MORFEUS - Discussing Working Seminar

September 15, 2015 at 10:00 – 13.00

- Introducing participants
- MORFEUS and SimLab (Soile Pohjonen)
- Preface presentations:

Tim Cummins, IACCM

Anne Kokkonen, Rita Lavikka, Teemu Lehtinen, CoCoNet

- Discussion

Contracting and Collaboration in Inter-Organizational Business Processes

Digital facilitation tools

Aalto University School of Science

SimLab

MORFEUS

LAUREA AMMATTIKORKEAKOULU *Yhdessä enemmän*

SimLab

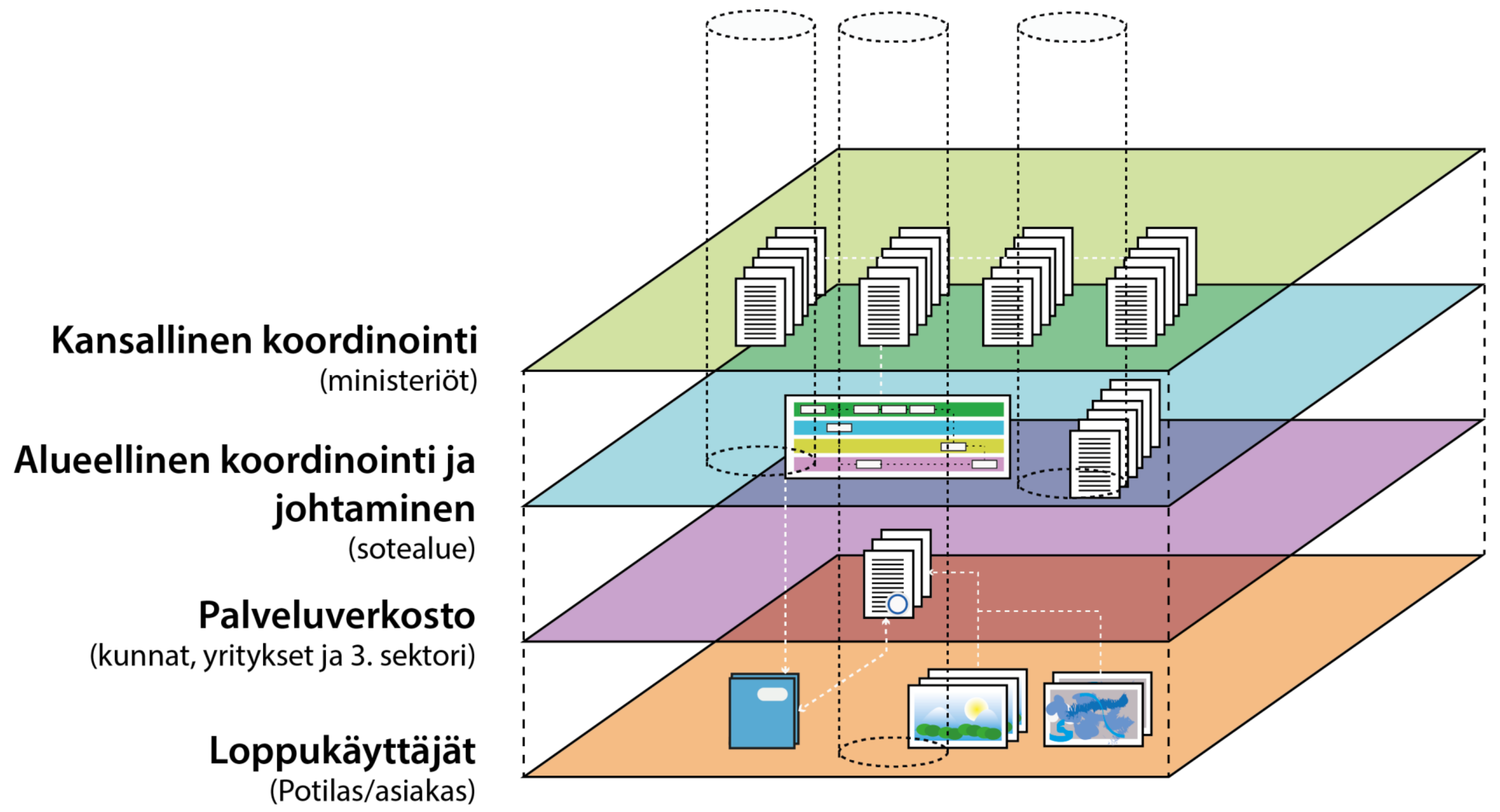
MORFEUS - Future value creation in wellbeing service networks

(01/01/2015–30/6/2017) The joint multidisciplinary project of
Aalto University and **Laurea University of Applied Sciences and 14 partners**

Studies and develops wellbeing services' multi-actor ecosystems.
An action research and Proactive Contracting approach,
service design, information modeling and future studies.

Actors of the ecosystem are mapped,
the relations between them explored,
especially in mental health, child protection and substance abuse related services.

The main research problem of the project is how cross-organizational collaboration can be facilitated when developing customer-centered wellbeing service ecosystems?



The first draft of the idea of SIM in the MORFEUS research plan

The project develops **Service Information Modeling (SIM)**

- for service domains
- all information required for the procurement and production of a service will be collected there.

- clarifies roles, relations and information needs of the actors
- strives to enable the development, production and procurement of more (cost-)effective and client-oriented services in the future.

Based on SIM it will be possible to develop novel digital tools
to support the functioning of the wellbeing service ecosystem.

SIM - digital tools – contracting design

SIM enables proactive self-direction and Systems Intelligence

- The big picture: purpose, roles, connections
- Detailed information in an user-friendly way
- Support (answers to questions)
- Developing ideas (presenting and commenting)

What kind of contracting enhances

- Self-direction
- Systems Intelligence
- Proactivity?

From command and control

towards framing and enabling innovative collaboration

Self-directive teams need supportive structures

SimLab at Aalto University

Multidisciplinary research and teaching unit founded in 1998

- Aalto SCI, Department of Industrial Engineering and Management

Research area

- Business co-creation and transformation in value networks
  - Collaborative innovations in business and service processes and models
  - Developmental intervention methods of SimLab™, face-to-face, and virtually

Teaching in the Master Programmes of Information Networks and IEM

- Understanding and managing business as networked processes
- Managing process co-development interventions
- Facilitating inter-organizational process co-creation
- Intervention research methods

Multidisciplinary research group

- Industrial Management, Computer Science, Design, Economics, Social Sciences, Communication, Law
- Professor, Senior university lecturer, 3 post doc researchers, 7 Doctoral students, Master's students, project planning officer

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SimLab™
Business Process Simulation

- Analysis and visual map of the process
- Structured and directed process discussion with case project examples
- Participation: all process actors involved
- From tacit to explicit knowledge
- Knowledge sharing and co-creation in team work

Interventions for the development of collaboration in business networks

- Demand-supply processes
- R&D processes
- CRM processes
- HRM processes
- E-Learning and knowledge management processes
- Strategy processes
- Urban planning processes
- Outsourcing and procurement processes
- Public-private service processes
- Business co-creation processes
- ... and the related business models

Current industrial sectors

- ICT, software, construction, manufacturing, education, education, municipal services, media, cross-industrial ...

