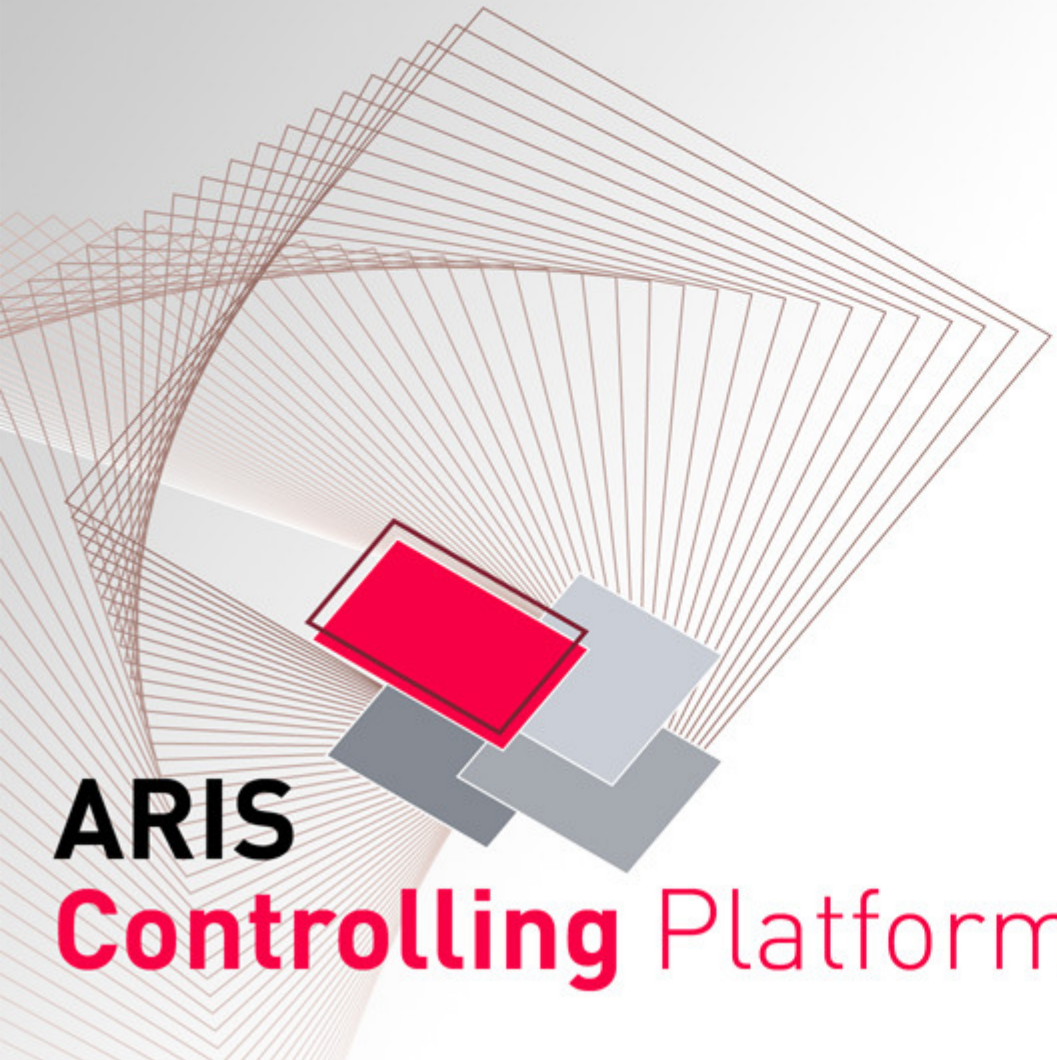


From Event-driven modeling to Process monitoring

Dr. Helge Hess
IDS Scheer

Event Processing
Symposium
14 – 16 March 2006

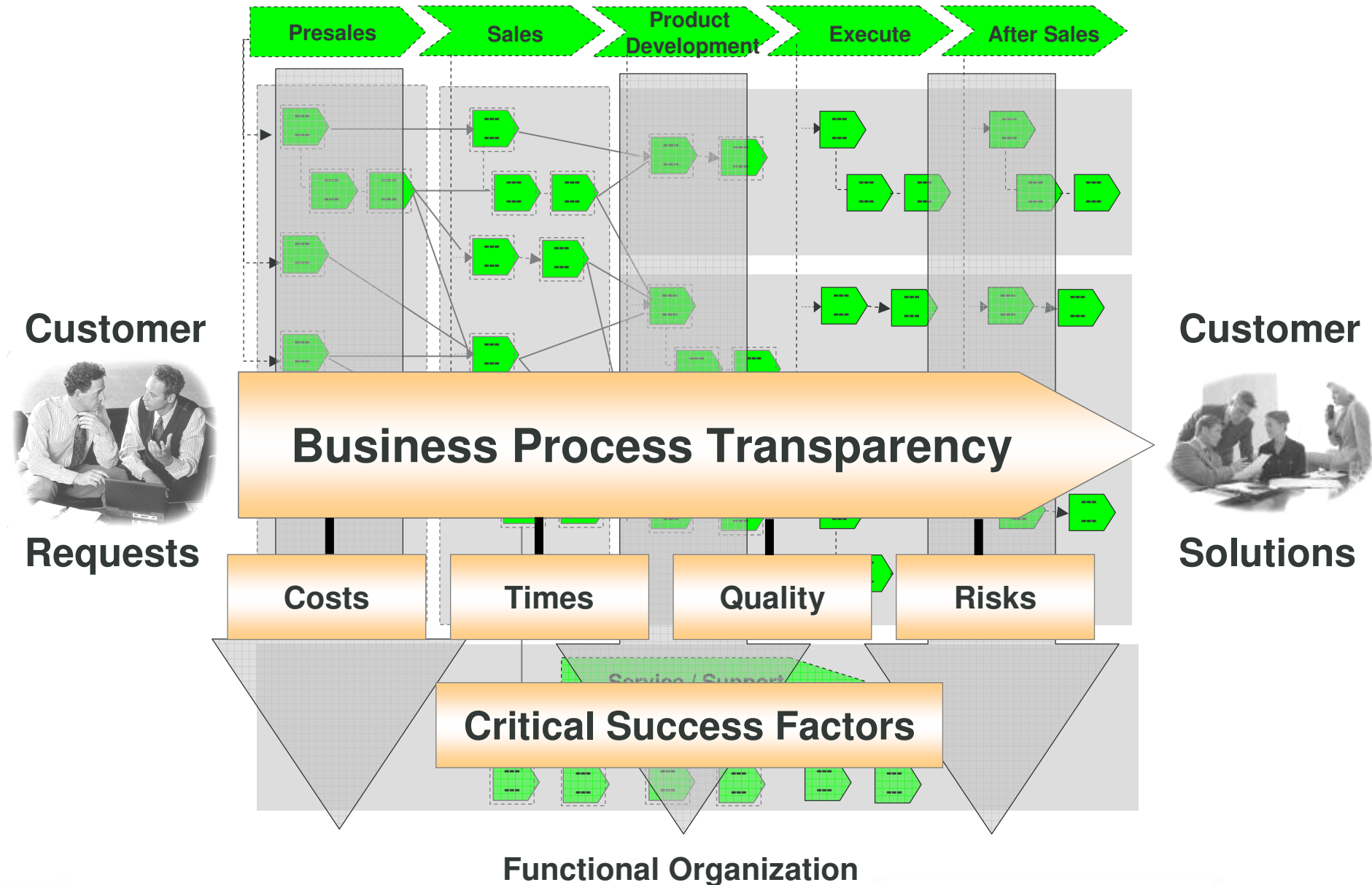
Parallel session
Workflow (BPM)

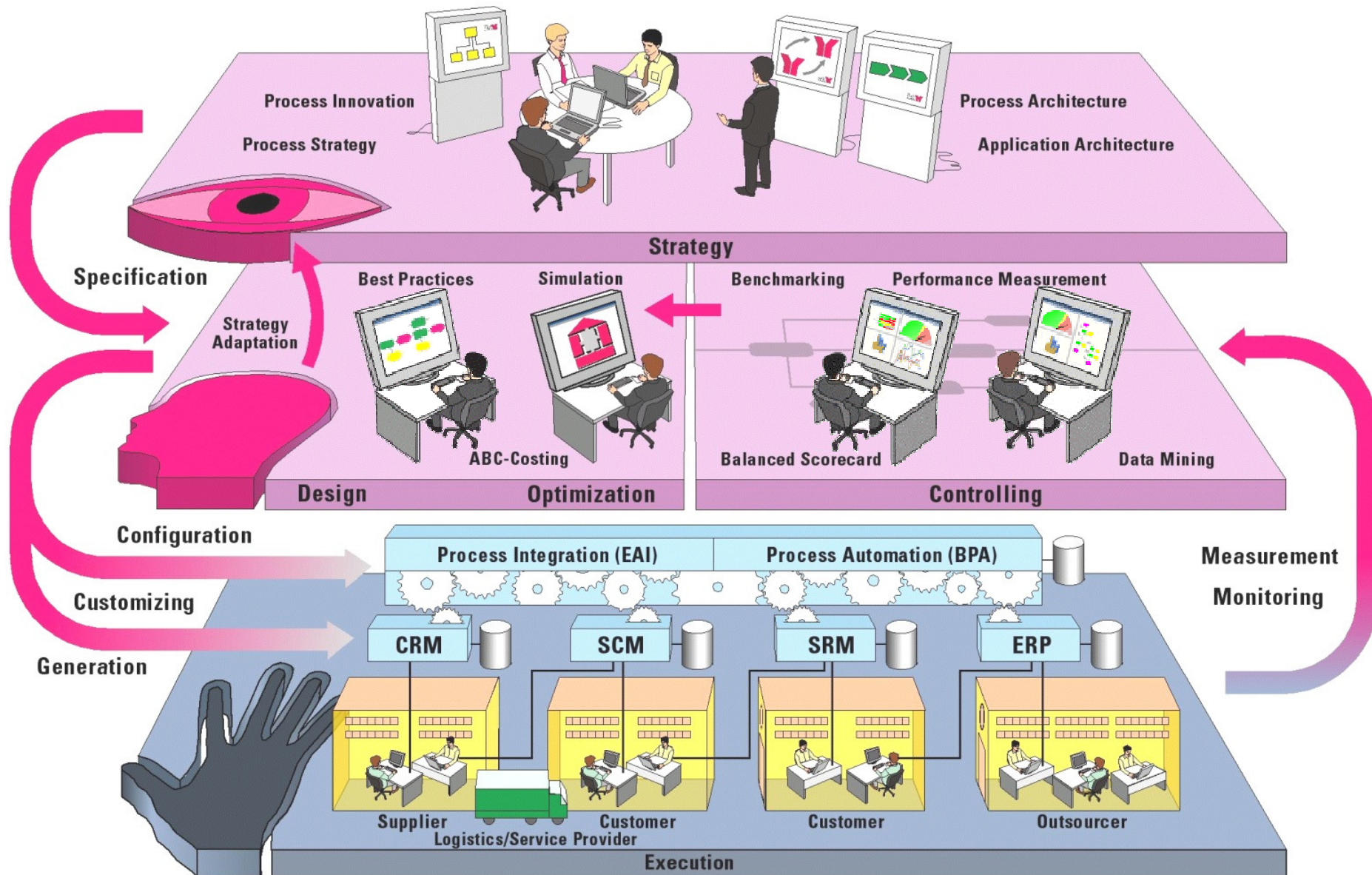
The logo features a stylized, overlapping geometric design of lines and shapes in shades of gray and red, creating a sense of depth and movement. The text 'ARIS' is in bold black, and 'Controlling Platform' is in red.

