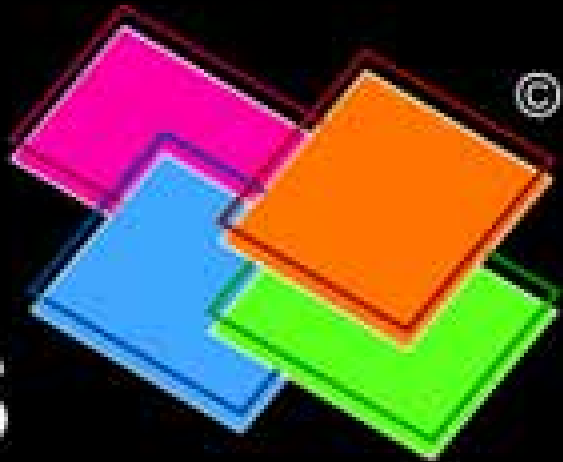
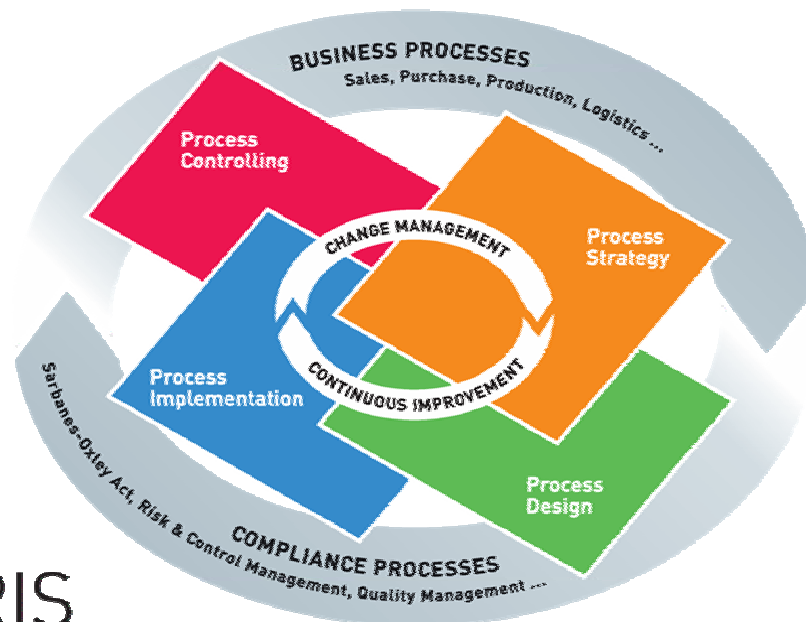


ARIS  
Platform







# ARIS Business Process Excellence

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基于业务流程管理平台的  
企业架构（EA）及德国大众汽车案例分享

IDS Scheer 集团

2007年4月

[www.ids-scheer.com](http://www.ids-scheer.com)



# 关于ARIS EA：

- **ARIS EA是什么？**
- **ARIS EA做什么？**
- **AIRS EA怎么做？**

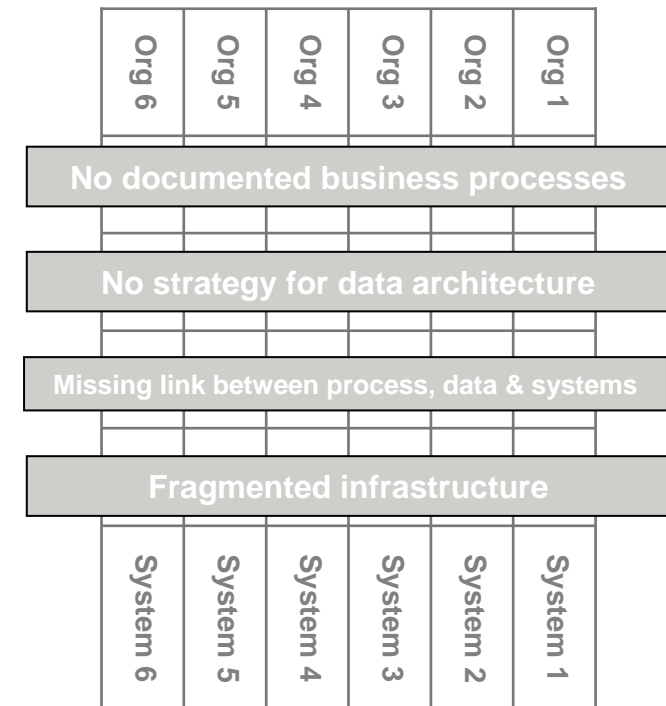




- ARIS EA – 企业架构的描述方法
  - 1、ARIS EA基于企业的管理架构、描述了不同层次的业务活动、组织和其它相关资源之间的关系；
  - 2、ARIS EA 描述对企业业务架构产生直接支撑作用的企业的应用架构和信息架构；
  - 3、ARIS EA 描述在企业应用架构和信息架构之下的企业技术设施组成架构，它包括支撑企业应用和数据运行的数据库、操作系统、网络应用和基础设施。
- 基于ARIS的EA管理
  - 企业用来管理企业架构的一套工具、方法论、管理思想。



- ▶ 使业务流程更加透明
- ▶ 对业务与相关信息系统的描述标准化 – 使得业务人员与IT技术人员可以使用相同的语言进行交流；统一不同的业务交流语言如：Visio, Word, Excel 等等。
- ▶ 将所有的来自业务的需求及来自IT的设计文档集中在一个统一的数据库中管理起来。
- ▶ 有效减少业务需求与技术需求之间的沟通困难
- ▶ 实现各类管理项目后业务流程的持续改进，适应系统不断升级、组织不断优化的管理需求。





# ARIS EA 解决的问题？

推出新的业务流程与新的产品需要太长的实施周期

IT 的开销不断增加，而反之成功实施IT项目的可能性却不断下降。

企业范围的问题



现有IT技术开发的新的应用系统不能满足我在质量、时间、成本各方面的要求。

业务人员描述业务需求的文档缺乏一致性与协调性。

业务人员的问题



公司内部IT人员在各个方面提供的技术支持不能让我感到满意。

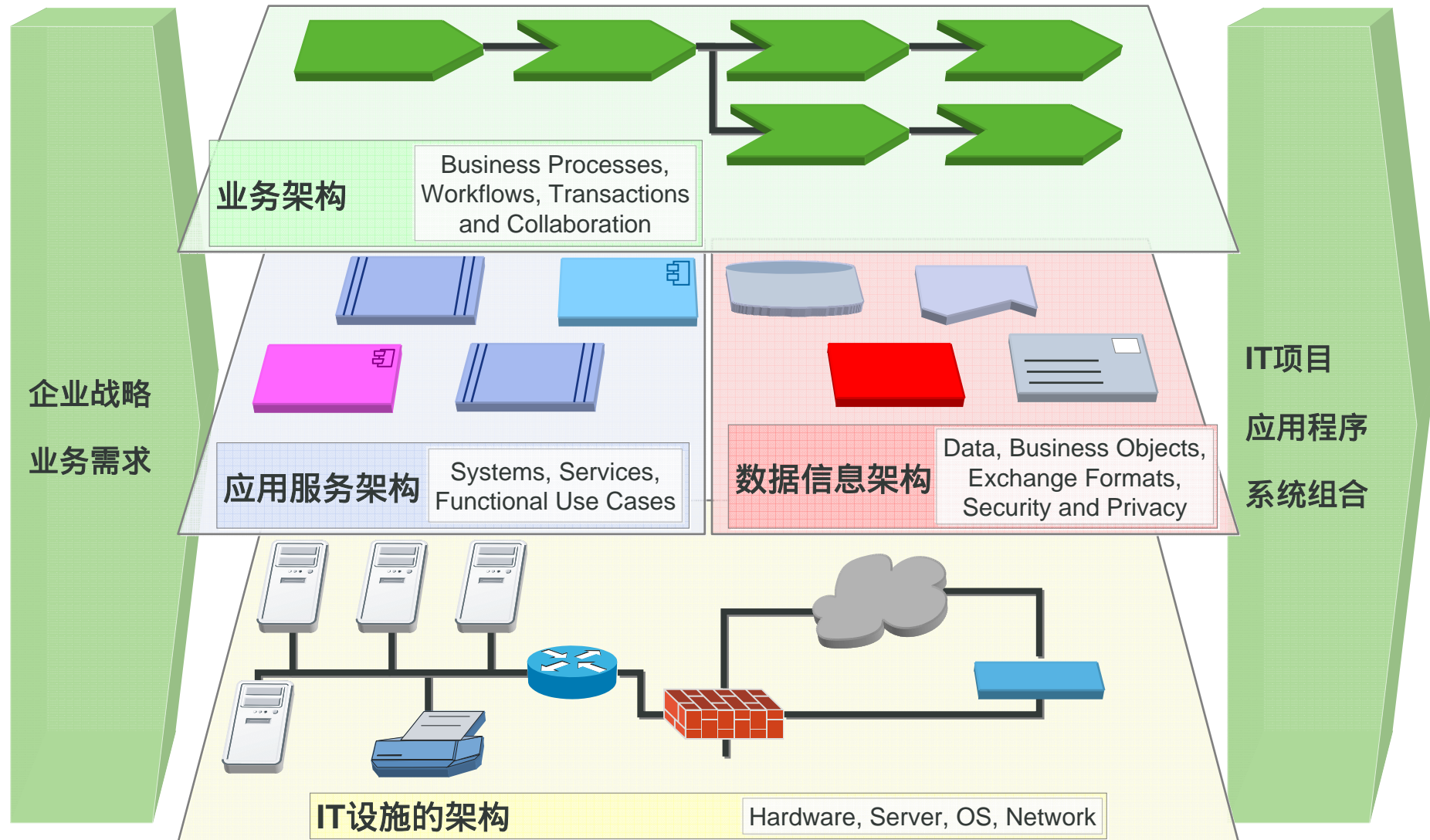
IT 人员的问题



内部IT系统越来越复杂，异构化，难以使用传统的文档进行描述。

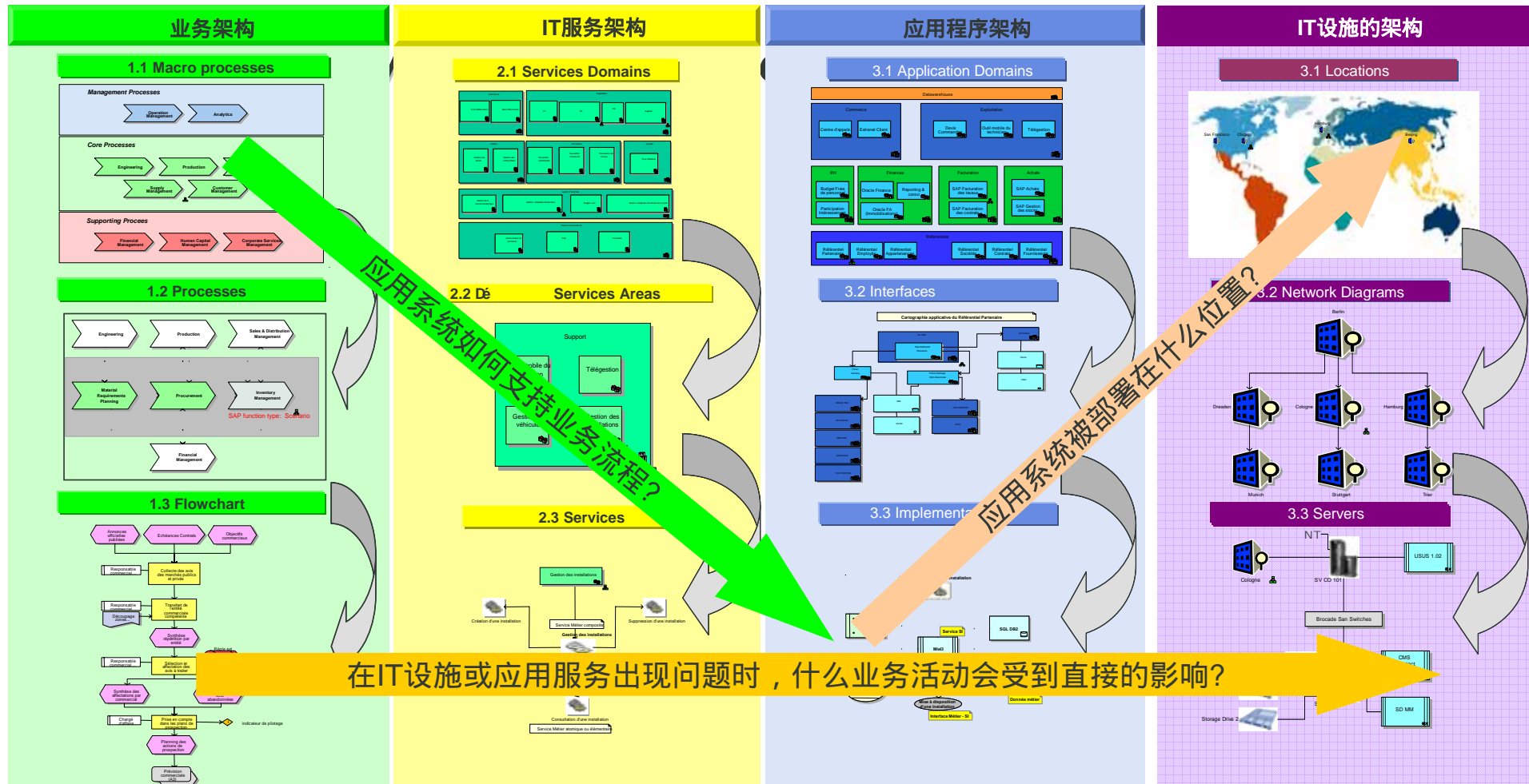


# EA做什么？ - 从业务到IT技术的桥梁





# EA做什么？ - 回答下面三个问题

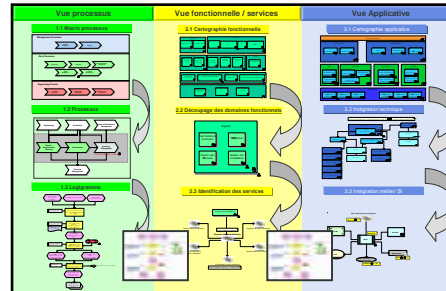




# EA做什么？ -

为业务和IT人员基于同一模型定义不同的视图

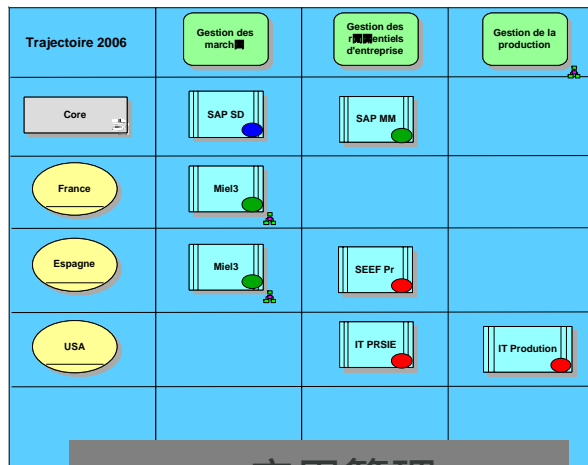
在EA中定义管理视图



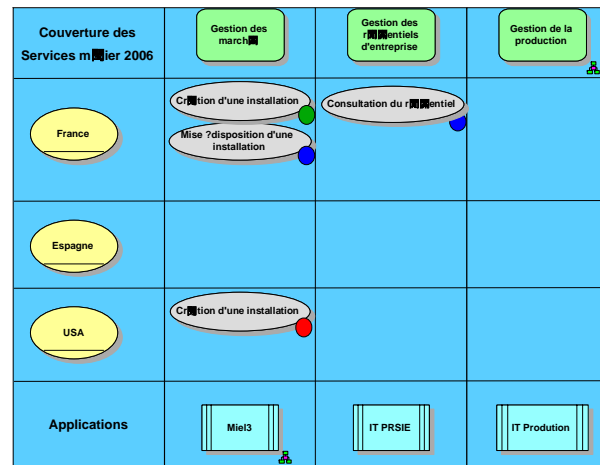
...在EA中集中管理与业务系统对应的信息系统配置文档

Nouveau Numéro : 356			Nb Interfaces	
N°	Appli sortante	Appli entrante	Nature interface	Statut cible
1	Prisma	Pivot	Envoi des OF	Supprimée
2	SAP	Pivot	Envoi des OF	Créée
3	Prisma	Simatic IT	Liste des ressources	Supprimée
4	SAP	Simatic IT	Liste des ressources	Créée
5	SAP	Prisma	Commandes MP	Supprimée
6	SAP	Prisma	Articles	Supprimée
7	Prisma	Fournisseurs		Supprimée
8	SAP	Prisma	Articles Fournisseurs	Supprimée
9	SAP	Prisma	PMP	Supprimée
10	SAP	Prisma	Contrats	Supprimée
11	Reflex	Prisma	Sortie Stock P	Supprimée
12	Reflex	Prisma	Génération de DI	Supprimée
13	Manugistics	Prisma	PCP	Supprimée
14	Pivot	Prisma	Déclaration de Production	Supprimée
15	OS	Prisma	OF (Stable)	Supprimée
16	Orbivox	Prisma	OF (Evros)	Supprimée
17	Prisma	SAP	Commandes EM, IN	Supprimée
18	Prisma	SAP	Réceptions	Supprimée
19	Prisma	SAP	Sorties	Supprimée
20	Prisma	SAP	Sorties de Fin de Mois	Supprimée
21	Prisma	SAP	Closure des Commandes	Supprimée

