Standard requirements for service management in federated infrastructure

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Overview

- Rationale and approach to improving ITSM
- Relevance to Helix Nebula
- ~~Minimum~~ Standard requirements and context
- Example requirements
- Next steps

FedSM Mission Statement

Increase maturity and effectiveness of Service Management in Federated e-Infrastructures by applying suitable good practices!

Rationale & Approach

- e-Infrastructures need to improve management
  - To ensure sustainability and competitiveness with competing solutions, better engage customers
- Problem: ITSM is proven in public & commercial sectors but less popular in research sector or more complex in federated environments
  - Seems to be too complex, 'management speak', too legal & financial, too much change
- Present ITSM in palatable way
  - Present in language and jargon of the e-Infrastructure community so people recognise their activities
  - Assess current service management to show that ITSM already occurs
  - Show improvement as series of small increments to go from current position to mature management
  - Recognise federated environments will not support unmodified ITIL etc.
  - Set realistic goals that allow compatibility with traditional ITSM

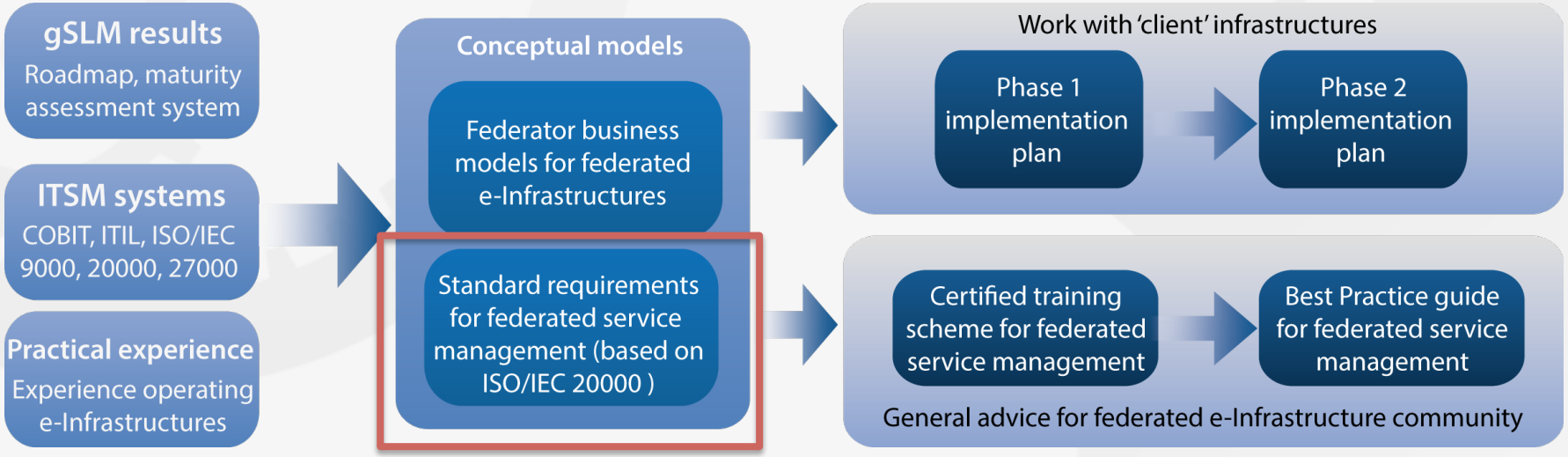
Relevance to Helix Nebula

- Federated environments
  - Cross organiational, disciplinary, national boundaries with *considerably less* control over interaction between participants than a normal service contract or commercial relationship
  - Technology/field Neutral
    - e.g. Grid (HTC or HPC) , multi-cloud, federated data infrastructure, cross-national e-Government etc. etc
  - Any area with close technical interaction with 'customer' where they have some managements roles (e.g. majpor research centre + cloud provider).
- Traditional ITSM falls down as it is based on assumptions that don't hold true for federations, or is rejected due to cultural clashes etc.

