
Service-Grids
based on UNICORE.
T Systems

# Outline.

- Service Grids: Vision, Strategy and Activities
- The Role of UNICORE in Service-Grids for the Technical Computing Market
- Service-Models and Examples for Customer-Environments
- Release-Management
- New Business Models

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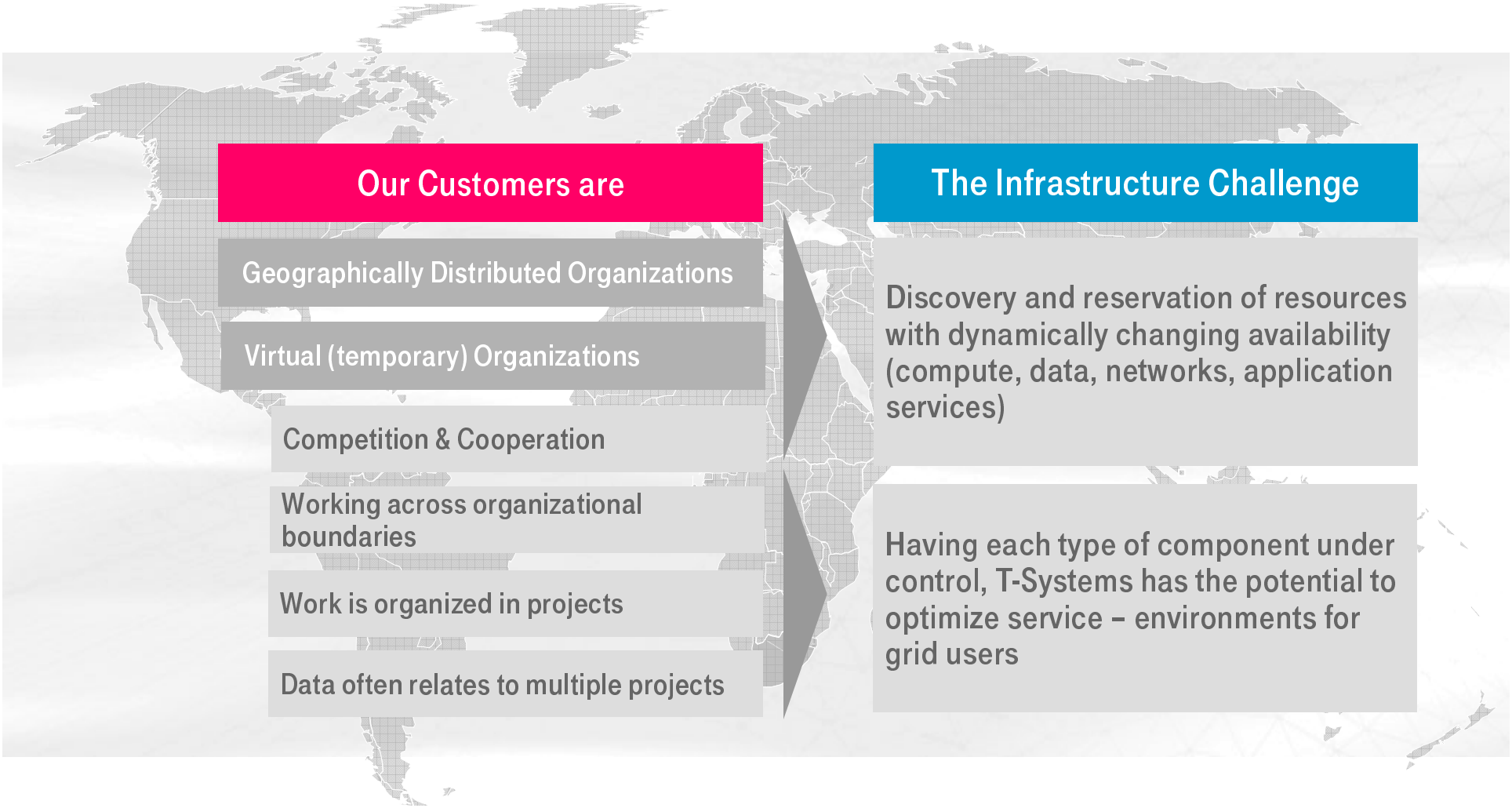
# Vision & Strategy.
## Motivation for Service Grids.

