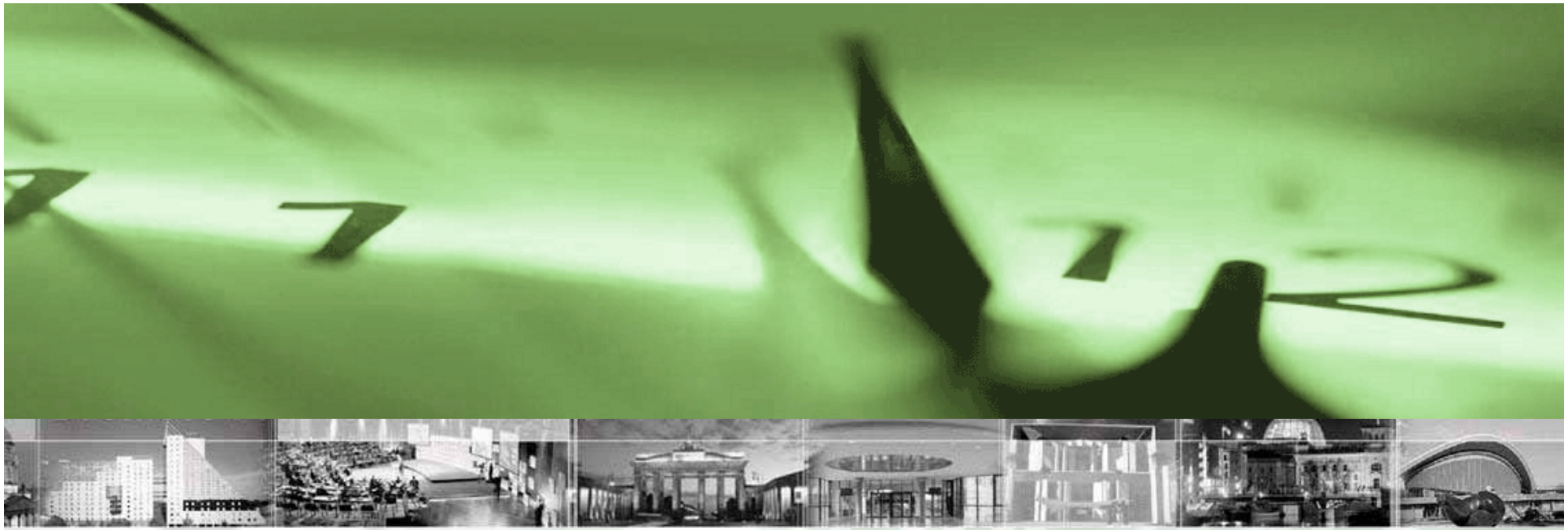

ArKoS

E-Collaboration Architecture for Customer-Driven Business Processes in Inter-Organizational Scenarios

IFIP Conference 2005, Poznan (Poland)

Institute for Information Systems (IWi) at DFKI, Saarbruecken (Germany)
Dipl.-Kfm. Dominik Vanderhaeghen

IWi

Outline

- Motivation
- Foundation
- E-Collaboration **Architecture and Life-Cycle**
- Conclusions and future research

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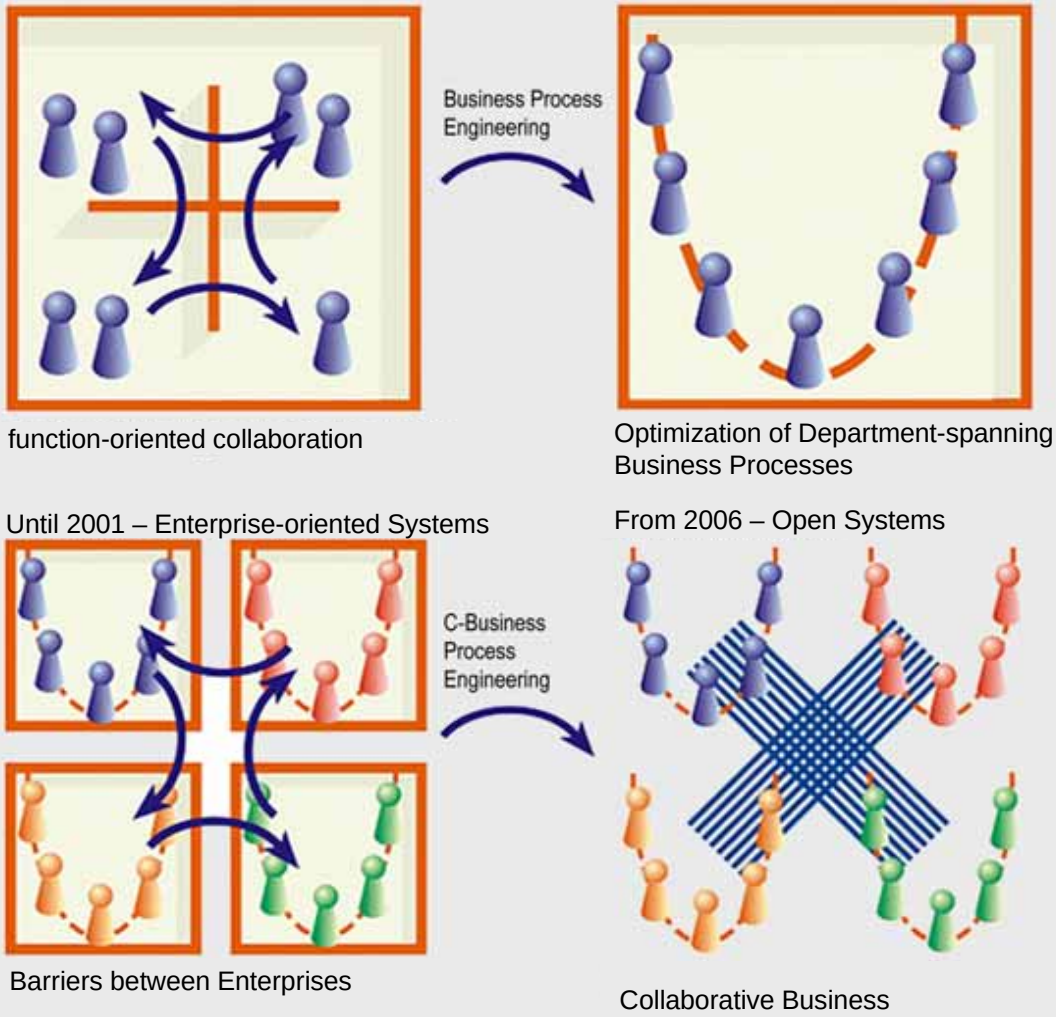
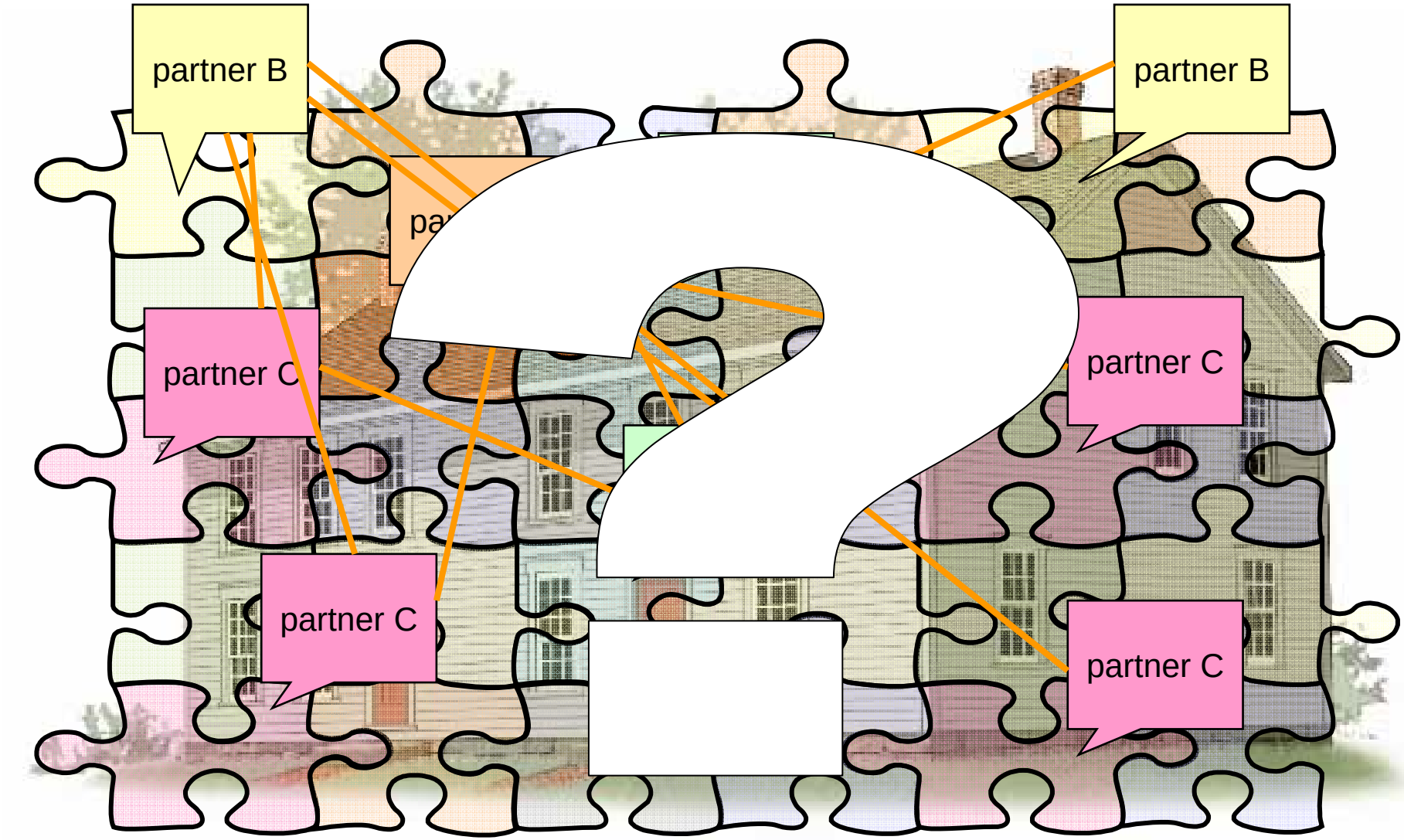
Organizational Changes