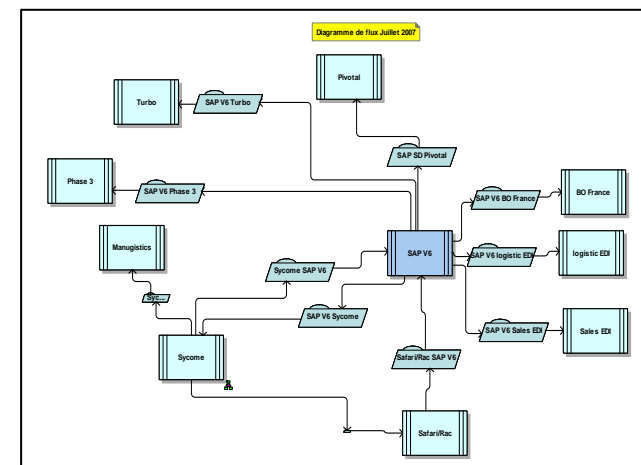
Excel



...应用管理



...服务管理



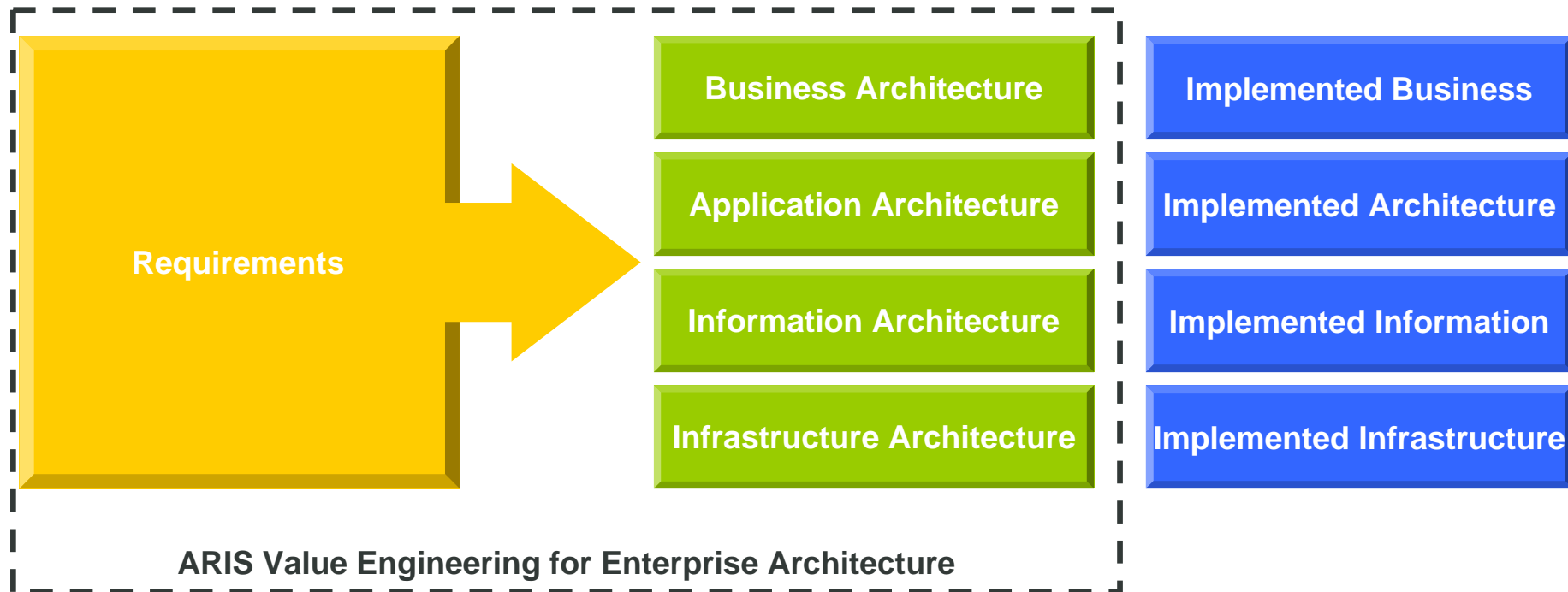
...操作界面管理



# ARIS EA做什么？ - 提供软件解决方案与方法论

## ► IDS Scheer 为用户提供：

- 为保存和维护企业架构（包括业务逻辑、应用系统、数据信息和IT设施等）提供一个完整的软件解决方案。
- 为上面的软件解决方案提供一个方法论和管理思想 - 基于 AVE 企业架构管理。





# ARIS EA做什么？ - 对IT的管理

## ▶ IT 架构的管理

- ▶ 对IT应用与其它的有形或无形的技术资产进行管理
- ▶ 实现标准化/系列化/模块化
- ▶ 业务与技术之间更好的交流
- ▶ 对IT 应用组件的管理 (业务场景管理)
- ▶ IT设施的管理

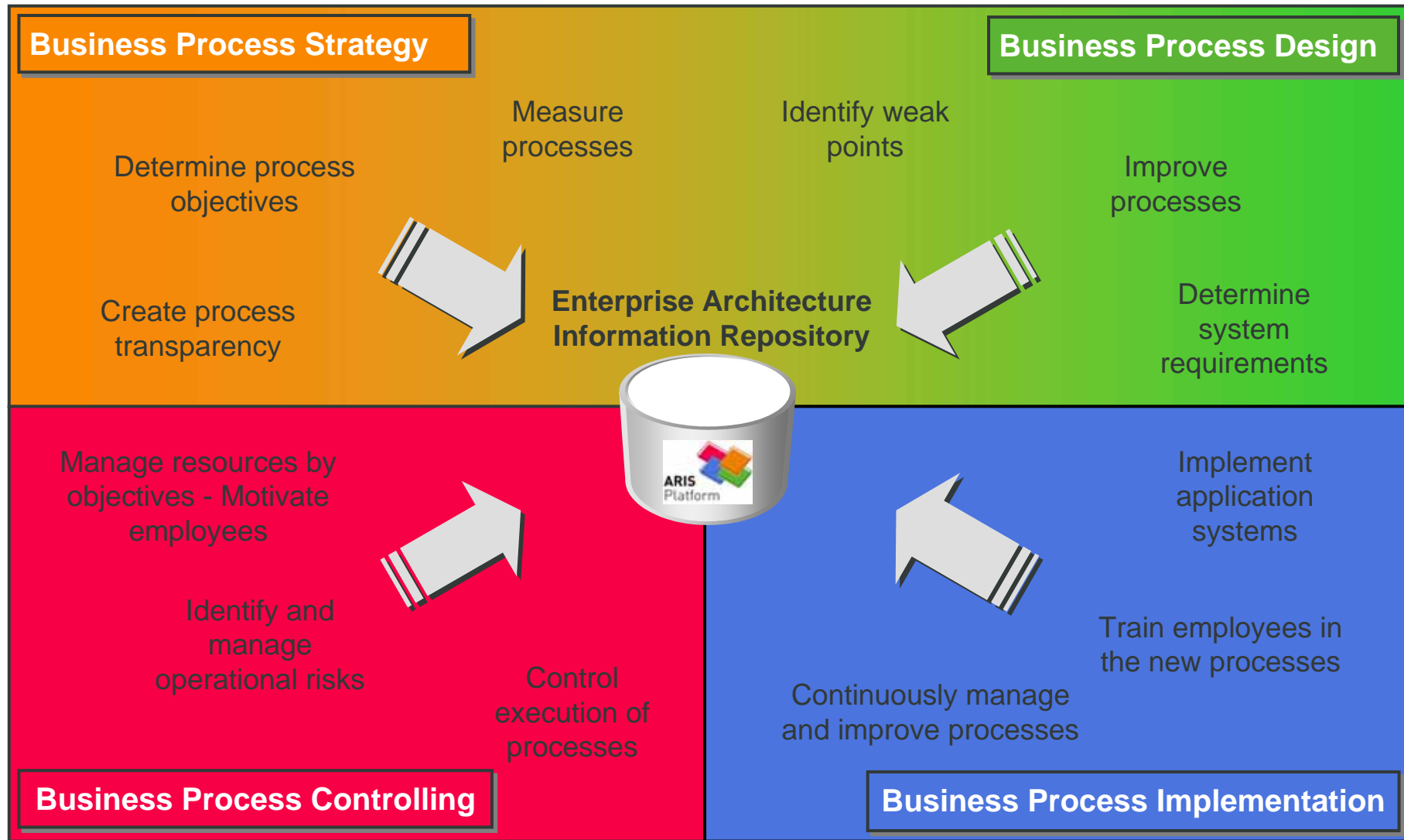
## ▶ IT改进的管理

- ▶ 设计与展示IT系统的部署计划
- ▶ 应用程序的开发管理
- ▶ IT资源的共享

## ▶ IT 服务的管理



# ARIS EA怎么做？ - 从战略到监控的集中管理模式





# ARIS EA怎么做？ - 利用了ARIS的四个平台



## ARIS Controlling Platform

ARIS Process Performance Manager  
ARIS Audit Manager  
...



## ARIS Strategy Platform

ARIS BSC Solution  
ARIS Business Optimizer  
...



# ARIS Platform



## ARIS Implementation Platform

ARIS for SAP NetWeaver  
ARIS UML Designer  
...

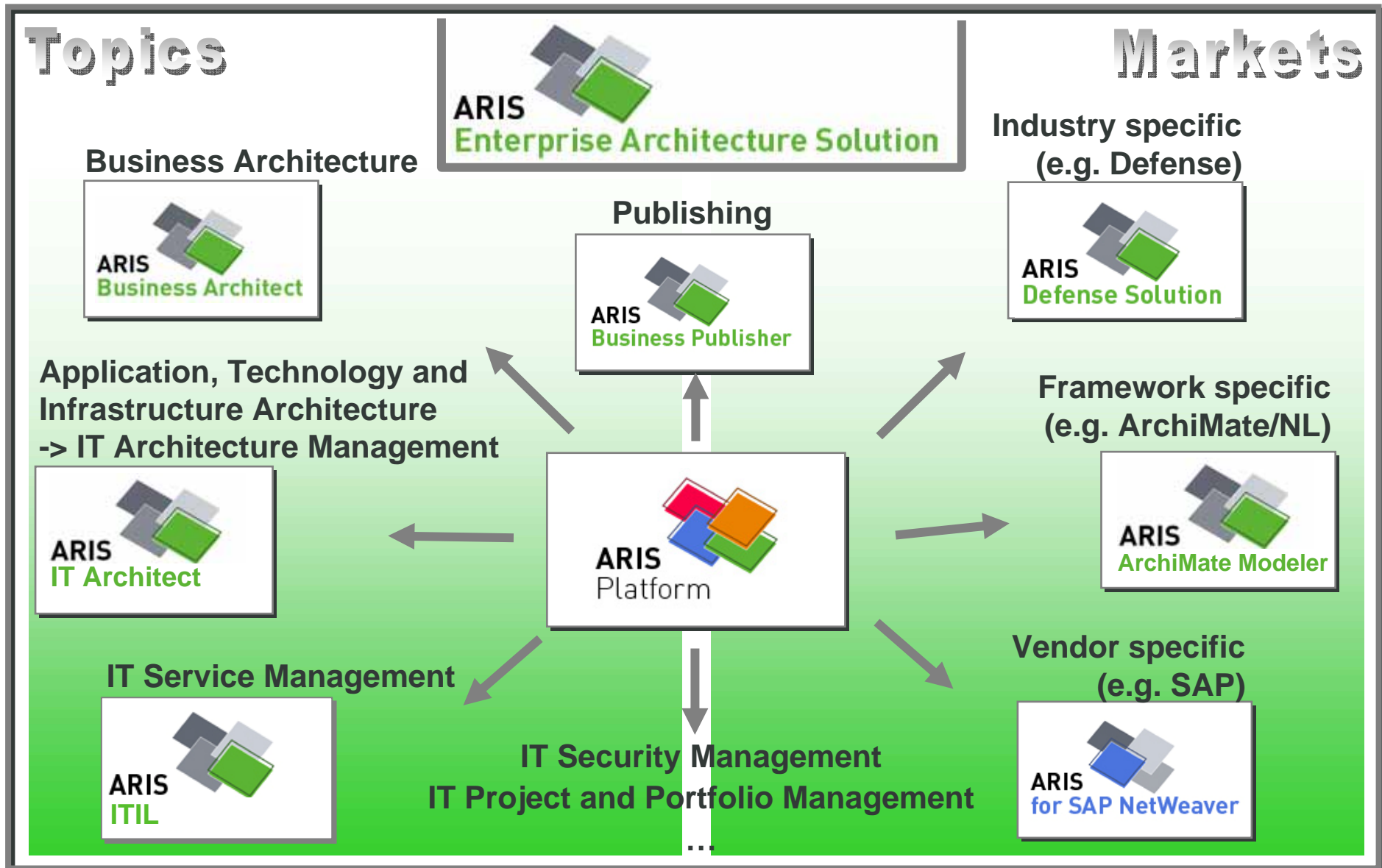


## ARIS Design Platform

ARIS Business Architect  
ARIS Business Publisher  
ARIS Enterprise Architecture Solution  
...



# ARIS EA怎么做？ - 解决方案的组成





# ARIS EA怎么做？ - ERP实施的过程

## Topics

Business Architecture



Application, Technology and  
Infrastructure Architecture  
-> IT Architecture Management



IT Service Management



ARIS  
Enterprise Architecture Solution

Publishing



ARIS  
Platform

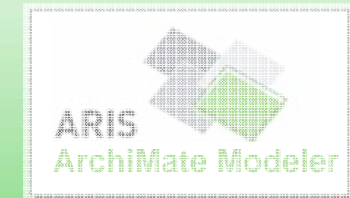
IT Security Management  
IT Project and Portfolio Management  
...

