



Business Modelling for Mobile Grid Scenarios

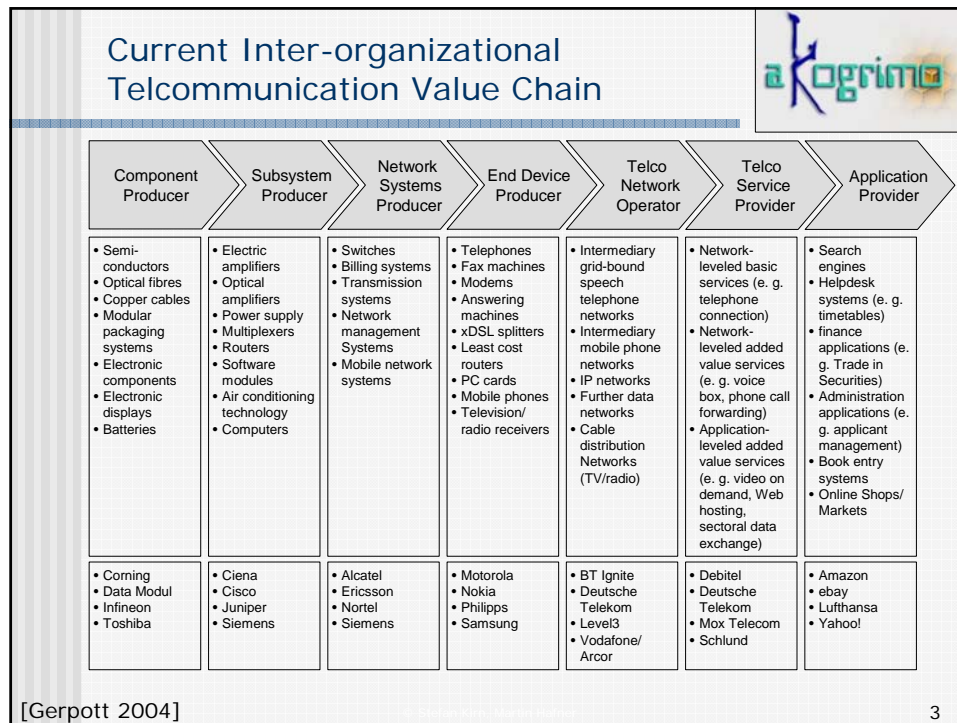
Akogrimo 1st Public Workshop Stuttgart, March 6th, 2006

Dr. Martin Hafner, Prof. Dr. Stefan Kirn
University of Hohenheim, Stuttgart (Germany)

