaborative digital services

Focus Group: Architecture – Dear Santa

Modular design

Common
Information Model

Full automation
support

Multi-vendor
support

Flexible E-W
integration

Standardized
abstraction and
functionality
exposure

Focus Group: Architecture – Dear Santa, do not forget...

Open APIs

Scalability

Global services

Research
suitable

Flexible
components

Security

Resource type
flexibility

Service
discovery

Composite
services

Orchestration

Technology and
service agnostic

Interoperability

Compatibility

Multi-tenancy

Orchestration, Automation and Virtualisation: Architectures

TM Forum Framework

- TMF Open APIs

MEF LSO

- Multi-domain NaaS

ETSI ZSM

- E2E service management

ETSI NFV aligned MANO

- ETSI OSM – widely used
- Open Baton – reference implementation

ONAP

- Design time + run time + management

GVM

- Scalability, resource flexibility

SENSE

- E2e multi-domain orchestrators

EOSC

- Interoperable e-infras

ETSI GANA

- Autonomic network management

Reference Architecture

- High-level view
- Common principles and guidelines
 - Modular architecture approach
 - Discrete set of reusable components
 - Open APIs
 - Vegas rule

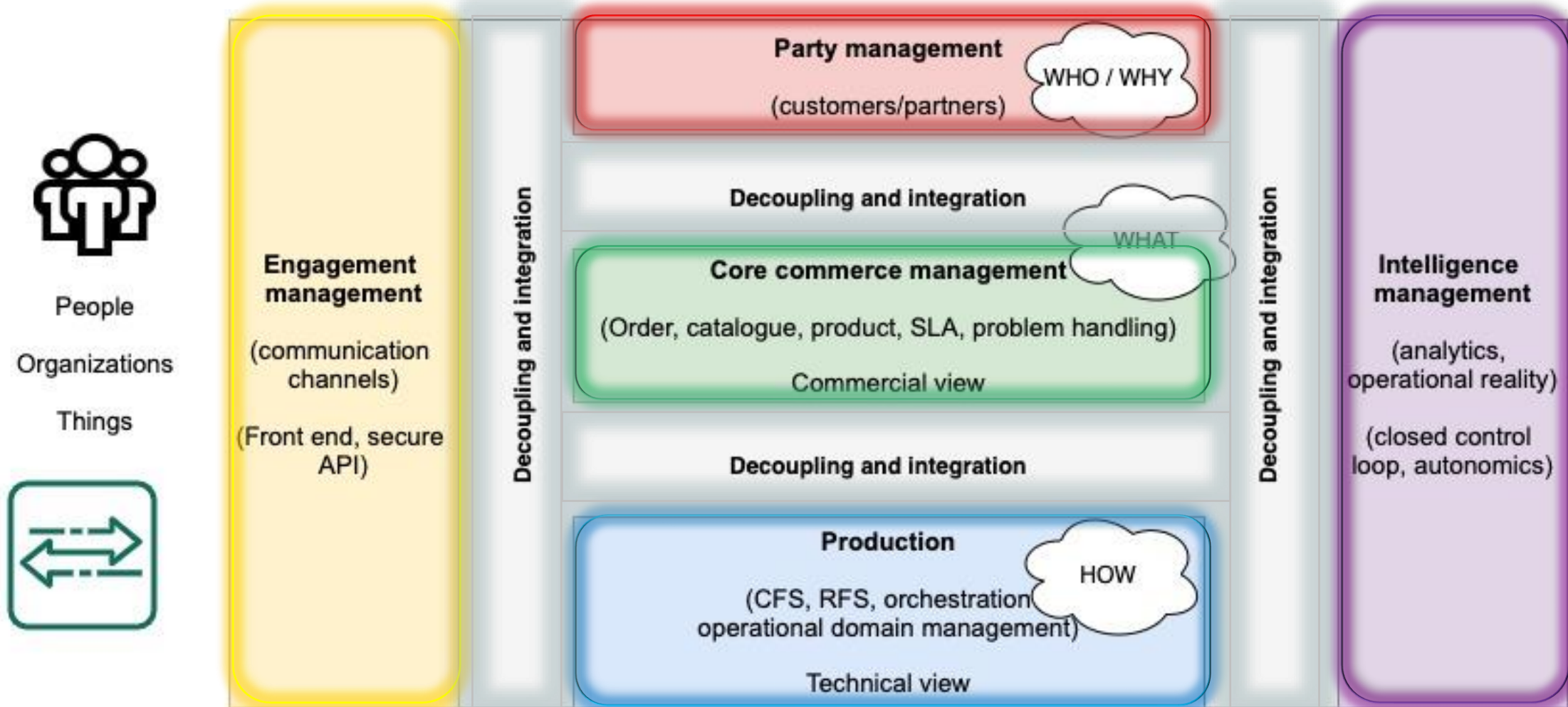


ODA Reference Architecture

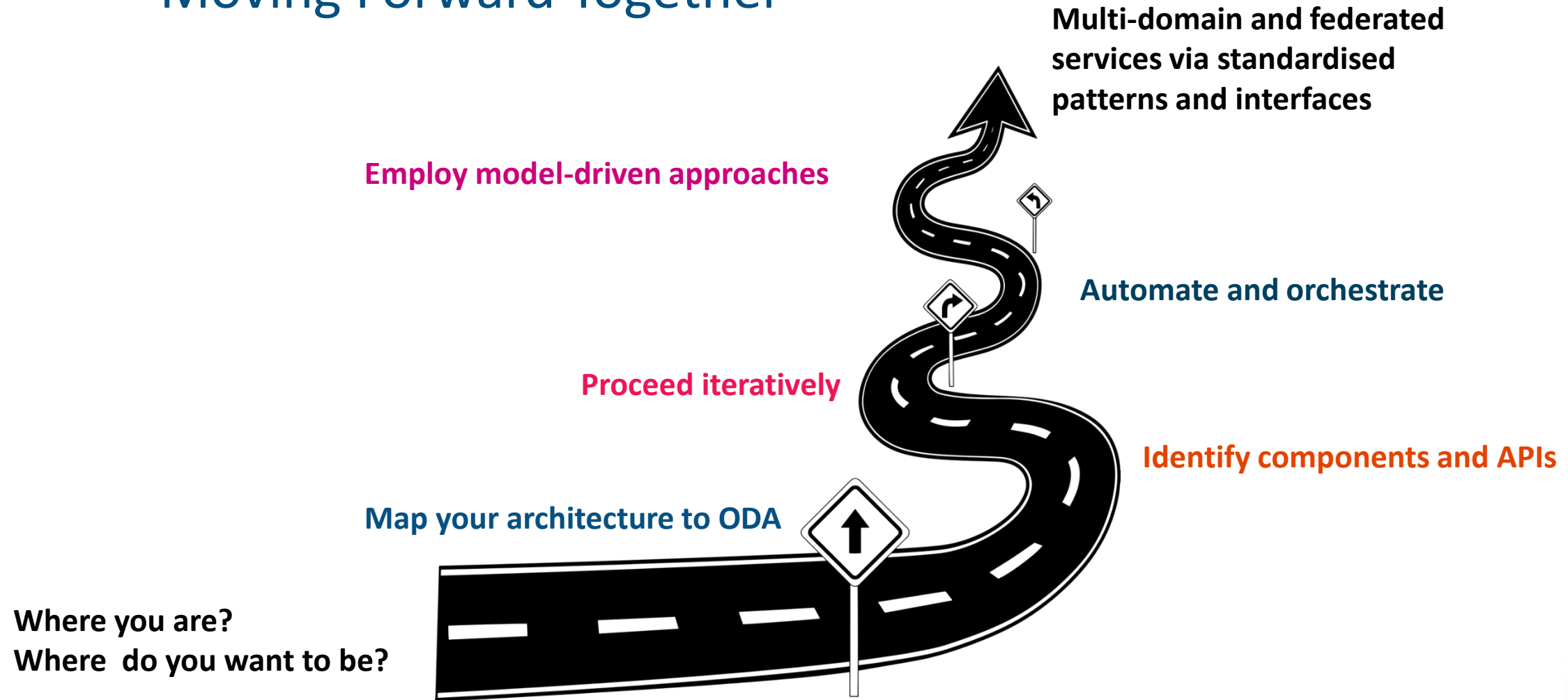
- TMForum Open Digital Architecture (ODA)
 - (<https://www.tmforum.org/oda/>)
 - industry-agreed
 - technology agnostic
 - functional blocks
 - blueprint for modular, cloud-based, open digital platforms that can be orchestrated using AI



TM Forum ODA Functional Architecture



Moving Forward Together



Thank you

Any questions?

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