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The Standardization Challenge

Addressing the challenges in research/standards
interfacing as a research project

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A Personal View based on...

- Open Grid Forum
 - Steering Group Member
 - e-Science Area Director
 - Semantic Grid Chair
 - OGF–W3C liaison
- Open Middleware Infrastructure Institute UK
- Grid Technologies projects and concertation activities
- Next Generation Grids



The Grid Context

Interop is the essence of Grid!

Grid is about joining things together – without interop there is no Grid

Old World

Static

Silo

Physical

Manual

Application



New World

Dynamic

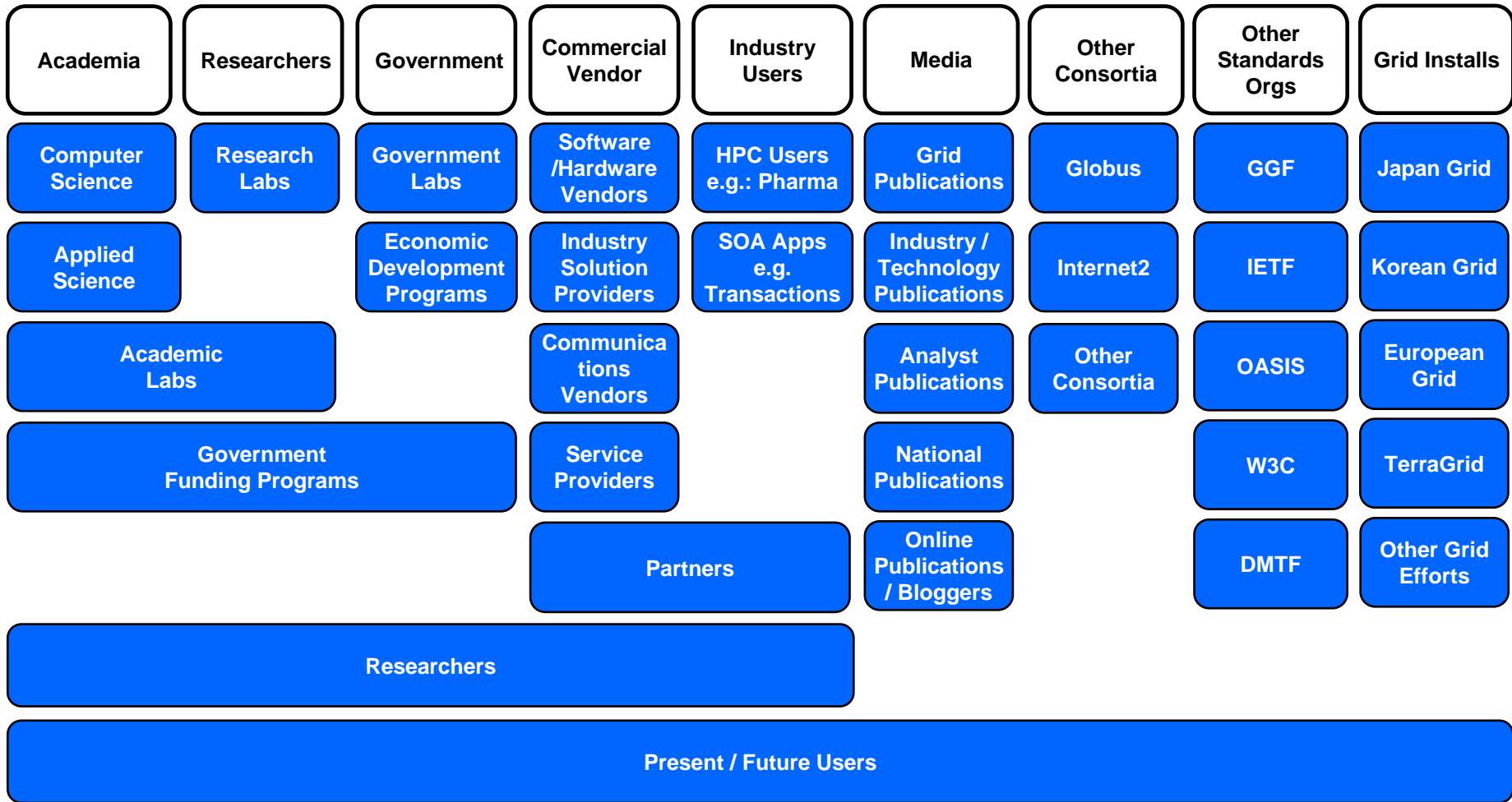
Shared

Virtual

Automated

Service

The Grid ecosystem



KEY

HPC = High Performance Computing
 SOA = Services Oriented Architecture

The Open Grid Forum

An international community dedicated to accelerating grid adoption

- **Open** Forum
- **Open** Standards
- Opening doors to ...
 - Business Value
 - Scientific Discovery

