OpenGridForum
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Grid Interoperation Now (GIN)
Welcome & Applications

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GIN Co-Chair

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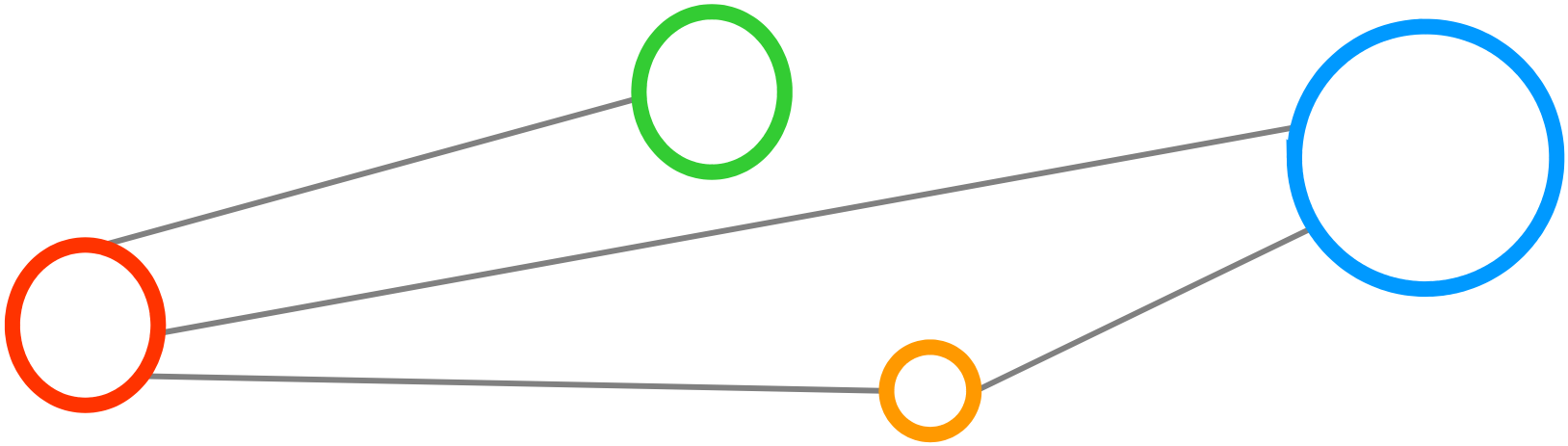
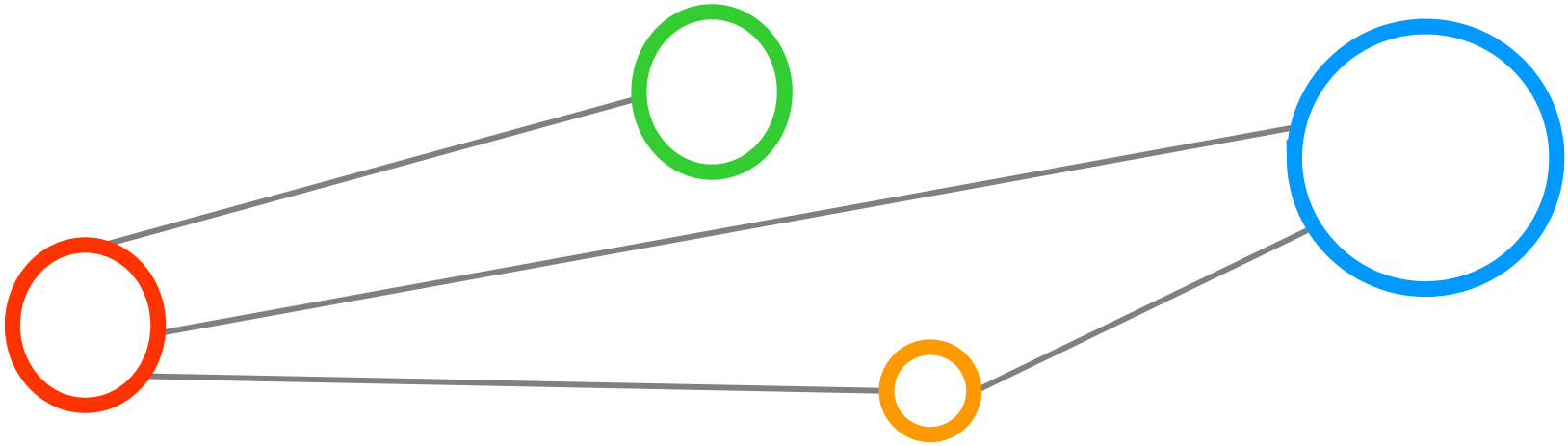
Outline



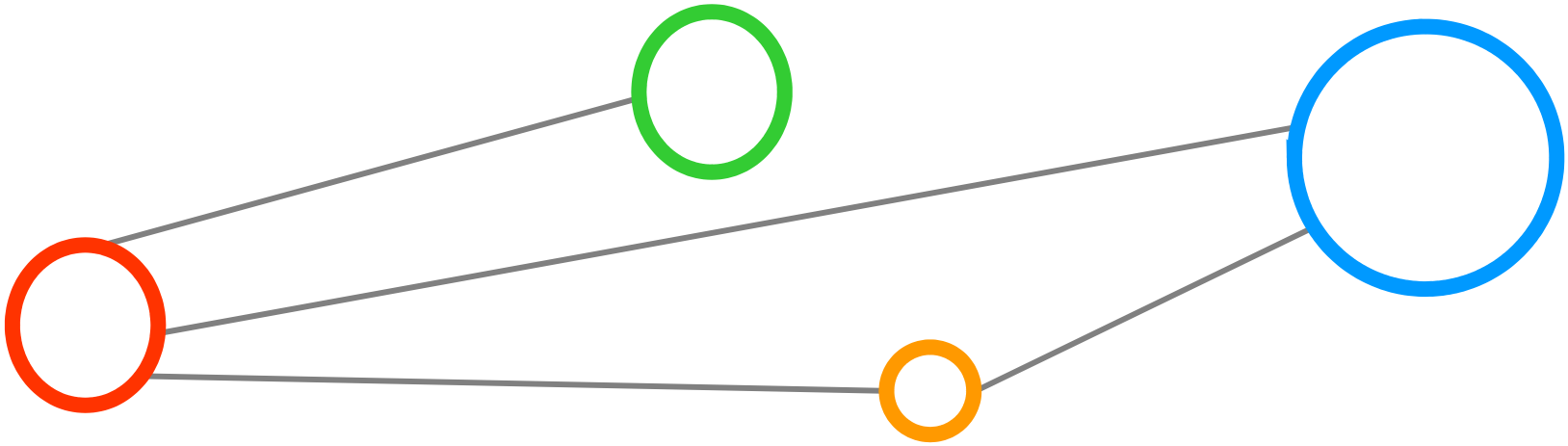
Outline

- Session Agenda
- OGF GIN & PGI 101
- Future Plans
- Applications: WISDOM
- Applications: EUFORIA

