



Akogrimo – Overview and Potential Contribution to Telco-CG

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Some facts

- A European Research Project with a duration of ~3 years and an overall effort of ~1200 PM and an overall budget of 10,5 M€
- 13 Partners from industry and academia including 3 Telecom Operators and large IT service providers
 - TelCos: Telefónica I+D, Telenor, Portugal Telecom through IT-Aveiro
 - IT Industry: ATOSOrigin, Datamat
 - SMEs: CRMPA, BOC
 - Research: RUS and HLRS, UPM, UniZh, CCLRC, NTUA, UHOH
- Project Start: July 2004
- Info: <http://www.mobilegrids.org>



To produce a breakthrough in current practices for Grids with the creation of a distributed, mobile and pervasive environment to make it a business proposition for Telecom Operators and Service Providers

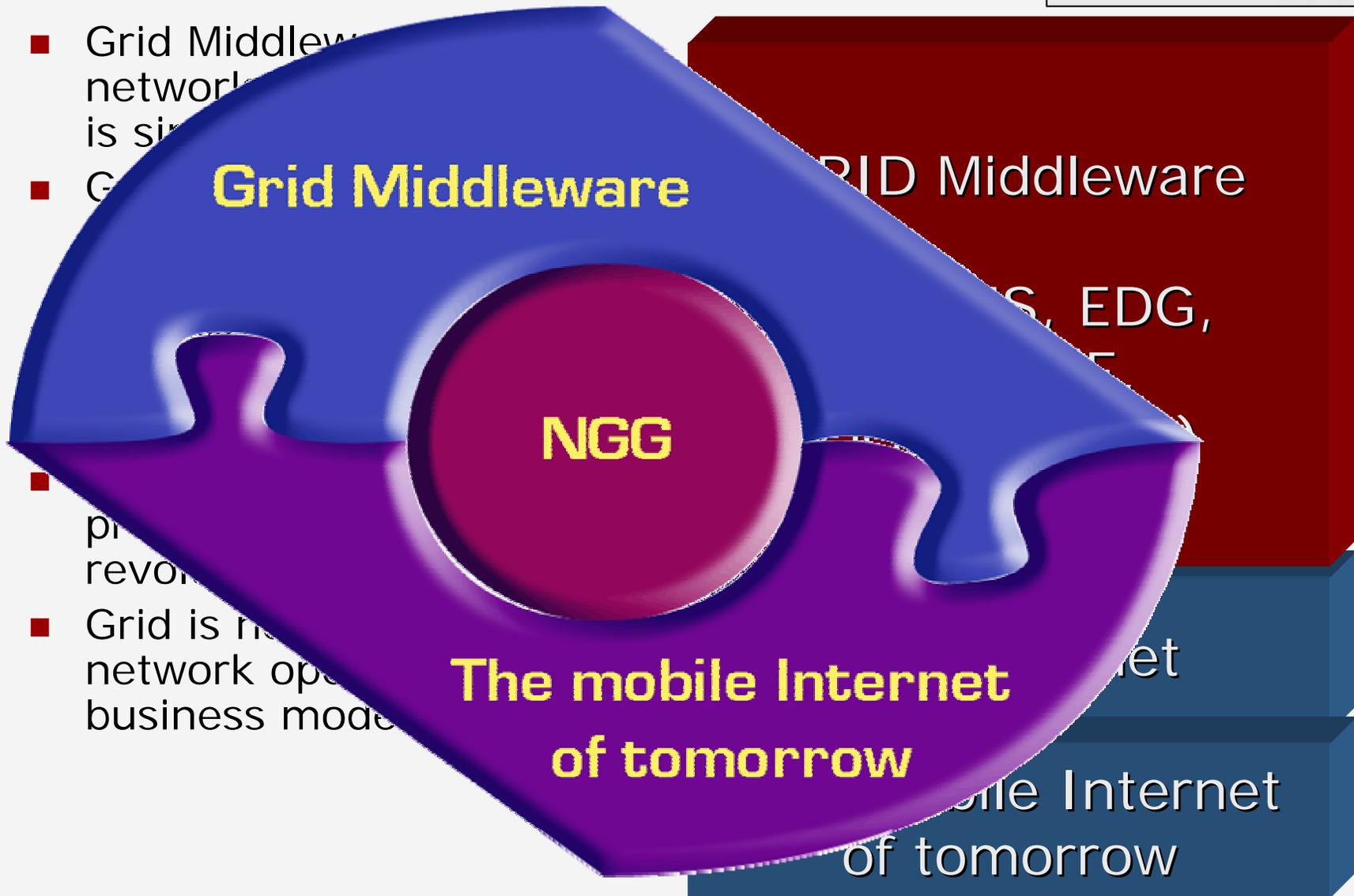
Basic Assumptions

- The future Telecom Infrastructure is an All-IP network
- For pervasively available Grids commercial infrastructure providers such as TelCos are needed
- The Next Generation Grid should consider the needs of
 - Context changes and all kind of mobility
 - Services that are only available locally
 - RFID technology
 - Integration with SIP and VoIP applications
- From eScience Grids to Business Grids many problems need to be solved:
 - Security
 - Service Level Agreements and QoS
 - Cross organizational Accounting
 - Identity Management
 - Business models that enable a self-sustained Grid infrastructure
- For us Grids are
 - Cross-Organizational and not "Cluster Grids"
 - Dynamically composed as needed from a pre-defined set of collaborators

Grid and Networks – not a business proposition yet



- Grid Middleware networks is similar to the Internet
- Grid is not a network operation business model



Expectations for a collaboration with the TelCo-CG



■ Status

- Akogrimo is the end of the first out of two major cycles
- Has produced a set of documents, an integrated prototype combining network, network middleware (e.g. AAA server) and Grids
- Development is based on GT4, WSRF.NET and Web Services Frameworks
- Is now in the cycle 1 evaluation phase providing input for the definition of the second cycle

■ How to collaborate?

- Provide results from the project
 - Analysis of Application Scenarios and their commercial relevance
 - Value Chain and Business Modelling Framework
- Contribute to the working documents of the group
- Integrate the results from this group into the project and provide feedback and validation of them