ARIS
Controlling Platform

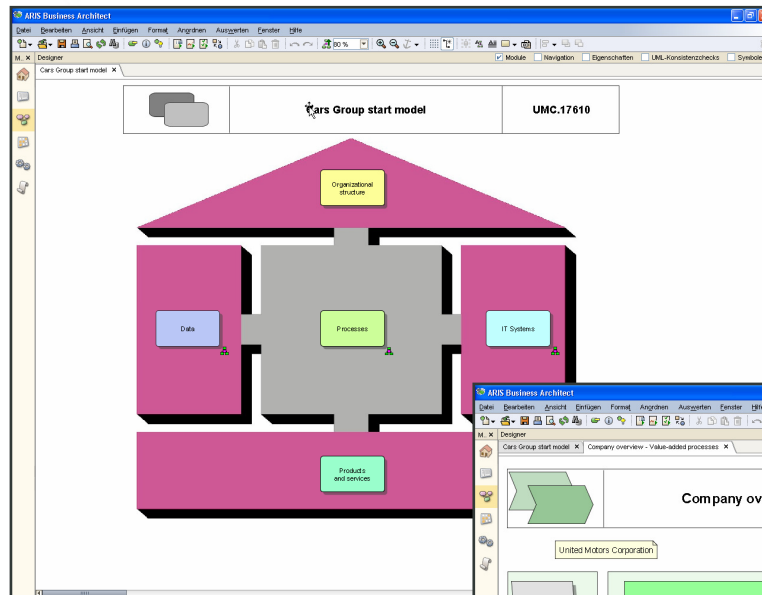
- ▶ **Founded 1984 by
Prof. August-Wilhelm Scheer**
- ▶ **Listed in German TecDAX, IPO 1999**
- ▶ **Consulting and software for Business Process
Management**
- ▶ **2.500+ employees worldwide**
- ▶ **Subsidiaries in 23 countries, with partners and
subsidiaries in over 50 countries**
- ▶ **Revenues increase in 2005 to € 318 million (55%
outside Germany) and profitable since founding**
- ▶ **EBITA in 2005 € 33,6 Million**





