

CLIENTS DRIVING INNOVATION



**ON THE WAY TOWARDS SUSTAINABLE KNOWLEDGE SOCIETY
– THE EUROPEAN APPROACH**

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VTT's Australian Collaboration

- International Research Network (ICALL)
- Performance Based Building (EC PeBBU & Aus-PeBBu)
- Joint ICT Briefing Tool Development (PRISM / EcoProp)
- International IAI and IMS work
- Long term collaboration between individual experts



INTERNATIONAL INNOVATION

INFORMATION SOCIETY ROADMAPS

- Intelligent and Sustainable Cities
- ICT in Construction
- Virtual Organisations and Breeding Environments
- Corporate Responsibility and Stakeholder Reporting

INNOVATIVE COMMUNITIES

ENABLING ENVIRONMENTS FOR MOBILE CITIZENS

SYSTEMIC INNOVATION IN AN AMBIENT ENVIRONMENT

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INTERNATIONAL INNOVATION

INCREMENTAL IMPROVEMENT OR RADICAL CHANGE?

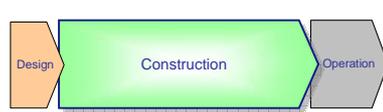
- who will manage our projects in the future?
- how much office space do we need in the future?
- which will be the future lifestyles?
- what is our global vision?

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CONSTRUCTION INNOVATION



- materials
- schedules
- costs

*technologies
products (goods + services)
processes*

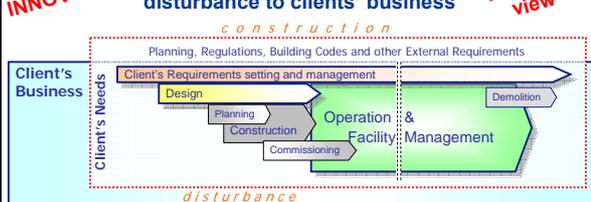
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WHAT IS CONSTRUCTION?

