



## **Business Process Modeling**

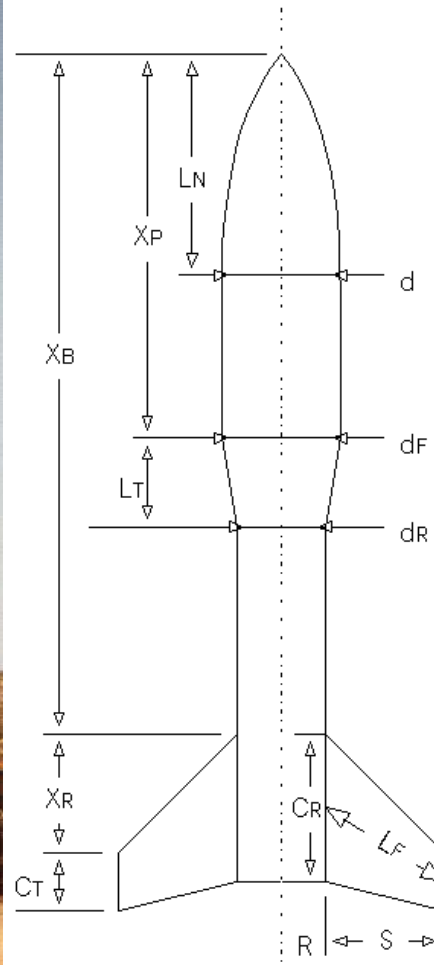
### **Introduction to ARIS Methodolgy**

# Agenda

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- **What's in modeling ?**
- **Situation today**
- **Objectives of Process Management**
- **ARIS Framework and methods**
- **ARIS suite of products**
- **Live demo**

# Example of models



$$k = \frac{1}{2} \rho C_d A$$

$$q = \sqrt{\frac{T - mg}{k}}$$

$$x = \frac{2kq}{m} = 2 \frac{\sqrt{(T - mg) \cdot k}}{m}$$

$$t = \frac{1}{T}$$

$$v = q \frac{1 - e^{-xt}}{1 + e^{-xt}}$$

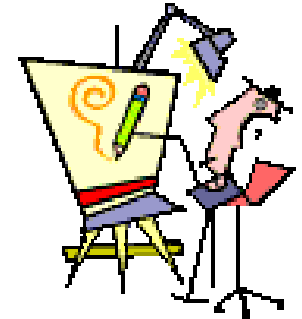
$$y_1 = \frac{-m}{2k} \ln \left( \frac{T - mg - kv^2}{T - mg} \right)$$

# Why do we need models?

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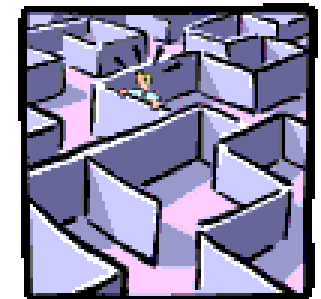
- **Visualization**

- Visualize final situation
- Show relationships between “objects”



- **Complexity management**

- Focus on one aspect at a time
- Reuse patterns/objects



- **Communication**

- Standard symbols
- Go in details



# What's in business process modeling?

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- **Business models are excellent communication devices**
- **Business professionals can model alternatives before committing**
- **Business models are key element for designing physical IT architectures**
- **Closing the communication gap between IT and business**

# Business Process model address important issues

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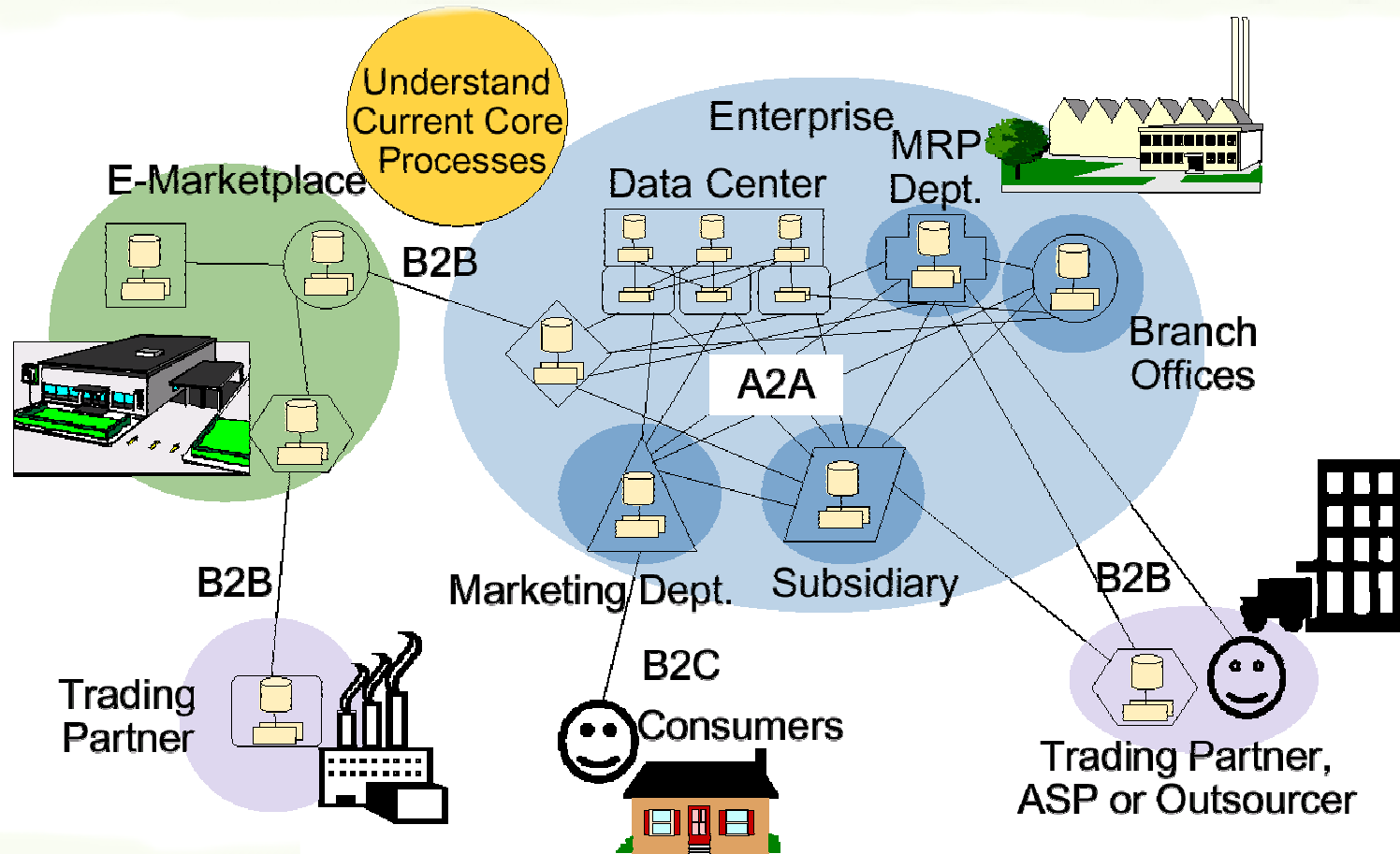
- How Does It All Fit Together?
- Will It Work?
- What Do We Need?
- How Do We Do It?
- Who Can Do It?
- How Important Is It?
- Where Does It Go?
- Who's Overloaded?
- How Did We Do?
- Models Process Interrelationships
- Simulates Alternative Realities
- Provides Resource Requirements
- Externalizes Rules and Flow from IT
- Defines Roles
- Defines Priorities
- Intelligently Routes Work
- Balances Queues
- Provides Workflow Statistics

# Situation today

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- **Economical situation: back to the basics**
  - Globalisation
  - Cost reduction
  - Merge/Acquisition
  - Performance
- **IT situation**
  - Decentralized/centralized
  - Web services/BPML
  - Integration
  - Multiple platform

# Business Process complexity is increasing



# How well do we know our processes?

## Questions :

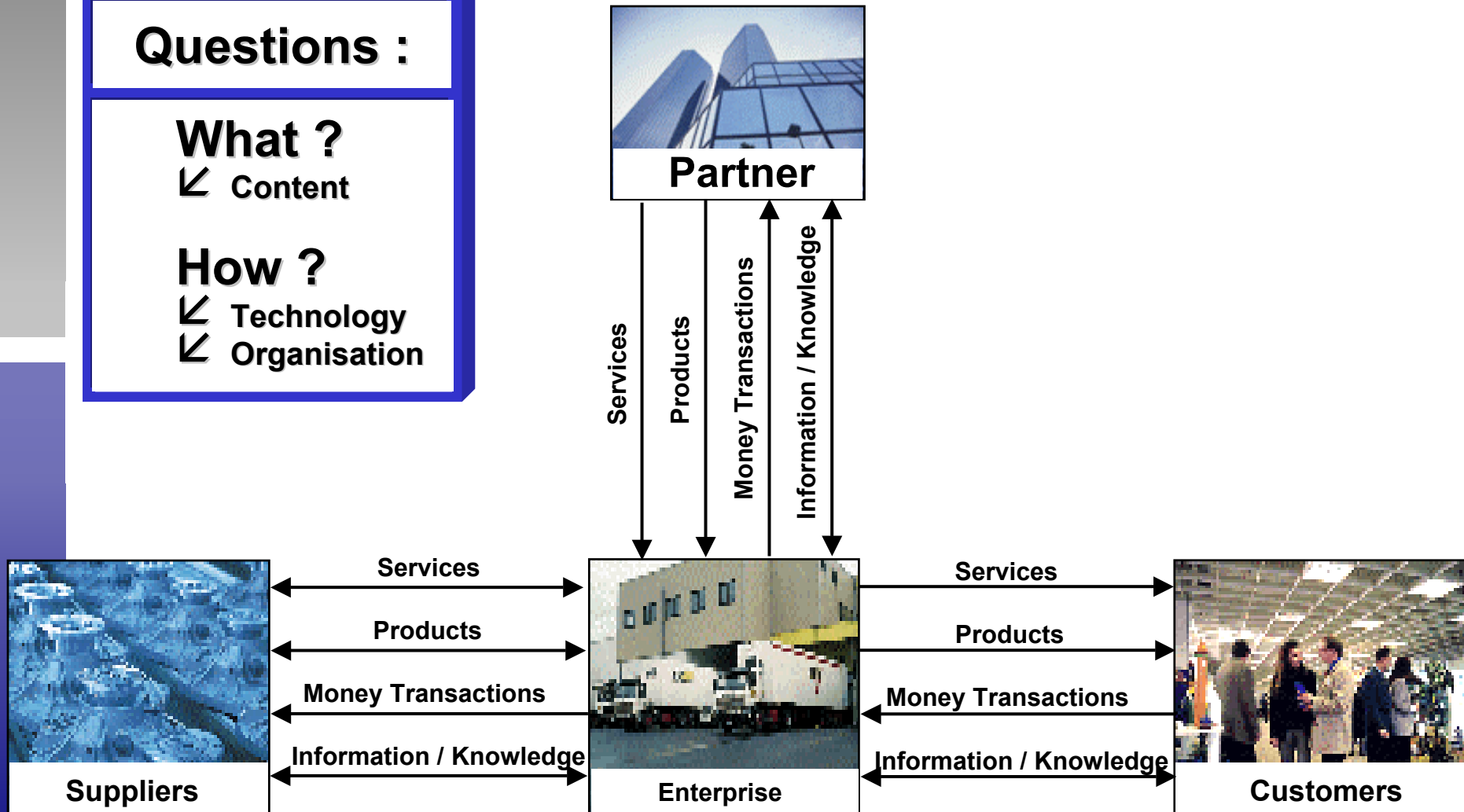
**What ?**

↙ Content

**How ?**

↙ Technology

↙ Organisation

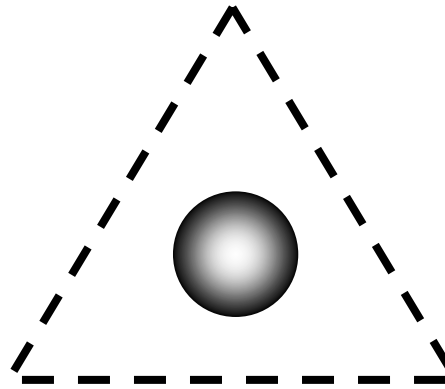


# Objectives of Business Process Management



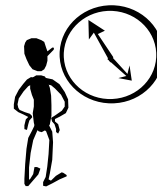
## Quality

- Aligning added-value with the client's interests
- Lowering the incidence of mistakes



