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The role of IT service management in e-Infrastructures careers

Gergely Sipos
Head of Services, Solutions, Support
EGI Foundation

- Intro to EGI

- Sustainability and growth

- IT Service Management (ITSM)

- Implementation in EGI

- ITSM and career paths

Vision

All researchers have seamless access to
services, resources and expertise
to collaborate and conduct
world-class research and innovation

Mission of the EGI Federation

Deliver open solutions
for advanced computing and data analytics
in research and innovation

Mission of the EGI Foundation

Enable the EGI Federation
to serve international research and innovation
together

EGI Participants

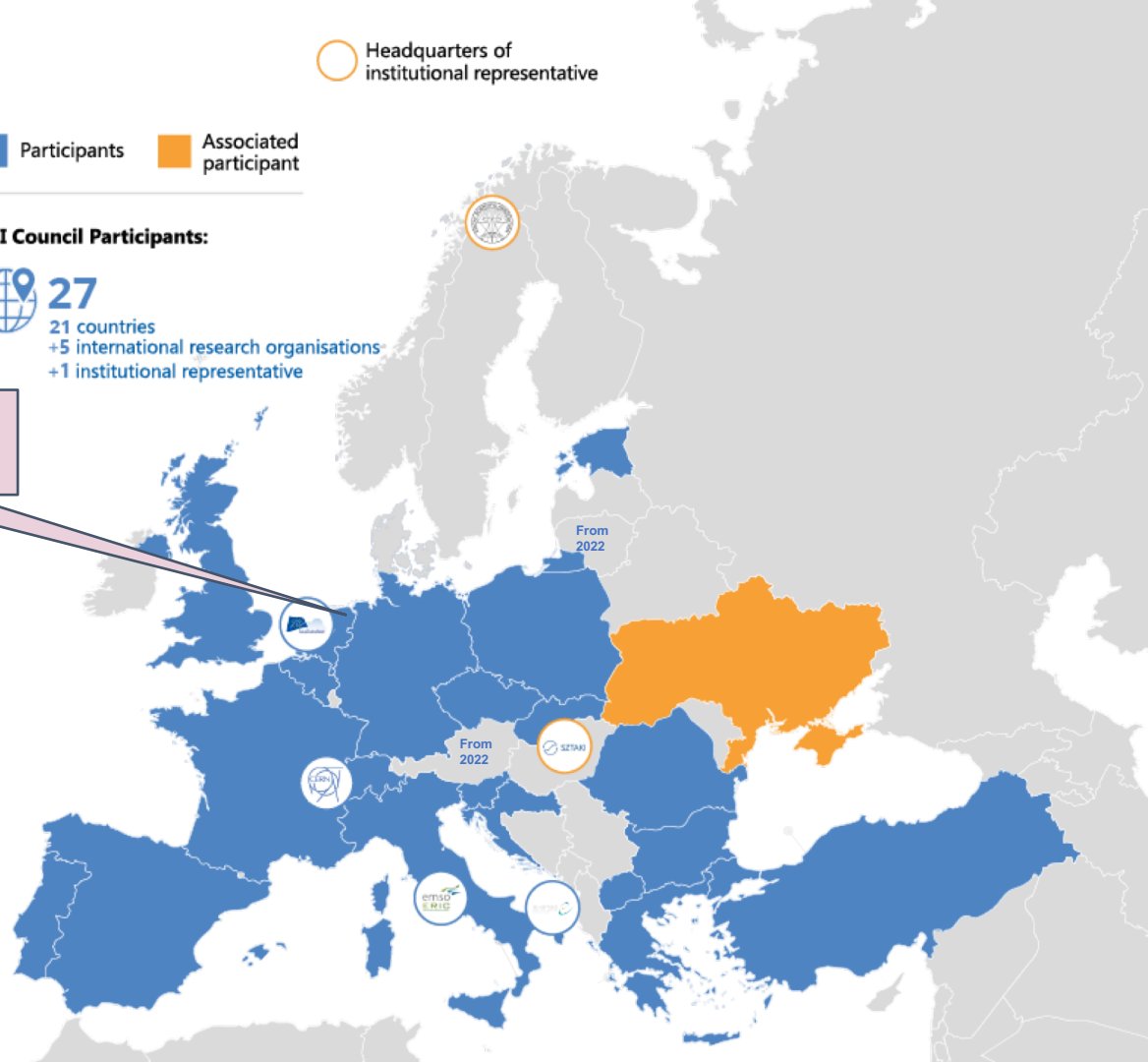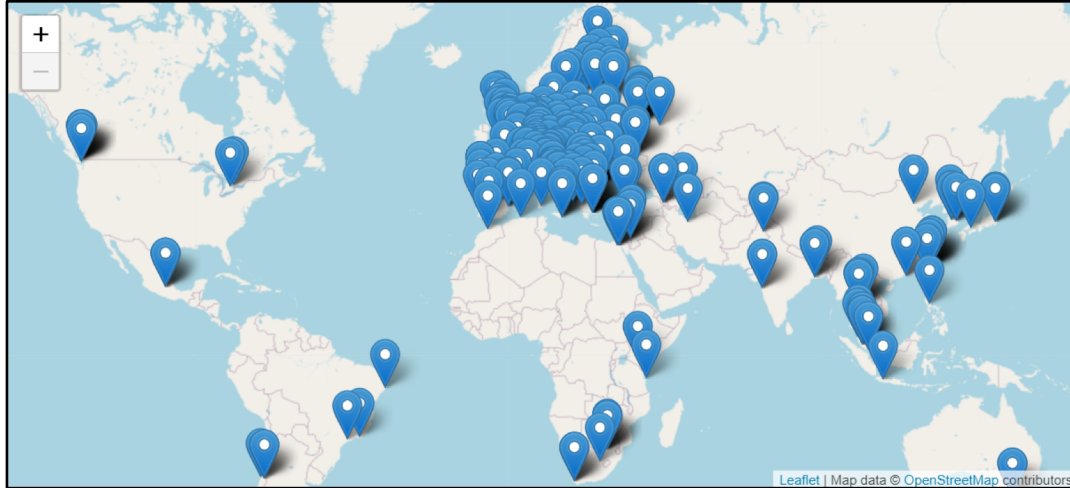Headquarters of institutional representative