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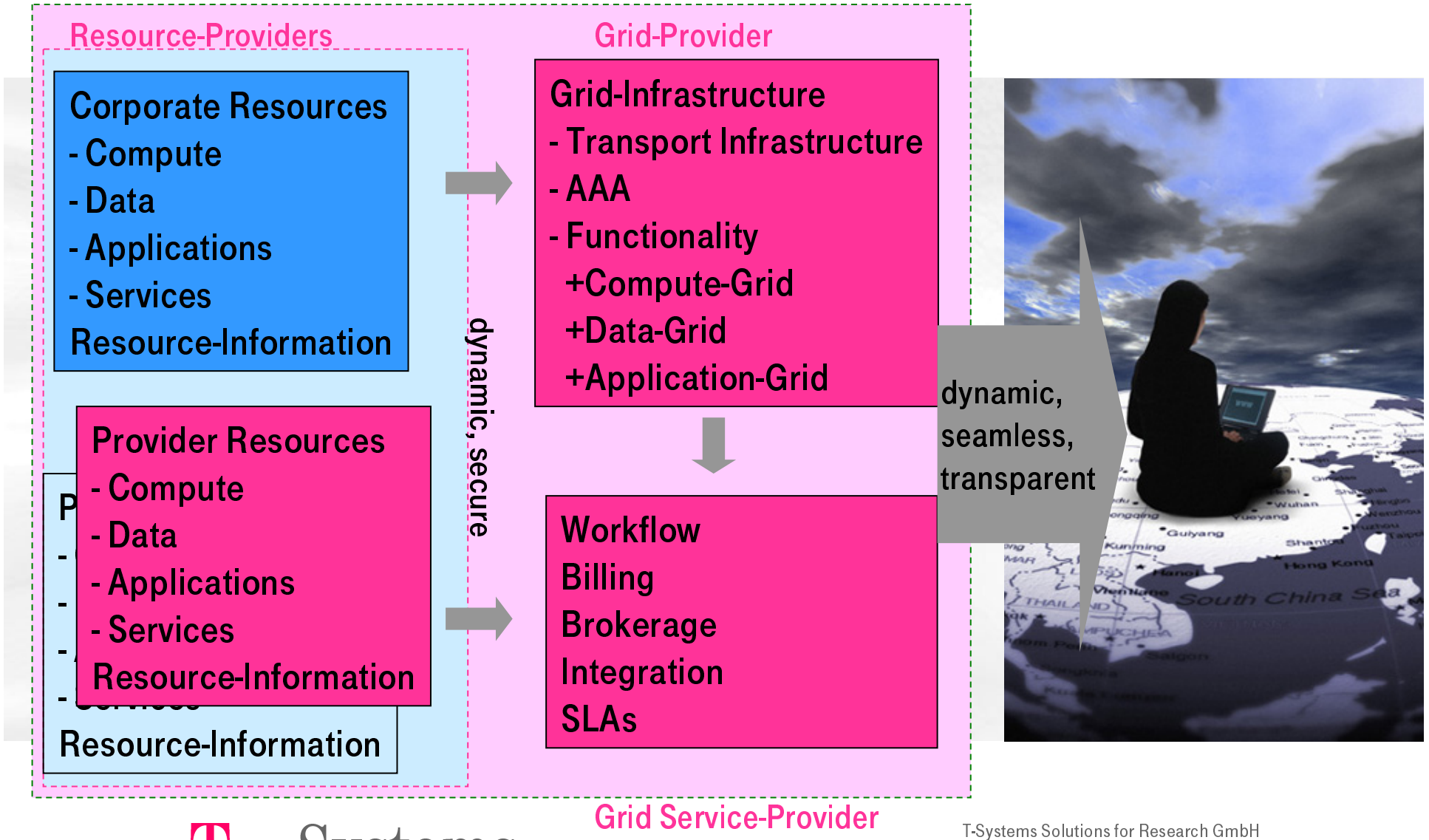
# Service-Grids.
## Target-Architecture (2007-2010)

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# Service Grids.
## Actual Activities – Resource-Provider

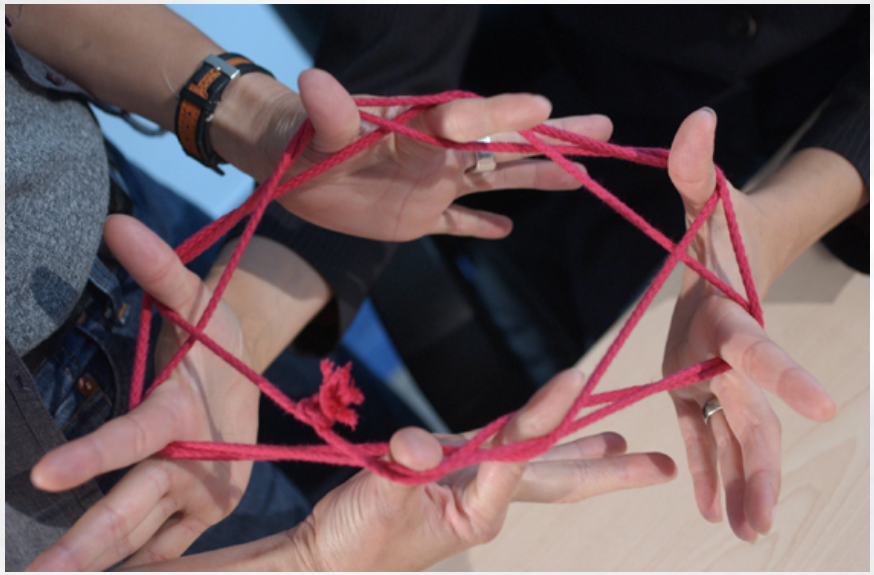
Provision of Resources as a Web-Service:

- Compute
- Storage
- Networks
- Applications
- Services

Provision of Information about Resources

- Price and Price Model
- Service-Levels (Availability, Performance, Operations-hours,...)
- Scope (Internal, Community, Public,...)
- WSDL-Compliant.

