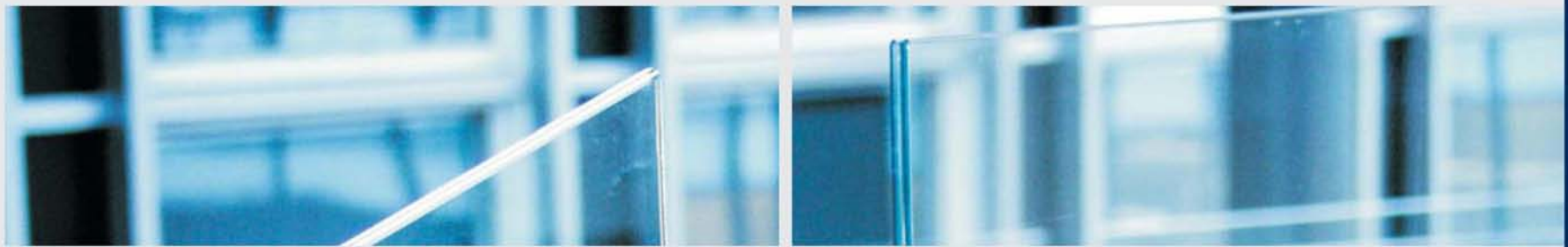


# Changing Identities – Changing Designs: Building up a Large Foresight Program in the Field of Cultural Evolution Research

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# THE CID RESEARCH AGENDA

- Actual R&D needs among stakeholders
- Emerging issues
- Innovation-foresight orientation
- Participatory processes with change agents
- Seeking big ideas
- Active use of modern foresight methods and methodologies
- Changing identities of humans in different life situations
- Adaptation to societal changes in designs and models

# CID Research Group & Lab

CID Research Group & Lab is a transdisciplinary group, which operates under Finland Futures Research Centre. The CID derives from *Changing Identities*, but it can also be attached to the words *Changing Design*. The expertise of the group is based on a wide, international and transdisciplinary networks. The CID Research Group combines transdisciplinary research with exploratory activities. The group focuses on developing expertise in design, architecture, communications, marketing, art, media and the relevant technologies. The CID Research Group is *focusing* its research on new media: social media, interactive media, hybrid media, cross-competences and transdisciplinarity analyses, on creativity and innovative environments, accelerating intelligence, and local special issues.

# EMERGENT SCOPES OF THE CID

*The Scoping of the CID Research Group is having the following perspectives... .*

- Holistic understanding and cross-competence development,
- Critical analysis,
- Conceptual understanding and R&D,
- Experimental projects,
- Living labs, human testbeds,
- General context: creative economy, creative industries,
- Some key notions and directions (economy): creative economy,
- Experience economy, entertainment economy, design economy, story
- Economy, image economy, participatory economy,
- Some key notions and directions (society): information society, media
- Society, techno society, biosociety, risk society,
- Globalization - its consequences (sustainable development, global
- Governance, social responsibility, corporate citizenship, etc.),
- Global and local integrated = glocal (new regionalism),
- Global signs of change; trends and weak signals,
- Speed: accelerating rhythm of life and economy,

# FUTURES OF NEW MEDIA

***New media* research field includes various special topics of research including the following topics:**

- Participatory media (blogs, wikis, RSS, tagging, social bookmarking, media sharing [music, photo, video], mashups, podcasts, participatory video projects, videoblogs),
- Virtual societies, virtual lifestyles,
- New trends and developments in marketing: viral & buzz marketing, long tail, news sources,
- Wellness/well-being technologies, therapeutic well-being design, and socio-economic impacts of ubiquitous (r)evolution.