INNOVATIONS? **disturbance to clients' business** *different points of view*



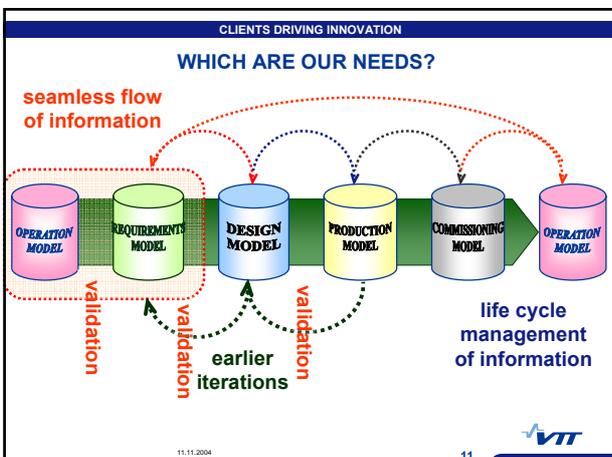
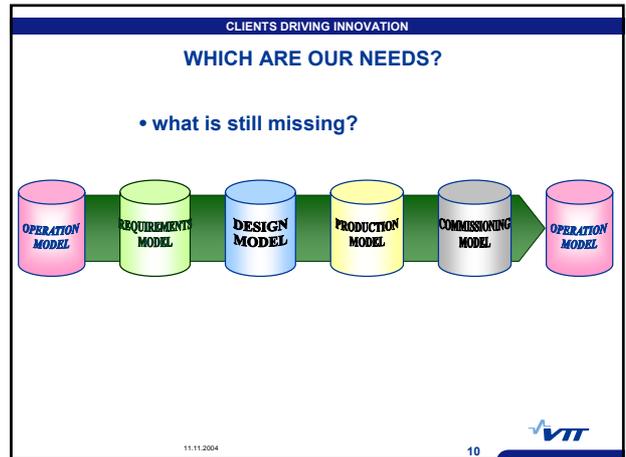
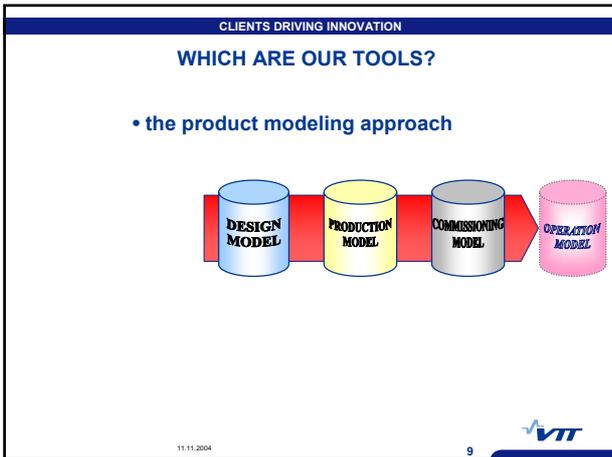
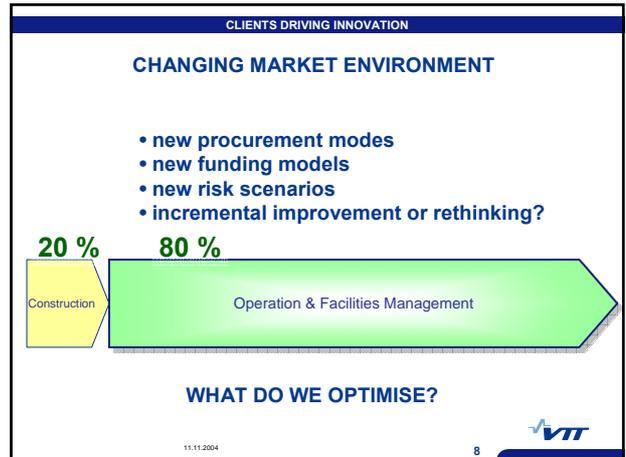
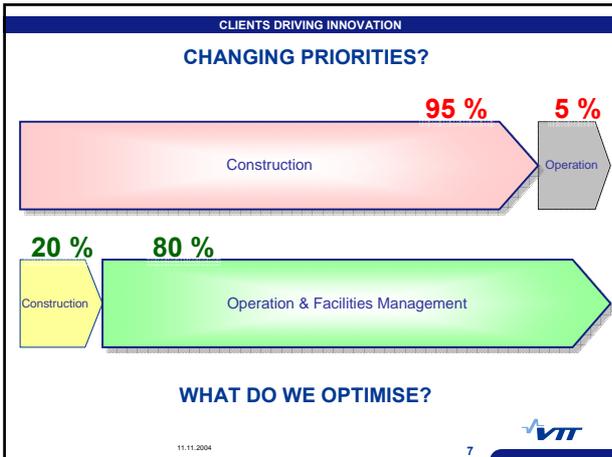
WHAT'S THE VALUE OF THE CONSTRUCTED ASSET?

- whole life performance
- whole life costs and profit
- environmental pressure
- social impacts