## Costs

- Avoidance of nonproductive activities
- Optimize resources usage



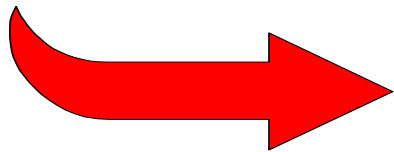
## Time

- Reduction of waiting times
- Reduce delivery time
- Time to market

# Objectives of Business Process Management

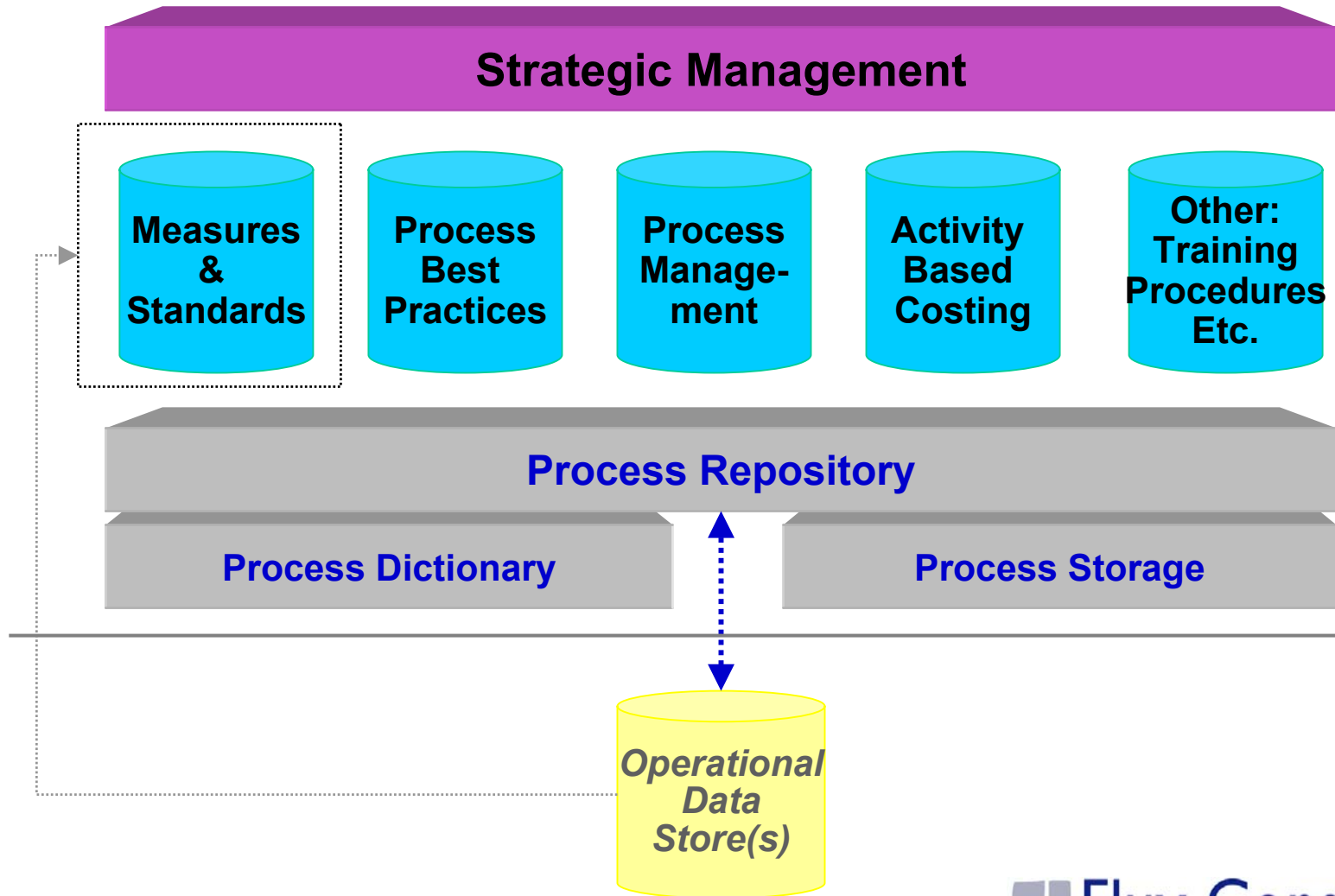
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- Description of the business processes, business data...
- Modeling of business processes beyond functional boundaries and company boundaries
- Revealing weak points in existing organisational and process structure
- Clear definition of responsibilities



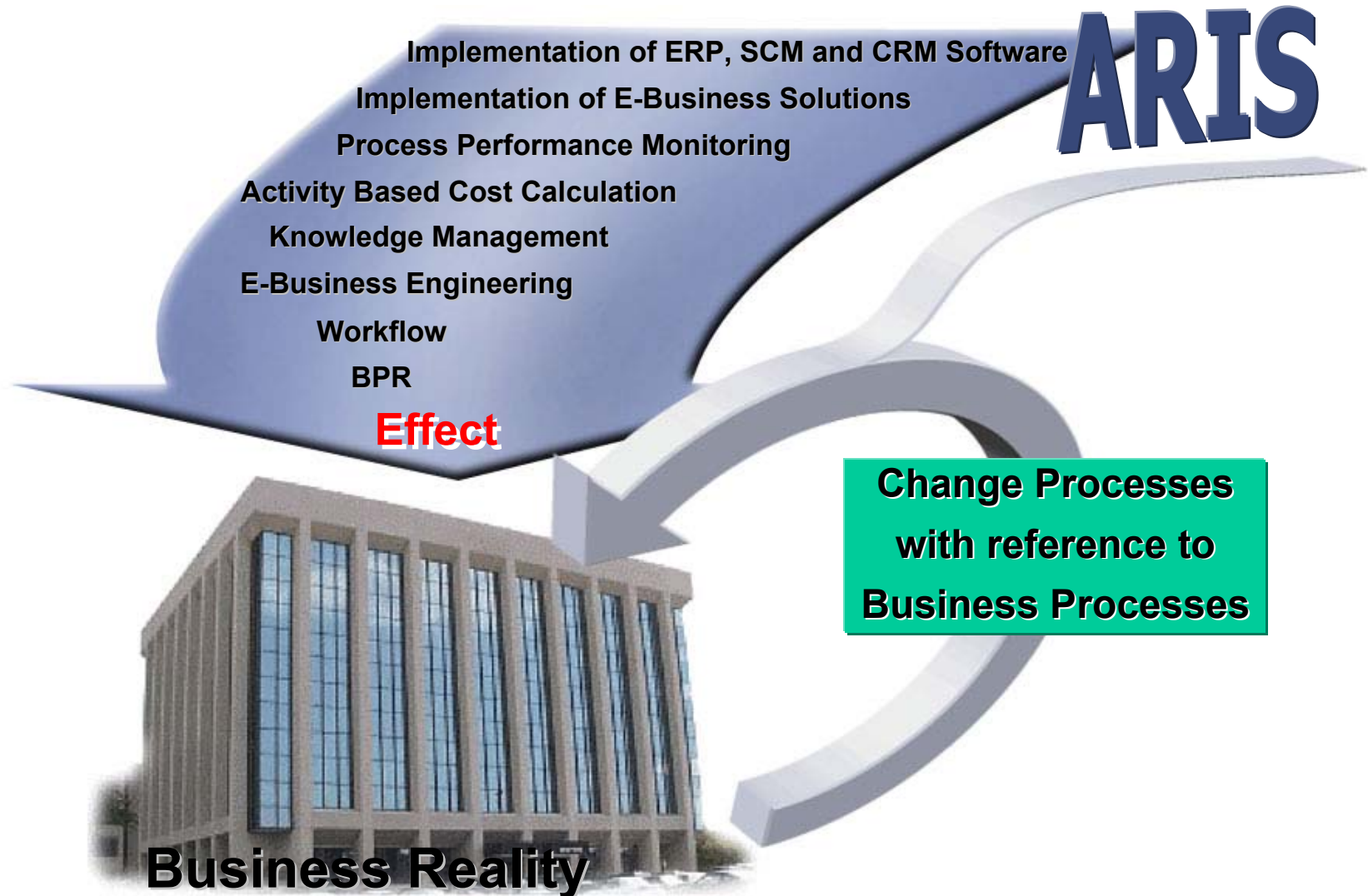
**Transparency of business processes**

# The Process Repository foundation

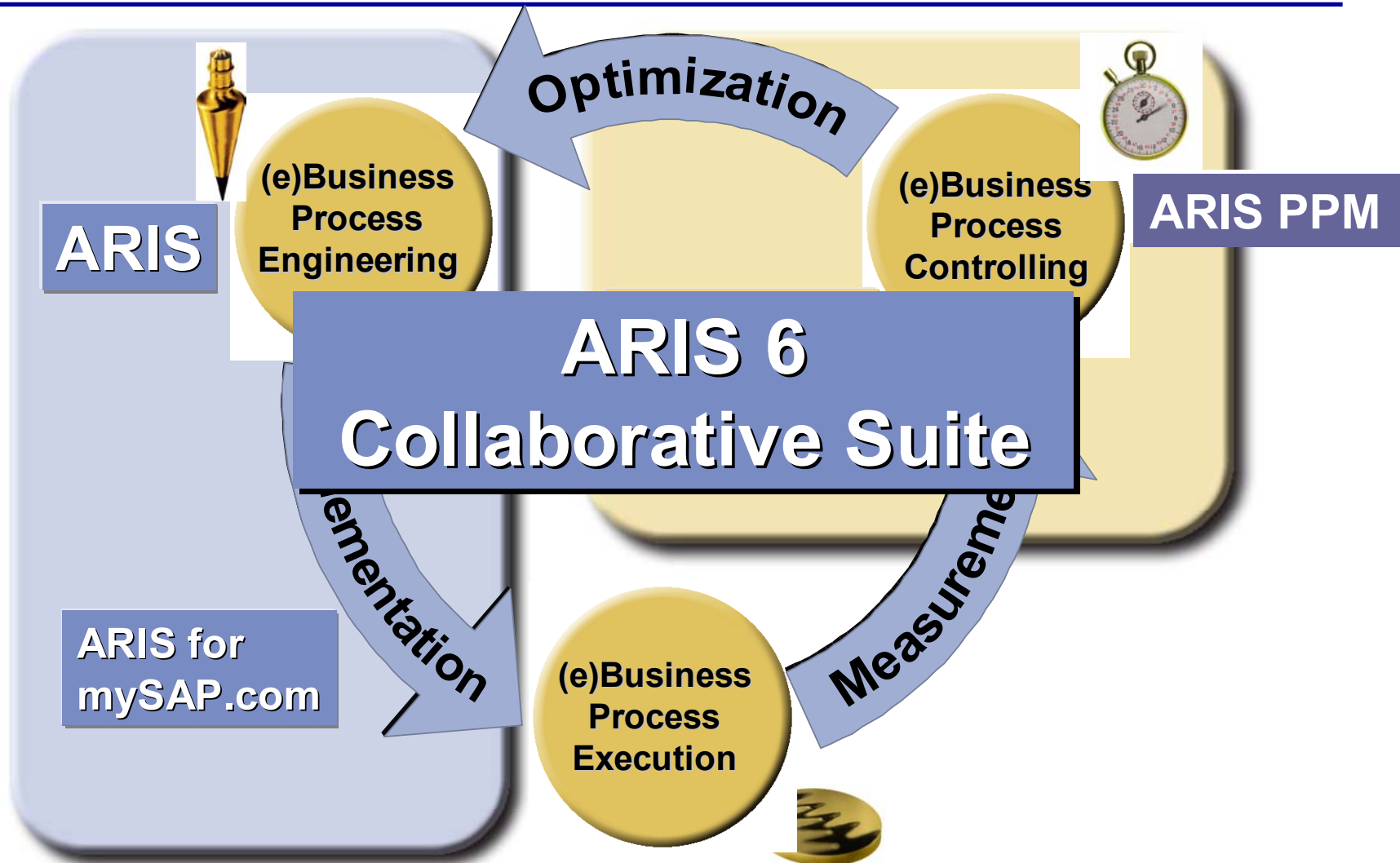


# Companies In Transition

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# The vision for continuous improvements



# Methodology & tools

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- **A modeling tool is more than a drawing tool**
  - Aris is a framework for describing company structures, processes and business application systems
  - Aris is process oriented and allows business process design, analysis implementation and optimization.