Research pilots 1998 -

- Aalto University
- ABB Industry
- Ahlström
- Asuntosäätiö
- City of Espoo
- City of Helsinki
- City of Hämeenlinna
- City of Kauniainen
- City of Pudasjärvi
- City of Rovaniemi
- City of Tampere
- City of Turku
- City of Vantaa
- Consolis Oy
- Cramo Instant
- Destia
- Finnmap Consulting
- Ericsson
- Elektrobit
- Elisa Communication
- Finnish Savings Banks Ass.
- Finnair
- Granlund
- Hewlett-Packard
- IBM
- Instrumentarium Oy Datex
- Itella Oyj
- Kemppi Oy
- KONE Oyj
- Lappset Group
- Laurea
- Martela Oy
- Microsoft Oy
- Neles Controls
- NCC
- Nokia Mobile Phones
- Nokia Siemens Networks
- Nokia BI
- Nokian Tyres
- Orion Pharma
- Patria
- Rammer
- Radiolinja
- Rautaruukki Oyj
- Raute
- Reuge Music S.A.
- RYM Oyj
- Samlink
- Senate Properties
- Sodexho
- SRV
- Tamrock Oy
- Tekla Oy
- TKK
- TeliaSonera Finland
- Tellabs Oy
- Tocoman Services
- UPM Oyj
- Vahanen Oy
- Valmet Oy
- WSOY Oy
- YIT Oy
- Yle
- ...

Continuous innovation in SimLab's collaborative intervention spaces and methods

1998-2004 in Spektri




2004 – 2013 in Innopoli

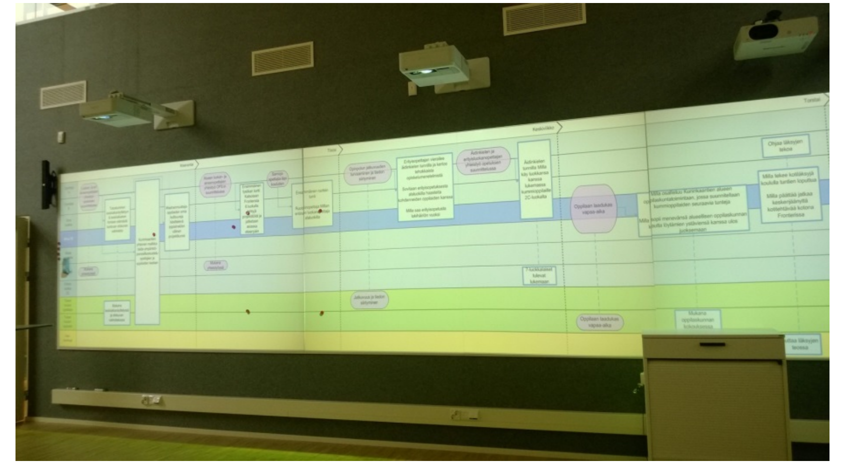




Since September 2013 in Open Innovation House



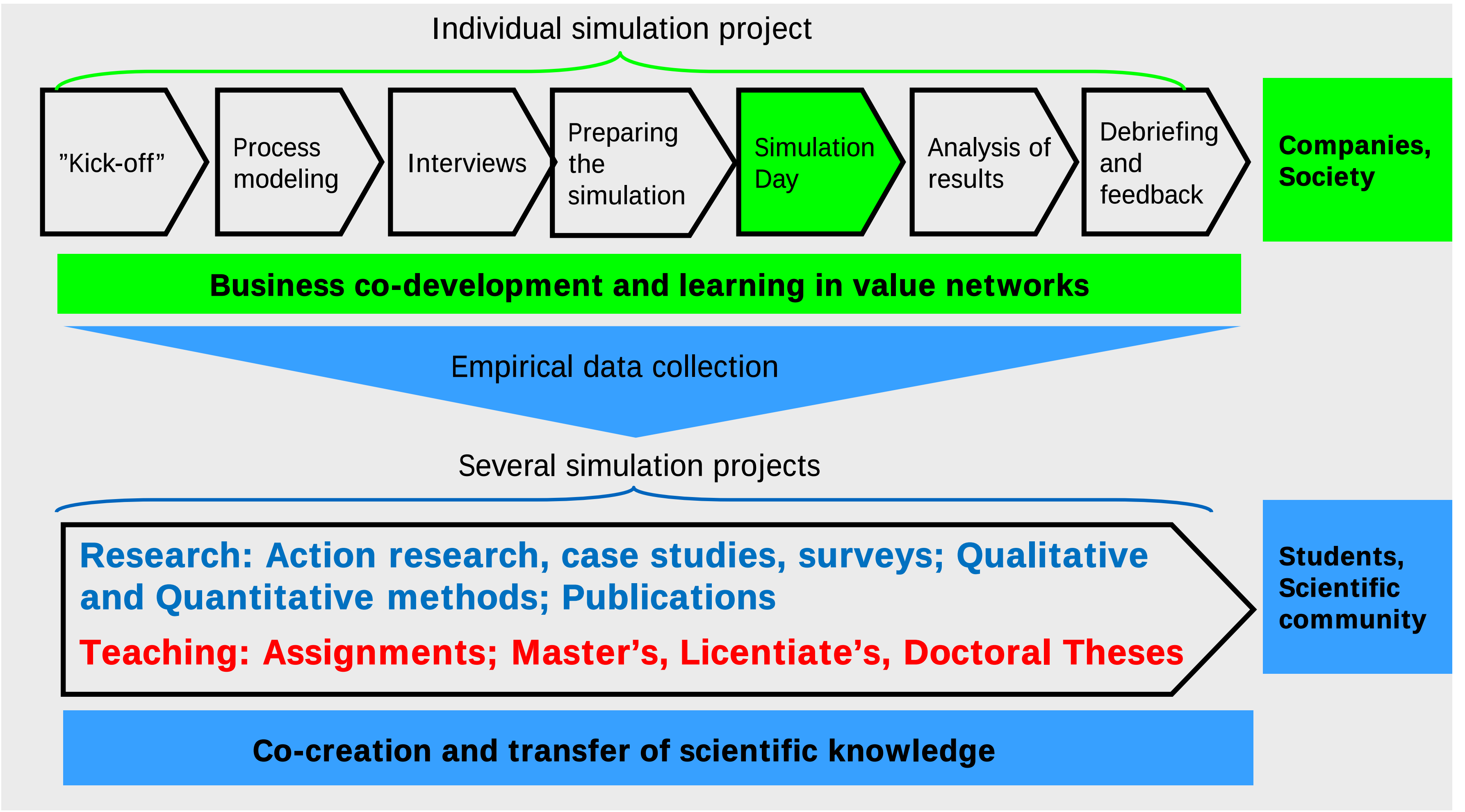





A!
Aalto University

SimLab™

SimLab's triple helix: interventions, research and teaching



Individual simulation project

"Kick-off"