# Service Grids.
## Actual Activities – GRID-Provider



Provision of Transport Infrastructure
- Managed Network Services
  - Dynamic Provisioning
  - Reporting
  - Accounting
- Quality of Service

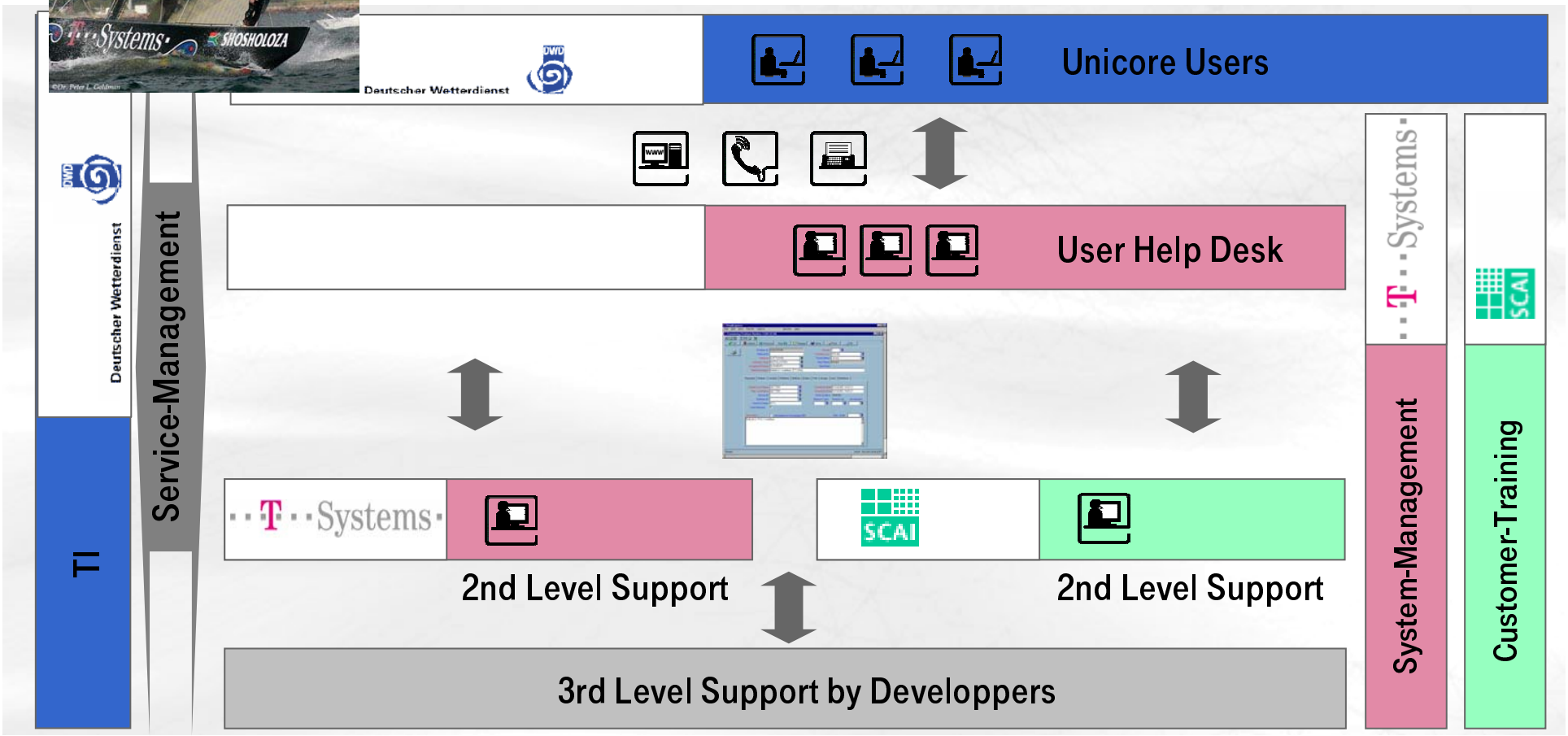
Provision of AAAA infrastructure
- Authorisation
- Authentification
- Accounting
- Audit

Operation of Grid-Middleware
- Application-Grids (e.g. UNICORE)
- Enterprise-Grids (e.g. InnerGrid)
- Data-Grids (e.g. Data-Finder)

