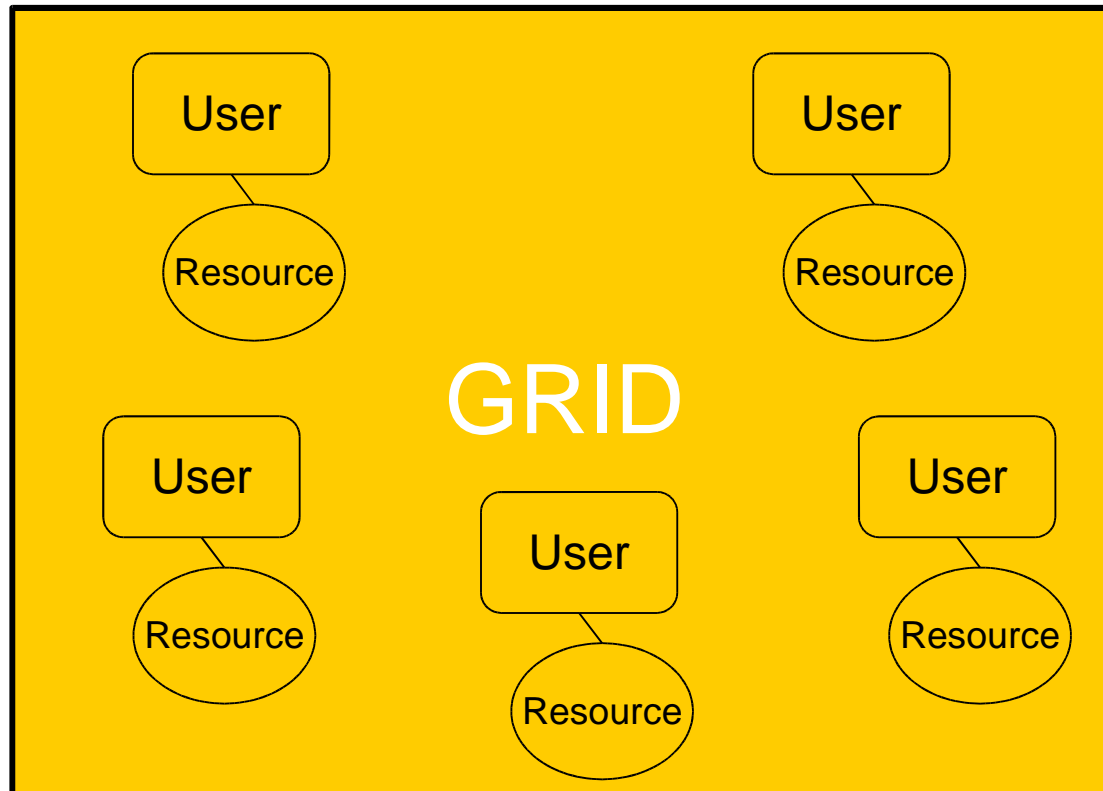


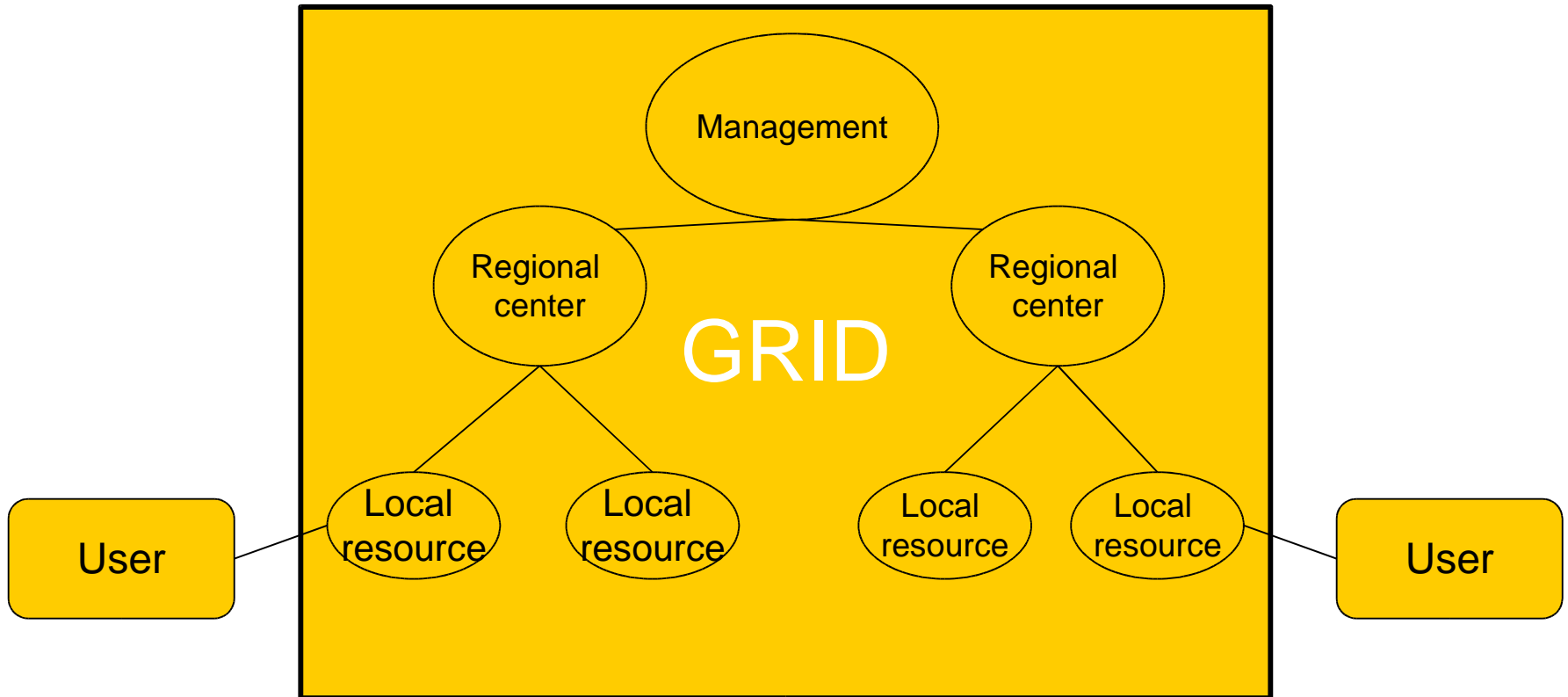
