# NI4OS-Europe ITMS

ITSM Train the Trainer 16 September 2020

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# Agenda

- NI4OS-Europe on-boarding
- Management Integration Levels details
- NI4OS-Europe implementaion
- Conclusion

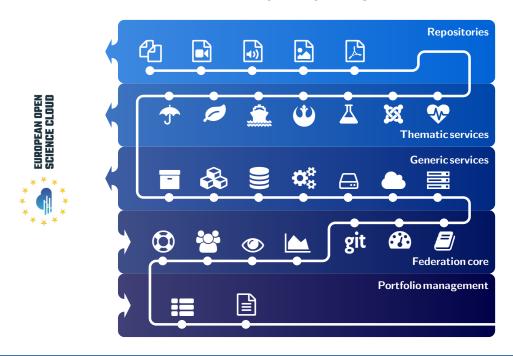
# Main on-boarding steps



■ Resource on-boarding includes five main steps

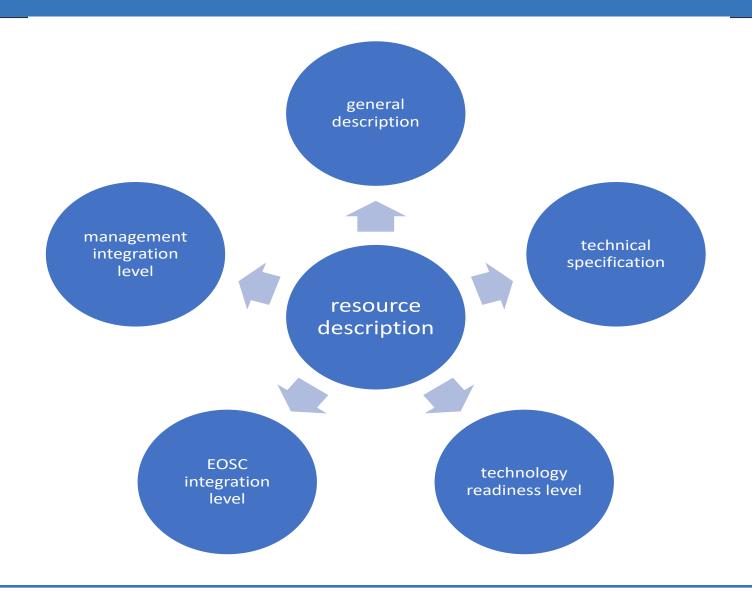


Services within the NI4OS-Europe project



# Different aspects of a resource description





# Technology Readiness Level (TRL)



TRL 9	Actual system proven in operational environment (competitive manufacturing in the case of key enabling technologies; or in space).
TRL 8	System complete and qualified.
TRL 7	System prototype demonstration in operational environment.
TRL 6	Technology demonstrated in relevant environment (industrially relevant environment in the case of key enabling technologies).
TRL 5	Technology validated in relevant environment (industrially relevant environment in the case of key enabling technologies).
TRL 4	Technology validated in lab.
TRL 3	Experimental proof of concept.
TRL 2	Technology concept formulated.
TRL 1	Basic principles observed.

# **EOSC Integration Level**



☐ Service Management Level > 8	☐ Service Management Level > 8	☐ Service Management Level > 8
☐ Service Management Level > 6	☐ Service Management Level > 6 ☐ Workflow production	☐ Service Management Level > 6
☐ Service Management Level > 3	☐ Service Management Level > 3 ☐ API production (APIP)	☐ Service Management Level > 3
☐ Accounting (ACC) ☐ Training resources (TR)	<ul><li>□ Accounting (ACC)</li><li>□ Training resources (TR)</li><li>□ Datasets production (PID)</li></ul>	☐ Accounting (ACC) ☐ Training resources (TR)
☐ Monitoring (MON)	<ul><li>☐ Monitoring (MON)</li><li>☐ Generic Service Integration (GSI)</li></ul>	☐ Monitoring (MON)
☐ Auth and Authz (AAI)☐ PID for services (PID)	<ul><li>□ Auth and Authz (AAI)</li><li>□ PID for services (PID)</li><li>□ Code Repository (CR)</li></ul>	☐ Auth and Authz (AAI)☐ PID for services (PID)
☐ Helpdesk (HD) ☐ Privacy policy (PP)	☐ Helpdesk (HD) ☐ Privacy policy (PP)	☐ Helpdesk (HD) ☐ Privacy policy (PP)
☐ Terms of Use (ToU) ☐ User manual (UM)	☐ Terms of Use (TOU) ☐ User manual (UM)	☐ Terms of Use (TOU) ☐ User manual (UM)
☐ Basic Service Description (BSD)	☐ Basic Service Description (BSD)	☐ Basic Service Description (BSD)
	Service Management Level > 6  Service Management Level > 3  Accounting (ACC) Training resources (TR)  Monitoring (MON)  Auth and Authz (AAI) PID for services (PID)  Helpdesk (HD) Privacy policy (PP)  Terms of Use (ToU) User manual (UM)	Service Management Level > 6  Service Management Level > 6  Workflow production  Service Management Level > 3  API production (APIP)  Accounting (ACC) Training resources (TR)  Monitoring (MON)  Monitoring (MON)  Generic Service Integration (GSI)  Auth and Authz (AAI) PID for services (PID)  Auth and Authz (AAI) PID for services (PID)  Helpdesk (HD) Privacy policy (PP)  Terms of Use (ToU) User manual (UM)  Service Management Level > 6 Workflow production APIP > 6 Workflow production (APIP)  Accounting (ACC) Training resources (TR)  Monitoring (MON) Generic Service Integration (GSI)  Helpdesk (HD) Privacy policy (PP)  Terms of Use (TOU) User manual (UM)