# A CID RESEARCH CHALLENGE:

## FUTURES OF REAL LIFE AND VIRTUAL LIFE INTERACTION



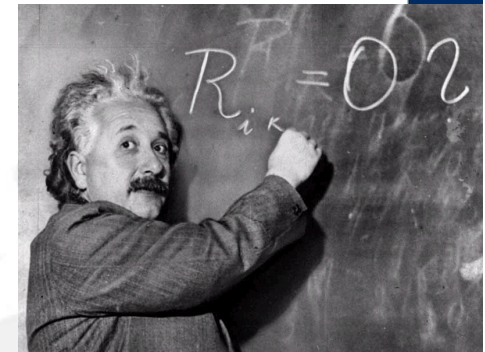
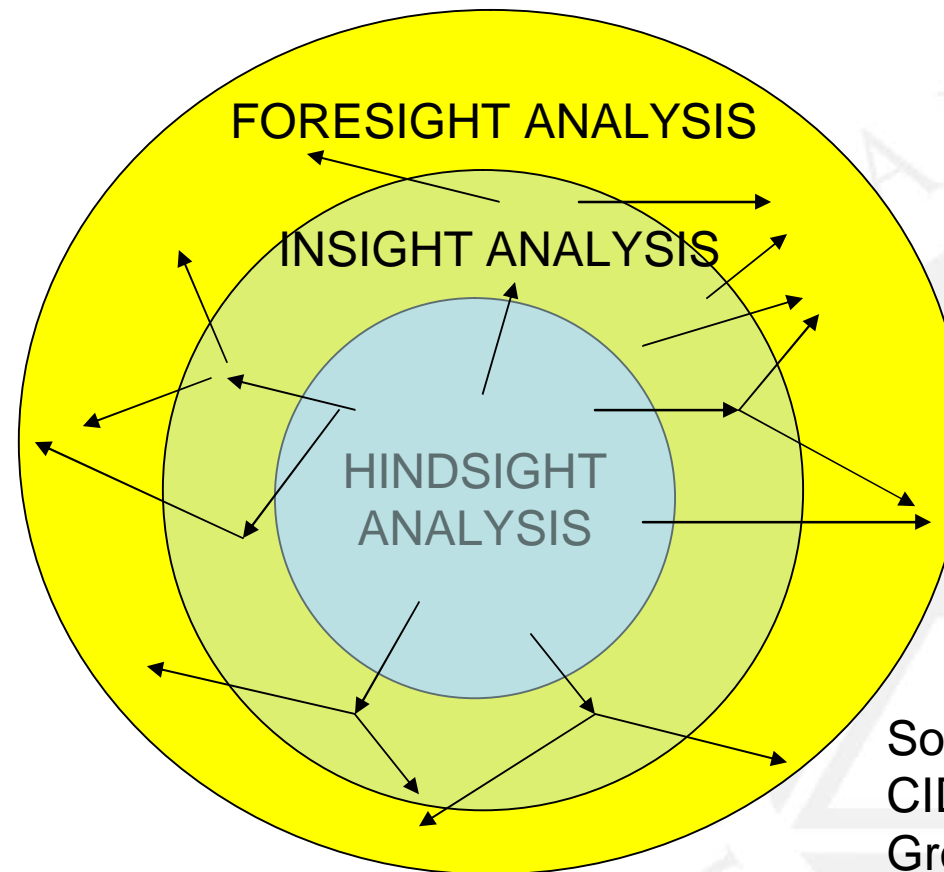
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# COMPETENCE FUSION ANALYSIS

*Cross-competences and transdisciplinarity* topics of the CID Research Group are the following ones:

- New requirements for knowledge and understanding,
- Cultural changes of various competence fields,
- Birth of new competence areas,
- Cross-competence training and consulting,
- Fusion of competencies, and
- Integrated knowledge management

# A CID CHALLENGE: COMPETENCES ANALYSIS IN TIME



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Source:  
CID Evolution Research  
Group & Lab

# CREATING CONDITIONS FOR CREATIVITY

## *Creativity and innovative environments* topics of the CID Research

Group are the following ones:

- Creativity and serendipity,
- Innovation systems/environments & branding (design, architecture, communication, marketing, art and media),
- New innovation process models,
- Fusion of technology waves and innovations,
- Participatory innovation environment (24/7 principle),
- 24 hour DesignLab (online design community & online research
- Community, real time problem solving, brainstorming lab),
- Social and lifestyle companies,
- Cross-competence and education, and
- New viewpoints, ways and means for education (24-hour LearningLab).

# A CID R&D CHALLENGE:

## FUTURES OF BRAINSTORMING



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# ACCELERATING INTELLIGENCE

*Accelerating intelligence* research field is focused on the following sub-themes:

- Future trends of computing: nanotechnology, quantum computing, grid computing, AI (artificial intelligence), electronic paper, RSS, personal info agents, etc.,
- From connecting people to connecting everything (ubiquitous),
- Ambience design, ambient intelligence,
- Ubiquitous (r)evolution,
- Smart materials and spaces,
- Smart architecture and smart advertising,
- Wearable computing (WearComp), wearable intelligence,
- Participatory branding (online, do your own brand),
- Emergence of innovation media,
- Co-operation between design and technology (design and science), and
- Accelerating intelligence and education.

# A CID CHALLENGE:

## A SOCIO-ECONOMIC CONSEQUENCES OF UBIQUITOUS REVOLUTION



Songdo City

# LOCALITIES INTEREST

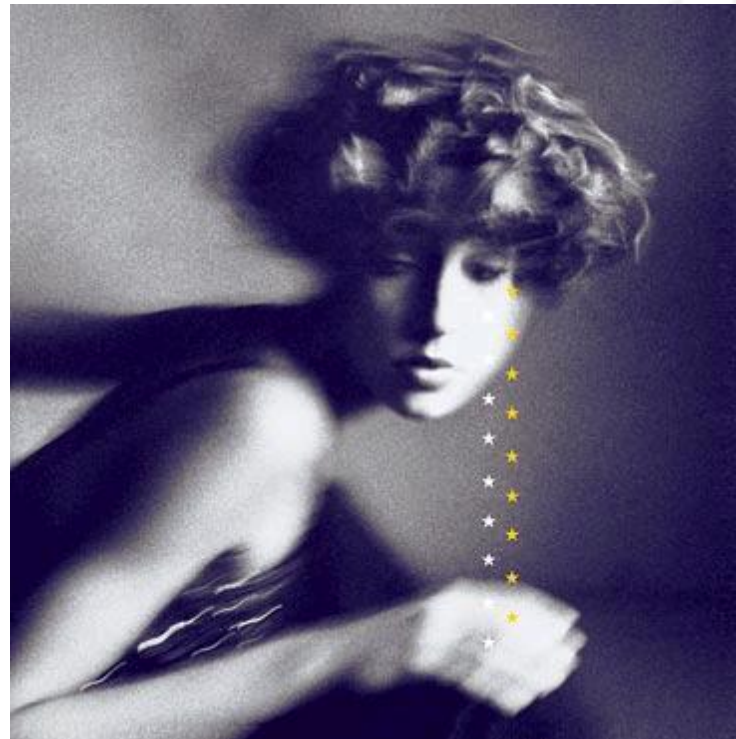
Local dimensions research field is focused on the following sub-themes:

- Locality as brand - participatory models (project)
- Cross-competence training & development (design, architecture, communication, marketing, art and media mixed with other locality development competence areas),
- Sustainable information society and civic participation, and
- Challenges of creative areas (city, town, region, etc.).

# A CID CHALLENGE:

SMART AND FAIR GLOBALISATION

FUTURES OF GLOBAL EMOTION  
ECONOMY AND  
EMOTIONAL COMMUNICATION AND  
BRANDING



# Critical changes in our times...



# GLOBAL TRENDS AND EVOLUTIONARY CHANGES

- Pyramid organization
  - Hierachy
  - Tight control
  - Work place clearly defined
  - Work time fixed
  - Well-defined fixed work tasks
  - Solo work
  - Individual responsibilities
  - Permanent jobs
  - Centralized production technology
  - Risk taking individually
  - Different isolated technologies
- 
- Network organization
  - Alliances
  - Open communication
  - Workplaces distributed
  - Work time flexible
  - Free and open work tasks
  - Team work
  - Team responsibility
  - Project jobs and vacancies
  - Outsourcing, distributed technology solutions
  - Risk taking in teams and alliances
  - Converging technologies

# INTERESTING TECHNOLOGY TRENDS

- Quantum information processing
- Global computing
- Emerging nano-electronics
- Bio-inspired intelligent information systems

# CONVERGING TECHNOLOGIES

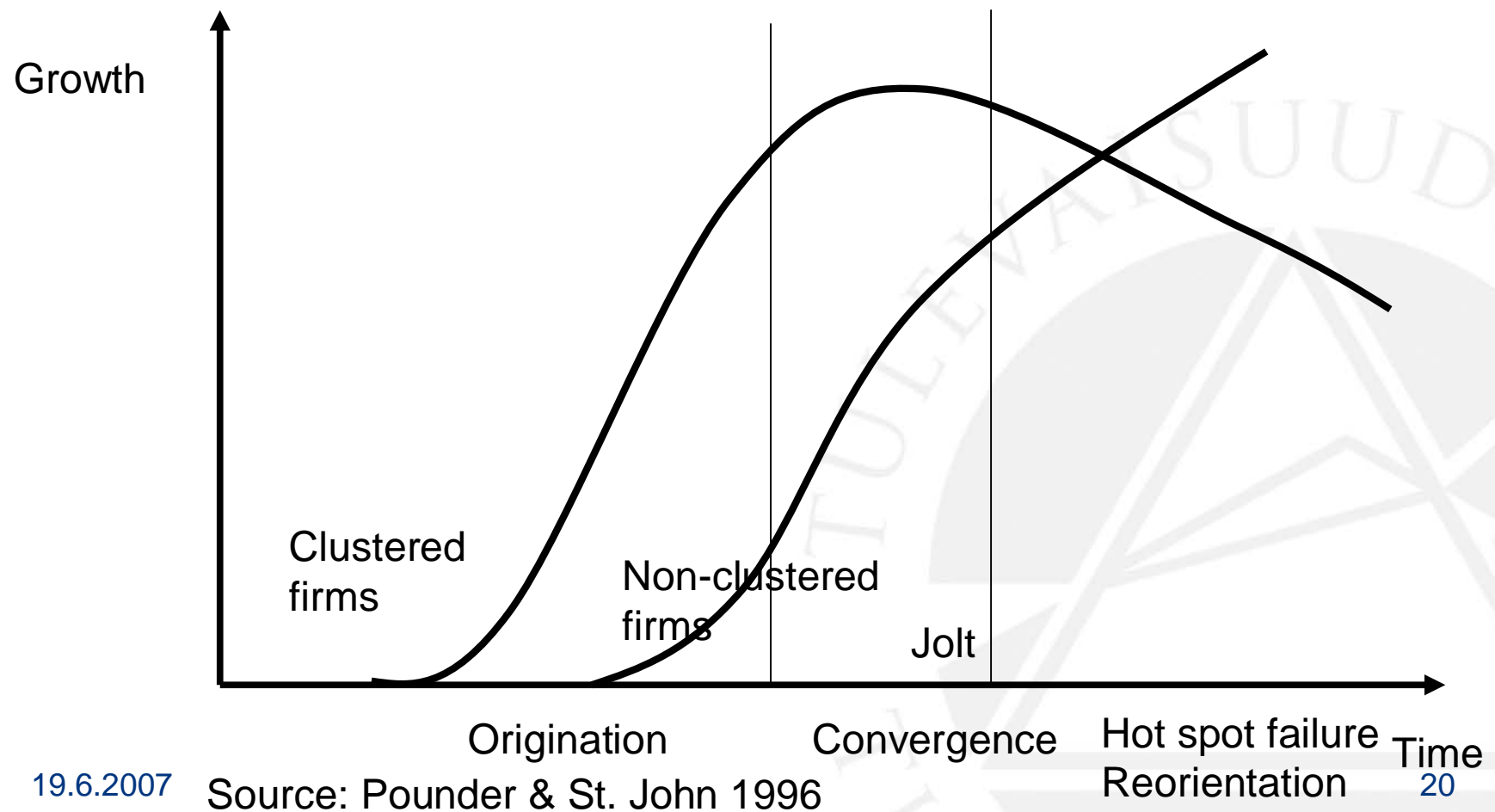
- Nanotechnology, Biotechnology, Information technology, Cognitive Science (**NBIC-technology** emerging)?
- Produces probably new kind of societies and cultures; current expectations: A unprecedented degree of control over our natural environment based on new generations of "**smart materials**", new high performance **clean energy sources**, all-pervasive **sensor networks** with actuator, **smart dusts**, higher performance **integrated computing and communication platforms**, faster and **cheaper manufacturing systems**, **human-level artificial intelligence**, and much **better medical diagnostic means and therapies.**