# Flat GRID

SETI@HOME



# Hierarchical GRID

EDG/EGEE



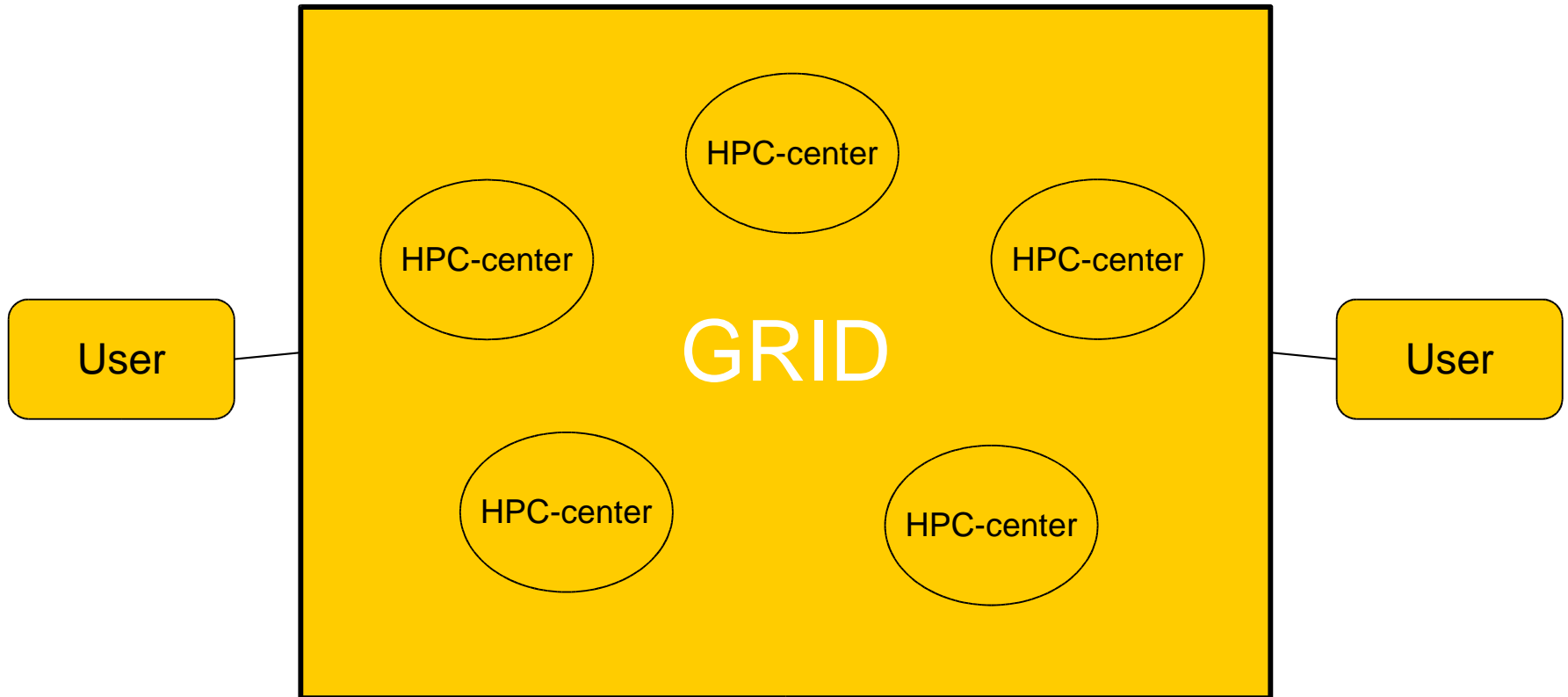
# Collaborative GRID

UK