# What is a business Processes

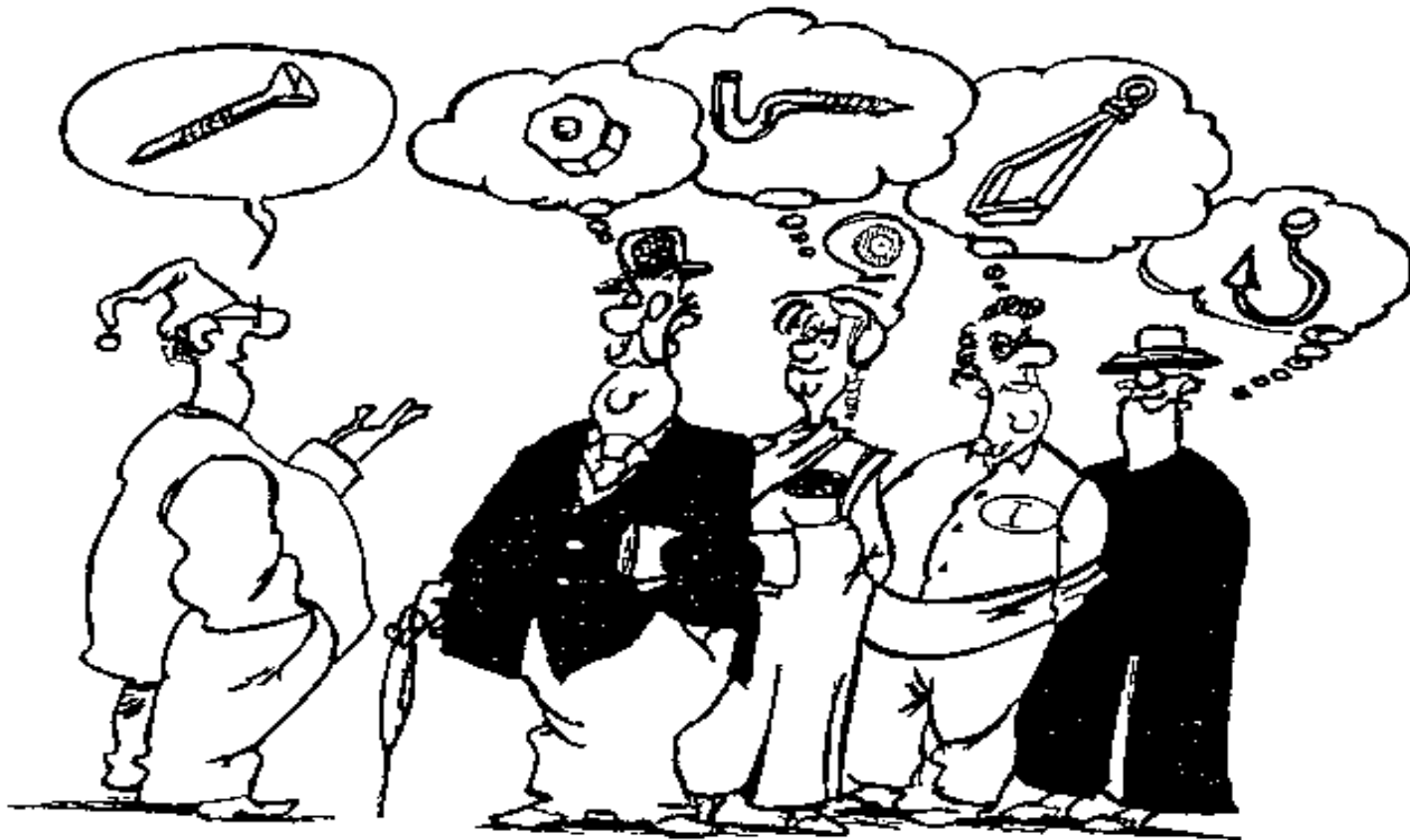
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## A few definitions:

- A business process is a **collection of activities** that takes one or more kinds of **input** and creates an **output** that is of **value** to the customer [Hammer and Champy 1993].
- **Processes** represent the flow of work and information throughout the **business** [BOMSIG 1995]

# Disadvantages of non-standardized language

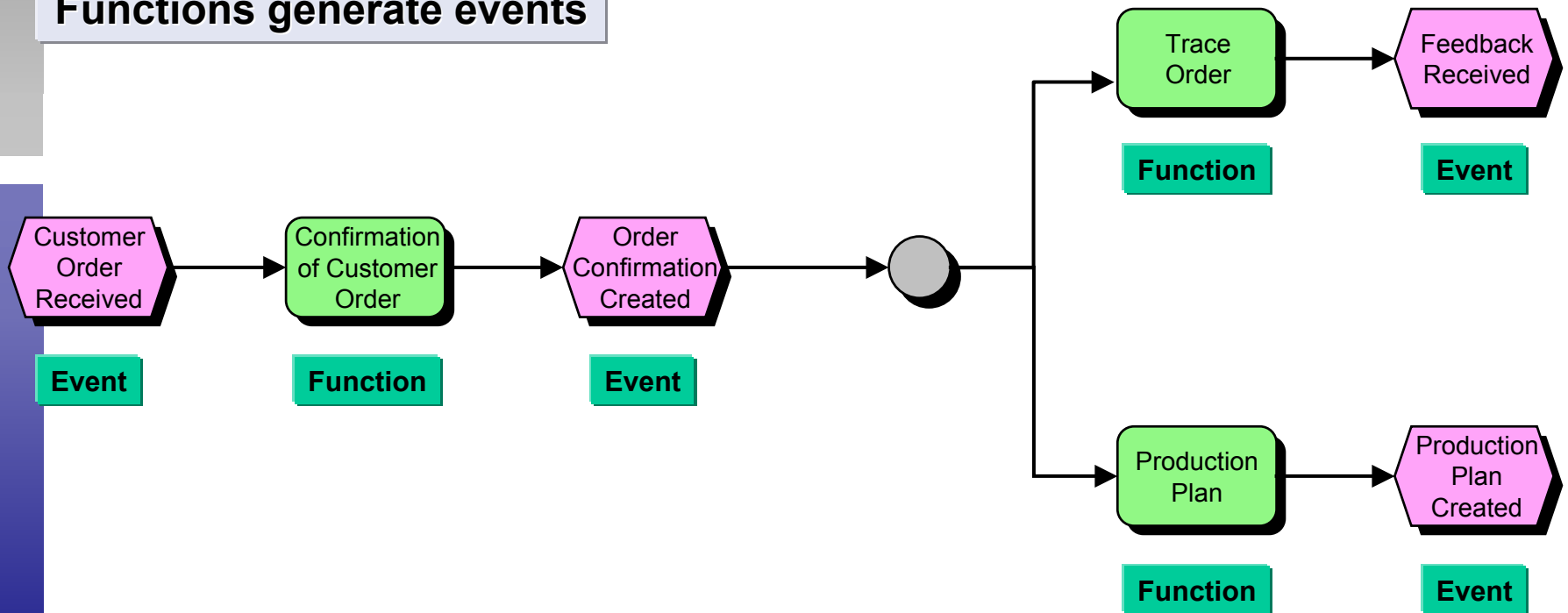
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# Business Process Components