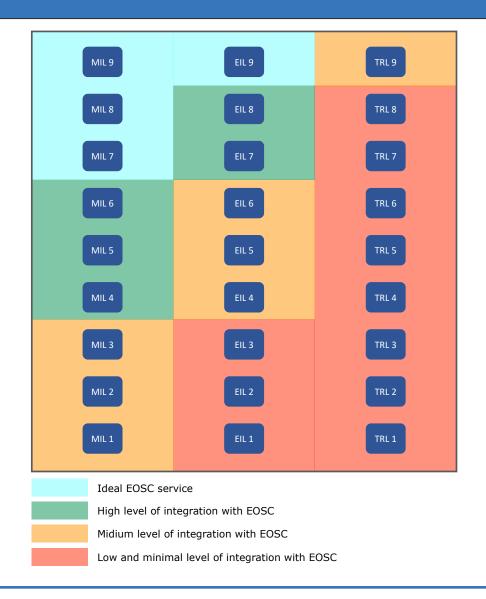
# Management Integration Level



MIL 9  CSI - Continual Service Improvement. CHM - Change Management.  MIL 8  RDM - Release and Deployment Management. CONFM - Configuration Management.  MIL 7  SRM - Service Reporting Management. CAPM - Capacity Management.  MIL 6  SACM - Service Availability and Continuity Management. SLM - Service Level Management.  MIL 5  SOCRM - Order and Customer Relationship Management.  MIL 4  PM - Problem Management.  MIL 3  ISRM - Incident and Service Request Management.		
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MIL 5  SOCRM - Order and Customer Relationship Management.  MIL 4  PM - Problem Management.	MIL 7	
MIL 4  PM - Problem Management.	MIL 6	
MIL 2	MIL 5	SOCRM - Order and Customer Relationship Management.
MIL 3  ISRM - Incident and Service Request Management.	MIL 4	PM - Problem Management.
	MIL 3	ISRM - Incident and Service Request Management.
MIL 2 ISM - Information Security Management.	MIL 2	ISM - Information Security Management.
MIL 1  SPM - Service Portfolio Management.	MIL 1	SPM - Service Portfolio Management.

# Cumulative levels of integration





### MIL1 - medium level



# □ SPM – Service portfolio management

#### PR1 Service Portfolio Management (SPM)

- PR1.1 A service portfolio shall be maintained. All services shall be specified as part of the service portfolio.
- PR1.2 Design and transition of new or changed services shall be planned.
- PR1.3 Plans for the design and transition of new or changed services shall consider timescales, responsibilities, new or changed technology, communication and service acceptance criteria.
- PR1.4 The organisational structure supporting the delivery of services shall be identified, including a potential federation structure as well as contact points for all parties involved.

- NI4OS-Europe implementation
  - AGORA SPMT
  - On-boarding team will plan design and transition
  - Contact points are part of each service description in the AGORA



### MIL2 - medium level



## □ ISM – Information Security Management

#### **PR6 Information Security Management**

- PR6.1 Information security policies shall be defined.
- PR6.2 Physical, technical and organizational information security controls shall be implemented to reduce the probability and impact of identified information security risks.
- PR6.3 Information security policies and controls shall be reviewed at planned intervals.
- PR6.4 Information security events and incidents shall be given an appropriate priority and managed accordingly.
- PR6.5 Access control, including provisioning of access rights, for information-processing systems and services shall be carried out in a consistent manner.