eScience

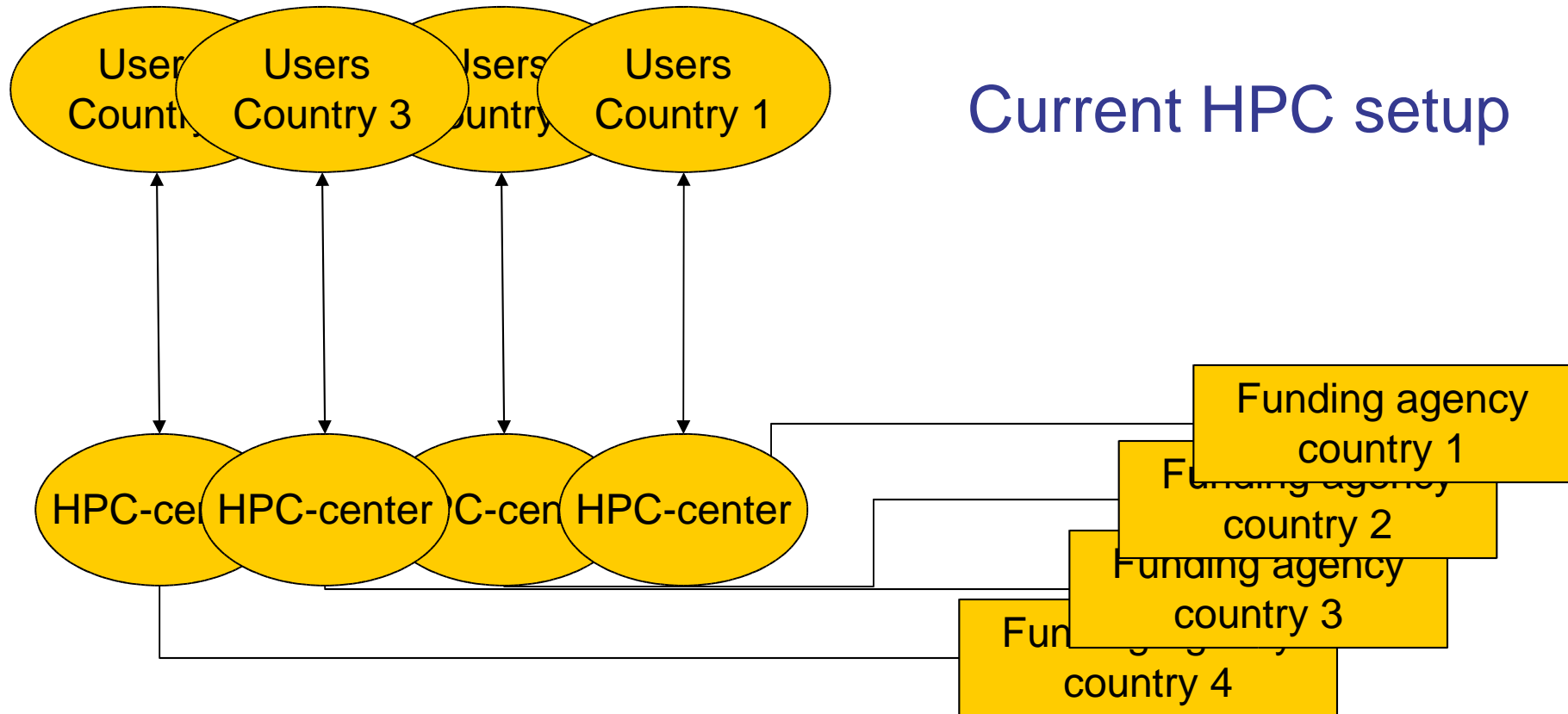