Relevance to Helix Nebula

- Impact of FedSM approach
  - ITSM 'baseline' that accommodates federated and research/academic environments.
  - For those not familiar with ITSM: something achievable, recognizably relevant to their work, incremental
    - Profit from existing efforts, make the tweaks needed to work with others
  - For those familiar with ITSM: a way to let others interact with your management processes in a more painless way
    - Make your 'customers' behave better, easier to make them happy
- FedSM approach is 'management interoperability'
  - 'Organisational interoperability' in EIF schema
  - Improve service managements in Grids such as EGI and easy integration with commercial partners
  - Help Cloud providers go beyond vendor-locked single provider model

Project outputs

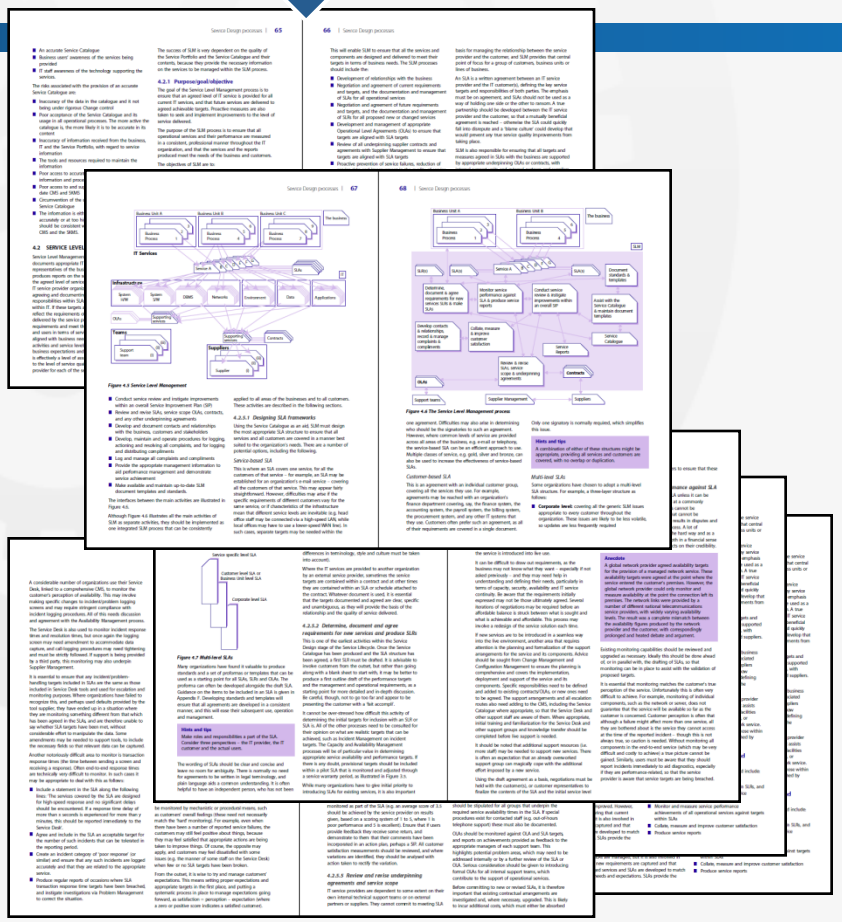


Standard requirements: Outline

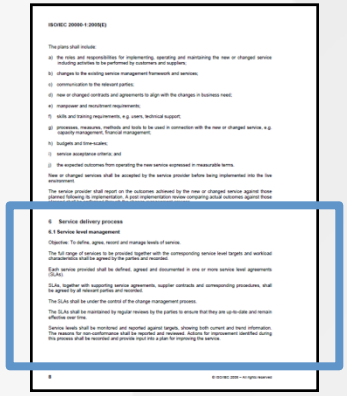
- General set of requirements in simple prose form
  - Divided into processes and possible activities
  - Technology neutral
- Based on ISO/IEC 20000
  - International standard for ITSM
  - Compatible with ITIL and other frameworks

- Not full ITSM maturity
  - Take fundamental elements of each process, enough for medium maturity
  - Remove elements that don't make sense in federated environment
- Foundation for improvement
  - Realistic to build off it to ISO/IEC 20000 certification or ITIL introduction