Process modeling

Interviews

Preparing the simulation

Simulation Day

Analysis of results

Debriefing and feedback

Companies, Society

Business co-development and learning in value networks

Empirical data collection

Several simulation projects

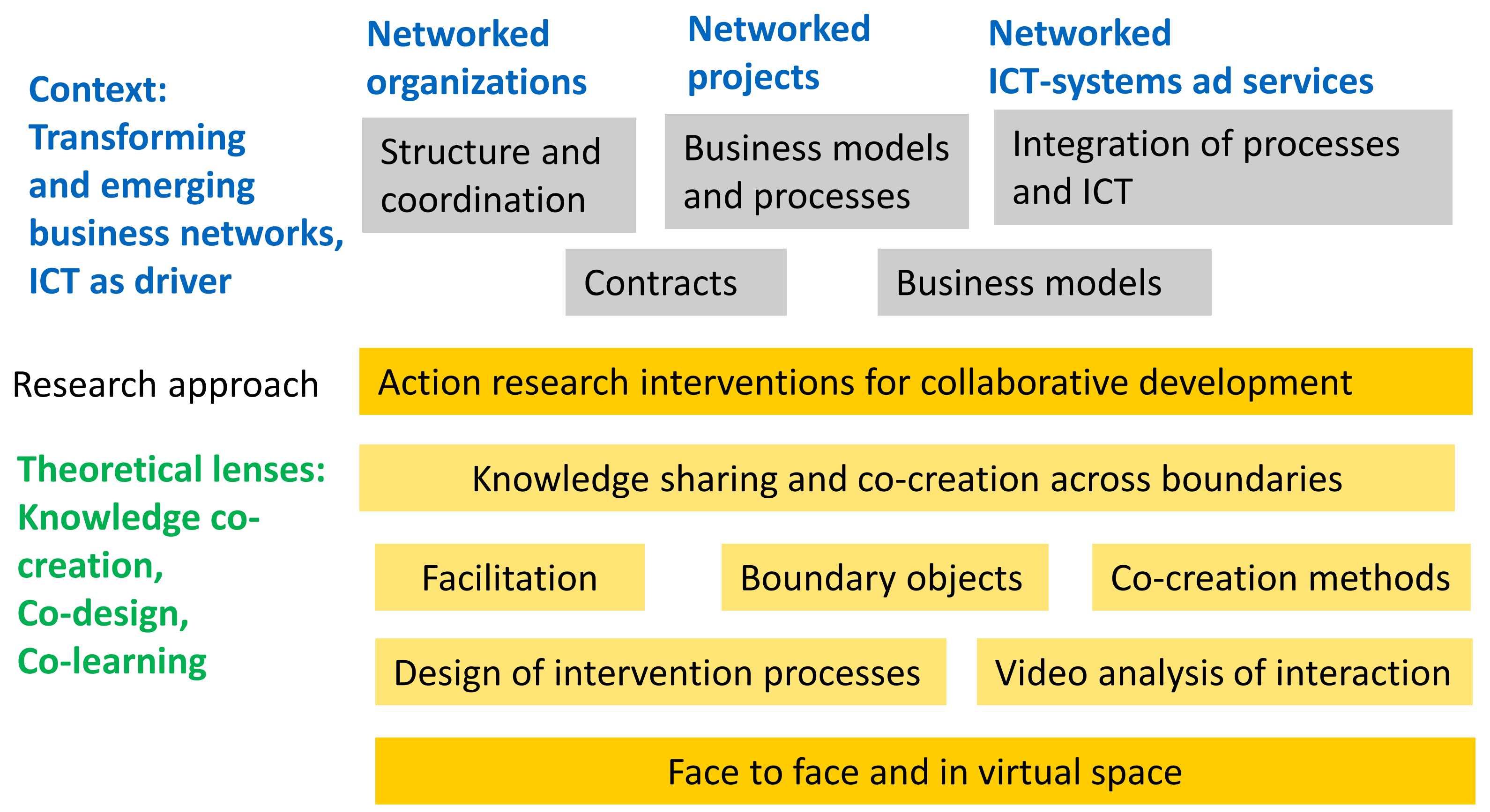
Research: Action research, case studies, surveys; Qualitative and Quantitative methods; Publications

Teaching: Assignments; Master's, Licentiate's, Doctoral Theses

Students, Scientific community

Co-creation and transfer of scientific knowledge

Evolving research themes



Context: Transforming and emerging business networks, ICT as driver

Networked organizations

Structure and coordination

Networked projects

Business models and processes

Networked ICT-systems ad services

Integration of processes and ICT

Contracts

Business models

Research approach

Action research interventions for collaborative development

Theoretical lenses: Knowledge co-creation, Co-design, Co-learning

Knowledge sharing and co-creation across boundaries

Facilitation

Boundary objects

Co-creation methods

Design of intervention processes

Video analysis of interaction

Face to face and in virtual space

The research strategy supports the triple helix

- Portfolio of industrially and socially relevant long term research projects, in collaboration with leading companies and public sector partners
  - Main funding through Academy of Finland, Tekes, EU, and partners
- with ambitious scientific goals, often in collaboration with international top universities, publishing in scholarly journals
  - Organization Science, Organization Studies, IJTM, PPC, Supply Chain Management, Project Management Journal, European Journal of Innovation Management, Construction Management and Economics,…
- closely linked with teaching on Master's and Doctoral levels, using research projects as platforms of teaching
  - Since 2001: 78 Master's, 5 Licentiate's and 10 Doctoral Theses

Current research projects

- MARIANNE 2013-15: Methods and Environments to Enhance Collaborative Innovation in Service Networks. Technology Industries of Finland Centennial Foundation. Research collaboration with HIIT.
- CoCoNet 2013-2015: Co-creation and Coordination in Emerging Value Networks – the double role of ICT-enabled modeling tools and methods. Academy of Finland.
- CECO 2014-15: Creative Ecosystems and Collaborative Operators. A pilot study in the digital media industry. Tekes Innovation research program, Yle, City of Helsinki, Open Tampere.
- MORFEUS 2015-17 Future value creation in the welfare service network. Consortium project with Laurea. Tekes, Municipalities, Healthcare and welfare organizations, ICT companies
- …

Researchers facilitate the interventions

Before the simulation:

- Collect and analyze the data
- Design the process model and other boundary objects
- Co-develop the objectives for the simulation
- Prepare the manuscript

In the simulation:

- Put questions
- Encourage the dialogue
- Organize group work on critical points
- Manage the schedule
- Observe and collect the data

