Needs, Development and Operation of Global Research Infrastructures — Challenges and Drivers for Collaboration

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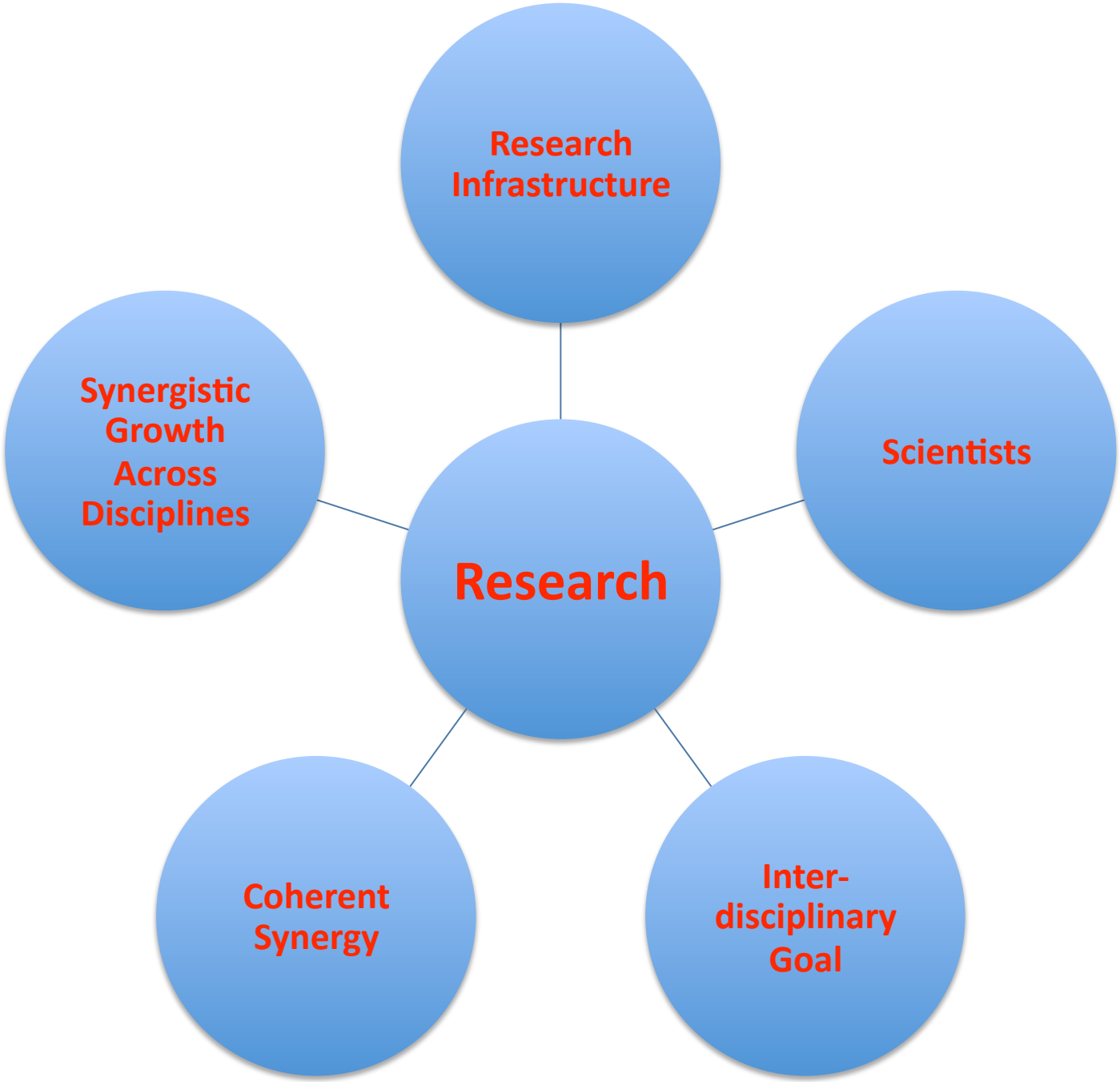
RI - Global Concerns Today

1. **Which types of world-class infrastructures are best suited to a global approach - Including globally distributed infrastructures and national facilities of global interest.**

2. **How to tackle data, in particular how to address the distributed nature of either the facilities themselves or the user communities?**


Research Infrastructure
Synergistic Growth Across Disciplines
Research
Scientists
Coherent Synergy
Inter-disciplinary Goal

RI and Global Science

- How to increase the use of Research Infrastructure and how to support access to RI based on excellence?
- How to strengthen international cooperation in the implementation, governance and operation of research infrastructures?
- How to nurture synergies between research infrastructures from differing disciplines and how to promote interdisciplinary approach?