Participants

Associated participant

EGI Council Participants:

27

21 countries
+5 international research organisations
+1 institutional representative
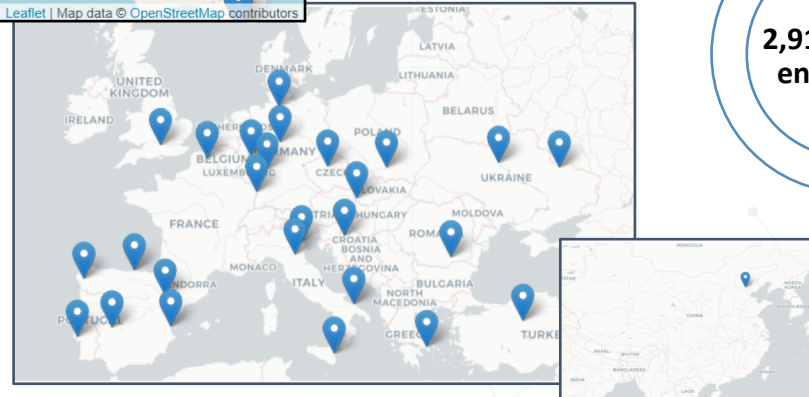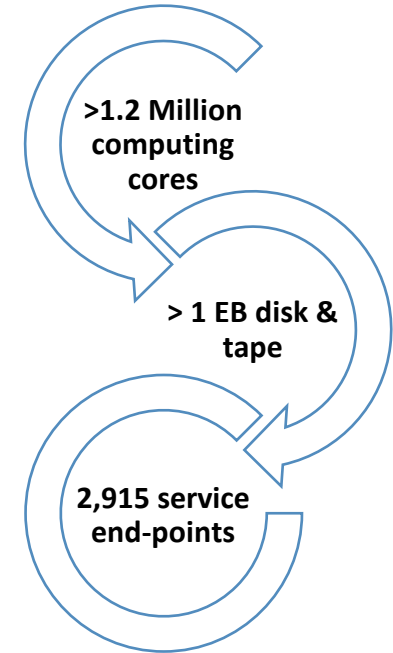
EGI Foundation (EGI.eu)
Est. 2010 in Amsterdam