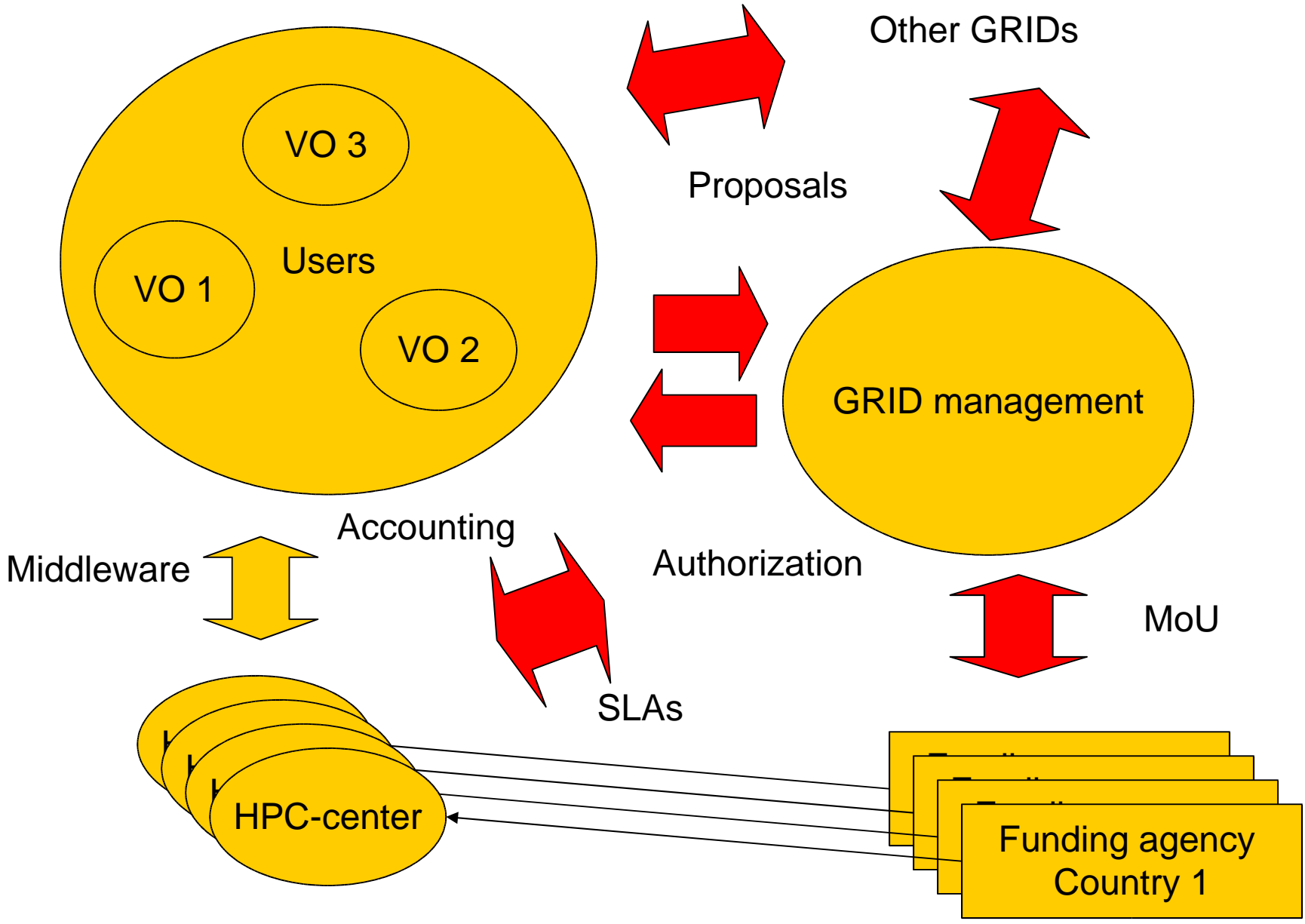
# Power plant GRID

DEISA, SweGrid, ...