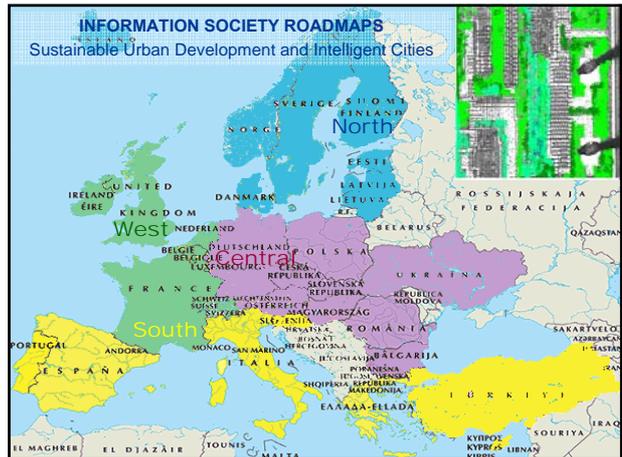
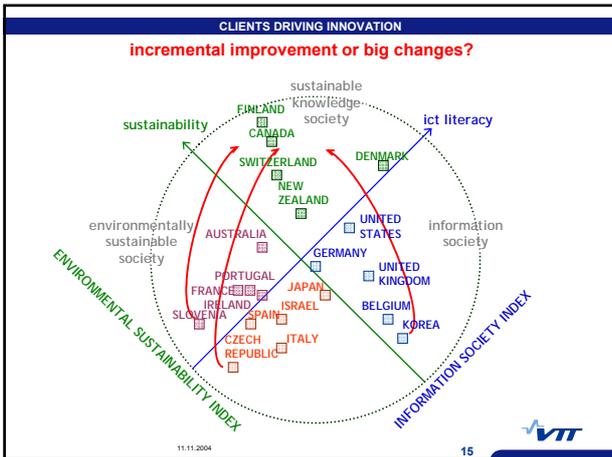
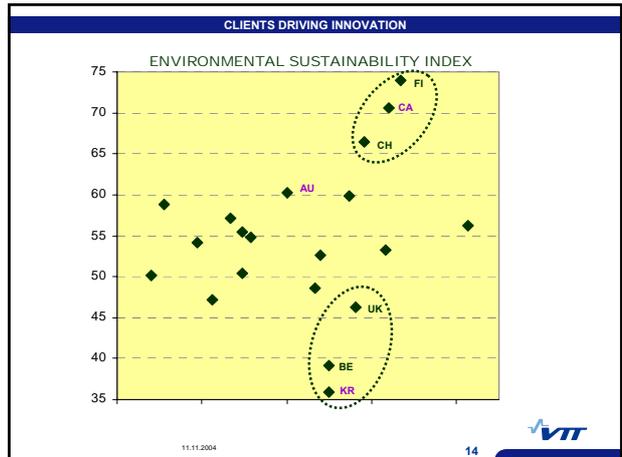
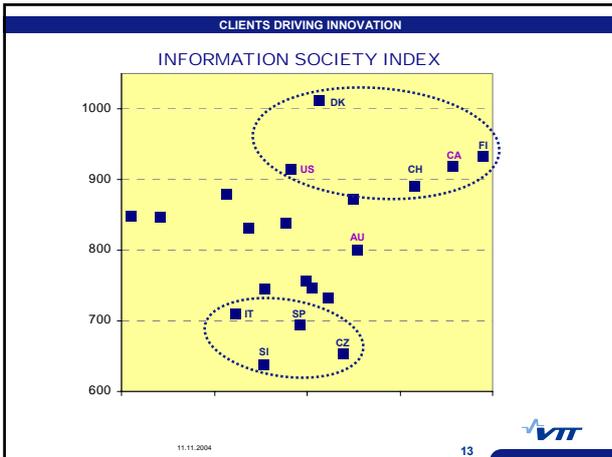
*systemic innovation
social innovations*

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- CLIENTS DRIVING INNOVATION
- ### INTERNATIONAL INNOVATION CASES
- Drawing maps*
- INFORMATION SOCIETY ROADMAPS
 - Sustainability and Intelligent Cities
 - ICT in Construction
 - Virtual Organisations and Breeding Environments
 - Corporate Responsibility and Stakeholder Reporting
 - INNOVATIVE COMMUNITIES
 - ENABLING ENVIRONMENTS FOR MOBILE CITIZENS
 - SYSTEMIC INNOVATION IN AN AMBIENT ENVIRONMENT
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Central Eastern conclusions

- barriers**
 - the transformation process
 - insufficient resources lead to restricted access
 - deficits of ICT knowledge and skills
 - lack of motivation using new techniques
 - social barriers, need of face-to-face contacts
 - the lack of legal regulations
- enablers**
 - high accessibility of ICT needs by low cost equipment
 - ICT knowledge by ICT training for city administration
 - ICT development based on local skills and knowledge
- Intercity Scenario votes**
 - alternative scenario 6
 - virtual city 3,25
 - environment city 2,75
 - cultural city 2,15
 - e-democracy city 0,25
 - post-catastrophe 0