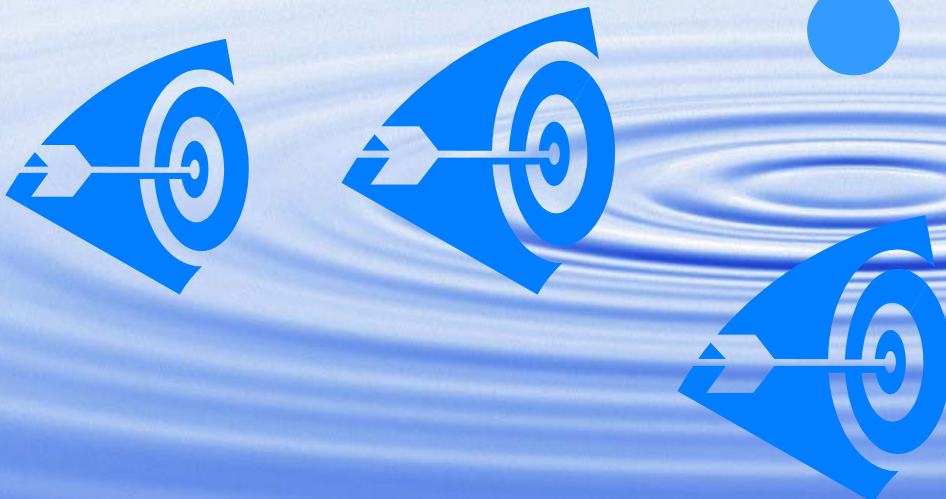


Challenge/Opportunity

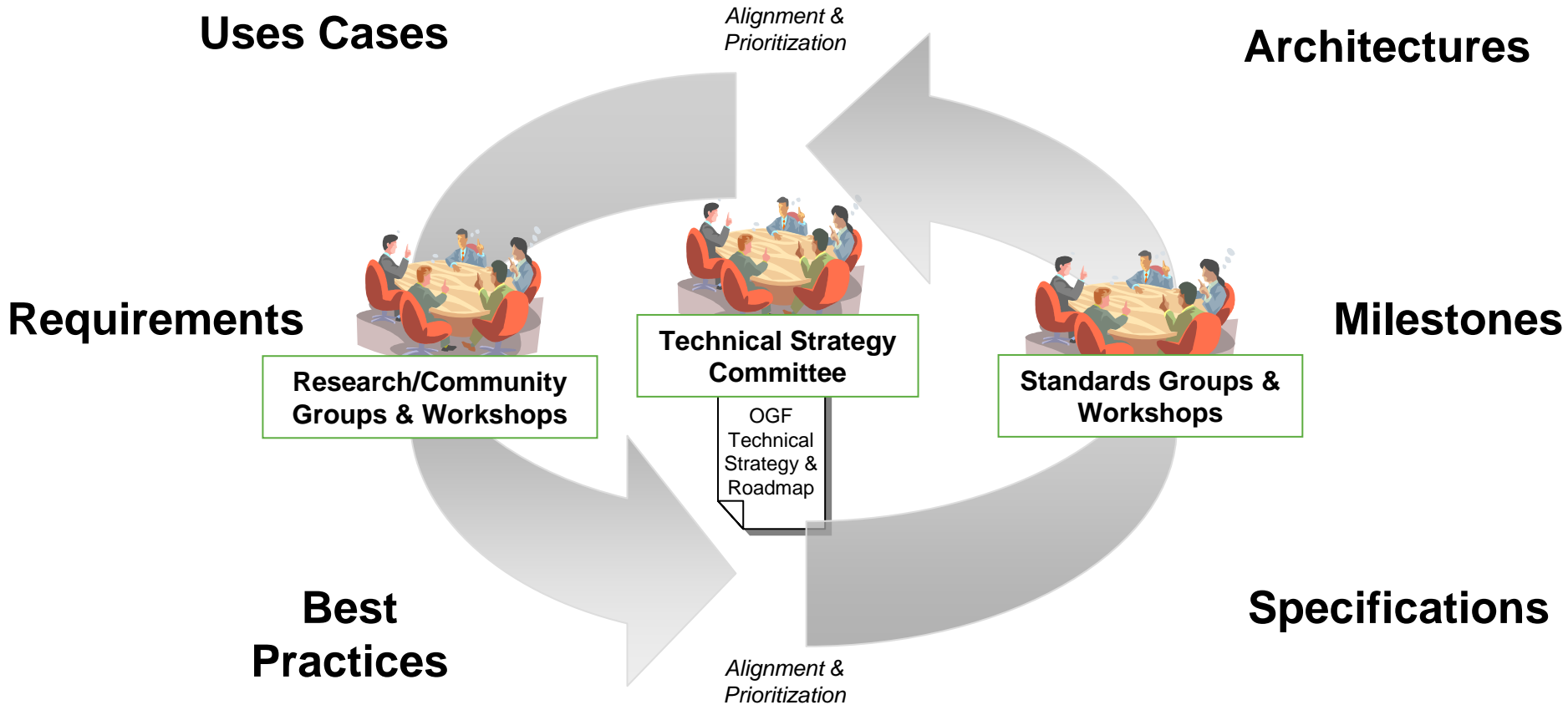
1. Bring diverse communities together and reduce overlap