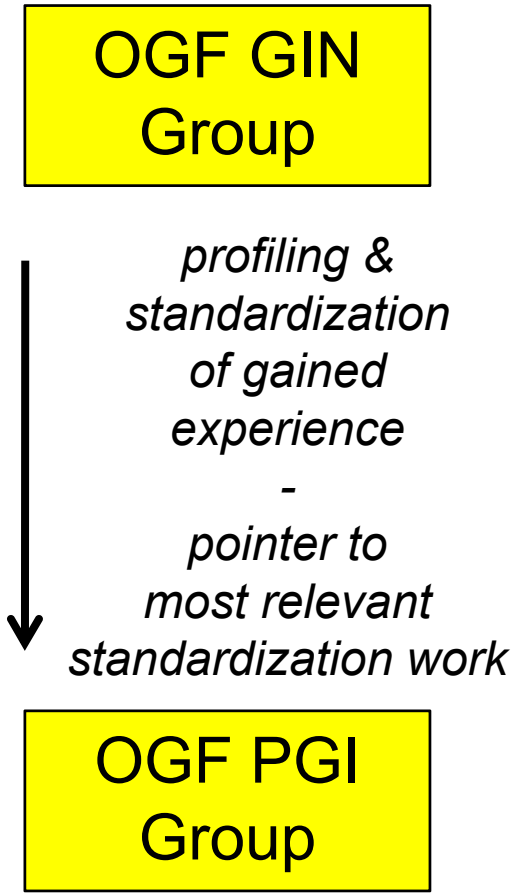
Session Agenda



OGF GIN & PGI 101



GIN & PGI Groups



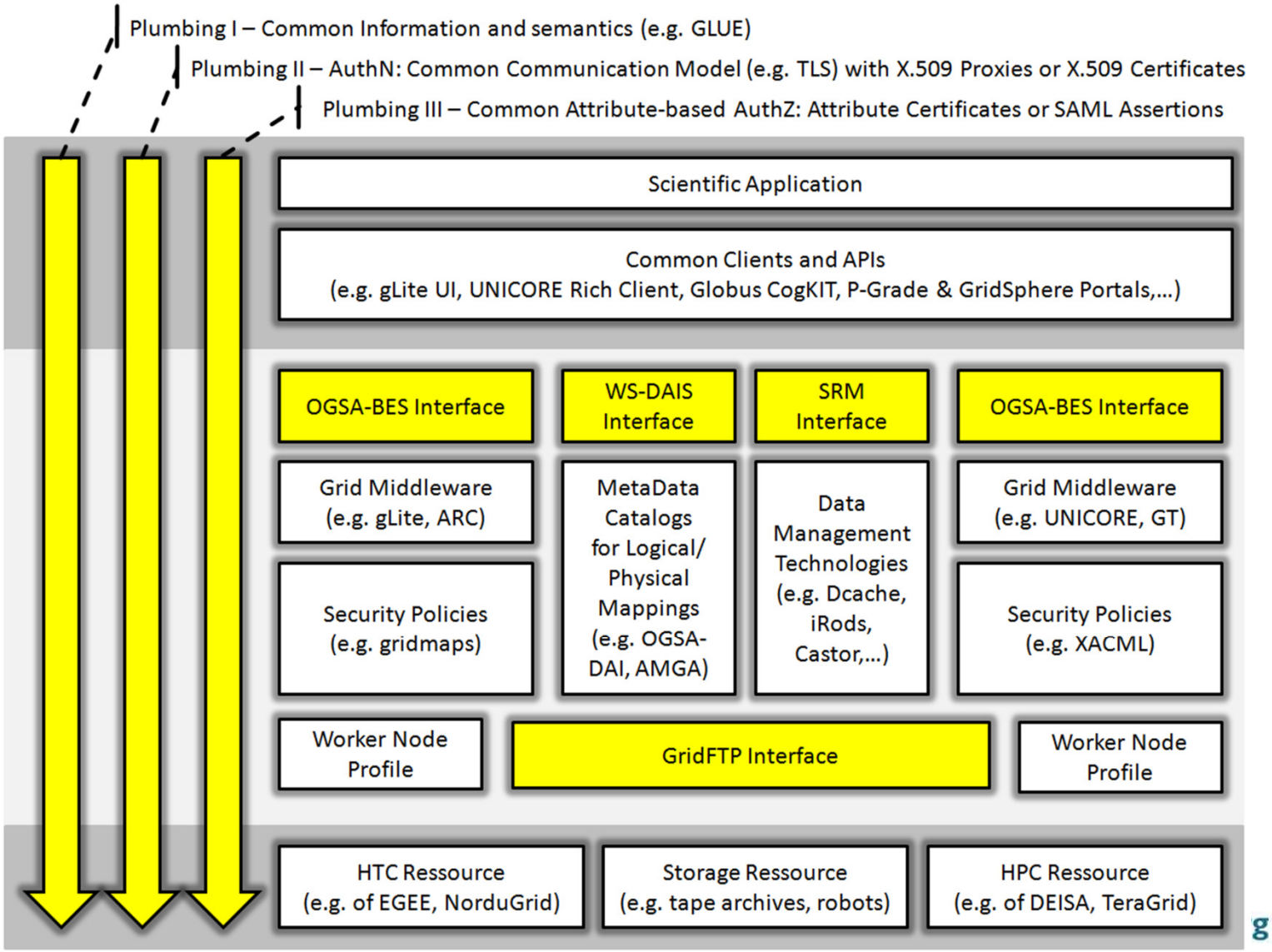
- OGF Grid Interoperation Now (GIN) Community Group
  - Cross-Grid use case applications that require resources in more than one Grid
  - (Often HTC and HPC interoperability)
  - Interoperation of multiple Grid infrastructures based on workarounds and small hacks / modifications
  - E.g. WISDOM, EUFORIA, VPH,…
- OGF Production Grid Infrastructure (PGI) Working Group
  - Takes gained experience from production interop of GIN into account
  - Standardization of a suitable set of standards based on lessons learned
  - Tunings, refinements & focus on missing links between open standards