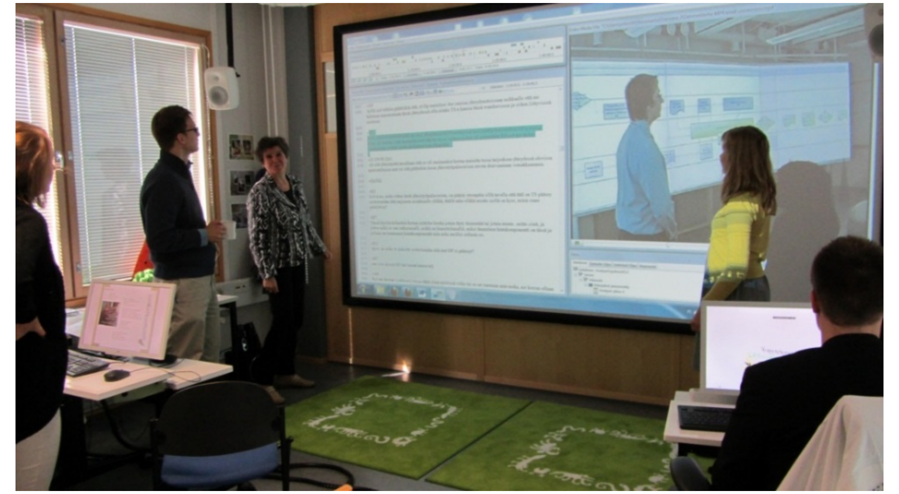
Researchers collect and analyze the intervention data to create / test theory

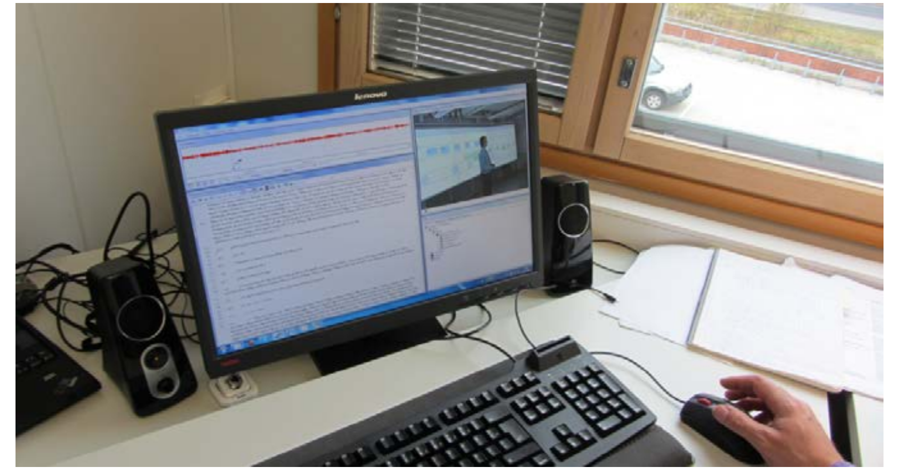
Each intervention produces a wealth of data

- Interview recordings and transcriptions
- Video and audio recordings of the dialogue during the intervention day
- Observations of the intervention day
- Observations from the intervention project
- Documentary data from the participant organizations
- Follow-up interviews as audio recordings and transcriptions
- Surveys

The data is analyzed applying multiple methods and theoretical lenses

- Content analyses of the observations and interviews
- Content analyses of the video recordings
  - – Visual analyses of the data
- Comparative analyses across several intervention projects
- Quantitative survey analyses





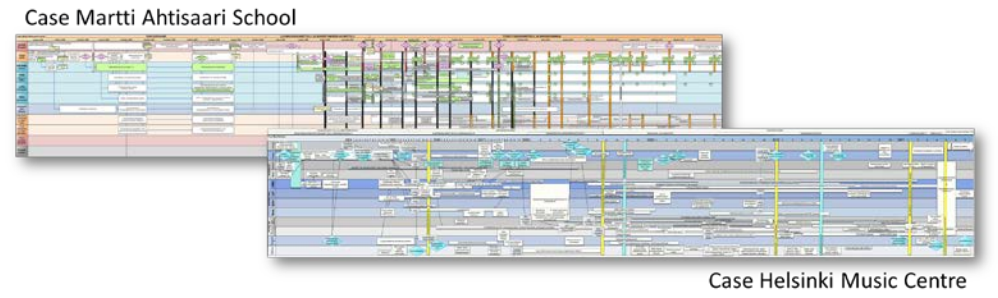
Recent publications

- Alin, P., Taylor, J.E. & Smeds, R. (2011) Knowledge transformation in project networks: A speech act level cross-boundary analysis. **Project Management Journal** 42(4): 58-75 (Winner of the 2012 Project Management Journal Paper of the Year Award)
- Feller, J., Parhankangas, A., Smeds, R. & Jaatinen, M. (2012) How companies learn to collaborate: The emergence of improved inter-organizational processes in R&D alliances. **Organization Studies**., Vol. 34, No. 3, 313-343.
- Hall, D., Algiers, A., Lehtinen, T., Levitt, R.E., Li, C. & Padachuri, P. (2014) The role of Integrated Project Delivery elements in adoption of integral innovations, In: Chan, P. & Leicht, R. (eds.): **Engineering Project Organization Conference 2014**. Conference proceedings: Devil's Thumb Ranch, Colorado, USA, July 29-31, 2014.
- Hall, D. & Lehtinen, T. (2015) Agile cost shifting as a mechanism for systemic innovations, In: Chan, P. & Leicht, R. (eds.): **Engineering Project Organization Conference 2015**. Conference proceedings: University of Edinburgh, Scotland, June 24-26, 2015.
- Hirvensalo, A. (2015) Inter-organizational knowledge creation during conflict of interest - a study of interaction in a facilitated workshop (In Finnish). Aalto University publication series **DOCTORAL DISSERTATIONS** 45/2015.
- Jarvenpaa, S.L. and Wernick, A., (2011). Exploring Paradoxical Tensions in Open Innovation Networks, **European Journal of Innovation management**, 14 (4) Fall 2011, 521-548.
- Jarvenpaa, S.L. and Wernick, A., (2012). Open Innovation Networks: The Evolution of Bureaucratic Control, Chapter 2, Collaborative Communities of Firms: Purpose, Process, and Design, edited by Snow, C.C., **Information and Organization Design Series**, Springer
- Kohonen-Aho, L., & Alin, P. (2015) Introducing a video-based strategy for theorizing social presence emergence in 3D virtual environments. **Presence: Teleoperators and Virtual Environments**, 24(2).
- Kokkonen, A. & Alin, P. (2015) Practice-based learning in construction projects: a literature review, **Construction Management and Economics.**
- Kokkonen, A. & Alin, P. (2015) Collaboration in construction projects: investigating cross-boundary participation in colocation, Conference paper, **EGOS 2015**, Athens, Greece, July 2-4, 2015.
- Lavikka, R., Smeds, R. & Jaatinen, M. (2009) Coordinating the service process of two business units towards a joint customer**. Production Planning and Control**. Special Issue. vol. 20, no. 2, pp. 135-146.
- Lavikka, R., Smeds, R. and Jaatinen, M. (2015) Interventions for managing ambidexterity in inter-organizational collaboration processes, **Business Process Management Journal**, Vol 21, No. 5.
- Lavikka, R., Smeds, R. and Jaatinen, M. (2015) Coordinating collaboration in contractually different construction projects, **Supply Chain Management: An International Journal**, Vol. 20 No. 2. pp. 205-217.
- Maunula, A., Taylor, J.E., Alin, P. and Smeds, R. (2013) Aligning Misaligned Systemic Innovations: Probing Inter-firm Effects Development in Project Networks**. Project Management Journal**, Vol. 44, No. 1, 77-93.
- Paananen, H., Irrmann, O. and Smeds, R. (2013) "Perceived Proximity and Paradoxical Tensions in an Innovative Industry-Academia Consortium. **Proceedings of the 46th Hawaii International Conference on System Sciences (HICSS),** January 2013, Hawaii (USA)
- Salmi, A.; Pöyry-Lassila, P.; Kronqvist, J. (2012) Supporting Empathetic Boundary Spanning in Participatory Workshops with Scenarios and Personas. **International Journal of Ambient Computing and Intelligence**, Vol. 4, No. 4, pp. 21-39.