# CRITICAL COMPETITIVE ISSUES

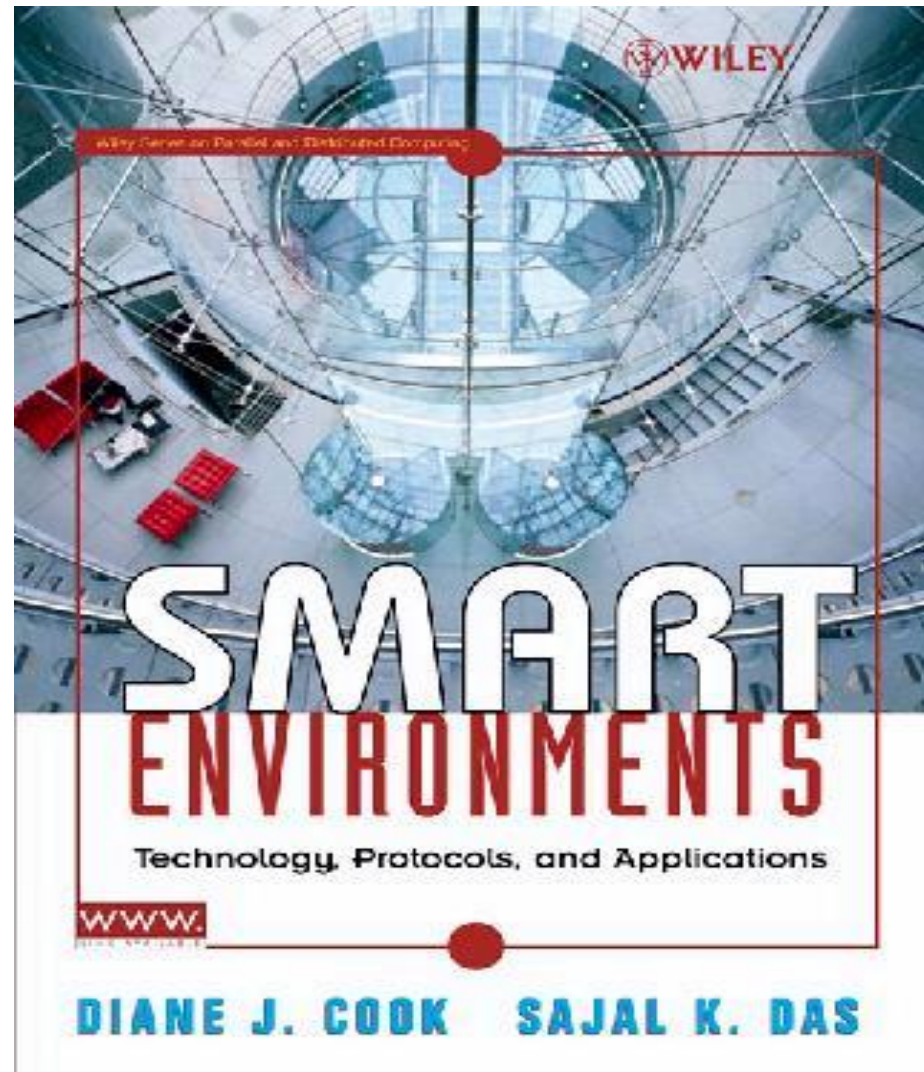
- New formulas, patterns, devices
- Novel combinations of information
- Digital technology aspects taken seriously in R&D
- Innovation related business competences: Imaging, incubating, making demonstrations, promoting and sustaining
- Take good care of immaterial rights and related competences (patents, copyrights, licences etc.)