- NI4OS-Europe implementation
  - Security policies and policy templates defined and published at the projects wiki page
  - Each service provider will implement necessary measures
  - Project wise CSIRT will be established as part of the pre-production environment
  - Possible integration with the helpdesk system
  - Security and privacy contacts already collected from all service provider

### MIL3 - medium level



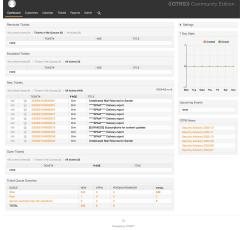
# □ ISRM – Incident and Service Requests Management

PR9 Incident & Service Request Management

- PR9.1 All incidents and service requests shall be registered, classified and prioritized in a consistent manner.
- PR9.2 Prioritization of incidents and service requests shall take into account service targets from SLAs.
- PR9.3 Escalation of incidents and service requests shall be carried out in a consistent manner.
- PR9.4 Closure of incidents and service requests shall be carried out in a consistent manner.
- PR9.5 Personnel involved in the incident and service request management process shall have access to relevant information including known errors, workarounds, configuration and release information.
- PR9.6 Users shall be kept informed of the progress of incidents and service requests they have reported.
- PR9.7 There shall be a definition of major incidents and a consistent approach to managing them.

- NI4OS-Europe implementation
  - Project ticketing system is part of the pre-production environment
  - Started with RT based solution, moved to OTRS for compatibility with EOSC
  - All service providers will have access to the system





# MIL4 - high level



### □ PM – Problem Management

#### PR10 Problem Management

- PR10.1 Problems shall be identified and registered based on analysing trends on incidents.
- PR10.2 Problems shall be investigated to identify actions to resolve them or reduce their impact on the services.
- PR10.3 If a problem is not permanently resolved, a known error shall be registered together with actions such as effective workarounds and temporary fixes.
- PR10.4 Up-to-date information on known errors and effective workarounds shall be maintained.

- NI4OS-Europe implementation
  - Reporting capabilities of the help desk system will be used to identify root cause problems causing incidents

# MIL5 - high level



CRM –Customer Relationship Management

PR7 Customer Relationship Management

- PR7.1 Service customers shall be identified.
- PR7.2 For each customer, there shall be a designated contact responsible for managing the customer relationship and customer satisfaction.
- PR7.3 Communication mechanisms with customers shall be established.
- PR7.4 Service reviews with the customers shall be conducted at planned intervals.
- PR7.5 Service complaints from customers shall be managed.
- PR7.6 Customer satisfaction shall be managed.

- NI4OS-Europe implementation
  - User database is maintained as part of NI4OS-AAI system
  - Services also have contact persons assgined in the AGORA SPMT
  - Surveys will be used to evaluate user satisfaction
  - A rating system will be in place to rate services

# MIL6 - high level

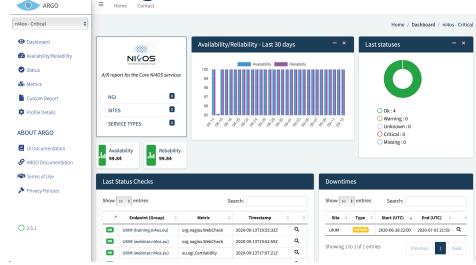


 SCAM –Service Availability and Continuity Management

#### PR4 Service Continuity & Availability Management

- PR4.1 Service availability and continuity requirements shall be identified taking into consideration SLAs.
- PR4.2 Service availability and continuity plans shall be created and maintained.
- PR4.3 Service availability and continuity planning shall consider measures to reduce the probability and impact of identified availability and continuity risks.
- PR4.4 Availability of services and service components shall be monitored.

- NI4OS-Europe implementation
  - ARGO monitoring tool will be used to monitor and report the availability of the services to be on-boarded
  - GOCDB will be used to announce planned outages



# MIL6 - high level



# □ SLM – Service Level Management

#### PR2 Service Level Management

- PR2.1 A service catalogue shall be maintained.
- PR2.2 For all services delivered to customers, SLAs shall be in place.
- PR2.3 SLAs shall be reviewed at planned intervals.
- PR2.4 Service performance shall be evaluated against service targets defined in SLAs.
- PR2.5 For supporting services or service components provided by federation members or groups belonging to the same organisation as the service provider or external suppliers, OLAs and UAs shall be agreed.
- PR2.6 OLAs and UAs shall be reviewed at planned intervals.
- PR2.7 Performance of service components shall be evaluated against operational targets defined in OLAs and UAs.