# Challenges for HPC Grids



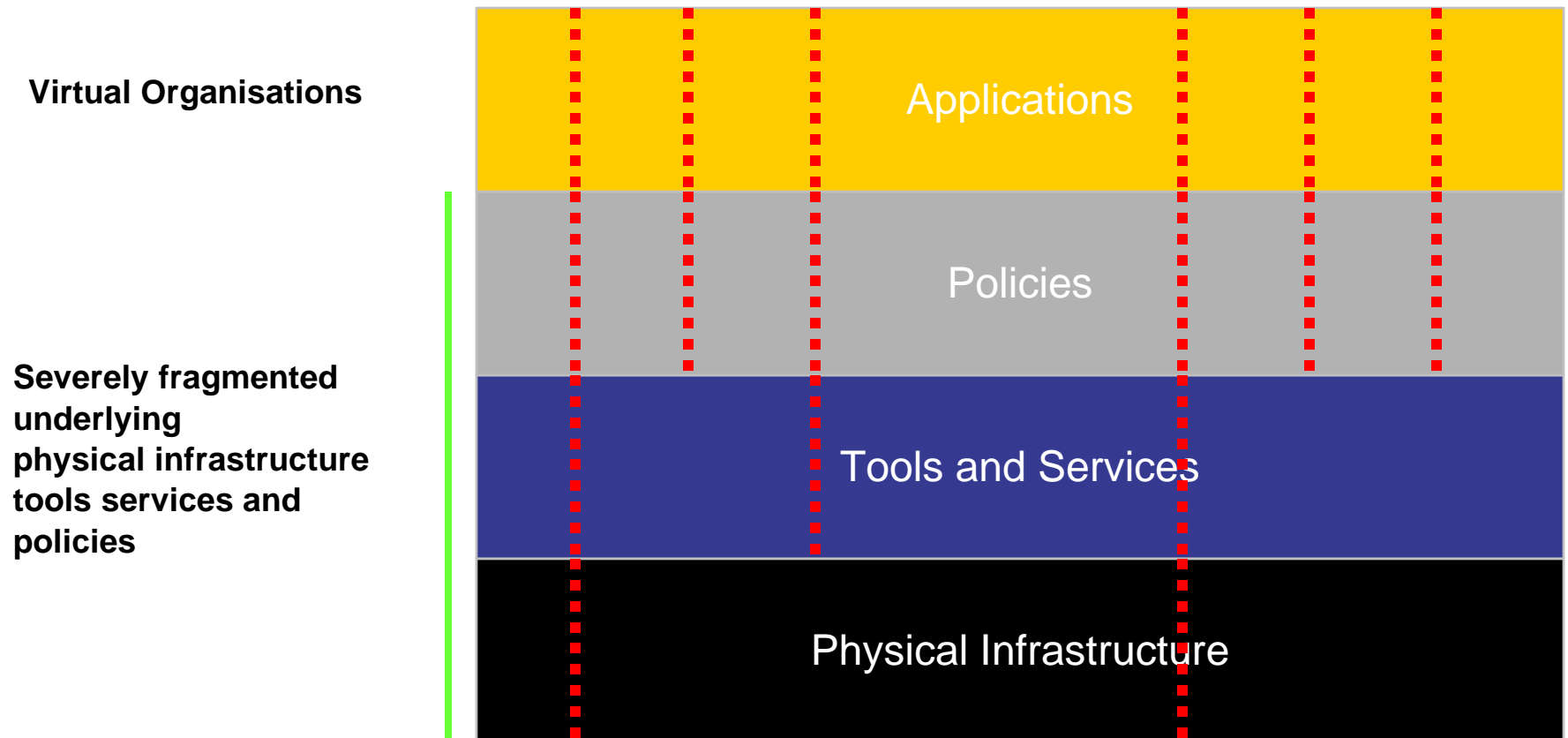


# General Purpose vs. Disciplinary Grids

**Anders Ynnerman**