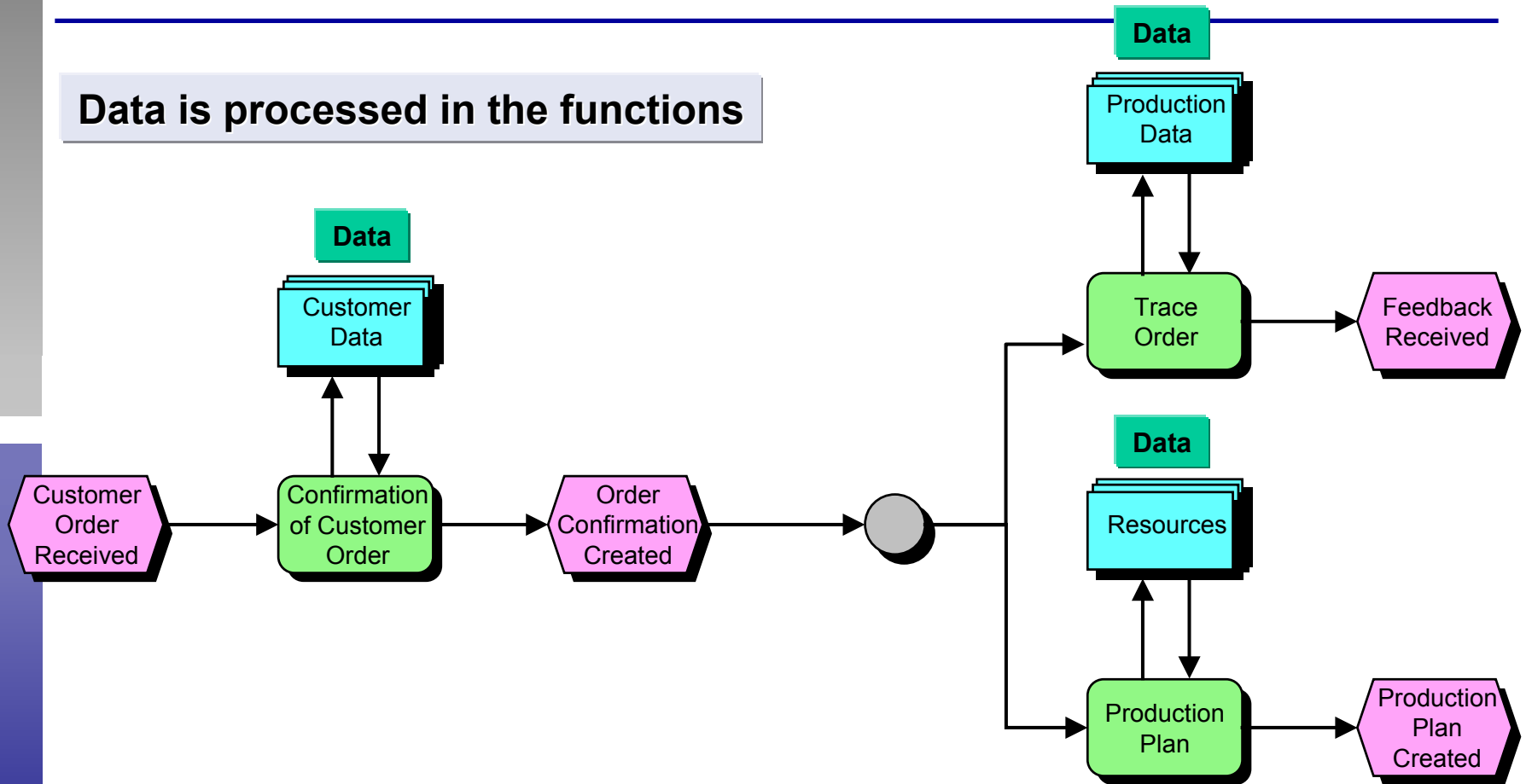
Events trigger functions

Functions generate events

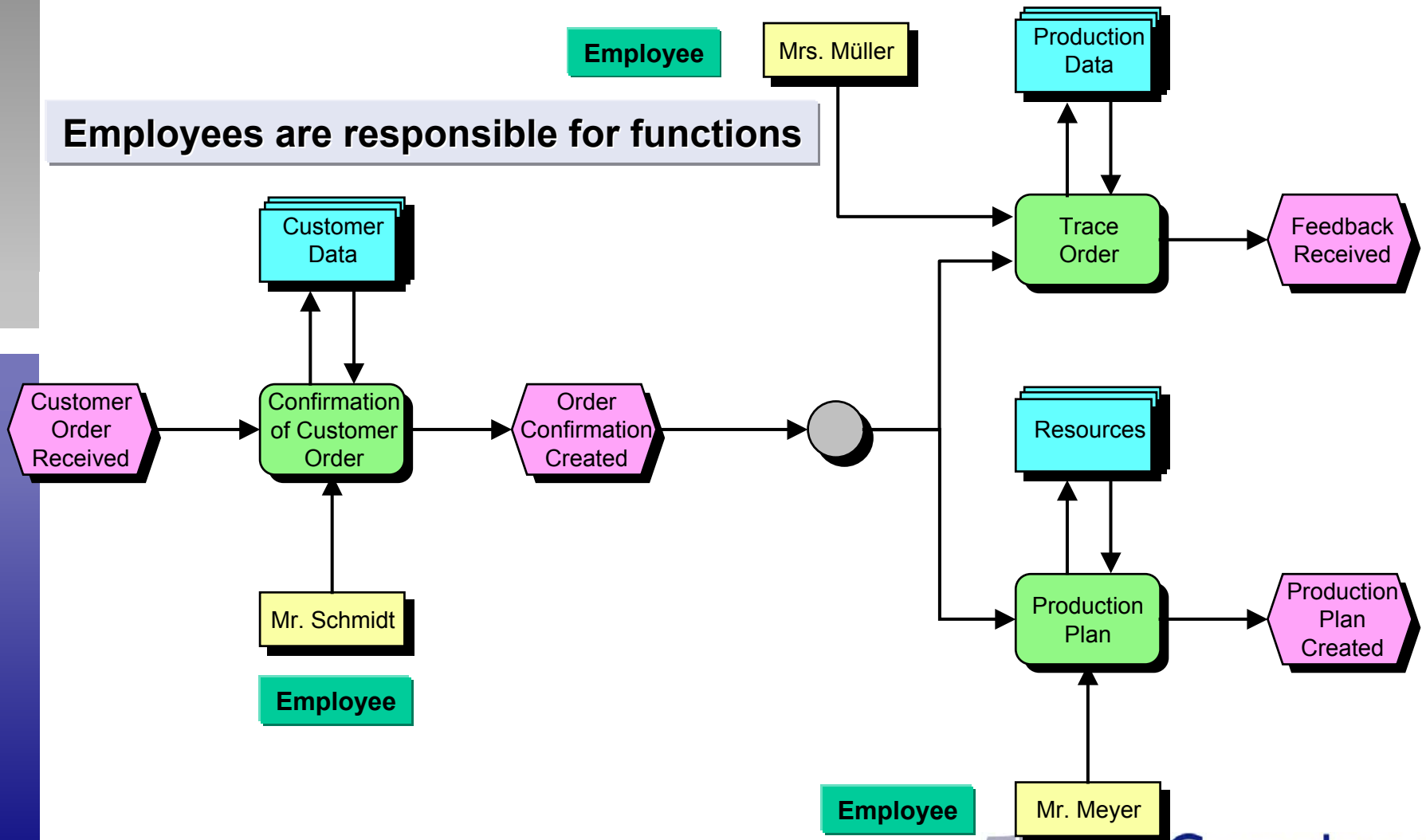


# Business Process Components

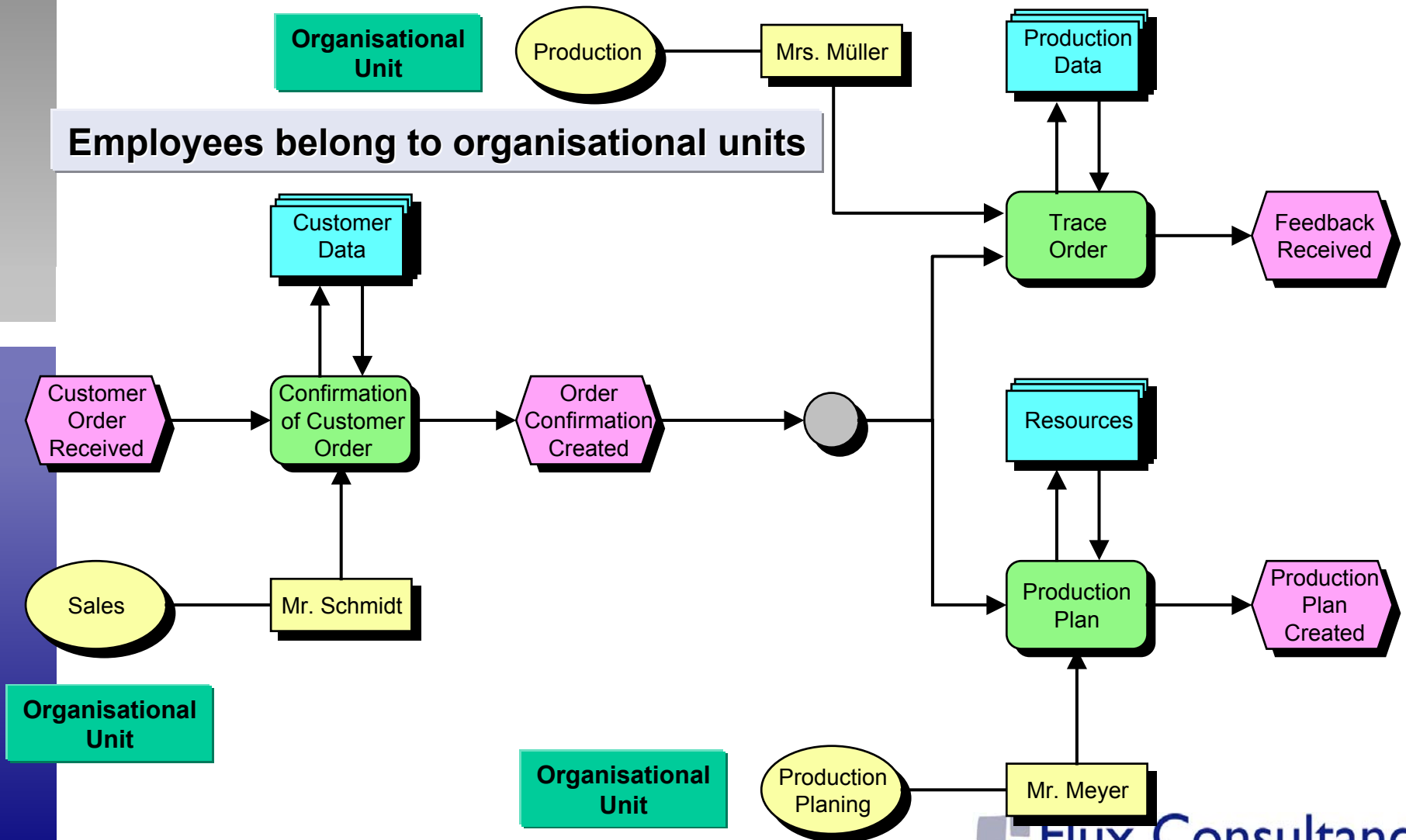
Data is processed in the functions



# Business Process Components

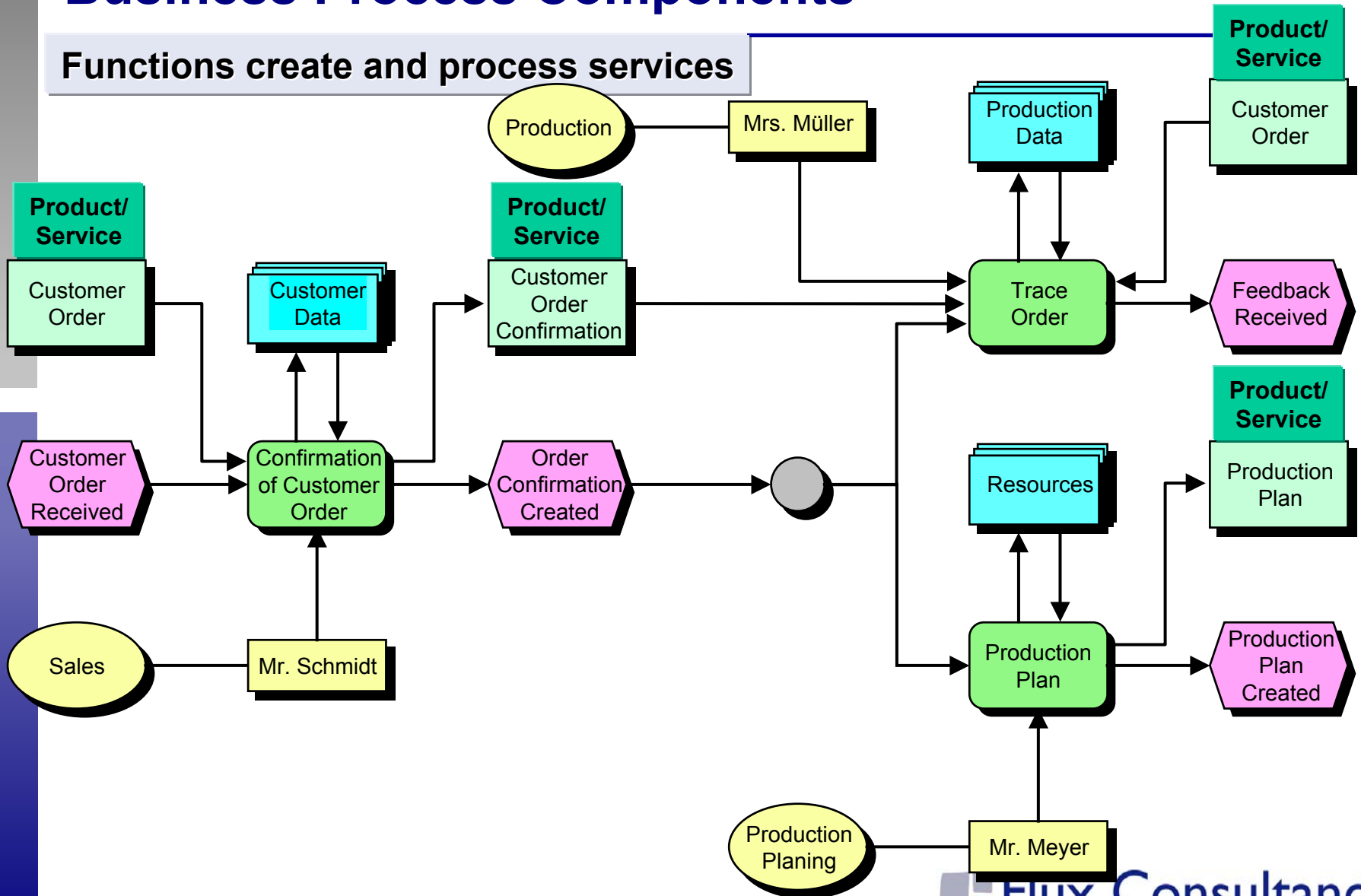


# Business Process Components

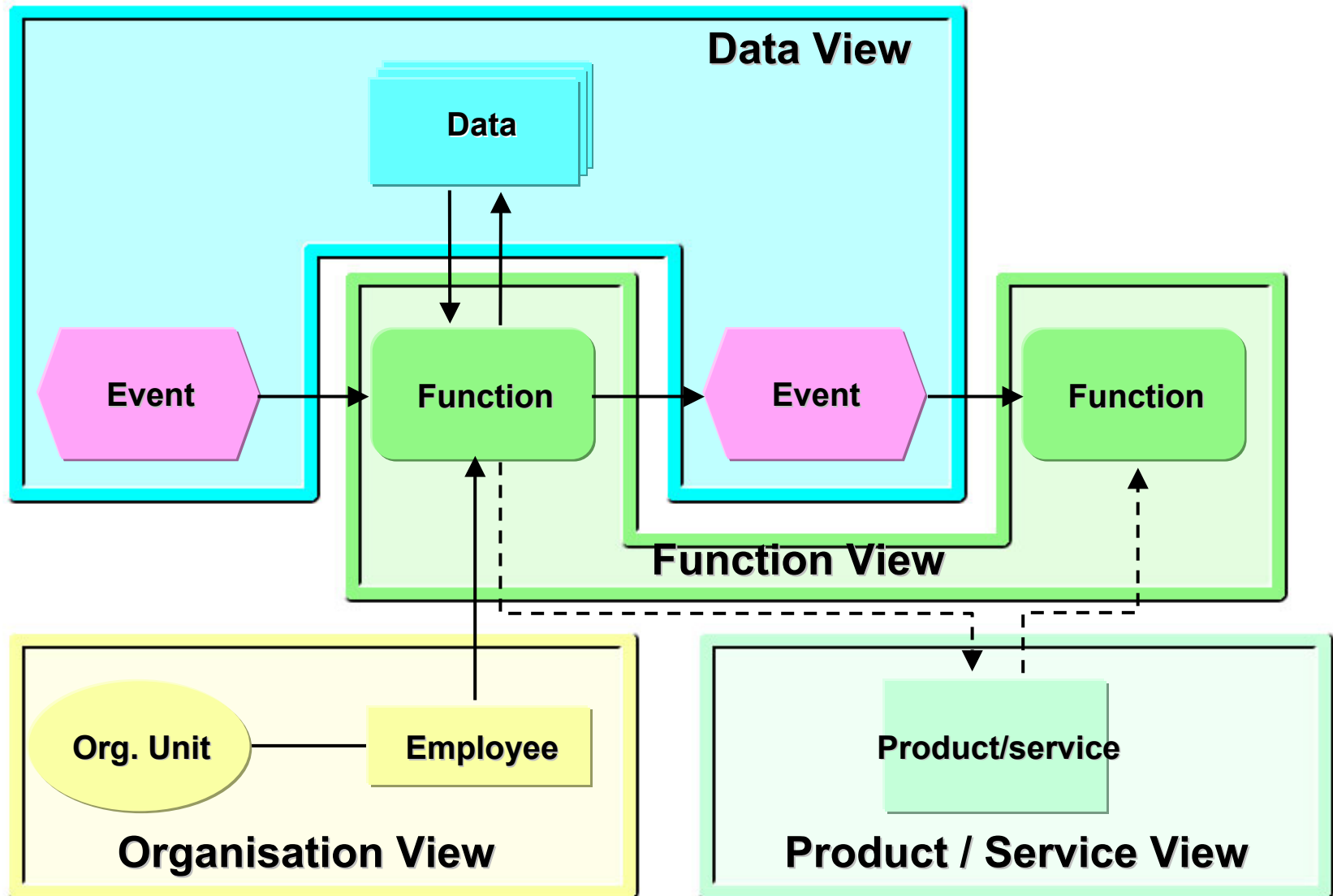


# Business Process Components

Functions create and process services

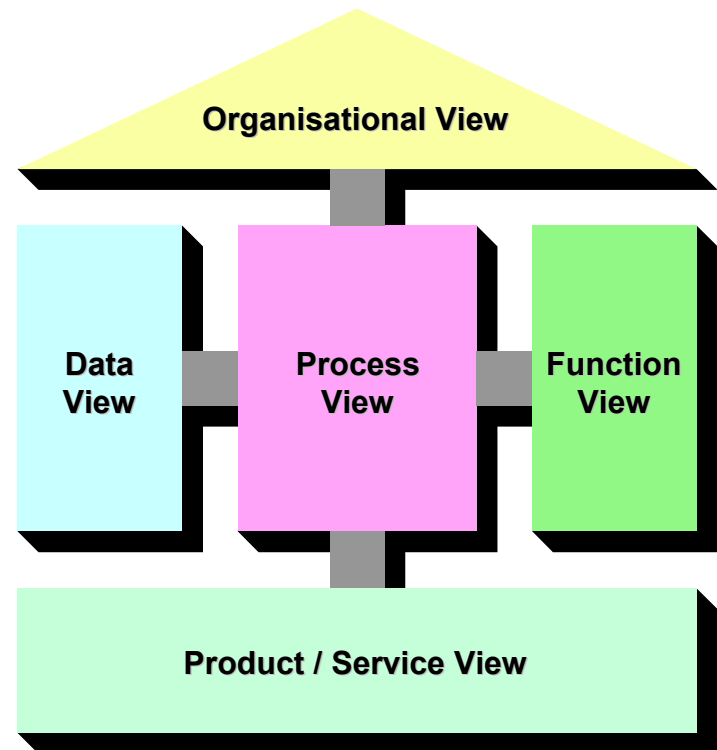


# Reduction in Complexity via View Formation

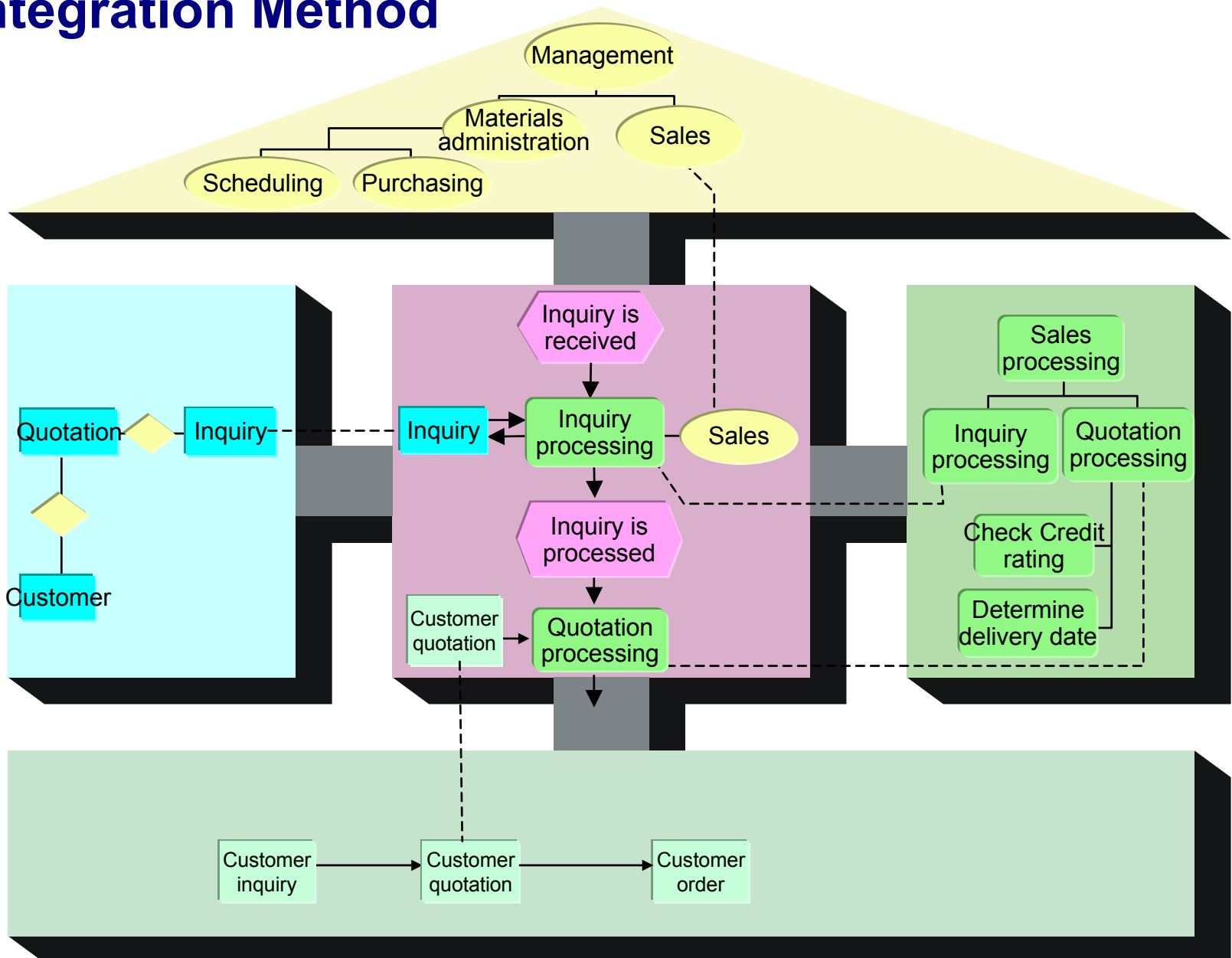


# ARIS Views

- ▶ **Data View**  
What information is important?  
(ie.: Customer, Supplier, Product, Material Calculation)
- ▶ **Function View**  
Which functions will be performed?  
(ie.: Production Plan Creation, Order Processing)
- ▶ **Organization View**  
Which organizational units exist?  
(ie.: Purchasing, Sales, Accounts)
- ▶ **Process View**  
The relationship between data, functions and organizational units
- ▶ **Product/Service View**  
Which products/services are important?  
(ie.: checked order, customer invoice)