From 2022

From 2022

SZTAKI

CERN

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EGI Infrastructure

High Throughput Compute providers

HTC: 5.2 Billion CPU h/year

Cloud: 43 Million CPU h/year

Over 75,000 users

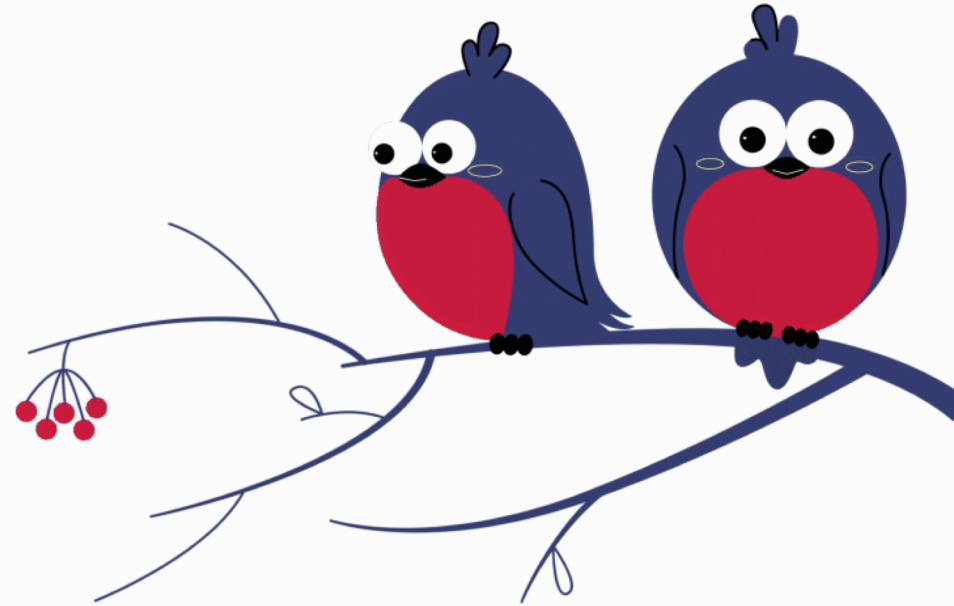>1.2 Million computing cores

> 1 EB disk & tape

2,915 service end-points

Cloud providers

- Keep the community together
- Enable growth

IT Service Management

Why Service Management is Needed

- **Why IT service management (ITSM)?**
  - About 80% of all IT service outages originate from "people and process issues"
  - Duration of outages and degradations significantly dependent on non-technical factors

- **IT service management**
  - … aims at providing high quality IT services meeting customers' and users' expectations
  - … by defining, establishing and maintaining service management processes
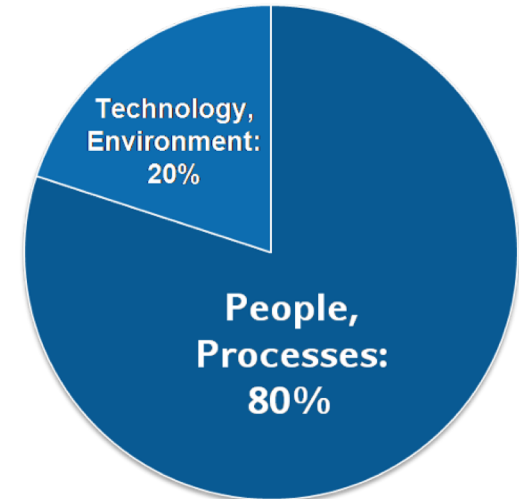
Reasons for service outages [Gartner]

IT Service Management...in Research

- **Shift in expected results**
    - FP7 -> H2020 = Publications -> Services
    - Focus on Sustainability!
    - Major cultural shift
- **Increased customer/user expectations**
    - Commoditization of digital services
    - XaaS (Anything as a Service) now commonplace
    - Researchers don't have to just accept whatever services are offered just because they are free at point of use
- **Skills, experience and knowledge gap**
    - Diverse experience and frameworks (e.g. agile, devops, ITIL)
    - Need for a common/shared approach to professionally plan, deliver, operate and control IT services
    - Limited to no formal training

We are now service providers?

- **Traditional IT service management (ITSM) practices …**
  - Assume single central control over all service management processes by one organisation acting as the service provider
  - Hardly address collaborative approaches to service delivery
- **As a result**
  - Applying ITSM in federated environments may be more difficult, and not all concepts / ideas will work
- **Even more important in a federated environment**
  - Understanding the roles of the federation members (including the roles or "business models" of all parties involved)
  - Not all federations are the same! This affects which part of the federation is responsible for which aspects of the service delivery

What is FitSM

- Standards family for lightweight IT service management
- Suitable for IT service providers of any type and scale
- Main design principle: Keep it simple!
- All FitSM parts are freely released under Creative Commons licenses
- FitSM is operated and managed by ITEMO (non-profit)
- Certification provided by ICO-Cert and APMG International

www.fitsm.eu

FitSM_Standard

The development of FitSM was originally funded by the European Commission through an EC-FP7 project "FedSM" (2012-2015)

IT Service Management with FitSM

- IT service management

PR5 Capacity Management (CAPM) → **Checklists**

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.

