e-infrastructure assessment strategy

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The eInfraCentral project:

**Project overview**

- **30 month H2020 CSA project**
  - One of two ‘foundation stones’ of EOSC
- **Developing a harmonised service catalogue and a ’one-stop shop’ portal**
  - Co-design with e-infrastructure service providers & users
- **Monitoring service performance & quality**
  - Interface with e-IRG project work on KPIs
eInfraCentral

Contribution to monitoring e-infrastructure performance

• During service catalogue alignment process ensure a common approach to Service Performance Monitoring
  – KPIs on usage, users, capacity, etc.
  – Services catalogued will be expected to list available KPIs

• During portal development:
  – Providing a tool for seamlessly monitoring service performance and quality across multiple service providers

• KPI choice informed by user needs elicitation survey
Catalogue of services

Key Performance Indicators (KPIs)

• For whom
  – user/funder/policy maker?

• For what purpose
  – market visibility, choice of service, internal/external evaluation?

• Building on past examples:
  – e-IRG, e-nventory, etc.

• Input on KPI selection will be informed by the results of the user needs questionnaire
Service Catalogue Alignment

Detailed timeline

01. Gather flagship European e-Infrastructures’ current catalogue/list of services

02. Draft classification of available service catalogues and validation of state-of-play

03. eInfraCentral Service Catalogue Requirements fully documented

04. Global e-Infra Initiatives provide their perspectives on service catalogue alignment

05. Service classification completed & linking KPIs to Services

06. Consensus on service classification/taxonomy achieved

07. Finalised service typologies communicated to all flagship e-Infras

08. Common set of KPIs selected for adoption by e-Infrastructures

09. Service representation schema defined and delivered
Service providers Functionalities

- Easy Registration of services
  - Prefilled fields and suggestions
  - Uniform service description & comparable service offerings across e-Infrastructures
- Management of service access requests
  - Customer feedback gathering
- Harvesting and Recording of service KPIs over time
  - Monitoring and Advanced Visualization of service KPIs
eInfraCentral Portal

Service consumers Functionalities

• Search services using keywords
• Explore/browse a catalogue of services
  • Browse through specific filters (faceted search)
  • View services organized per category
  • View details for a specific service
  • View key performance indicators (KPIs) for a specific service
• Compare service characteristics and KPIs
• Visually explore service stats & KPIs through different types of graphs
• Different views based on user group & interest (researcher, funder, etc)
  • Different filters on Service types and offerings
  • Different highlighted KPIs
  • Different rankings and characteristics for comparison
Survey on requirement elicitation

Aim and state of play

- Targeted questions to service providers and users/customers, as well as potential users/customers and interested stakeholders
- Survey is open until 19 June 2017 via following link
  - https://www.surveymonkey.com/r/e-infra_service_catalogue
- 209 replies received by 5 June 2017:
  - 48% service providers
  - 25% current users
  - 26% others
Survey on requirement elicitation

KPI questions to service providers 1/2

• Select from the following list those KPIs that you are currently providing to a) service users/consumers, b) policy makers/funders and c) wider public:
  – Service Level Agreements in place
  – User representatives in governing bodies
  – Number of up- and downtime
  – Number of users and its increase over time
  – Availability (24/7)
  – Number of service requests
  – Number of incidents/ mean time to repair
  – None of the above
Survey on requirement elicitation

KPI questions to service providers 2/2

• List additional KPIs that you have for internal use or you are currently providing to service users/consumers, policy makers/funders and wider public and that have not been included in the above question: [open ended response]

• How can your service KPIs be accessed and updated?
  – Download URL
  – Web UI
  – Rest API
  – Dedicated application
  – SPARQL endpoint

• List KPIs for internal use or for users/consumers, policy makers/funders and wider public that you are planning to collect in the future? [open ended response]
Answers to KPI questions 1/4

KPIs that are currently provided [45 answers from 101]

- Service Level Agreements in place
- Availability (24/7)
- Number of service requests
- Number of users and its increase over time
- Number of CPU, bandwidth, storage
- User representatives in governing bodies
- Number of up- and downtime
- Number of incidents/ mean time to repair
- None of the above
Answers to KPI questions 2/4

Additional KPIs that are not on the dropdown list [14 answers from 101]

- Usage/consumption of CPU cycles
- Storage per storage class per scientific domain
- Number of implemented projects (facilitated use cases)
- Growth in data resources
- Volume of data downloaded
- Increase in data published (by country, by node/partner organisation)
- Publications citing the used service and increase in data citation (by dataset/ by data node/ by each country)
- Different type of flagged data quality issues
- Number of providers supporting open standard interfaces
- Web statistics (hits, visitors)
- Graphical user interface (for users)
Access to service KPIs [42 answers from 101]

Other ways to access and update KPIs:

- Quarterly reports (PDF files)
- Direct link on a website
- KPI info available only internally
- Mix of the mentioned means + direct requests of specific KPI information
Answers to KPI questions 4/4

KPIs to be collected in the future [13 answers from 101]

- Performance monitoring and benchmarking
- Dependencies by other resources
- Availability of helpdesk
- Researchers decide, if they are willing to spend their grant money for any given e-infrastructure
- Usage parameter characteristics, not only service features
- Reviewing indicators that provide better insight on impact of research
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Survey: https://www.surveymonkey.com/r/e-infra_service_catalogue