## Markets

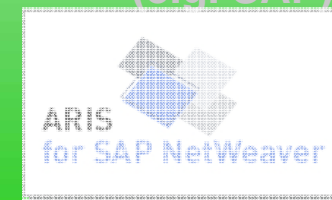
Industry specific  
(e.g. Defense)



Framework specific  
(e.g. ArchiMate/NL)

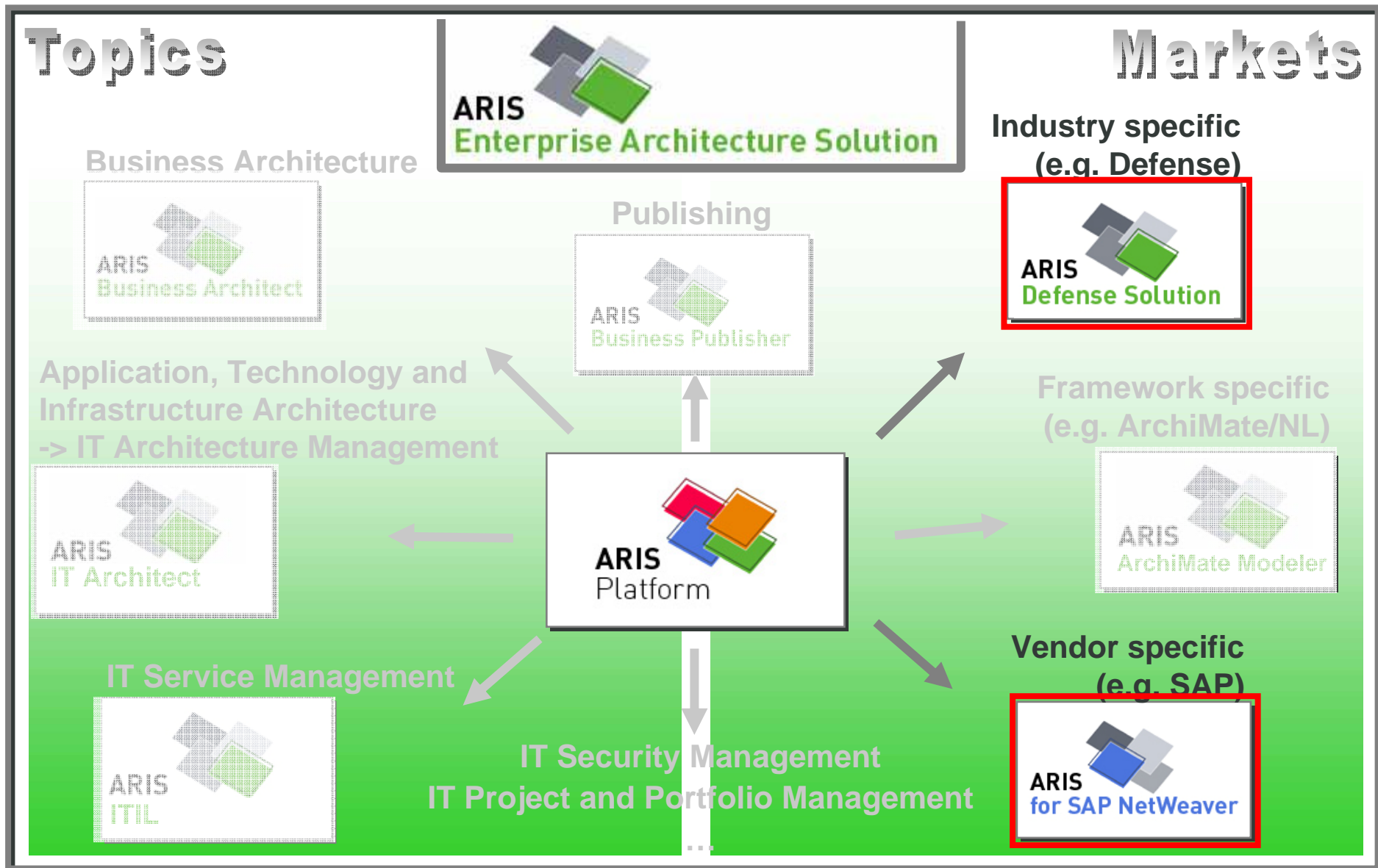


Vendor specific  
(e.g. SAP)



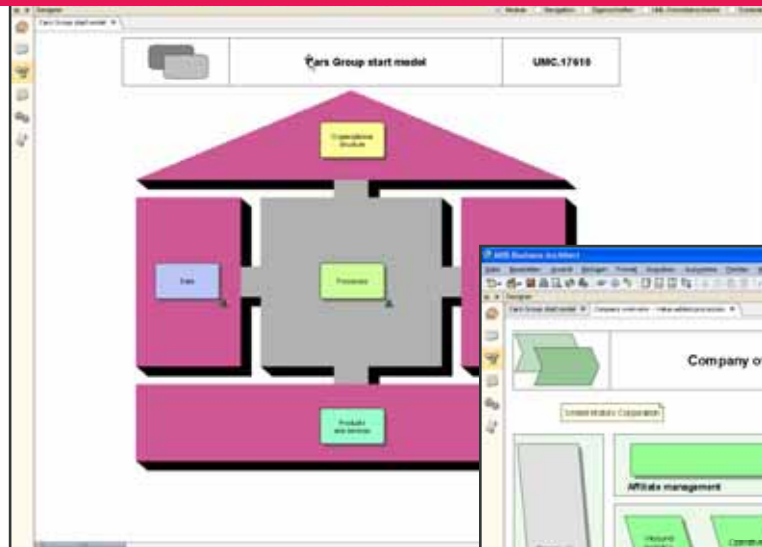


# ARIS EA怎么做？ - ERP实施的过程



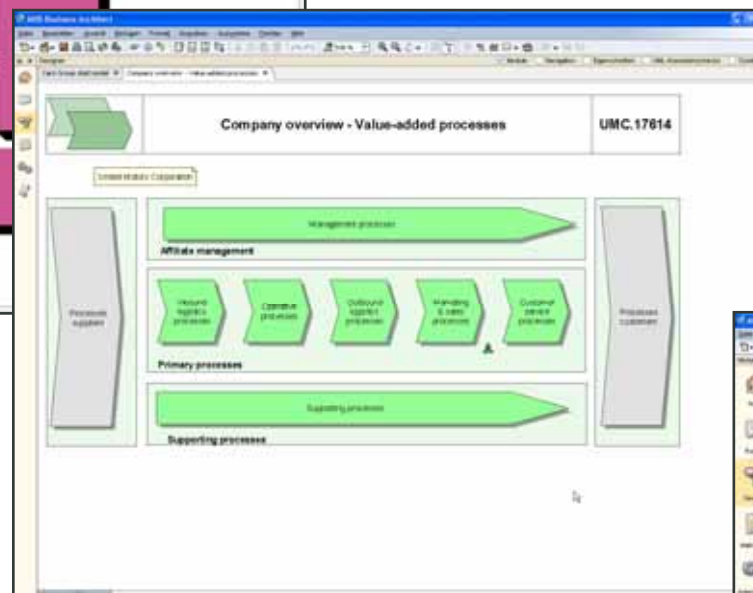


# ARIS EA怎么做？ - 以业务架构为基础

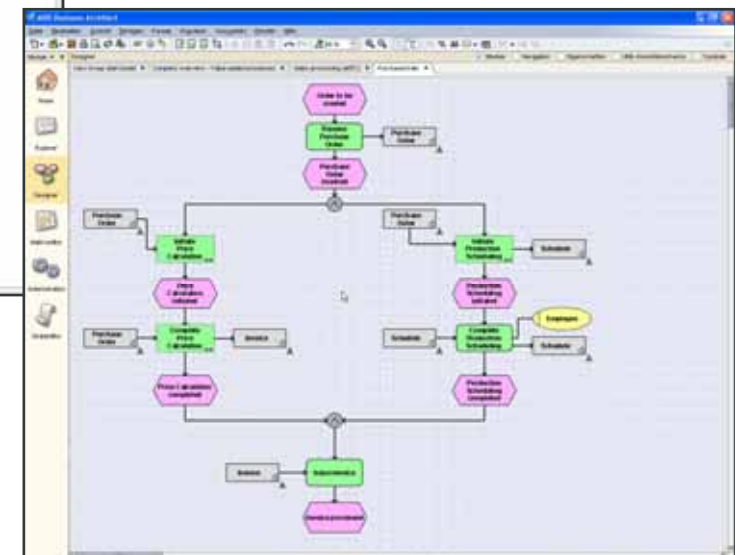


Processes

BPM



Notation made for  
Business Analysts



Strategy

Design

Implementation

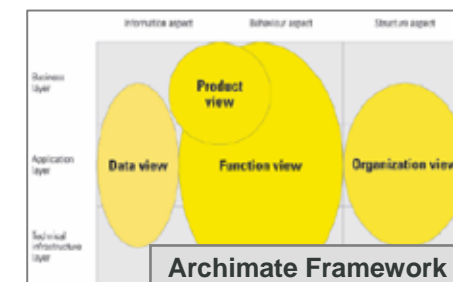
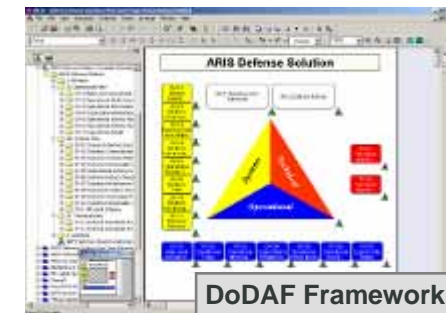
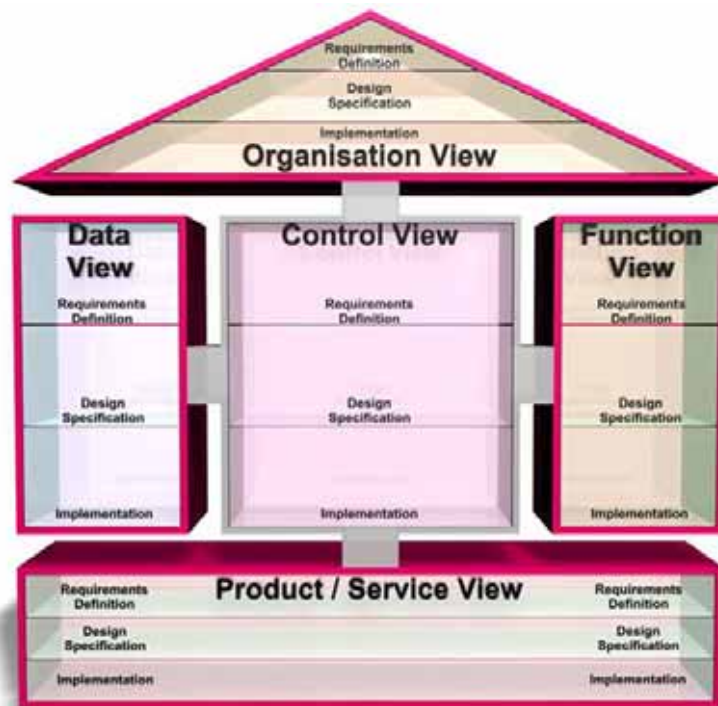
Operation & Control



# ARIS EA怎么做？ - 在房式模型中回答

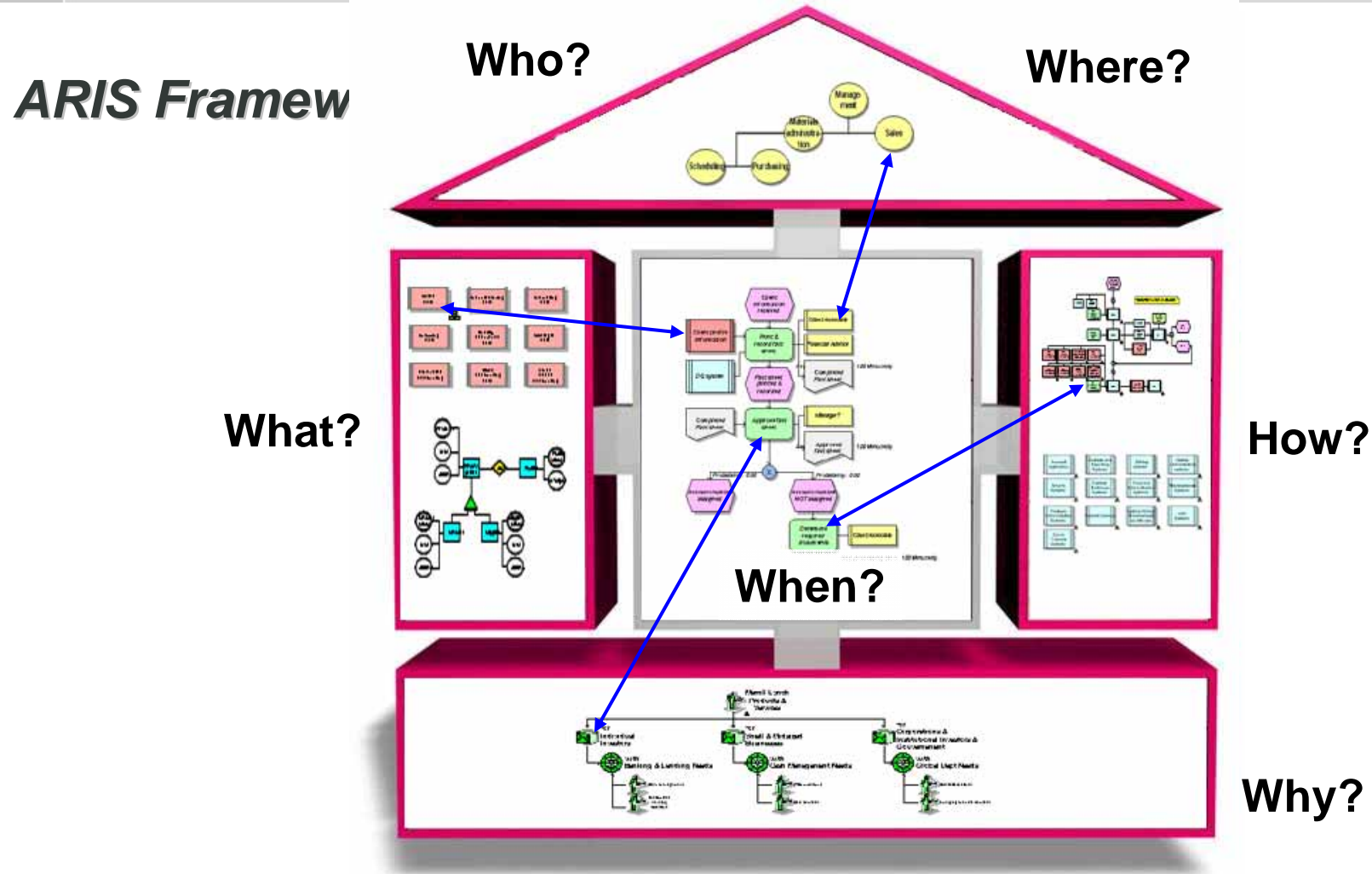
## Who? What? When? Where? How? Why?