2. Align technical directions and requirements

3. Mature grids standards and best practices



Align directions & requirements



OGF Mission – accelerating adoption



Open forum for grid
innovation and outreach

Open standards for grid
software interoperability

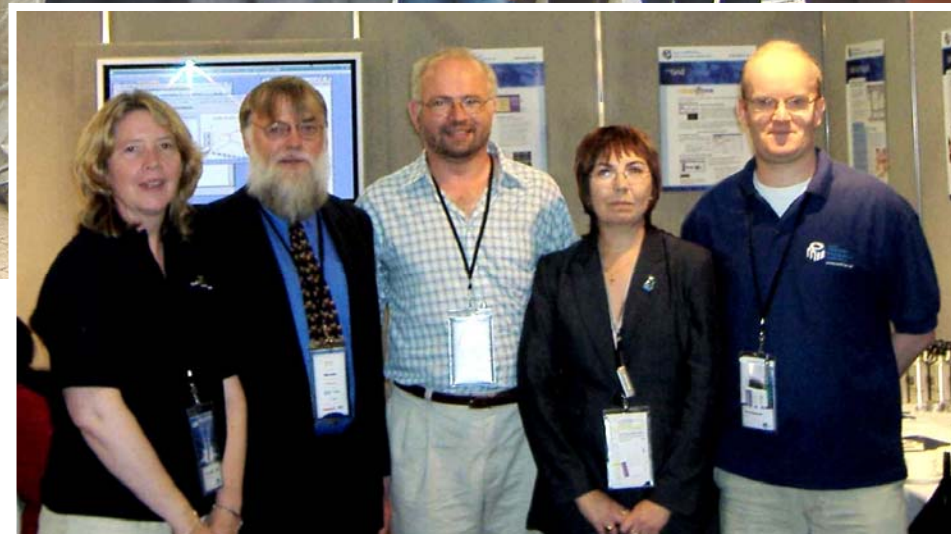


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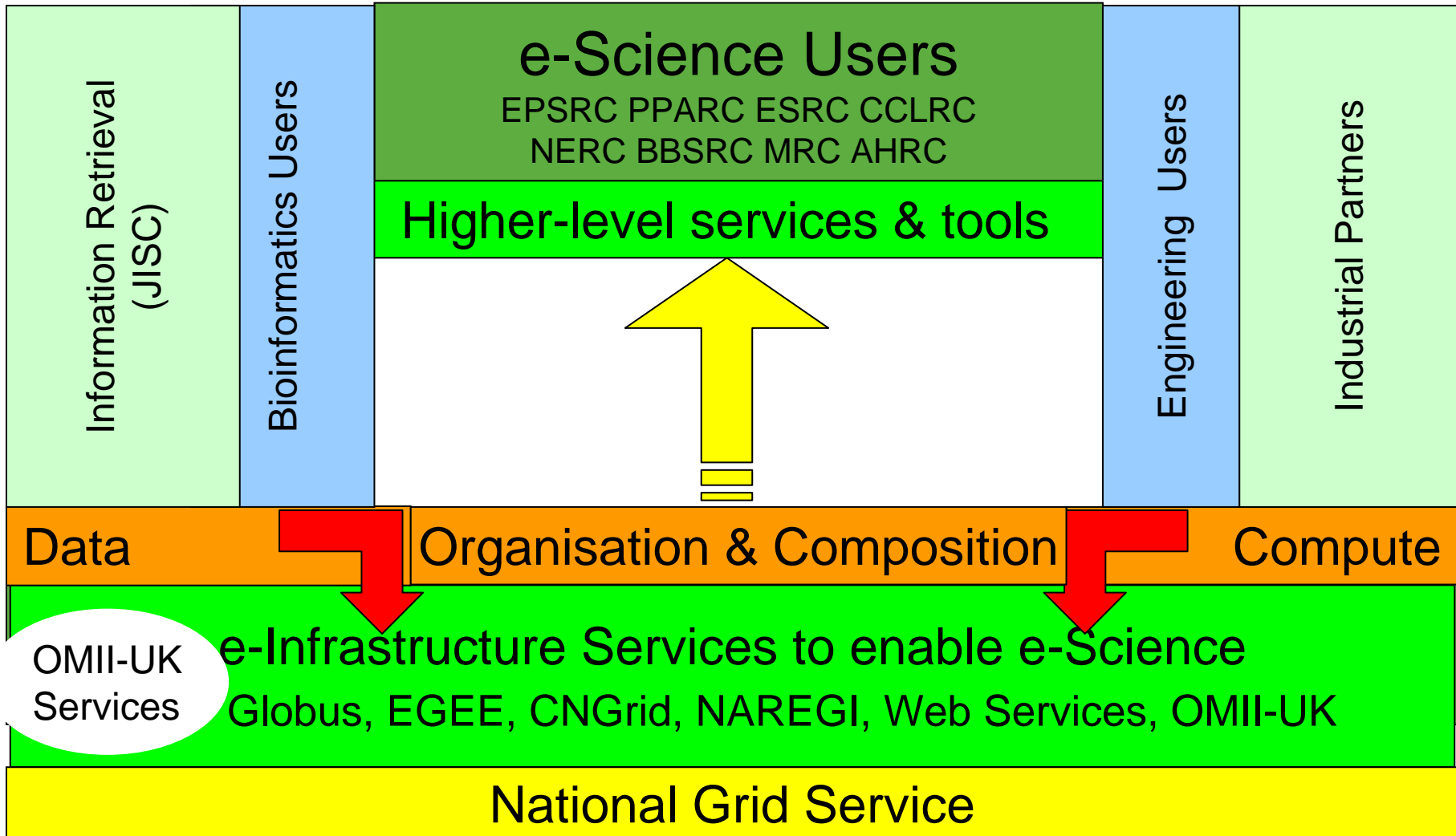
**SOFTWARE
SUPPORT
SUSTAINABILITY**