Scope

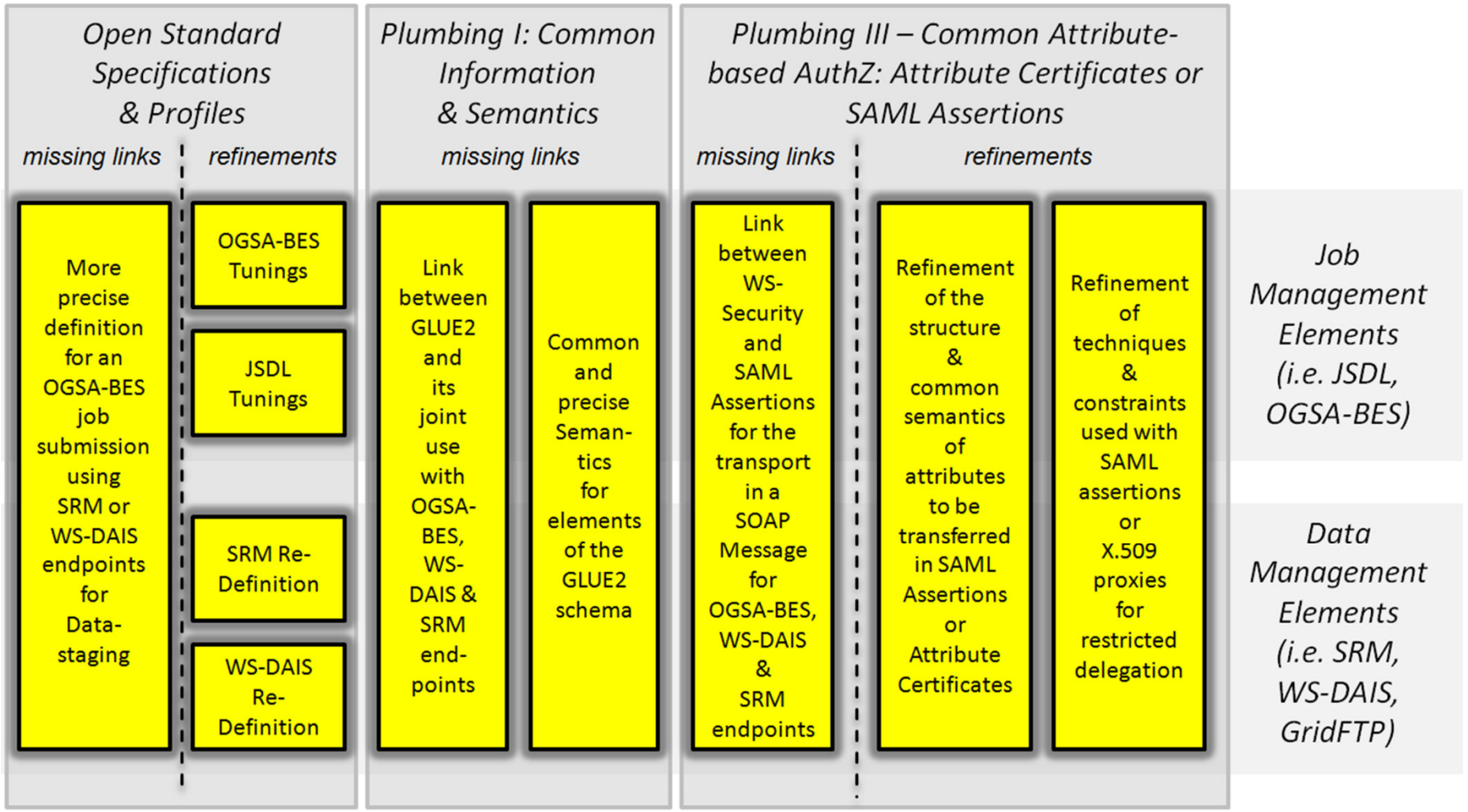
- Identified Basic Use Case
- Only matured specifications
- Specification adoption exist in production middleware systems
- Experience exists in production infrastructures
- Interoperability tests have been performed
- Real scientific use cases require these standards
- Refinements necessary and not complete spec. re-definitions

→ 'Low hanging fruits'

