GES 2007
Requirements to Accounting and Billing within MediGRID and Services@MediGRID

Baden-Baden, May 2, 2007

Ulrich Sax
Dept. of Medical Informatics
University Medical Center Göttingen
Sustainability Problems of competence networks and NGFN-Networks

• IT infrastructure based in institutes not professional, no IT-center-know how

• Medical computing centers and university ccs move slowly to integrative solutions (DFG Initiative „Integriertes Informationsmanagement“)

• Missing controlling- and billing processes prevent:
  • Adequate ressource discussion
  • industry cooperations
Summary (WS sustainability KA)

Similarities to product development in Industry
• It has to work (Technology, Licences, Pricing).
• „Where is the beef“ for providers and for clients?

Necessary preconditions:
• Academic und industrial Grid Service-users have to be able to use relevant Grid Services (threshold!)
• Billing with respect to heterogeneous funding agencies
• Support with the development of business models
• Relevant law (privacy, archiving, finances)
Summary (WS sustainability KA)

Similarities to product development in Industry

• It has to work (Technology, Licences, Pricing).
• „Where is the beef“ for providers and for clients?

Neccessary preconditions:

• Academic und industrial Grid Service-Clients have to be able to use relevant Grid Services (threshold!)
• Billing with respect to heterogeneous funding agencies
• Support with the development of business models
• Relevant law (privacy, archiving, finances)
Dichotome World in the Medical-Community

Research

• Basic equipment via HBFG- (bis Ende 2006!)
• Gap financing via BMBF
• Operating cost via grant money or Länder

Health Care

• Basic equipment via Länder, Uniklinik ca. 150 Mio. davon 5 Mio IT/anno
• Operating cost health care via health insurances, University Medical Center app. 250 Mio€.; 10 Mio IT/anno
Requirements to next Generation networked Research

• Research Networks need to develop business plans – even with 100% funding

• IT-cost and management cost have to be made transparent

• Adapted Service-Level-Agreements

• Adequate controlling abilities

• Separation in research share and healthcare part

• Standardized contracts between actors

• Scalability
Framework

- Grid network infrastructure
- Portal/customer interface
- Customer/user
- ERP
- Grants
- Controlling
  - Billing
  - Accounting
  - Monitoring
  - Auditing
  - (Tracking)
- Authorization
- Authentication
- SLAs
- Pricing
- Clearing?

* Cost approach based on DFN-Grid infrastructure and its respective prices
Use cases (Services@MediGRID)

Universitary and industrial Research
Use cases (Services@MediGRID)

AP1: Grid Coaching
1.1 Integration der Projekte
1.2 Grid Services Coaching
1.3 Migration einer Kundenanwendung ins Grid

AP2: Business enabling
2.1 Service Engineering
2.2 Geschäftsmodelle
2.3 Grid Service-Portal

AP3: Kundenprojekte
3.1 Selektion (SNPs)
3.2 Evolutionäre Analyse
3.3 Mikroskopbildanalyse
3.4 Genom-Browser

AP4: Faktura
4.1 Grid Accounting Shell
4.2 Integration in ERP-Systeme
4.3 MediGRID in kommerziellen Grids
4.4 Volumenorientierte Fakturierung genetischer und HTS*-Analysen

Ulrich Sax
Göttingen, 28.03.2007
Use Case: Grant Financed Research

Expensive infrastructure more and more not in included in life science funding

→ The grant applicant is asked to shop this service at a provider

• Example: SFB680 in Köln and at Kirchhoff Institut for Physics in Heidelberg → money for Grid-Services via DFG
Use Case: Industry

Similar facts for (pharmezeutical) industry:

→ need for shopping / offering Grid Services

• Example: HTS drug screenings (HTS=high-throughput screening) at c.a.r.u.s

• s. PharmGrid
Specifics

Research controlling (not only) in Medicine (user)
- Impact
- Teaching
- Grant Money (so grid credits would be sub-optimal…)

Specific calculation of cost (provider)
- Business model
- IT/Management cost
- Refuse underfinanced projects
Summary

Similarities to product development in Industry
• It has to work (Technology, Licences, Pricing).
• „Where is the beef“ for providers and for clients?

Necessary preconditions:
• Academic und industrial Grid Service-Clients have to be able to use relevant Grid Services (threshold!)
• Billing with respect to heterogeneous funding agencies
• Support with the development of business models
• Relevant law (privacy, archiving, finances)
GES 2007
Requirements to Accounting and Billing within MediGRID

Baden-Baden, May 2, 2007

Ulrich Sax
Dept. of Medical Informatics
University Medical Center Göttingen
Analyzing the cost structure of MediGRID, not all functional units could be considered.

Customer / user

- Portal/customer interface

Resources (Services offered in the grid)
- Computing
- Storage
- Applications
- Other services

Grid network infrastructure (regarded as external*)

Support
- Coordination/Management
- Contractual issues
- Marketing
- Software
- Maintenance
- Security
- Billing/Accounting
- Others
- Others (regarded as external*)

In cost analysis:
- Regarded
- Not regarded

* Cost approach based on DFN-Grid infrastructure and its respective prices