Modeling and Execution of Process-driven Adaptive Service Orchestrations

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Project Group Presentation
January 31st, 2011

Research Group Database and Information Systems
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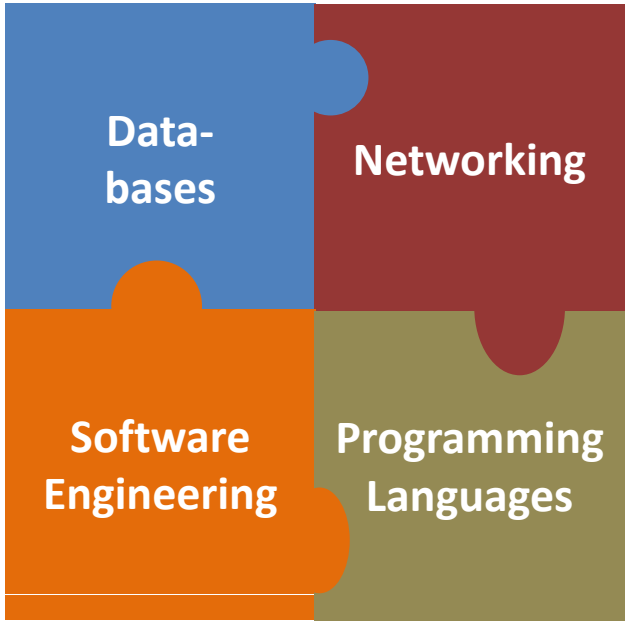
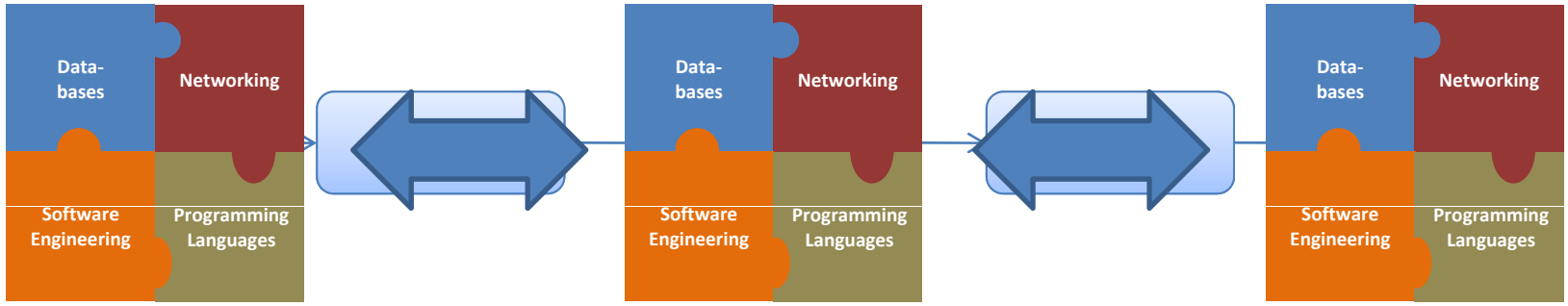
SW Development Paradigm Shift

Traditional SW Development comprises:



SW Development by Service Orchestration:



Web 2.0 Service APIs

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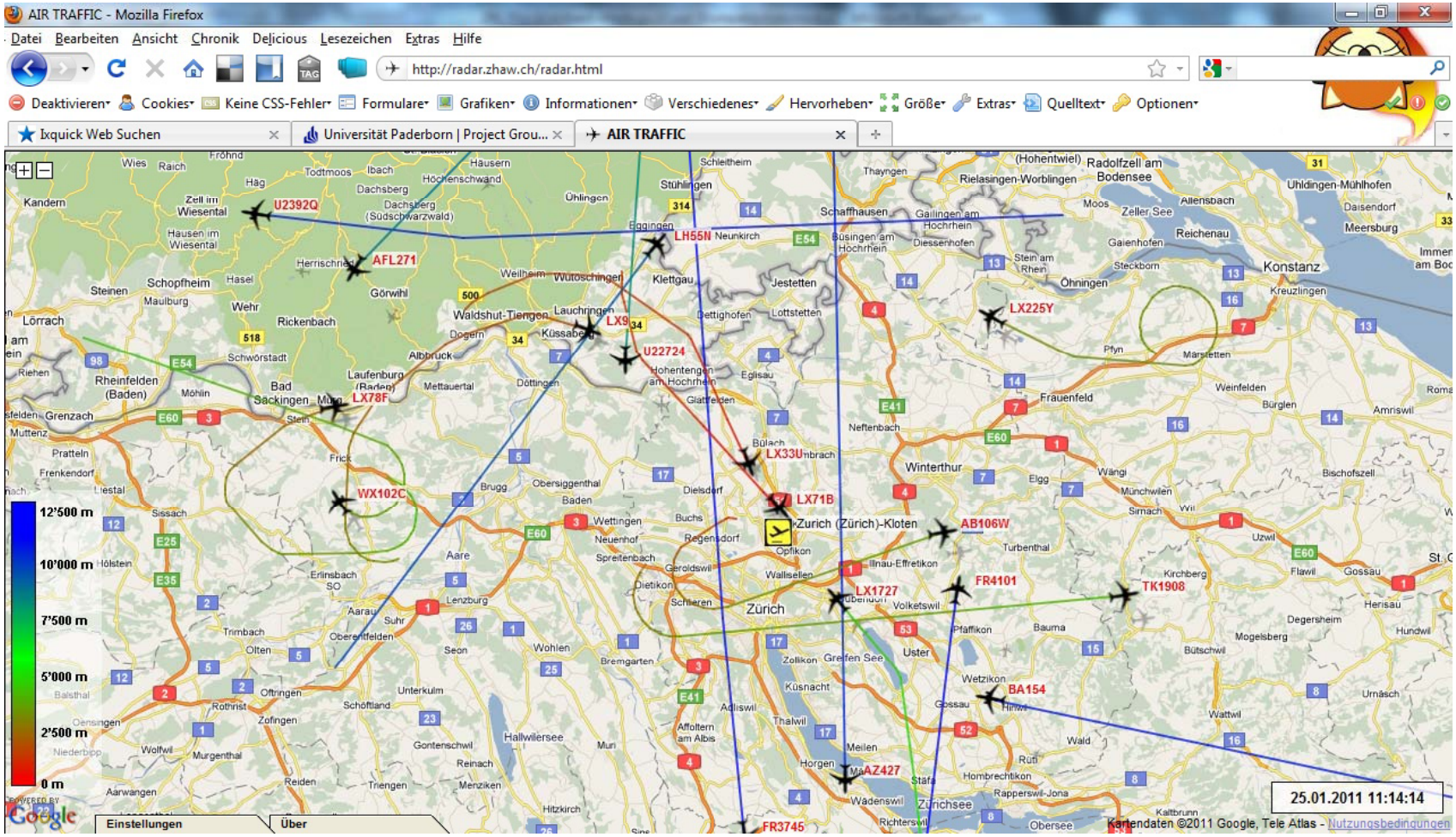
MashUp Example: Air Traffic

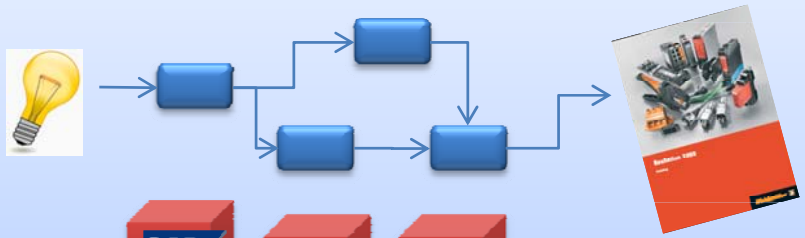


Case Studies: Composite Applications are on their way to the real world of business

syskoplan
LIVING NETWORK

Smart Solution…

Guiding the business users through a collaborative process to bring a new product from the idea to the market.



Master Data Management

ERP

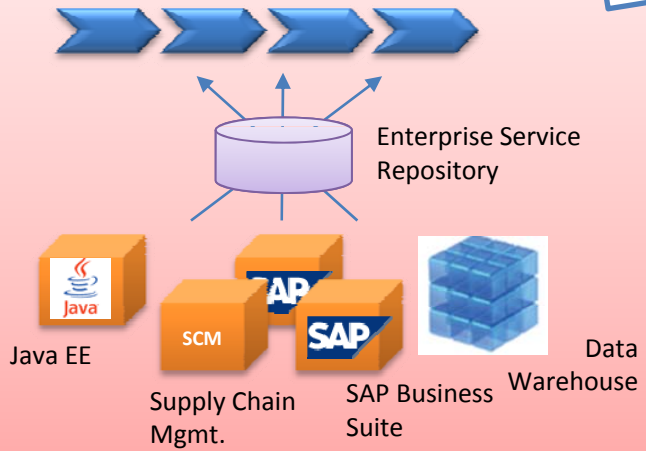
Product Information Mgmt.