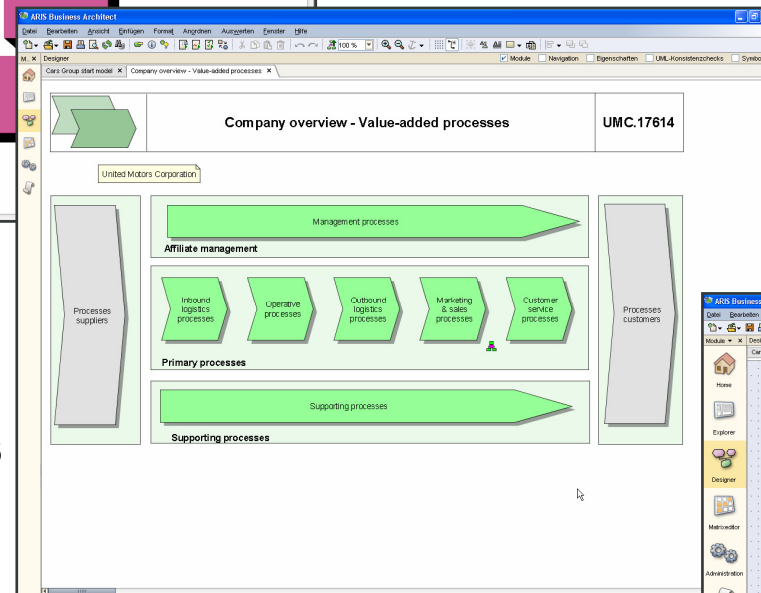


Service-Oriented Business Process Modeling

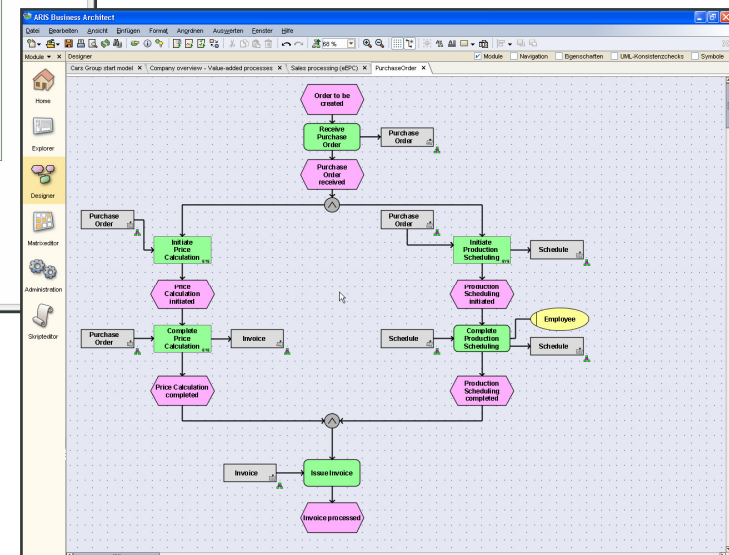


Company BPM Model

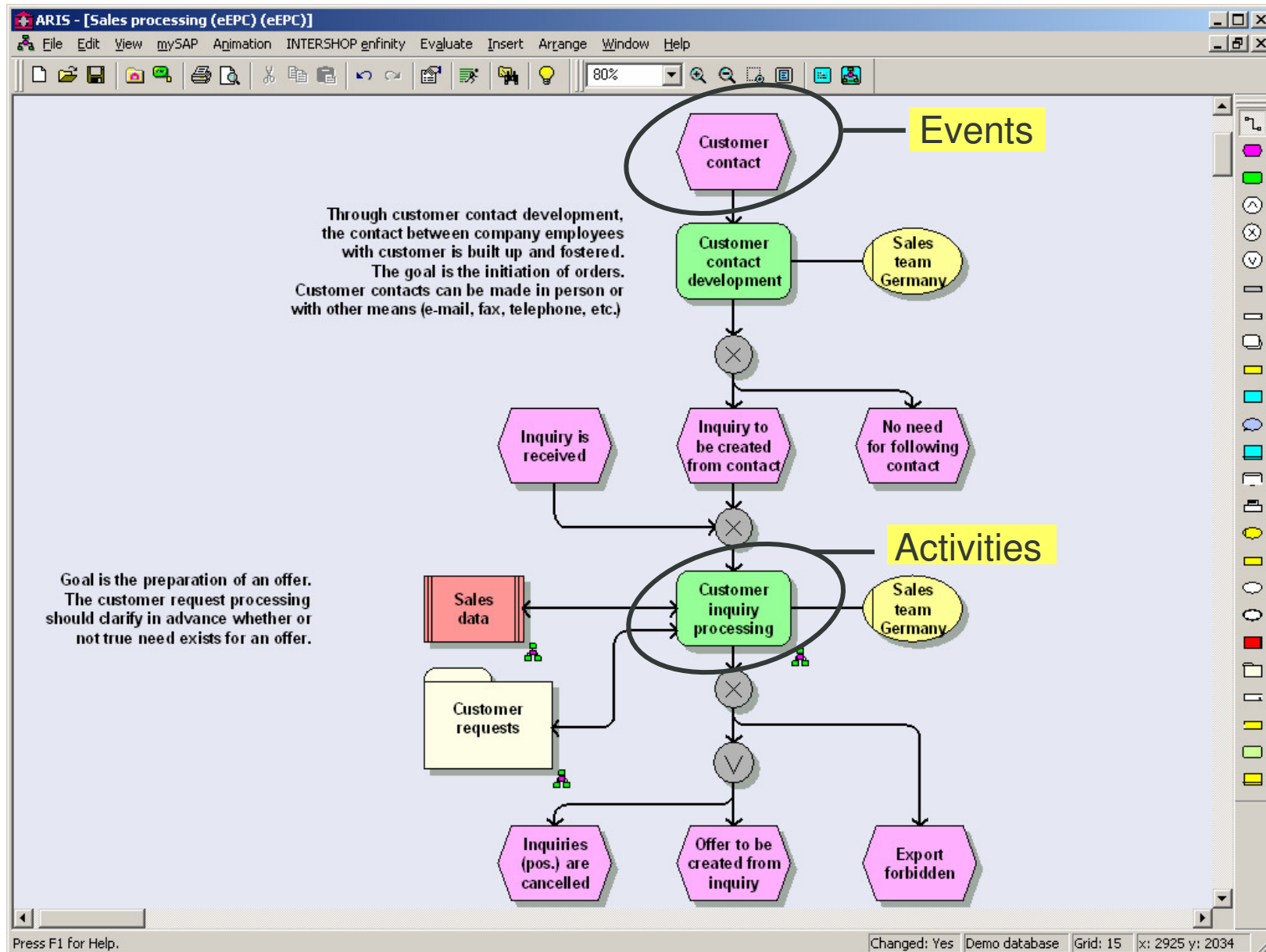
Company Processes Overview

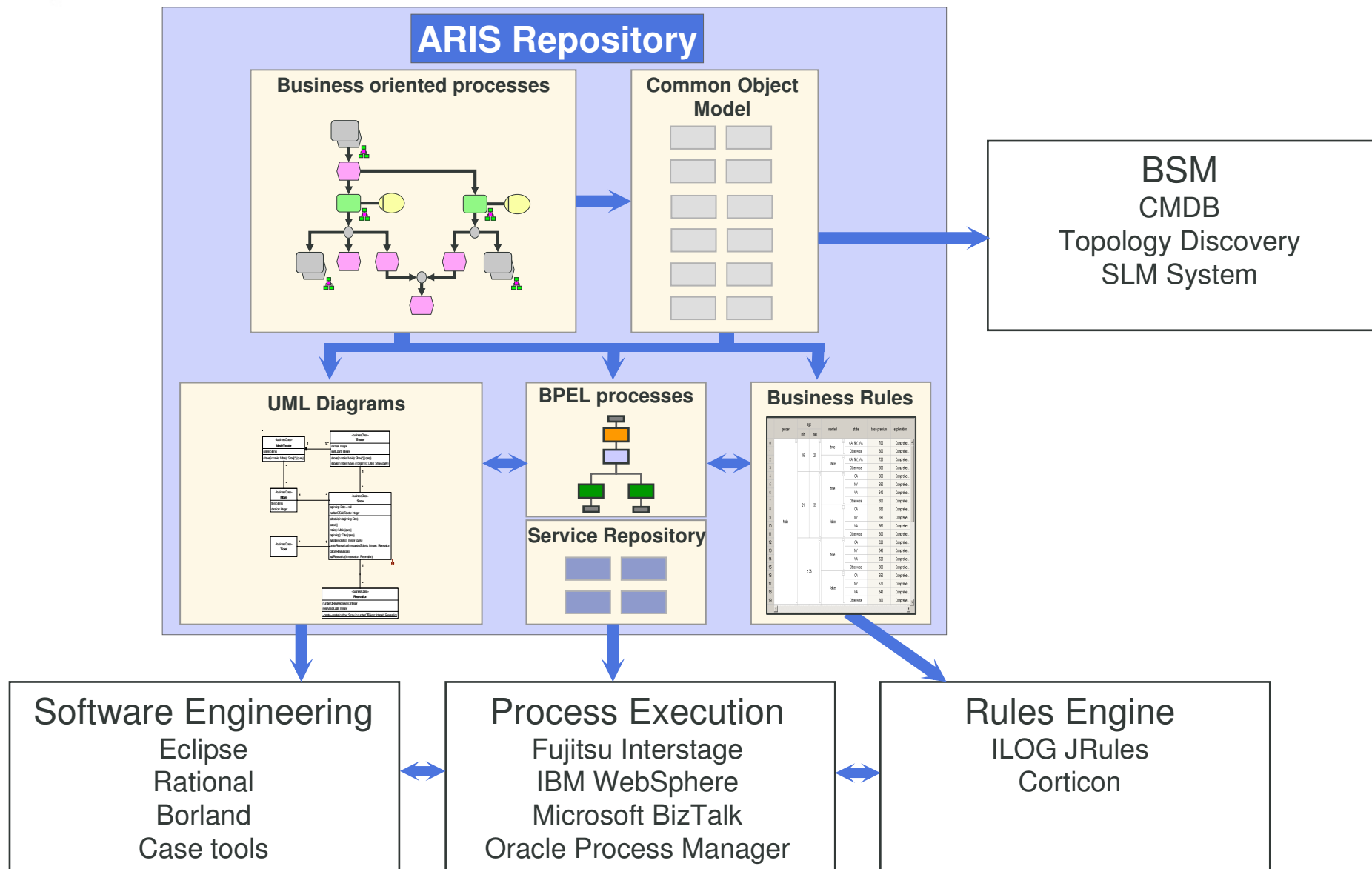


Company Service-Oriented Process

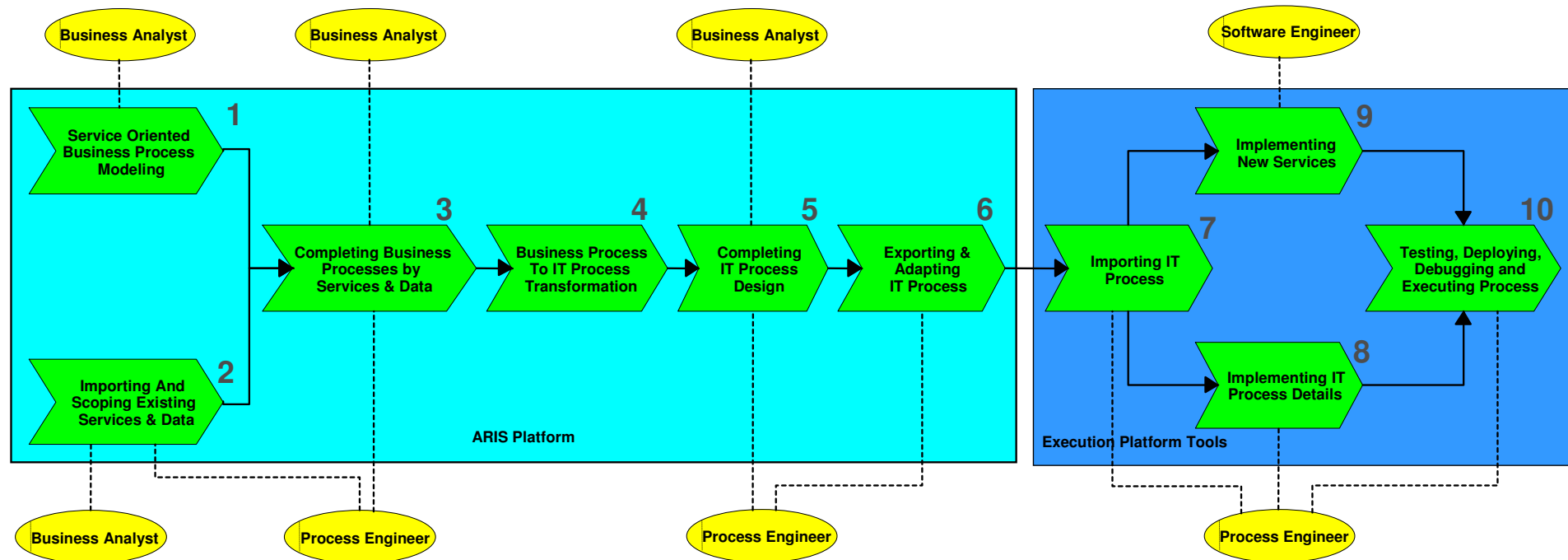


Event-Driven Process Chain





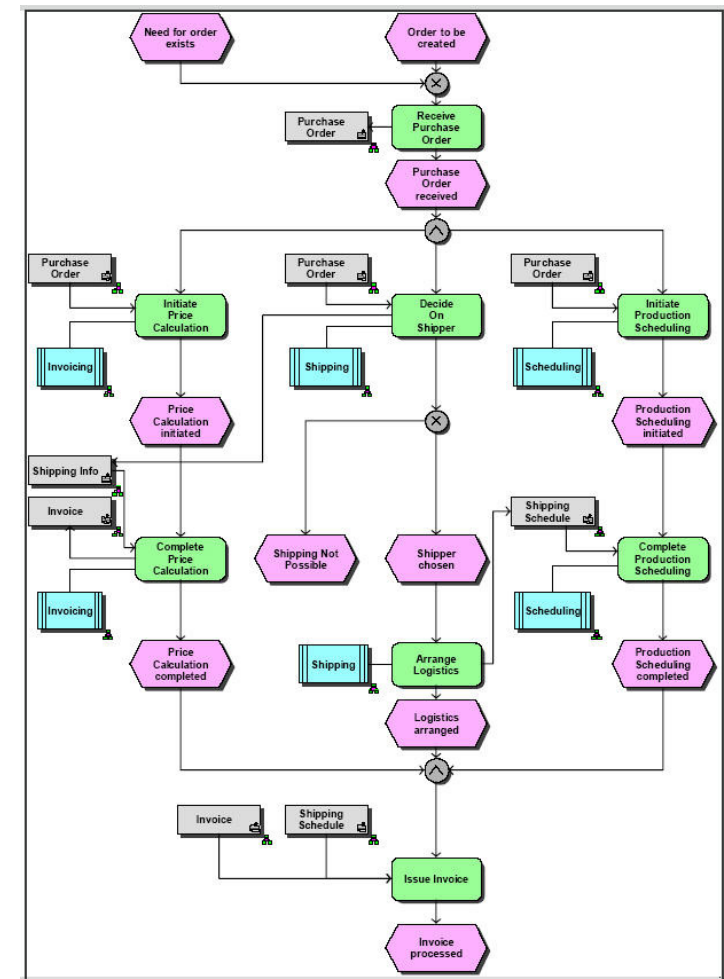
10 Steps To Process Execution



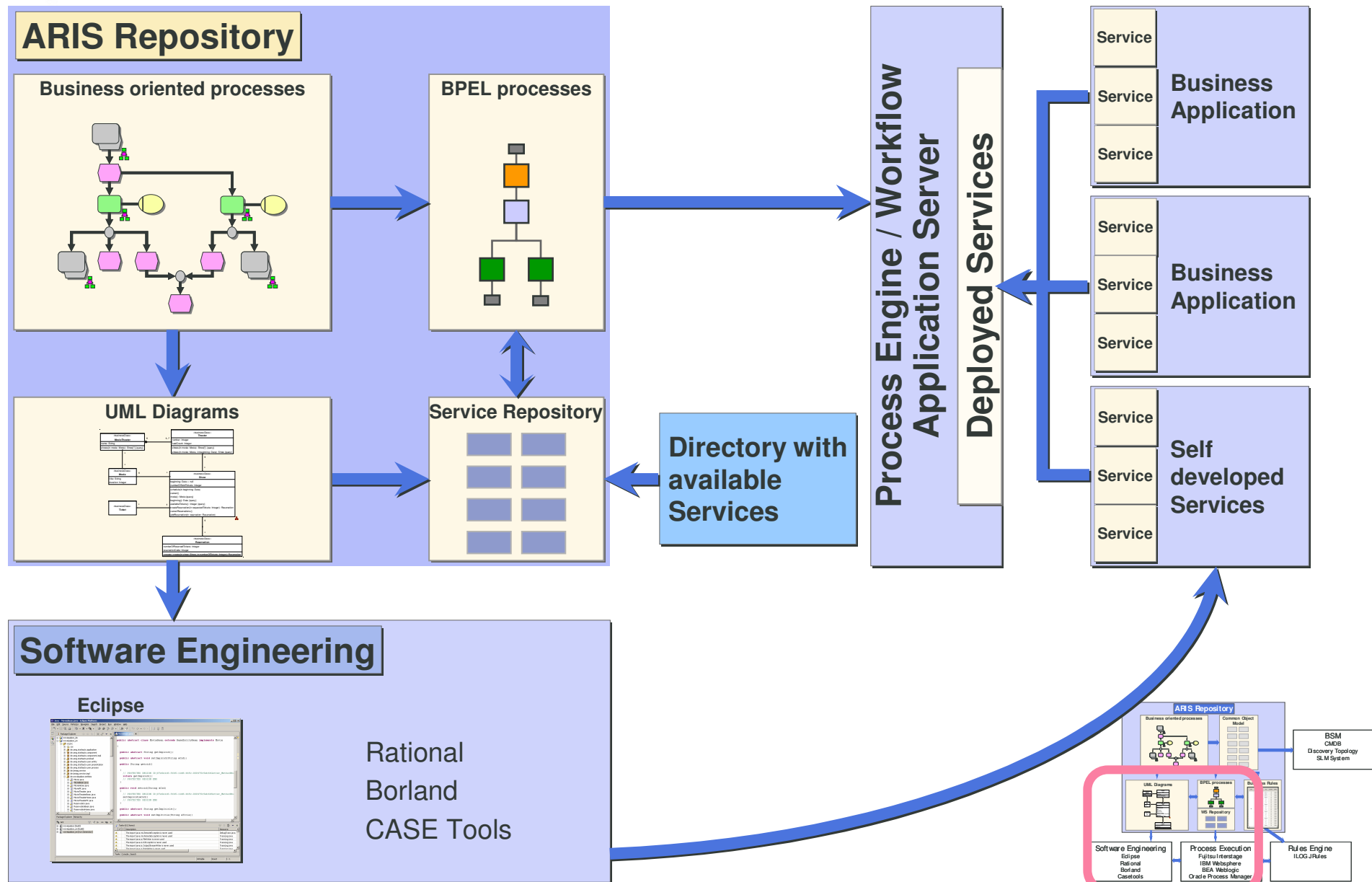
From Business Process Definition To Process Execution



- ▶ ARIS Process Modeling
 - ▶ Pretension for workflow implementation, otherwise further refinement step required
 - ▶ Identify activities and entities relevant to implementation
 - ▶ Customer specific modeling conventions, e.g. cost
 - ▶ Apply best practices for nested levels of decomposition in various diagrams