► ARIS House 作为不同架构模型的集成平台





# ARIS EA怎么做？ - 基于房式模型的解决方案



„Enterprise Architecture is about understanding all of the different elements that go to make up the Enterprise and how those elements inter-relate.“

(Derived from definition by „Institute for Enterprise Architecture Developments“)



# ARIS EA怎么做？ - 对全球范围大规模实施的支持

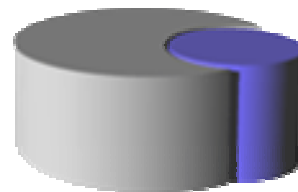
Ms. Rosenfeld  
→ Person  
in Charge of  
design activities



Worldwide process and IT design

ARIS  
Business Designer

ARIS  
Business Publisher



ARIS  
Business Architect

Ms. Meyer  
→ Project  
manager,  
Architect

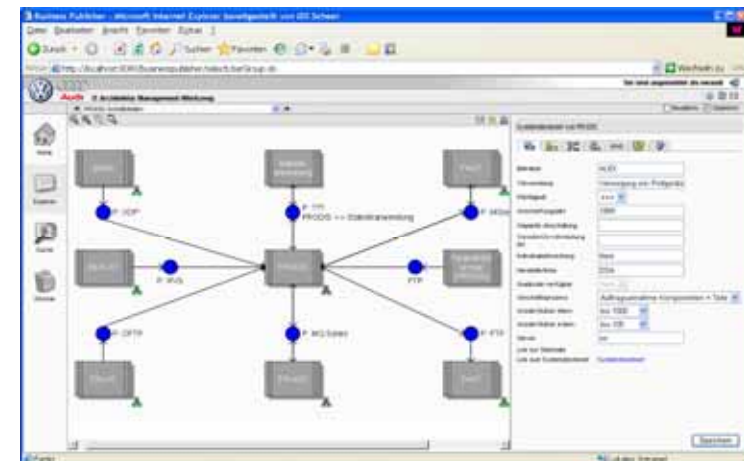


Analysis, optimization, and  
administration

Technical  
departments  
→ Staff  
in charge



Worldwide communication  
of process and IT  
knowledge to all employees

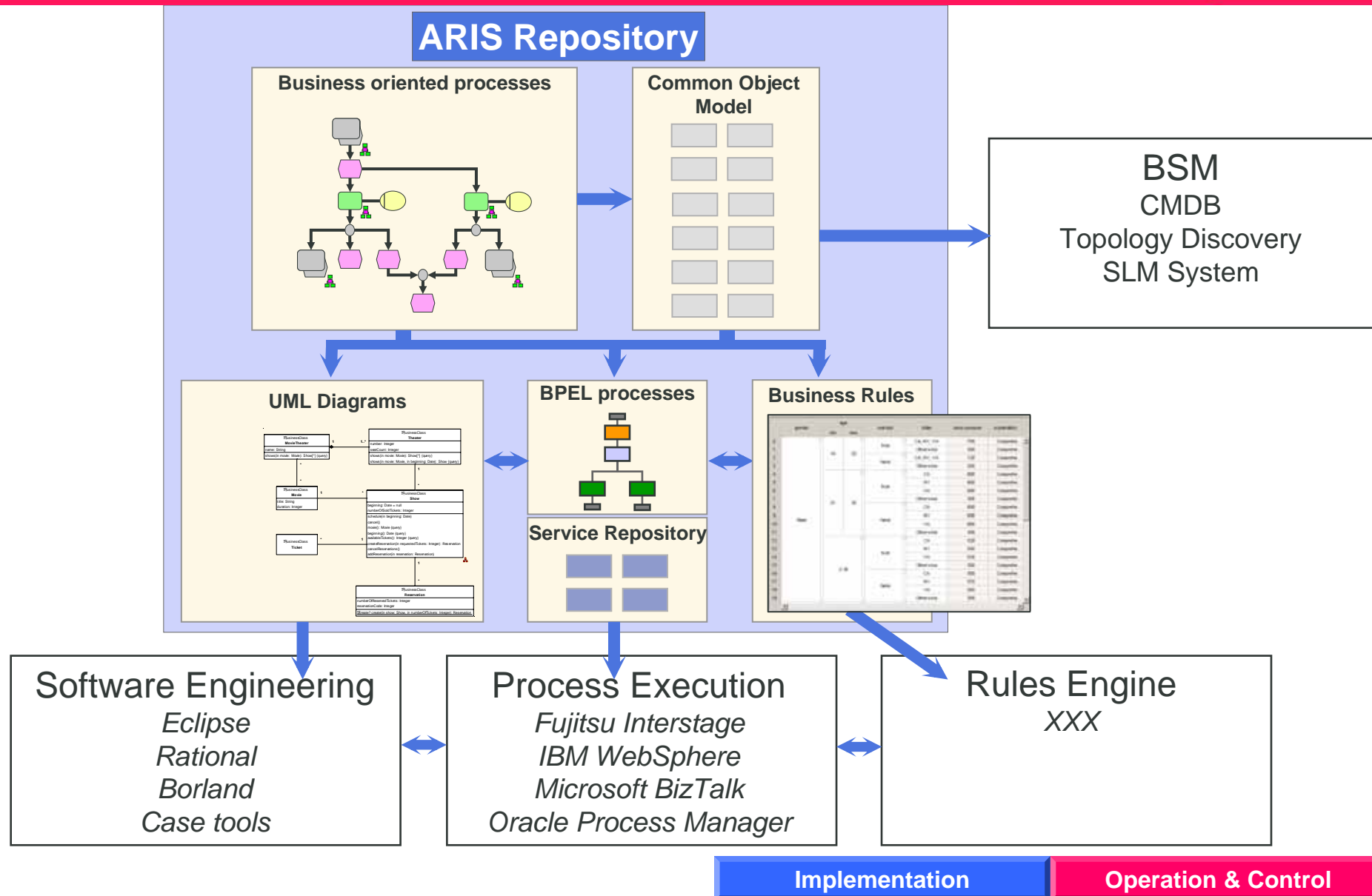


Design

Implementation



# ARIS EA怎么做？ - 与各种开发平台及 workflow 引擎的接口





- ▶ 将ARIS用于EA项目实施时，可以从下面的设计平台上的功能特色中得到很大的帮助！
  - ▶ 过滤器
  - ▶ 模型变体
  - ▶ 相互嵌套的对象
  - ▶ 各类矩阵模型
  - ▶ 由一种模型生成其它模型的功能
  - ▶ 模型数据库的合并
  - ▶ 自定义模型类型
  - ▶ 索引与查询