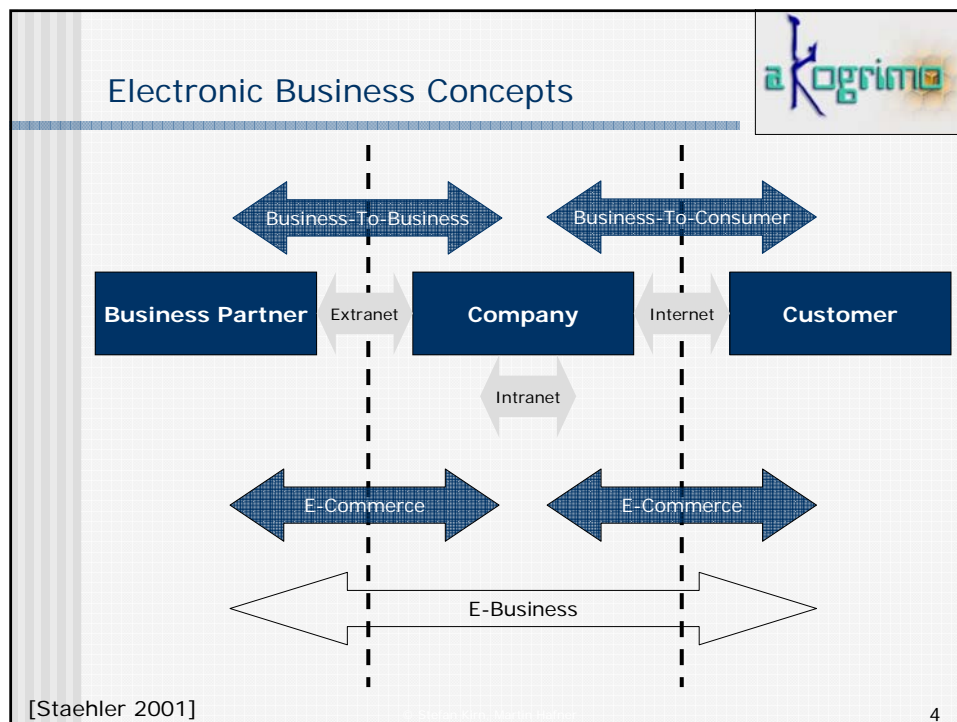
Outline



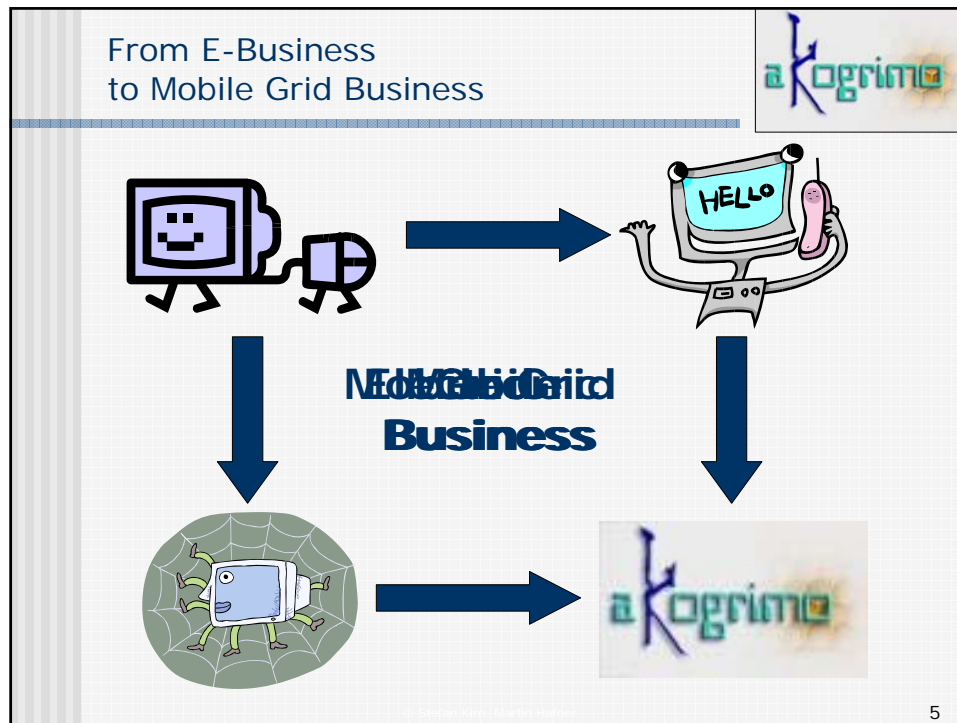
- Current Telecommunication Providers' Value Network
- From Electronic Business to Mobile Grid Business
- The Akogrimo Value Network
- The Akogrimo Business Modelling Framework
 - Fundamental Strategic Decision
 - Customer Orientation
 - Flexibility by Business Services
 - The Akogrimo Emergency Scenario Supply Chain
- Current Exploitation Interests of Institutions in the Mobile Grid Context