Complexity: Coordination (!)



Problems

- **heterogeneous** set of collaboration partners
- **complex** interconnection between collaboration partners
- **service-oriented** design of process and constellation instances

→ high coordination efforts for the design, implementation and controlling of e-collaboration projects in e.g. the construction domain

Approaches

Development of
methods and **tools**
for the inter-organisational
management of e-collaboration
projects

- modelling methods and tools for description and analysis
- procedure models and guidance for the practical implementation
- information systems for the daily support of project work
- frameworks for the supported description, analysis and implementation

- **heterogeneous** set of collaboration partners
- **complex** interconnection between collaboration partners
- **service-oriented** design of process and constellation instances

→ high coordination efforts for the design, implementation and controlling of e-collaboration projects in e.g. the construction domain

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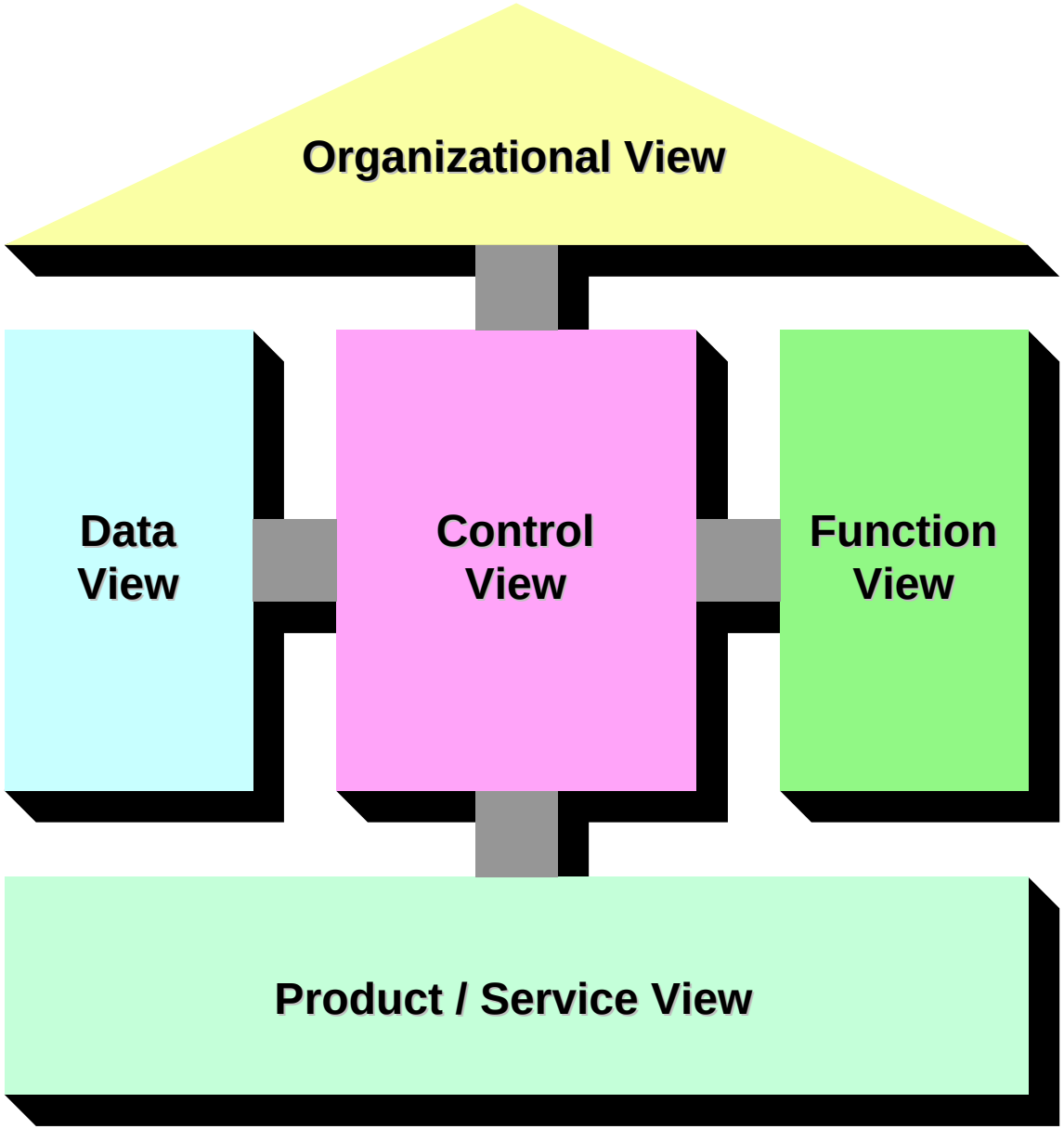
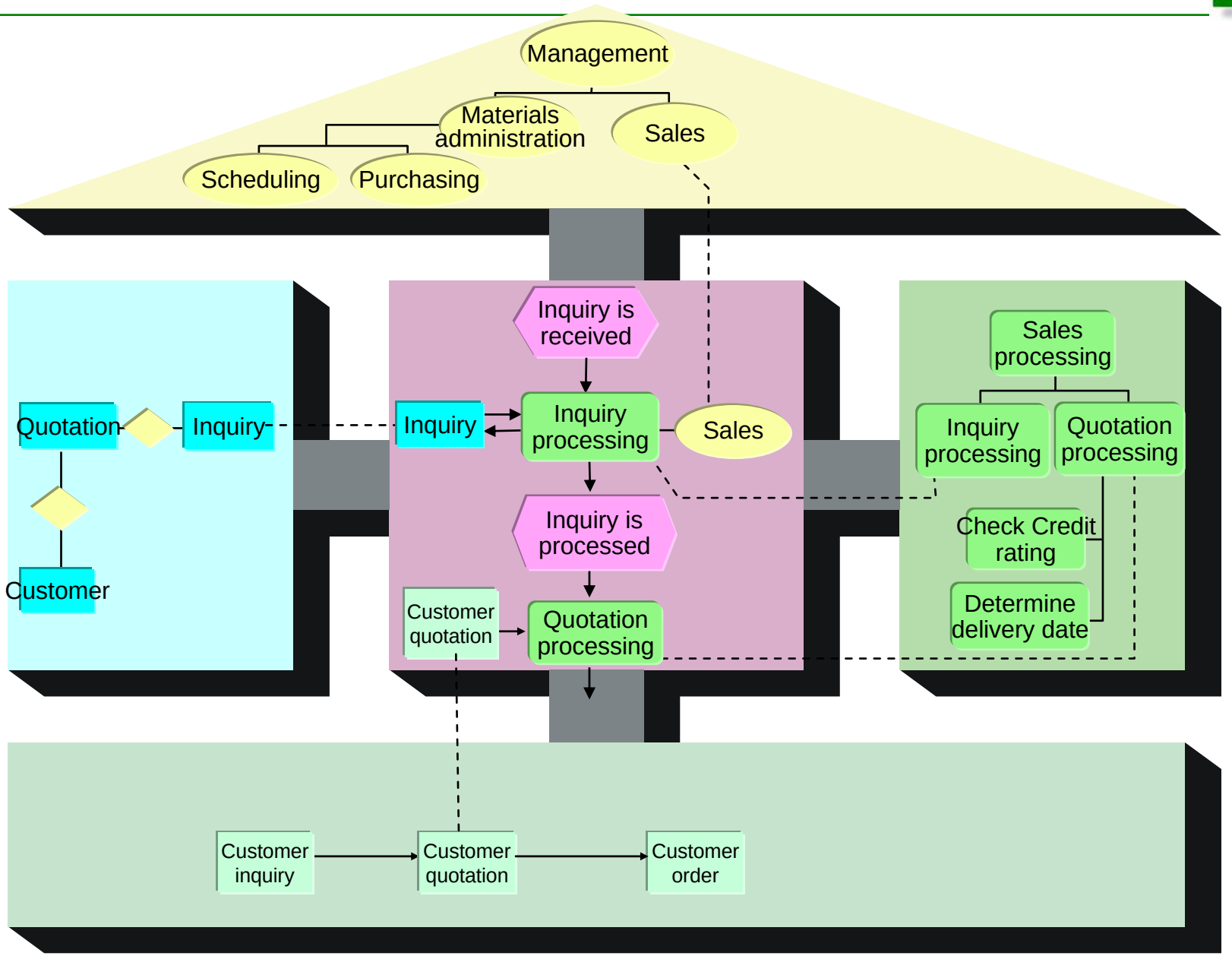
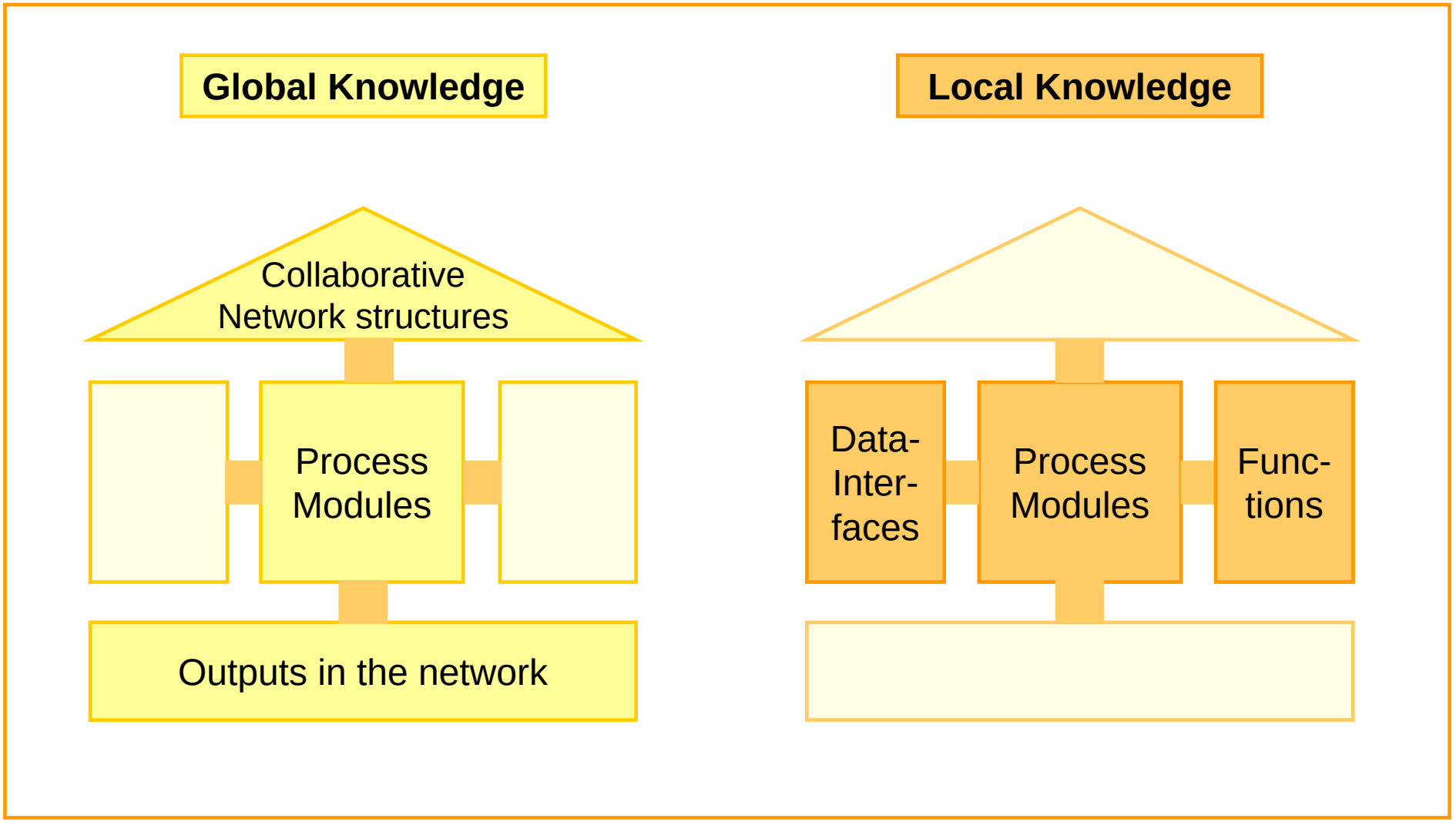
Existing BPM concepts: ARIS House of Scheer