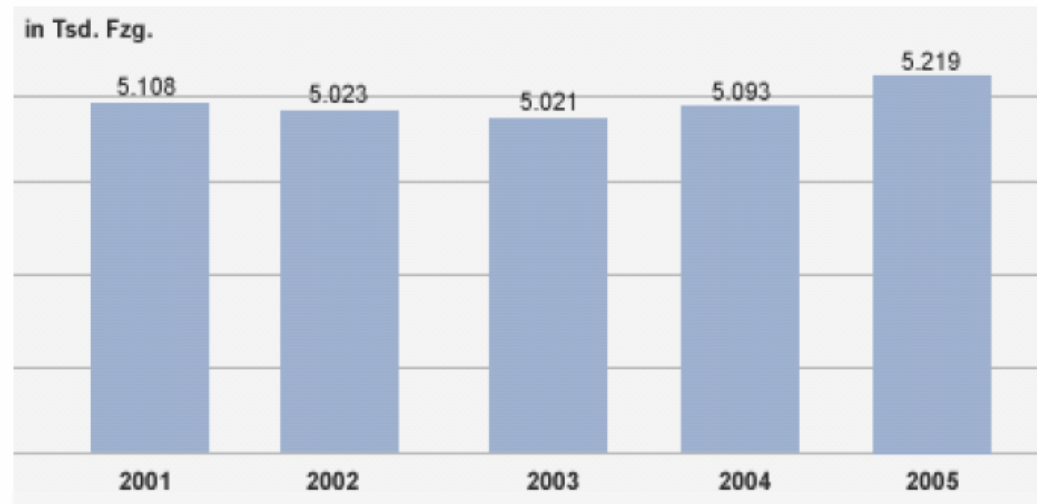
- 大众集团
- IT架构管理 —— 目标/定位
- 解决方案
- 业务价值





# 大众集团的现状与数据分析之一

## 汽车产量



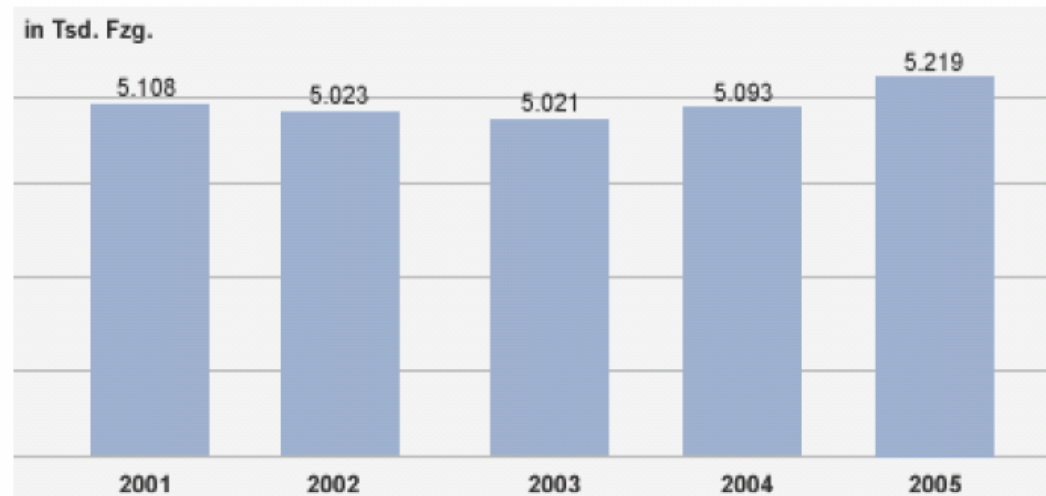
## 员工人数



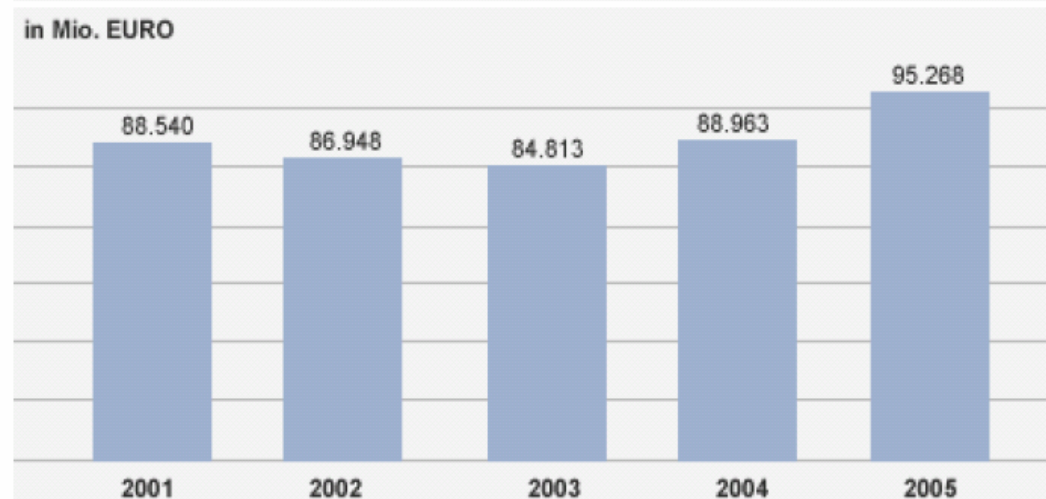


# 大众集团的现状与数据分析之二

汽车销售量

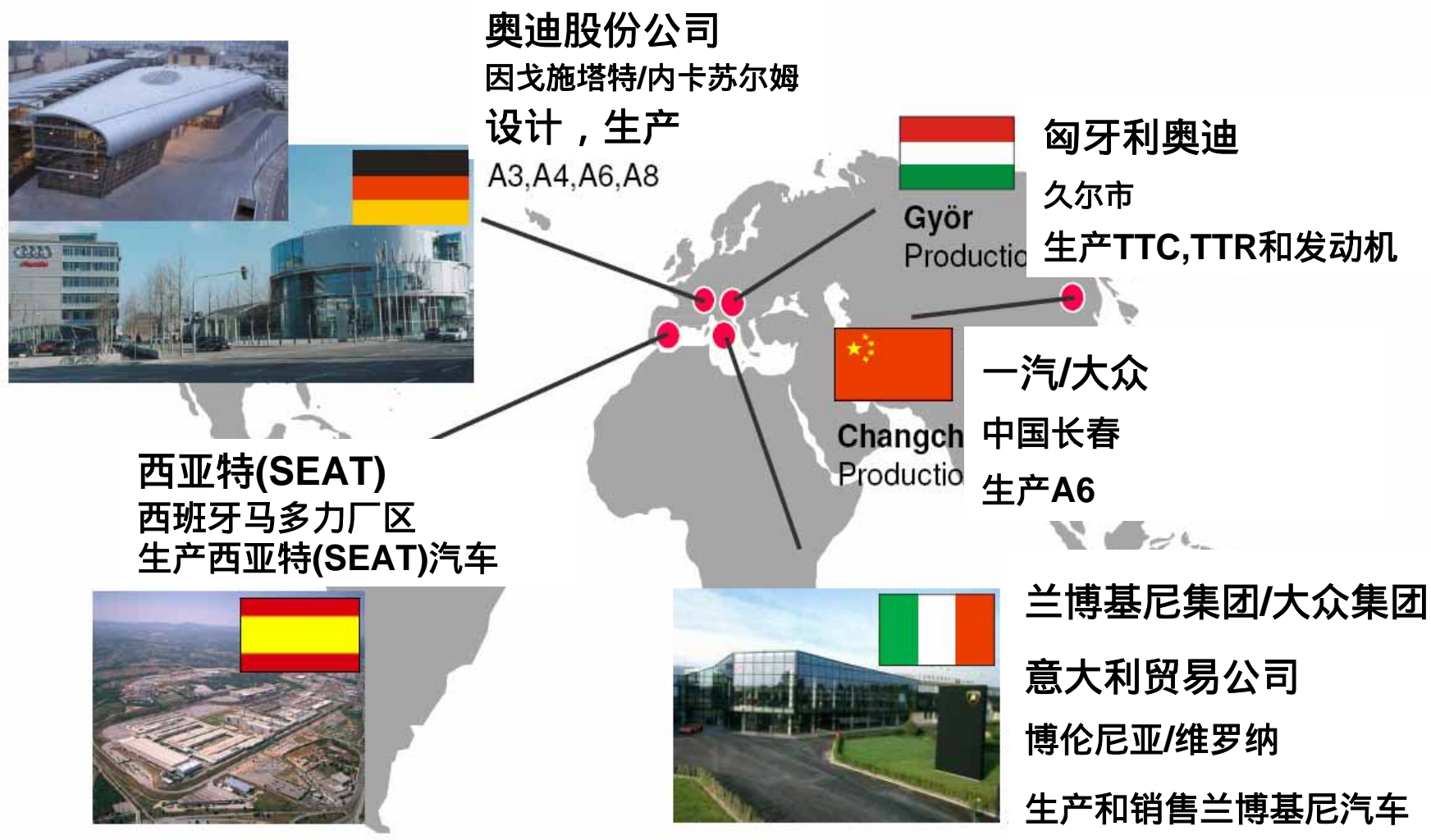


净收入





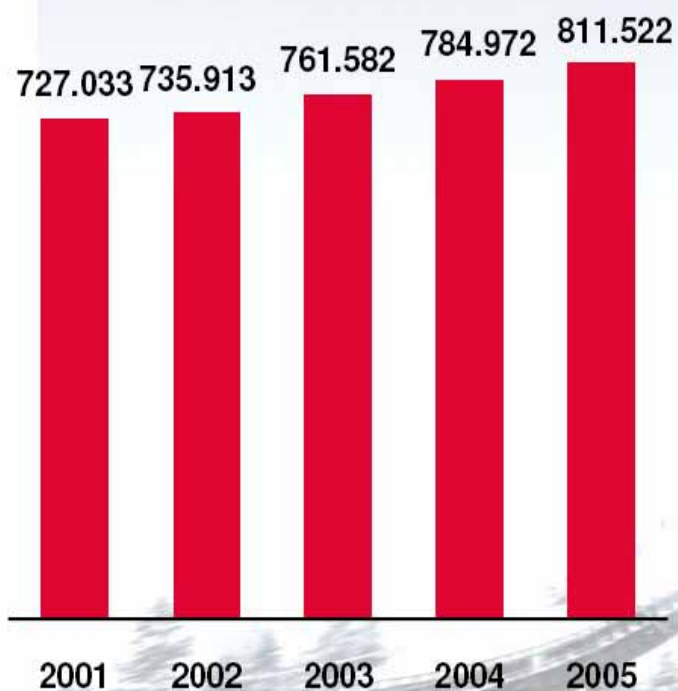
# 奥迪品牌集团在全球的地理分布示意图



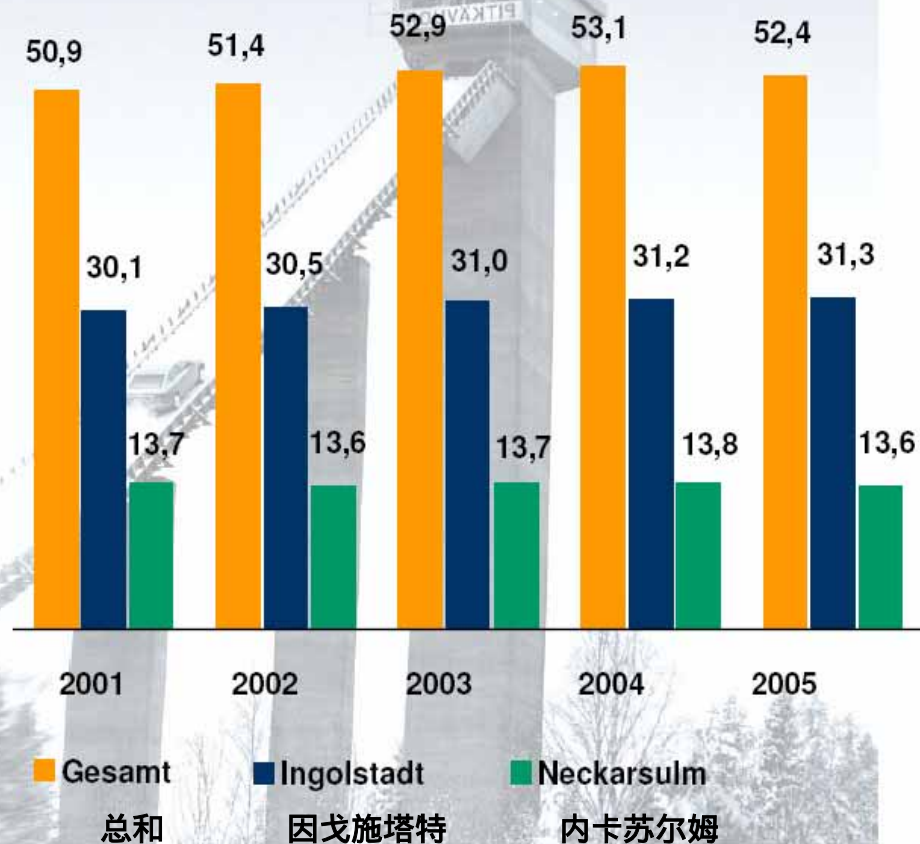


# 奥迪集团的现状与数据分析之一

## 汽车产量



## 员工人数





# 奥迪集团的现状与数据分析之二





# 奥迪集团IT系统的现状

德国

Neckarsulm

6.000 PC-User  
1 Production DC



Martorell  
Zona Franca

6.000 PC-User  
2 Production DC

西班牙

意大利

Verona

650 PC-User  
Server room



Ingolstadt

德国

18.000 PC-User  
1 Production-DC



Bologna

500 PC-User  
1 Production DC

意大利



Györ

3.000 PC-User  
1 Production DC

匈牙利

58.000  
Employees

1.3%

35.000  
PC-User

2.1%

6  
Data Centers

750 IT-  
Employees





- 大众集团
- IT架构管理 —— 目标/定位
- 解决方案
- 业务价值





## ► 背景

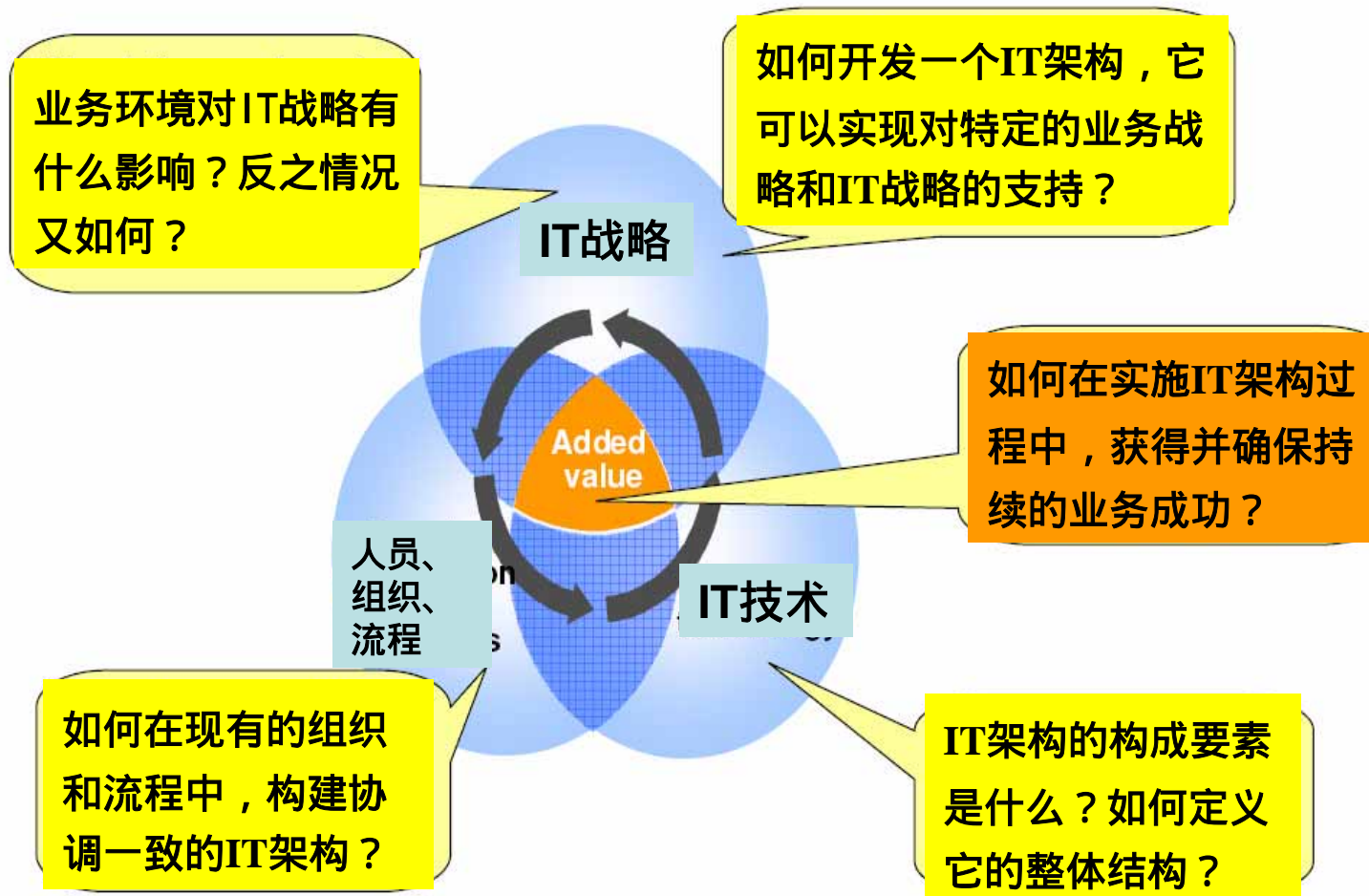
- 跨国公司，欧洲汽车制造业的龙头老大
- 现存有负责多样的技术平台，传统方式很难有效的识别清楚这些技术平台和上面各类应用的对应的业务活动
- 系统分布在不同的地理位置，非常需要减少维护这些系统需要的成本（该项目由CIO发起）

## ► 项目的目标

- 建立一个EA模型，使之能够覆盖业务流程、应用系统、IT基础设施、以及数据信息等各个方面的视图。.
- 通过构造技术现状与未来的详细图纸，使得业务人员和技术人员能够了解那些技术内容可以实现标准化，系列化，模块化，并且不影响现有的业务活动。