# IMPORTANCE OF NETWORKING

## CLUSTERED FIRMS AND NON-CLUSTERED FIRMS



# USEFUL READING....



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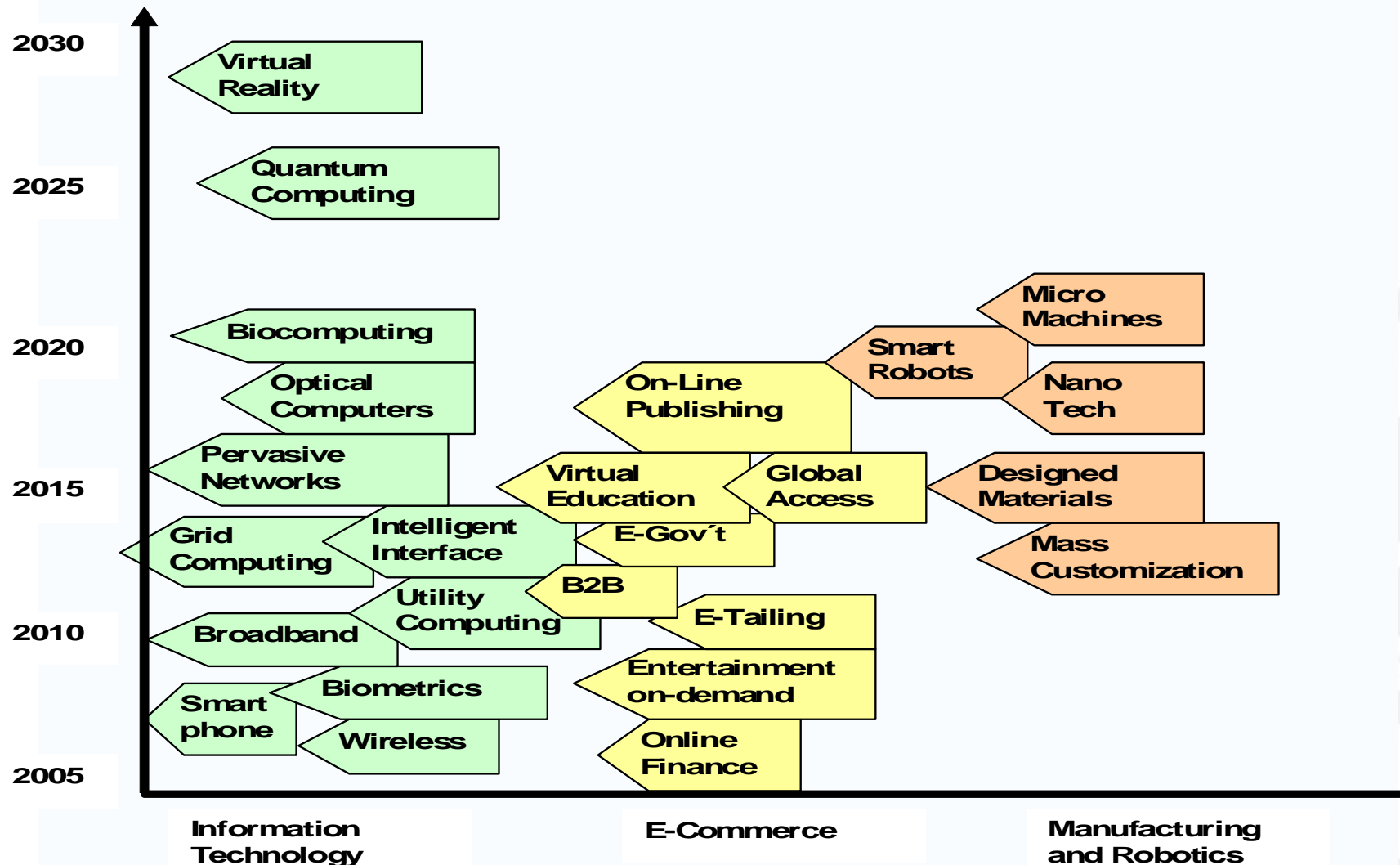
# SMART ENVIRONMENT: CONCLUSIONS

- It must be connected to the strategic networks of a company
- Network management process must be an adaptive system
- Smart environment is always supported by other smart environments
- Smart environment requires integrated management systems and integration of enterprise applications (eg. smart cards systems)
- Target vision: *Unlimited smartness*