PR6 Information Security Management (ISM) → **Checklists**

REQUIREMENTS
- 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.

- Service portfolio management
- Service level management
- Incident management
- Change management
- Capacity management
- Information security management
- …

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- 18 ...neral requirements; 69 pro

- 14 processes

Implementing FitSM – In practice

Process documentation

e.g. Confluence, GitLab
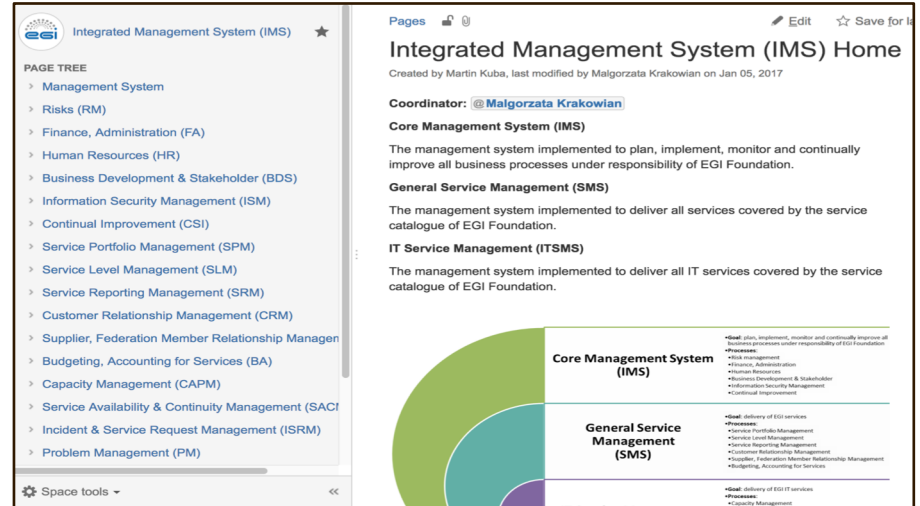
Ticketing tool

e.g. JIRA, RT

Templates

e.g. Word docs, Excel, Google Apps, Forms

Checklists

Self assessment tool

Committed and trained teams

Following the documentations

Organizations

Federations / Projects

*Non-exhaustive list

FitSM Personal Certification / Training

Expert Level

2 days — Expert training in IT service management

3 days — Expert Bridge — ITIL Expert, ISO/IEC 20000 consultant and auditor

Advanced Level

2 days — Advanced training in service planning and delivery

2 days — Advanced training in service operation and control

Foundation Level

Foundation training in IT service management

1 day

1.5 days when held virtually

Some Stats

1000+
Certificates delivered via EGI training courses

85
Individual FitSM training courses delivered by EGI

100+
Individual organisations having had someone trained
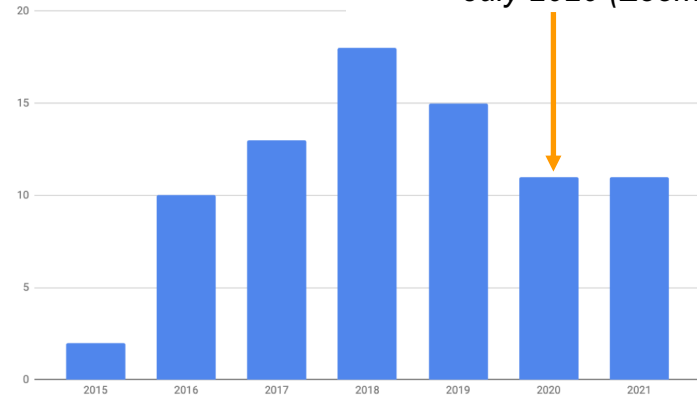
75M/25F
Gender Balance

30
Organisations and projects having held in-house training courses

20+
Accredited Training Organisations globally delivering commercial FitSM training

Remote courses 1st held in July 2020 (Zoom)

FitSM Training trends

NEW! FitSM Organisation Certification

Intro
- Until now, FitSM has been delivering "personal" certifications as a formal recognition of the knowledge acquired during training.
- The FitSM Working Group, as part of ITEMO, has developed a scheme in partnership with certification authority APMG International, for an "organisation level" certification as a formal demonstration of FitSM implementation.