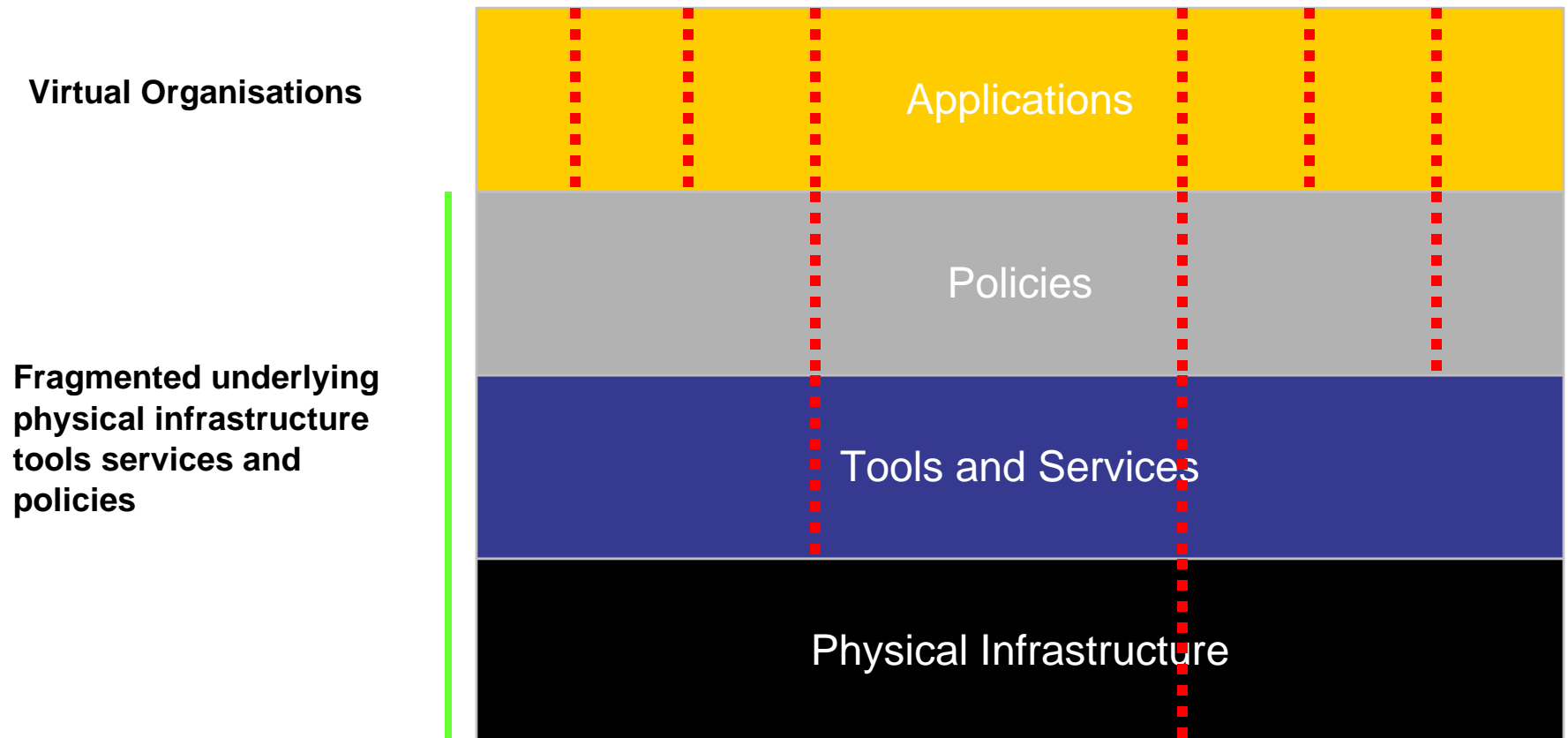
Director Swedish National Infrastructure for Computing  
Linköping University  
Sweden