- NI4OS-Europe implementation
  - AGORA service is used to maintain the service catalogue
  - SLA and other agreements templates are published on the wiki
  - ARGO tool will be used to evaluate the targets of the agreements

### MIL7 – ideal EOSC



□ SRM – Service Reporting Management

#### **PR3 Service Reporting**

- PR3.1 Service reports shall be specified and agreed with their recipients.
- PR3.2 The specification of each service report shall include its identity, purpose, audience, frequency, content, format and method of delivery.
- PR3.3 Service reports shall be produced. Service reporting shall include performance against agreed targets, information about significant events and detected nonconformities.

- □ SRM Service Reporting Management
  - NI4OS Accounting system is used to generate usage reports of the services

## MIL7 – ideal EOSC



### □ CAPM – Capacity Management

#### PR5 Capacity Management

#### REQUIREMENTS

- PR5.1 Service capacity and performance requirements shall be identified taking into consideration SLAs.
- PR5.2 Capacity plans shall be created and maintained.
- PR5.3 Capacity planning shall consider human, technical and financial resources.
- PR5.4 Performance of services and service components shall be monitored based on monitoring the degree of capacity utilisation and identifying operational warnings and exceptions.

### ■ NI4OS-Europe implementation

- Each service provider, accorgin to the SLA shall plan the capacities
- □ Capacitu utilization will be measured based on the outputs of the monitoring (ARGO) and accounting tools.

### MIL8 – ideal EOSC



# □ RDM – Release and Deployment Management

#### PR13 Release & Deployment Management

- PR13.1 A release policy shall be defined.
- PR13.2 The deployment of new or changed services and service components to the live environment shall be planned with all relevant parties including affected customers.
- PR13.3 Releases shall be built and tested prior to being deployed.
- PR13.4 Acceptance criteria for each release shall be agreed with the customers and any other relevant parties. Before deployment the release shall be verified against the agreed acceptance criteria and approved.
- PR13.5 Deployment preparation shall consider steps to be taken in case of unsuccessful deployment to reduce the impact on services and customers.
- PR13.6 Releases shall be evaluated for success or failure.

- NI4OS-Europe implementation
  - Each service provider shall plan its release and deployment.
  - Communication channels will be used to inform the users of the planned

## MIL8 – ideal EOSC



### □ CONFM – Configuration Management

#### PR11 Configuration Management

- PR11.1 Configuration item (CI) types and relationship types shall be defined.
- PR11.2 The level of detail of configuration information recorded shall be sufficient to support effective control over Cls.
- PR11.3 Each CI and its relationships with other CIs shall be recorded in a configuration management database (CMDB).
- PR11.4 CIs shall be controlled and changes to CIs tracked in the CMDB.
- PR11.5 The information stored in the CMDB shall be verified at planned intervals.
- PR11.6 Before a new release into a live environment, a configuration baseline of the affected CIs shall be taken.

- NI4OS-Europe implementation
  - Service providers, depending on their maturity and capability, will deploy CMDB

### MIL9 – ideal EOSC



□ CSI – Continual ServiceImprovement Management

# PR14 Continual Service Improvement Management

- PR14.1 Opportunities for improvement shall be identified and registered.
- PR14.2 Opportunities for improvement shall be evaluated and approved in a consistent manner.

- NI4OS-Europe implementation
  - Improvement opportunities will be identified by the service providers, based on the user recommendations and technology development
  - Service providers will define procedures for continual improvement

## MIL9 – ideal EOSC



### □ CHM – Change Management

#### PR12 Change Management

- PR12.1 All changes shall be registered and classified in a consistent manner.
- PR12.2 All changes shall be assessed and approved in a consistent manner.
- PR12.3 All changes shall be subject to a post implementation review and closed in a consistent manner.
- PR12.4 There shall be a definition of emergency changes and a consistent approach to managing them.
- PR12.5 In making decisions on the acceptance of requests for change, the benefits, risks, potential impact to services and customers and technical feasibility shall be taken into consideration.
- PR12.6 A schedule of changes shall be maintained. It shall contain details of approved changes, and proposed deployment dates, which shall be communicated to interested parties.
- PR12.7 For changes of high impact or high risk, the steps required to reverse an unsuccessful change or remedy any negative effects shall be planned and tested.

- NI4OS-Europe implementation
  - □ Service providers will implement change management procedures

# Conclusion

- Standards are important
- □ Tools are also important
- But people are even more important
- □ Some changes (rearangements) of the levels are possible
  - Based on the lessions learned from the initial on-boarding of the services

# Thank you for your attention



Questions, comments, discussion...