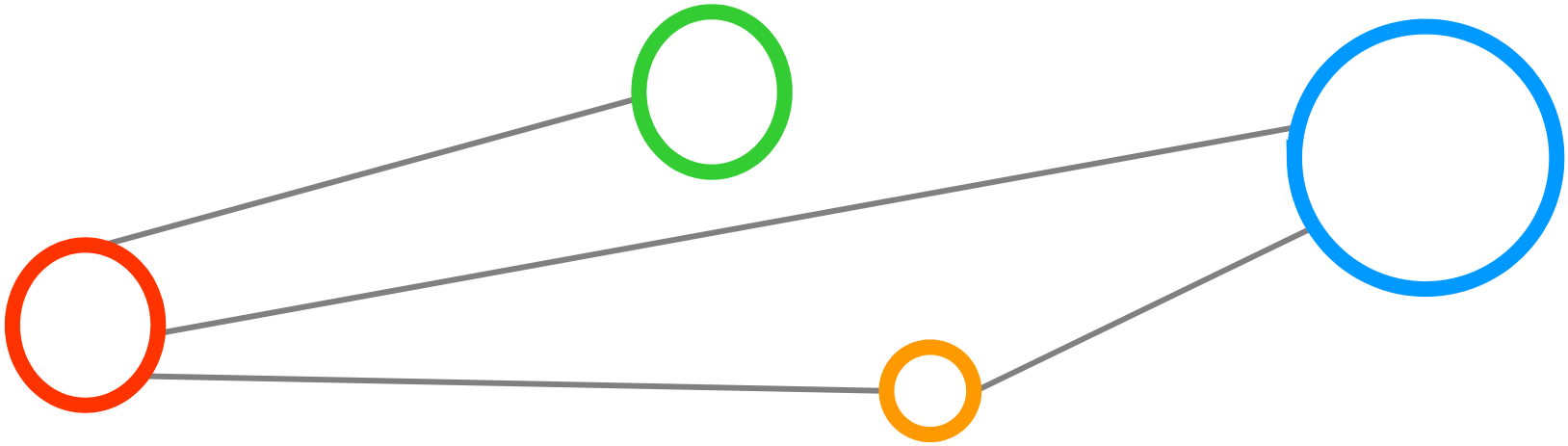
PGI Ecosystem Overview



Missing Links & Refinements



Future Plans

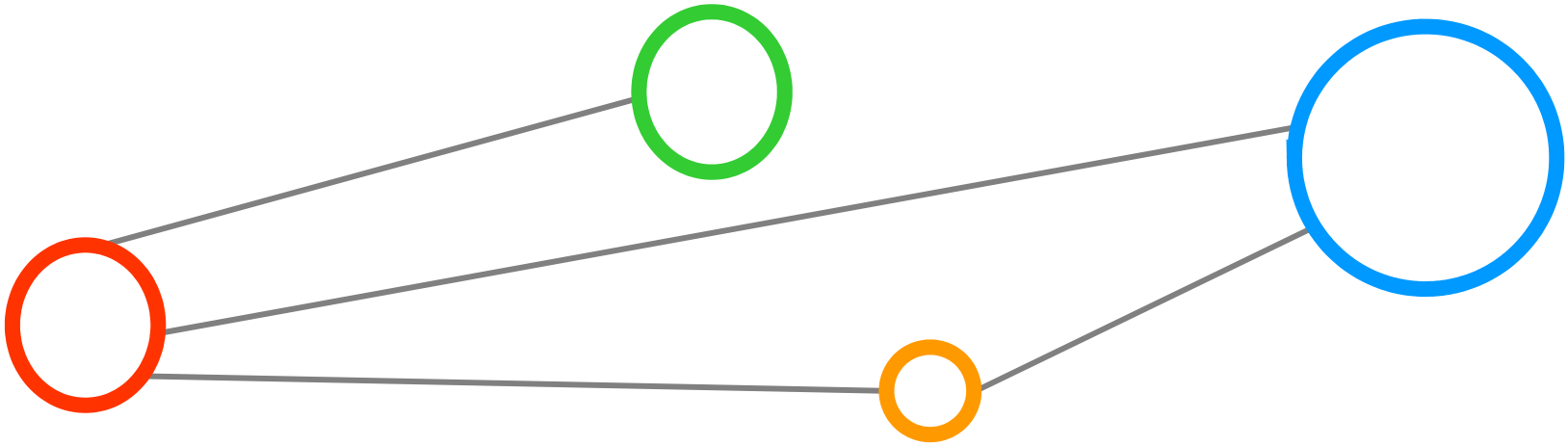


Future Plans

- Short-term: Questionaire at OGF27 in Canada
  - Why using interoperability, benefits, etc.
  - What scientific goals and approaches
  - Which computing paradigms (HTC, HPC, both, etc.)

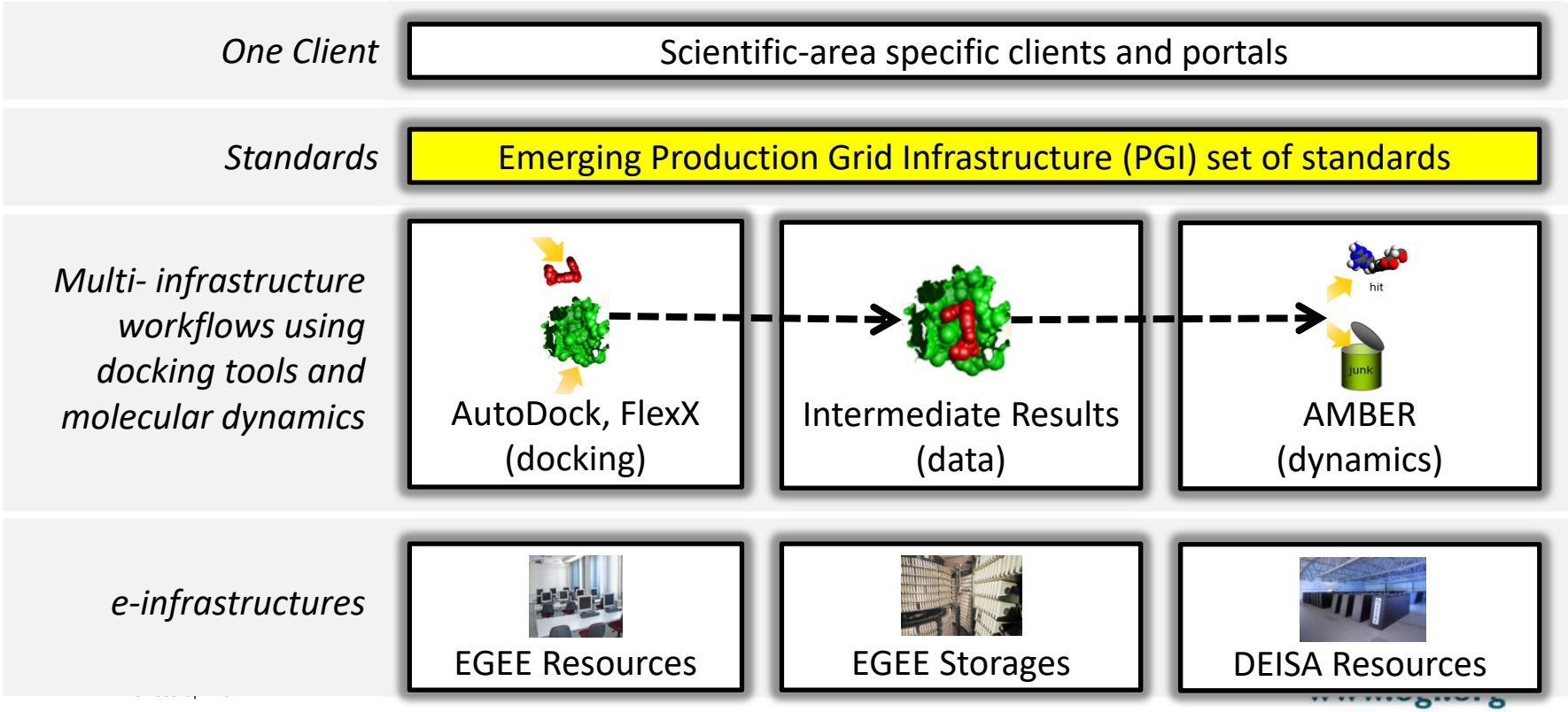
- Mid-term: Deploy emerging PGI components and use them with GIN applications
  - Check whether PGI components are suitable enough
  - Feedback for PGI standardization processes