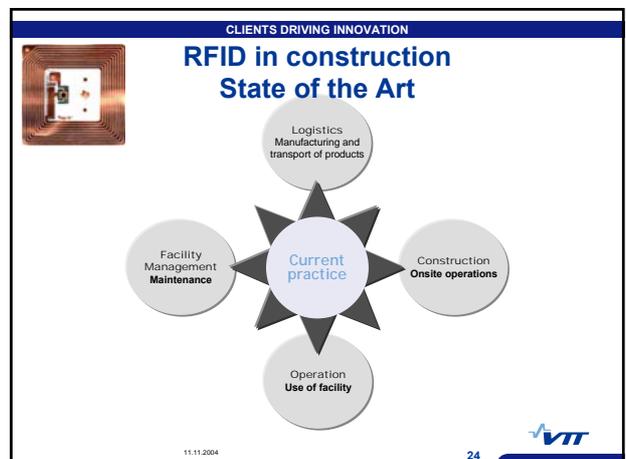
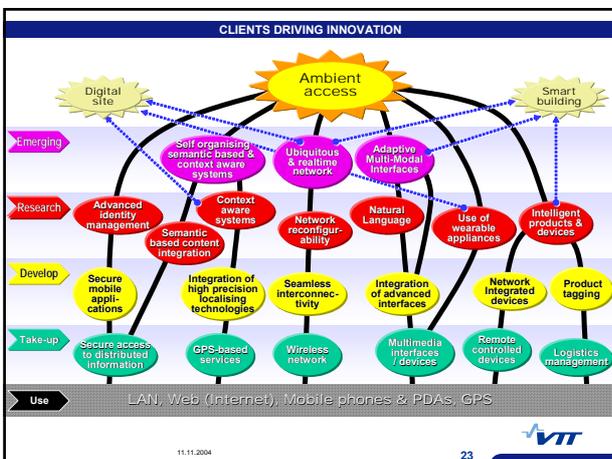
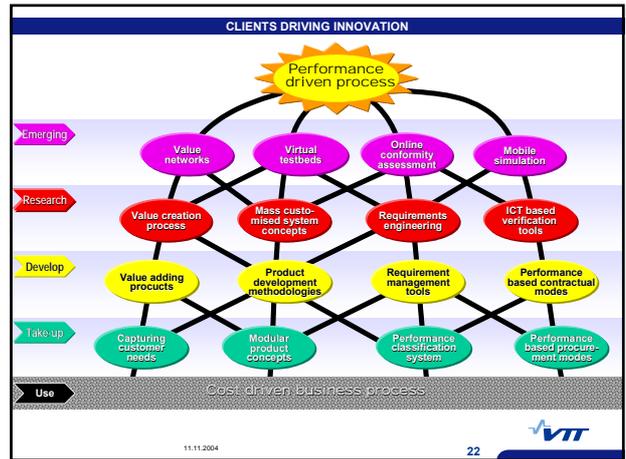
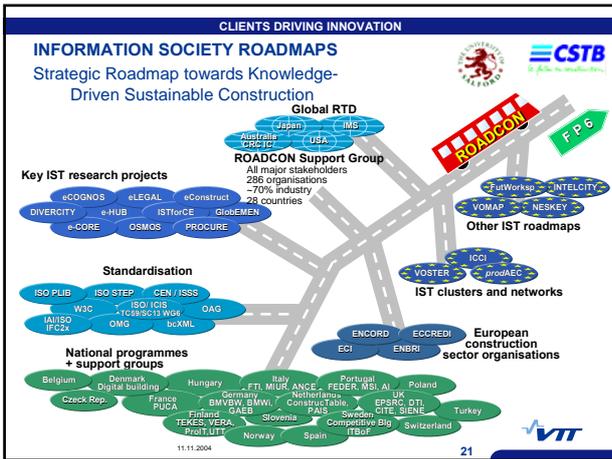
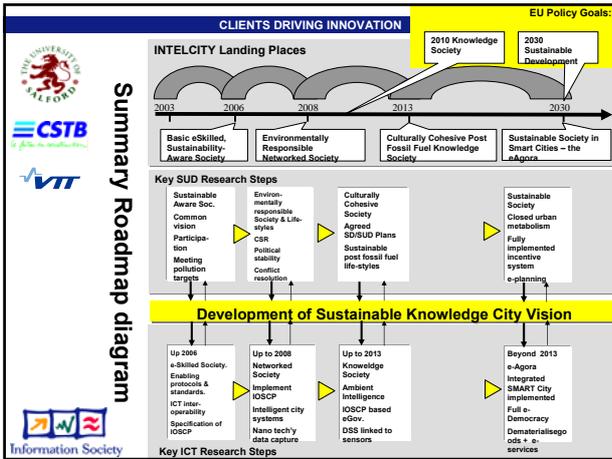
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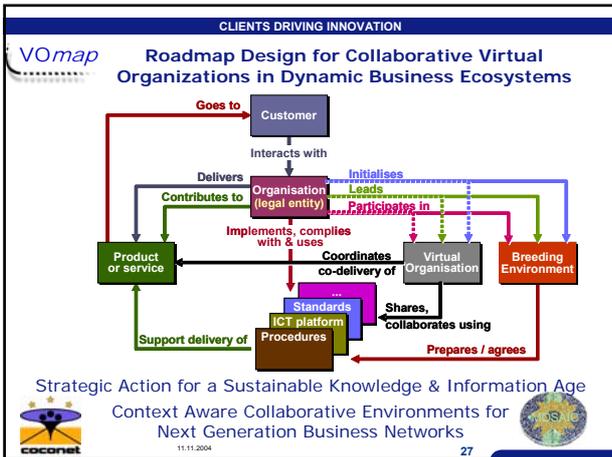
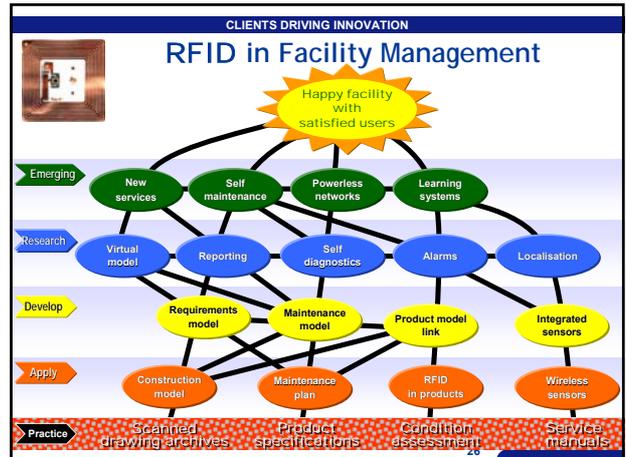
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Central Eastern Alternative Scenarios