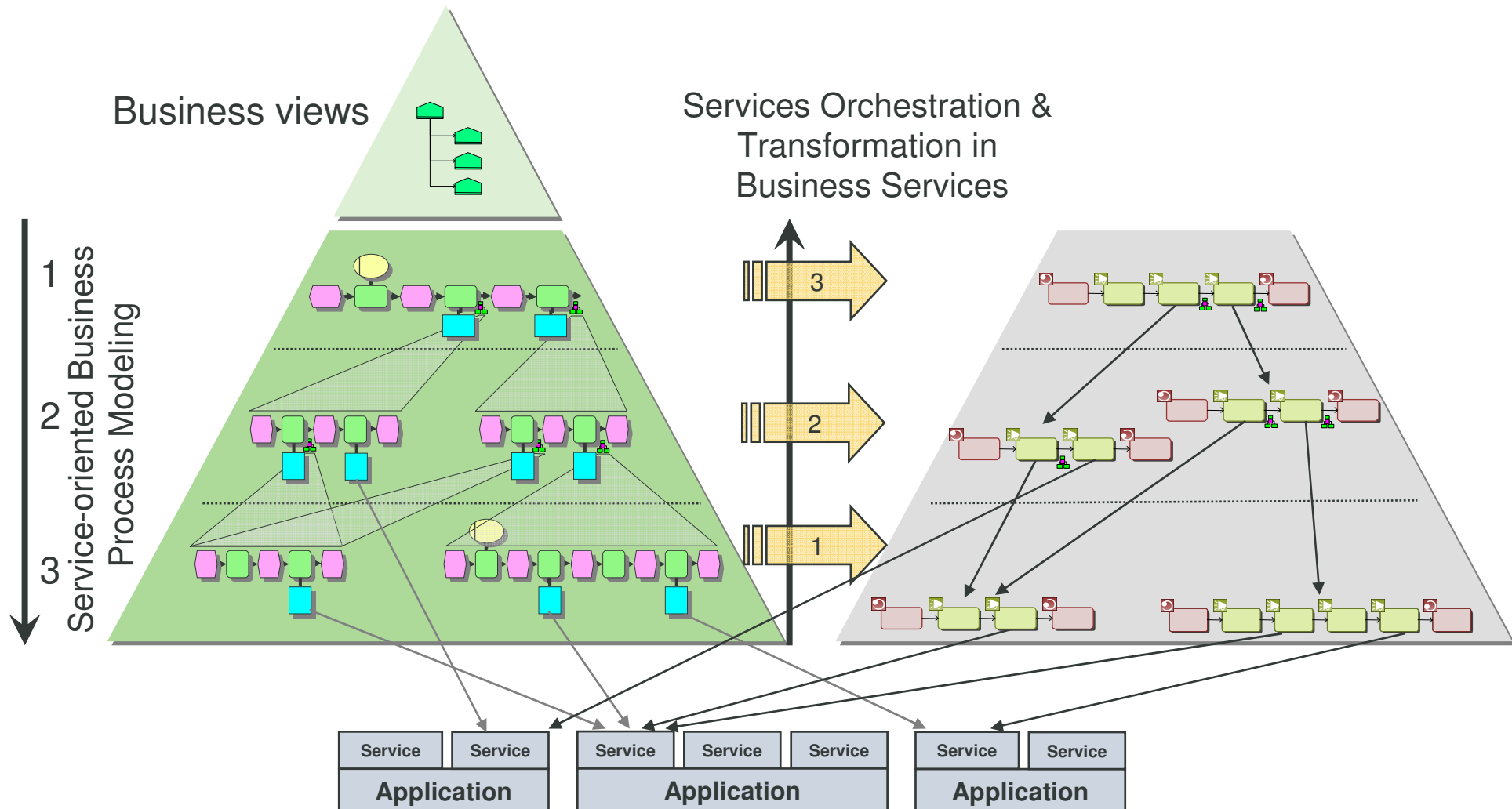


Solution – Process Execution/Software Engineering

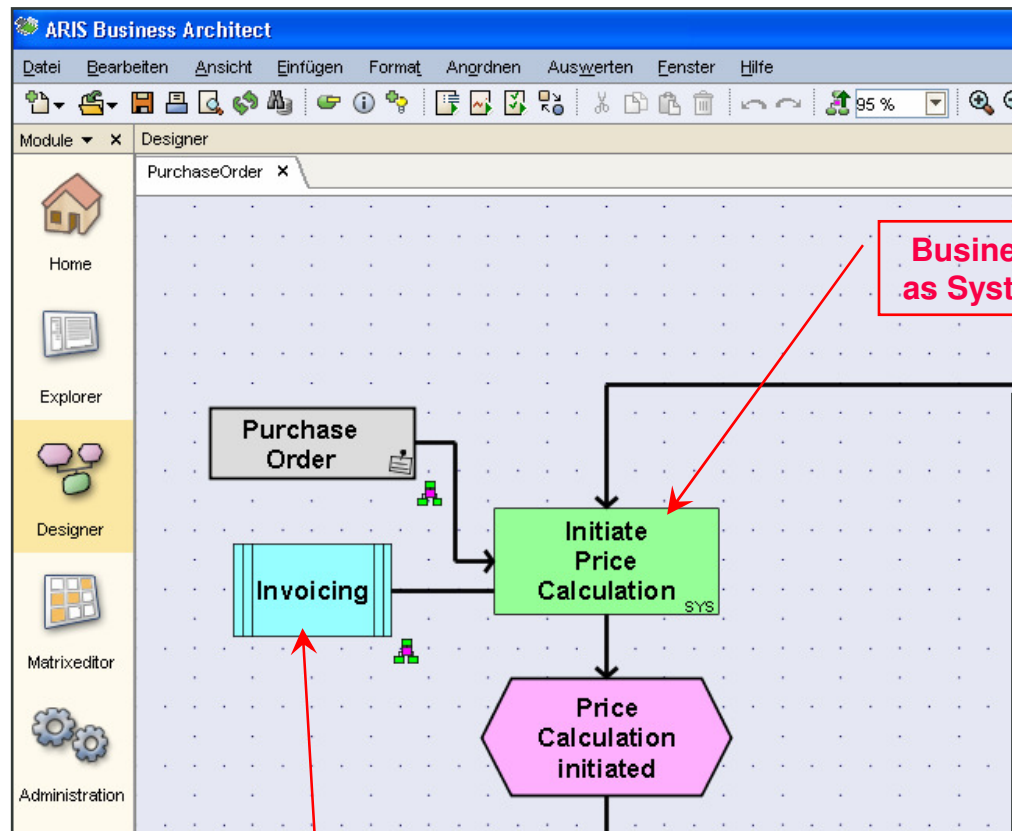


Business Processes Hierarchy

Business Services Hierarchy



3. Completing Business Processes By Services & Data



Service-supported Business Function

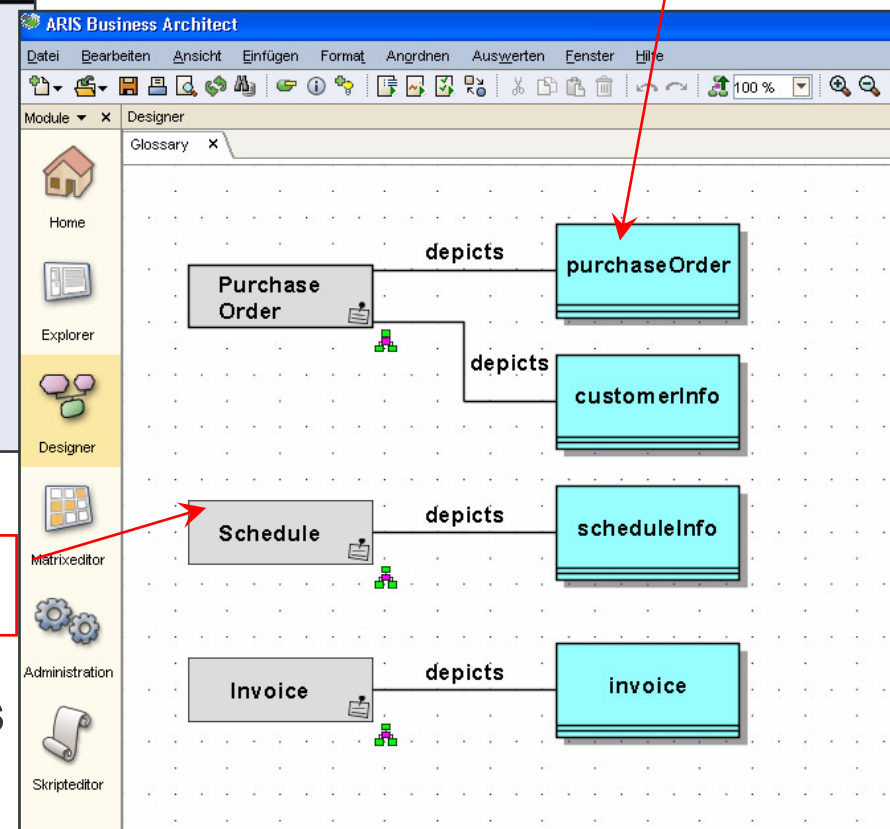
Business Function
as System Function

IT Data
Structure
as Class

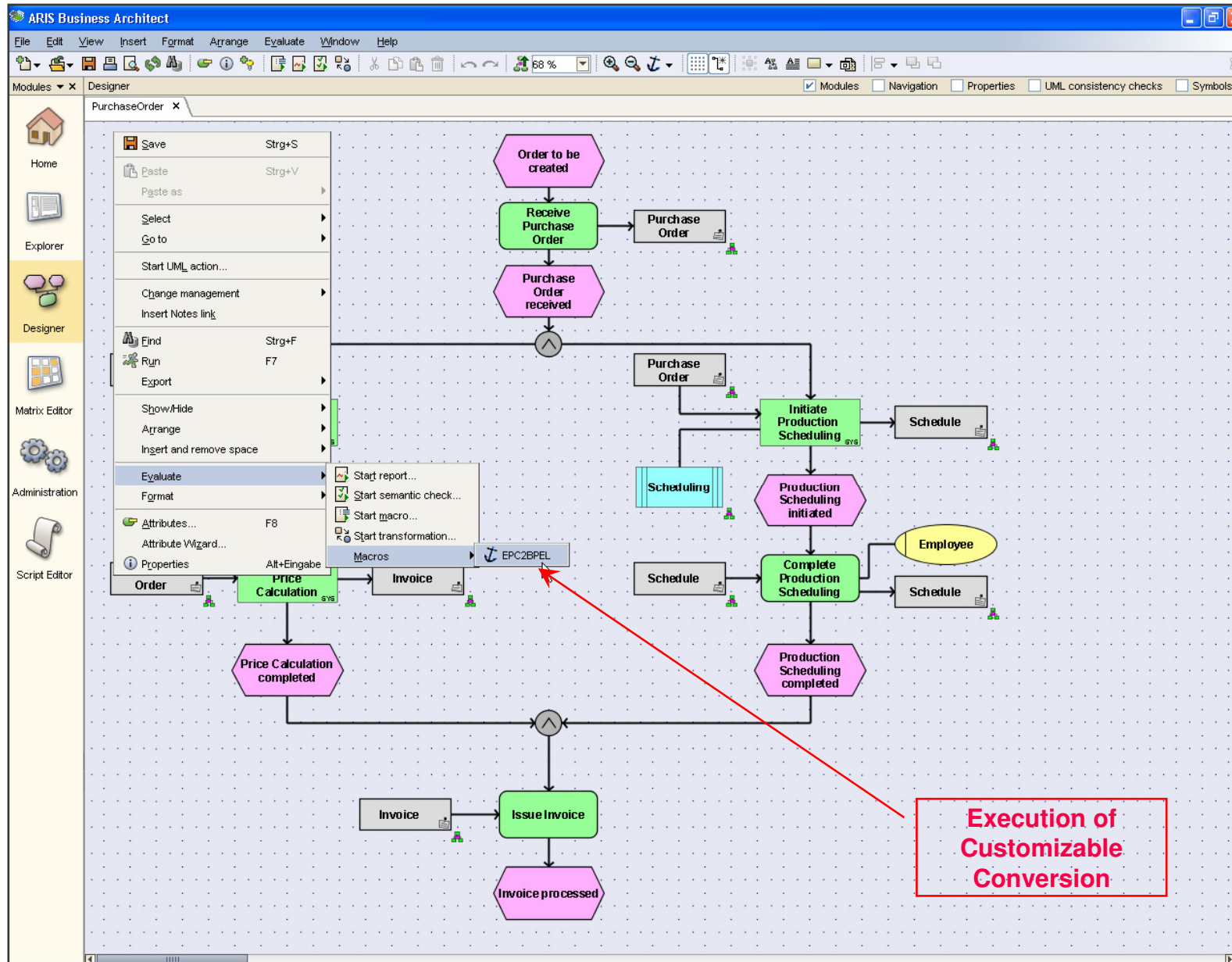
Service

Business Object
as Technical Term

Mapping between Business Objects
and IT Data Structures

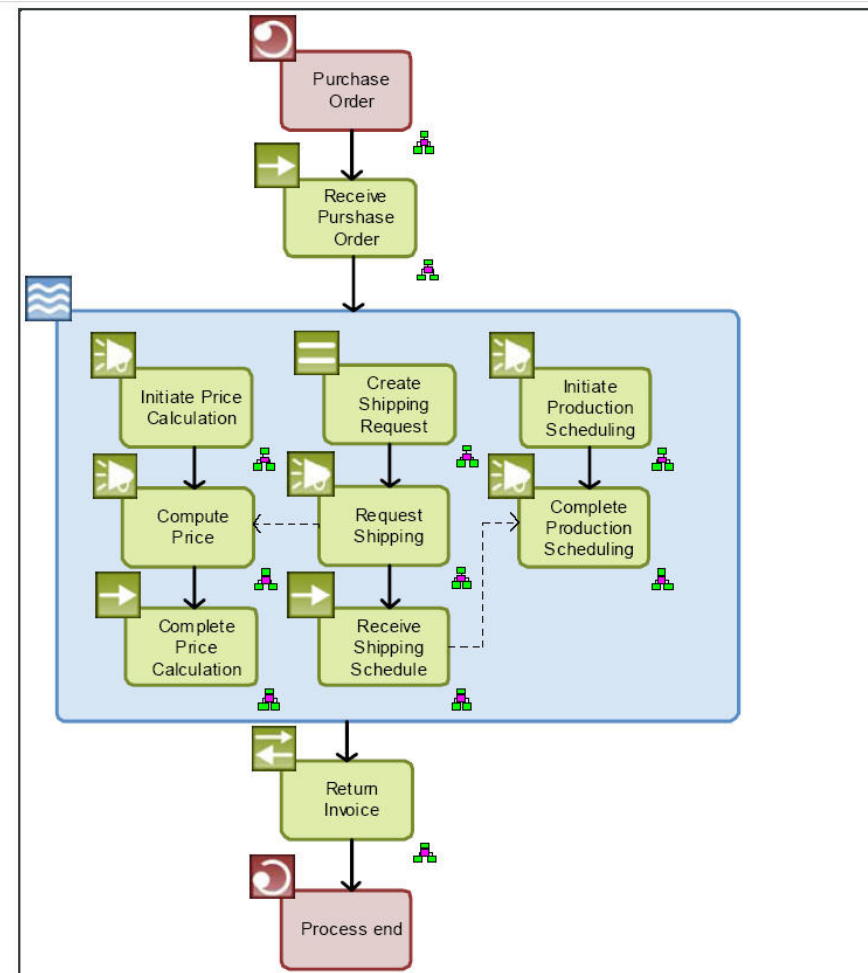
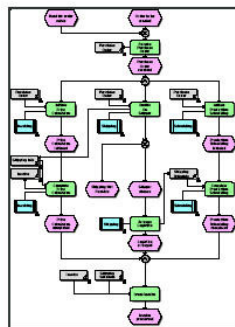


4. Transforming Business Process To IT Process



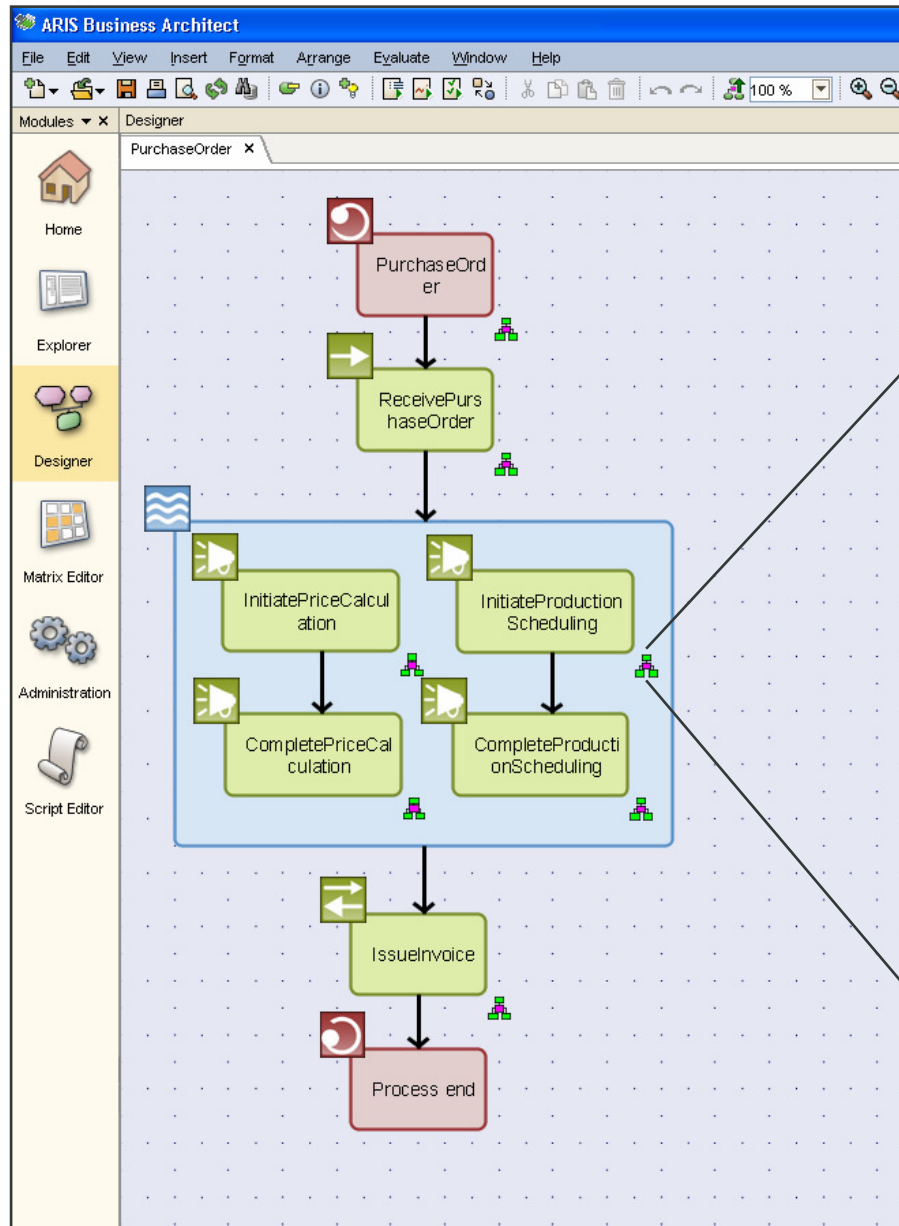
► EPC2BPEL transformation

- Adaptation due to customer-specific modeling conventions
- Filter irrelevant information for workflow automation