Applications: WISDOM

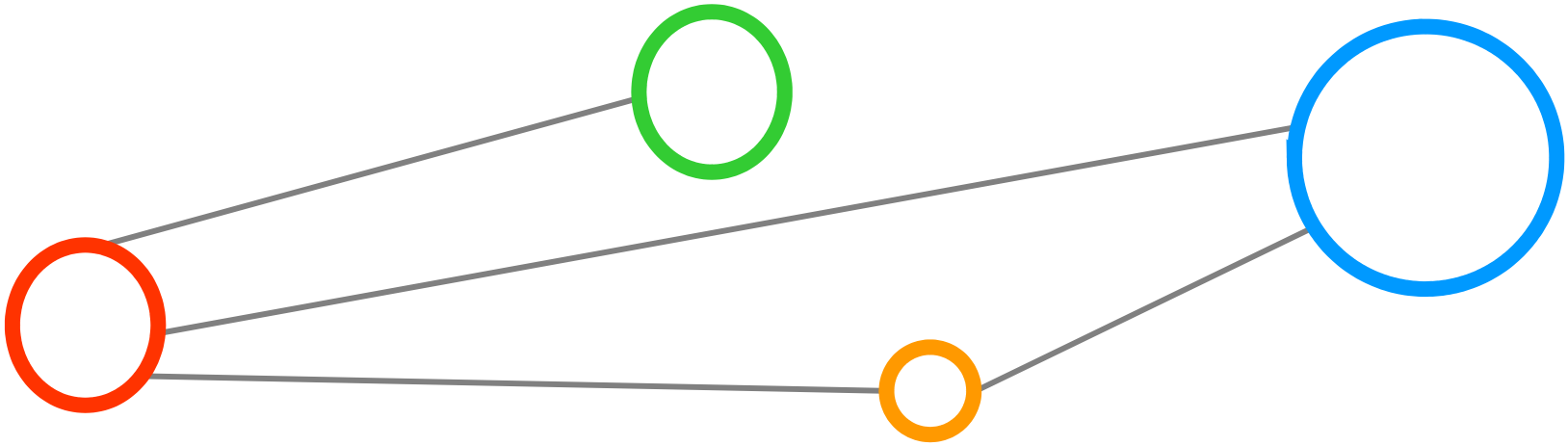


Applications: WISDOM

- Key goal: Cheaper and faster drug discovery
  - Infrastructure interoperability: Drive and use open standards
  - Benefit: Leveraging power of both HTC and HPC resources