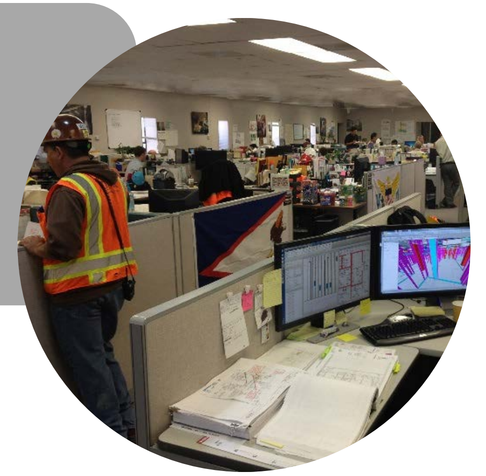
Project management and process innovation in construction

RYM PRE Model Nova

New Business Model Based on Process Network and Building Information Modeling (BIM). Main research themes are 1) **TO-BE BIM process**, 2) **lean and integrated practices**, and 3) **contract models**.



Team co-location: Coordinating agile co-working, space as a tool for collaborative project management



BIM process redefined: identification of tasks and intensive collaboration points

Integrated Project Delivery: IPD and cross-disciplinary innovations, agile cost shifting

CoCoNet

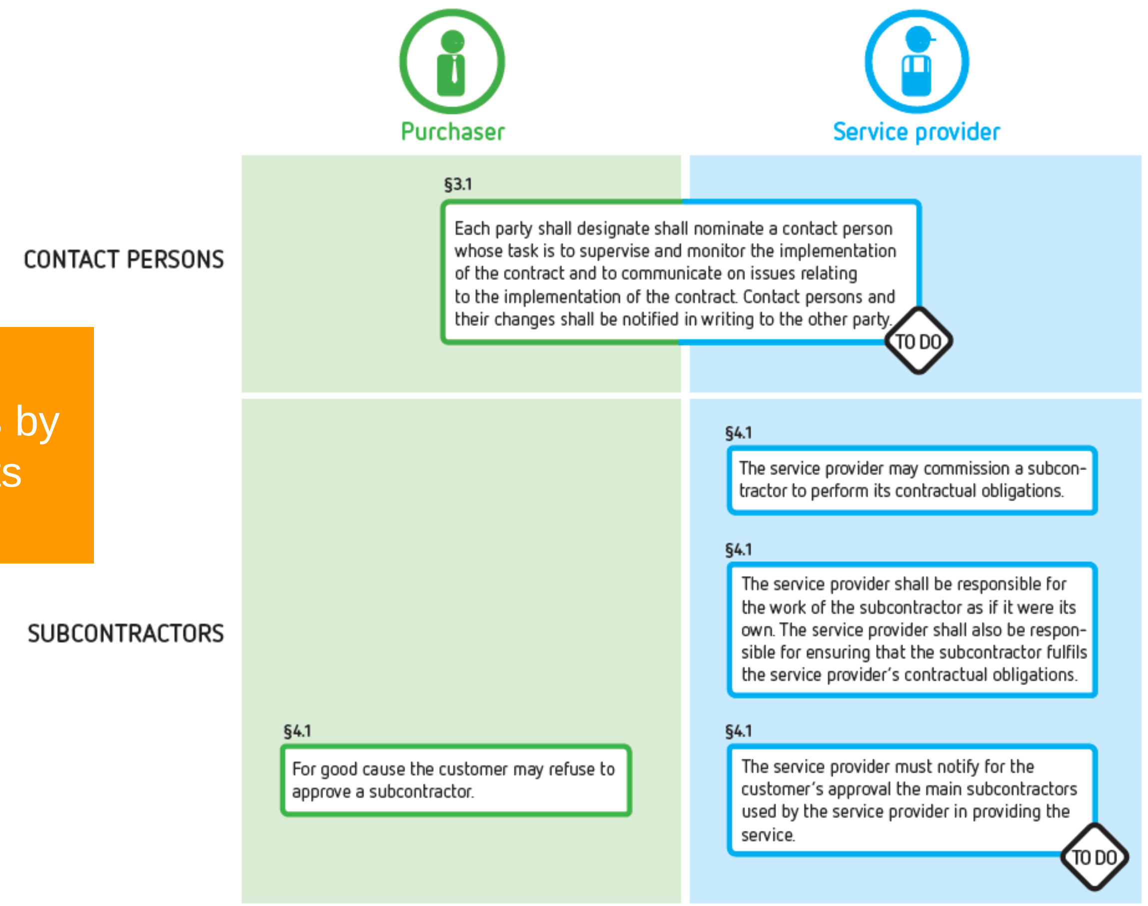
Co-creation and Coordination in Emerging Value Networks – the double role of ICT-enabled modeling tools and methods. This double role for innovation and efficiency is analyzed from three theoretical domains: 1) **collaborative innovation**, 2) **coordination and integration**, and 3) **inter-organizational learning**.

Proactive contracting and inter-organizational processes in services

Starting point: Proactive Contracting, a cross-disciplinary and cross-professional approach to promote successful collaboration and knowledge sharing – to co-create and reach the mutual goals.

Contracts and contracting processes can become **user-friendly boundary objects** by
- visualizing them and their environments
- developing digital tools

The main research problem of the ongoing MORFEUS project is how cross-organizational collaboration can be facilitated when developing customer-centered wellbeing service ecosystems. MORFEUS introduces the idea of **Service Information Modeling (SIM)** which includes contracts.



Each party shall designate shall nominate a contact person whose task is to supervise and monitor the implementation of the contract and to communicate on issues relating to the implementation of the contract. Contact persons and their changes shall be notified in writing to the other party.

For good cause the customer may refuse to approve a subcontractor.

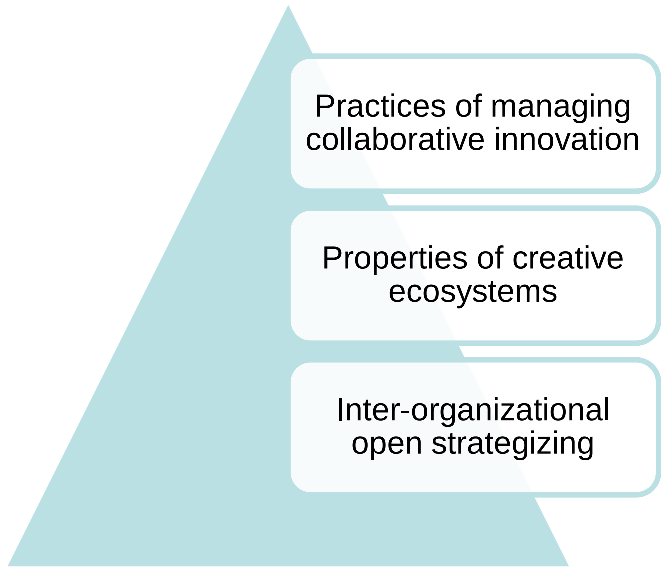
The service provider may commission a subcontractor to perform its contractual obligations.