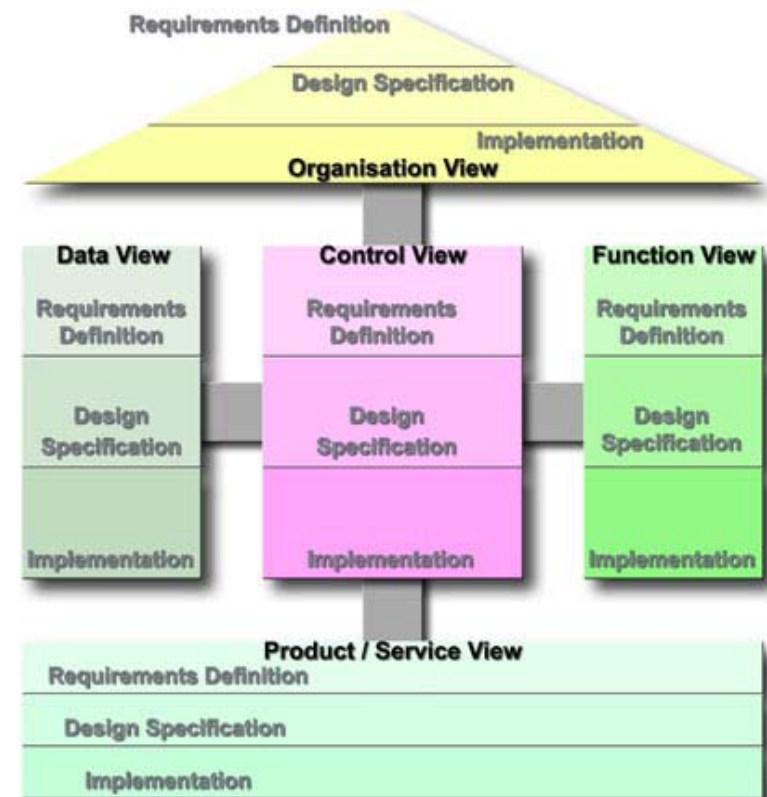


# Integration Method

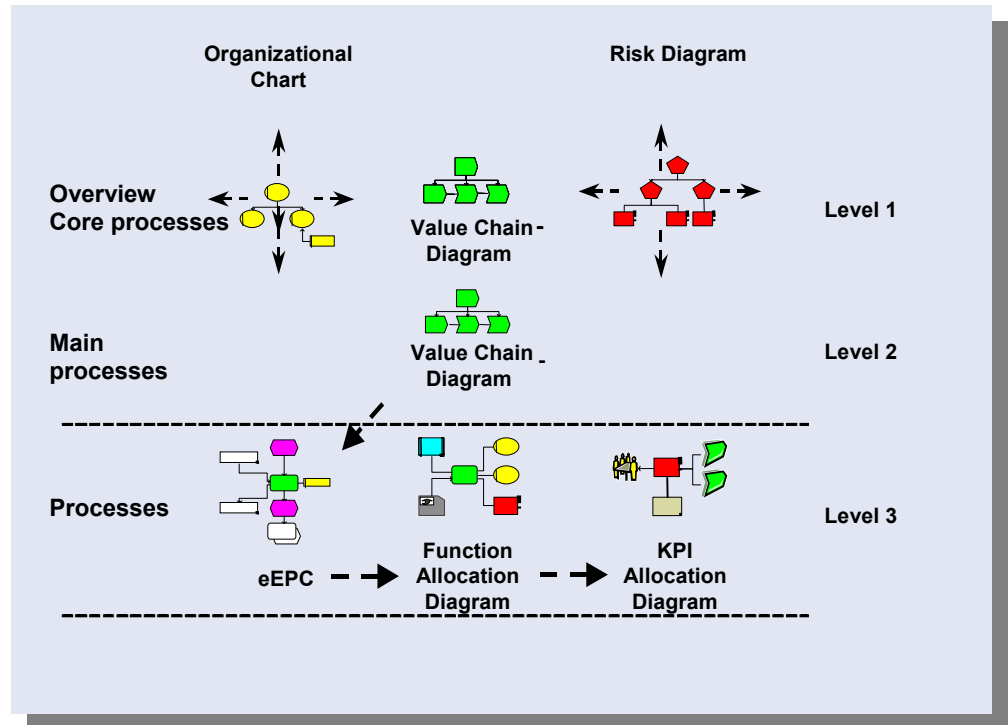
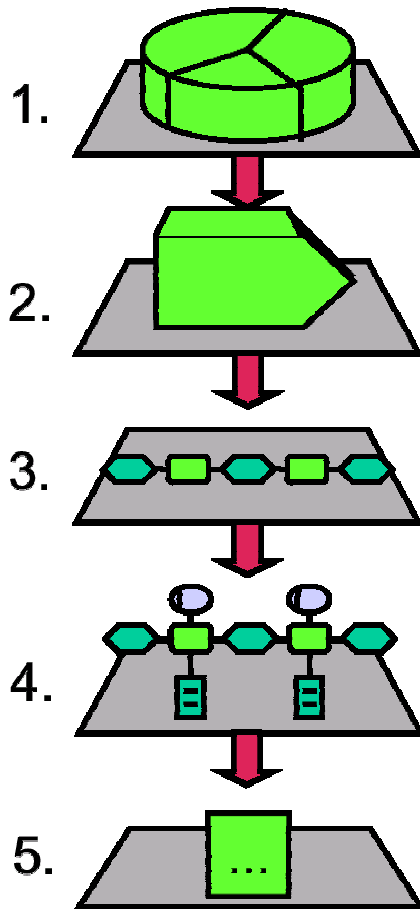


# ARIS leading the way towards Business Process Management

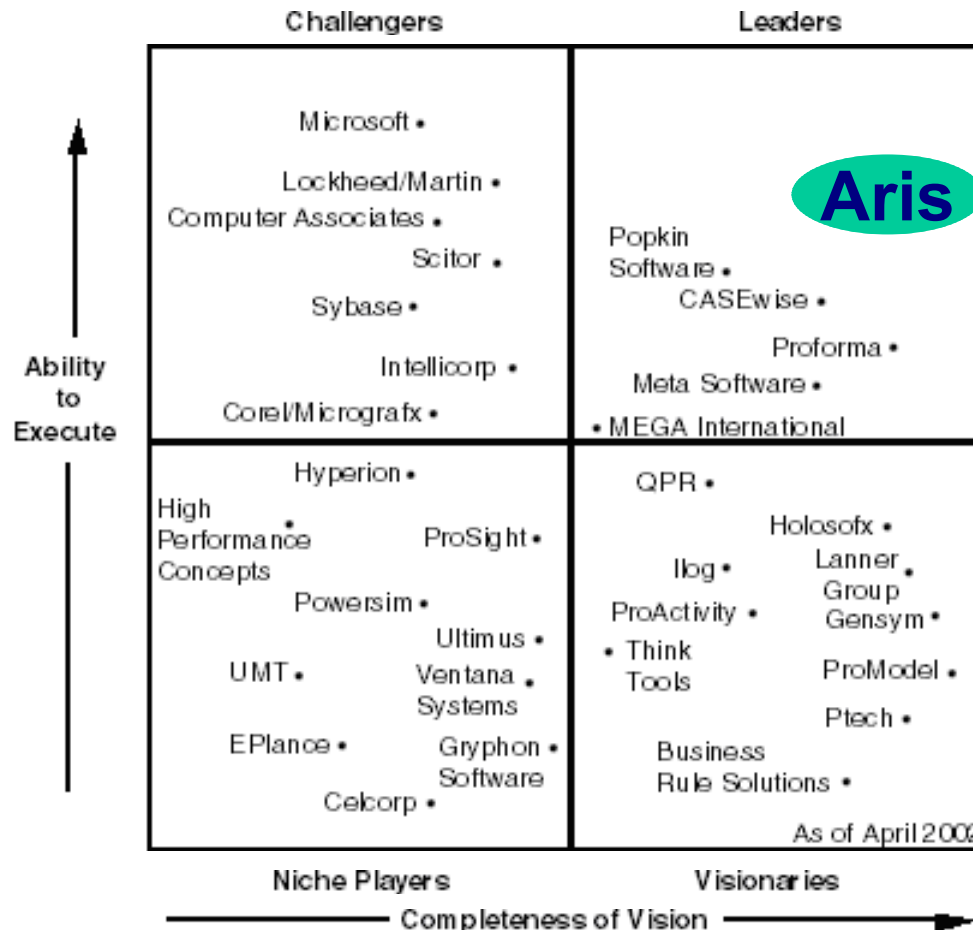
- ▶ **ARIS = Architecture of Integrated Information Systems**
- ▶ **Framework concept to describe companies and application software**
- ▶ **Developed by Prof. Dr. A.-W. Scheer**
- ▶ **Uses standard modeling methods**
- ▶ **Concentrates on the business process**
- ▶ **Effective in all areas: independent of the number of departments, the size of the company or the available software**