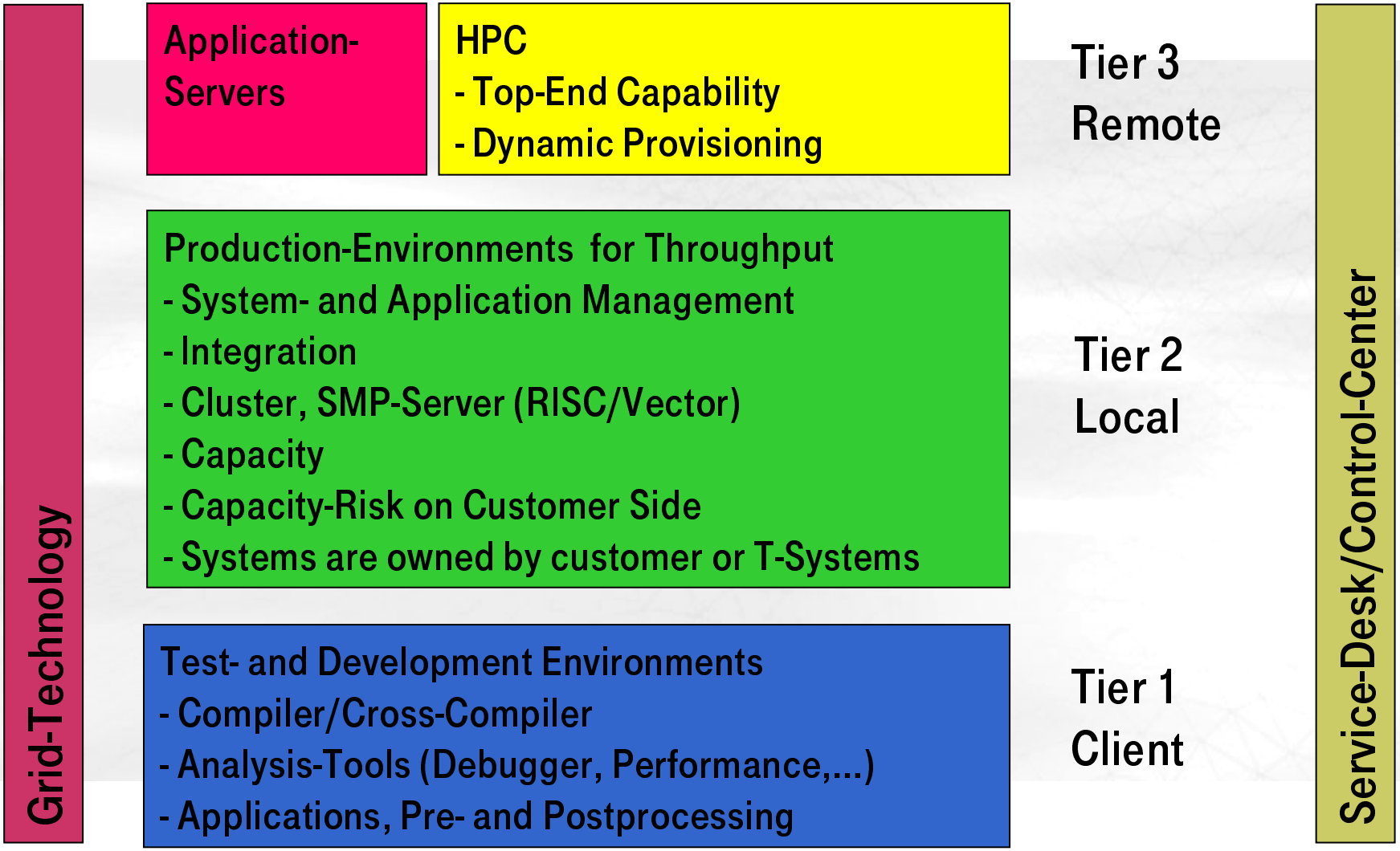
# Value Added Services based on UNICORE.
## Realisation.


- Customer-specific Solutions and Generic Services based on UNICORE .
  - Vertical Integration into Customer´s Value-Creation Chain
    - Modularisation and Horizontal Integration parallel to productive use
  - Actual Focus
    - Grid-Solutions for the inter-organisational access to resources.
      (Customer-Examples DWD, GRS and Team Shosholoza)
    - Integration of Compute-Services into Service-Oriented Architectures based on Webservices
      (Customer-Example DLR)
    - Second Generation Application Service Providing as a generic model for SMEs
    - Release Management for UNICORE and UNICORE/GS: Stable Production vs. Development

# UNICORE based Access to Computing-Resources.
## Delivery-Model for DWD, GRS and Team Shosholoza

# Technical Computing/CAE – Business Model.
## 3-Tier Architecture

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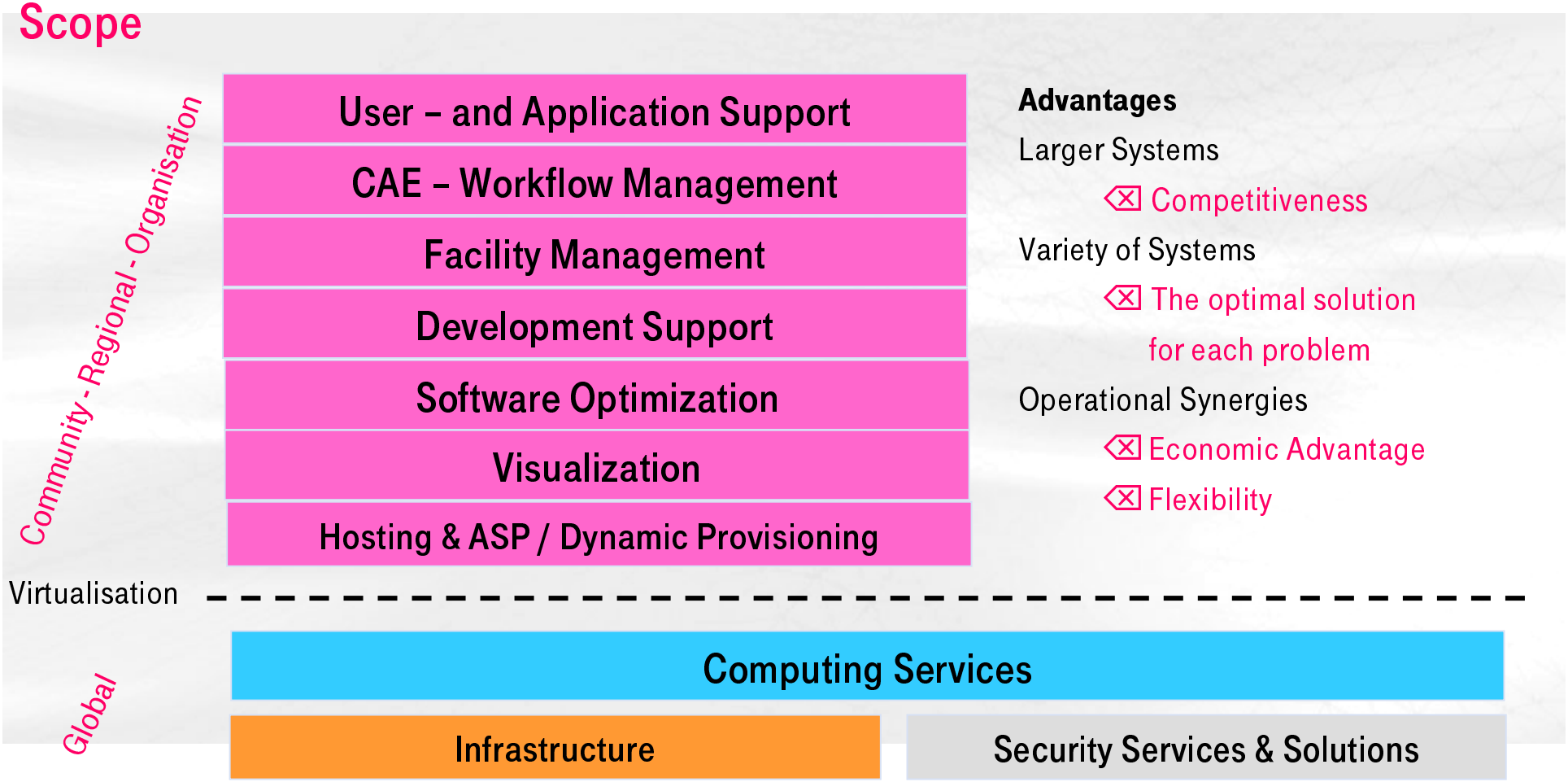
# HPC-Services Tier 3.
## Virtualisation.