The service provider shall be responsible for the work of the subcontractor as if it were its own. The service provider shall also be responsible for ensuring that the subcontractor fulfils the service provider's contractual obligations.

The service provider must notify for the customer's approval the main subcontractors used by the service provider in providing the service.

PRO2ACT VISO MORFEUS

Emerging Business Ecosystems



Practices of managing collaborative innovation

Properties of creative ecosystems

Inter-organizational open strategizing

Facilitation and knowledge co-creation

Virtual collaboration
- Communicating social presence in virtual teams
- Avatar-based interaction in 3D environments
- Role of verbal and non-verbal communication

AivoSenses project/Laura

Face-to-face knowledge creation
- Knowledge creation in inter-organizational context
  - Co-creation of collaboration practices
    - Facilitator's activity in guiding interaction

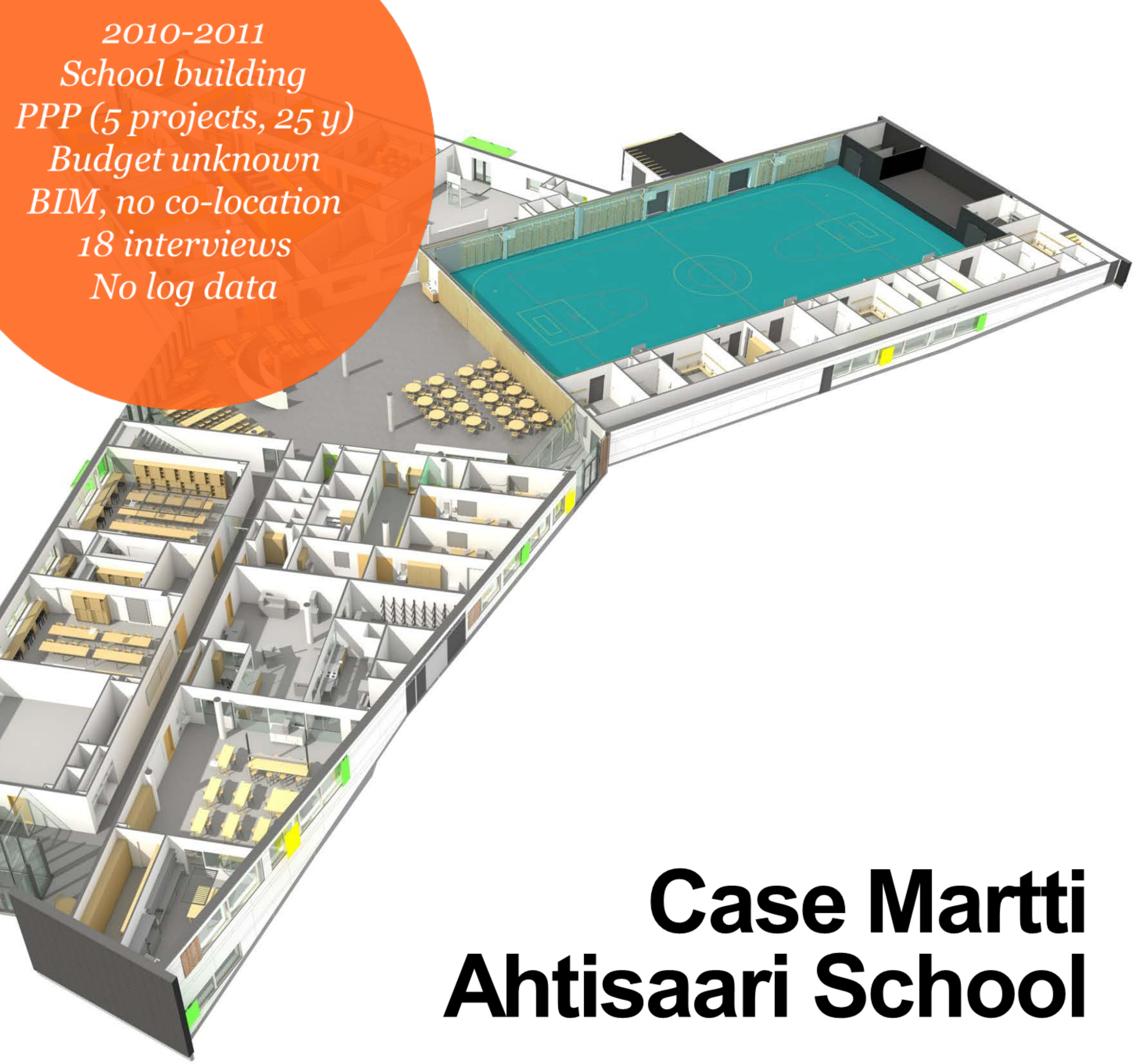
Facilitation project
/Antero, Miia

ICT-supported collaboration
- Large group participation
- "Metagroup" process: Combination of face-to-face and ICT-mediated collaboration

MARIANNE project/Elina, Laura

Games in Knowledge Creation
- Artefact-mediated dialogue
- Playful co-development of practices
- Instrumental play

CECO project/Otso



2010-2011
School building
PPP (5 projects, 25 y)
Budget unknown
BIM, no co-location
18 interviews
No log data

Case Martti Ahtisaari School

1992-2011
Concert hall
Design-Bid-Build CM
$200 Million
BIM
Partial co-location
34 interviews
Log data

Case Helsinki Music Center

2007-2015
Hospital
IPD-ish
$1.5 Billion
BIM, co-location
41 interviews
Log data

Case UCSF Mission Bay

2008-2014
Patient care tower
IPD with IFOA
$300 Million
BIM
Partial co-location
31 interviews
Log data

Case Alta Bates

2012-2015
Office building
Project Alliancing
$15 Million
BIM
Partial co-location
18 interviews
Log data

Case THL

BRINGING THE DESIGN TEAM TOGETHER:

Coordinating inter-organizational design work using an agile co-working method

(Lavikka, Niku, Lehtinen 2013)

