

SLA4D-Grid Status and Open Issues

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Open Issues Session on “Quality-of-Service für
community-übergreifende Ressourcennutzung”
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Outline

- For those who do not know SLA4D-Grid
- A use case example
- Nice architecture sketches
- Technology insights
- Challenges? Yes!
- Status quo

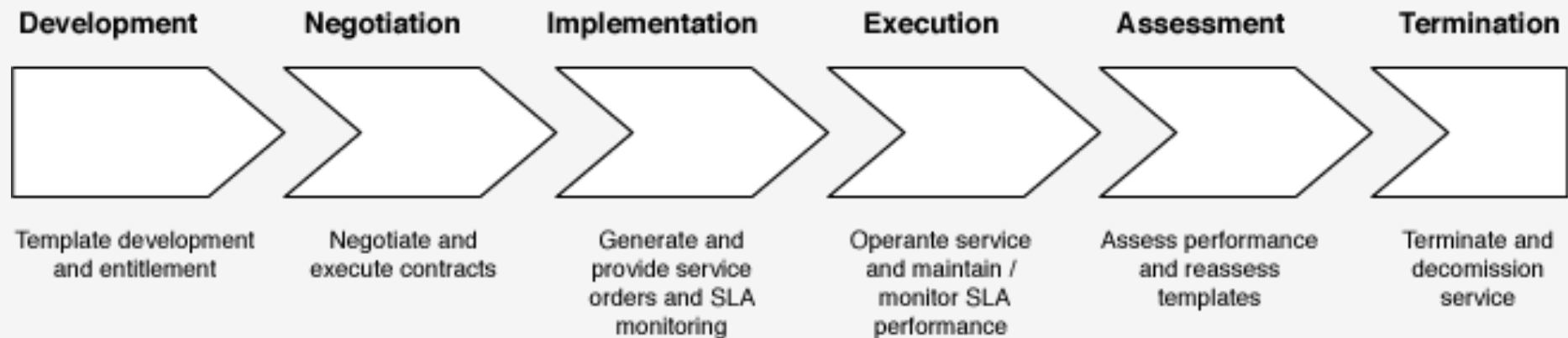
One Definition (out of many ...)

A Service Level Agreement is

“[a] formal negotiated agreement between two parties, sometimes called a service level guarantee. [...], it is a contract (or part of one) that exists between the service provider and the customer, designed to create a common understanding about services, priorities, responsibilities, etc.”.

TeleManagement Forum, SLA Management Handbook, 2001

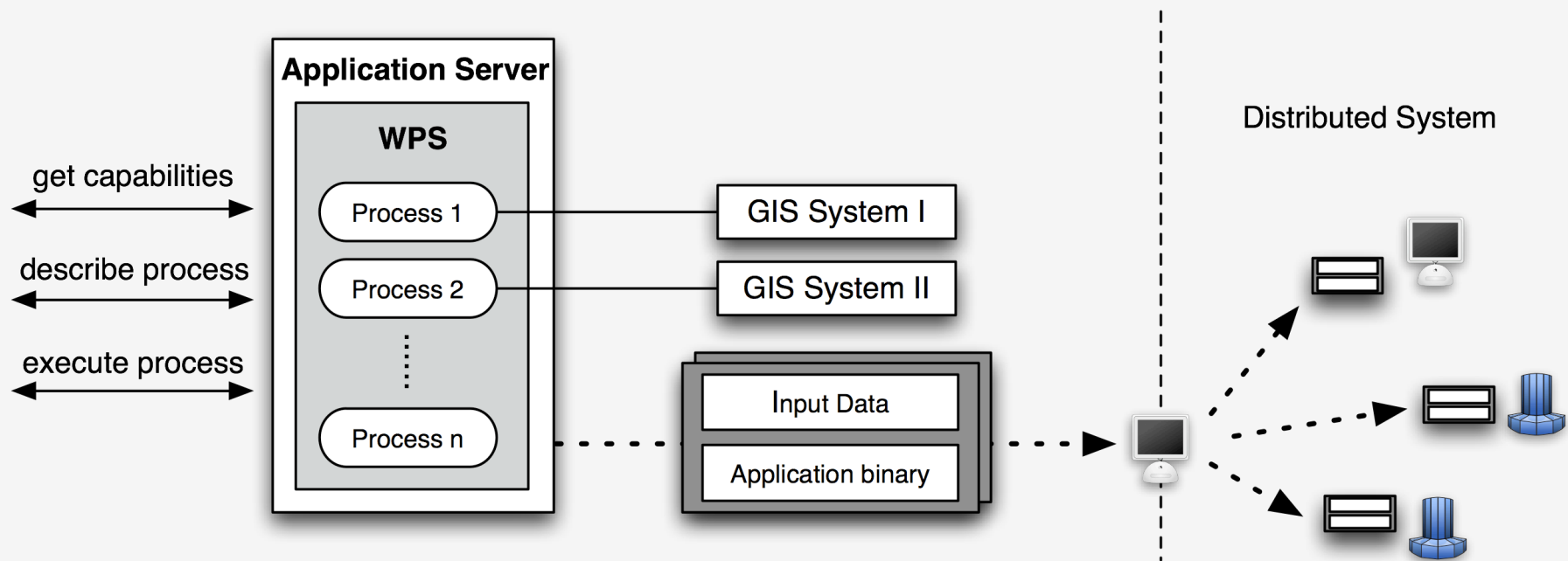
SLA Lifecycle



Objectives of SLA4D-Grid

- Main: Design and realisation of a Service Level Agreement layer for the D-Grid supporting as much of the SLA lifecycle as possible
- Secondary:
 - Quality of Service guarantees for D-Grid communities
 - New business models
 - Foundation for commercial resource providers
 - Close integration with existing D-Grid infrastructure

