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**NITEC:∞**

NCI Agency Industry Conference and AFCEA TechNet International

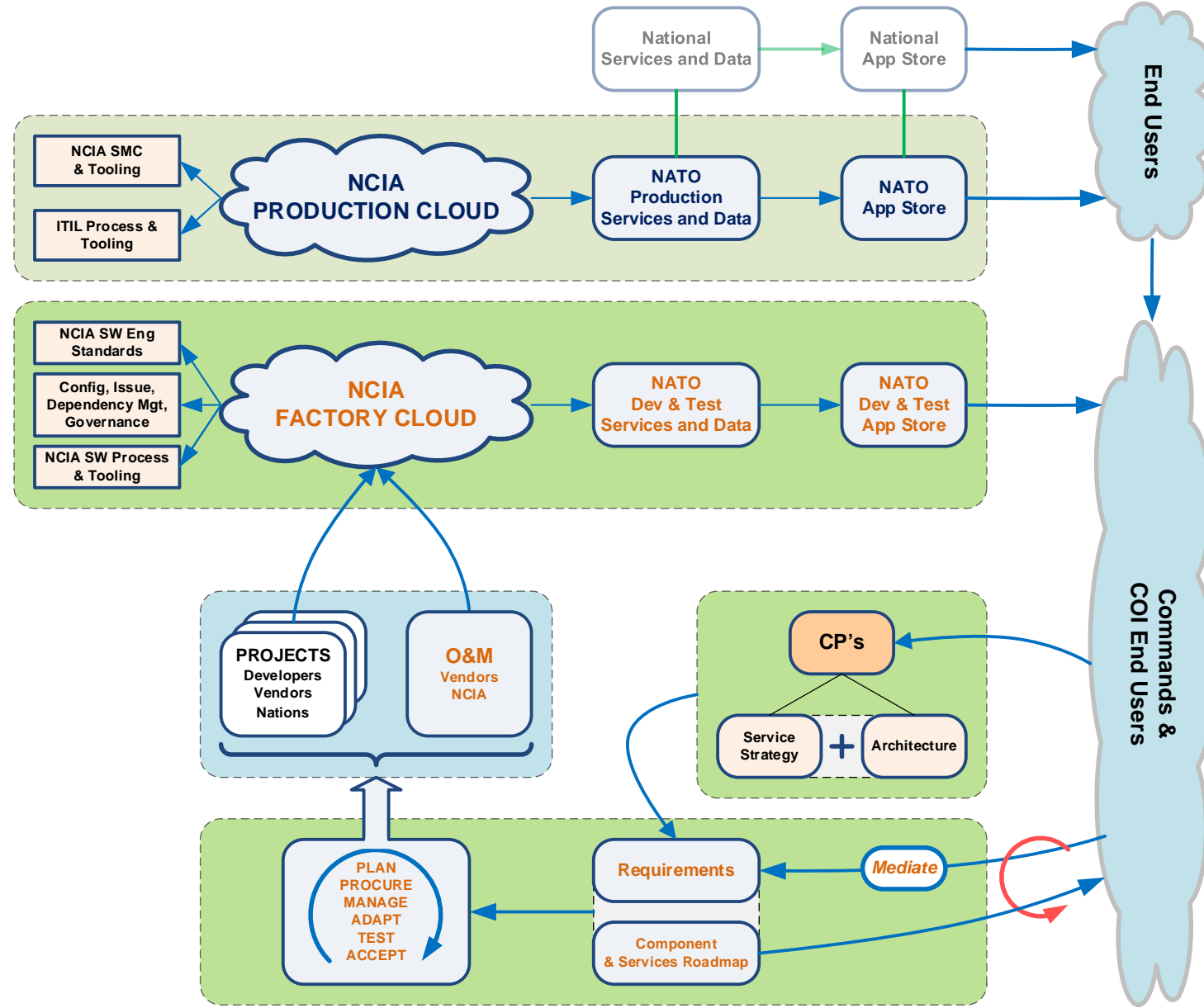
# NCI Agency Software Factory

The glue that binds it all together...



# What we want to make possible...

- Collaborative development by the coalition ecosystem.
- Break the stovepipes open.
- Get a lot of the benefits of Agile within our constraints.
- Lower the barriers to engaging in development with NCI Agency.