# Disciplinary Grids

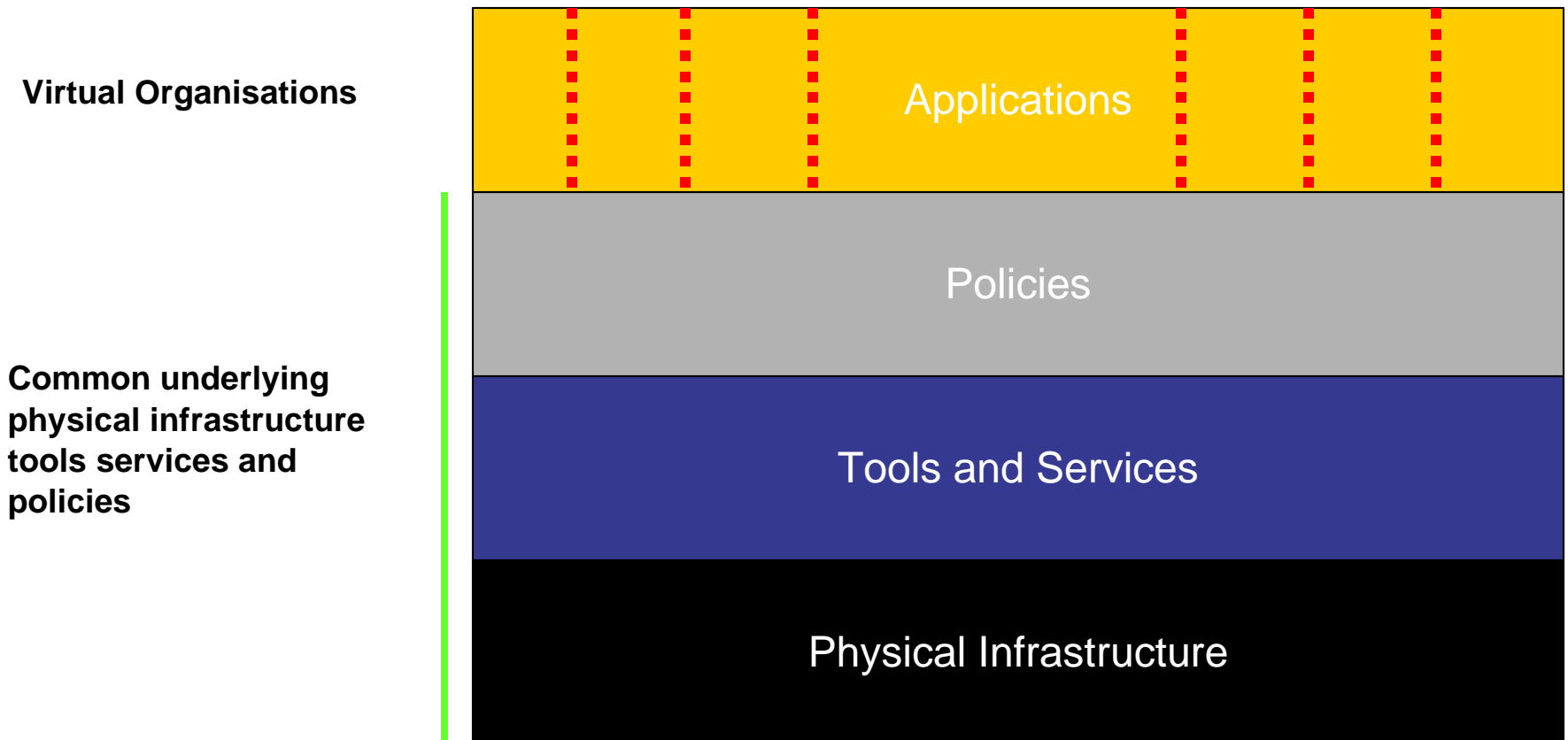




# Multi Disciplinary Grids



# General Purpose Grid



# Observations

- Disciplinary and multi disciplinary Grids are similar
  - Manageable number of organisations and users
  - Top down control of:
    - ★ physical resources
    - ★ services
    - ★ middleware
- General purpose grids
  - Vast number of users
  - VOs may or may not be the natural way for users to work
  - Policies for bottom up provision of (international) general purpose Grids do not exist
    - ★ Funding agencies
    - ★ Resource providers
- Multi disciplinary & general purpose

# Issues for discussion

- Is the long term vision is a general purpose international production Grid complemented with very special Grids for strong collaborations often involving large scale equipment? (Yes)
- Is technology and policy ready for this vision? (No)
- Should the underlying technologies (middleware and some elements of the policy architecture) be common between disciplinary and general purpose Grids? (Yes, in the long run)
- How do we avoid duplicate efforts in a large number of disciplinary efforts, but at the same time not prevent the bottom up development? (Slow migration towards standardization and strong co-ordination)
- Is there a need for a forum for co-ordination of these efforts? (Yes)
- Are ease of use efforts premature? (Maybe)

# Recommendation

*A forum dedicated to the co-ordination and exchange of technology and policy for disciplinary Grids should be formed. The task of the forum is to minimize (reduce) duplication of efforts but still recognize and pronounce unique demands from disciplinary user communities.*

- eIRG could constitute the forum for policy issues*
- Documentation of best practise followed by dissemination efforts*
- Adoption of new application areas and communities*
- Call December 15th for funding of forum?*

- Warning !!!!
- Forced collaboration can cause frustration
- Use pragmatic approaches