- Patchwork City**
 - segregated and differentiated lifestyles and city districts
 - specific areas in cities will develop differently
 - disperse urban structures
 - cities are different and specific scenarios are more likely to come to pass in one city than in another city
- Trend City**
 - no dramatic changes; colourful, allowing atmosphere
 - ICT will not change our city, but
 - ICT prevents the city from collapsing
 - we might depend on ICT
 - modern society needs complex support systems
- Overload City**
 - over-complexity leads to less participation
 - the citizens feel e-violence and e-power, that leads to less active citizens discouraged to get involved in decision making processes
 - coercion

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Achieving a Sustainable Society

The threshold for achieving a sustainable society is a sustainable economy that generates both tangible and Intangible wealth.

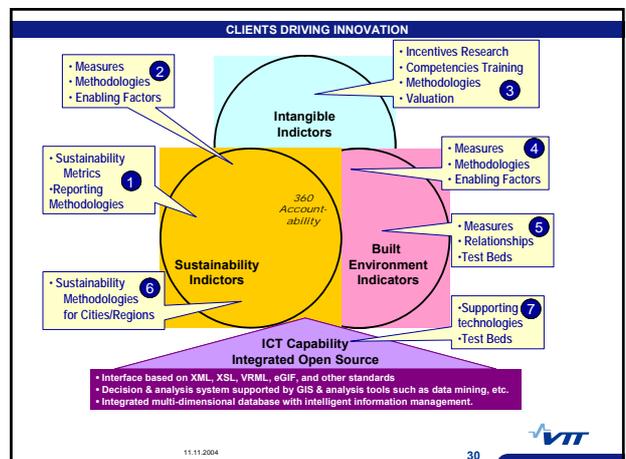
Sustainable society means

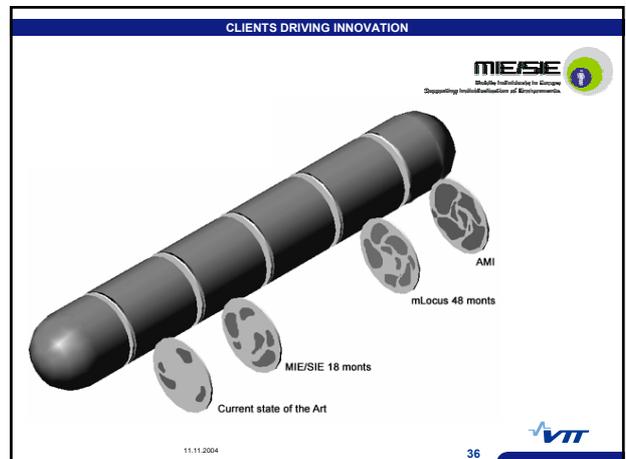
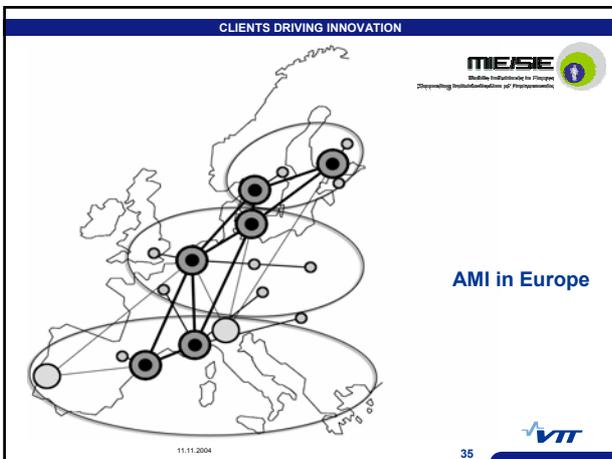
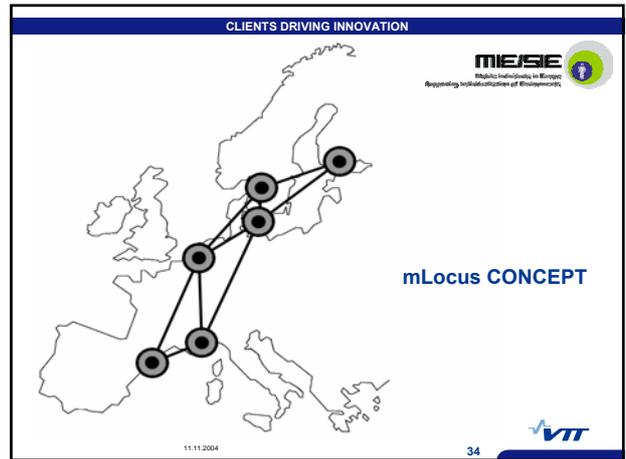
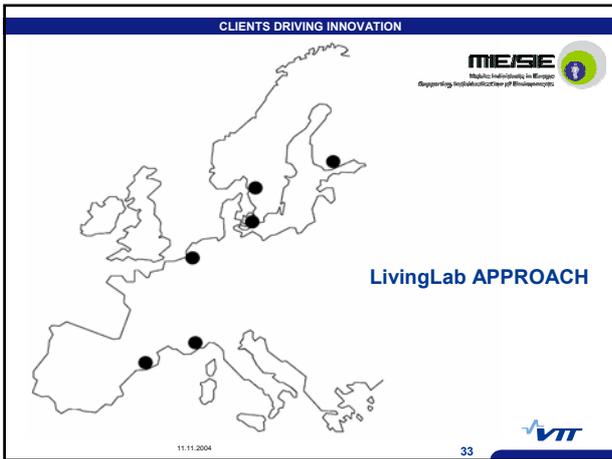
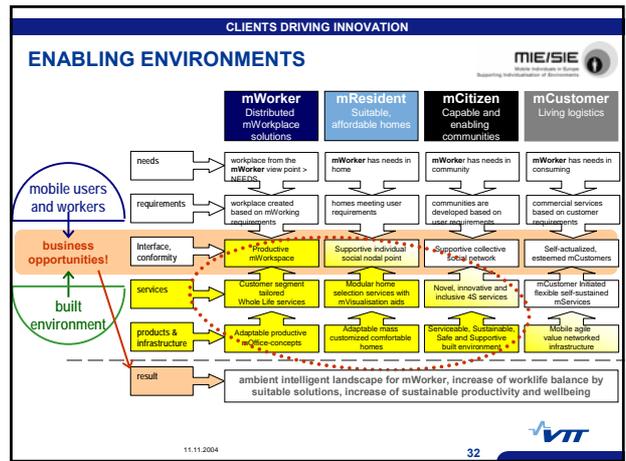
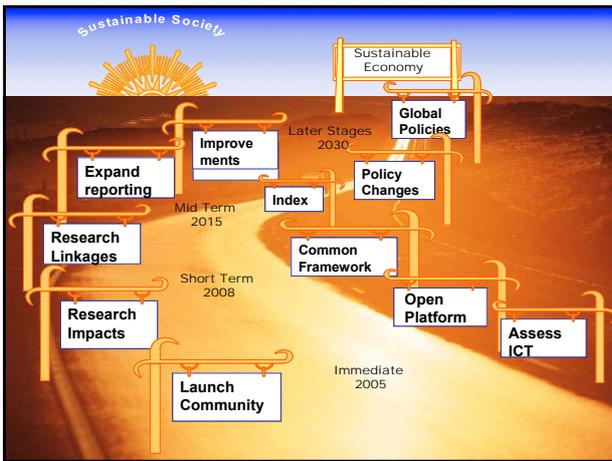
- environmental sustainability
- social sustainability
- economic sustainability