Key findings

Common understanding

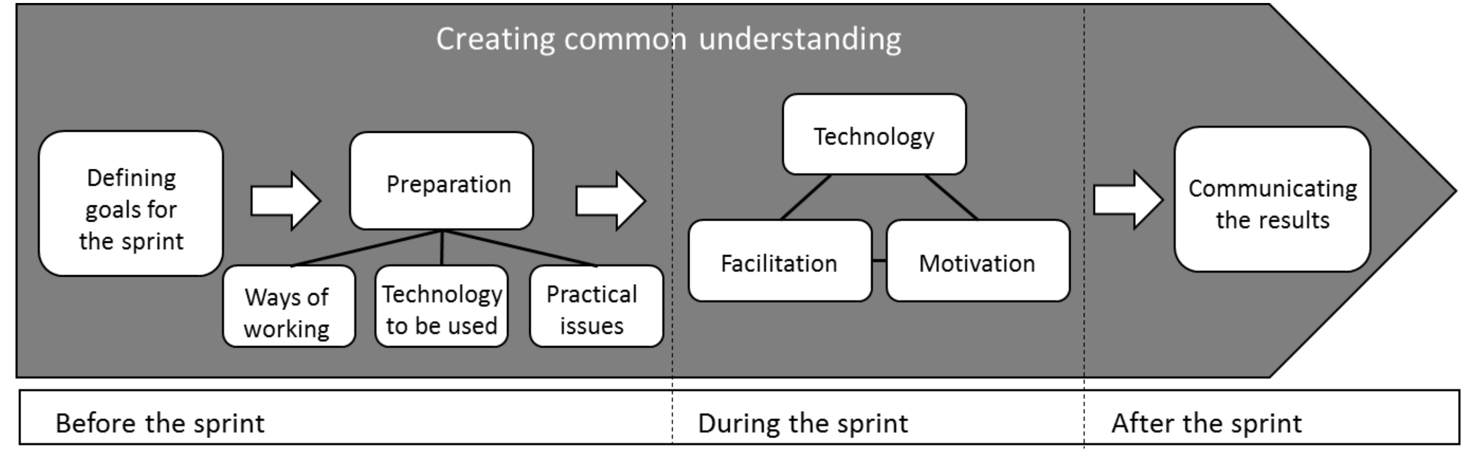
The sprint increased common understanding between team members about other disciplines' work tasks during conceptual design

Commitment

Participants created goals for the project together which increased commitment

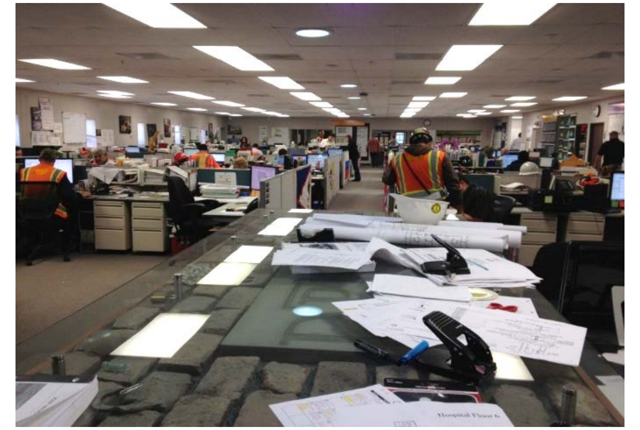
Visualization of knowledge

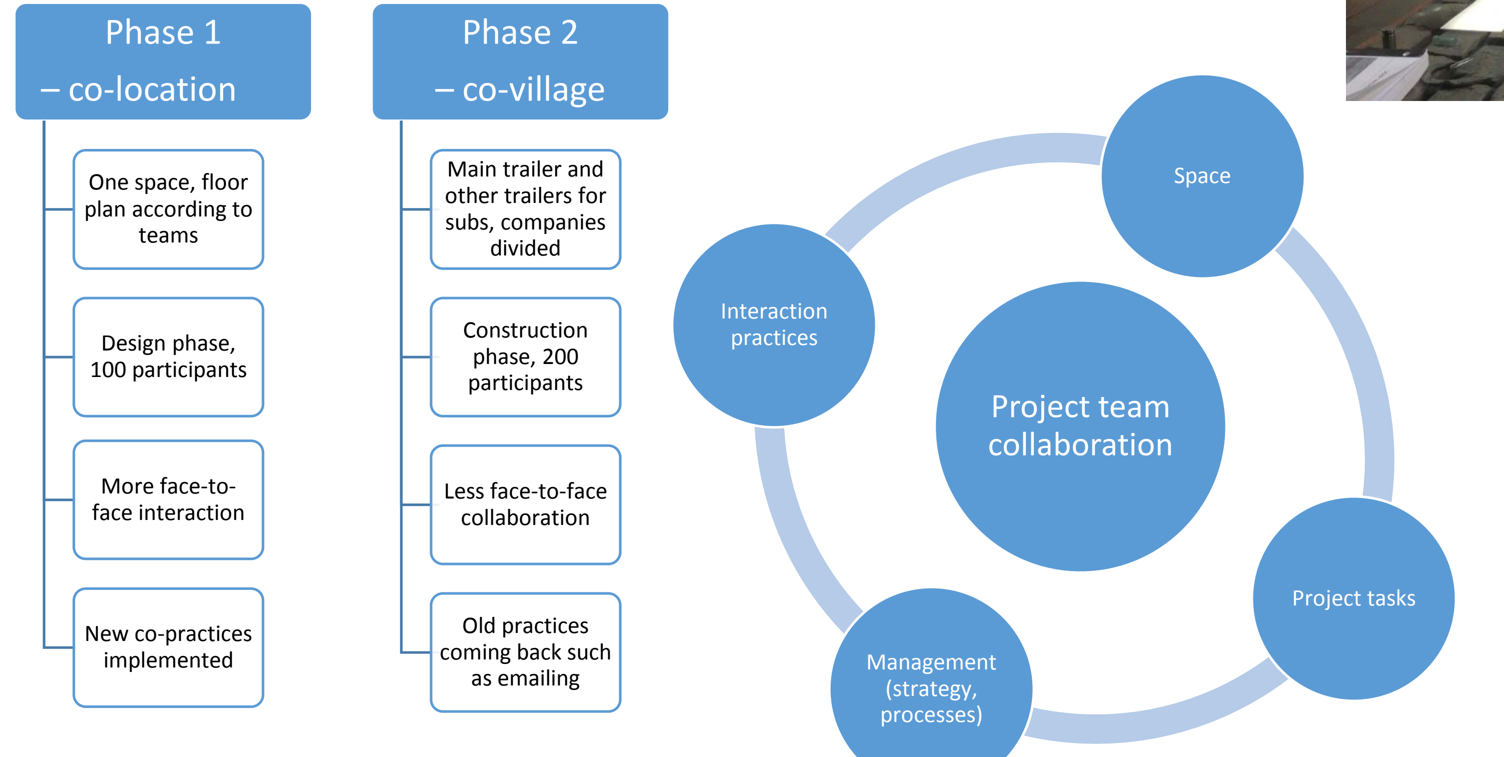
Visualizing the work completed helped in the customer's decision making