Powered by SAP NetWeaver© Composition Environment

Weidmüller

Solution is already live at Weidmüller Interface, a leading manufacturer of electrical connectivity solutions, used by 100+ employees.

…Big Deal



Enterprise Service Repository

Java EE

Supply Chain Mgmt.

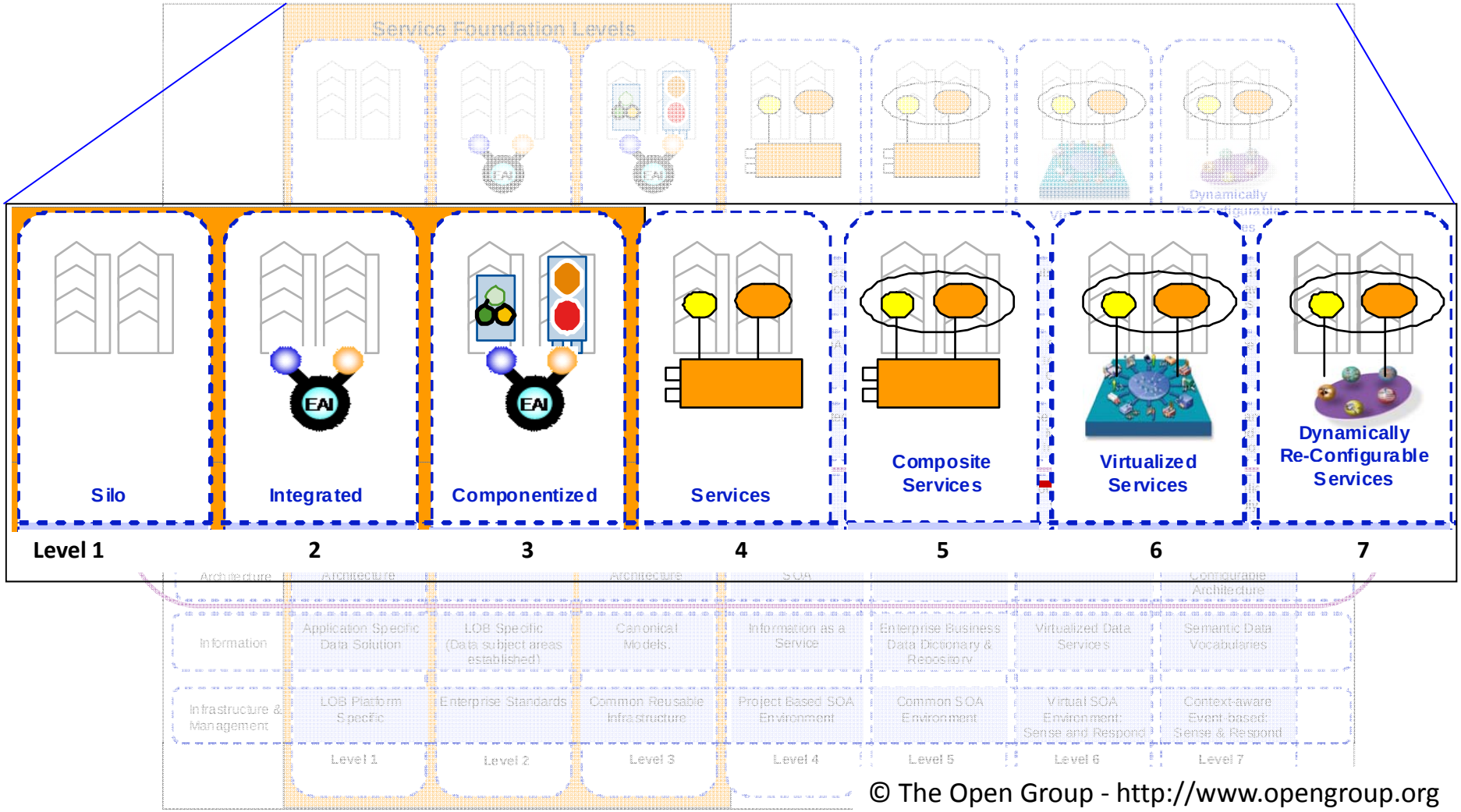
SAP Business Suite

Data Warehouse

Assembling End-to-End processes (integrating supply chain and customer relations) by using process components from a heterogenous system landscape.