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OMII-UK in context



Website Interactions

e-Science Community

Open Source
Development Community

Open Source

**People use software
not standards!**

Register a software
project or activity

Software
Catalogue

Website & Wiki

Software
Repository

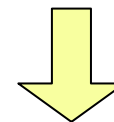
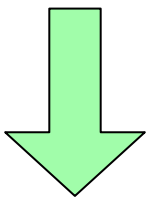
Repository

Software Catalogue

Website & Wiki

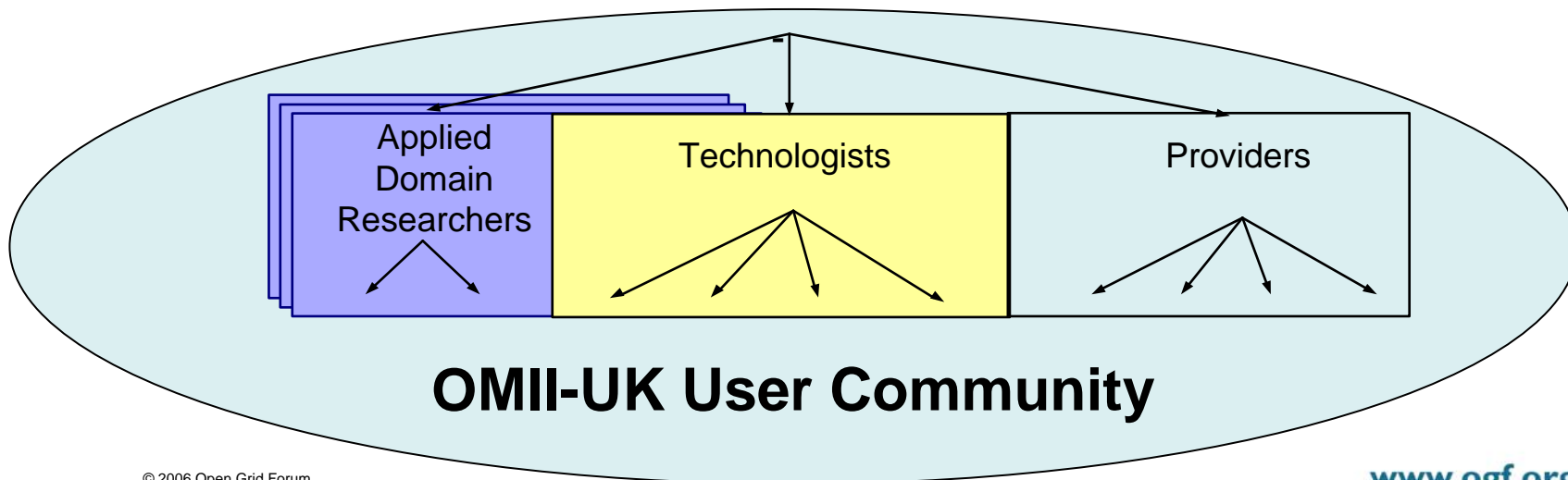
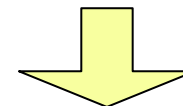
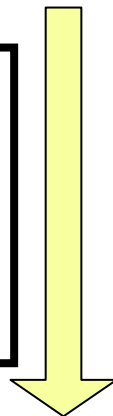
Software Repository

Download individual software components directly from repository



- Information about the community
- Advice & consultancy
- Community forums & feedback
- Support & Training
- Partnerships to provide software

OMII-UK Software Release
Software components integrated and tested to form the OMII-UK software release



Early engagement

- Two UK funding agencies MANDATE that proposers consult
 - OMII-UK
 - Open Source Advisory Service
- Benefits everyone!

JISC



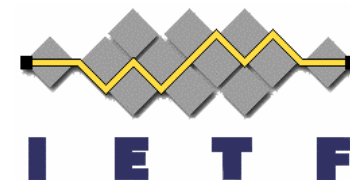
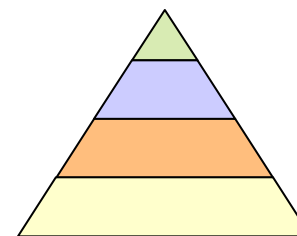
Arts & Humanities
Research Council

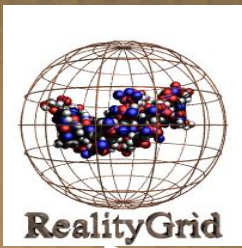
Some common dialogues

- The things I often find myself saying when facilitating interaction between research projects and the standards process...