Space as a tool for collaborative project management

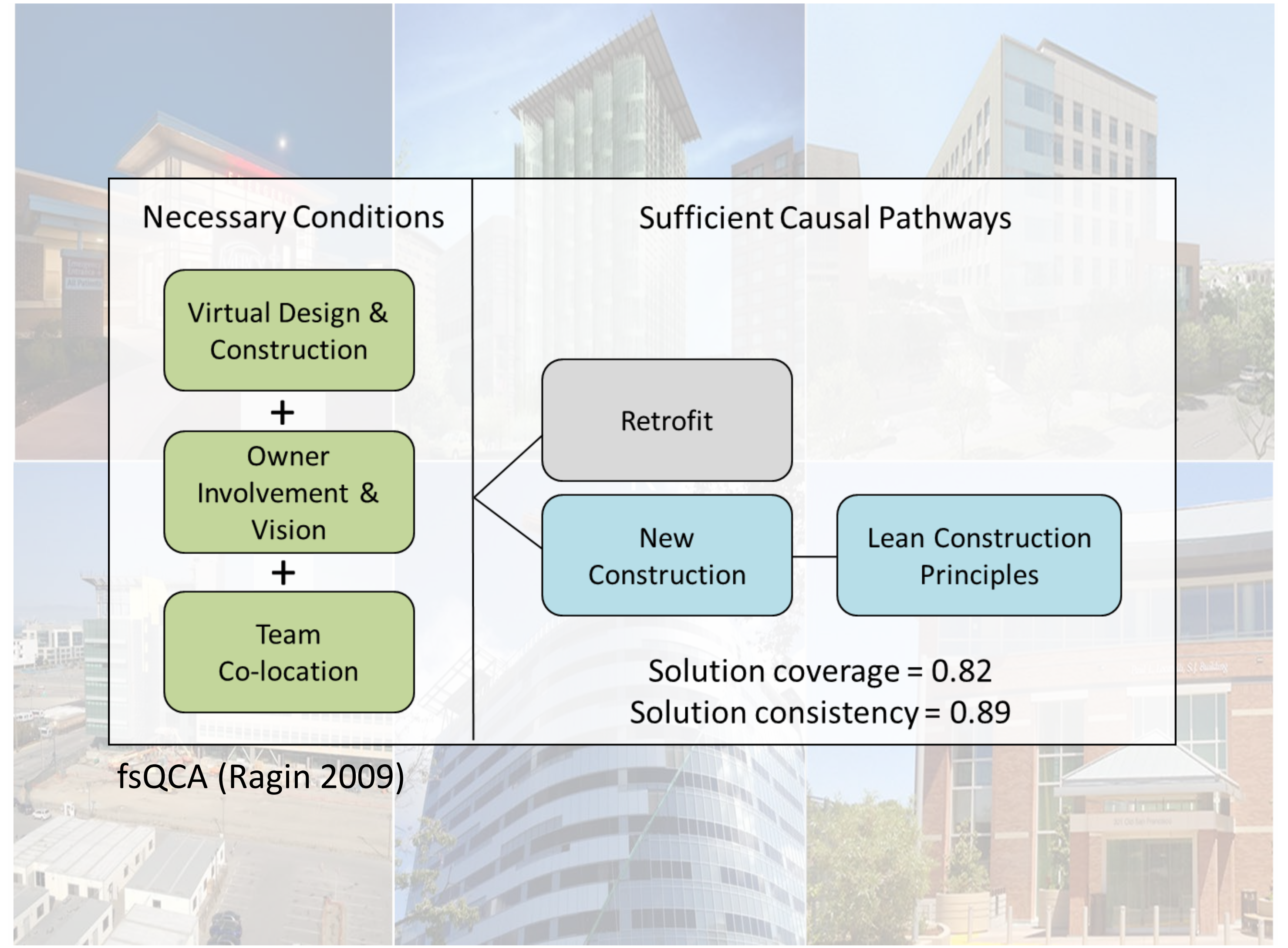
(Kokkonen & Alin 2015)





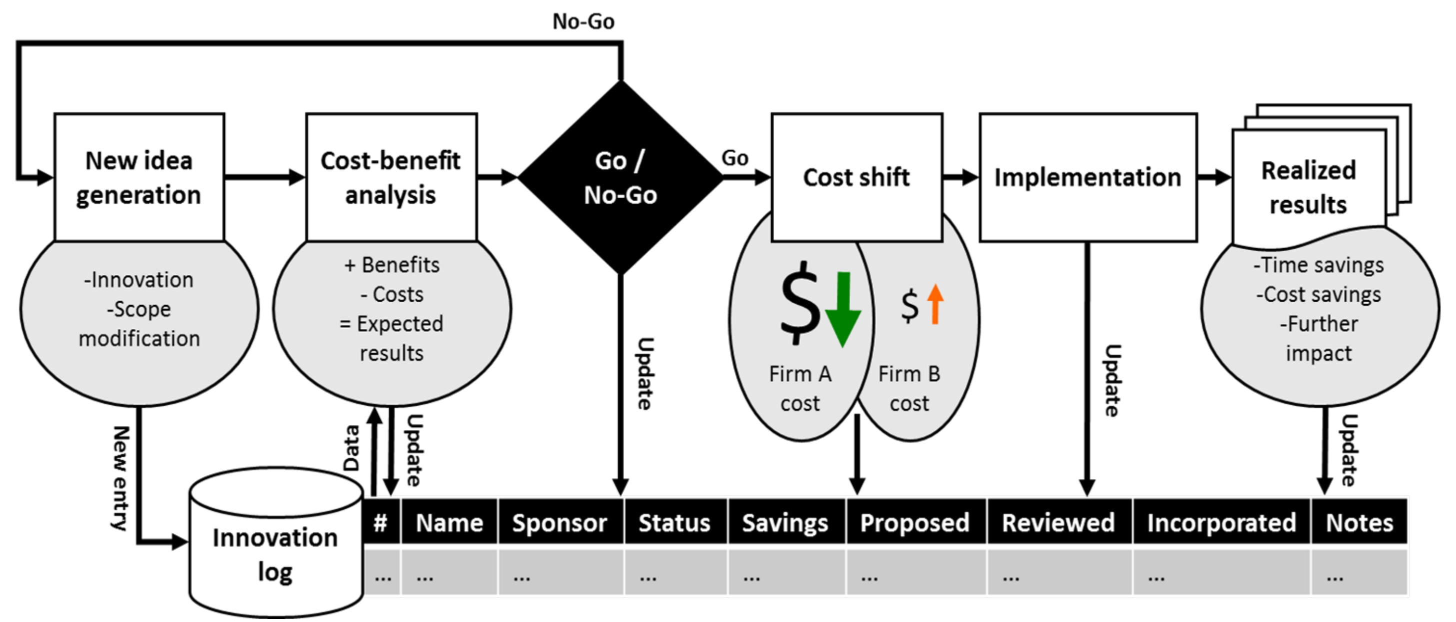
Proximity does not automatically increase interaction in a space. Knowledge management processes and interaction practices such as overhearing and interfering in space are also needed.

The role of IPD elements in adoption of cross-disciplinary innovations



(Hall, Algiers, Lehtinen, Levitt, Li, Padachuri 2014)

Agile cost shifting as a mechanism for systemic innovations



Change Management Characteristics	Change Management System	
	Traditional Change Management	Agile Cost Shifting
Approval to Proceed	Hierarchical	Consensus
Interface Register Transparency	Low (Change Order Log)	High (Innovation Log)
Transaction Costs	High	Low

(Hall & Lehtinen 2015)