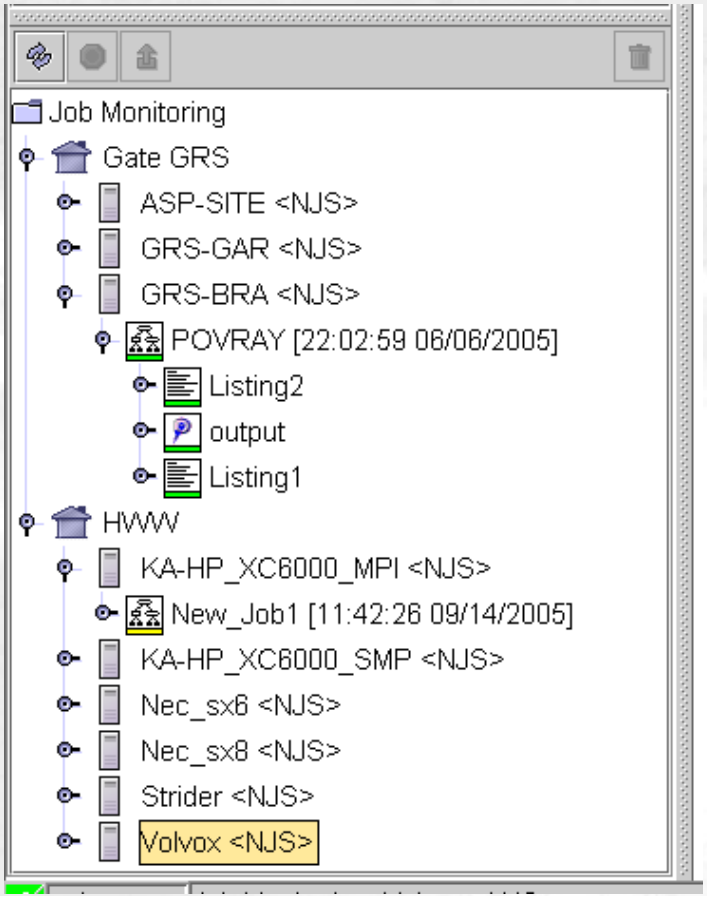
# UNICORE in a Production-Environment:
## View of GRS - Users