The ARIS House of Scheer



Global contra Local Process Knowledge



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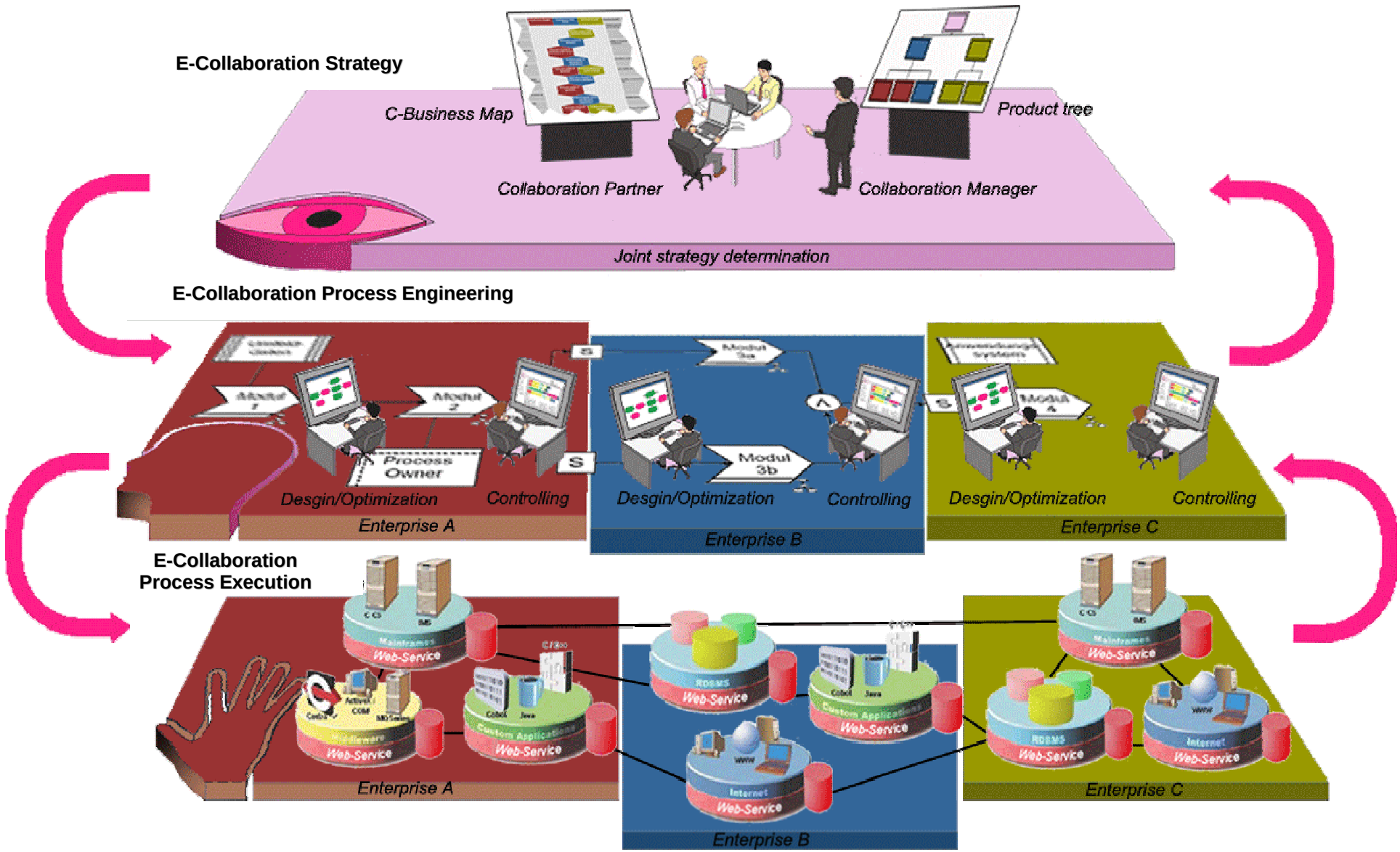
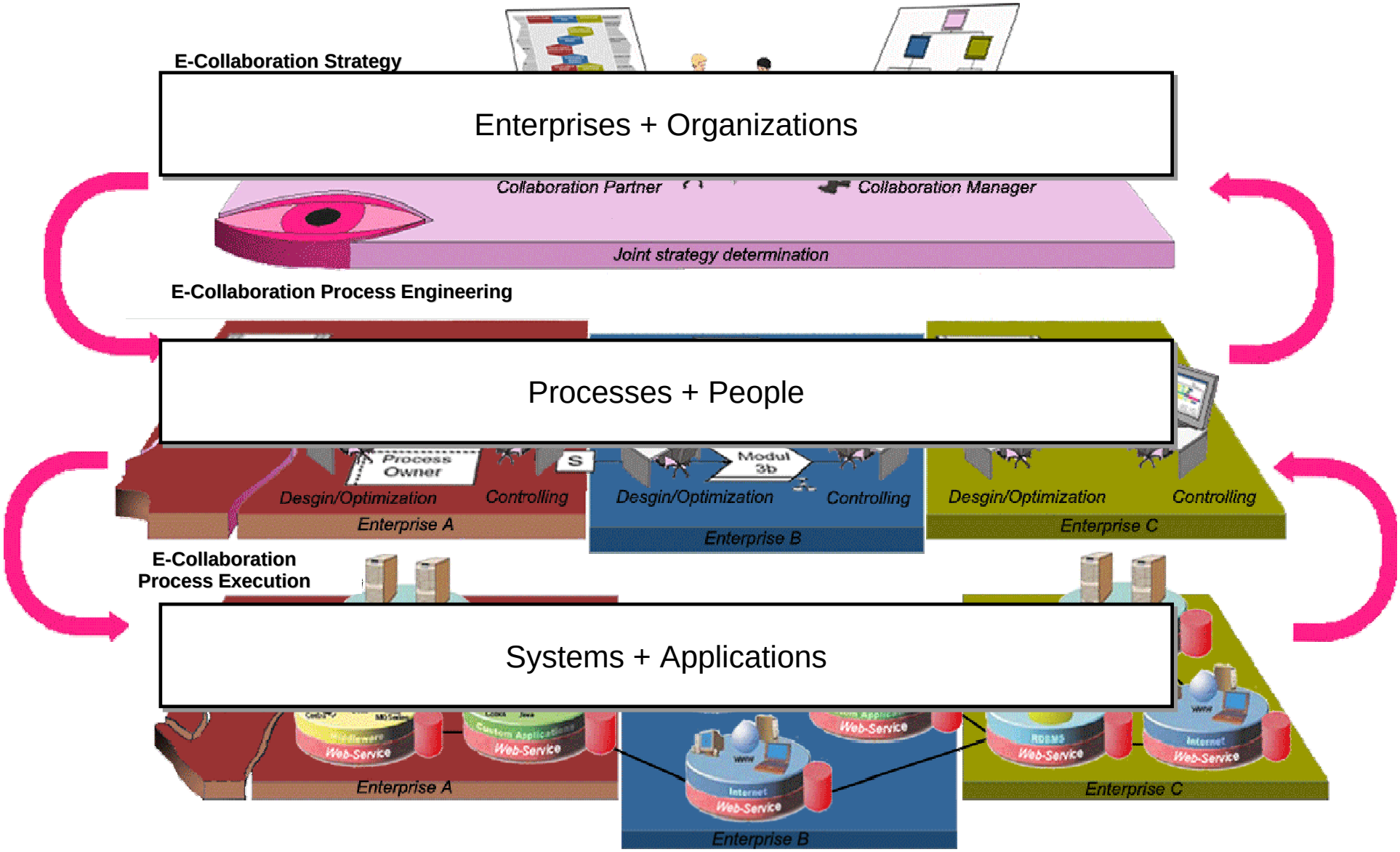
E-Collaboration Architecture