# NCI Agency SW Factory – Why?

- Shorter time to in-service value
- Higher degree of collaboration between NATO and Industry
- Flexible delivery ecosystem
  - Lower the threshold for entry of developers and testers
- Modern Capability Development & Testing leading to DEVSECOPS
  - Standard SW Engineering Process
  - Service fabric including micro-services
  - Componentization
  - Engineering testing
  - Short cyclic development and deployment

**This is a key enabler in realising the bigger vision (scalable, responsive, agile...)**

# Context

## Software Factory with 2 Main Building Blocks



### Electronic Definitive Media Library (EDML)

- NATO App Store



### NCIA DevTest (Pilot)

- DevOps Service Platform (Hybrid Cloud)

Requirements | Architecture | Design | Code | Work | Build | Test | Deploy | Release

# Building Block 1: Electronic Definitive Media Library

- **The Business Dimension**

- NATO App Store @ <https://edml.nato.int>
- Covers 19 NATO SW tools (NST) for testing, evaluation and operational use
- Addressed to NATO Nations' MODs and covers all subordinate structures
- Licence Agreement signed by 25 Nations, 6 NRFs and 2 National Entities (USAEUR + SOCEUR)

- **The IT Dimension – How it was built in 30 days**

- Agile (SCRUM) development based on iterative sprints
- SW Engineering DevOps platform (PaaS) in the Public Cloud (Azure)
- DevOps tools and commercial best practices

# Building Block 2: "DEVTEST": From Assets to Service-based PaaS

## NCIA DevTest

ARCHITECTURE & DESIGN

BUILD & MIGRATE Project

OPERATE Service (SDP)

Application

Security

IAM  
Governance

Network  
Compute  
Storage

PLATFORM

LOGFAS  
(13  
FTEs)

TOPFAS  
(37 FTEs)

NIRIS  
(28 FTEs)