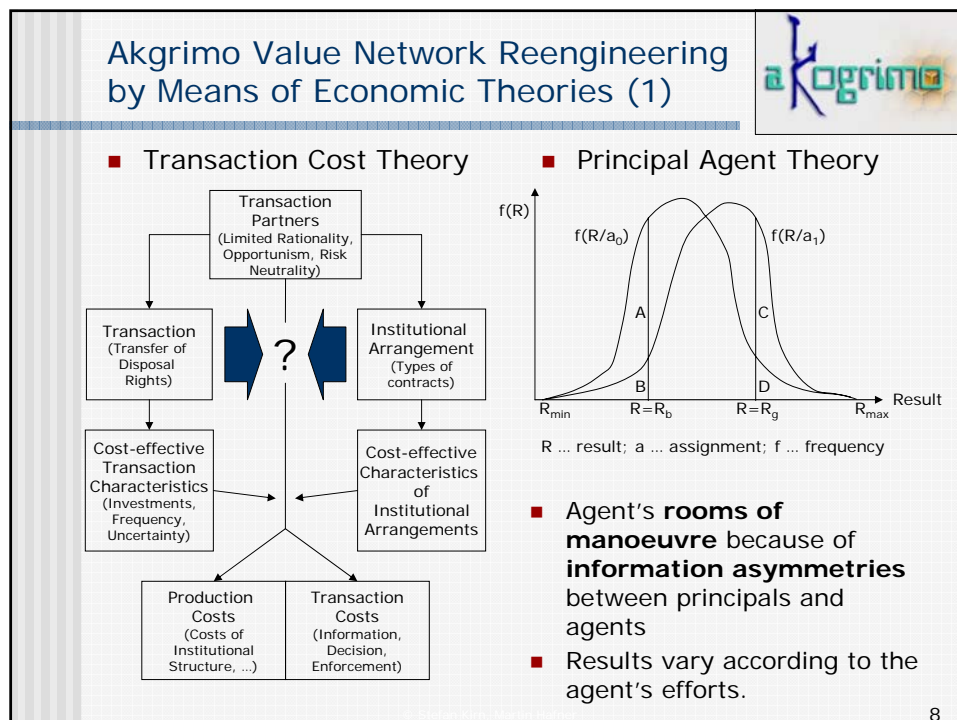
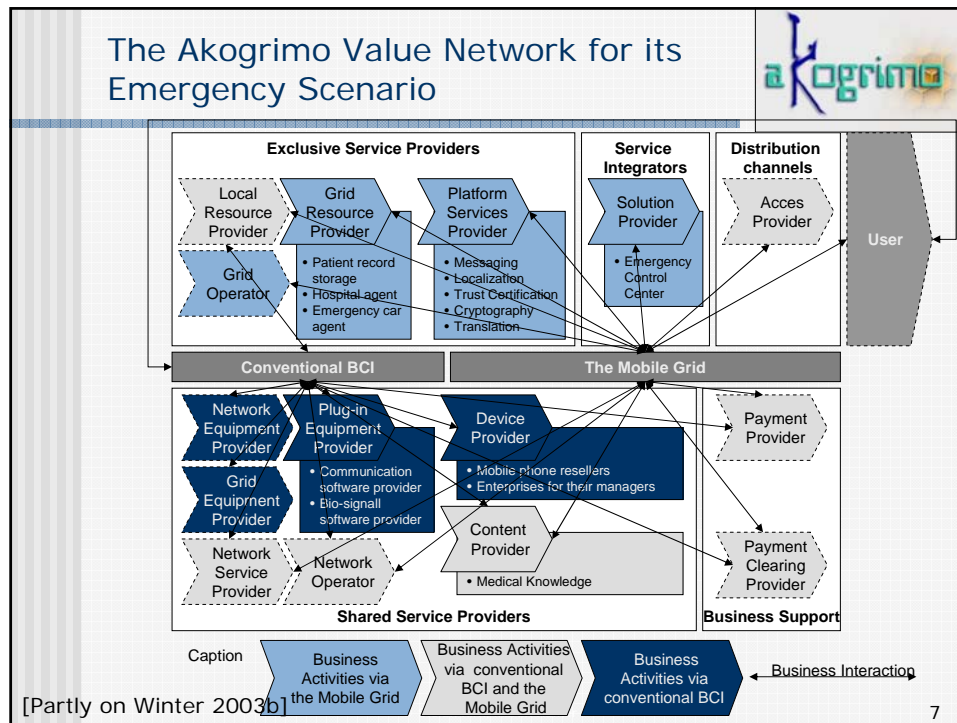
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Akogrimo Value Network Reengineering by Means of Economic Theories (2)



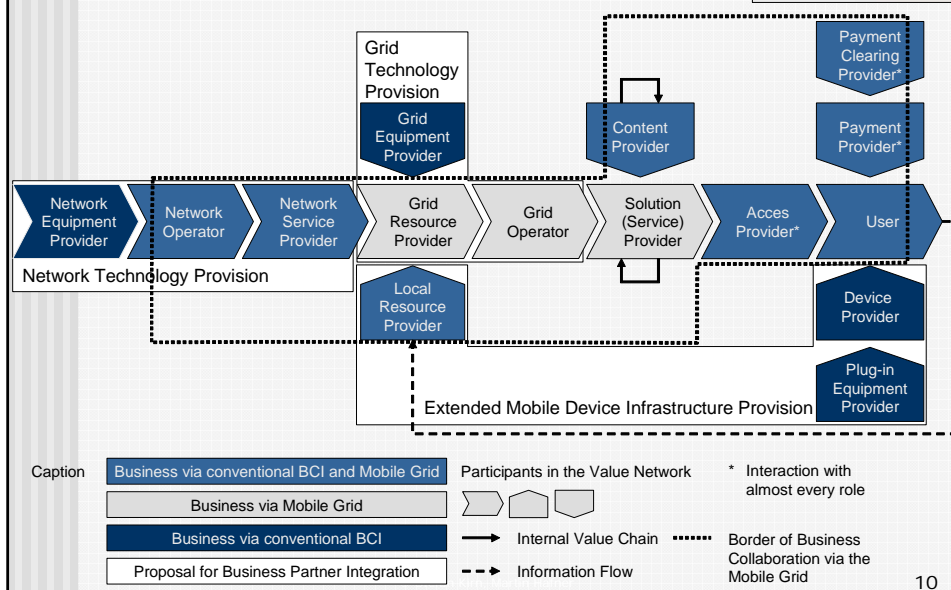
Transaction cost theory and agency theory together predict that