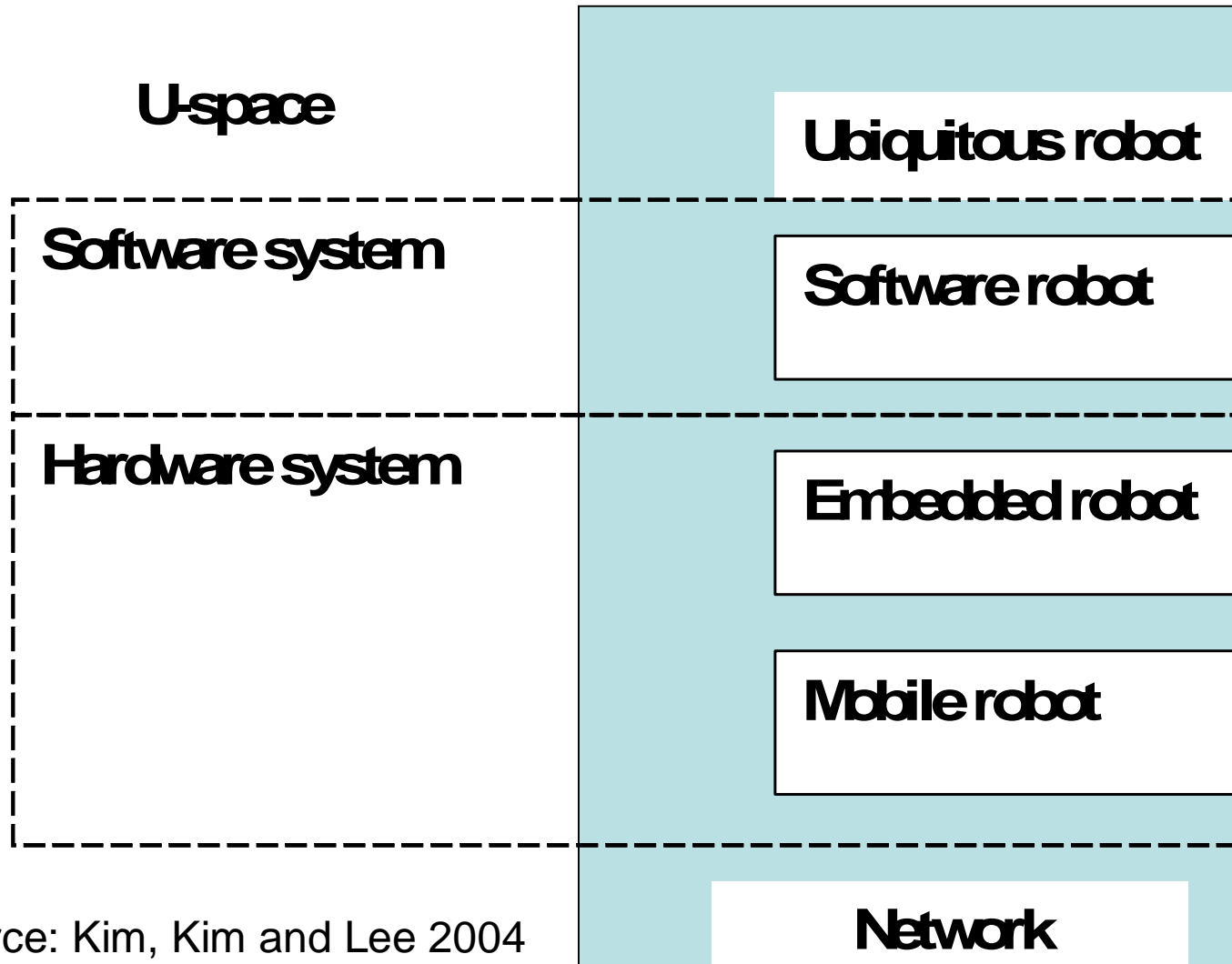
# TECHNOLOGICAL FORESIGHT OF UPIQUITOUS REVOLUTION (SOURCE: TECHCAST 2007)

Most likely year to enter the mainstream

(Usually defined as 30% adoption year)



# UBIBOP VISION: UPIBOP IN UBIQOUTOUS SPACE



Source: Kim, Kim and Lee 2004

# TECHNICAL ELEMENTS OF AMBIENCE INTELLIGENCE

<b>Ambients</b>		<b>Intelligence</b>
Embedded System		Common sense reasoning
I/O Devices		Computational intelligence
MEMS		Context arousal
Sensors		Emotions and computing
Smart materials		Multimedia
Ubiquitous Communications		Multi-modal interactions
Communities and Environments		
Participatory		
Prototyping, hands-on		
Security		
Software Engineering		
Technology Platform		
<b>Integration Issues</b>		