Definition

Provisioning

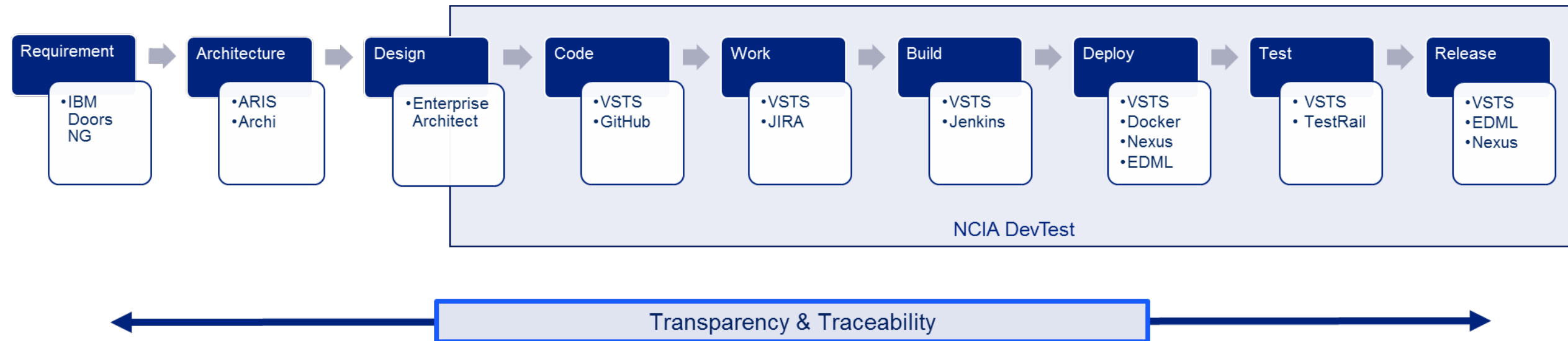
Operation

Support

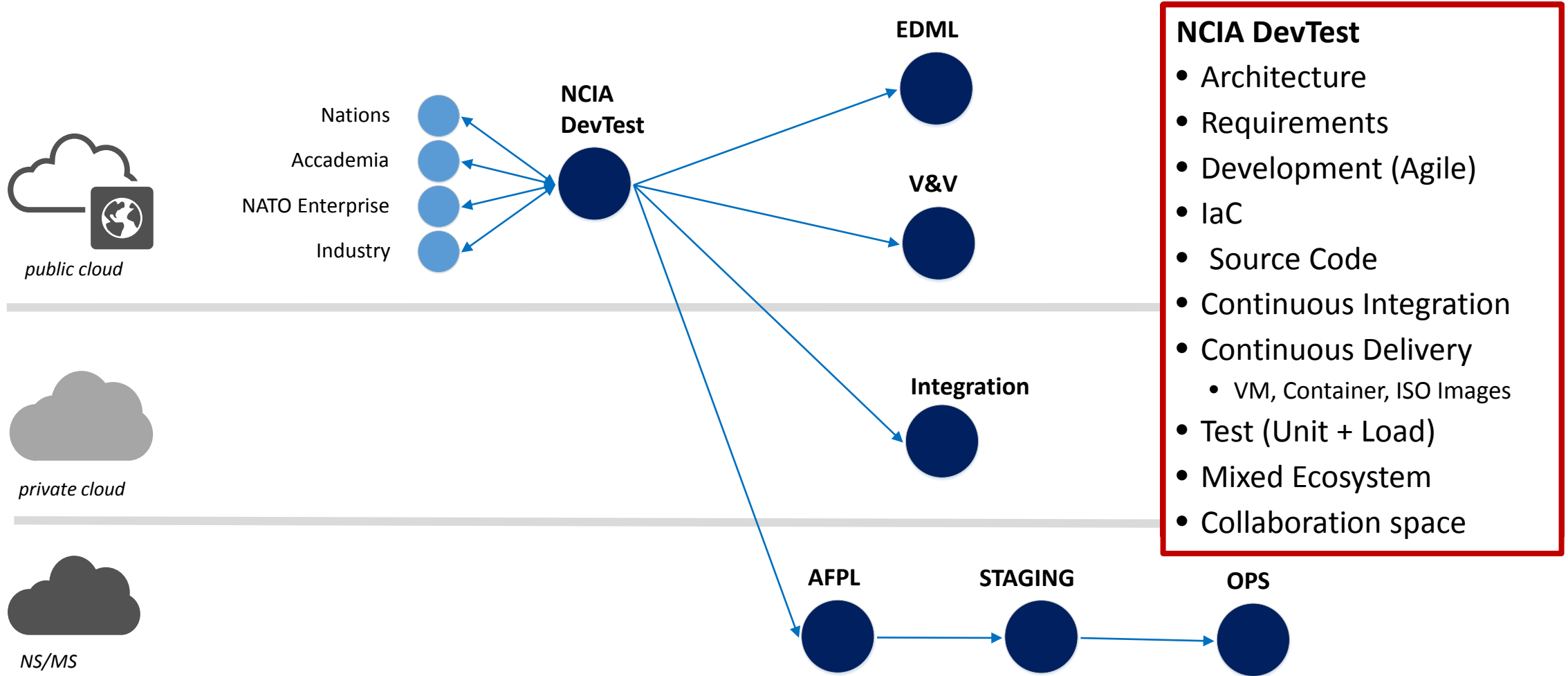
Catalogue

# NCIA DevTest (Pilot) - Toolchain

NATIONS | ACADEMIA | NATO ENTERPRISE | INDUSTRY



# Delivery Pipeline





# Goals and Outcomes

## Cloud Adoption Goals

Cloud Public Cloud Deployment Model  
Service Model (**PaaS**)  
DevOps (**Agile**) Best Practices  
Cloud Assurance (Accreditation) by Nations  
Fix obsolescence issue with NST FAS download  
NATO App Store

Service Model (**SaaS**)  
EDML as costed service

Modern Capability Development  
Short Development Cycle (Agile)  
Standardization, Consolidation  
Reuse, Componentization  
Fabric of Services  
Pay as You Go, Split Fixed and Variable Costs  
Address Development System Obsolescence

EDML 1  
(NU)

EDML 2  
(NU)