RI - Management

- How to manage large international Research Infrastructures focused on global challenges?
- How to increase awareness of the education and training possibilities that Research Infrastructures offer?

Can we Learn from INDIAN RI?

- Lessons to be learnt from existing infrastructures across different fields.
- Are there specific additional needs for managing those addressing global challenges? If so, in which areas? Are there common characteristics?
- The experience that existing global Research Infrastructures and other bodies can share.

RI, Global Science, and International Cooperation – Way Forward…

- **How international cooperation for research infrastructures can be effective in the future?**
  - **Strengthening of existing initiatives,**
  - **Highlighting possible needs for additional effort**
  - **Developing a vision for an open science**
  - **Global ecosystem of research infrastructures**
  - **Actions needed to achieve it**
  - **Perhaps resulting in Horizon 2020…**

National Knowledge Network:

Enabling a Paradigm Shift in Research Infrastructure
And
Global Science Cooperation

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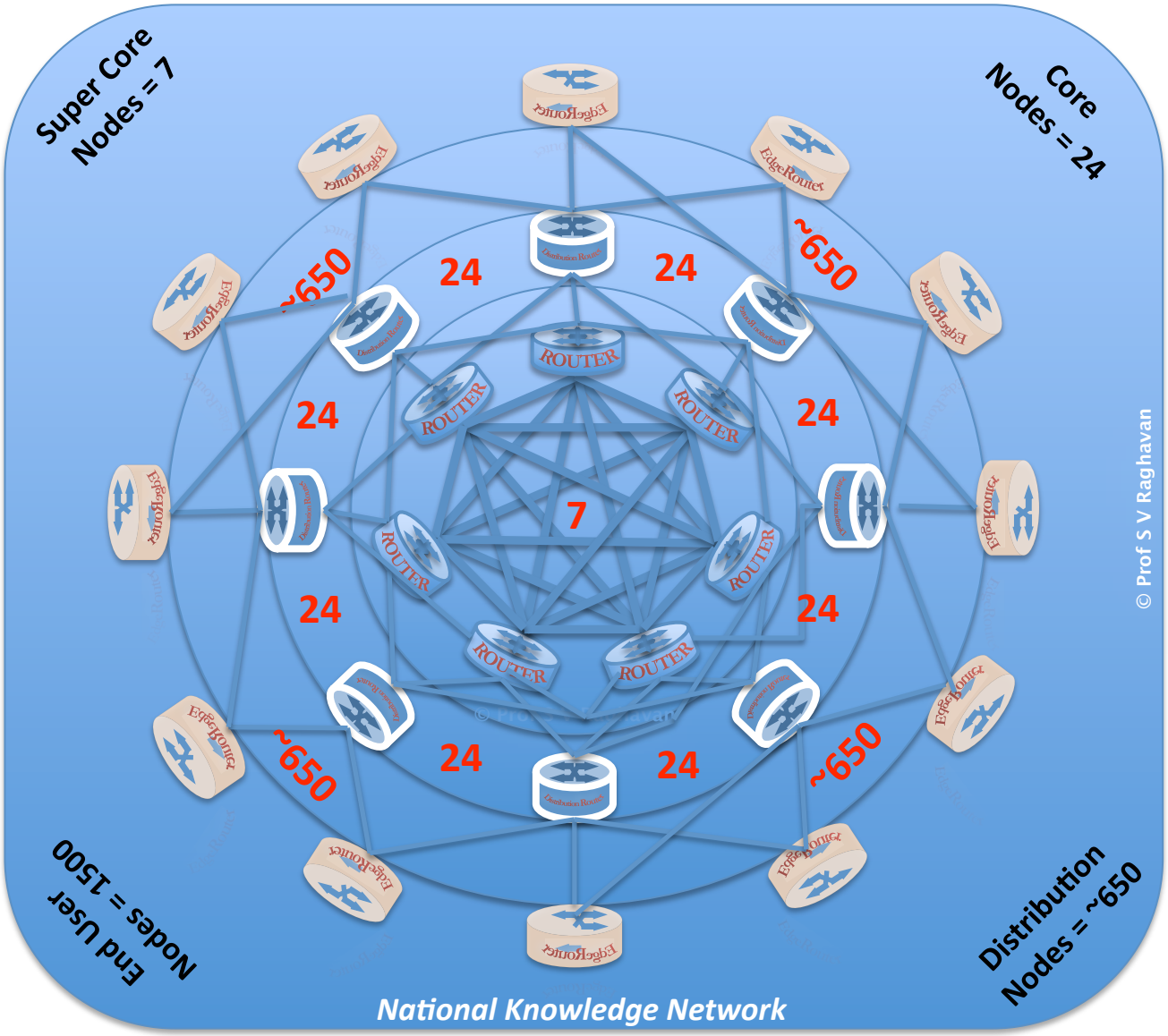
Super Core
Nodes = 7
Core
Nodes = 24
End User
Nodes = 1500
Distribution
Nodes = ~650