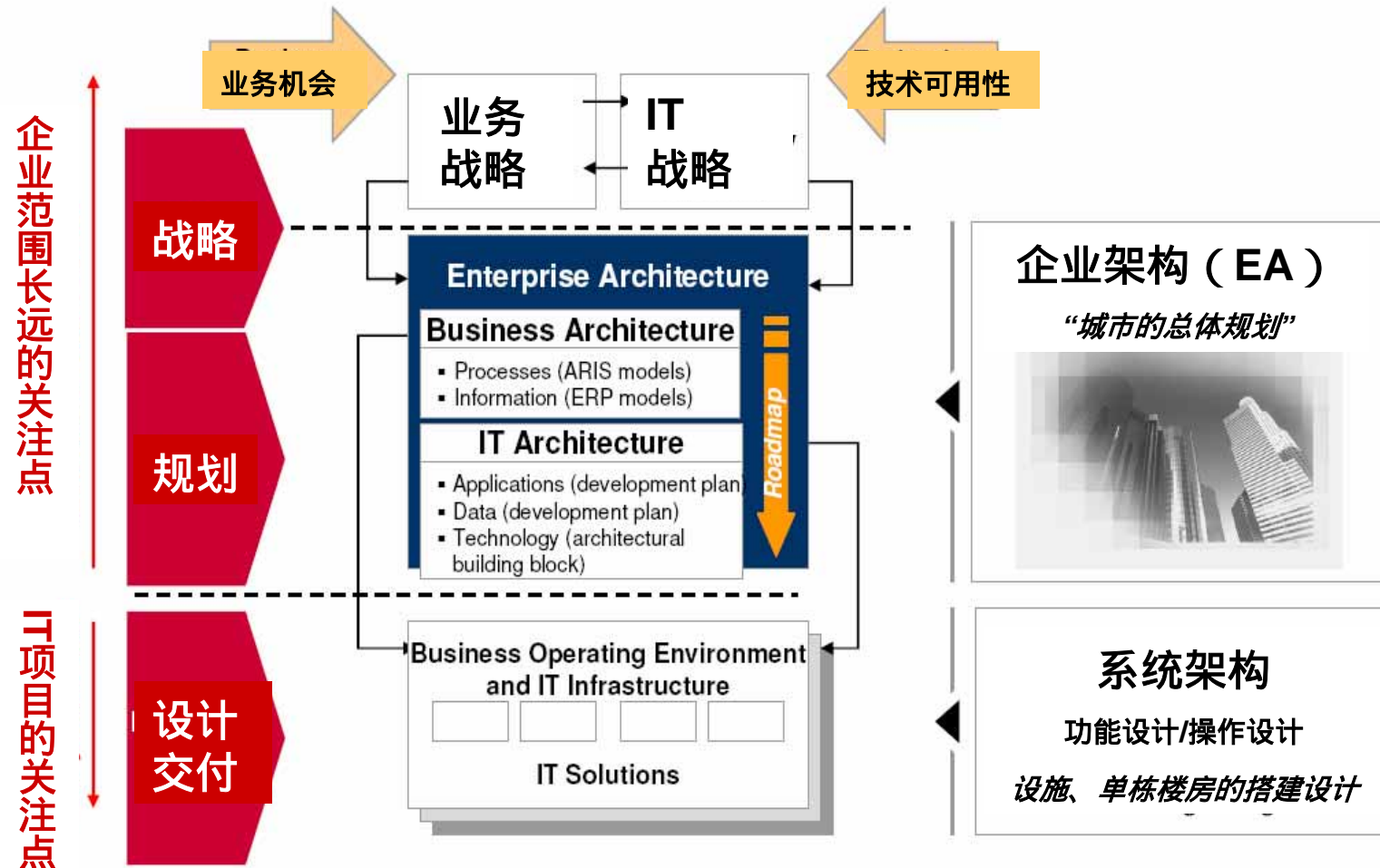


# IT架构管理回答大众集团的下列问题





# IT架构: 以公司目标为导向, 促进技术标准化和成本优化





# 大众集团的IT架构管理：核心流程

## IT和运营策略的协同设计

- 建立运营架构的模板
- 和奥迪品牌集团密切合作
- 建议应用门户的组合配置

## IT架构自身的设计

- 设计标准化的产品和组件
- 规划开发计划和路线图
- 创建应用门户的组合配置

## IT架构的沟通与交流

- 进行案例交流
- 安排培训
- 举办研讨会

## IT架构的实施与推广

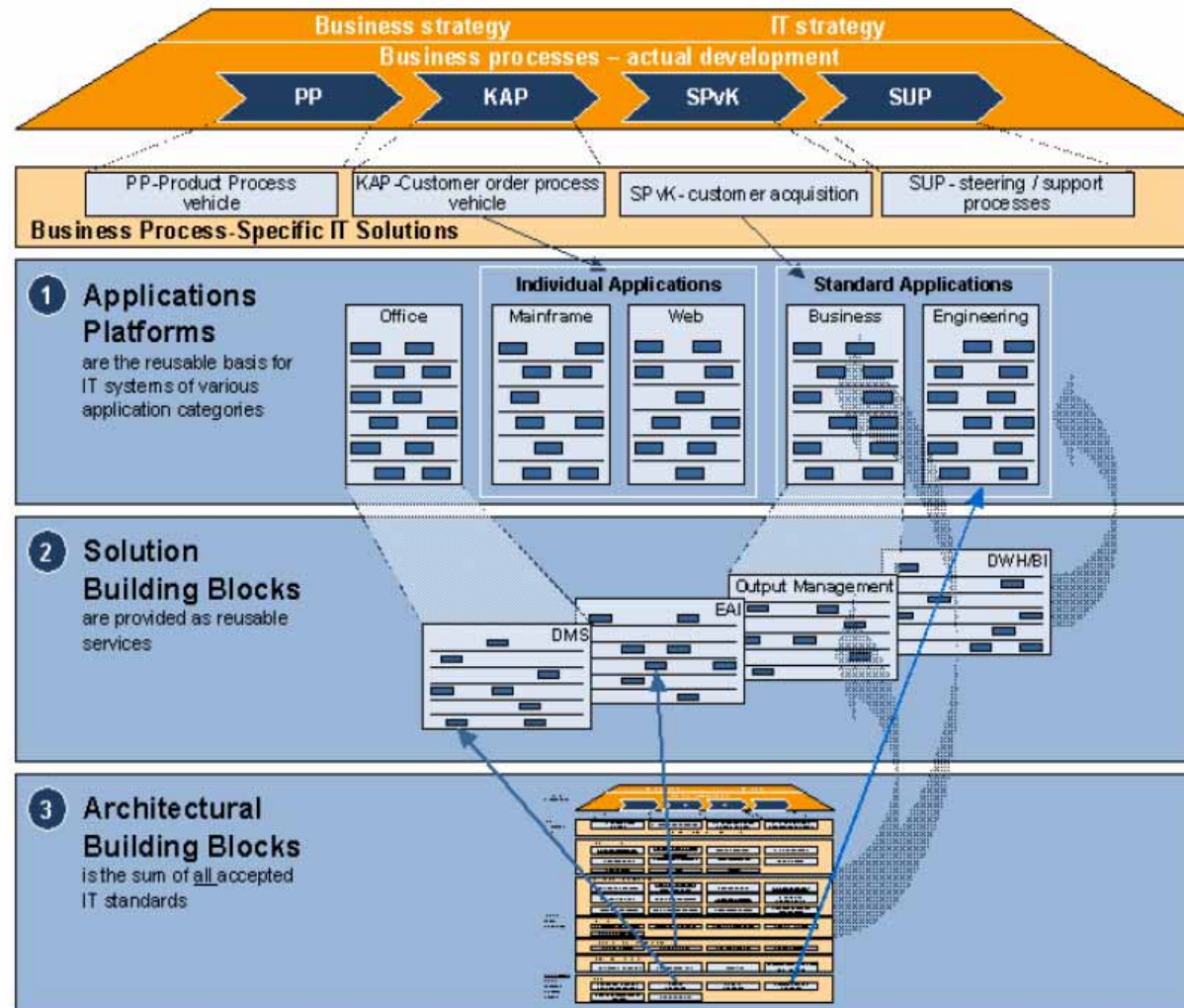
- IT项目的支持
- IT项目的监控
- IT项目的实施与有效控制

## IT架构的升级与更新

- 管理IT的标准
- 升级与更新系统技术蓝图
- 了解并掌控IT架构中的流程、功能、系统、信息和技术



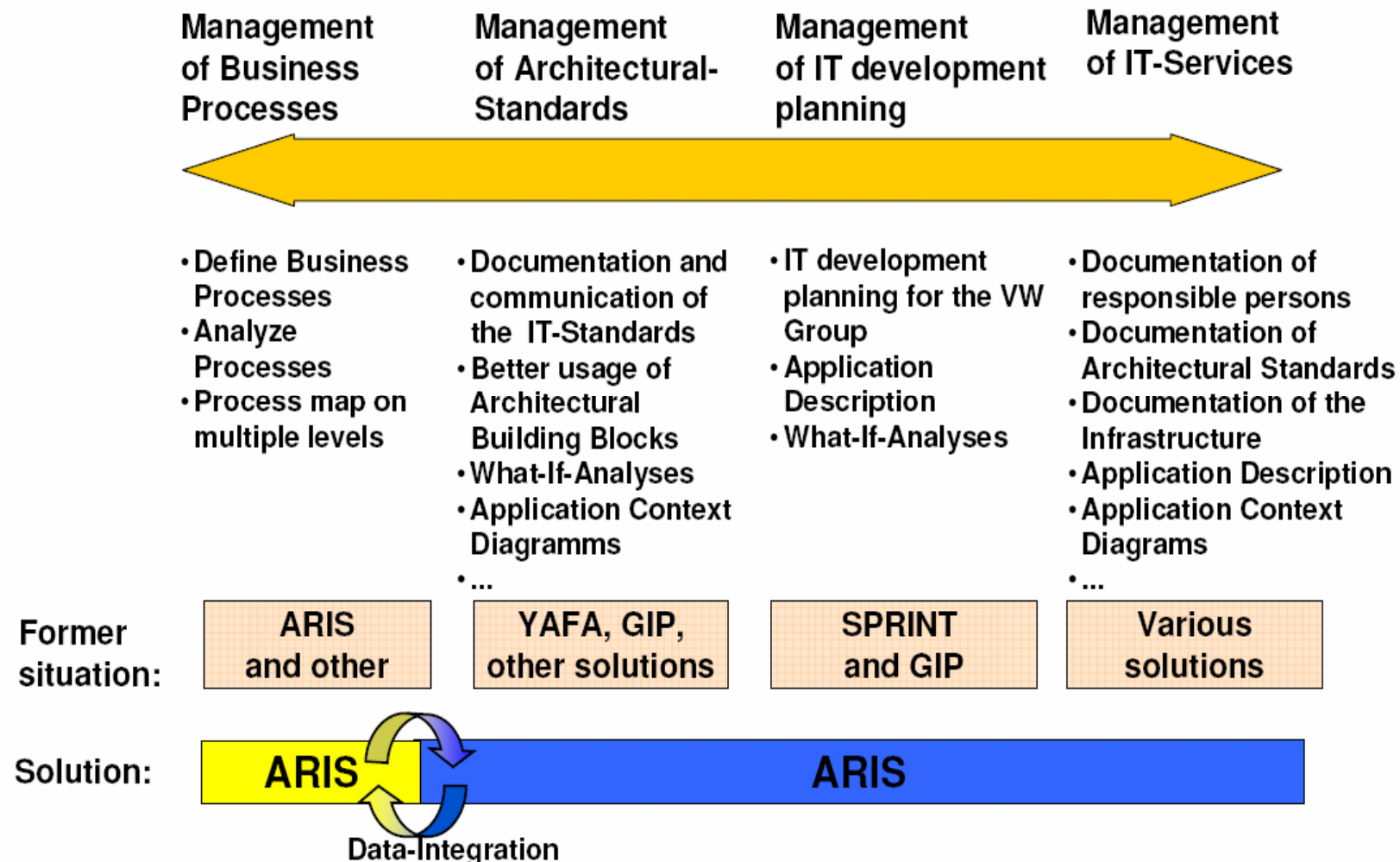
未来，大众集团的IT系统将采用清晰明确的解决方案平台，  
该平台将基于SOA（面向服务导向）的方法进行设计。



Principles  
and Rules  
for Service-  
orientated  
Application  
Landscape  
(SOA)



# 项目的主要目标是将BPM、IT架构管理和系统开发规划整合起来





- 大众集团
- IT架构管理 —— 目标/定位
- 解决方案
- 业务价值





# 现有文档中的不同内容在ARIS中模型化

Adobe Reader - [Volkswagen-Architecture-Standards.pdf]

Datei Bearbeiten Anzeige Dokument Werkzeuge Fenster Hilfe

Input: VW/Audi Book of Standards  
-> IT Standards

2 Introduction.....

3 Basic Solutions .....

3.1 Business Intelligence.....

3.1.1 Analysis / Planning / Simulation .....

3.1.2 Data Mining .....

3.1.3 Reporting.....

3.2 Document and Content Management .....

3.2.1 Document Management .....

3.2.2 Web Content Management .....

3.3 Mobile Computing .....

3.4 Office Applications .....

3.1.3 Reporting

Volkswagen Corporate Standard:

Product	Vendor	Platform	Status	Contact
Oracle Reports	Oracle	Unix Windows	Standard ISOC 02/1997	GOT-5
Oracle Discoverer	Oracle	Unix Windows	Standard ISOC 02/1997	GOT-5
Business Objects	Business Objects	Unix Windows	Requested for Standard BO	I/FP-54 GOT-5
Focus	Information Builders	zOS	To be phased out 06/2007	GOT-5

Limited Use: Standard for SAP-Systems:

Solution Building Block:  
- Objecttype = Application system class  
- Solution Building Blocks are typically modeled on the highest level of the respective Architecture item. The description is done via an assigned IT Architecture diagram containing the IT Components used to build the Solution Building Block (see next slide)

Model type: Application system type diagram

Sub Architecture Item

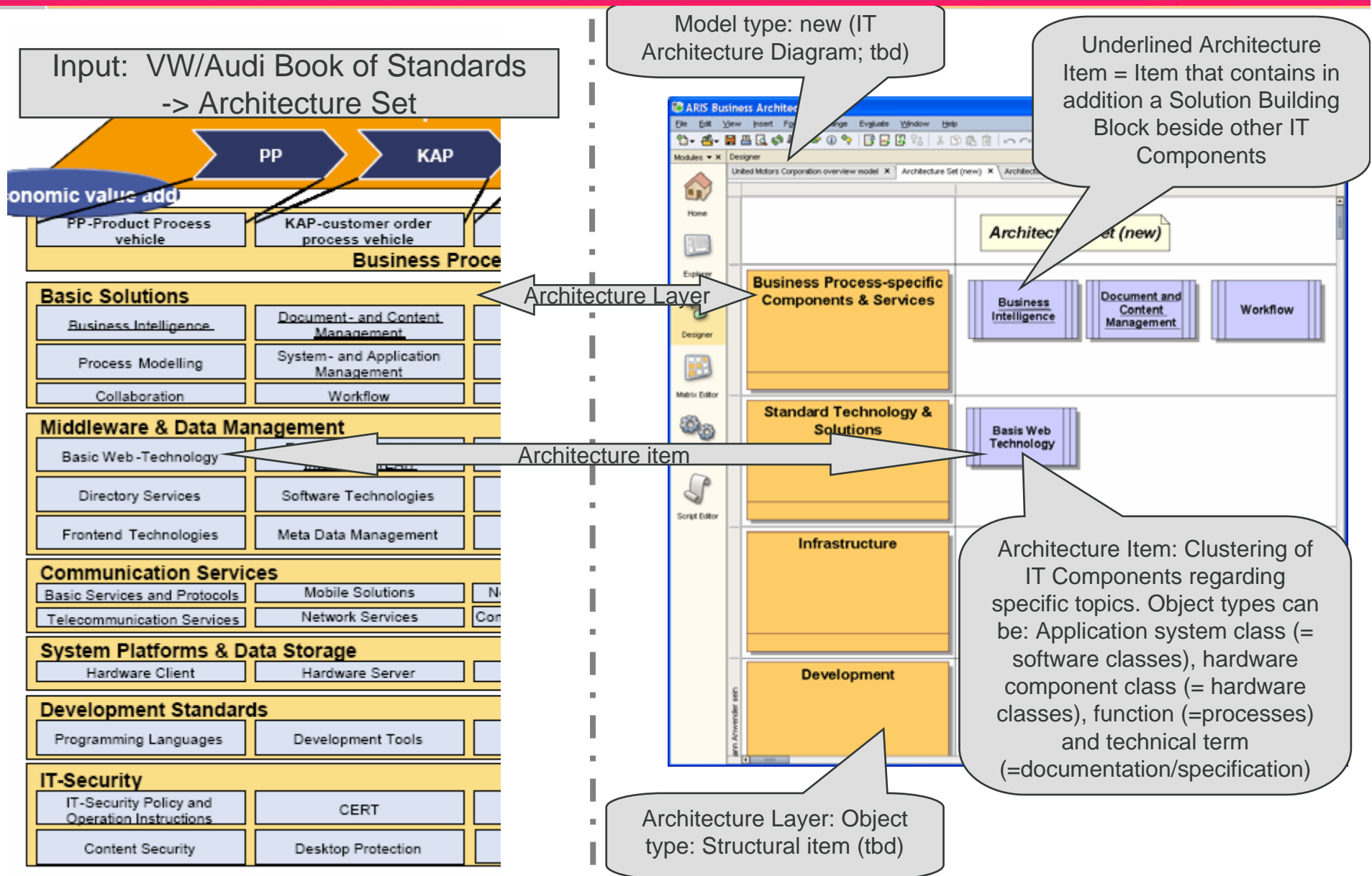
Architecture item

IT component

IT Component: Object types = Application system type (SW), HW Component (HW), Function (Process), TT (Documentation, Spec)



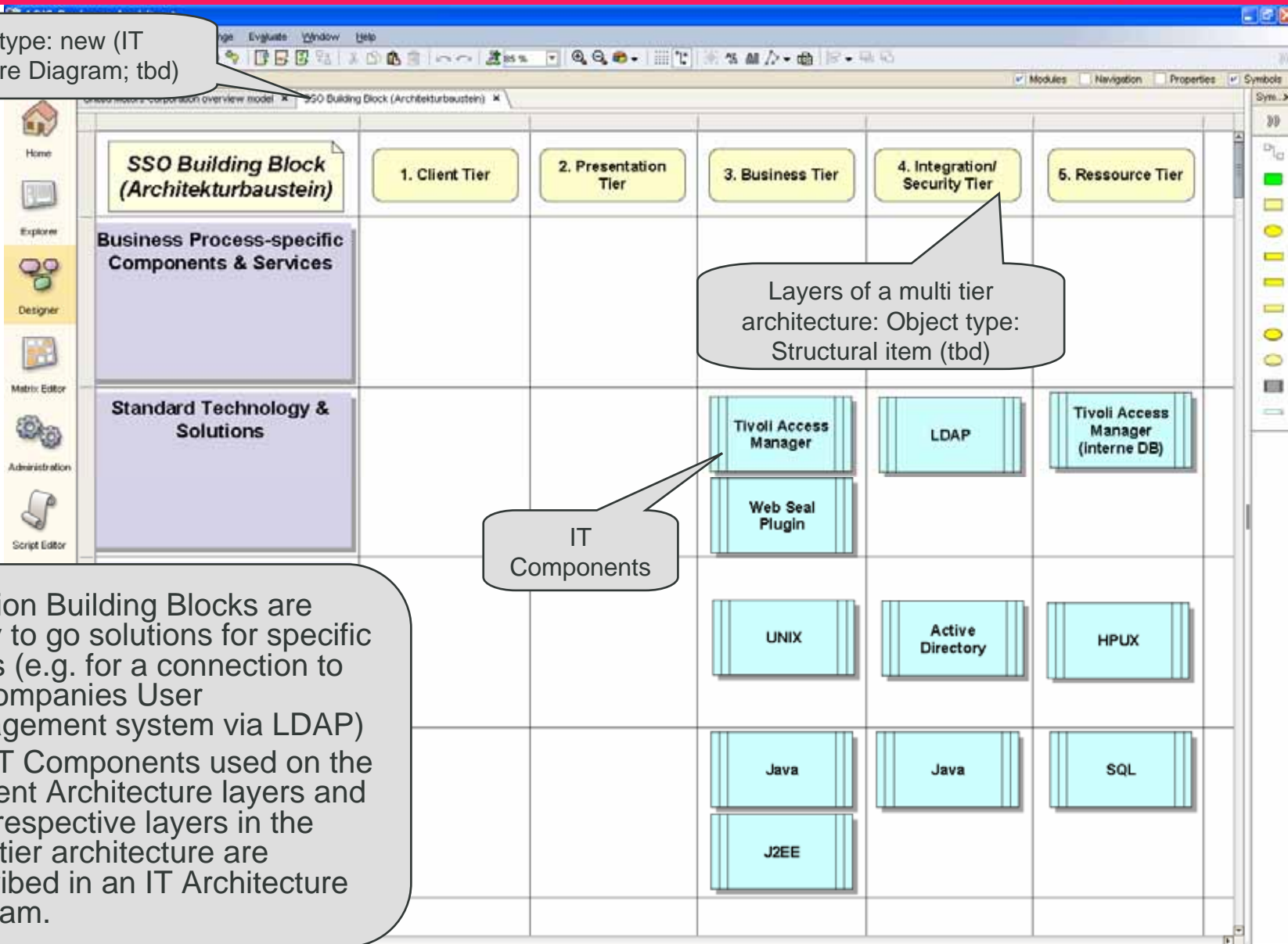
# ARIS EA架构中的不同层次与EA模型中的相关对象





# ARIS EA模型中的应用服务 - 层次 - 应用系统矩阵

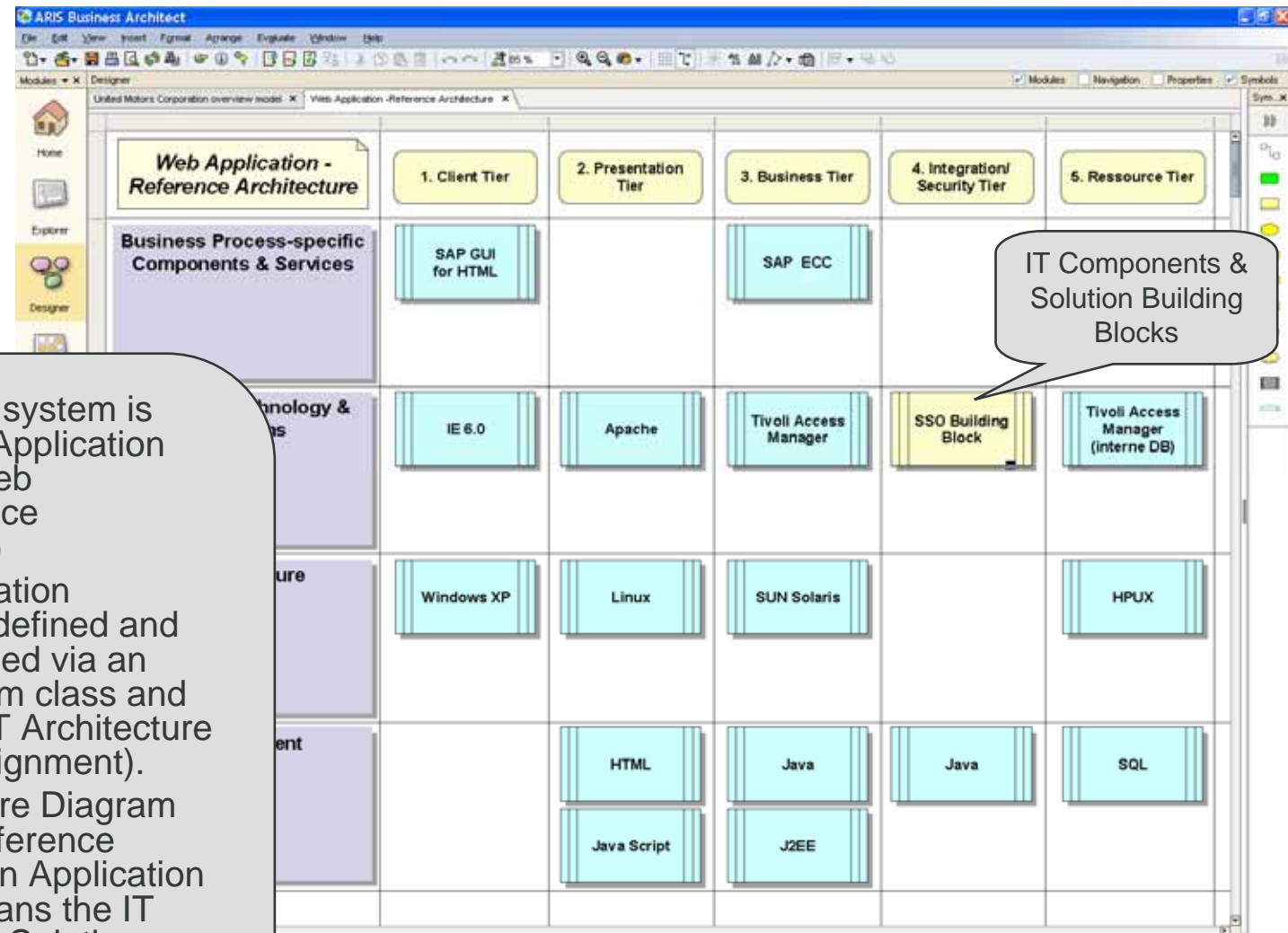
Model type: new (IT  
Architecture Diagram; tbd)



- ▶ Solution Building Blocks are ready to go solutions for specific topics (e.g. for a connection to the companies User Management system via LDAP)
- ▶ The IT Components used on the different Architecture layers and their respective layers in the multi tier architecture are described in an IT Architecture Diagram.