- the higher the level of uncertainty surrounding the business context
- the greater the information asymmetry between resource exchangers,
- the greater the specificity of investment required for the economic activity in question,
- the more difficult it is to relate the marginal contribution of different resources to the final value, and
- the greater the conflict of interest between resource exchangers,
- the higher the likelihood of an integrated or consolidated value chain. That is, the more likely it will be that a greater proportion of the value adding-activities will be organized within a few firms.

[Venkataraman, Bodily 2003]

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The "Serialized" Akogrimo Value Network



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Identification of the Right Business Model

- Limited knowledge on the future
- Product development of telecommunication providers to be considered as industry secrets
- No protection by law for business model innovations



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Consideration of strategic decisions for Mobile Grid value network participants

2

Clear customer orientation

3

Assurance of flexibility and business model reconfigurability by clear business service orientation


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Continuous validity of supply chain mechanisms

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Success Factors in Mobile Grid Business




How to succeed in Mobile Grid Business?

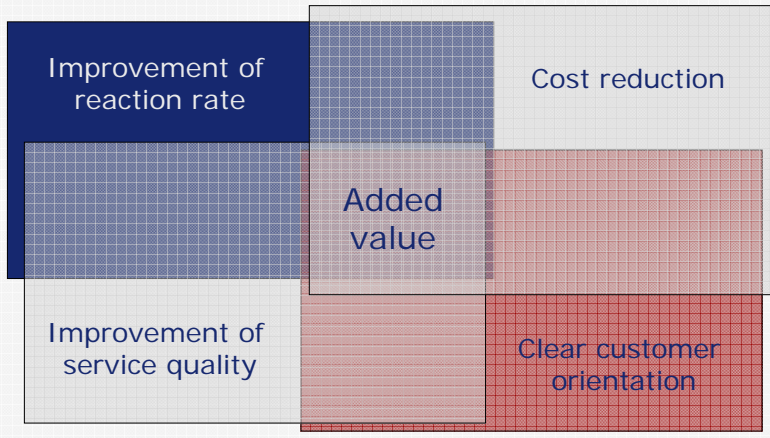
- Push away existing structures that are providing accordant services today, or
- Build new structures which will develop new business segments that can not be accessed in a different way.
- More detailed description given by Callon in the context of the competitive advantage of IT. Accordingly, positive contribution can come from
 - **Efficiency** measured by productivity (doing things better);
 - **Effectiveness** (doing better things including: what an organisation could never do before);
 - **Competitive advantage** (doing better and new things for the customer)

[Callon 1995]
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Strategic Options for Potential Akogrimo Business Participants





[Schwarze, Schwarze 2001, p. 50]
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Consideration of Strategic Decisions



Summarized from Callon and according to Porter, there are two major strategies for enterprises of the internet economy and the information society respectively:

Cost Leadership Strategy

providing services at very low prices.

Consequently, standardization and high-performance technologies are necessary

Differentiation Strategy

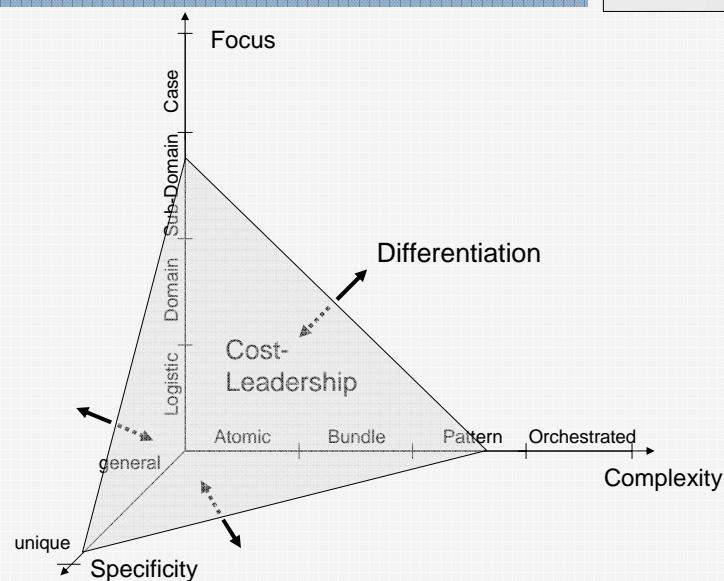
- Research and development (related to products and technologies),
- Marketing mix,
- Production,
- Logistic