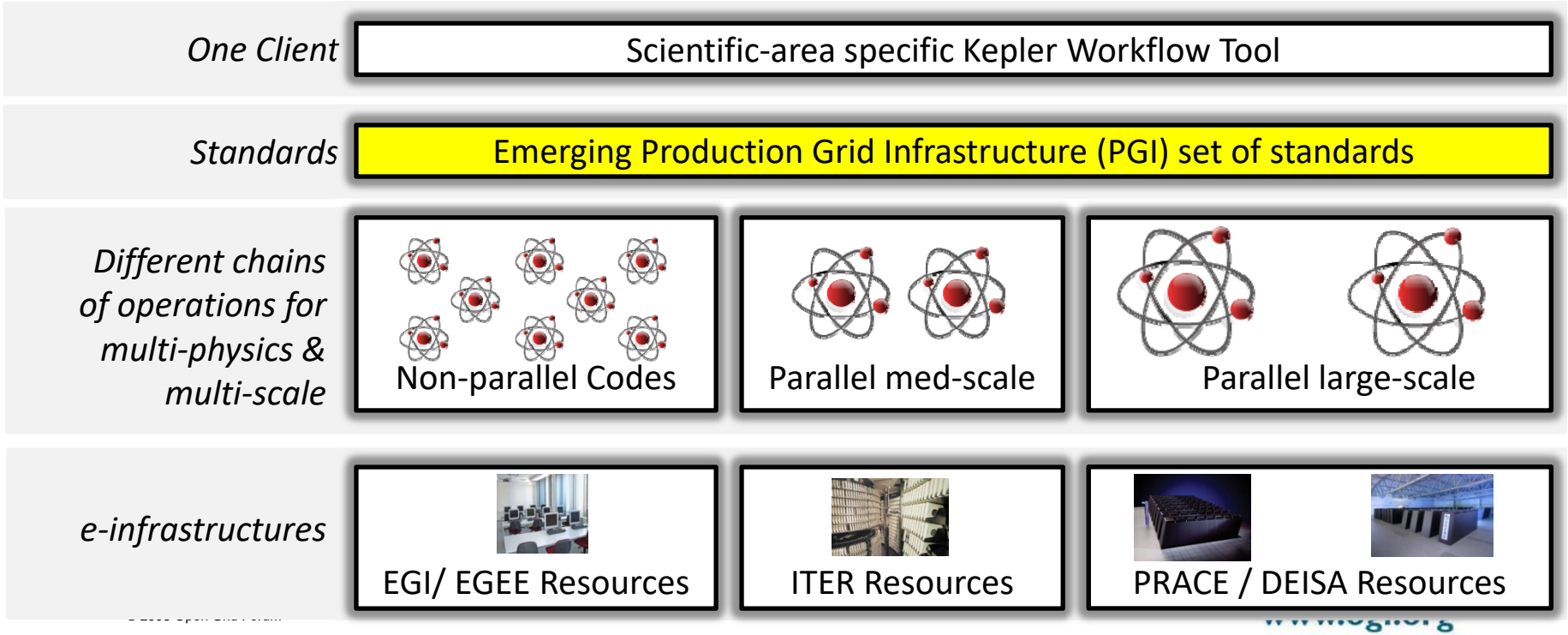


Applications: EUFORIA

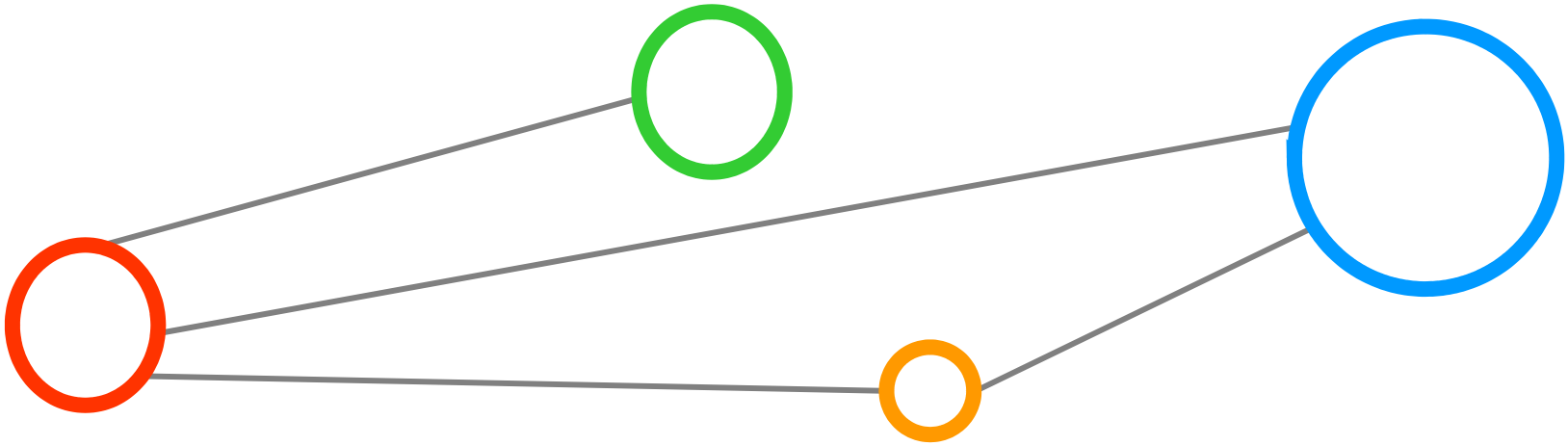


Applications: EUFORIA

- Key goal: Support transition process from comp. studies to future electricity-producing fusion power plants
  - Infrastructure interoperability: Drive and use open standards
  - Benefit: Use of HTC and HPC resources (multi-scale applications)