The UNICORE-Client

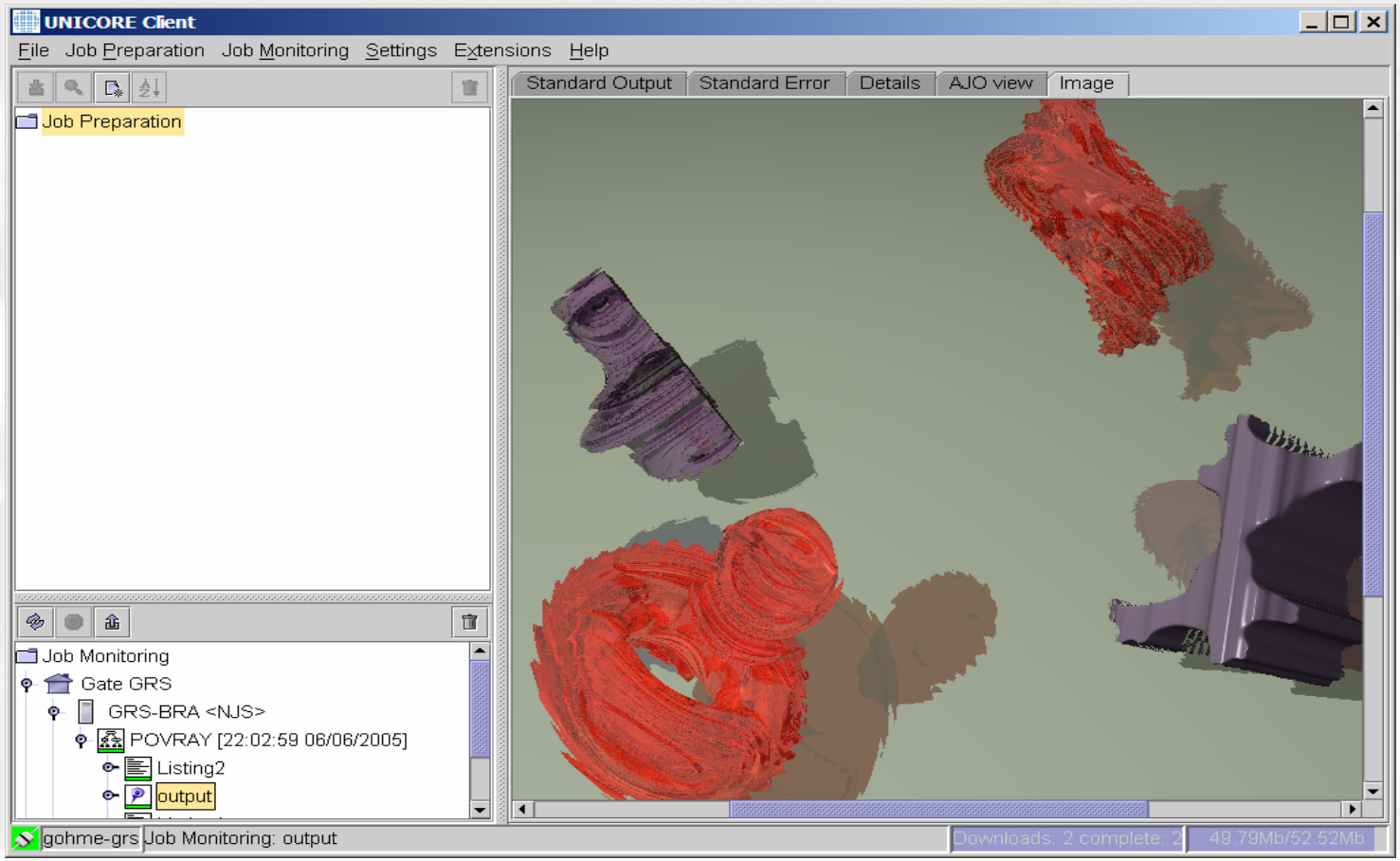
shows all

USites/VSites reachable
for Customers of GRS

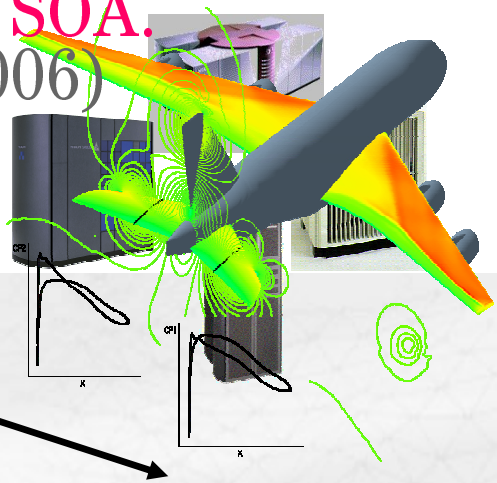
as of today

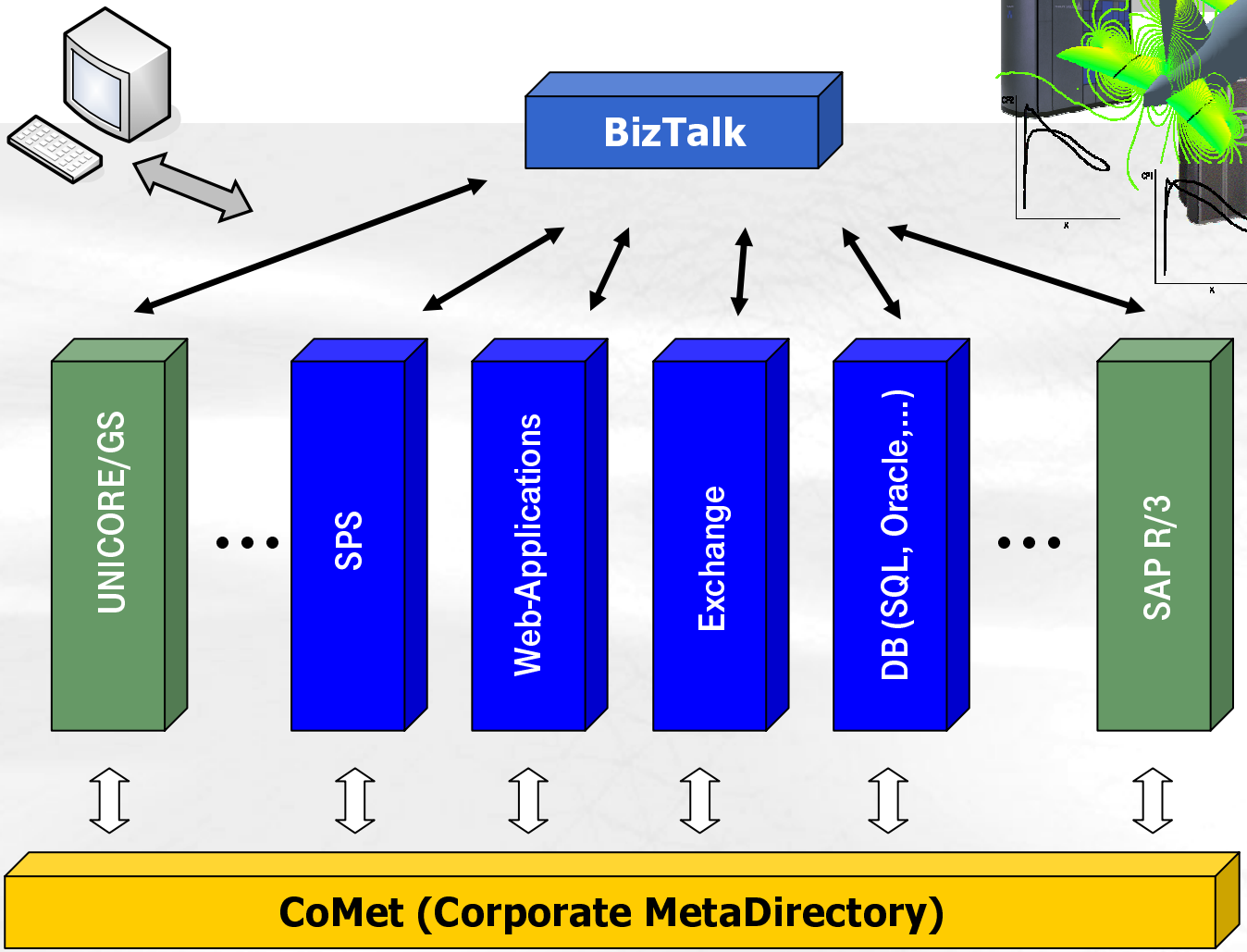


# Actual Activities:
## Application-Integration in the UNICORE-Client

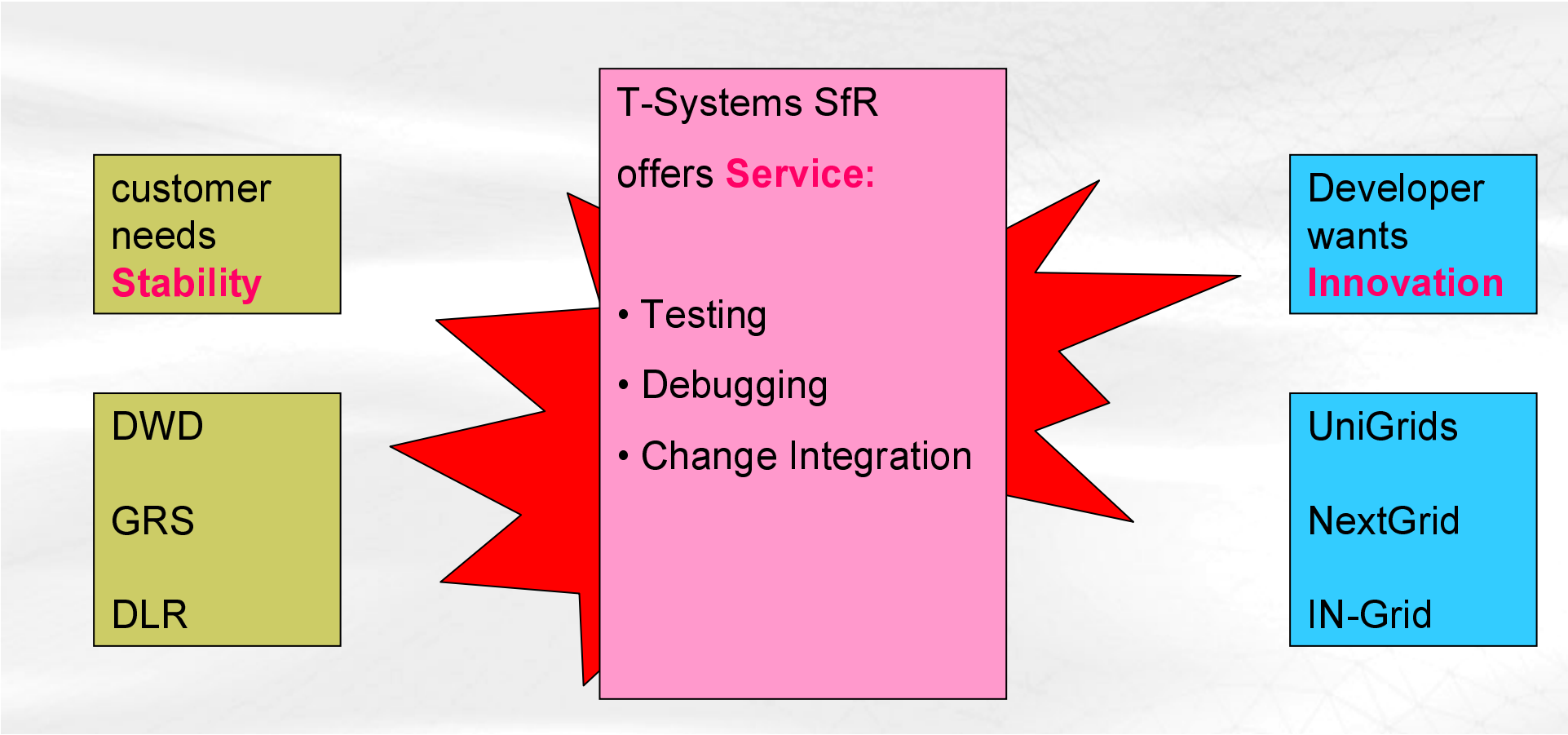


# Services: Integration of Compute-Services in a SOA.
## Framework @ DLR based on UNICORE/GS (2006)





# Release Management: Service and Development Aspects



# New Business-Models: Second Generation ASP.