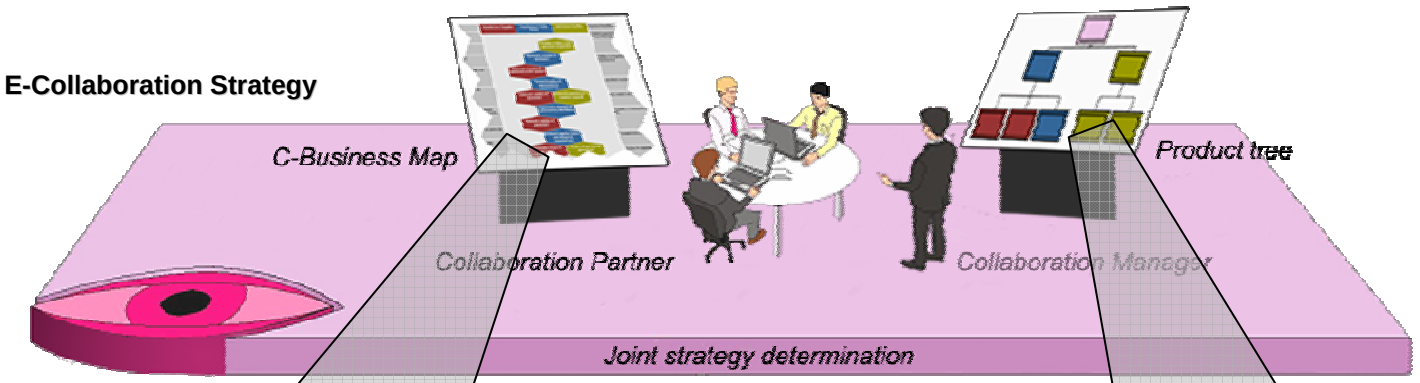
Bring together…



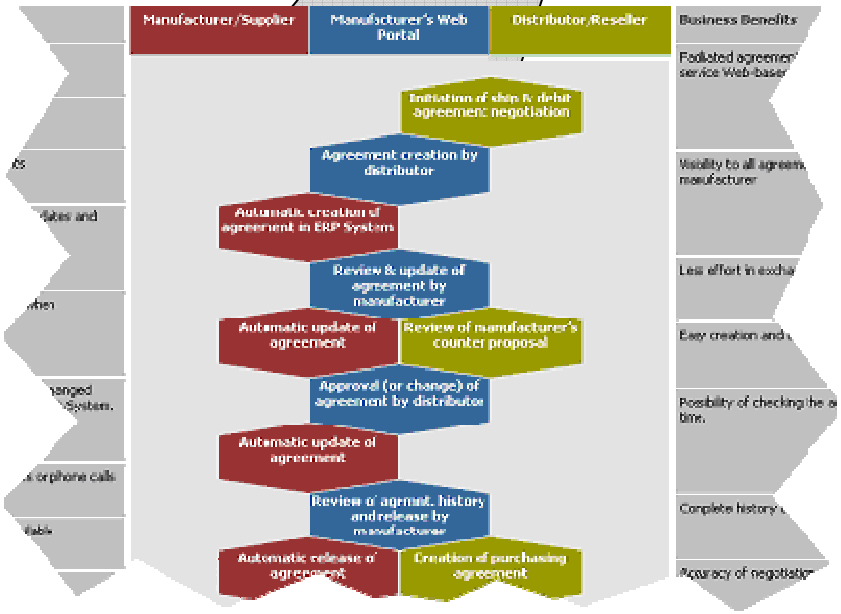
(1) E-Collaboration Strategy

- **awareness of an expected win-win situation through collaboration**
  - definition of individual and global goals
  - global (partner) input and global (partner) output
  - role-based definition of partner constellations
  - IT-architectures to be supported
  - …