Value Proposition
- Get recognition for having implemented your service management system.
- Market your professional service management to potential new customers and funding agencies.
- Receive a structured external review for both positive aspects and areas of improvement.

How it works
- A certified auditor, with vetted credentials, spends 2-3 days formally reviewing your service management implementation with the key personnel from your organisation. Following a standard evaluation against FitSM-1 requirements with 2 potential levels:
  - FitSM Essentials: entry level certification verifying the initial key processes have reached full maturity with varying capability levels for others.
  - FitSM Plus: highest level certification demonstrating that all FitSM-1 requirements have reached full maturity with only minor exceptions.

Associated Costs
- Auditor Fee: Subject to individual auditor service offers and days required, which is typically based on organisational size
- APMG Fee: Organisational approval, certificate and digital badge = €500.00

Interested?
- APMG and ITEMO are currently gathering expressions of interest.
- Please visit https://www.fitsm.eu/organisational-certification/ to learn more

NEW! FitSM V3.0

FitSM-1 V3.0 Edition 2021 – Now in Pre-Release!
An updated version of the FitSM-1 requirements is now available in pre-release.

- No structural changes, many requirements cleaned and improved language across all processes.
- Alignment with ISO/IEC 20000 updated version, v2018.
- Many of the changes resulted from direct feedback during training courses.
- Work will continue into 2022 to update the training material and exam questions to start to certify individuals with V3.0.

How FitSM helps career development

M

Service operators

User supporters

Technology developers

Management (project, national, etc.)

F

Communication, policy, finance, ...

Growing via processes:
Contributor → Manager → Owner

CRM2 Customer technical onboarding

18

EGI FitSM Trainer Network

Current Demand and Scale
- EGI is establishing a trainer network programme with certification authority APMG International

Models
- Associated Trainer
  - Full accreditation by APMG with your own audited Quality Management System
- Affiliate
  - An organisation is not interested in a full accredited training organisation (ATO) and operating/having audited its own Quality Management System.
  - Ability to reuse EGI's established QMS framework. All courses delivered must follow the defined EGI practices, including all EGI branded material.
  - Individual trainers must be certified by APMG with the relevant credentials and pay a fee (less than being a full ATO). EGI can support in the process.
  - This model is foreseen to be more attractive for EGI federation members and the wider community who are interested in providing local training.

If you are interested in becoming a certified FitSM trainer, contact training@egi.eu
A dedicated webinar is planned in the first half of 2022.

Spreading excellence

- EC Projects with FitSM Training Planned
  - EOSC Future
  - EGI-ACE
  - PITHIA-NRF
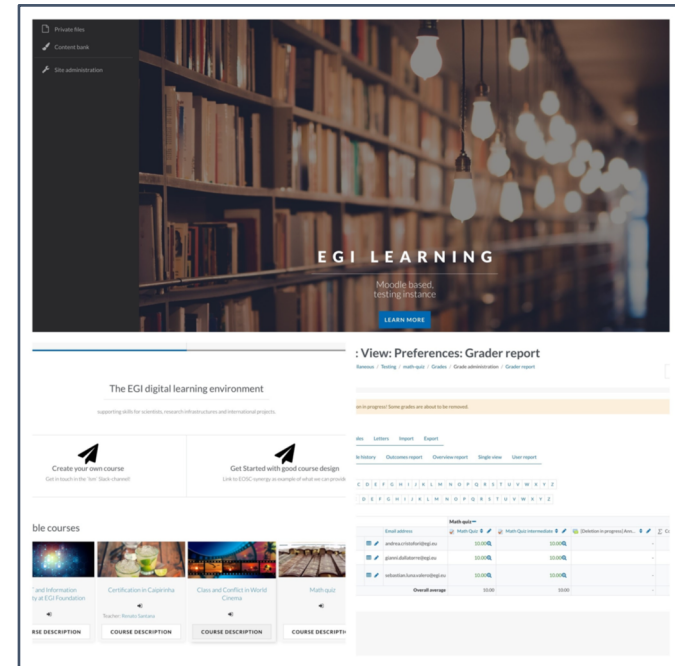

- Paid training courses available upon request:
  https://www.egi.eu/services/fitsm-training

- In 2022:

  - Moodle based EGI Training environment

  - Contribute to the broader training landscape
    - EOSC Compute Platform training for operators and users (EGI Moodle)
    - Reproducible data analytics (EOSC Future Knowledge base)

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Thank you for your attention.

Questions?