Know your body

- Bodies differ in character & role!
 - W3C produces standards that are then used to define domain-specific standards
 - W3C and GGF have an “architecture”, OASIS just has a process
 - OGF and IETF use volunteer armies





Grid resource ontology

Consumer-Producer tension

- Projects want to know which emerging standards to adopt
- versus*
- Funders want the projects to influence standards

This is non-trivial!

Accusation of being Proprietary

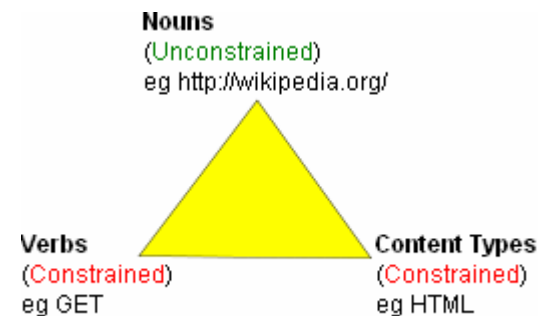
You're producing non-standard software and expecting people to use it!

But we have to start somewhere!

**Solution: easy access to global standards process
Standards *and* software provide base for research**

Elegance or Engineering

- Standards should simplify interop but sometimes complexity is a deterrent to engagement
- Interop can be achieved through
 - Consistency and simplicity of model
 - Extensive engineering
- Natural selection!



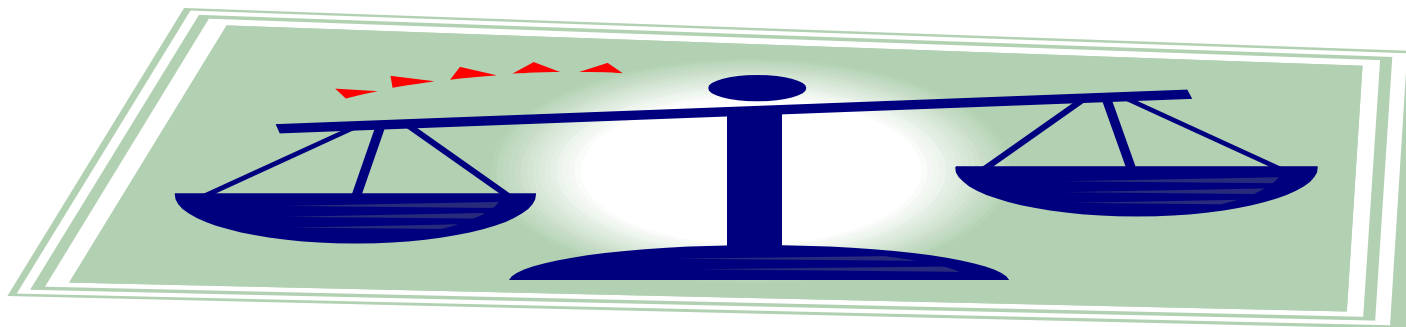
Benefits of engagement

- Influence, but also...
- Sometimes the greatest thinkers are at the table!
- Finger on the pulse
 - What's happening
 - What will be happening
- Technology transfer route
 - Especially important under European R&D model



The dilemma

- Pros
 - Influence (long game)
 - Basis for work
 - Knowledge of community
 - Funder approval
 - Dissemination / transfer / impact route
- Cons
 - Entry cost
 - Return on investment



How can standards bodies help?

- Balance community engagement with standards process
 - Close the loop:
 - Use cases -> standards -> adoption
- Reduce entry cost
 - Providing an easy front door
 - Going out to the community
- People use software not standards(!)



Messages

- To researchers
 - There are real benefits
- To funders
 - Both reward structure and facilitation are needed
- To standards bodies
 - Minimise entry cost