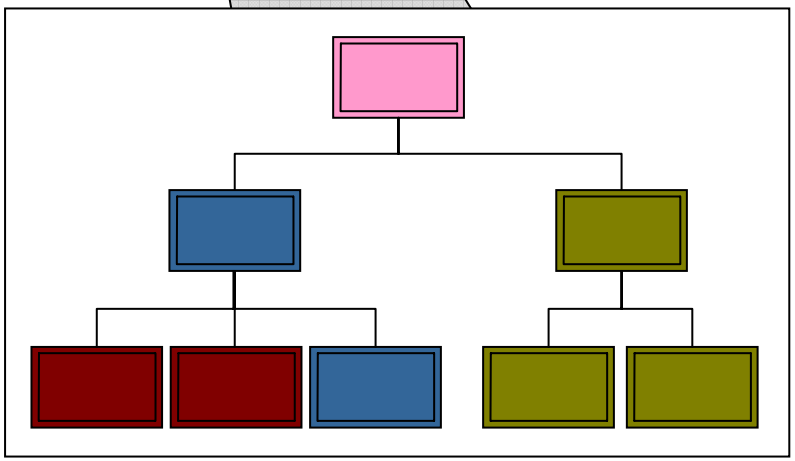
(1) E-Collaboration Strategy



C-Business Diagramms



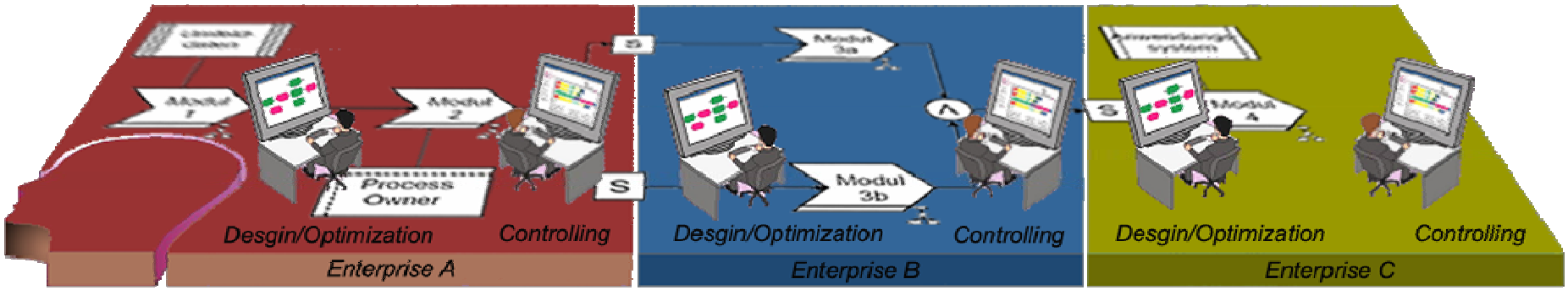
Product Tree



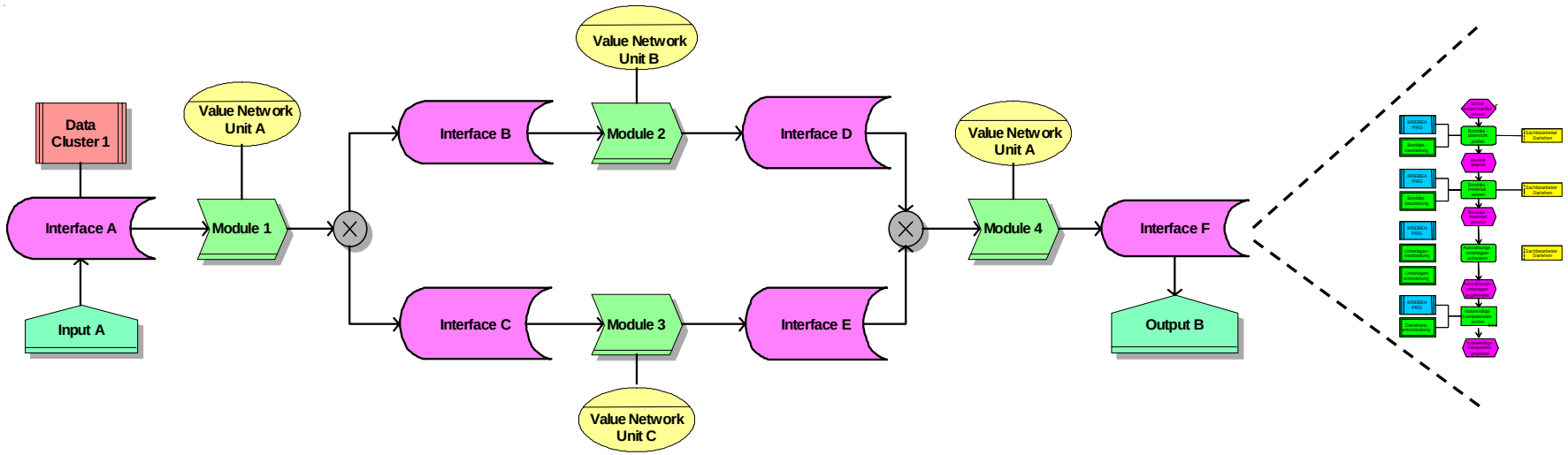
(2) E-Collaboration Process Engineering

- **design, implementation and controlling of inter-organisational business processes**
  - (enterprise-) internal and external view
  - share sometimes critical knowledge to direct business partners
  - hide the business secrets and generate public views
  - But: obtain an integrated view!