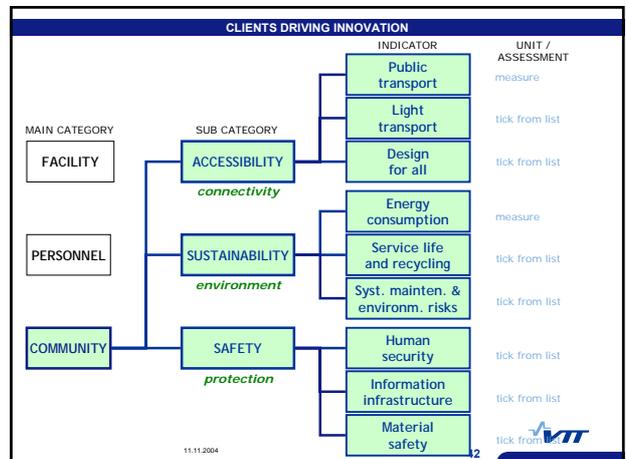
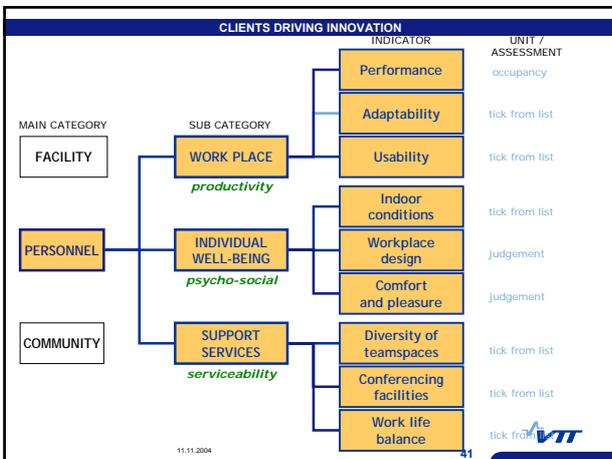
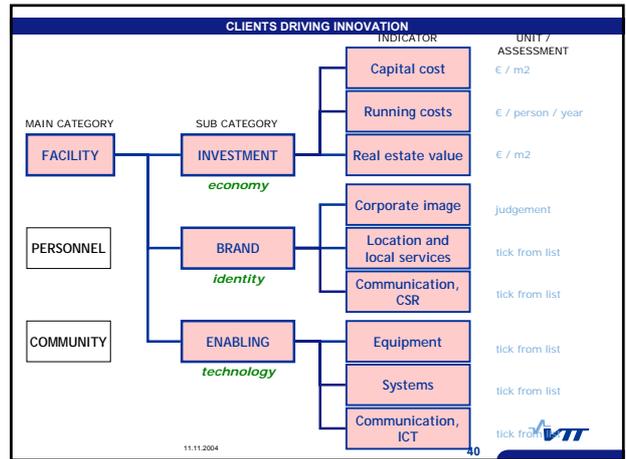
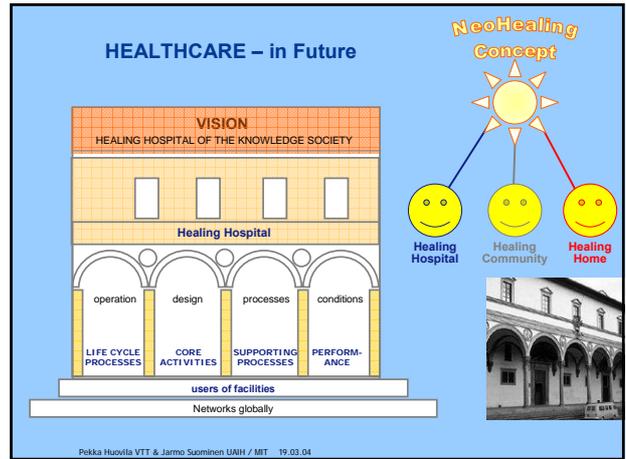
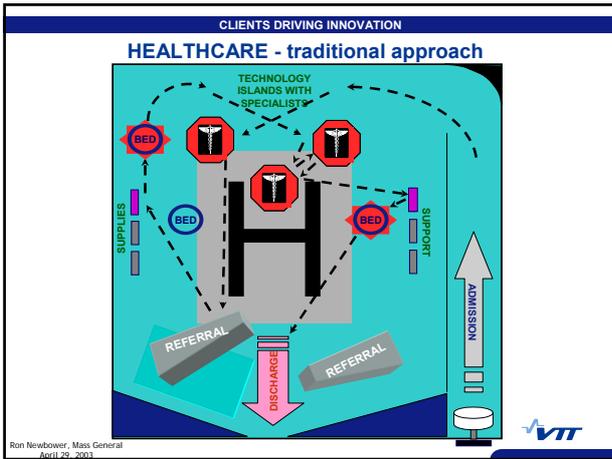
Such an economy requires a feedback system that