Discussions



Discussions

- TBD

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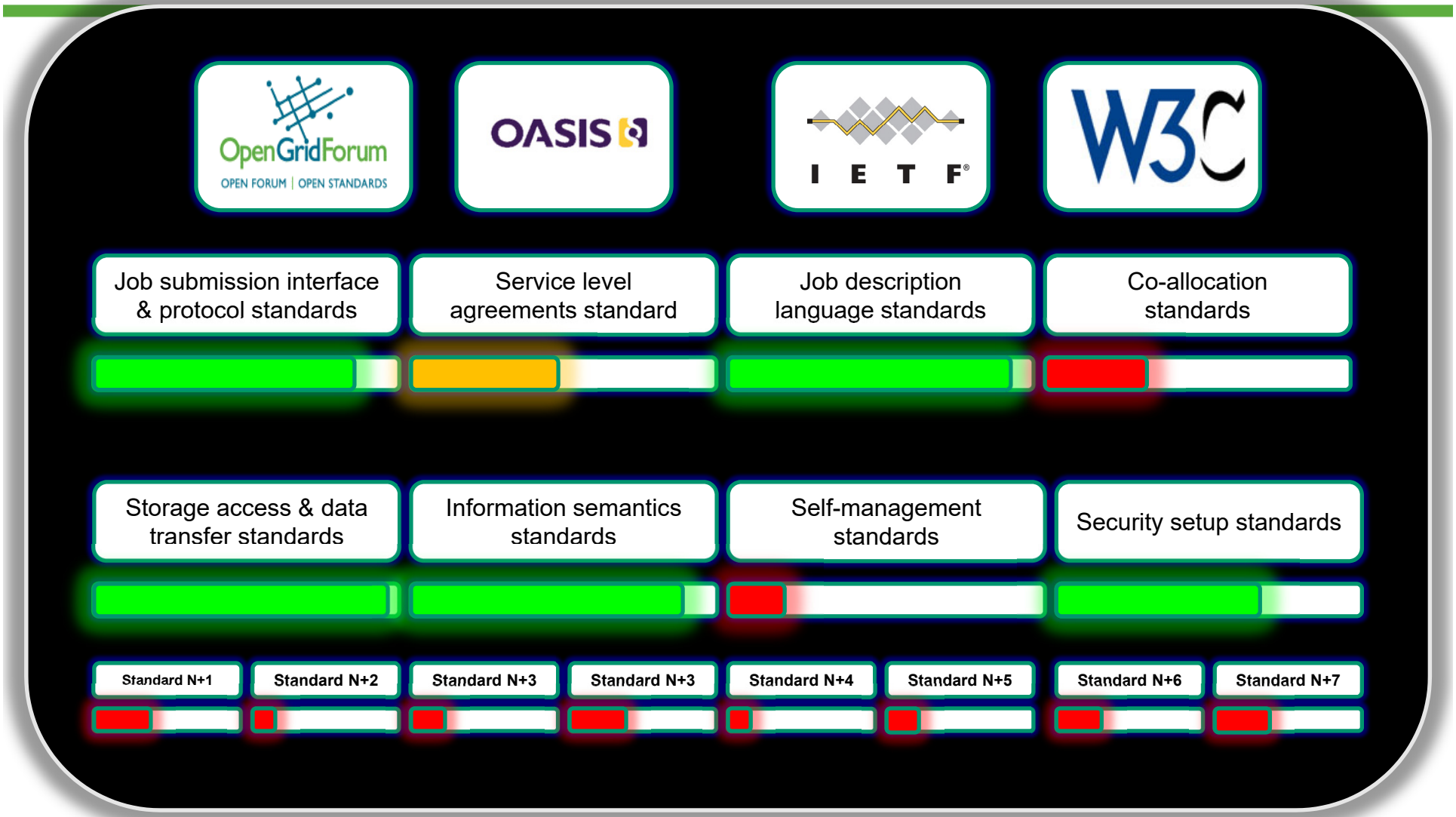
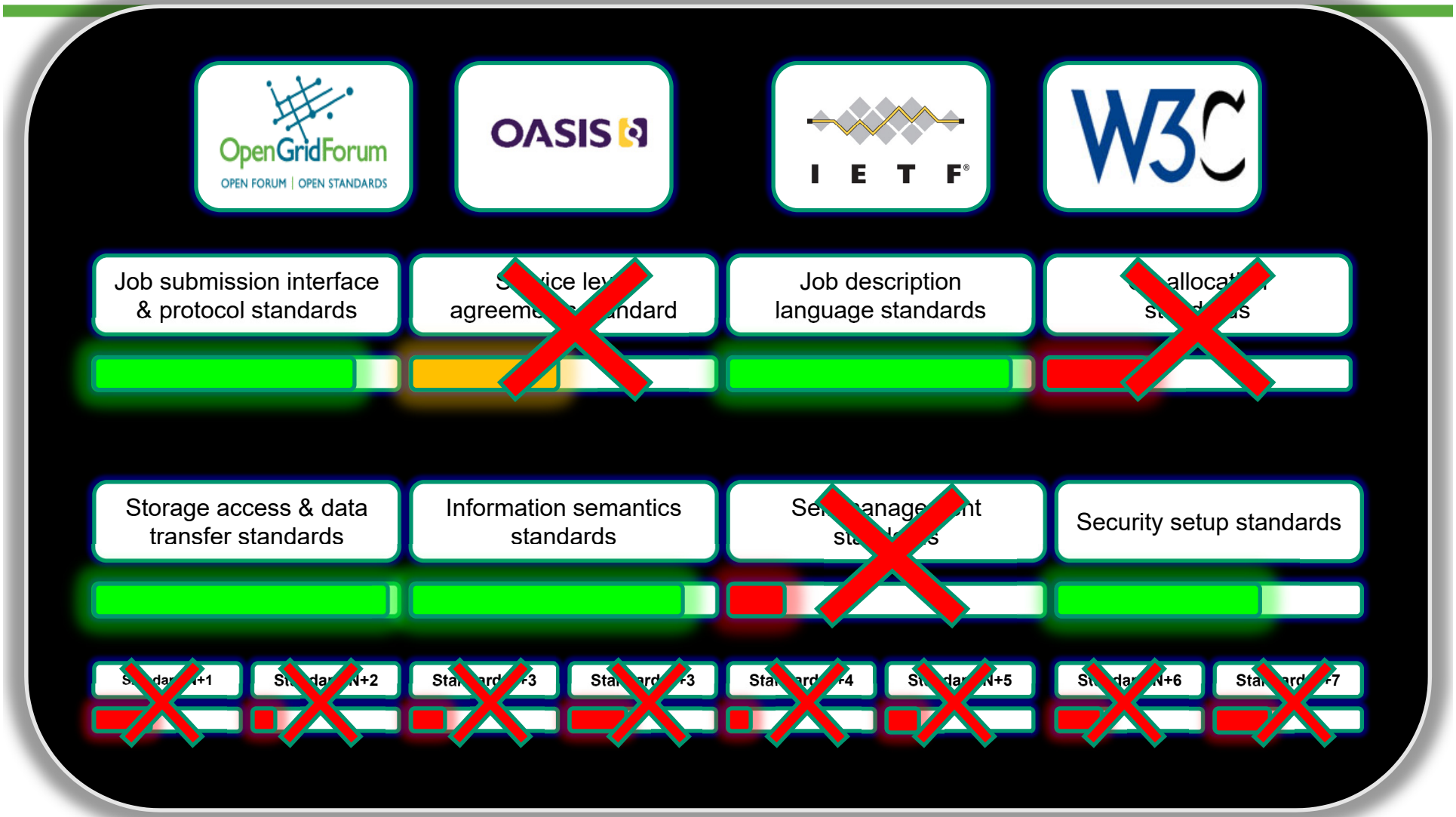
OGSA Standards