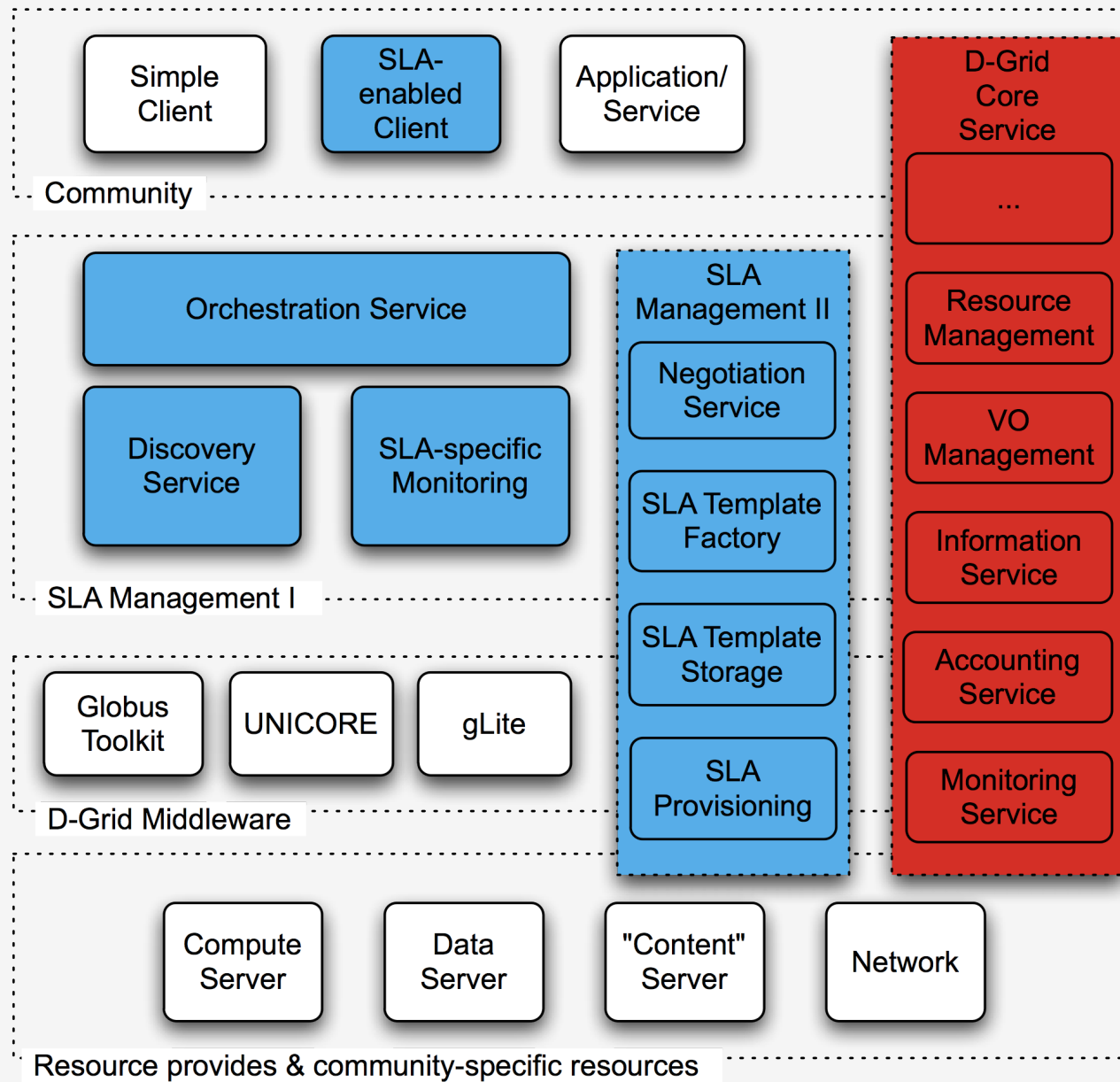
Spatial Data Infrastructures



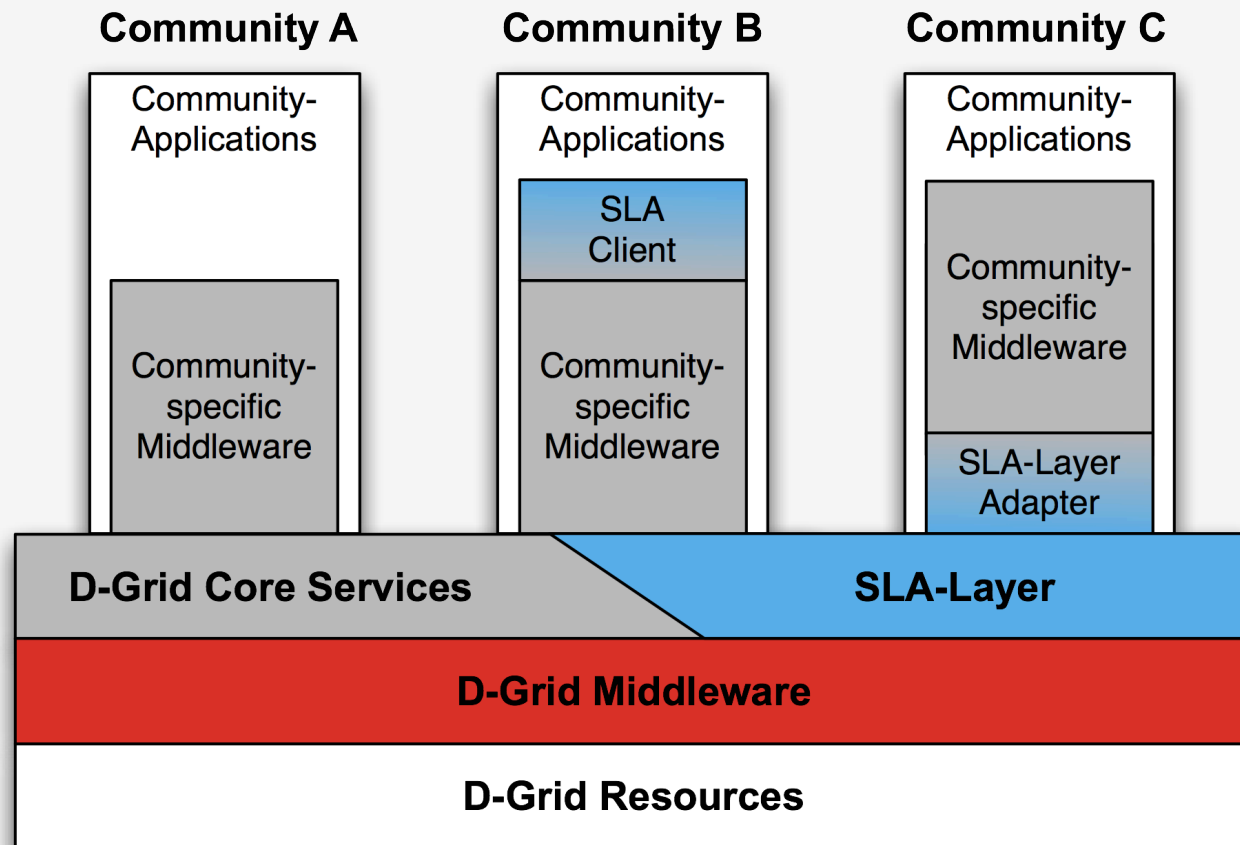
B. Baranski, Grid Computing Enabled Web Processing Service, 2008

Approach

- SLA Layer: Develop a set of services for service-level management
- Generic SLA: Cover the main use of resource reservation
- Domain-specific SLAs: Covering the Use Cases
- User support: Clients, APIs, ...
- Integration: With D-Grid core services like monitoring, accounting, ...



Integration Plans



Open Issues (I)

- What kind of QoS support is needed?
 - Requirements status
 - Advance Reservation specified
 - Spatial data infrastructures ready to implement
 - Results from first SLA4D-Grid workshop
 - Commercial Cloud provisioning to be specified
 - DGSI and ValueGrids in pipeline
 - What else is needed?
 - What is the motivation to provide QoS (see also legal issues)?

Open Issues (II)

- Integration with D-Grid core services like monitoring, information provisioning, ...
 - To run real business, the whole lifecycle has to be supported. How to achieve this across all platforms?
 - Core services not offered across all middleware and miss SLA-related requirements.

Open Issues (III)

- Legal issues and „Betriebsmodel D-Grid“
 - Technical solutions are provided by SLA4D-Grid, but integration into operational concept is done by D-Grid. What happens after DGSI-2?
 - Legal issues are far from being solved.
 - Can academic resource providers create revenue? If so, what processes have to be established? Best practices?
 - Business cases exist, but nobody ever ran business in D-Grid.
 - How is D-Grid positioned wrt Clouds?

Status Quo

- Project is 10 months young
- Current focus on 1st prototype
 - Support for two use cases
 - SLA development, negotiation, implementation
 - Support for Globus, UNICORE
- Plans
 - Integration with D-Grid monitoring & accounting
 - Added value service-level management
 - Tackle the legal issues

Questions & Recommended Reading

QUESTIONS?

- Overview: <http://www.d-grid.de>
- On SLA4D-Grid: <http://www.sla4d-grid.de>
- Technical reports: soon to appear above
- Next SLA4D-Grid Workshop May 4, 2010, Berlin, DE