Selected Results –

Visionary Scenarios and
Validation Scenarios

Evaluation Approach

Define a wide range of potential application scenarios for an Akogrimo Grid

Visionary Scenarios

Challenges

Open Grid Service Architecture

- Use cases
- Functional requirements

Mobility of Grid Resources

Knowledge Orientation

- Knowledge-based systems
- Semantic Web

Select some of them to be realised and validated within the scope of the project

Validation Scenarios

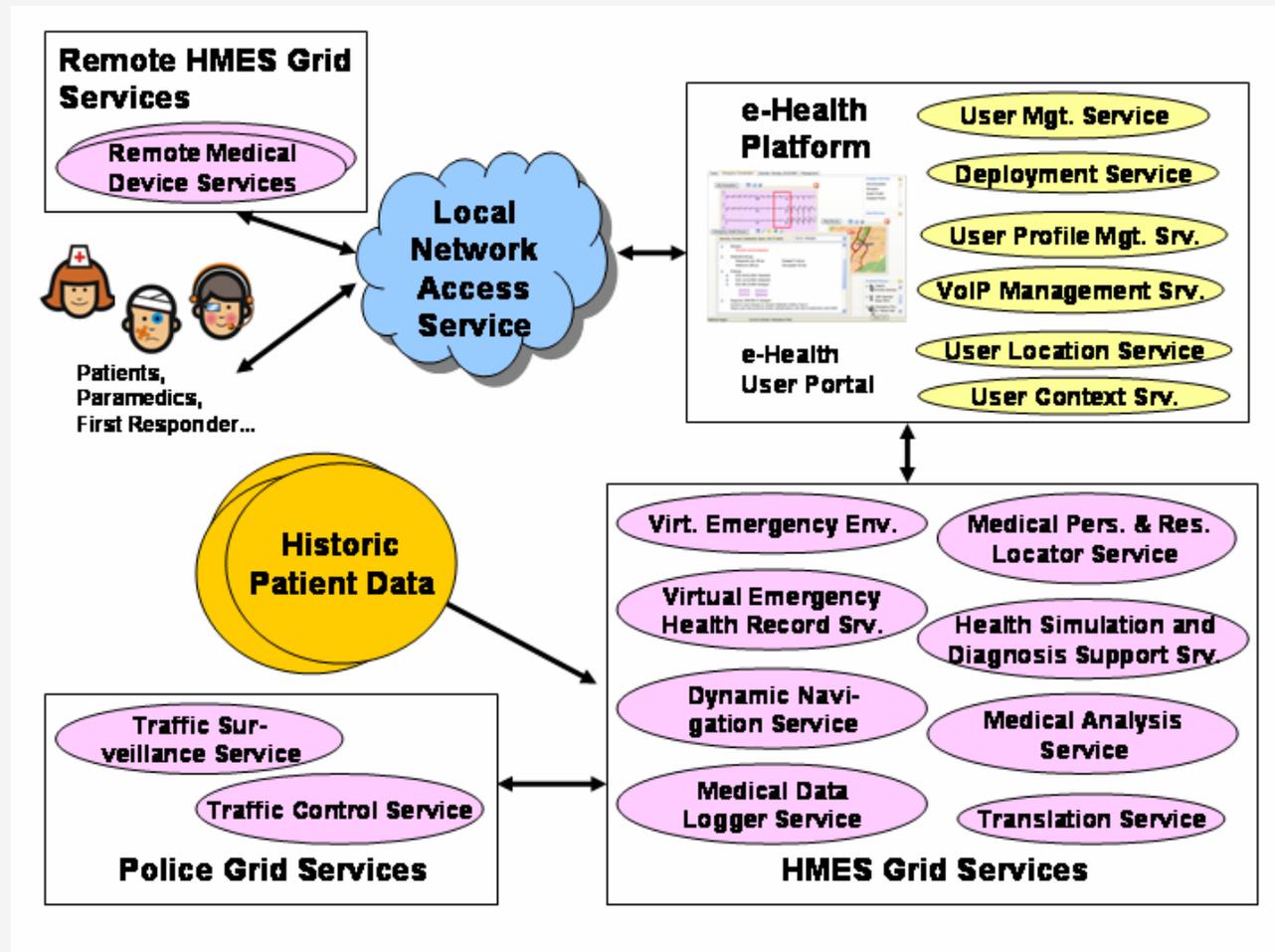
Important element of the selections criteria - Commercial Relevance



- **Customers:** Who? How many? Motivation?
- Number and type of **transactions**
- **Payment:** How much? How frequent?
- Business **opportunities:** number, strength
- How many (and which type of) **third parties** collaborating in Grid-based value chains?
- **Investments:** infrastructure, applications, organisation
- Coverage of **existing infrastructure**
- **Risks:** technological, commercial
- **Reimbursement** potential