# ARIS Drill down possibilities

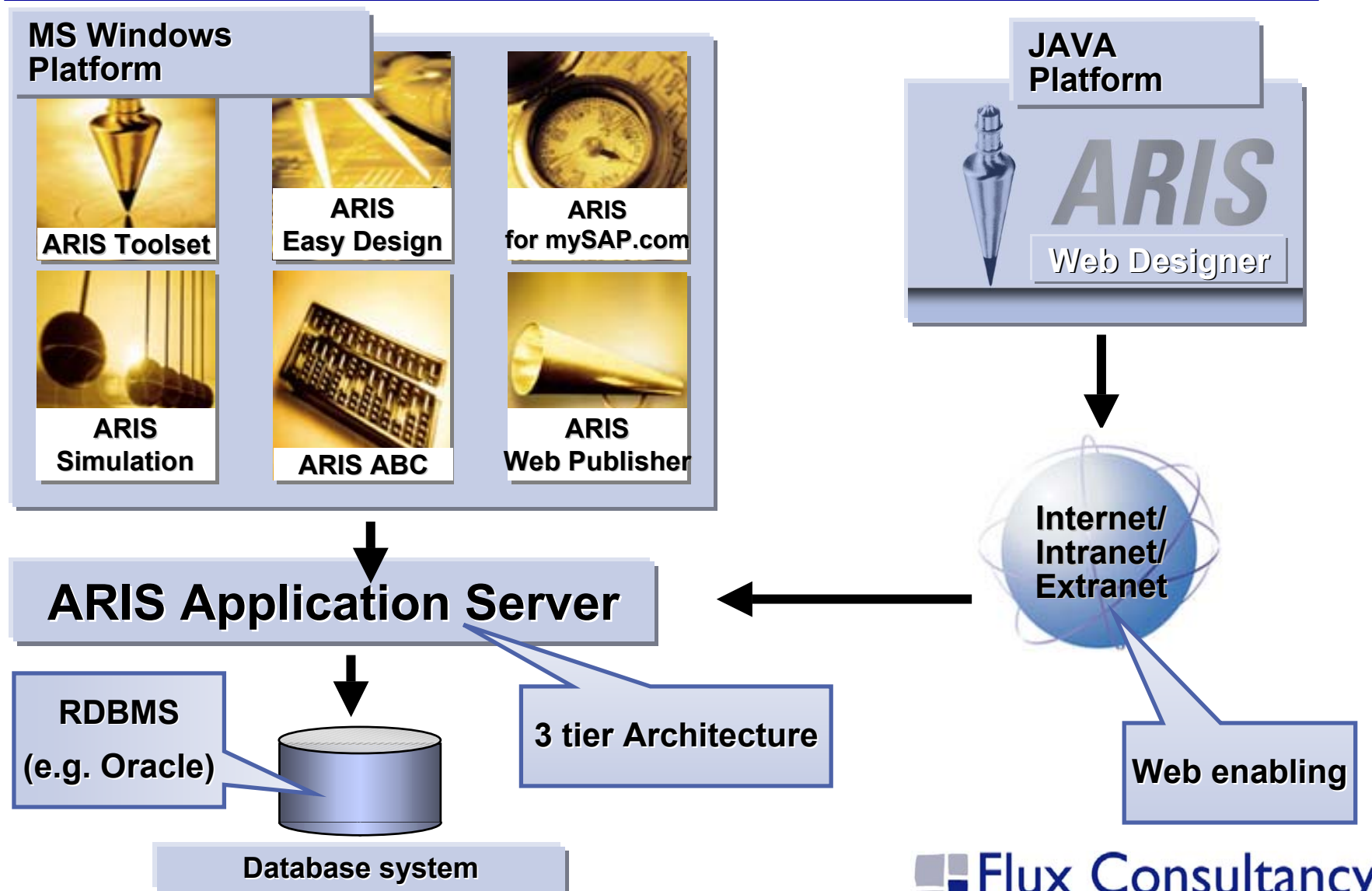


# Why ARIS ? Gartner Research April 2002

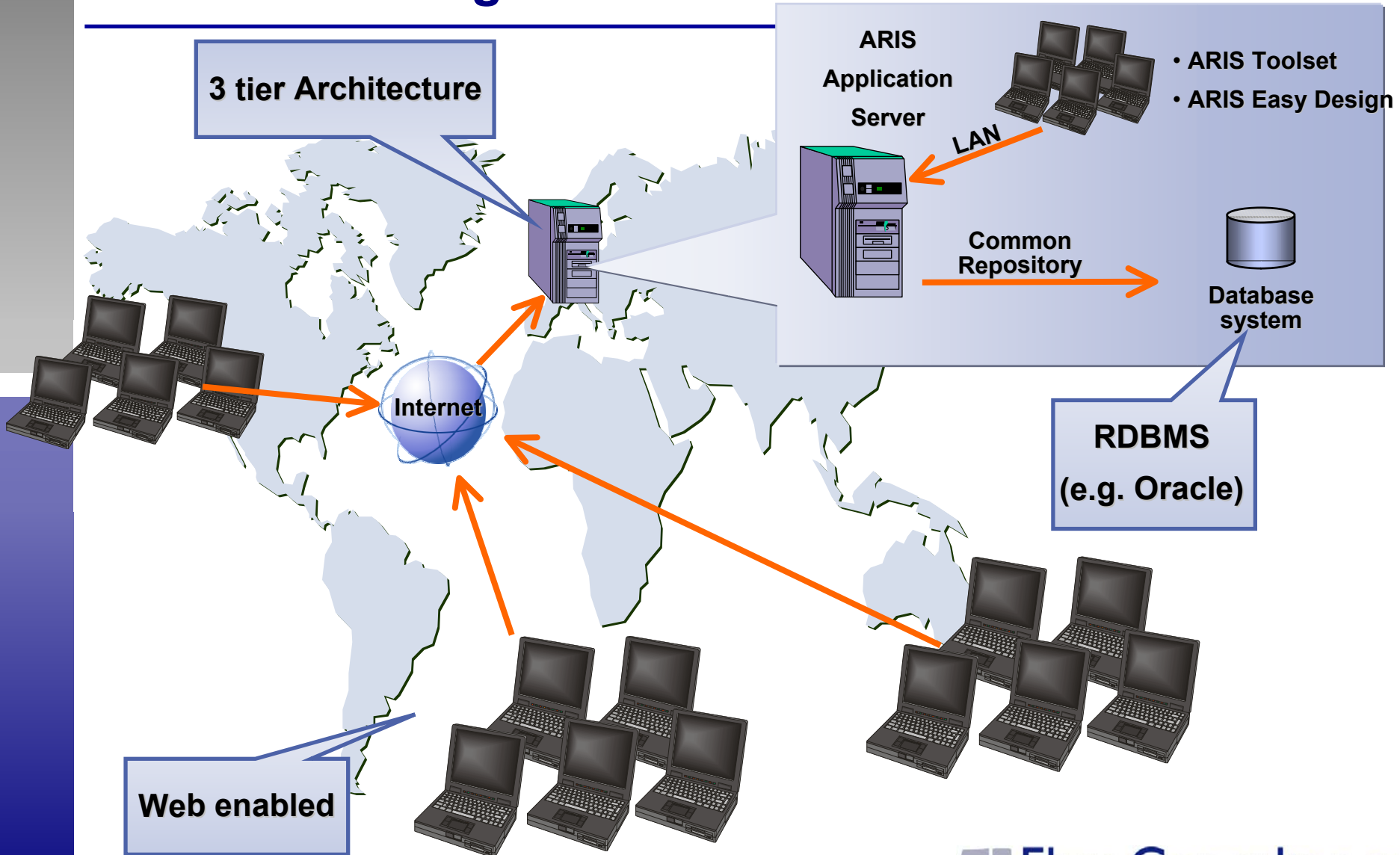


► ARIS extends its position as „the far and away leader in the BPR tool market“ (Gartner Group)

# Architecture of ARIS



# ARIS Web Designer - Scenario



# ARIS 6 - Collaborative Suite



**ARIS Web Designer**



**ARIS Toolset**



**ARIS Easy Design**



**ARIS PPM**



**ARIS Web Publisher**



**ARIS BSC**



**ARIS for mySAP.com**



**ARIS ABC**



**ARIS Simulation**



**QM Scout**



**SAP RBE Scout**

# ARIS Web Publisher: Online process documents

ARIS - Microsoft Internet Explorer von IDS Scheer AG

Datei Bearbeiten Ansicht Favoriten Extras ?

Zurück Vorwärts Abbrechen Aktualisieren Startseite Suchen Favoriten Verlauf E-Mail Drucken

Adresse <http://pcssu/> Links >>

**Vehicle Sales and Distribution** Grafik

IDS SCHEER

[Modellindex](#) [Modellliste](#) [Objektindex](#) [Objektliste](#)

< Vehicle Sales and Distribution > [Hilfe](#)

- Shipment tracking
- Transport Status
- Vehicle Configuration
- XML invoice document
- XML-Payment document
- Oil & Gas: Buy & Sell Process on
- Vehicle Sales and Distribution

**Modell**

Attribute
Collect information about customer requirements and preferences Improved market intelligence Faster reaction to market trends Benutzerattribut Increased

```
graph TD
    subgraph OEM
        RP{{Reservation Planning}}
        MC[MRP Controller]
    end
    subgraph Importer
        SB[Strategic Buyer]
        VLA{{Vehicle Locating and Allocation}}
    end
    subgraph Dealer
        VSSR{{Vehicle Specific Search Request via Internet}}
        PA[Purchasing Agent]
    end
    SB --> VLA
    VLA --> RP
    RP --> MC
    VSSR --> PA
    PA --> VLA
    VLA --> PA
```

Applet gestartet

Lokales Intranet

# ARIS Web Publisher

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- **Role based access for a working knowledge management**
- **Fast, worldwide communication of your business processes via the Internet or Intranet**
- **Web based user interface for quick comprehension and employee acceptance**
- **Overcomes constraints in terms of time and space regarding information distribution**
- **Paperless rollout of business process documentation**
- **Fast, clear implementation of new processes**

# ARIS Web Publisher

ARIS - Microsoft Internet Explorer von IDS Scheer AG, Germany

Datei Bearbeiten Ansicht Favoriten Extras ?

Zurück Vorwärts Abbrechen Aktualisieren Startseite Suchen Favoriten Verlauf E-Mail Drucken Bearbeiten

Adresse D:\Programme\ARIS5\html\wpen\index.htm Wechseln zu Links

### Company overview

Graphic

IDS SCHEER

[Model index](#) [Model list](#) [Object index](#) [Object list](#)

< Company overview > [Help](#)

Models Objects

- Demodatenbank (PP)
- General Cars Corp.
  - ARIS for mySAP.com
  - Sales processing
  - Company overview
  - Billing
  - Core business process product assembly
  - Customer contact development
  - Customer inquiry processing

### Model

#### Attributes

Author	IDS Scheer AG
Identifier	IDS.1171
Languages	english, german, french
Last change	18.10.00 15:32:23
Last user	system
Name	Company overview
Safety class	Secret
Status	18.10.00 15:32:23

#### Download

#### Feedback

Last user system

Applet started.

Arbeitsplatz

```
graph TD; A[Core business process product assembly] --> B[Marketing]; A --> C[Sales]; A --> D[Production planning]; C --> E[Customer contact development]; C --> F[Customer inquiry processing]; C --> G[Customer offer process];
```

# Direct access on important documents

The screenshot shows a web browser window titled "ARIS - Microsoft Internet Explorer von IDS Scheer AG, Germany". The address bar shows "D:\Programme\ARIS5\html\wpen\index.htm". The main content area displays a "Company overview" page with a sidebar menu and a central flowchart. The sidebar menu includes "Models" and "Objects" tabs, with "Objects" selected. The "Objects" list includes "Demodatenbank (PP)", "General Cars Corp.", "ARIS for mySAP.com", "Sales processing", "Company overview", "Billing", "Core business process product assembly", and "Customer contact development". The "Model" section shows attributes for "Company overview": Author (IDS Scheer AG), Identifier (IDS.1171), Languages (english, german, french), Last change (18.10.00 15:45:59), Last user (system), Name (Company overview), Safety class (Secret), and Status (18.10.00 15:45:59). The flowchart shows a process flow: "Core business process product assembly" (yellow arrow) leads to "Sales" (yellow arrow), which leads to "Customer inquiry processing" (yellow arrow). "Sales" also leads to "Product development" (green arrow). "Customer inquiry processing" leads to "Customer offer processing" (green arrow), which leads to "Customer order processing" (green arrow). A Microsoft Word document titled "Sales 2000" is open over the flowchart, showing the text "Sales 2000" and a bulleted list: "Objectives", "Strategies", and "Activities".

Company overview

Graphic

Models Objects

Demodatenbank (PP)

General Cars Corp.

ARIS for mySAP.com

Sales processing

Company overview

Billing

Core business process product assembly

Customer contact development

Model

Attributes

Author	IDS Scheer AG
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Safety class	Secret
Status	18.10.00 15:45:59

Download

Feedback

Last user [system](#)

Applet started.

Arbeitsplatz

Core business process product assembly

Sales

Customer inquiry processing

Product development

Customer offer processing

Customer order processing

Sales 2000

Sales 2000

- Objectives
- Strategies
- Activities

SAP

Even for Lotus Notes, SAP R/3 as well as any application.



# Fast feedback to the right adress

ARIS - Microsoft Internet Explorer von IDS Scheer AG, Germany

Adresse: D:\Programme\ARIS5\html\wpen\index.htm

**Company overview**

Graphic

IDS SCHEER

Model index Model list Object index Object list

Company overview Help

Models Objects

Demodatenbank (PP)

General Cars Corp.

ARIS for mySAP.com

Sales processing

**Feedback**

Last user: system

**Master model**

**Objects**

Function: Billing

Function: Core business process product assembly

Function: Customer contact development

Function: Customer inquiry processing

Function: Customer offer processing

Function: Customer order processing

Function: Delivery

Function: Final assembly

Function: General agreement processing

mailto:tsydow@ids-scheer.de?subject=Feedback to model: \\ARIS Network\LOCAL\Demodatenbank (PP)\General Cars Corp.\Company

Arbeitsplatz

```
graph TD; A[General Cars Corp.] --> B[Core business process product assembly]; B --> C[Marketing]; B --> D[Sales]; B --> E[Production planning]; C --> D; D --> F[Customer contact development]; D --> G[Customer inquiry processing]; D --> H[Customer offer process]; F --> G; G --> H;
```

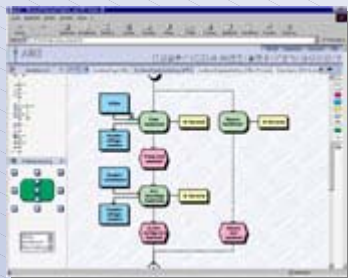
# ARIS Web Designer - Benefits

*Hundreds of users  
on one Repository*

*Thin client*

*World wide distributed  
business modeling*

**Graphical modeling**



**ARIS Web  
Client**

*Very easy handling*

*Platform independent*

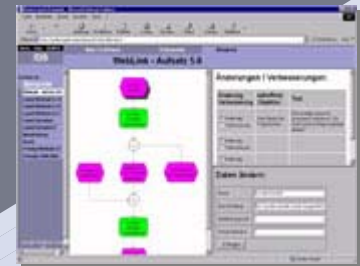
*Easy installation/  
distribution*

*Specific tools for  
different user groups*

**Table modeling**



Index	Table Name	Table Description	Table Type
1	Table 1	Table 1 Description	Table 1 Type
2	Table 2	Table 2 Description	Table 2 Type
3	Table 3	Table 3 Description	Table 3 Type
4	Table 4	Table 4 Description	Table 4 Type
5	Table 5	Table 5 Description	Table 5 Type
6	Table 6	Table 6 Description	Table 6 Type
7	Table 7	Table 7 Description	Table 7 Type
8	Table 8	Table 8 Description	Table 8 Type
9	Table 9	Table 9 Description	Table 9 Type
10	Table 10	Table 10 Description	Table 10 Type



**Feedback / Attribute  
editing**



# Web Designer : Web Based modeling tool

**Aris 6 - Collaborative Suite**

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit MicroPortal

Address <http://webserver/aris6/index.html> Go

**ARIS** File Edit View Insert Arrange

History

- Certification
- IT architecture
- Simulation
- UML
- Variants
- Customer inquiry processing (eEPC)
- Customer inquiry processing (Office P)