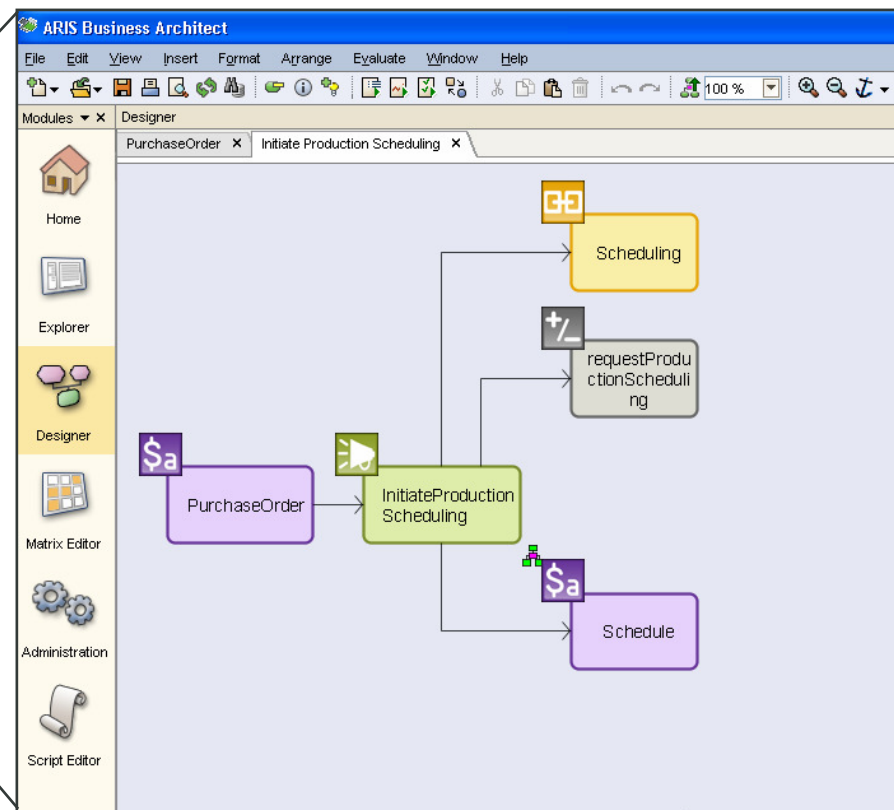


- Organizational means to keep master and derived / refined processes in sync due to uni-directional transformation

5. Completing IT Process Design



ARIS BPEL Process Flow

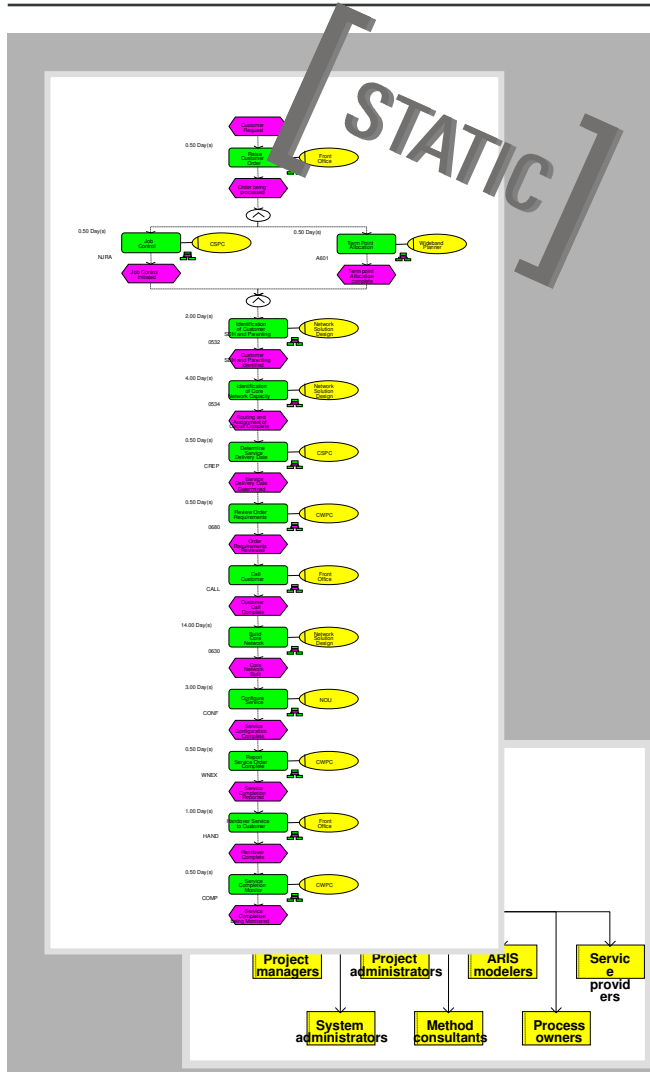


BPEL Activity Details

Extracted processes vs. modelled

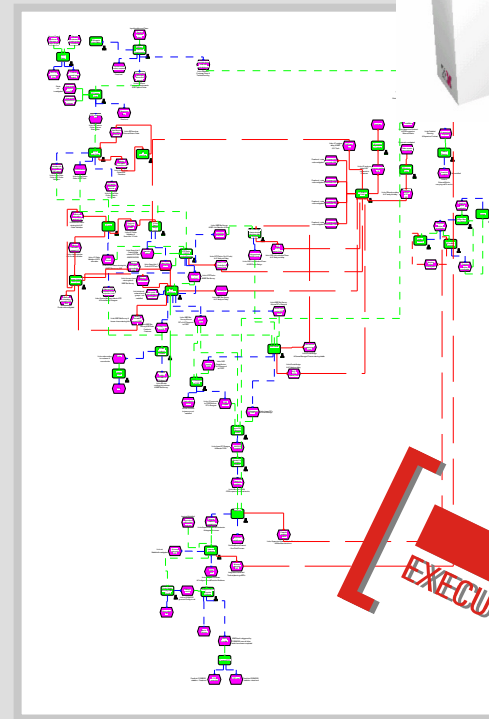
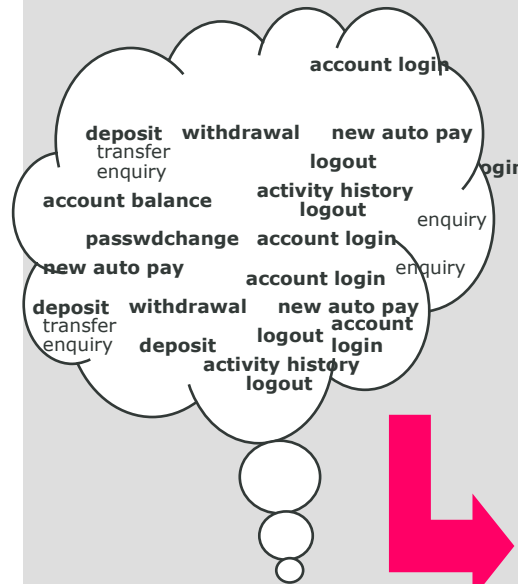
TO BE Processes

Documented



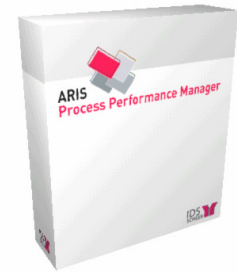
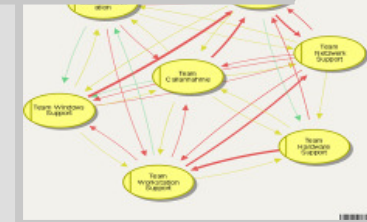
AS IS Processes

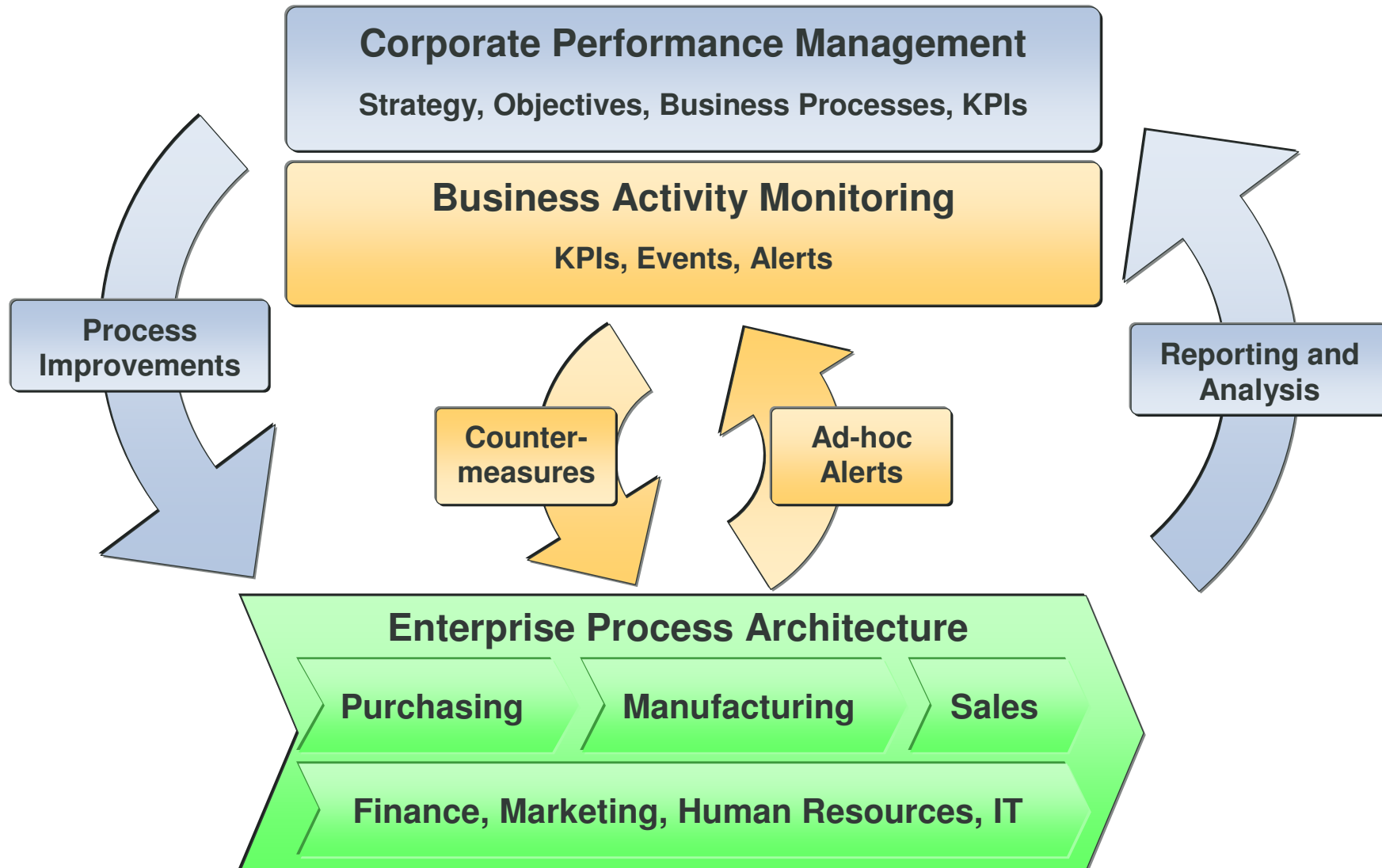
Actually Executed



+

Times
Costs
Quantities
Risks
Probabilities





Source: Gartner, January 2004

Deployment Scenario – Key Process „Billing“

Main steps of the process „Billing“

- 1 **Create Order**
 - Billing order
 - metering order

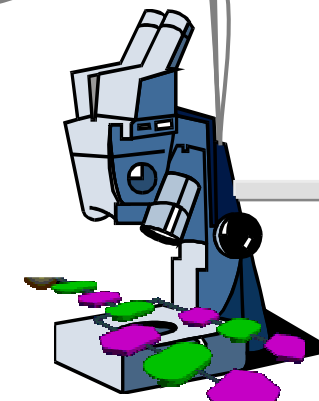
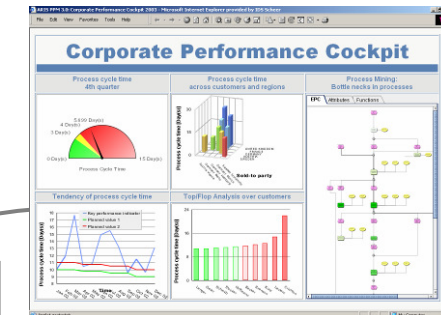
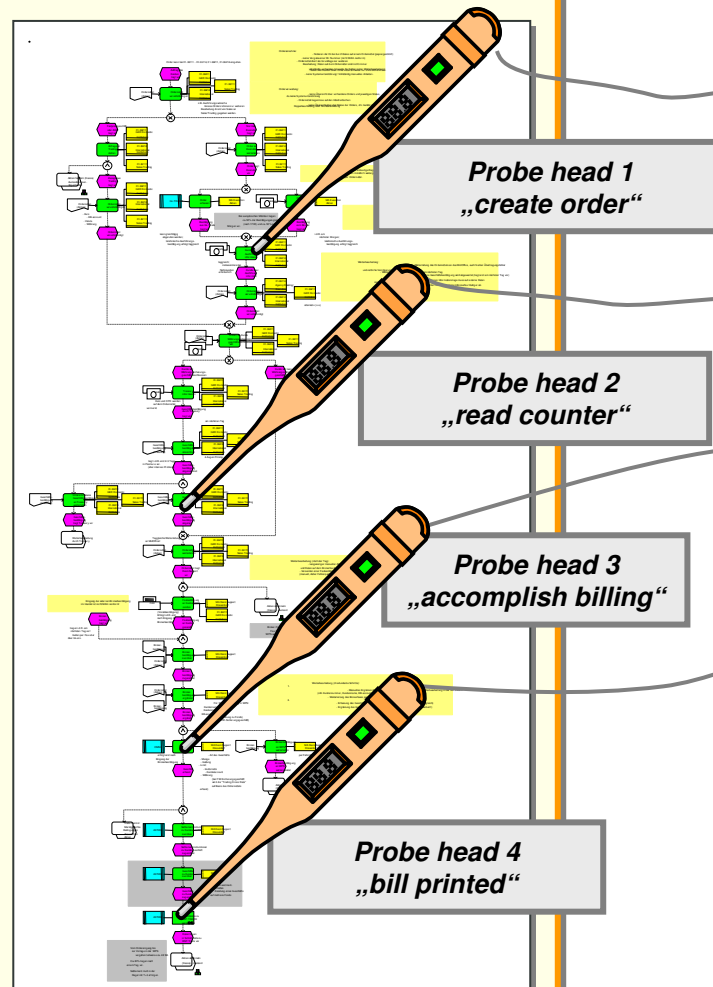
- 2 **Read Counter**