Selected scenario: Heart Monitoring and Emergency Service

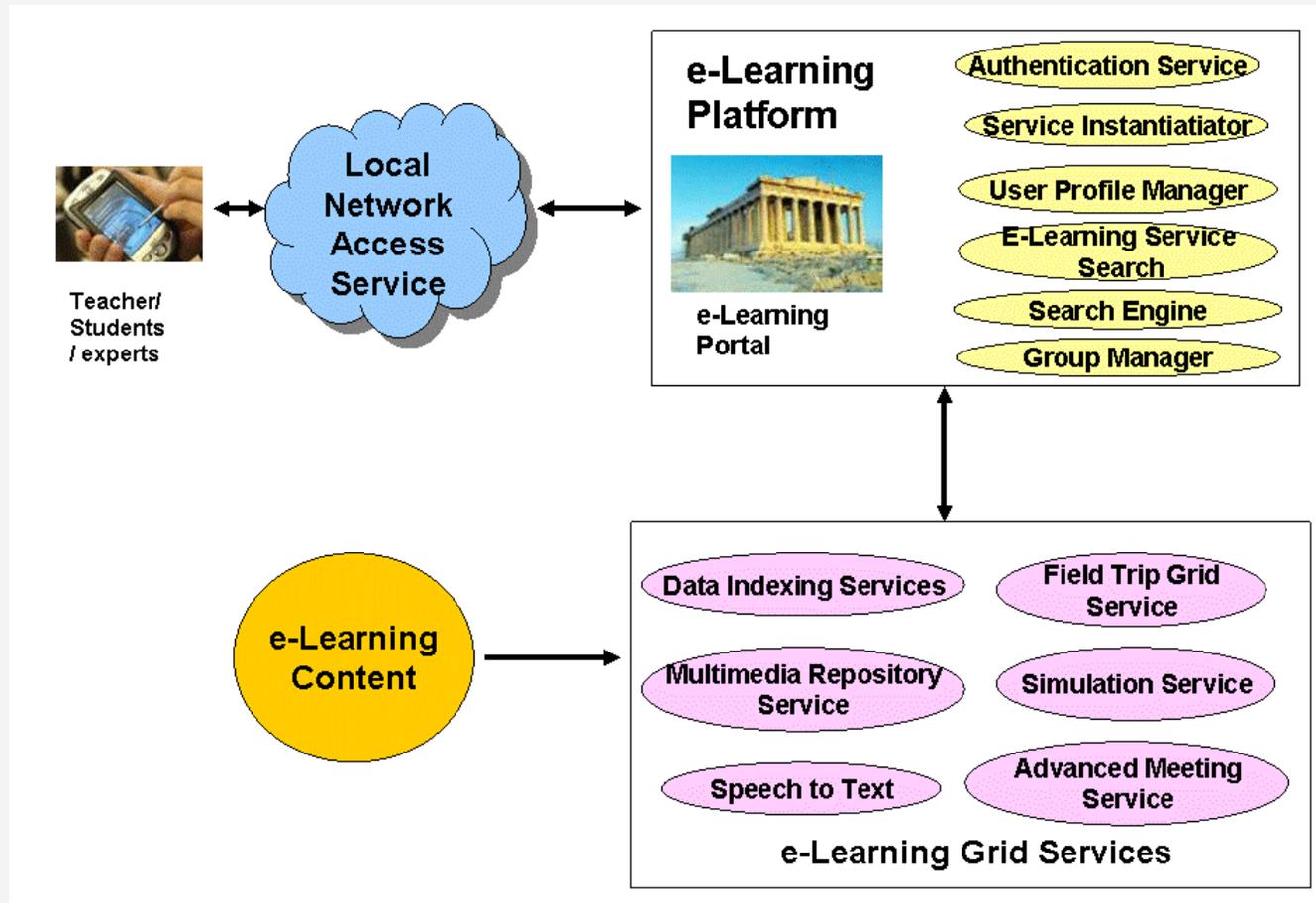
Medical Emergency Scenario extended towards permanent monitoring and introduction of services offered by the police



Selected Scenario: The Field Trip Service



Combination of e-learning and collaboration approaches from the Field Trip scenario with simulation and visualization capabilities