[Porter 1980]

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Proposed Evaluation Criteria for Strategic Decisions



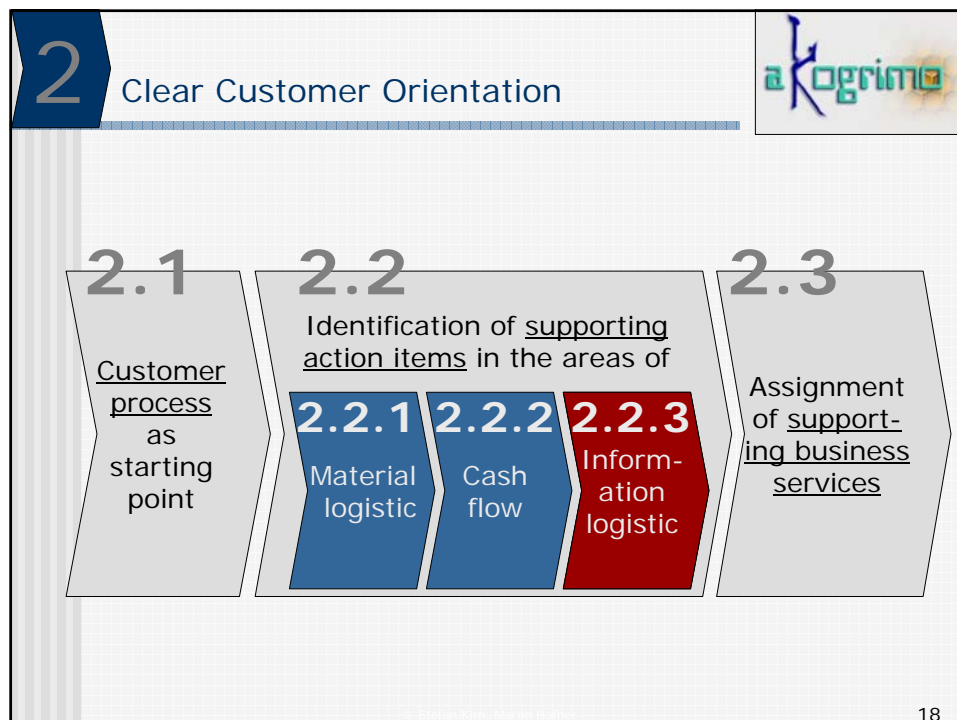
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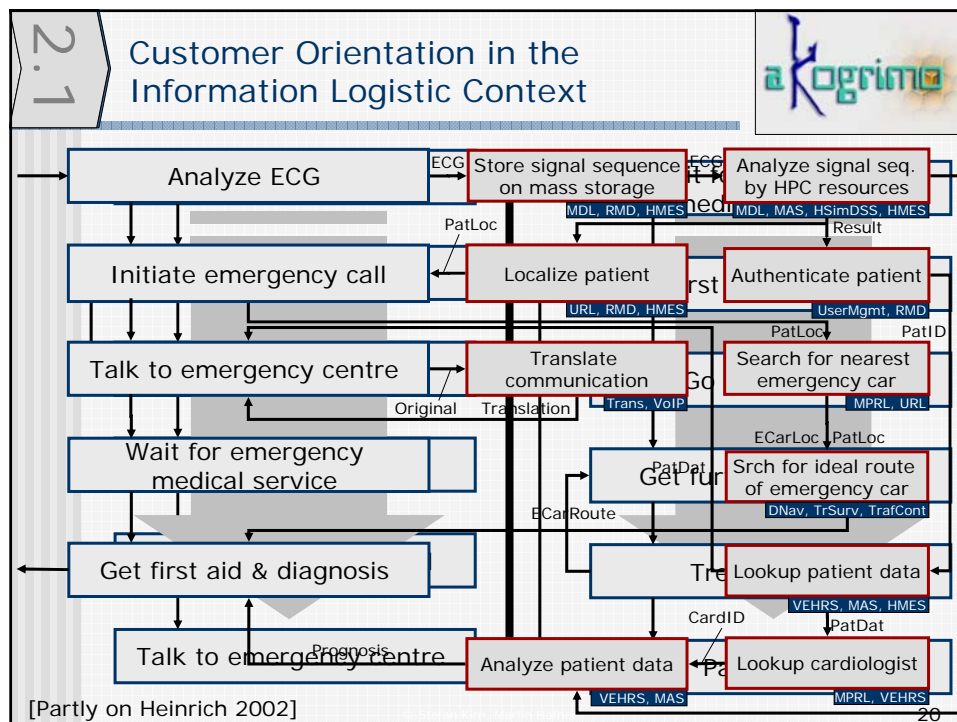
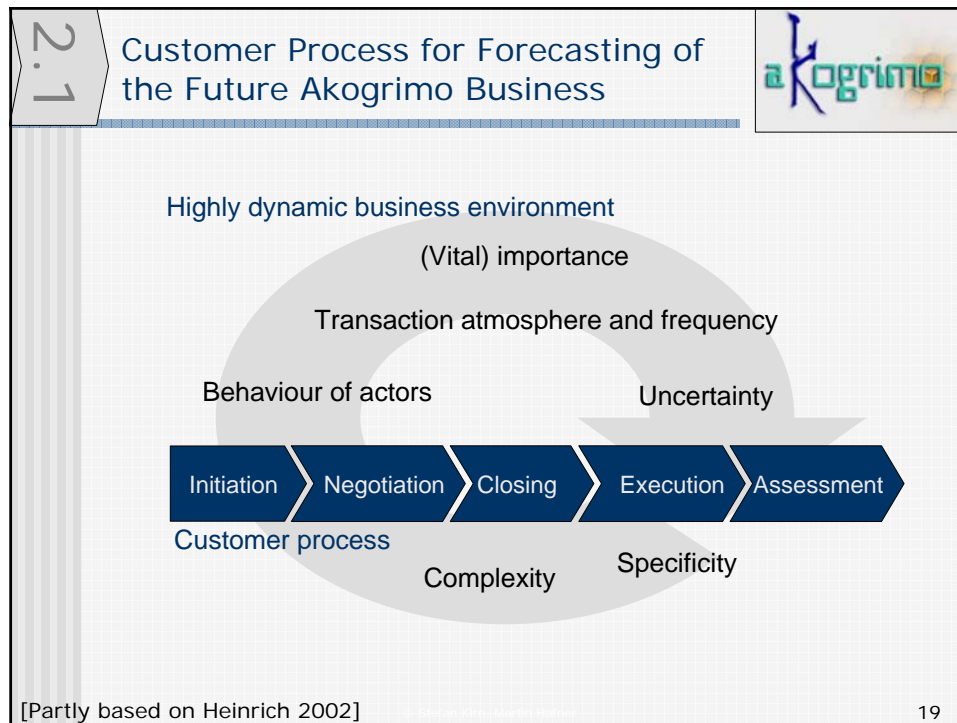
1 Akogrimo Partners' Opinion of the Strategy for Akogrimo Business Roles