ITIL (good practice) vs. ISO/IEC 20000 (standard)

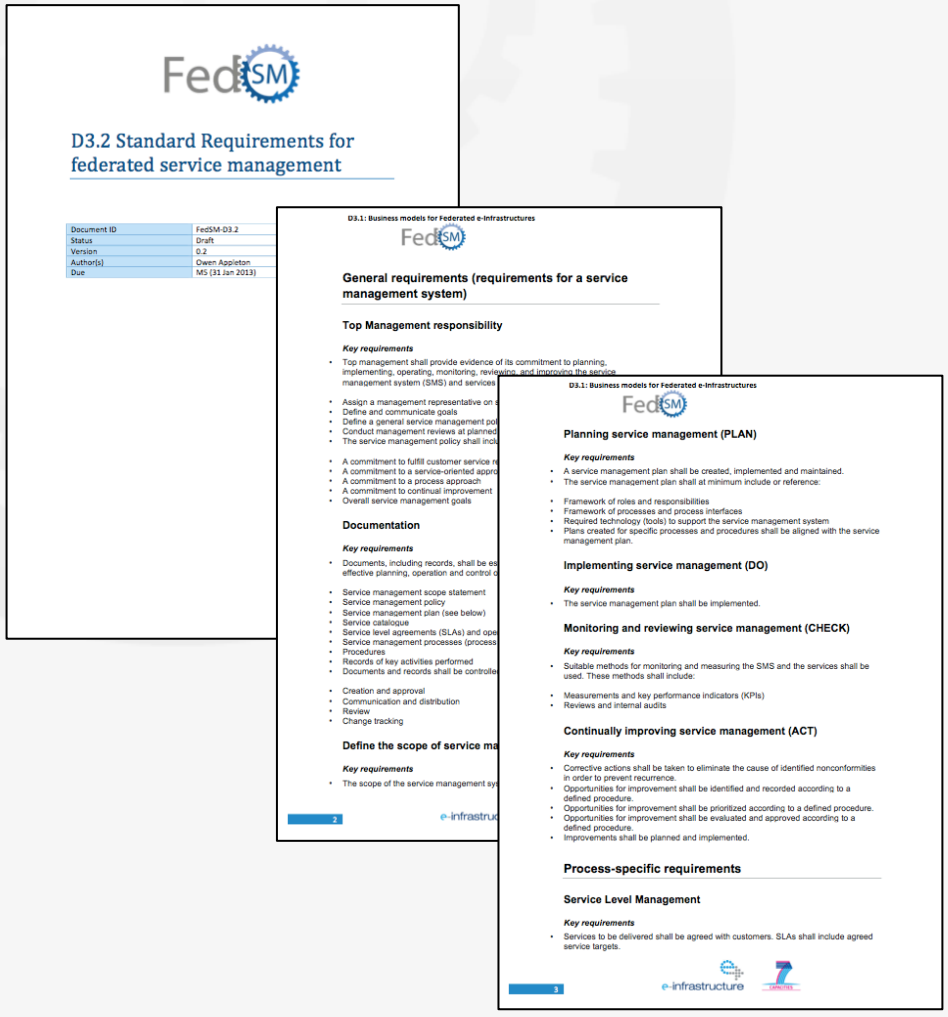


- **about 1,500 pages total (entire framework)**
- **10-20 pages per management process**