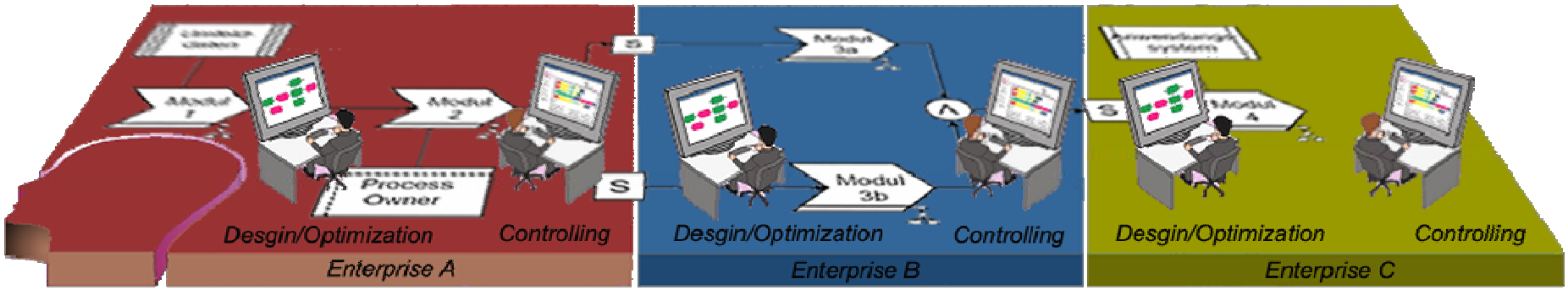
E-Collaboration Process Engineering



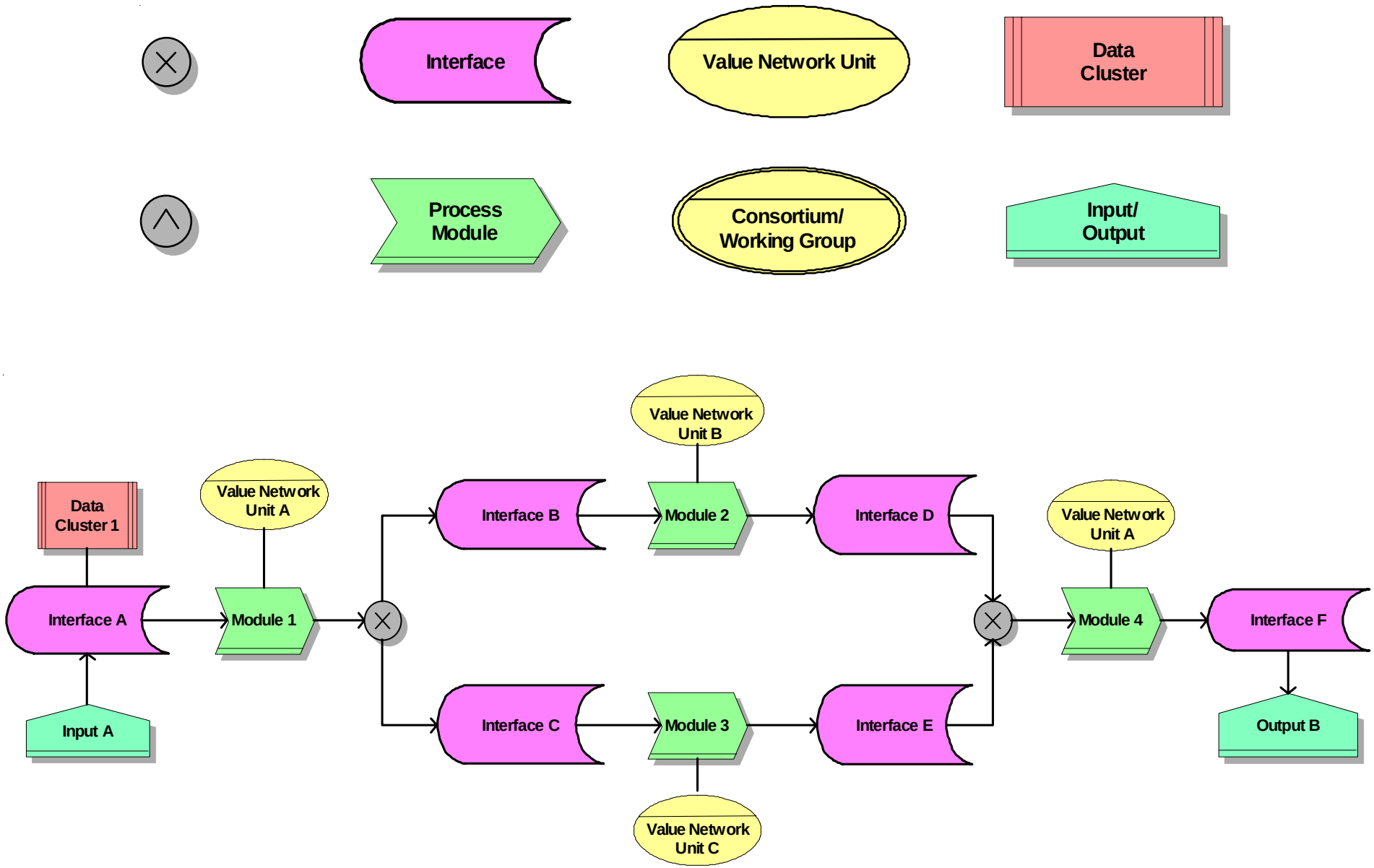
(2) E-Collaboration Process Engineering



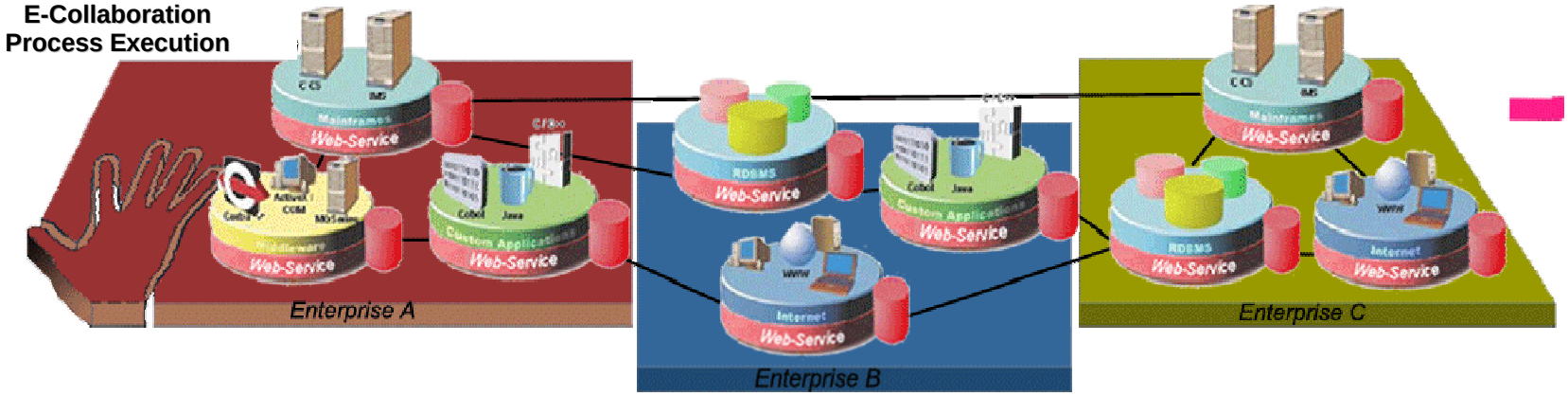
E-Collaboration Process Engineering



Developed Modeling Languages (excerpt): PMC

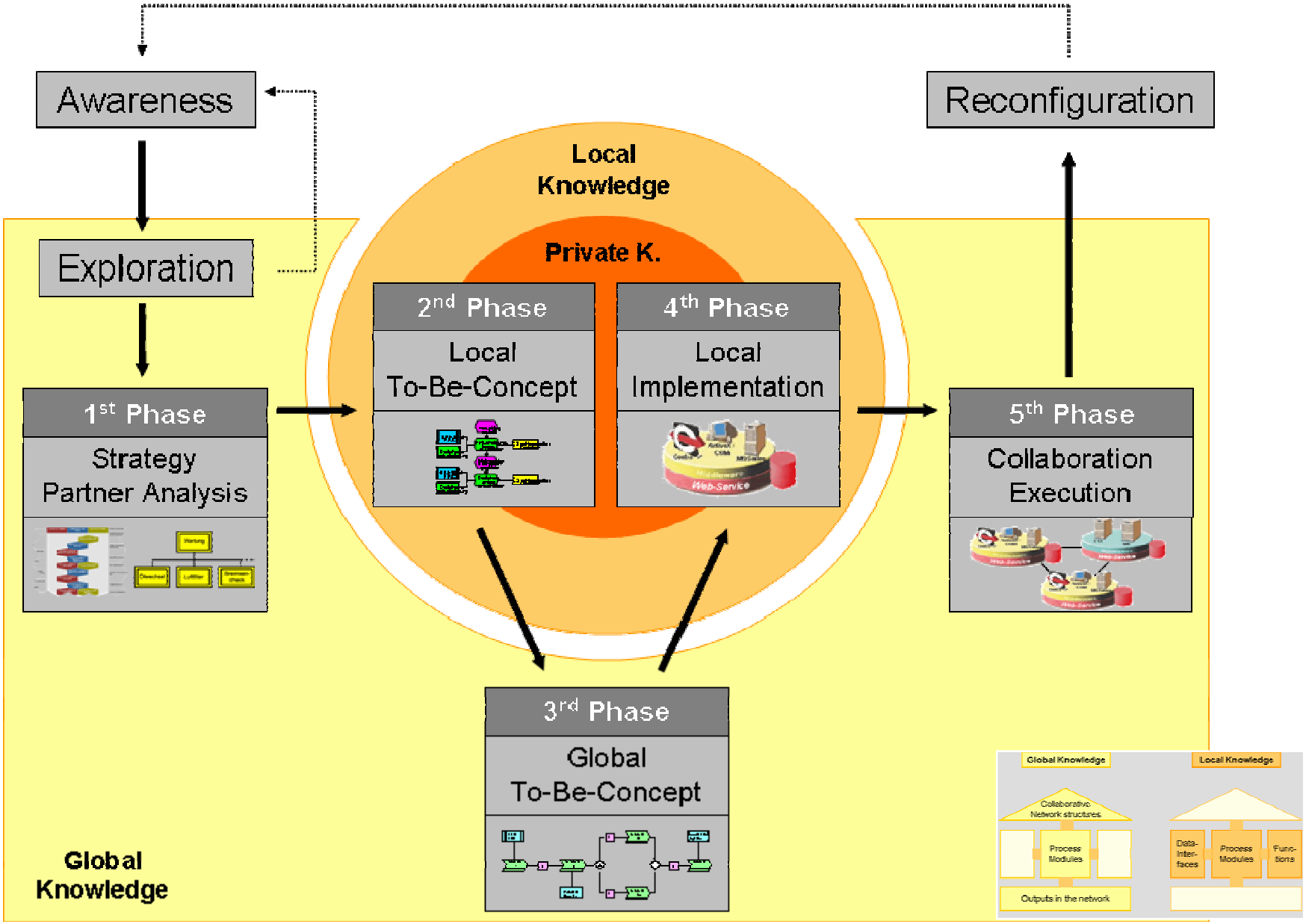


(3) E-Collaboration Process Execution



- **inter-organisational and process-oriented integration of applications**
  - re-use/map business logic form the 2nd layer
  - consider open standards for integration
  - Enterprise Application Integration, Web-Services…

E-Collaboration Life-Cycle



ArKoS

Architecture for Collaborative Scenarios

01.10.2003 – 30.09.2006

Modeling methods • Integrating Architecture

Reference Models • Software • Showcases

Enabling dynamic cooperation and collaboration

Funded by

Bundesministerium für Bildung und Forschung

Dissemination – status quo

Scientific dissemination (excerpt):

- Presentations at international conferences
- Research collaborations

Exploitation by companies:

- Industrial workshops
- Cross-sector transfer