Participant	Cost Leadership		Almost Equality		Differentiation	
	Freq	Dec	Freq	Dec	Freq	Dec
Network Equipment Provider	6	3.00				
Network Operator	6	3.17				
Network Service Provider	4	3.00	2	2.50	1	2.00
Grid Equipment Provider	6	2.83				
Grid Software Provider	3	2.33	3	3.00	2	3.00
Grid Solution Provider	2	1.50	1	3.00	5	3.00
Grid Resource Provider	3	2.33	2	3.50	1	2.00
Grid Operator (in a broader sense)	1	3.00			5	2.80
Grid Service Aggregator			1	4.00	5	3.20
Grid Operator (in a tighter sense)	3	3.00	1	3.00	1	3.00
Device Provider	3	2.67	2	3.00	1	3.00
Plug-in Equipment Provider	1	2.00	1	3.00	4	3.00
Local Resource Provider	2	2.50	1	3.00	3	2.33
Solution Provider			2	3.00	7	3.43
Content Provider	2	2.50	1	3.00	4	2.75
Content Creator			1	3.00	6	2.33
Content Aggregator			3	2.33	4	3.00
Content Distributor	3	3.00	1	2.00	3	2.67
Access Provider	5	3.20	2	3.00		
Payment Provider	7	3.00				
Payment Clearing Provider	7	3.00				


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Business Service Orientation (1)