# CRITICAL GENERIC ICT TECHNOLOGIES

VTT TECHNICAL RESEARCH CENTRE OF FINLAND

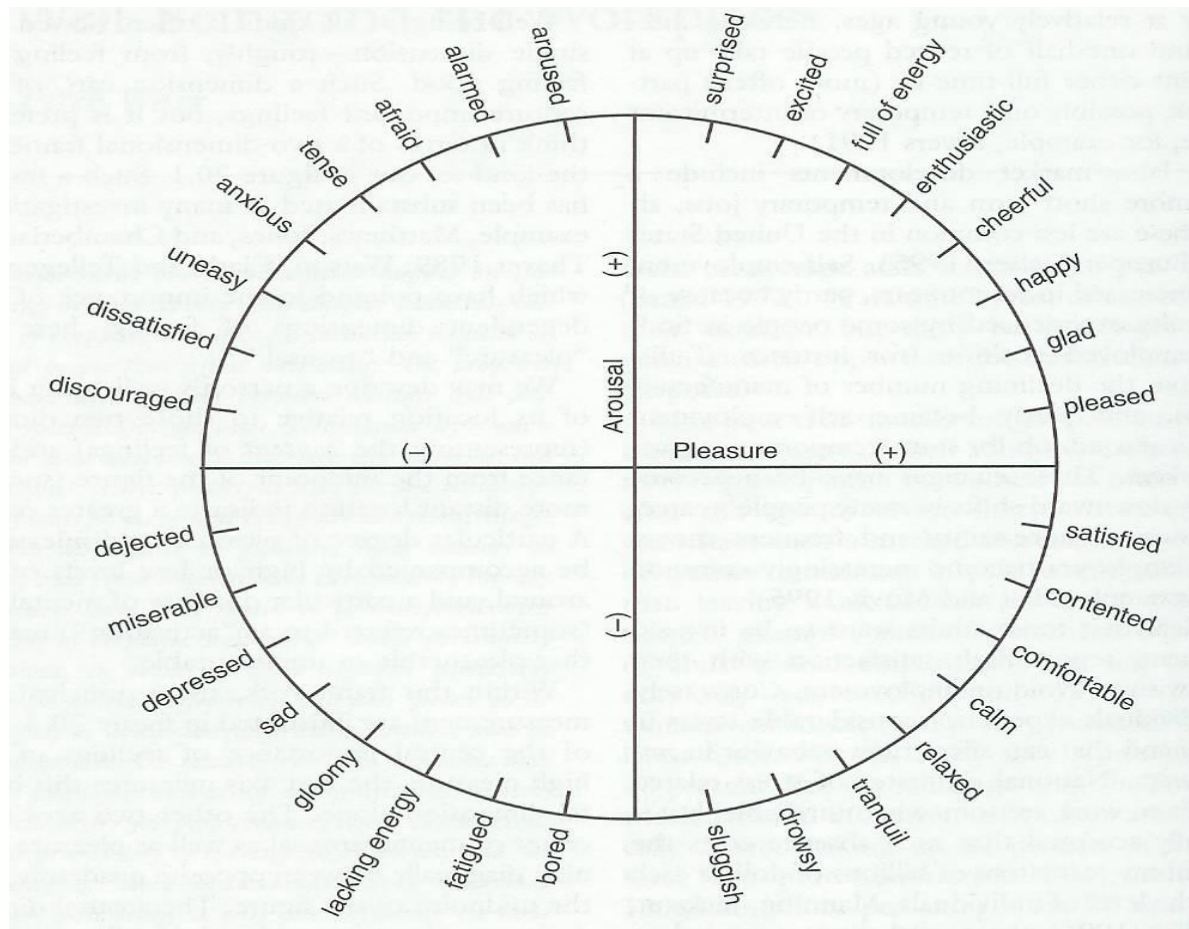
Example from the Finnish SWOT workshop:  
both groups, identified generic technologies



Group 1 - generic technologies	Group 2 - generic technologies
<p><b>Personal Area Network</b></p> <p><b>Cross Media</b></p> <ul style="list-style-type: none"> <li>multiple channels, interoperability</li> </ul> <p><b>Ambient Intelligence</b></p> <ul style="list-style-type: none"> <li>urban environment as a experiment environment</li> <li>security, entertainment, informing</li> </ul> <p><b>Printed codes</b></p> <ul style="list-style-type: none"> <li>intelligent paper, matrix codes</li> </ul> <p><b>3D avatars</b></p> <p><b>Ad Hoc -networks</b></p> <p><b>Semantic networks</b></p> <ul style="list-style-type: none"> <li>distribution of contents</li> </ul> <p><b>Wireless applications</b></p> <ul style="list-style-type: none"> <li>last mile</li> <li>terminals</li> <li>gadgets</li> </ul> <p><b>Wearable computing</b></p>	<p><b>Mobility</b></p> <ul style="list-style-type: none"> <li>systems</li> <li>terminals</li> <li>services</li> <li>WIFI</li> <li>3G</li> <li>network technologies</li> <li>wireless wideband</li> <li>positioning technologies</li> </ul> <p><b>Intelligent systems</b></p> <ul style="list-style-type: none"> <li>sensors technologies</li> <li>RFID</li> <li>systems that measure the reliability and value of information</li> <li>flexible, distributed architectures</li> <li>visualisation techniques of information semantics</li> <li>semantic web</li> <li>sensors networks</li> <li>multitechnical modelling design</li> </ul> <p><b>Interfaces</b></p> <ul style="list-style-type: none"> <li>flat</li> <li>flexible</li> <li>3D</li> <li>systems that endorse communality and social interactions</li> <li>user modelling in real time</li> <li>voice controlled systems &gt; producing, understanding and interpretation</li> </ul>
<p>Source: Ahlqvist 2006</p>	