- 3 **Create meter reading document**

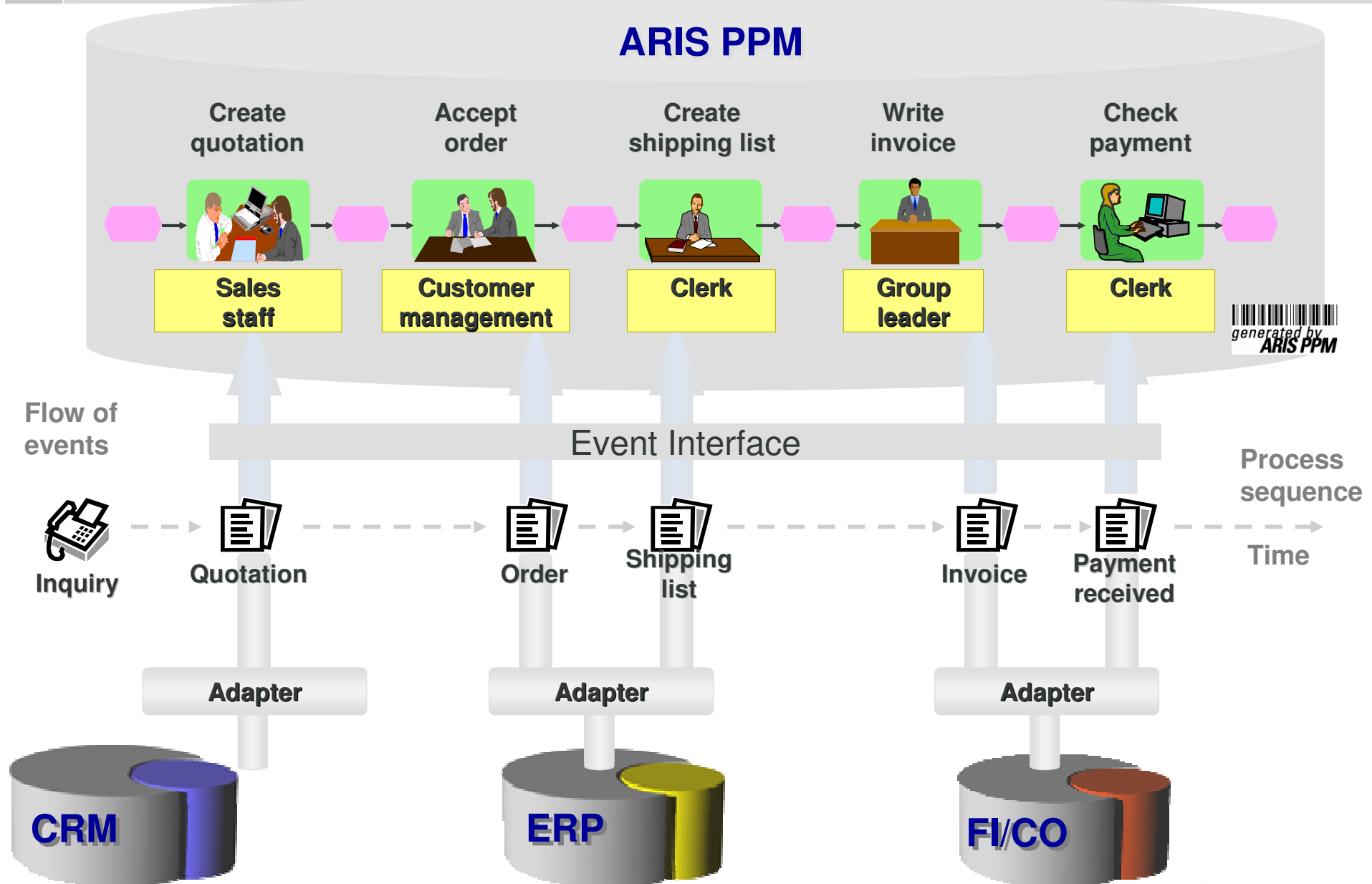
- 4 **Check Plausibility**
Correction in case of implausible meter reading result

- 5 **Accomplish Billing**

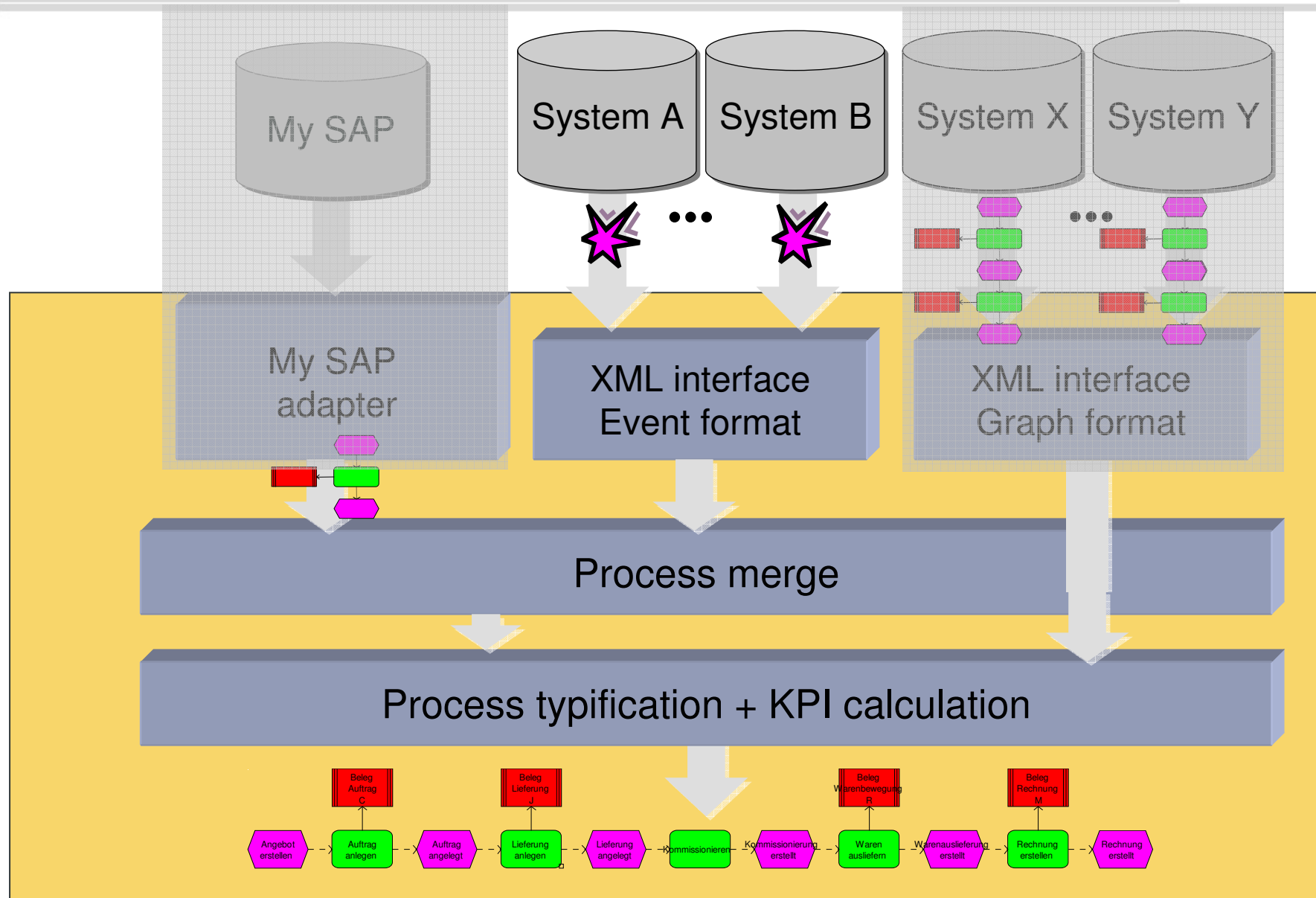
- 6 **Invoice processing**
 - create invoice
 - print bill



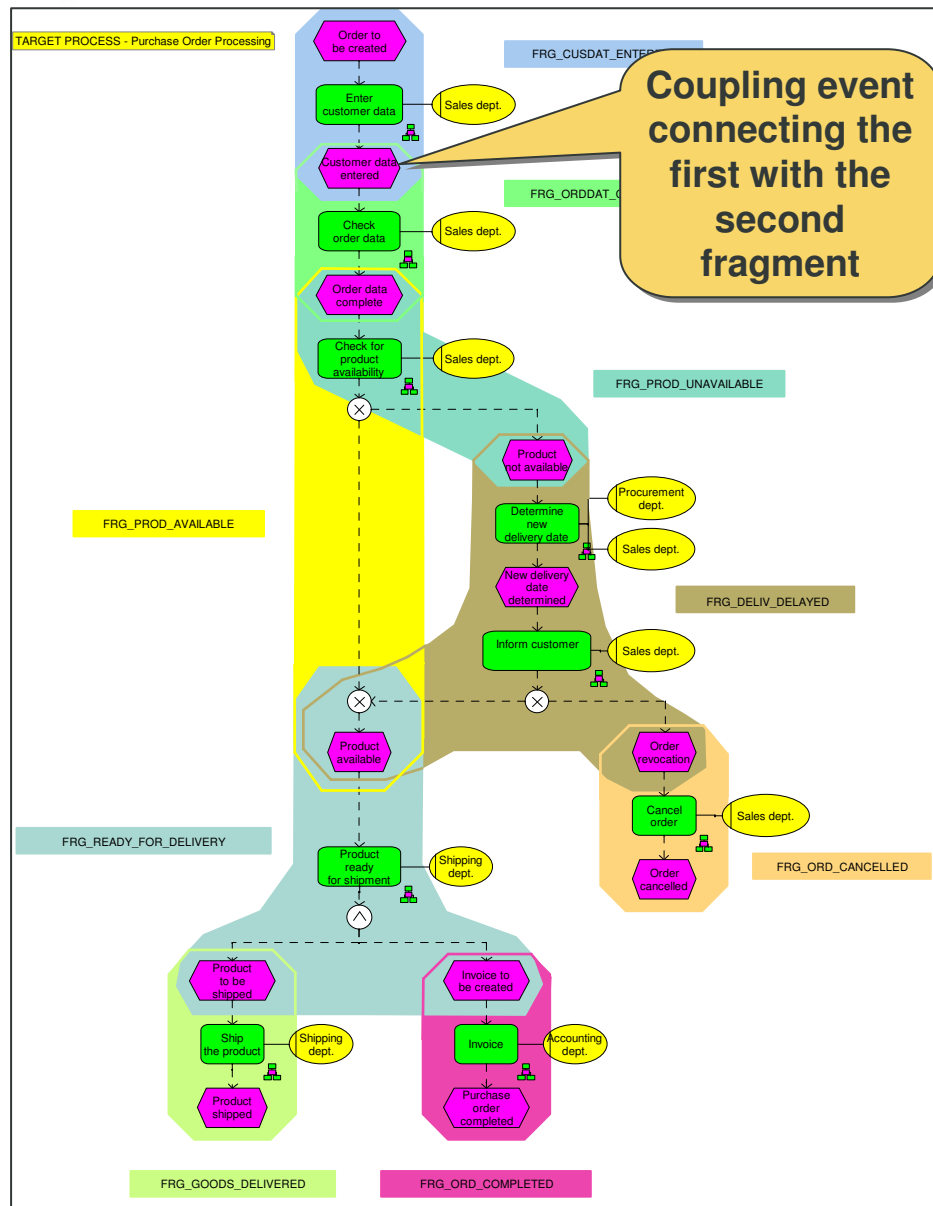
Graphical Process Model from Runtime Events