Attribute Placement → Connections

Assignments

Attributes Occurrences

Attribute Name	Value
Name	Open customer
Identifier	IDS.1184
Author	IDS Scheer AG
Type	Function
Last user	system
Min. orientation time	10 Minute(s)

Sales processing (eEPC) Consumer credit processing

Process credit inquiry for consumer

Credit decision

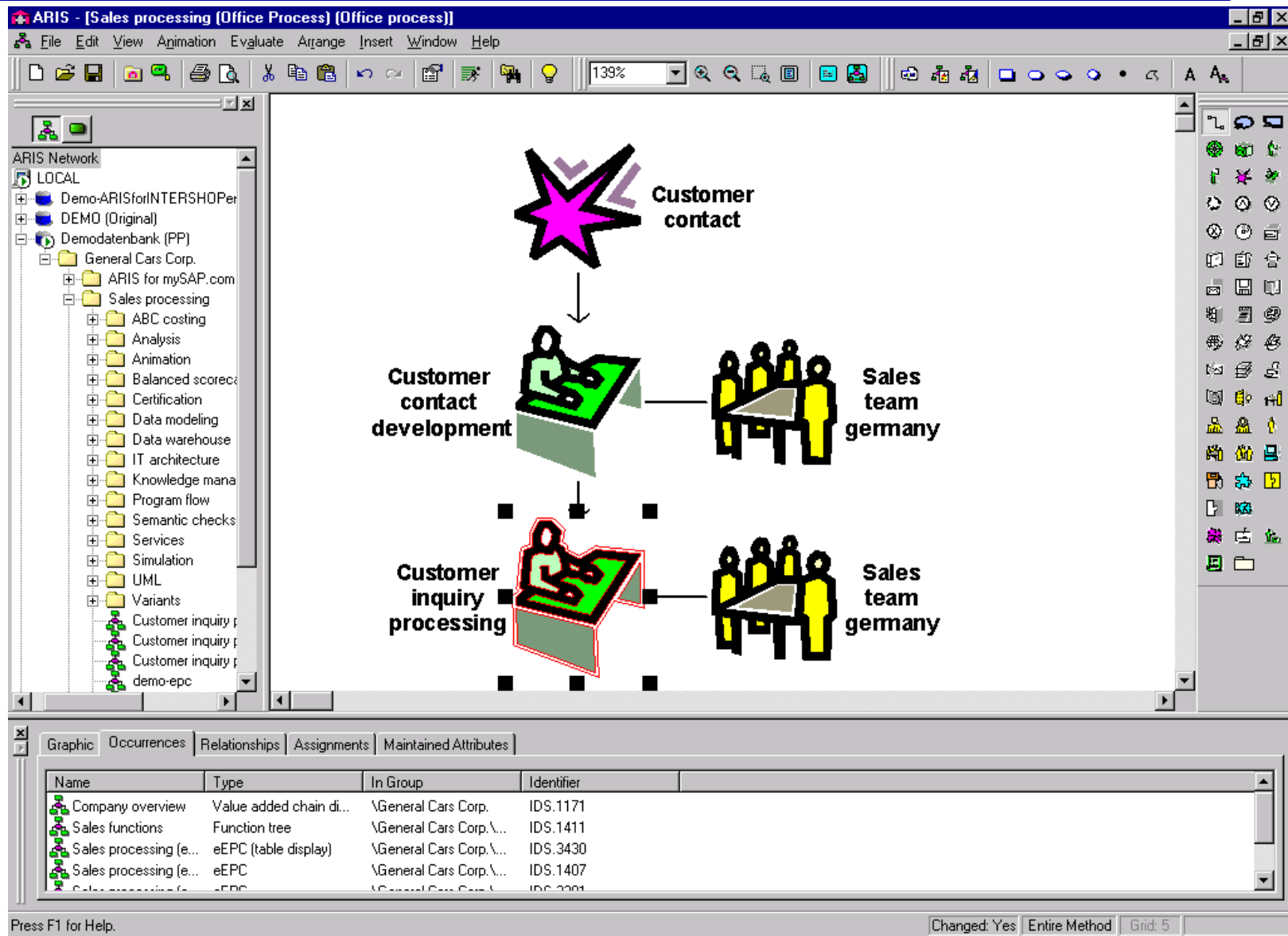
Credit decision positiv

Credit decision negativ

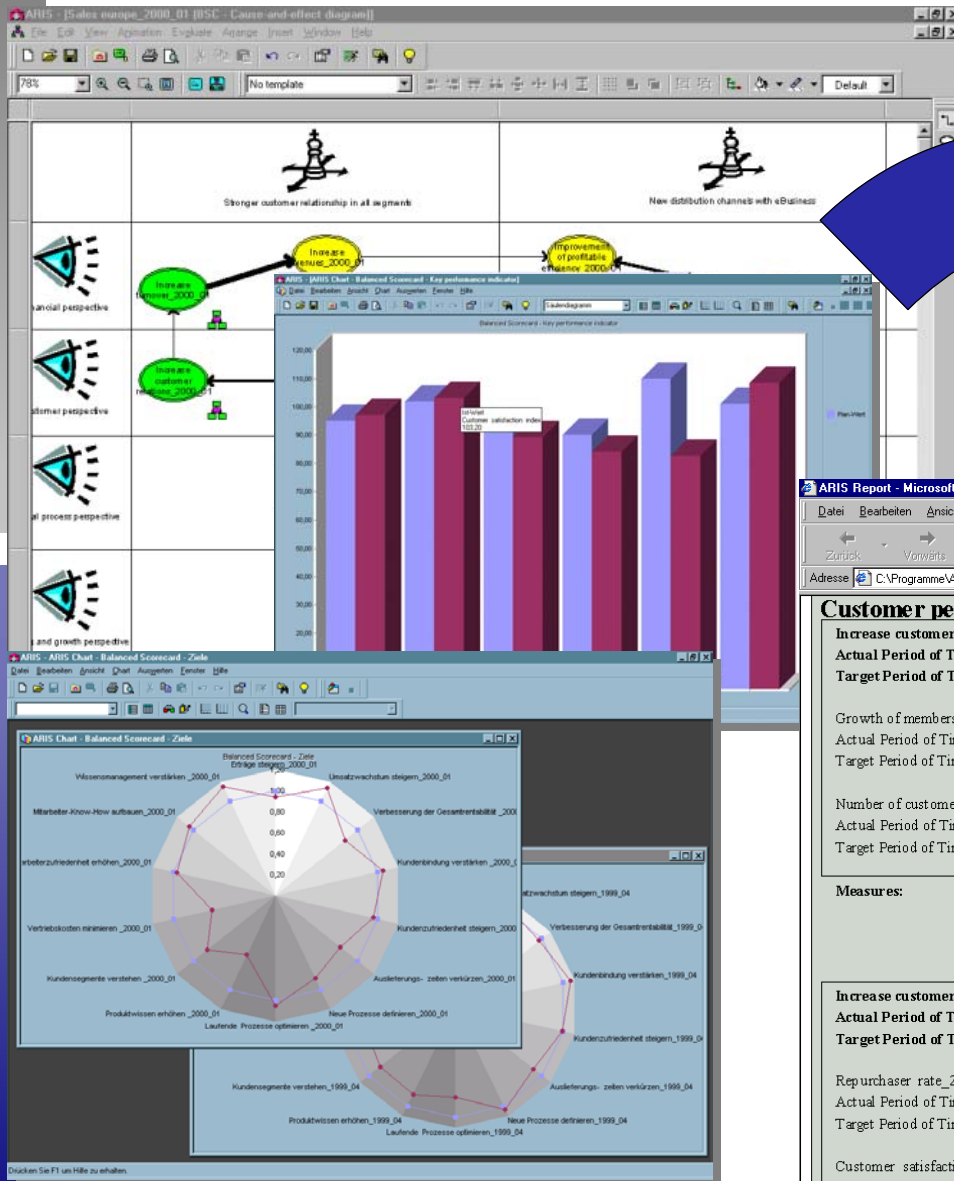
Create credit documents for consumer

Applet started. Local intranet

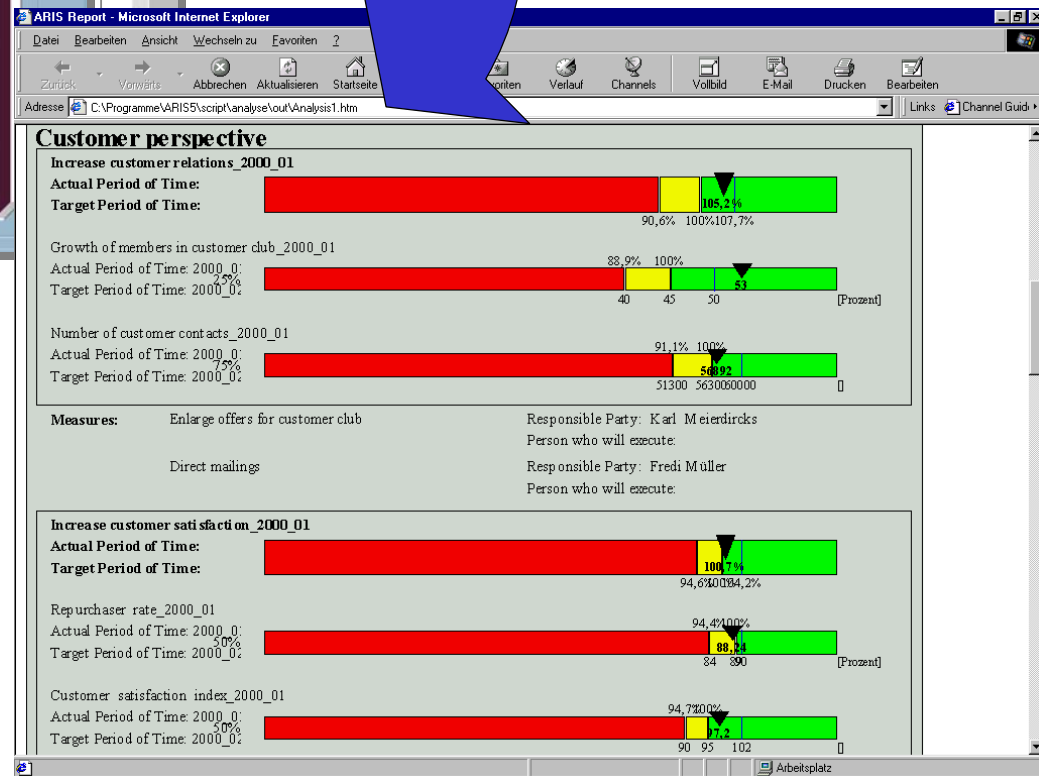
# ARIS Toolset : Unique process analysis tool




# Graphical Analysis Functions





Graphical analysis of goal accomplishment and of all defined KPI (Management View)




## Créer une commande client: écran initial

 Créer avec référence

 Vente

 Synthèse des postes

 Acheteur



## afficher Gestion des crédits client: Habitude paiement



Textes...

Données de gestion

Client: 1170 Buy & Fly Supermarkt

Dom. contrôle crédit: 1000 Domaine de contrôle crédits Europe

EUR


### Habitudes de paiement

#### Paielements

Période	Exer.	Nom...	Total (avec escompte...	Retard	Total (ss escompte b...	Retard
6	1996	1	0,00	0	35,28	344
1	1996	2	4.911,19	2-	26,46	181
10	1995	1	0,00	0	924,61	2-
9	1995	2	0,00	0	113,19	12-
8	1995	2	0,00	0	778,99	1-
7	1995	6	0,00	0	2.857,40	3-
6	1995	6	3.771,91	11	139,93	3-



des postes

 Acheteur