National Knowledge Network
ROUTER
7
24
~650
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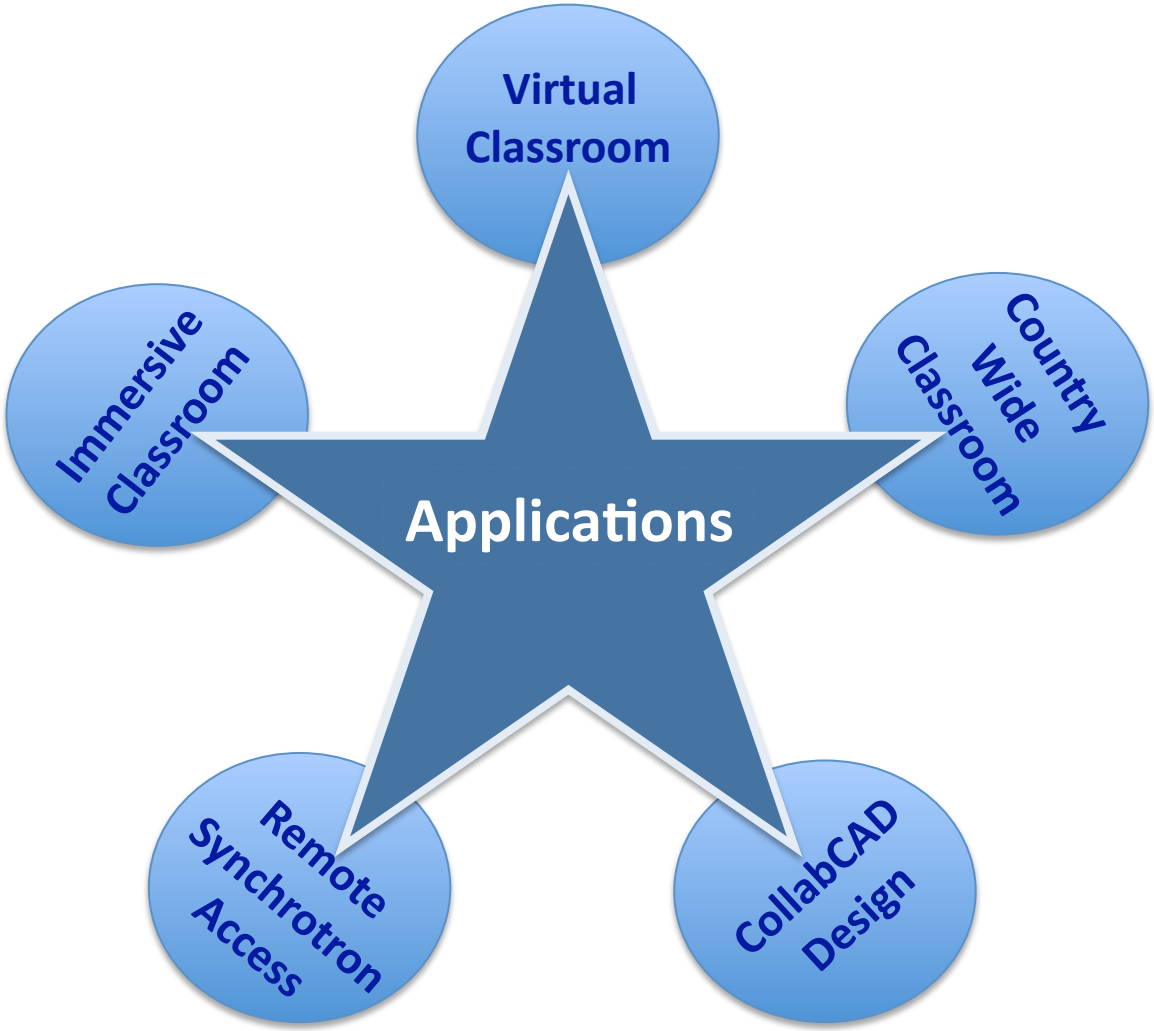
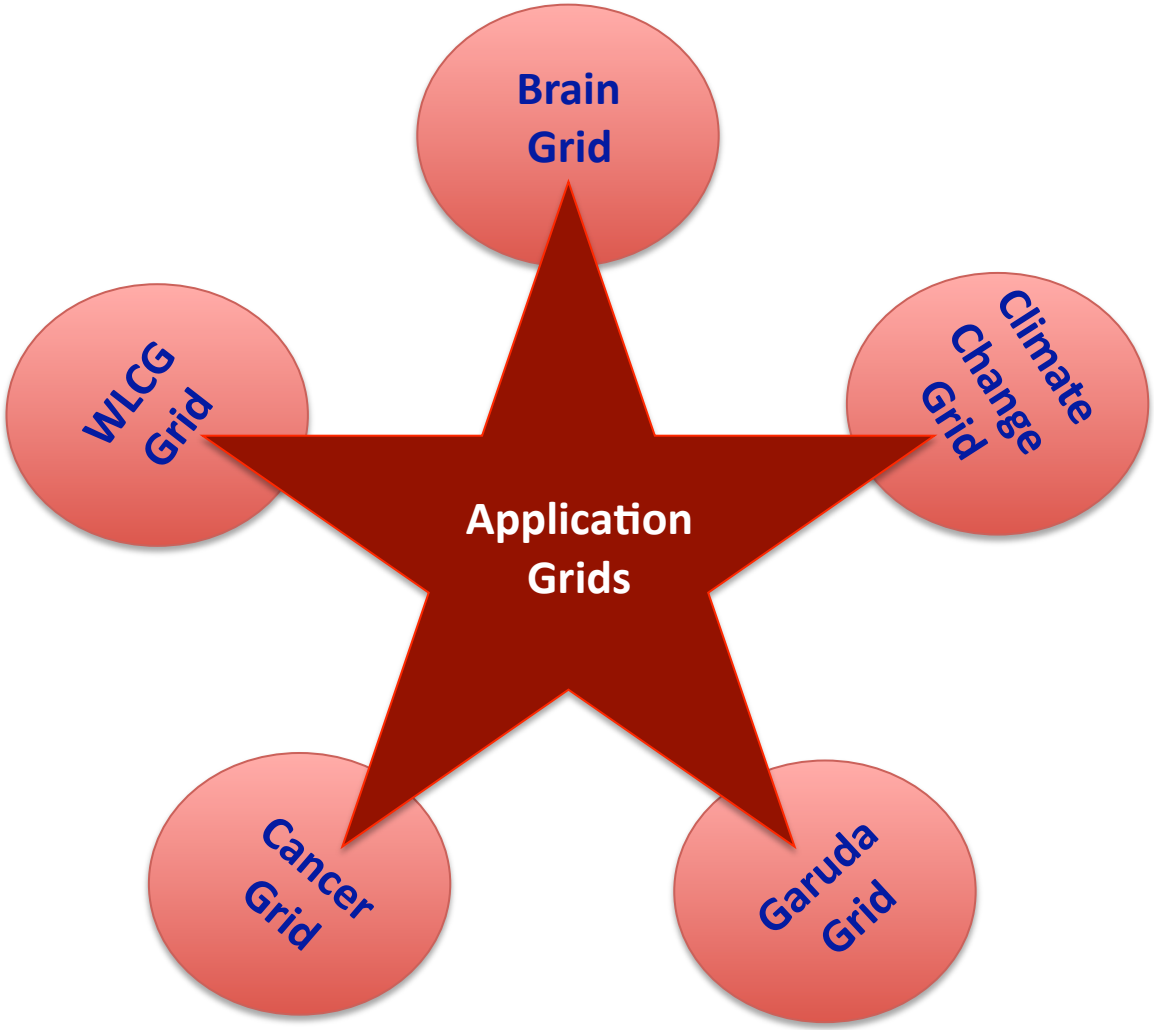
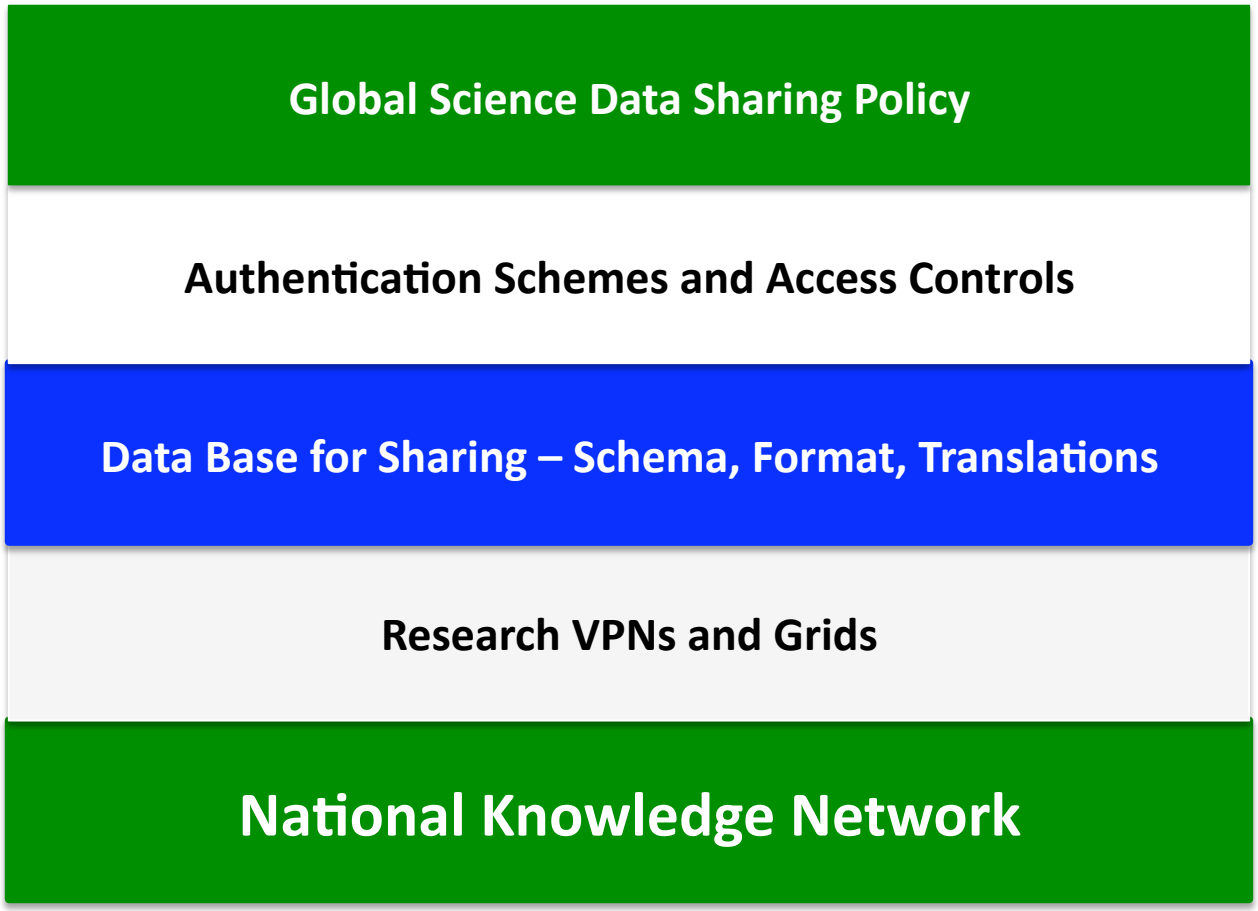
Applications



Application Grids




Global Science Data Sharing Policy
Authentication Schemes and Access Controls
Data Base for Sharing – Schema, Format, Translations
Research VPNs and Grids
National Knowledge Network

Thank You