This project is currently running at a multi-national retailing company, targeting to 500+ users and 30+ business systems.

Maturity Levels for Integrated Application Landscapes



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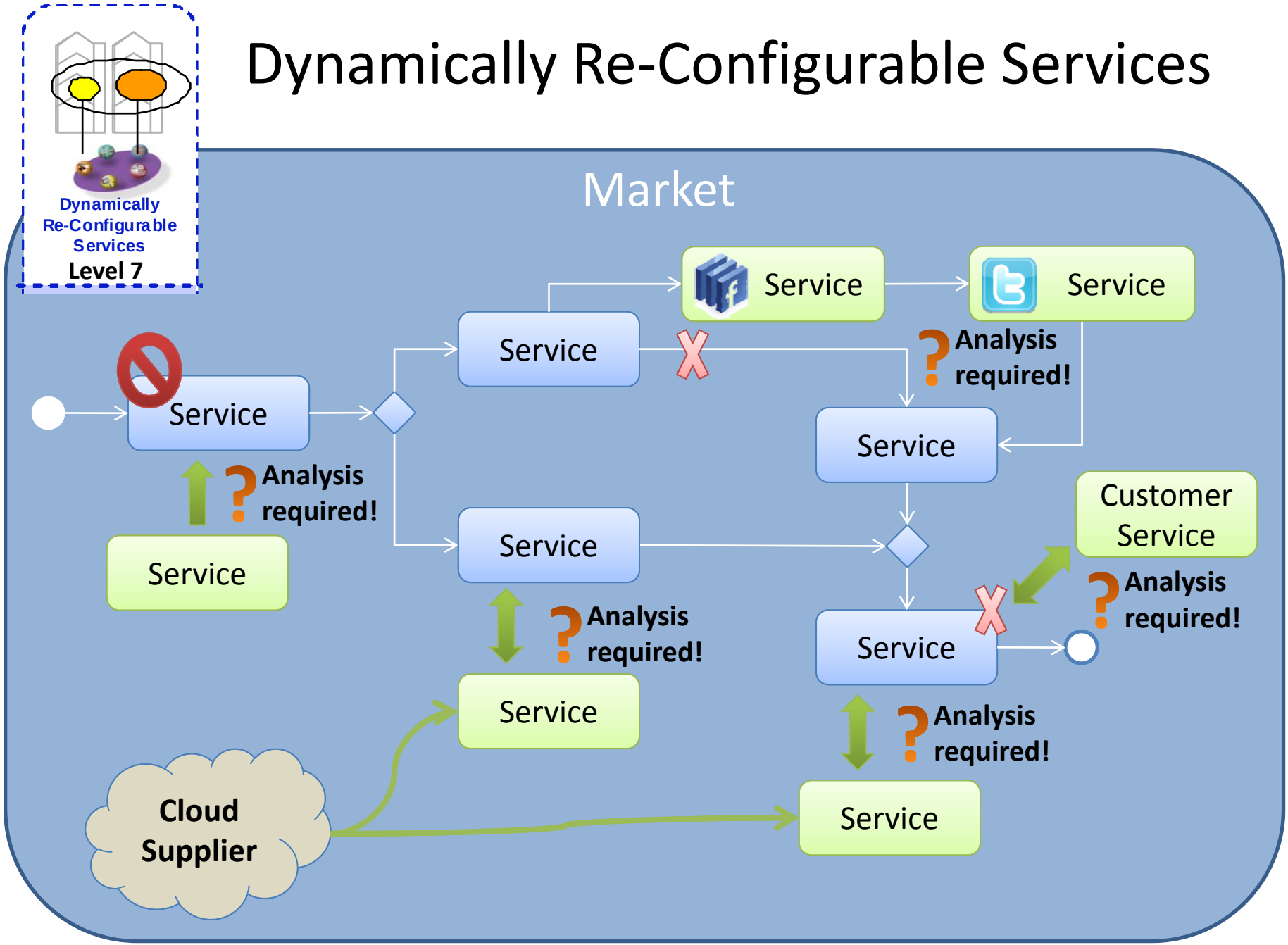
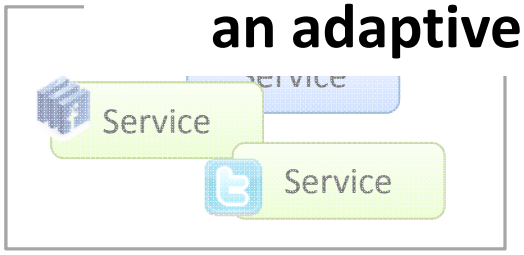
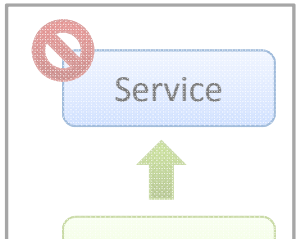
Dynamically Re-Configurable Services