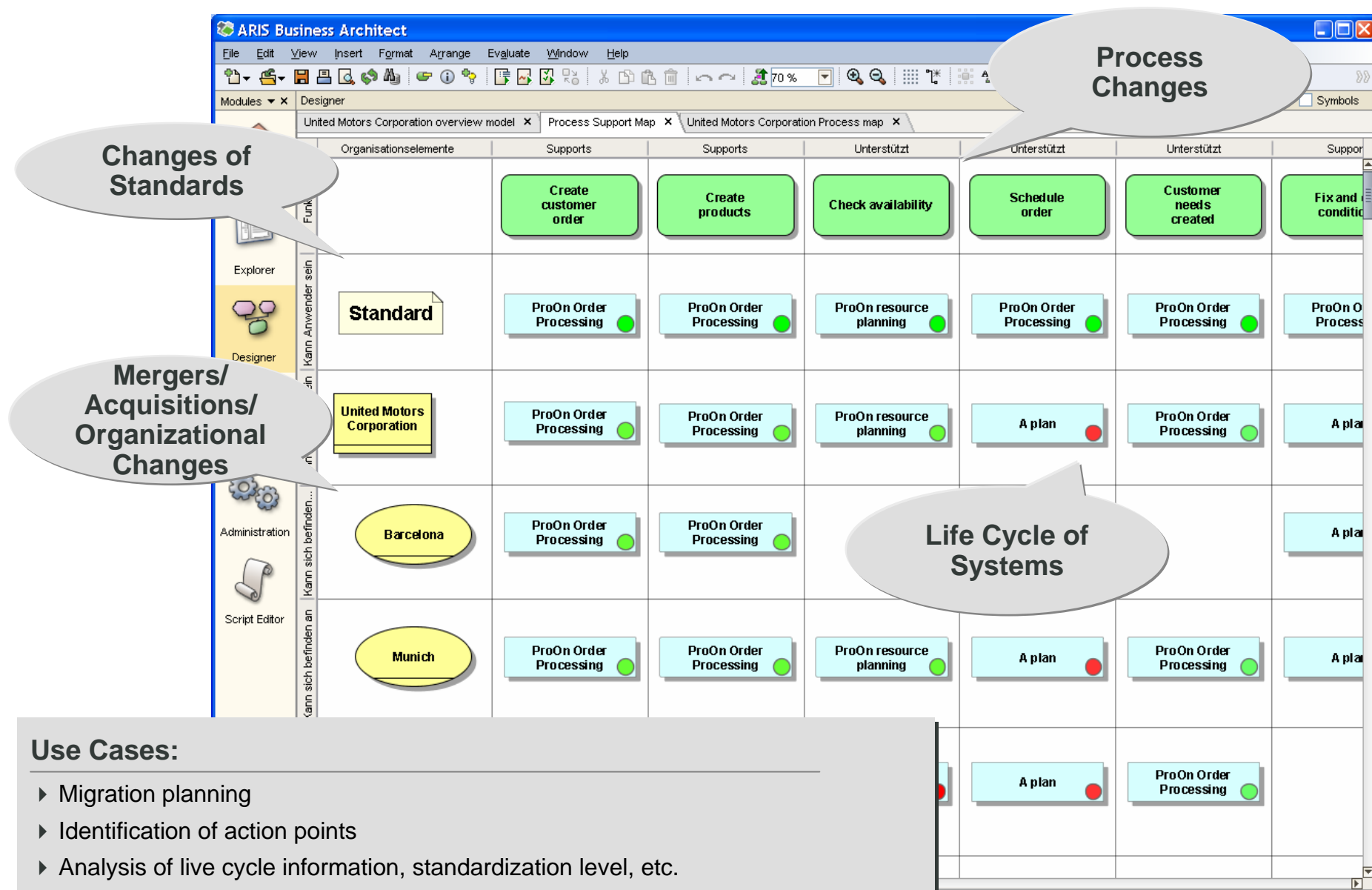
# ARIS EA模型中的应用服务 - 层次 - 应用系统矩阵



- ▶ Each Application system is classified via an Application platform (e.g. „Web Application“, „Office Application“, etc.)
- ▶ The set of Application platforms is well defined and each is represented via an Application system class and described in an IT Architecture Diagram (via assignment).
- ▶ The IT Architecture Diagram describes the Reference Architecture for an Application platform; that means the IT Components and Solution Building Blocks which should be used to build such an application)

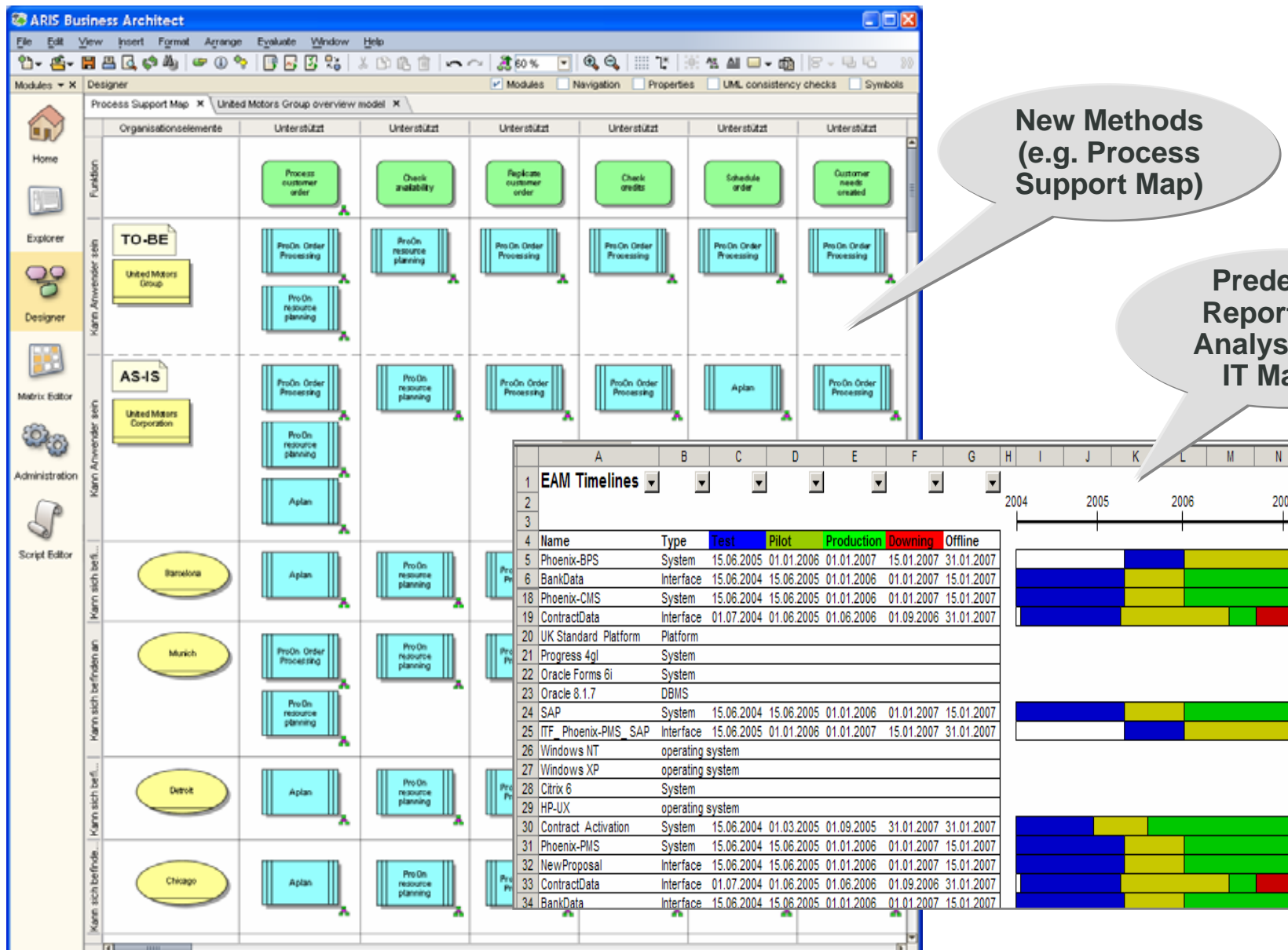


# ARIS EA模型中的业务流程支持矩阵模型





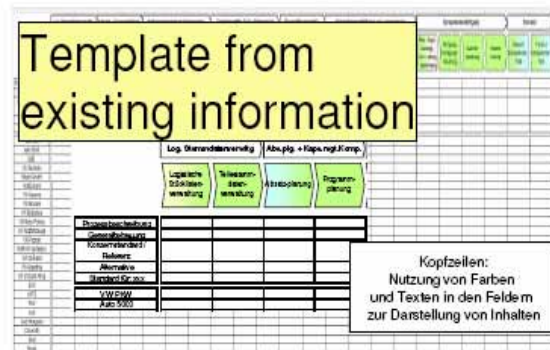
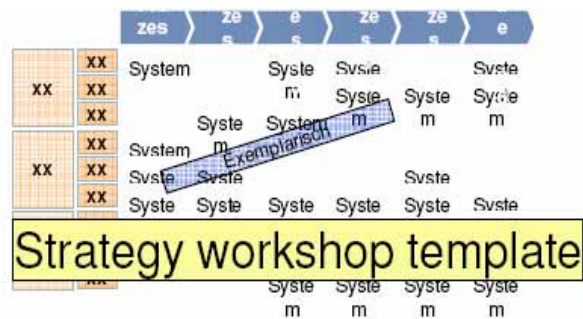
# ARIS EA模型中的业务流程支持矩阵模型