Selected Results –

Value Chain and Business
Modelling Framework

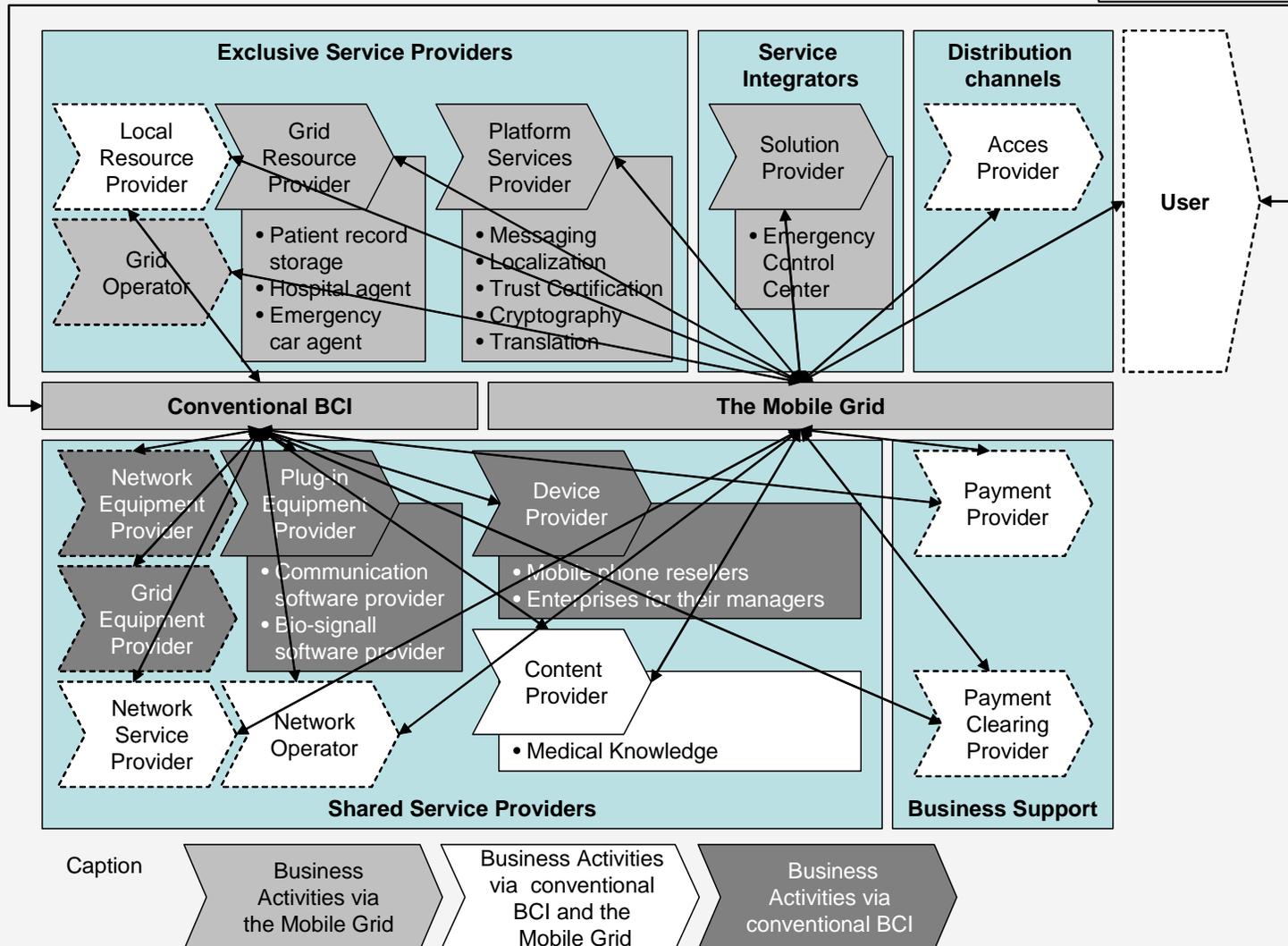
"Analytical Toolset"



- **Description** of a Mobile Grid Services Value Network
- **Analysis** of the participants' development
- **Analysis** through various cost theories
 - Transactional Cost Theory
 - Principal Agent Theory
 - General Criteria

	Before Dissemination of Mobile Grid Services	After Dissemination of Mobile Grid Services
Transaction Cost Theory	Uncertainty	
	Asset Specificity	
	Frequency of Transactions	
	Control Archetypes	
	Types of Costs	
Principal Agent Theory	Hidden Information	
	Incentives	
General Criteria	Traceable Marginal Contribution	
	Conflict of Interests	