Challenges on Adaptive Service Orchestrations

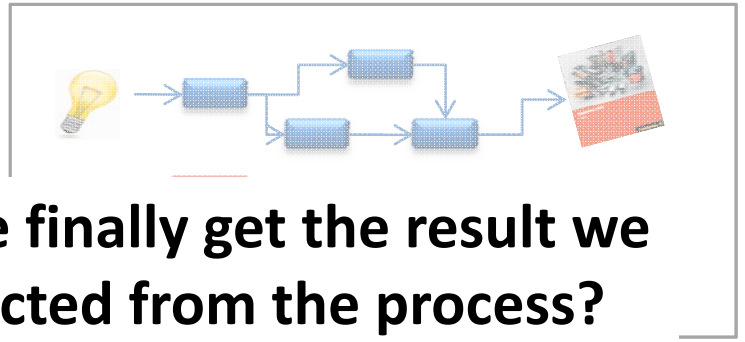
What is an appropriate service for an adaptive orchestration?





How can we identify and specify uncertainty factors and threats?

Is another service an adequate substitution?

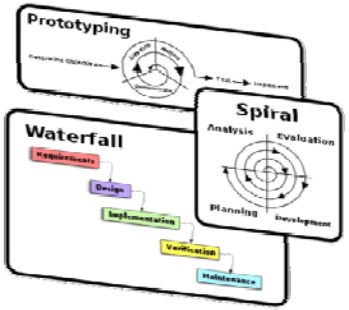


Did we finally get the result we expected from the process?

How to meet these challenges?

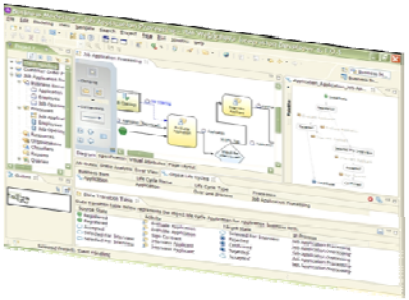
Develop a ***methodology*** to identify adaptive service orchestrations ...

- State-of-the-art specification approaches
- Definition of services
- Systematic identification of uncertainty factors



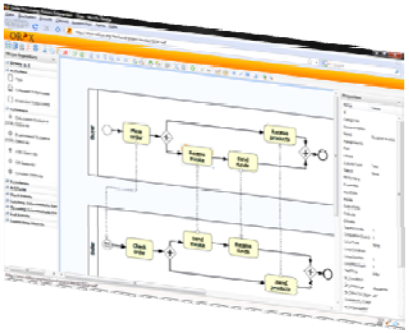
... that are ***modeled*** and ***analyzed*** by ...

- Formalized modeling languages
- Quality and analysis attributes
- Execution and analysis of service orchestrations



...an implemented ***workbench***.

- Evaluation of existing tools
- Tool support for usage in industrial projects



We want **you** for ME PASO ...

Benefits

- Direct cooperation with industrial partners
- Realistic scenarios, competent advisors, contacts
- Networking, master theses, publications, ...

Organization

- Module SWT
- Summer term 2011 - winter term 2011/12, RG Engels
- Seminar phase with invited talks; project phase

Questions?

- Benjamin Nagel – bnagel@s-lab.upb.de

- http://is.upb.de/index.php?id=mepaso