- **24 pages total (entire standard)**
- **½ page per management process**

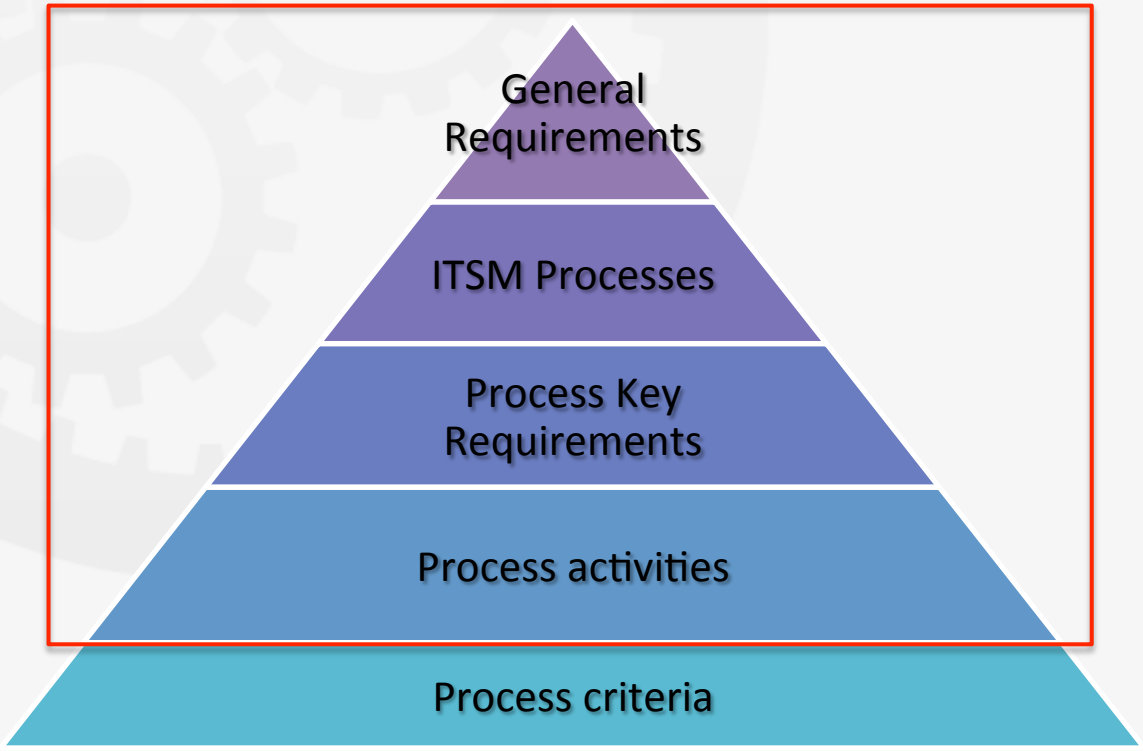
Standard requirements: Outline



- FedSM Standard Requirements
  - 8 Pages!
  - ~100 words/process

Requirements structure

Standard requirements



General requirements to manage IT services

Distinct processes that must be in place to manage IT services

Key requirements to make process effective

Suggested way process requirements can be implemented

Specific criteria to practically meet process requirements

General Requirements: areas

- General Requirements
  - Top management responsibility
  - Documentation
  - Scoping
  - Planning
  - Implementing
  - Monitoring
  - Service Improvement

General Requirements: example

- Top Management Responsibility (extract)
  - *Top management shall provide evidence of its commitment to planning, implementing, operating, monitoring, reviewing, and improving the service management system (SMS) and services*
    - *Assign a management representative on senior management level*
    - *Define and communicate goals*
    - *Define a general service management policy*
    - *Conduct management reviews at planned intervals*

- In essence, management must meaningfully back service management to make it worth implementing

Processes

- Service Level Management
- Service Reporting
- Service continuity & availability management
- Capacity management
- Information Security Management
- Business Relationship Management
- Incident & Service Request Management
- Problem Management
- Configuration Management
- Change Management
- Release & deployment Management

Maps closely to ISO/IEC 20000 and ITIL processes

Process Key Requirements & activities: example

- Incident & Service Request management
  - Process aimed at returning service to correct operation and fulfilling standard requests as quickly as possible
  - Easy process to understand, makes sense to most people in IT service provision
  - Exists in some form in any operational service (even if it is just ‘call Owen and shout until he reboots the server!’)

Process Key Requirements & activities: example

- Incident & Service Request management: Requirements
  - All incidents shall be **recorded** according to a defined procedure.
  - All incidents shall be **classified** according to a defined procedure.
  - All incidents shall be **prioritized** according to a defined procedure, taking into account impact and urgency of the incidents.
  - **Escalation** of incidents shall follow a defined procedure.
  - **Closure** of incidents shall follow a defined procedure.
  - Personnel involved in the incident and service request management process shall have access to **relevant information** including configuration and release information.
  - Customers shall be **kept informed** of the progress of their reported incidents and service requests.
  - There shall be a **definition of a major incident**. Major incidents shall be classified and managed according to a documented procedure.