## Learning from the ISPs.....

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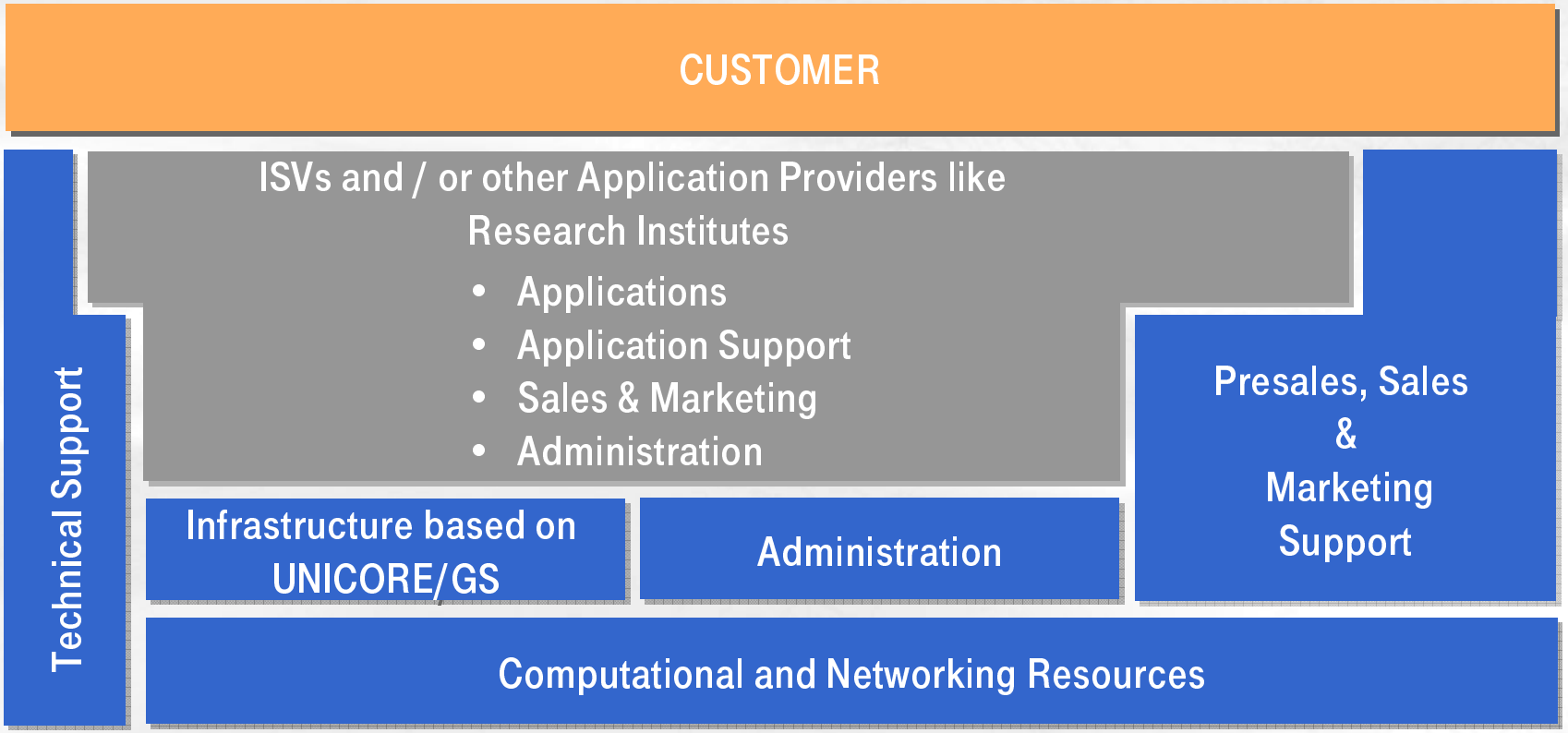

# Services: Second Generation ASP.
## Actual Problems to Solve

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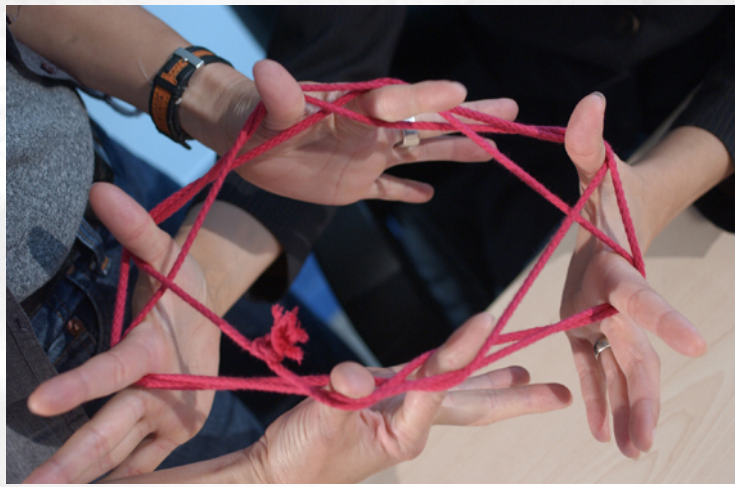
- Refinement and Expansion of Business-Models
  - Other Markets
- Reliable Services with strict SLAs based on Open Source Components.
  - How can risk be managed?
  - Liability Issues
  - Contracting Functional Descriptions rather than Technical Solutions?



- Model for the Collaboration with ISVs
  - The Licensing Problem if commercial software-componets are involved.

# Conclusions.

- Service-Grids are still a vision

but:

- Components of Service-Grids are ready for productive use.
- As a vertically integrated solution, UNICORE is ready for integration into delivery-concepts and business models
  - Low technical risk (compared to the actually available toolboxes)
  - Stable environment
  - Low financial risk


# Thank you.

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