  - Industrial Enterprises
  - Service Industry
  - Public Administration

Outline

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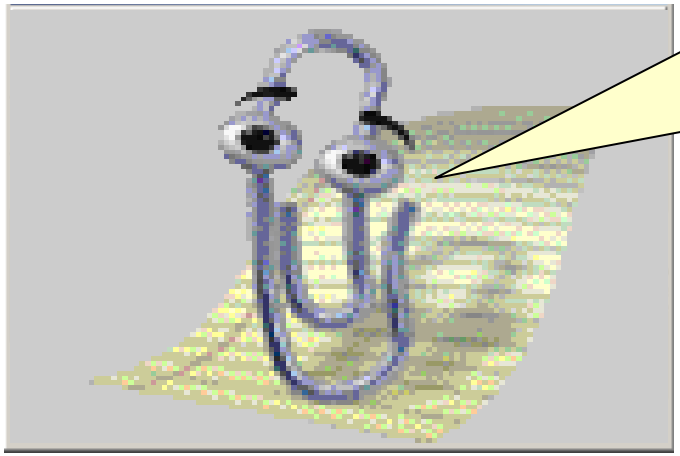
Conclusions & Future Research

- Improve **inter-organisational** business processes management in collaboration scenarios
  - **consistent** and **integrated** approaches (architecture, knowledge classification, life-cycle, modelling languages)
- Implementation and Evaluation
  - definition of **showcases** from the application domain „construction industry“
  - design and implementation of **prototypes** for “cost and error management” processes

Dominik Vanderhaeghen
Institute for Information Systems (IWi)
at the German Research Center for Artificial Intelligence (DFKI)



Thank you for your attention!

What would you like to do?

- question
- comment
- criticize

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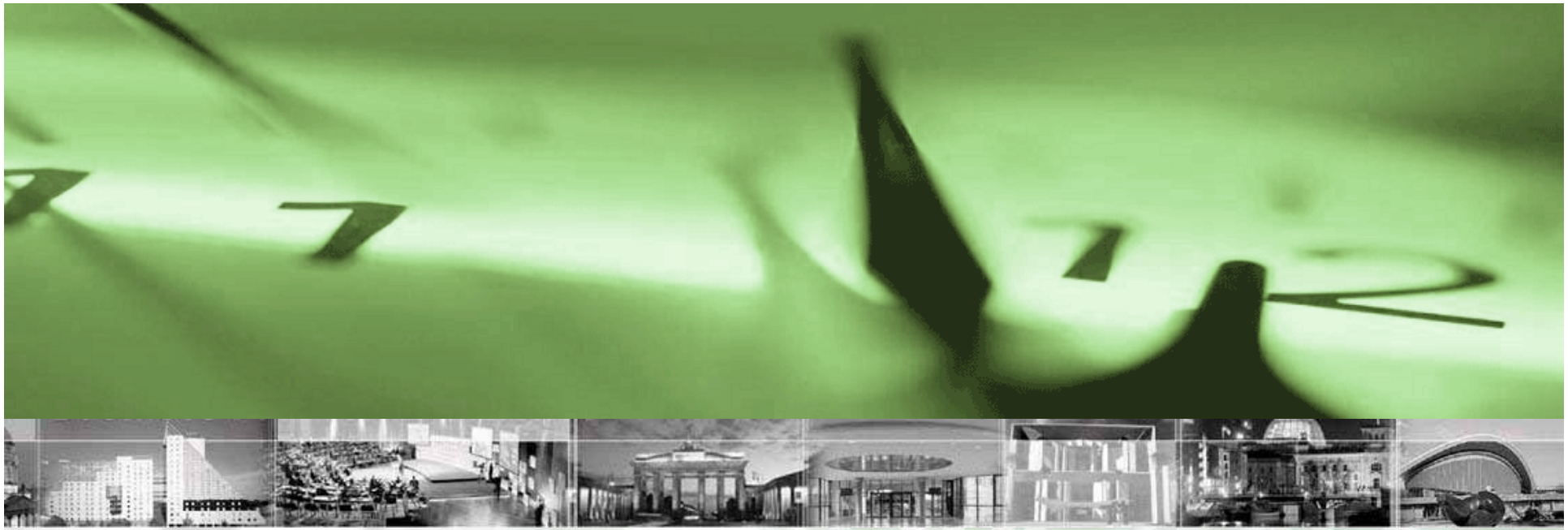

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Research consortium ArKoS
Architecture for Collaborative Scenarios

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