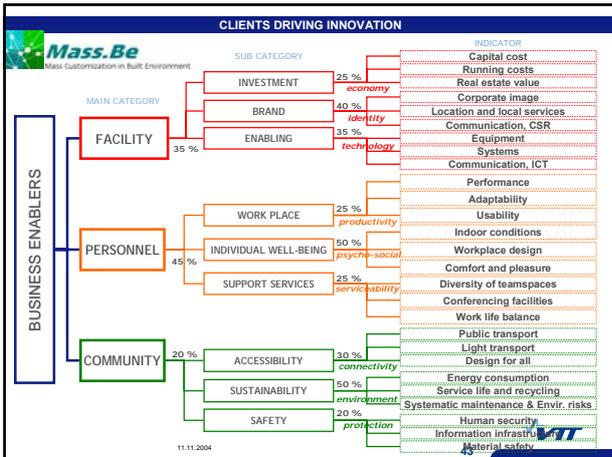
- Is transparent
- Is widely understood, supported and used
- Is efficient (leverages ICT capability)
- Accepts input and provides data 360 degrees

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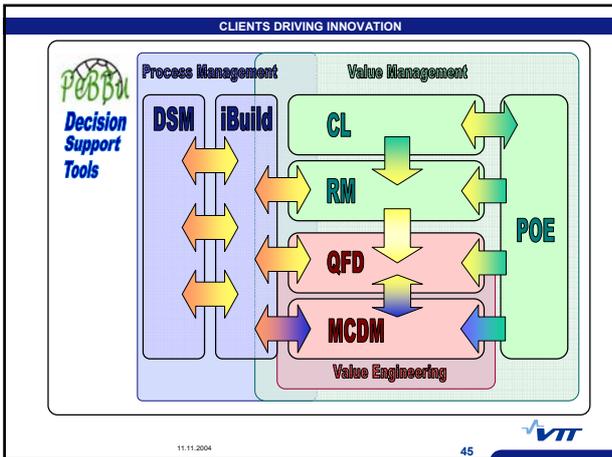
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PeBBu

Decision Support Tools

	Briefing	Design	Delivery	Operation
Value Management				
Post Occupancy Evaluation (POE)		2	3	1
Check Lists (CL)		2	1	3
Requirements Management (RM)	1	2	3	
Quality Function Deployment (QFD)		1	2	3
Multi Criteria Decision Making (MCDM)	1		3	2
Design Structure Matrix (DSM)		2	1	3
iBuild	3	1	2	
				PERFORMANCE

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INTERNATIONAL INNOVATION

CHANGING MARKET ENVIRONMENT

- new variables?
- new priorities?

SUSTAINABLE KNOWLEDGE SOCIETY VISION

- different approaches (Roadmaps)
- mobile individuals with varying user profiles

INNOVATIVE OPENINGS

- Living Laboratories
- Future healthcare
- Enabling environments

→ systemic and social innovations

→ win-win-win concepts

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