Process Key Requirements & activities: example

- Incident & Service Request management: Activities
  - **Record** incident or service request
  - **Classify** incident or service request
  - **Prioritize** incident or service request
  - **Escalate** incident or service request
  - **Resolve** incident or service request
  - **Close** incident or service request

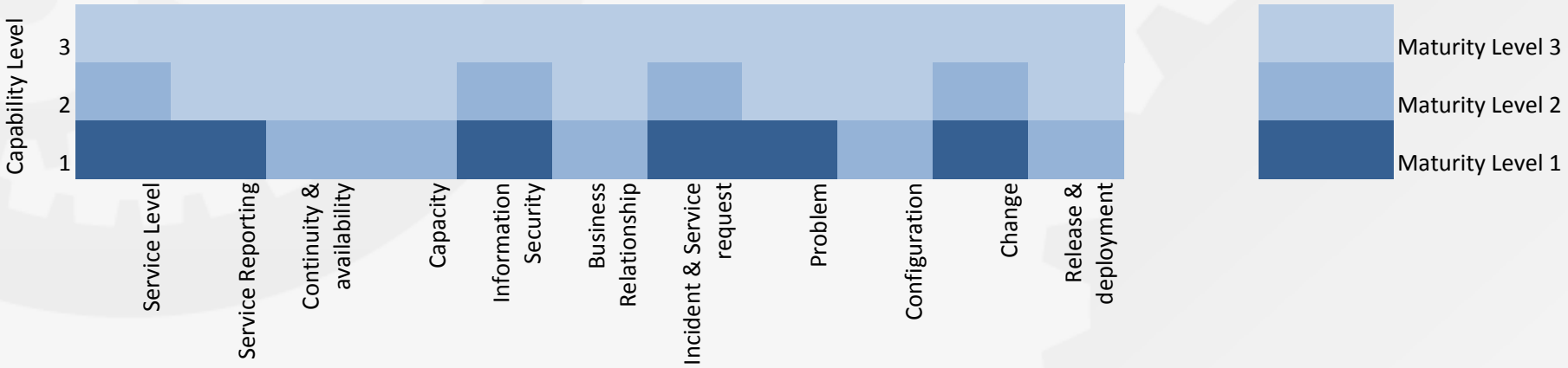
Process Key Requirements & activities: overview

- Incident & Service Request management
  - Requirements and activities clearly quite similar
  - Can be summarised as ‘have a set of steps, document, publish and follow them’
  - Should be achievable for any e-Infrastructure, though implementation will vary
  - Not prescriptive, a framework for organizations to work out what they need to do in their particular case

Using the requirements

- Using the requirements
  - Requirements form level of ITSM that should suffice for most federated e-Infrastructures
  - Additionally define two intermediate maturity levels on the path to meeting the full requirements
  - Provide assessment based on criteria that shows level of capability in each process and through that, overall maturity
    - Allows those using it to see what actual actions are needed for effective ITSM
    - Show current state in ITSM terms
    - Show ‘delta’ to better ITSM

Using the requirements



Next steps

- Requirements published end of Jan 2013
  - Non-deliverable version combined with business models
- Complete criteria by late spring 2013
  - Required for implementation plan with FedSM 'clients'
- Certified training based on requirements Certified by TUV Sud
  - Provide training in ITSM for e-Infra community
  - First training in Autumn 2013 (EGI) Technical Forum)
- Engage with Helix Nebula
  - See how this relates to Service Architecture, tune outputs to assist HN
- To stay up to date: email info@fedsm.eu to be added to mailing list

Thanks for listening!

Contact me for more information
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- Project acronym: FedSM
- Project title: Service Management in Federated e-Infrastructures
- Funding: EC-FP7 – Coordination and support action
- Project duration: 36 months, 1 Sept 2012 to 31 Aug 2015
- Project website: www.fedsm.eu
- Twitter: @FedSM_project