NCIA  
DevTest

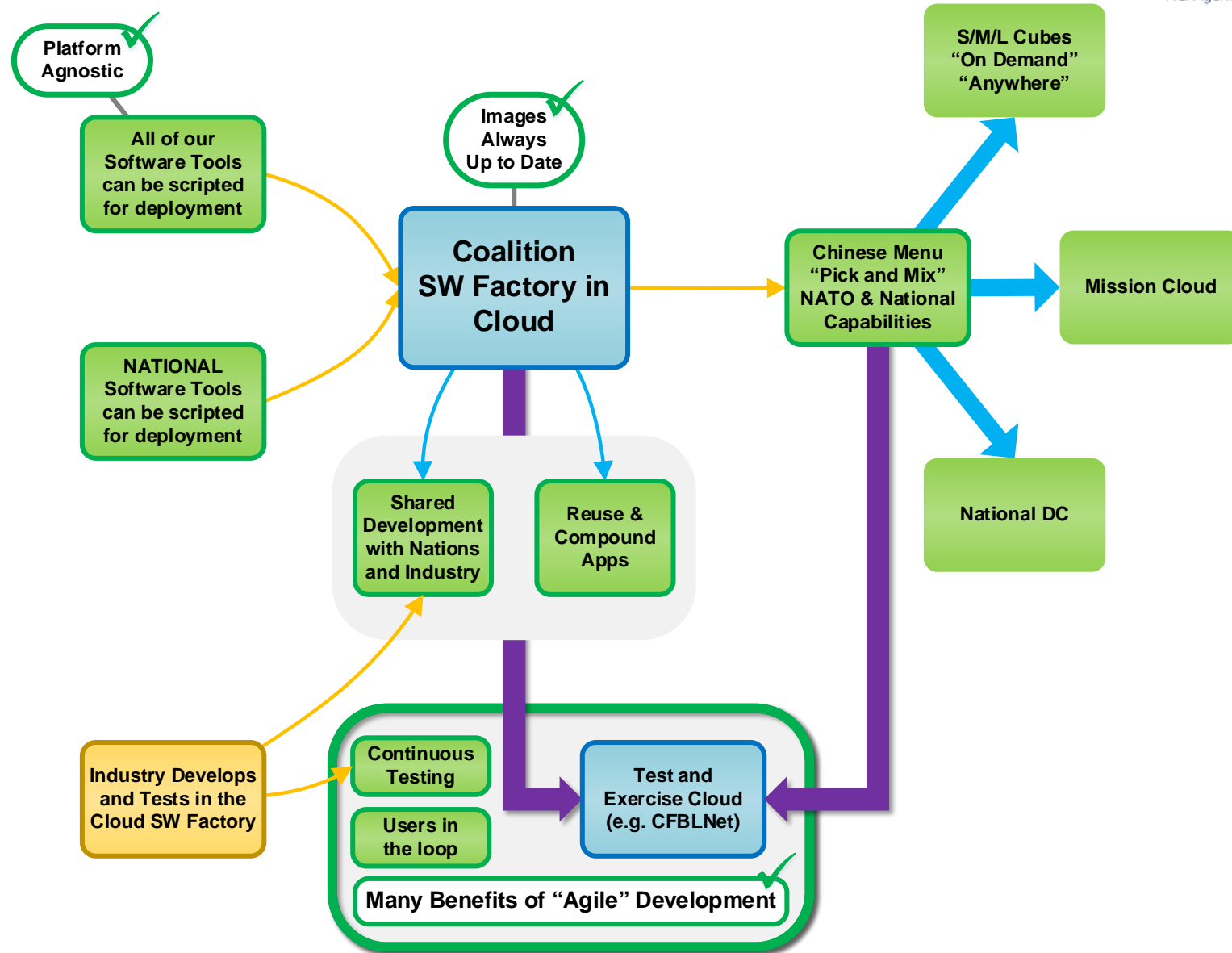
Door opener for Public Cloud  
New NCIA Standard for Public Cloud Utilization  
NOS Accreditation  
Improved Customer experience and Satisfaction  
Reduced upfront investments in infrastructure

From Monolithic to Micro-service + Service Fabrics (IaC)  
EDML as a Costed Service  
Multi-purpose (DCIS Cube, VM, Constrainers, NATO Apps, National EDMLs)

Shorter Time to Value  
Cost Savings  
Performance Improvement  
Enable much faster innovation  
Collaboration space with Industry (CP) and Coalition  
Enable SW Factory Mandatory in all Future Development

## Key Benefits

# In context of the larger vision...



# What We Are Interested to Know...

- Your reactions...
- Are we going in the right direction?
- Are we missing opportunities?
- Would you use it yourselves?
- Are you ready to deliver to us in the Factory?