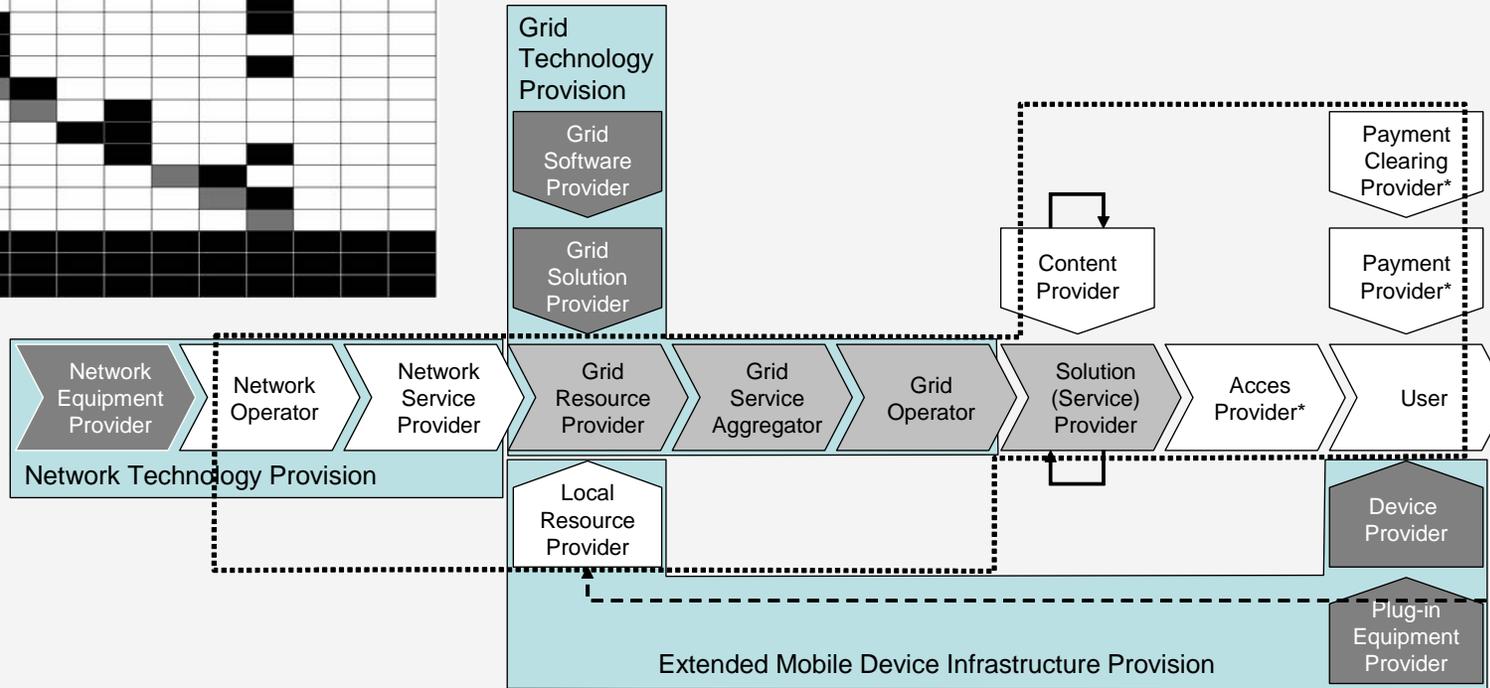
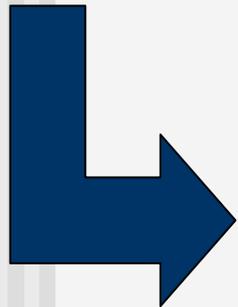
"Analytical Toolset"



Consolidated Value Network



		Service Consumers														
		NEP	NO	NSP	GEP	LRP	GRP	GO	CP	SP	PIEP	DP	User	AP	PCP	PP
Service Offerers	NEP															
	NO															
	NSP															
	GEP															
	LRP															
	GRP															
	GO															
	CP															
	SP															
	PIEP															
	DP															
	User															
	AP															
	PCP															
	PP															



Caption: Business via conventional BCI and Mobile Grid

Participants in the Value Network

* Interaction with almost every role

Business via Mobile Grid

Business via conventional BCI

Proposal for Business Partner Integration

Internal Value Chain

Information Flow

Border of Business Collaboration via the Mobile Grid

■ Mobile Grid Services Value Network proposed based on considerations of **dyadic interrelationships**

Summary of potentially relevant documents for the Telco-CG role model



- D 2.3.1 – Description and evaluation of visionary scenarios
 - Clarification of differences between Mobile Grids and established OGSA-based Grids
 - Derived criteria for characterizing mobile grid scenarios
- D 2.3.2 – Specification of validation scenarios
 - End user, domain, and provider-specific requirements on applications to carry out the Heart Monitoring and Emergency Service as well as the Field Trip Service
- D 3.2.1 – Akogrimo Value Chain
 - Analytical framework for value network interactions based on economic theories
 - Consolidated value network for mobile grid based services
- D 3.2.2 – Akogrimo Business Modeling Framework
 - Which business strategies can be followed by TelCos and Service Providers in order to maximize their benefits from offering services in the Mobile Grid field?
- Next Step: Indicative Business Cases
- All are available at: <http://www.mobilegrids.org>

Thank you !