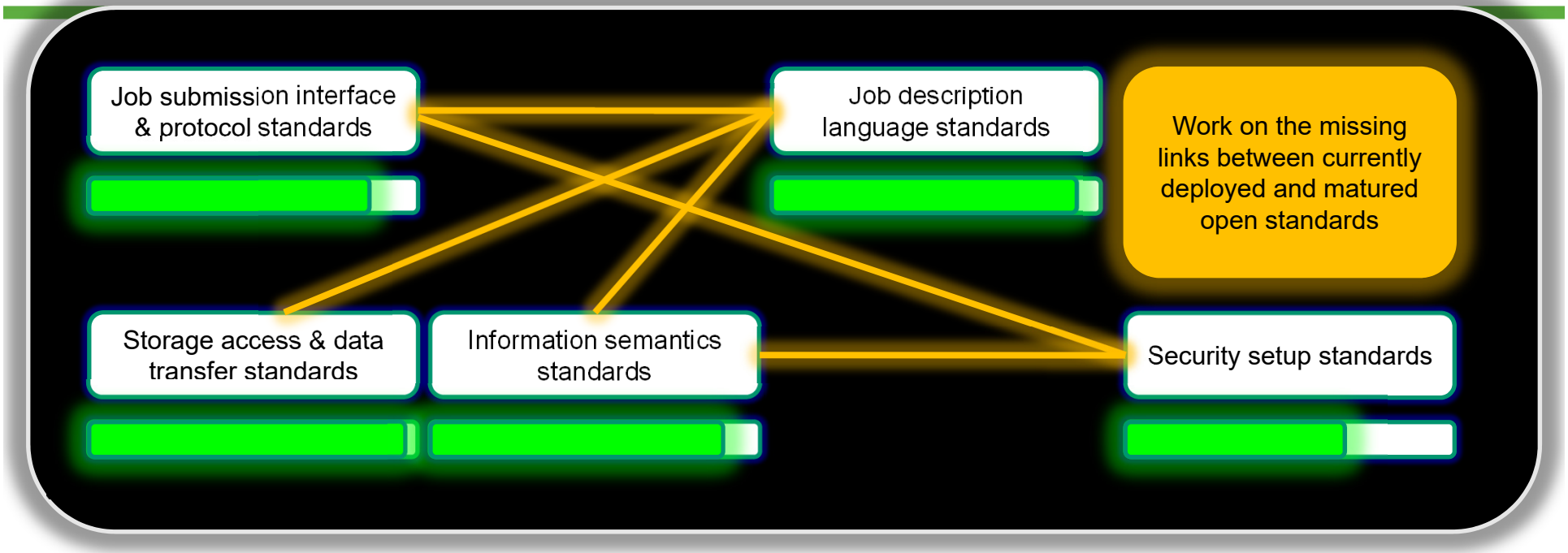
[7] Foster et al., *'The Open Grid Services Architecture'*

GIN Production Experience

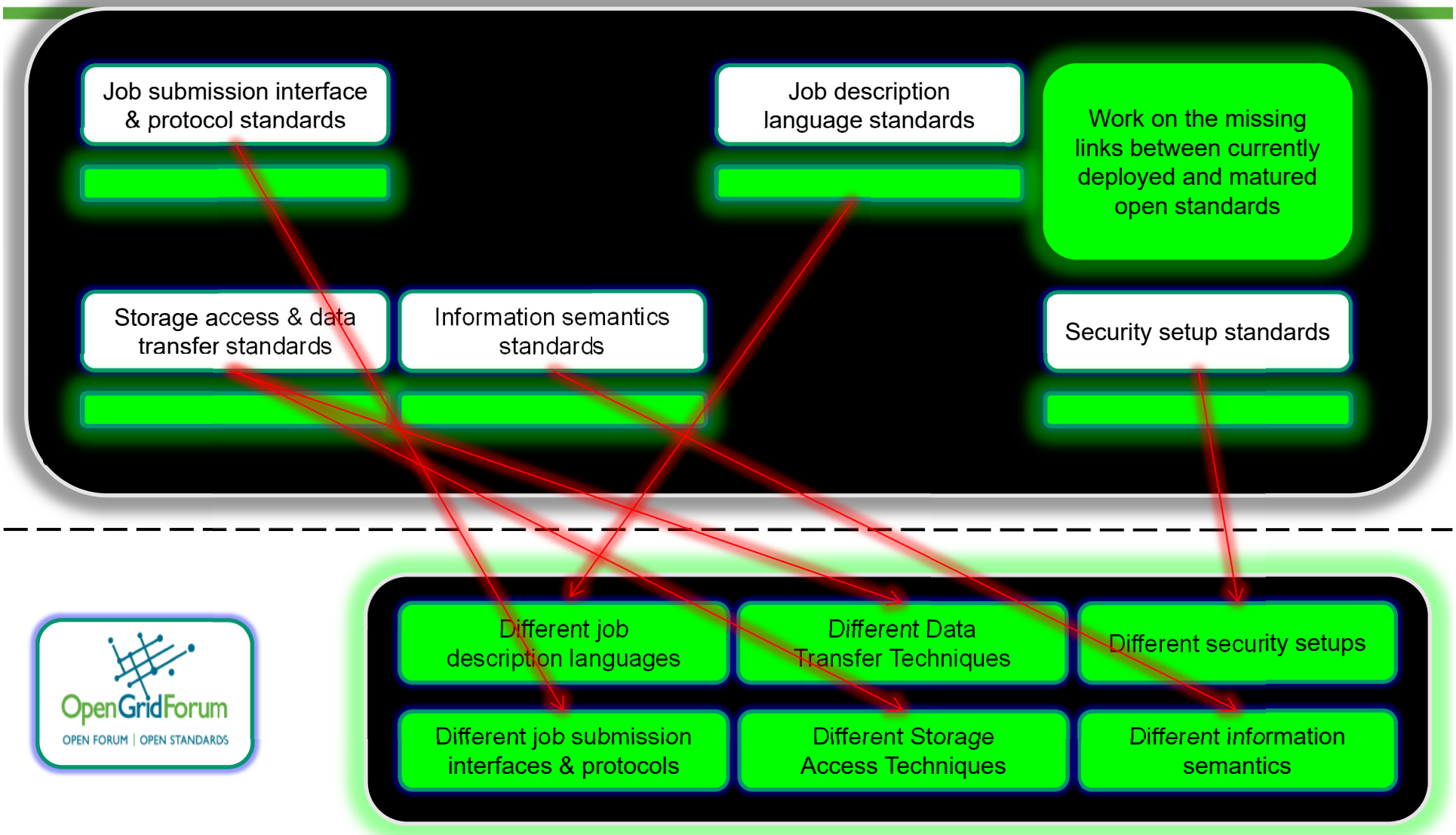


[8] Riedel et al., *'Interoperation of World-Wide Production e-Science Infrastructures '*

PGI Approach (1)



PGI Approach (2)



[5] Riedel et al., *'Experiences and Requirements for Interoperability between HTC- and HPC-driven e-Science Infrastructures'*

Compare History of Computer Science