Area	Criteria	Description
Business Service Basics	Business Service name	Virtual emergency health record service
	Short Business Service description	Collect available patient's records and determine emergency-relevant information
	Business Service goal(s)	Provide on-demand situation-specific patient's records
	Business Service charact.	Execution
Business Service Details	Business Service provider	Grid resource provider
		Supplier: patient record storage provider
	Business Service receiver	Logistics service provider
		LSP: Heart attack specialist, hospital
	Required resources	Communications infrastruct., mobile devices
	Min. service level	Available patient's records are provided
	Quality service level	Patient's records are presented by level of relevance

[Derived from Bieser 2004]
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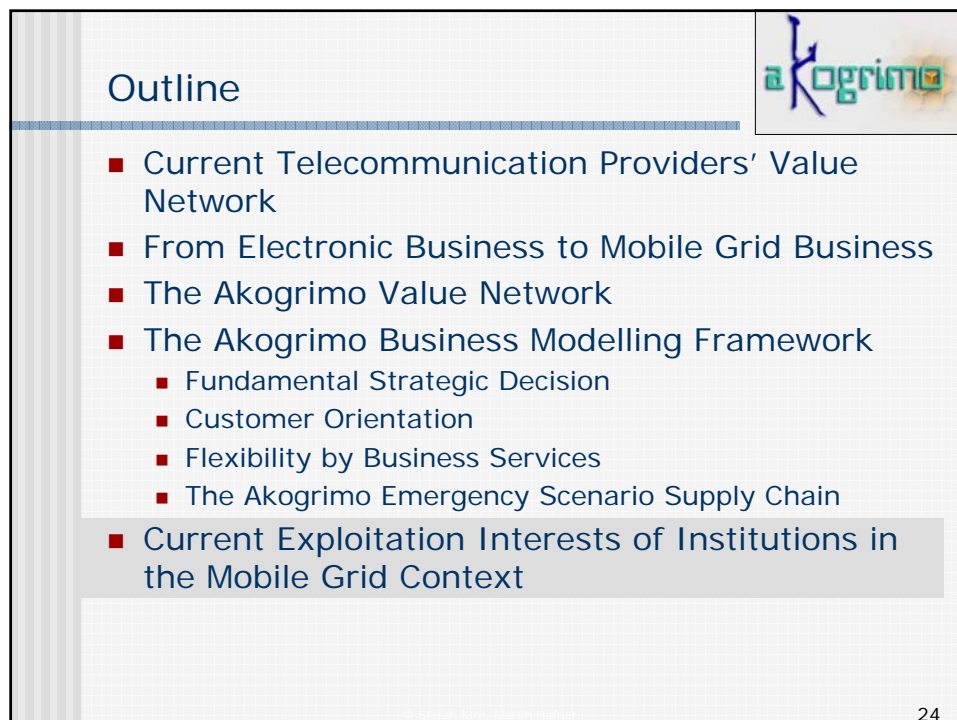
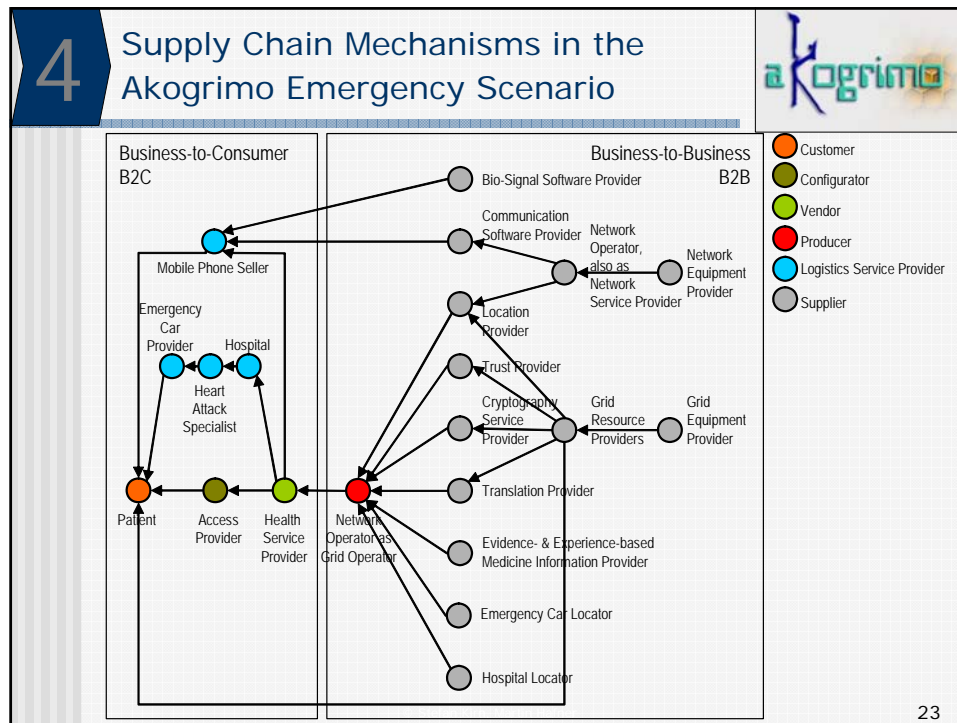
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Business Service Orientation (2)