Interface Summary

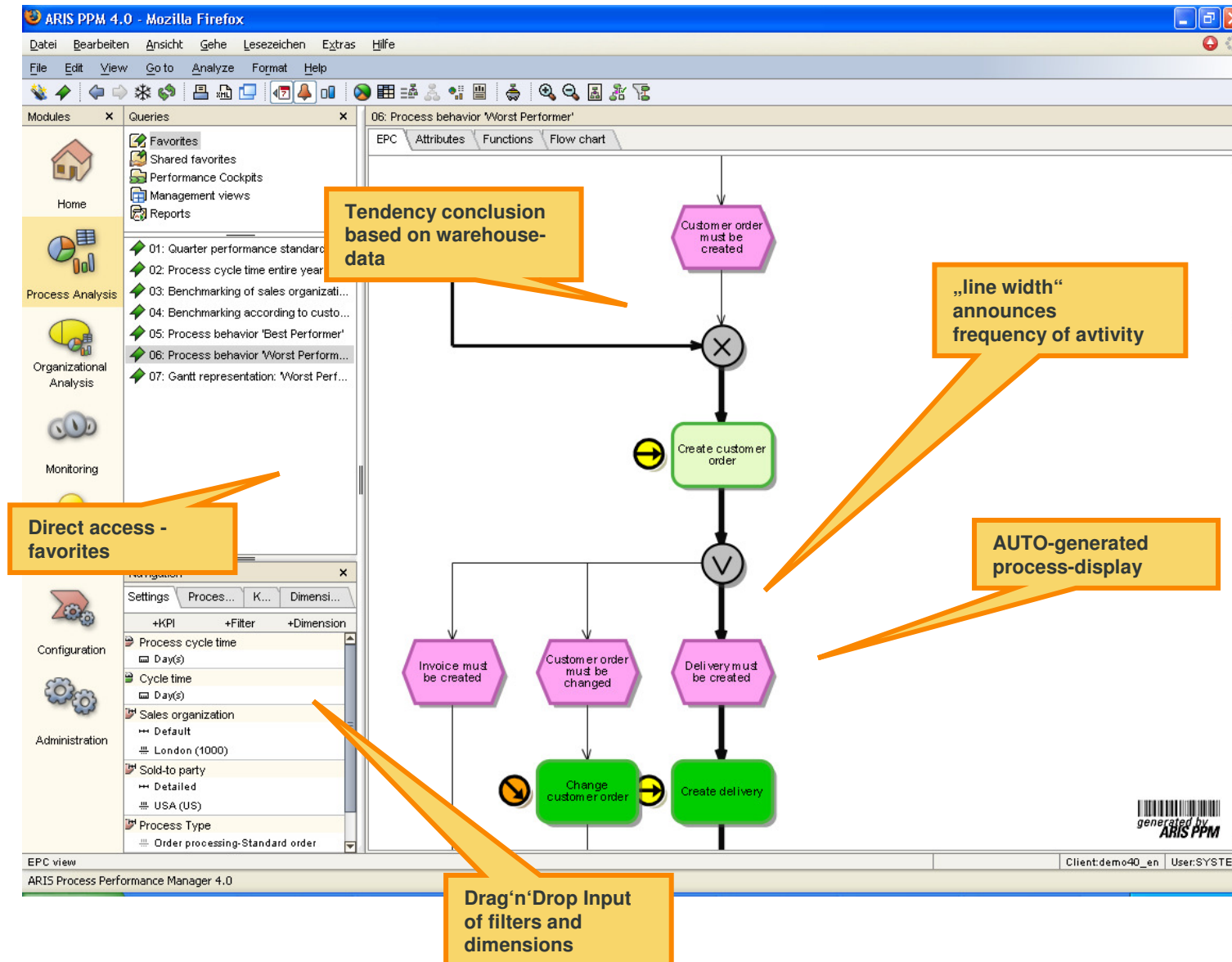


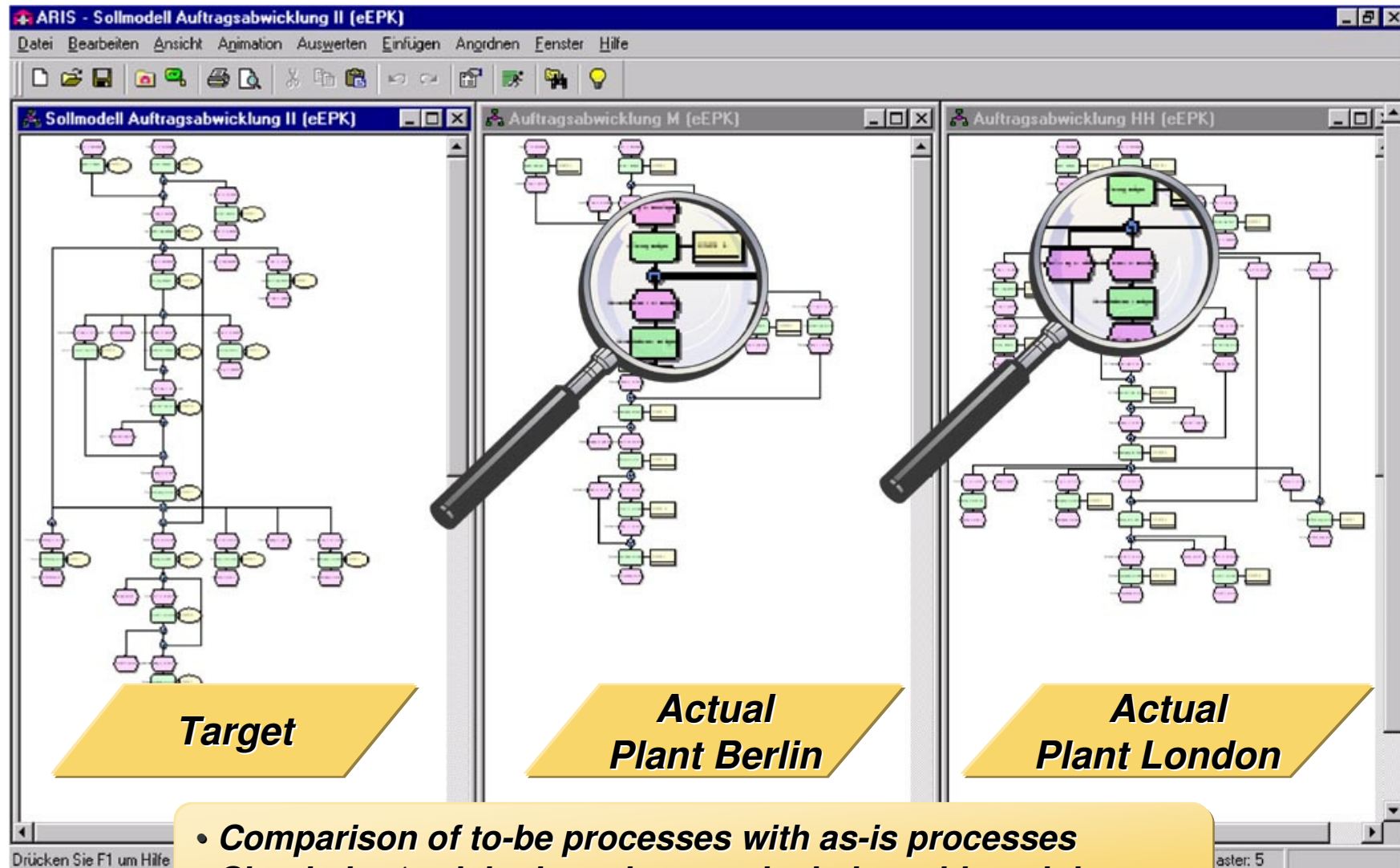
Combine Process Fragments

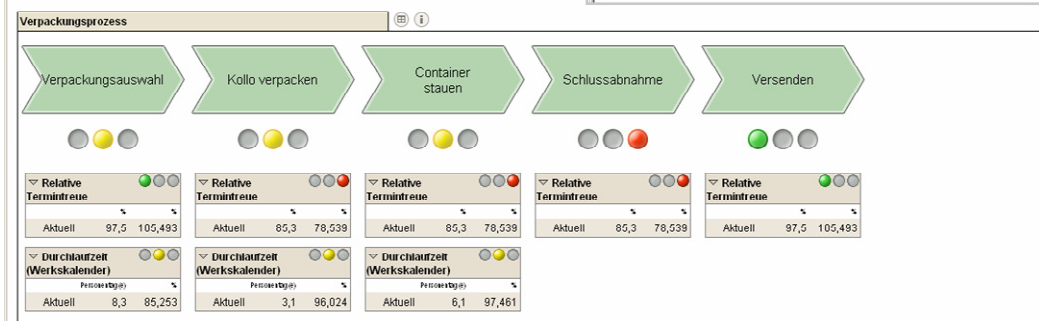
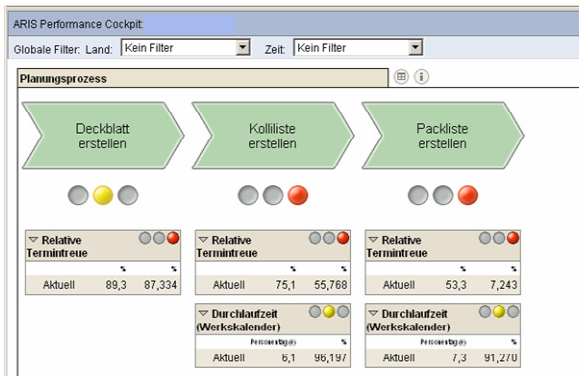


- ▶ Find process fragments
 - ▶ Cut process into single fragments
 - ▶ A fragment consists of
 - ▶ a start event,
 - ▶ at least one function and
 - ▶ at least one end event.
 - ▶ A fragment can contain rules.
 - ▶ Events that connect different fragments are called coupling events.
 - ▶ Org. units are assigned to the functions

Analysis of As-is processes



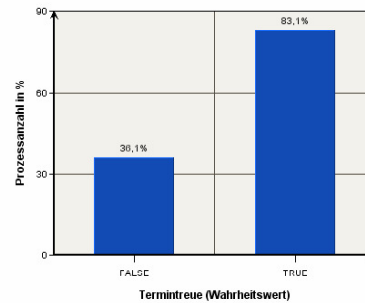




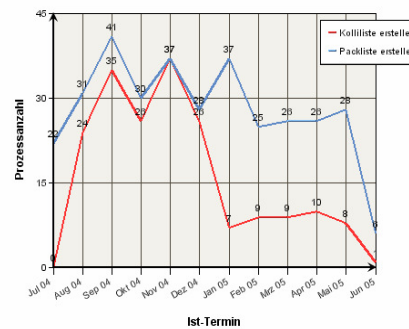
Performance Cockpit



Termintreue Verteilung



Historie: Anzahl nicht termingerechter Planungen



Prozessanalyse: Liste aller verspäteten Planungen

CKD Prozesse-Planungsprozess

Prozesslaufz...	Funktion	SoL-Termin...	Ist-Termin(Tag...	Termintreue (...)	Sammelendung	Verkaufsbezeichnung	Prozesskennzeichnung	Proz...
25,000	Packliste erstellen	6. Mai 05	10. Mai 05	FALSE	FALSE	4040 K/39	LU_02341_05	
22,000	Kolliste erstellen	6. Mai 05	9. Mai 05	FALSE	FALSE	2628 B/33	LU_04775_06	
21,000	Packliste erstellen	6. Mai 05	10. Mai 05	FALSE	FALSE	2628 J/45	LU_03625_05	
18,000	Kolliste erstellen	6. Mai 05	9. Mai 05	FALSE	FALSE	3348 S/33	LU_04750_06	
7,000	Kolliste erstellen	6. Mai 05	9. Mai 05	FALSE	FALSE	4242 L/22	LU_02623_06	

EPK Attribute Funktionen Verlauf



Objektattribute

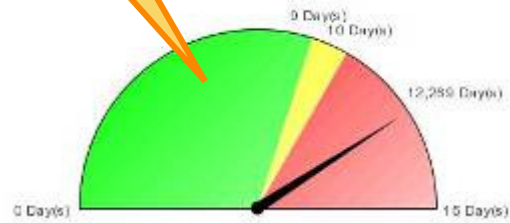
Objekt: Funktion "Packliste erstellen"

Attributtyp	Attributwert
Anzahl Bearbeiter (Funktion)	1,000
Anzahl Funktionsinstanzen	1
Bearbeitungshäufigkeit	1,000
Bezugszeitpunkt	10.05.05 0:00:00
Durchlaufzeit (Funktion)	11 00:00:00
Durchlaufzeit (Werkskalender)	6 00:00:00
EPK-Fragment-ID (XML)	Packliste erstellen
Endzeitpunkt	10.05.05 0:00:00
Identifizierer	02341_05p
Interne ObjektID	Packliste erstellen_FCT
Interner Objekt-Schlüssel	Packliste erstellen-Packliste_erstell...
Ist-Termin "Packliste"	10.05.05 0:00:00
LU-Monat	05
LU-Nummer	02341
Objektname	Packliste erstellen

