Sustainability of e-infrastructures and challenges for the future

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Outline

1. e-Infrastructure funding instruments and programmes
2. Funding consolidation of e-Infrastructure national nodes
3. Cross-border access and funding to operations, training and technical support
4. e-Infrastructure representation in decision making and setting of priorities

Discussion

Topic 1. e-Infrastructure Funding Instruments and Programmes

C. Stöver

Fragmentation of Funding Opportunities

- In addition to Horizon Europe, increasingly funding being distributed across CEF, DEP, NDICI, as a consequence of the Digital Decade
- Some requirements/calls are very similar, but in different calls
- Different funding: different rules and fragmentation of actions
  - Connectivity: Horizon Europe but the EuroHPC Hyper-connectivity network is under CEF (in consequence this is now a procurement)
  - EOSC: Horizon Europe
  - Quantum: partly in CEF and across many elements in DEP
  - International: NDICI, IPA3
  - Data spaces, AAI and PID: DEP
- e-infrastructure reach across Europe can extend beyond EU 27
- Not all our partners are associated to new instruments like DEP and CEF

Fragmentation of Funding Opportunities (cont)

- We see a shift towards indirect management
  - Yet some of our members and other parties find they cannot participate in procurement activities
  - Not for profit/state funded entities not designed to take financial risks in service delivery
  - Break even/Cost based model so no profit= no margin for unexpected costs
- The NIS2 directive will be transposed in slightly different way into national law across EU MSs
  - This will impact service delivery
- Sanctions and espionage/IP protection, critical infrastructures are changing the landscape
  - more stringent requirements for participation (exclusion of third country entities, security clauses)
- Cross border transactions and VAT
  - More (not less) VAT complexity proving a real barrier to pan European service delivery where equipment and services are concerned

Topic 2. Funding consolidation of e-Infrastructure national nodes

J. v. Wezel

Value delivery

- Free and roaming data / compute services (use anywhere anytime)
- Enabling unhindered collaborations (beyond single sign on)
- With researchers, jointly building services and running operations
- Develop European/International/cross border partnerships

Costs recovery

- National versus International funding
  - different ruleset for each funding instrument
  - local/national investments/operations cannot be used for cross-border services.
  - disparity in expected use between local and EC funding which results in a loose-loose situation
  - in-kind funding is not sustainable which impacts foremost long term commitment of members
  - further development of services through (competitive) calls/proposals is unplannable (lottery)
- Costs models and locality of eInfra members differ. Resulting in
  - different costs for similar services
- Membership model of eInfras
  - requires balanced input/output with third party funding
  - members expect return of their engagement
  - are more expert at local level funding which foregoes cross border use of funds
  - Activities on funding of eInfra is syphoned of the creative process

Topic 3. Cross-border access and funding to operations, training and technical support

F. Berberich

Transnational Access (TNA) - Booster for the Use of e-Infras

- Huge investments (national and EU level) in a rich e-Infrastructure (e-Infra) landscape
- Sometimes too focused on investment BUT use of e-Infra is most important
- New e-Infras require specific expert skills
- Users need more than access !
  - Support
  - Training
- Transnational Access is the right tool

Transnational Access (TNA) - Advantages

- Cover part of operation cost - sustainability
- Provide support and training
  - New user communities - long tail domains
  - Industry, e.g. SMEs have not time nor funding to engage with top level RI
- Enable
  - Co-operations (across borders & research fields)
  - Cross disciplinary engagement (experts & long tail domains)
  - Uptake of new requirements
- Increase visibility of e-Infras
- Promote and foster EU e-Infra landscape

Transnational Access (TNA) - Requirements

- Suitable and sustainable EC funding
  - Sufficient funding for
    - Operation
    - Training
    - Support
  - Not restricted e.g. ERIC but open to all e-Infra (including national)
- On site visits but also remote access should be possible
- Access free of charge

Topic 4. e-Infrastructure representation in decision making and setting of priorities

N. Manola

Setting priorities - the ideal scenario

- Prepare long-term infrastructure plans that translate a systematic baseline assessment into a committed articulation of priorities, goals and pipeline of projects.
    - A **cycle** of setting agenda-implementation-evaluation-uptake-evolution **> 3-4 years**
- **How:** Formulating, updating and reviewing plans done be independent think-tanks able to foster political commitment for the plans and the directional advice coming from them.

Setting priorities - The practice

- EC 2-year work plan (too short), which does not necessarily translate to actions in member states
  - A lag in priorities among states and EU
  - Many infrastructure national members struggle to be in the cycle

- **How:** A “collaborative” way to set priorities in “bottom-up”, with too limited research community involvement
  - Task forces, consultations, surveys, workshops, …
  - **Fatigue** due to the perception (?) that there is no act on the feedback
  - **Top down vs. bottom up:** Key priorities are set in a **top down mode** (e.g. EOSC, EOSC Portal, EOSC Nodes) while services are mostly generated in a bottom up fashion (e.g., OpenAIRE Graph, eduroam, b2drop, EGI federated data processing and analytics solutions)

- **Fact:** e-Infrastructures have built **excellent and active European networks** which provide valuable information on opportunities, challenges, risks, paths for uptake. Close to researchers.

Decision taking

- Dilution: too many bodies, too complex an environment
  - EOSC-A: GA too big to take informed decisions. Task forces from volunteers, often with own agenda.
  - EOSC SB - More on the observing side (?)
  - e-IRG mostly on reflection
  - ESFRI - but DIGIT WG does not include e-Infrastructures
  - EuroHPC
  - DG-R&I, DG-CNECT: Different set of priorities, not common decision making
- It is too often about politics and not about users' needs
  - Plethora of white papers that do not showcase practical implications
- e-Infrastructures are partially acknowledged, but their voices are not yet heard
  - Many fronts to tackle, skilled resources needed (fragmentation, fatigue)
  - It takes two to tango
  - A single voice transforms into a more powerful voice

Lessons learnt & way forward

- **Go back to the roots**
  - Spend concerted effort on our skills for active listening - proactively define priorities
  - Become the (joint) voice of our networks
- **Build trust**
  - Among us and beyond - continue dialogue towards the e-Infra Assembly and become a trusted dialogue participant
  - Provide viable and different options for services, agreed and tested by us
- **Lead developments instead of following them**
  - Invest in (joint) development studies to scope potential responses
  - Communicate, communicate,communicate!
- **Follow a practical approach**
  - Expedite the process: include high level executives in the dialogue (political commitment on our side)

Discussion