Area	Criteria	Description
Business Service Subord	Business Service Interfaces	
	Further Business Service Dependencies	User Management/Profile Management Service, Virtual Emergency Environment
	Critical Success Factors	Determination of relevance
Value Chain Details	Supply Chain Coverage	Configurator, Vendor, Producer, Supplier, Logistics Service Provider
	Cost Model	Transaction-fee
	Value Chain Earnings	Logistics Service Provider

[Derived from Bieser 2004]
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Particular Role of Telecommunication Companies in Future Value Networks

Participant Group		Network Technology				Grid Technology				Extended Mobile Dev. Infrastruct.				Payment Prov.				
Telecom Provider	Exploitation Item	Concept/Teaching	Network Equipment	Network Operator	Network Service	Network Equipment	Grid Resource	Grid Software	Grid Solution	Grid Operator	Content	Solution	Access	Plug-In Equipment	Device	Local Resource	Payment Clearing	Payment
Telecom Prov. 1	Exploitation Item 1.1																	
	Exploitation Item 1.2																	
	Exploitation Item 1.3																	
	Exploitation Item 1.4																	
	Exploitation Item 1.5																	
	Exploitation Item 1.6																	
Telecom Prov. 2	Exploitation Item 2.1																	
	Exploitation Item 2.2																	
	Exploitation Item 2.3																	
	Exploitation Item 2.4																	
	Exploitation Item 2.5																	
	Exploitation Item 2.6																	
	Exploitation Item 2.7																	
	Exploitation Item 2.8																	
	Exploitation Item 2.9																	
	Exploitation Item 2.10																	

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Akogrimo Partners' Roles in Their Own Exploitation Plans

				Network Technology Provision				Grid Technology Provision				Extended Mobile Device Infrastructure Provision				Payment Provision					
Type	Partner	# Expt	Concept/Teaching	Network Equipment	Network Operator	Network Service	Network Equipment	Grid Resource	Grid Software	Grid Solution	Grid Operator	Content	Solution	Access	Plug-in Equipment	Device	Local Resource	Payment Clearing	Payment	Maximum	Average
Research Institutes	RI-01	3	100%							100%		67%	100%							100%	92%
	RI-02	4	100%						25%			25%	25%							100%	44%
	RI-03	2	100%						100%											100%	100%
	RI-04	5	100%									20%								100%	60%
	RI-05	1	100%																	100%	100%
	RI-06	3	67%									33%	33%							67%	44%
	RI-07	4	25%		75%	50%		50%	25%	25%	75%		25%	50%			50%	50%		75%	46%
Companies	CO-01	5	20%							40%			80%							80%	45%
	CO-02	3	67%					33%	33%			33%								67%	42%
	CO-03	4	100%						100%	100%	25%	25%	100%							100%	75%
	CO-04	6			67%	50%		50%		50%	83%		50%				33%	50%	50%	83%	54%
	CO-05	10	60%		70%	70%				60%		70%	70%	70%	50%	40%		60%	60%	70%	62%
Max.		10	100%		75%	70%		50%	100%	100%	83%	70%	100%	70%	50%	40%	50%	60%	60%		
Avg.		4	76%		71%	57%		44%	54%	63%	61%	39%	60%	60%	50%	40%	41%	53%	55%		

Caption

	> 90%
	> 80%
	> 70%
	> 60%
	> 50%

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Caption

- > 90%
- > 80%
- > 70%
- > 60%
- > 50%

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Summary



- Current Telecommunication Providers' Value Networks are dynamically changing.
- Mobile Grid Business is consequently evolving from Electronic Business.
- The Akogrimo Value Network is challenged by considerable uncertainties.
- The Akogrimo Business Modelling Framework supports strategic decision-making, customer-orientation, flexibility, and process logic.
- Institutions in the Mobile Grid Context identify many exploitation opportunities

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Thank you!



Dr. Martin Hafner
Prof. Dr. Stefan Kirn
University of Hohenheim
Information Systems II (510.O)
Schwerzstrasse 35
D-70599 Stuttgart, GERMANY
{martin.hafner | kirn}@uni-hohenheim.de

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