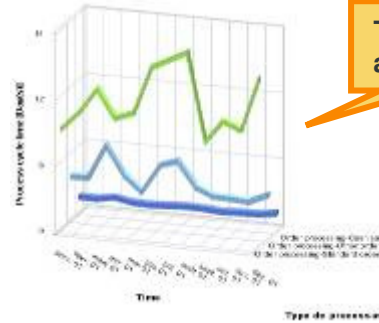


ARIS PPM allows „real“ Root Cause Analysis

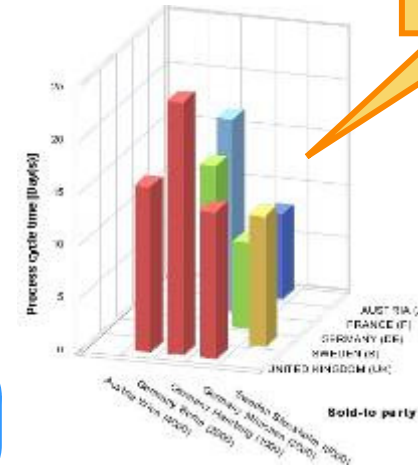
Indicator



Trend
analysis



Influence
Coefficients



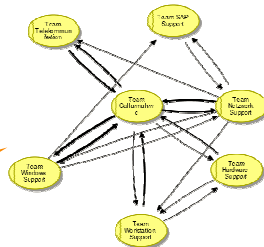
„What?“

„How?“

USP ARIS PPM

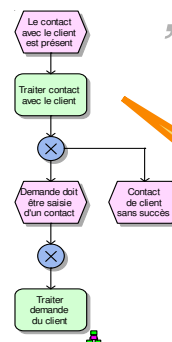
„Who?“

Organisational
Background

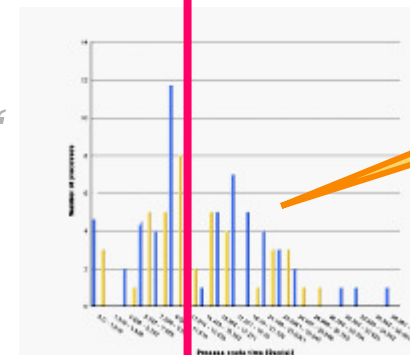


„Why?“

IncidentChains

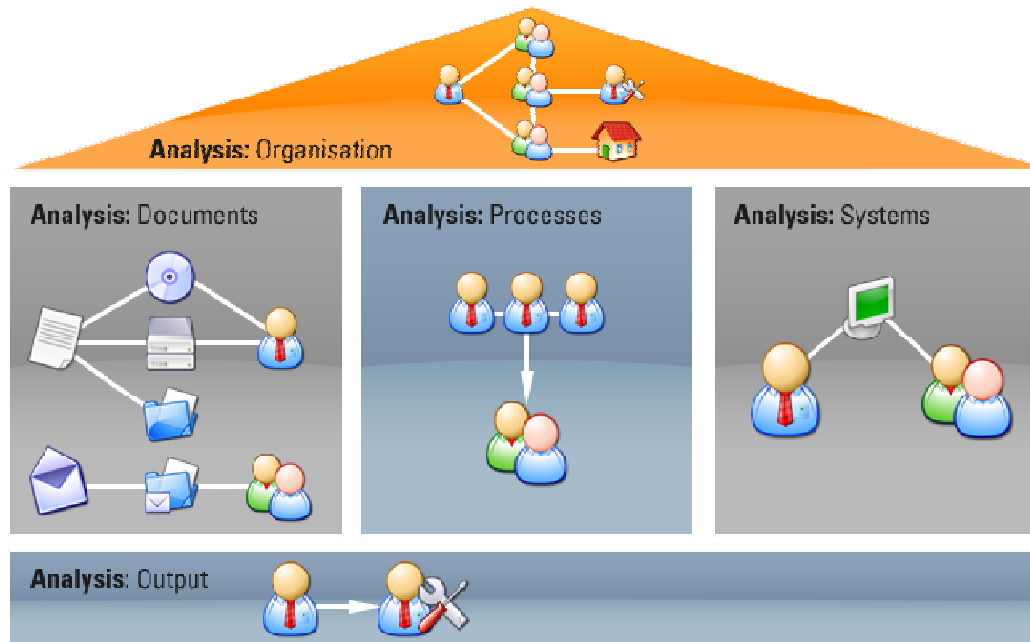


Allocation

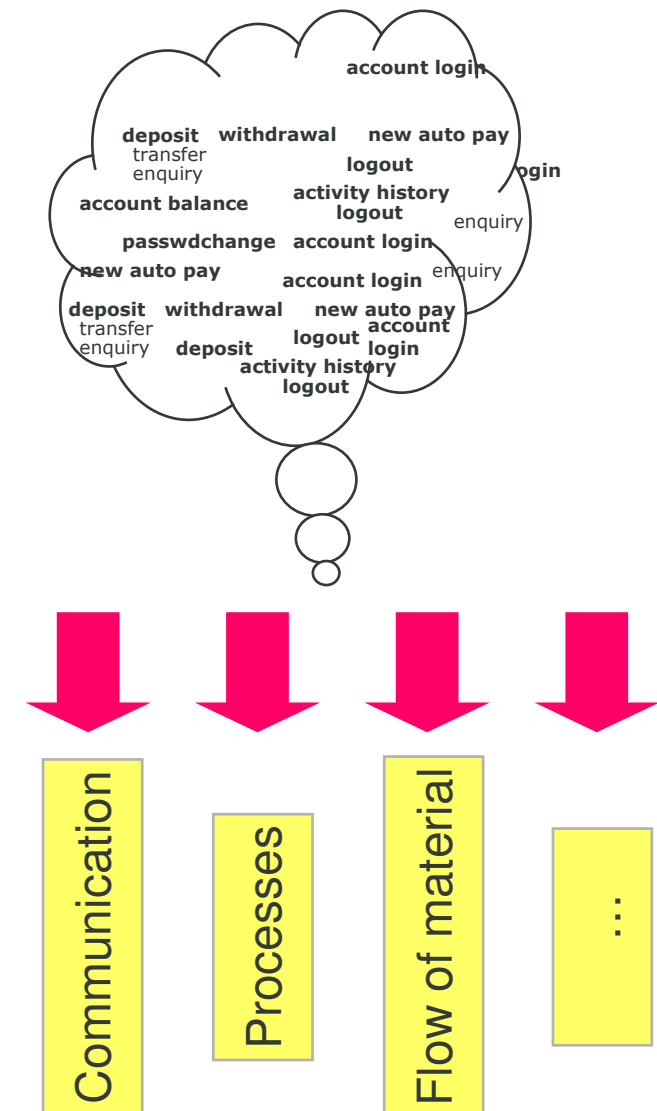


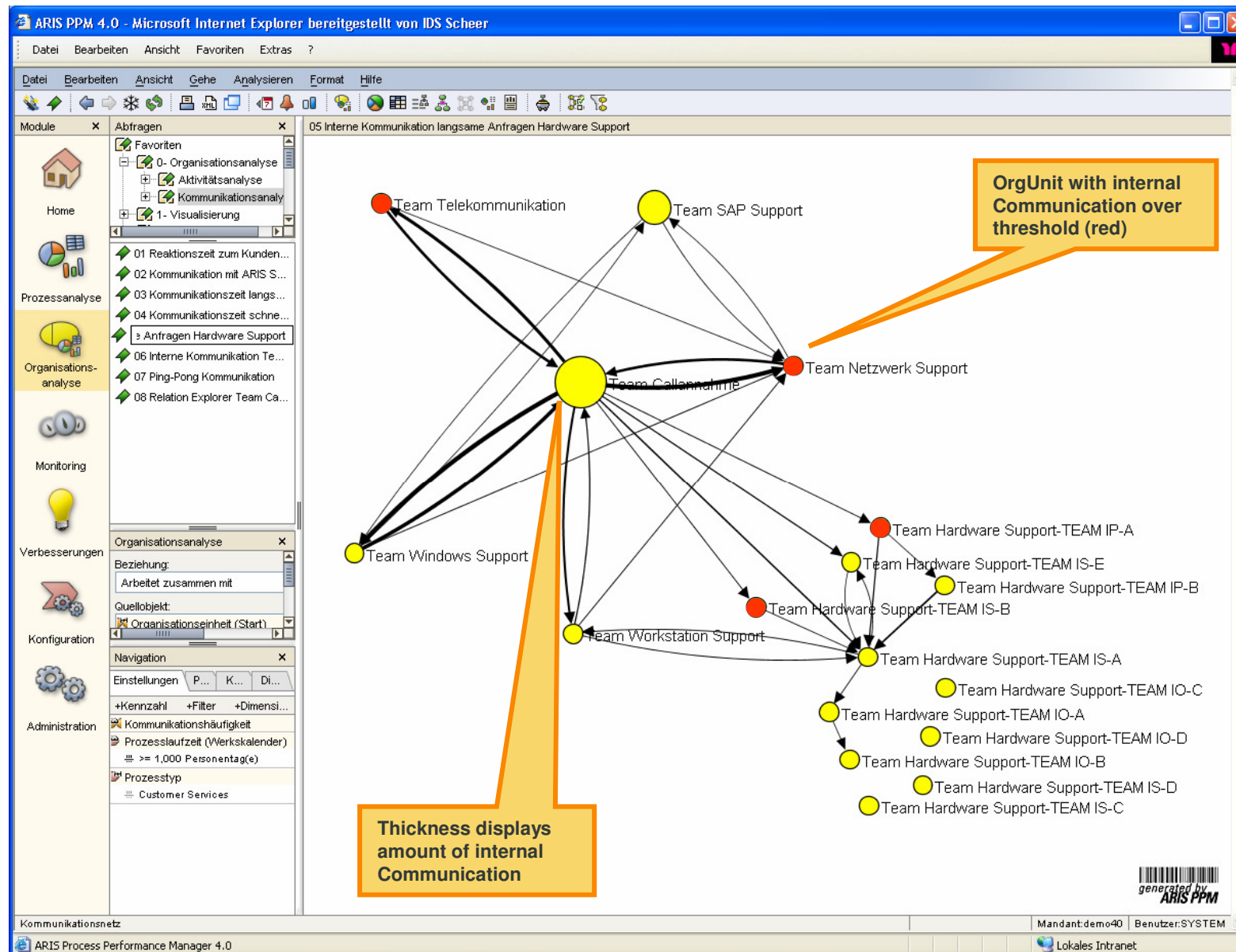
* All graphics are take out of ARIS PPM 4.0

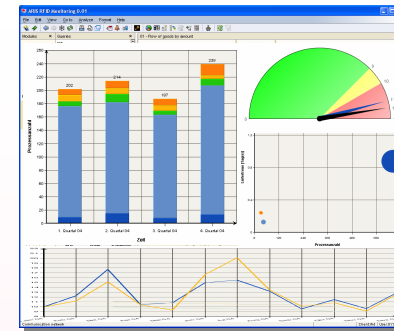
Vision: Measurement of the whole Enterprise



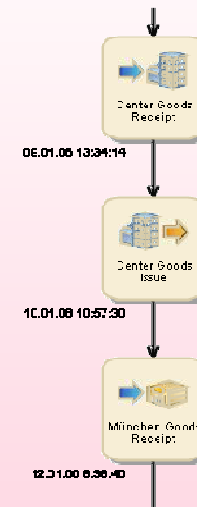
➤ *extending the corporate performance analysis with **process** and **organisation** related information sources to get the „Big Picture.“*



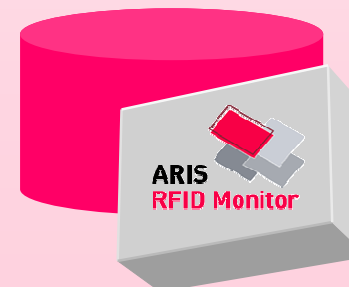




KPI Analysis

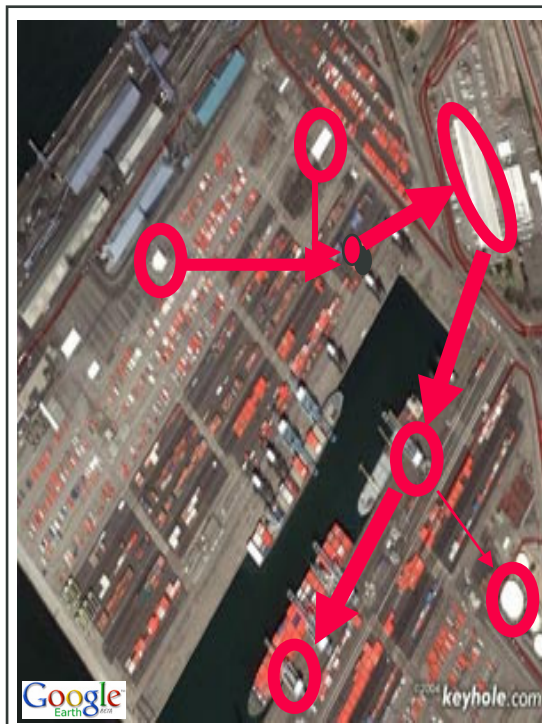


Reconstruction
flow of goods

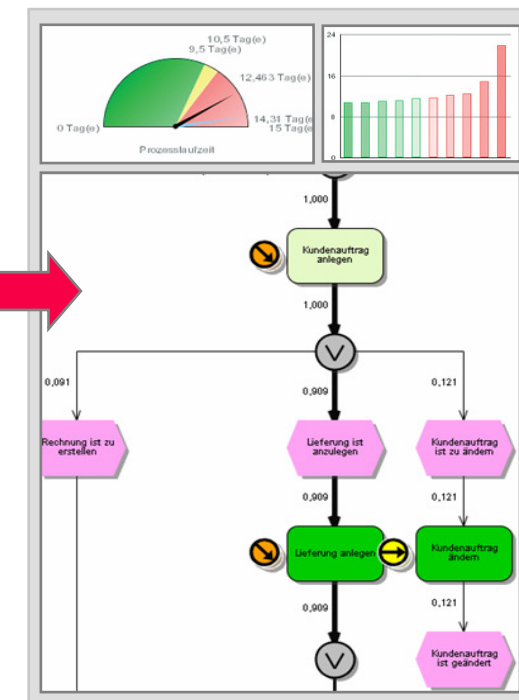
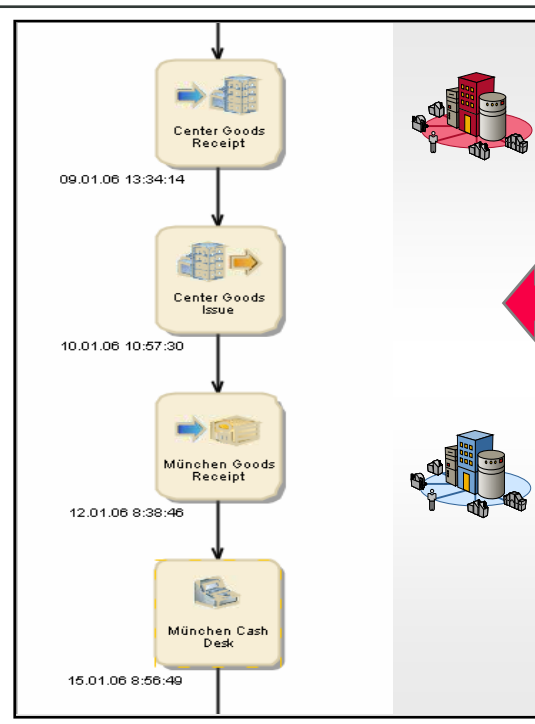


RFID-Database

>> Combined analysis of Process und Material flow



Product Supply Chain



Information Supply Chain

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