# HUMAN TEST BED MODEL FOR UPIQUITOUS LIFE (Kahneman et al 1999)

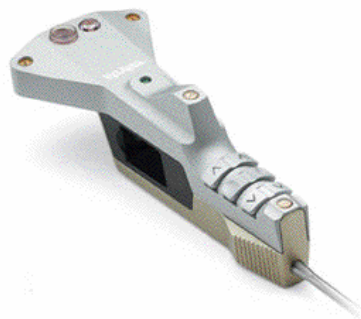
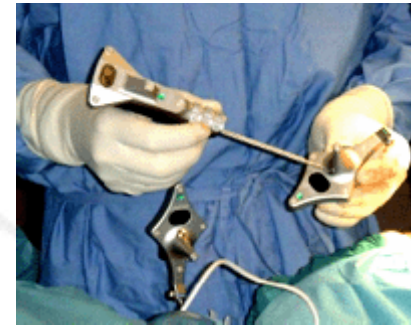


# MEDICAL DEVICES

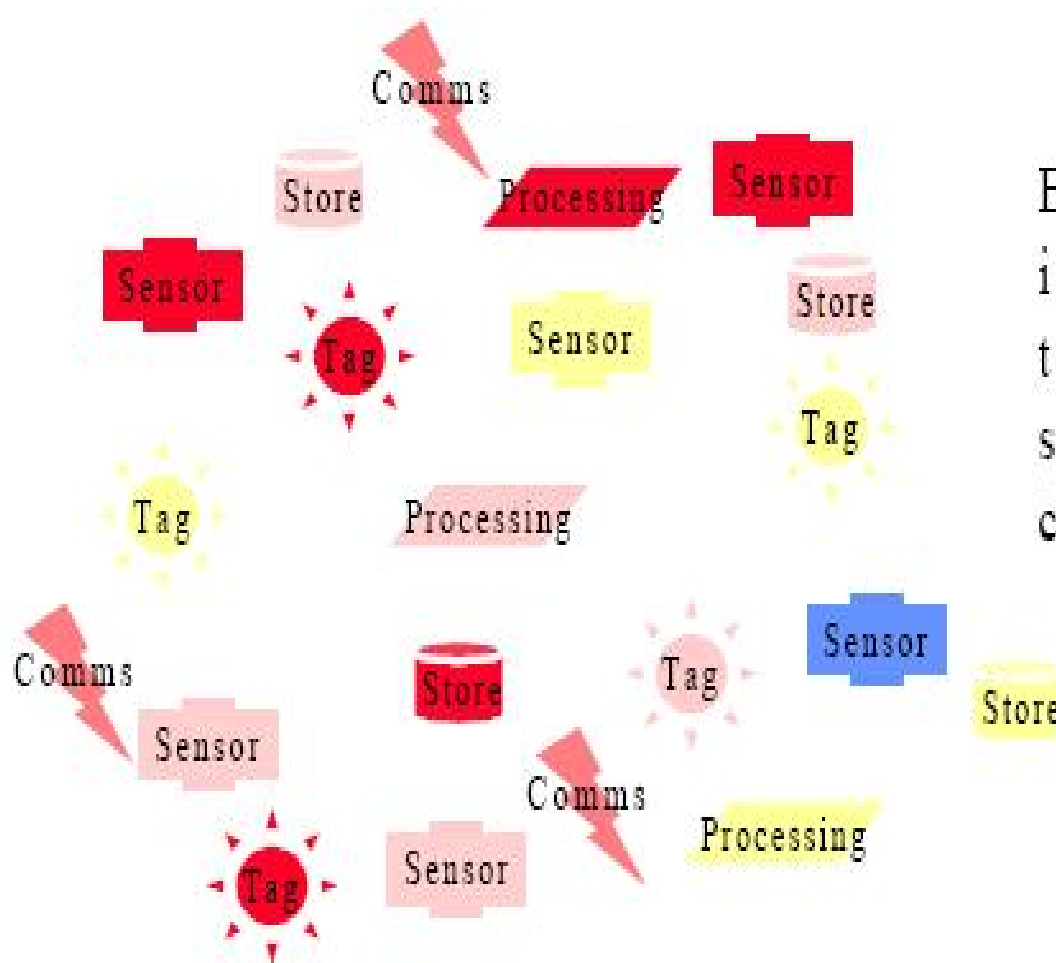
Designed With **msi**sensors  
Innovation • performance • reliability



# SMART INSTRUMENTS



# UBIQUITOUS DEVICES (Bibel 2005, 32)



Environment rich  
in processors,  
tags, data stores,  
sensors and  
communicators.



Source: Mercedes Benz & Giorgio Armani





Source: Philips Lumalive

Source:  
Digital Cultures Lab

19.6.2007



Source:  
Fraunhofer Institute for  
Manufacturing Engineering  
and Automation (IPA),  
Stuttgart

**Motto:**

Digitalization –  
Visualization –  
Virtualization.

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## INTERESTING PROJECT FOR THE CID: H.O.T PROJECT



# TO CONCLUDE...

*"The empires of the future are the empires of the mind."*

*Sir Winston Churchill (1874 - 1965). Speech at Harvard University, September 6, 1943*



# i thank you for your attention!

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