e-Infrastructures in a strategic approach :
A user-oriented vision

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From the beginning:

✓Development of Internet technologies (TCP/IP): A unique naming and addressing space!

✓The development of the WEB boosted the expansion of the Internet!

✓Why? Because it made inter-operable applications using IP stacks (who does remember WAIS, Gopher or even Mosaic?)

✓Interoperability and standards are keys to the success!

What are the e-Infrastructure?

✓Physical network layer: GEANT, NRENs, RedCLARA, EUMEDCONNECT, TEIN, SEEREN, etc…

✓Service infrastructures: HPC (DEISA, PRACE), storage (LHC, EBI), Grids (EGEE, etc…)

✓Application sharing layer: Grid middleware, AAI, etc…

But what are the user needs?

✓User-friendly interfaces

✓Resource abstraction

✓Access to the world of knowledge

✓Access to instruments

Expectations from users

✓Trust

✓Security

✓Authentication, authorization

✓Interoperability

✓Openness

But also new ways to perform:

✓Access to scientific publication and data

✓Shorter turn-around between production and availability

✓Networking of instruments and researchers (vLBI, LHC)

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Examples from the ESFRI roadmap

✓All SSH projects are drastically depending upon e-Infrastructures

✓Most of the BMS projects as well (bio-informatics, networking of life science facilities)! Others rely only strongly on them (translational medecine, clinical research facilities)

✓All except one or two, among the PSE groups are relying also on e-Infrastructures

✓All ENV projects are likely to depend also (global change, biodiversity)

A more general context:

✓Data (deep changes in the economic model):

    ✓digital repositories,

    ✓libraries

    ✓Open access to data and literature (grey and white)

    ✓Scientific publications

    See Feb-07 communication of the European Commission, Recommendation of OECD for scientific data and the latest conclusions of the European Council!

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Global scope for e-Infrastructure policies:

Research infrastructures: ESFRI

European Strategy Forum for Research Infrastructures

www.cordis.lu/esfri/

e-Infrastructures: eIRG

e-Infrastructures Reflection Group

www.e-irg.eu

Thanks for your attention

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Questions