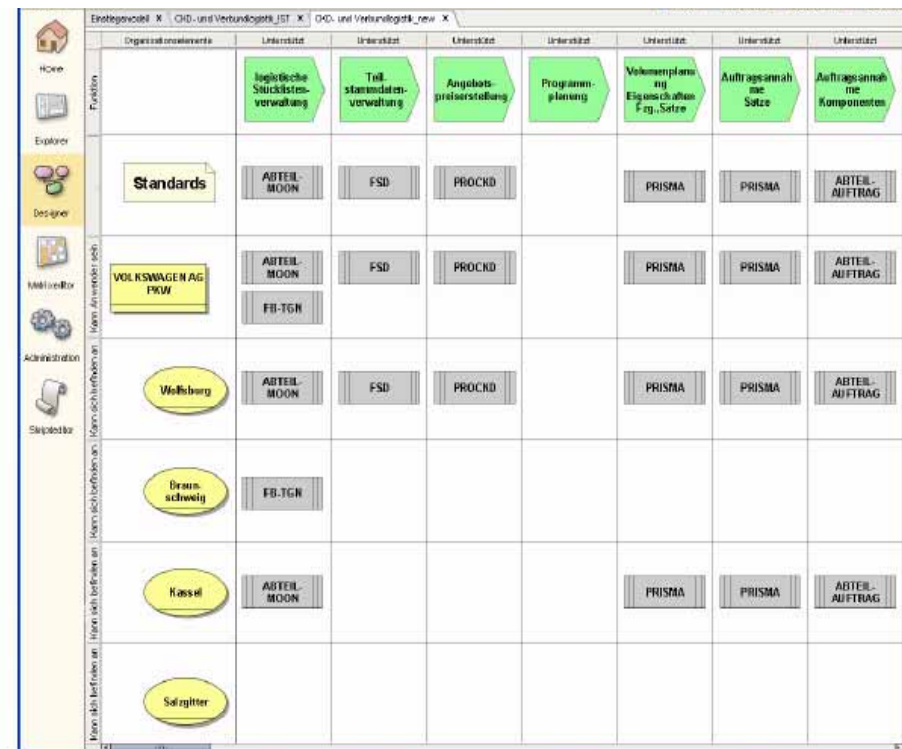


# 在集团范围内， 确认使用现状模型描述的一套标准流程支持图和开发规划

## 系统规范：现状和未来的流程支持图

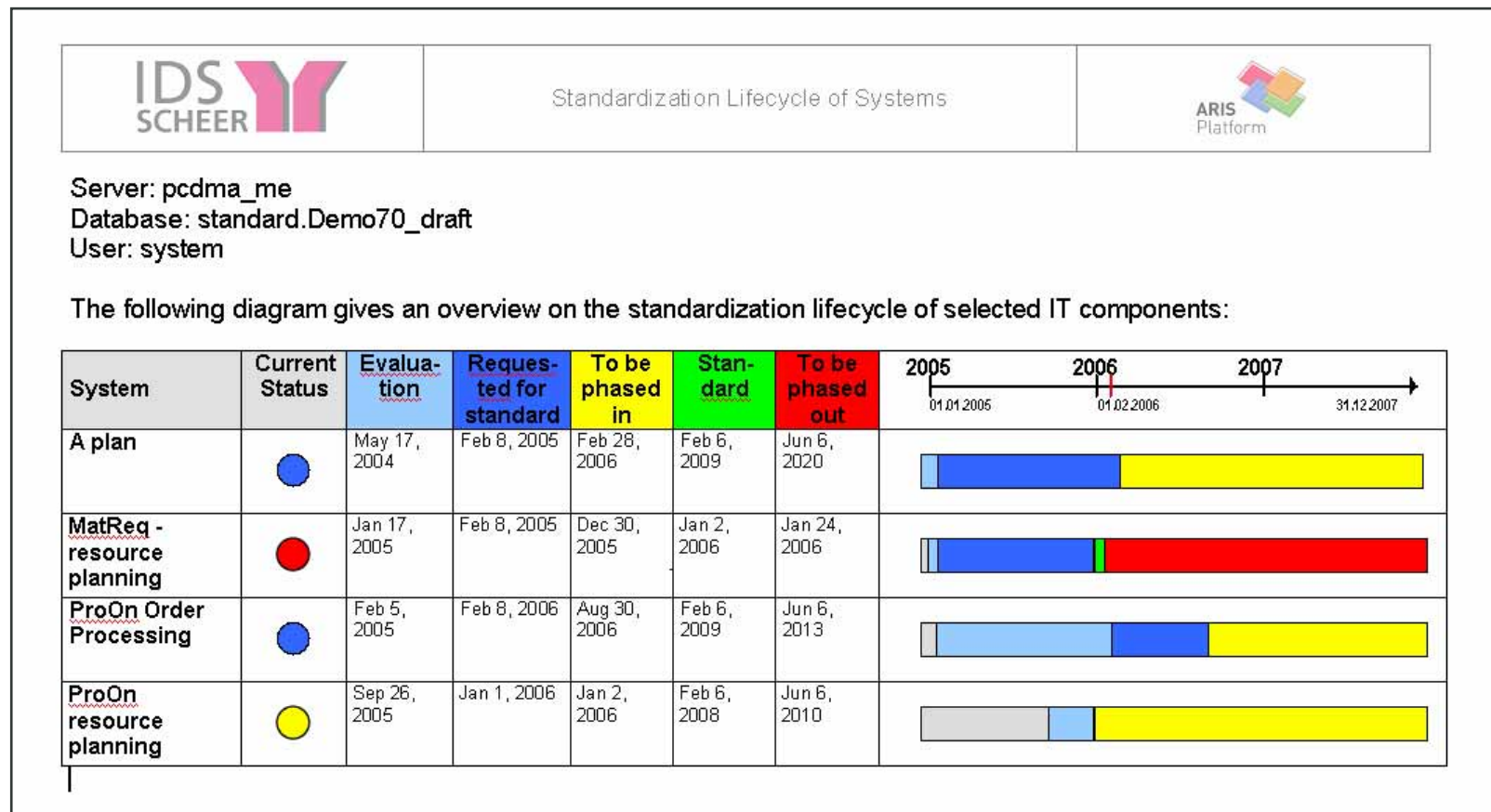


## 解决方案：在ARIS中的流程支持图



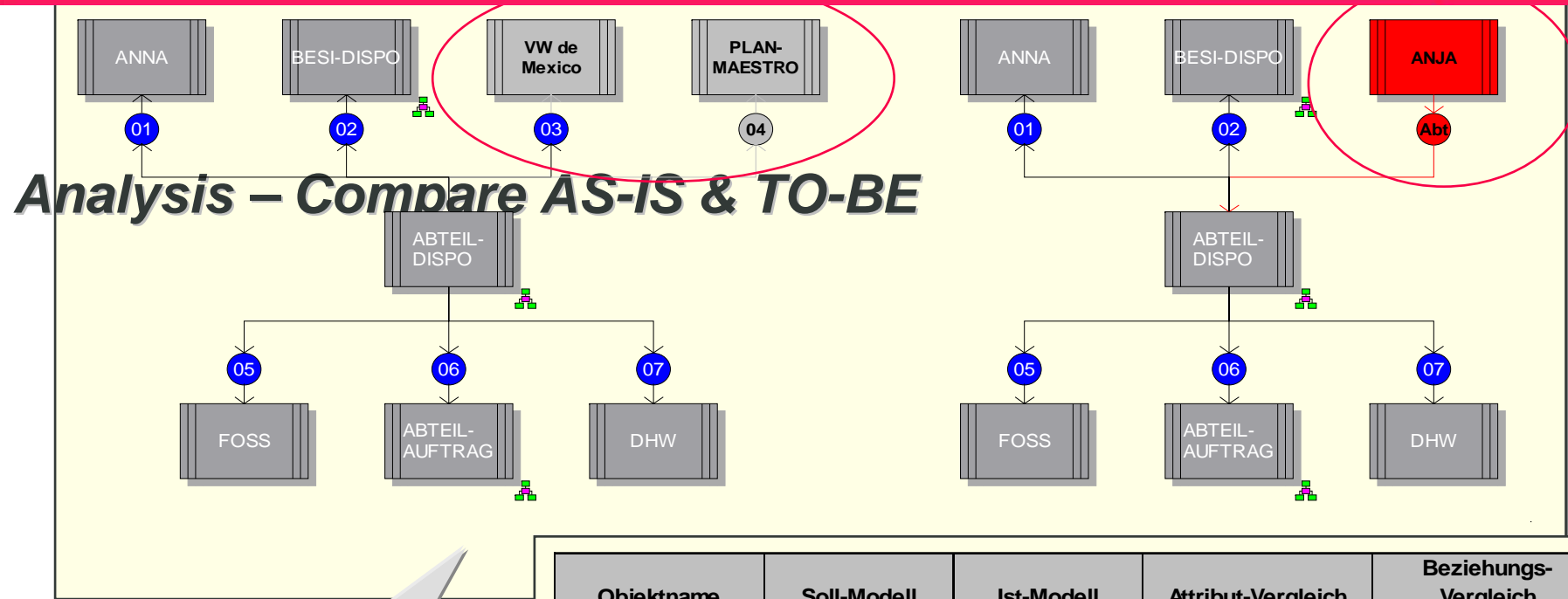


- ▶ Report for evaluation of standardization lifecycle
- ▶ Queries and Reports for analyzing degree of standardization of processes and applications
- ▶ Creation of standardization documentation („Book of Standards“)





# ARIS EA模型中的报表分析



Various versions  
can coexist  
within the same  
repository

Objektname	Soll-Modell	Ist-Modell	Attribut-Vergleich	Beziehungs-Vergleich
Corp	X			
PLAN-MAESTRO	X			
FOSS	X	X	identisch	identisch
DHW	X	X	identisch	identisch
BESI-DISPO	X	X	identisch	identisch
ANNA	X	X	identisch	identisch
ANJA		X		
ABTEIL-DISPO	X	X	identisch	BV_ABT_2
ABTEIL-AUFTRAG	X	X	identisch	identisch
Abteil Dispo 07	X	X	identisch	identisch
Abteil Dispo 06	X	X	identisch	identisch
Abteil Dispo 05	X	X	identisch	identisch
Abteil Dispo 04	X			
Abteil Dispo 03	X	X	identisch	BV_Abt_1
Abteil Dispo 02	X	X	identisch	identisch
Abteil Dispo 01	X	X	identisch	identisch



# 在IT架构框架中，轻松配置和追踪采用的标准IT组件

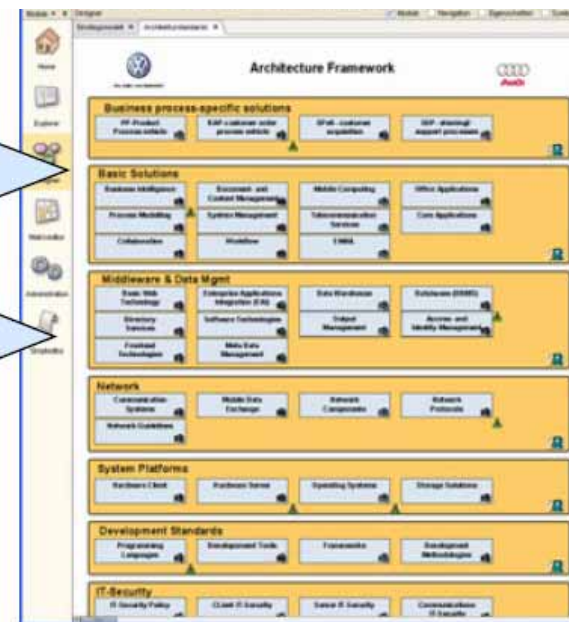
Specification:  
IT Architecture Framework in PPT

Solution:  
IT Architecture Framework in ARIS



Architecture Layer

Architecture item

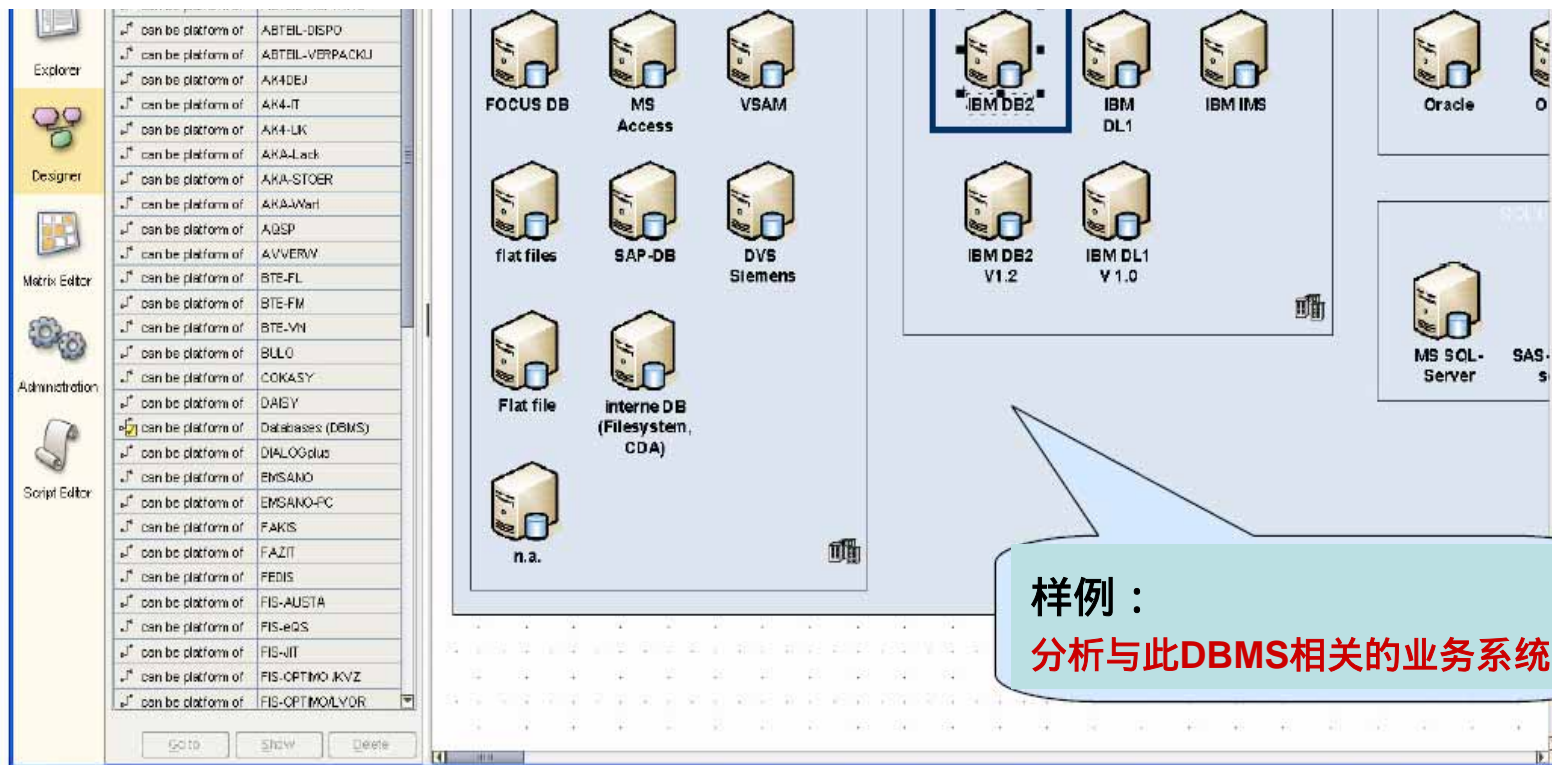




# 使用EA知识库进行影响分析， 以IT设施为起点，分析到相关受影响的业务流程



○

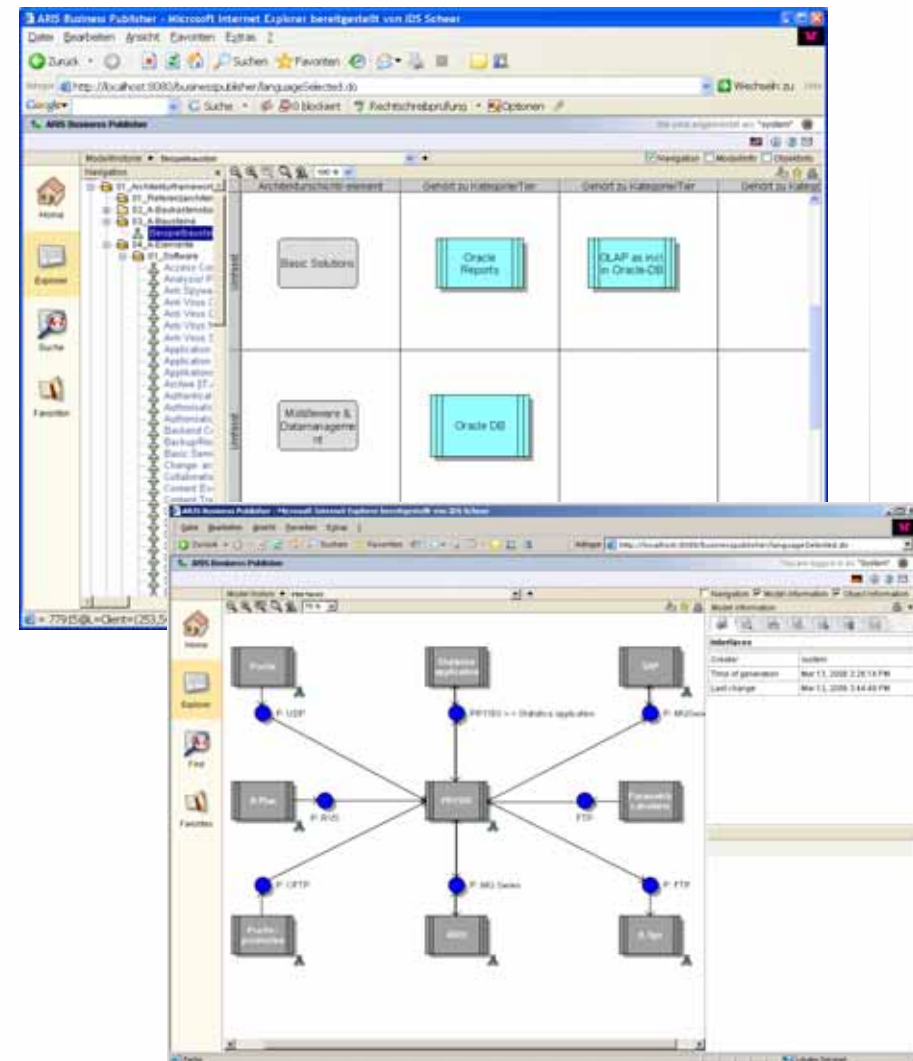




***Worldwide distribution of the EA repository content via:***

# ARIS Business Publisher

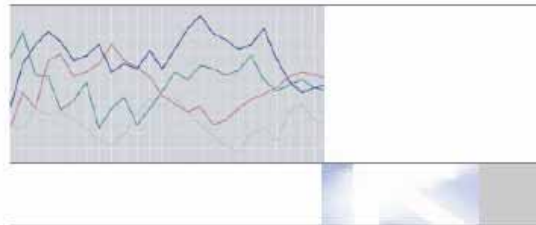
- Presentation of contents is **completely adaptable** to the company's corporate design and the requirements of the target group.
- **Communication of IT system information** in company portals (responsibilities, supported processes, technologies and functionalities, documentation, etc.)





# 全球通用的IT标准、运营生命周期标准的定义和发布流程

Specification:  
Book of Standards



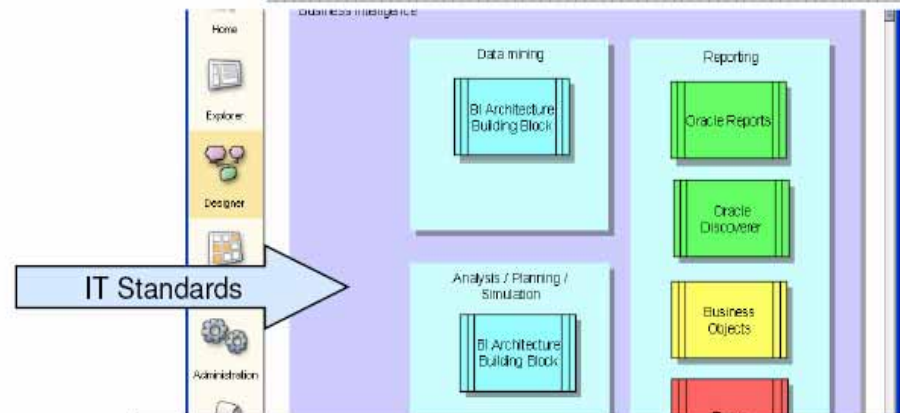
IT Standards of the Volkswagen Group  
"Book of Standards"

17.10.2005

Meaning of the colours within the tables named "Volkswagen Corporate Standard":  
The coloured rows indicate the following status of the corresponding IT-Standard:

Green	defined and used as a corporate VW Group IT standard
Yellow	requested to be decided as a corporate VW Group IT standard either as a replacement for the current Standards or as an additional standard
Red	the current IT standard is in Phase out phase. It has been decided to be replaced by another IT standard and is not allowed be used in new projects
Blue	Limited Use: This is a standard only for specific environments, e.g. only for SAP Systems.

Solution:  
IT Standards in ARIS



Life cycle report

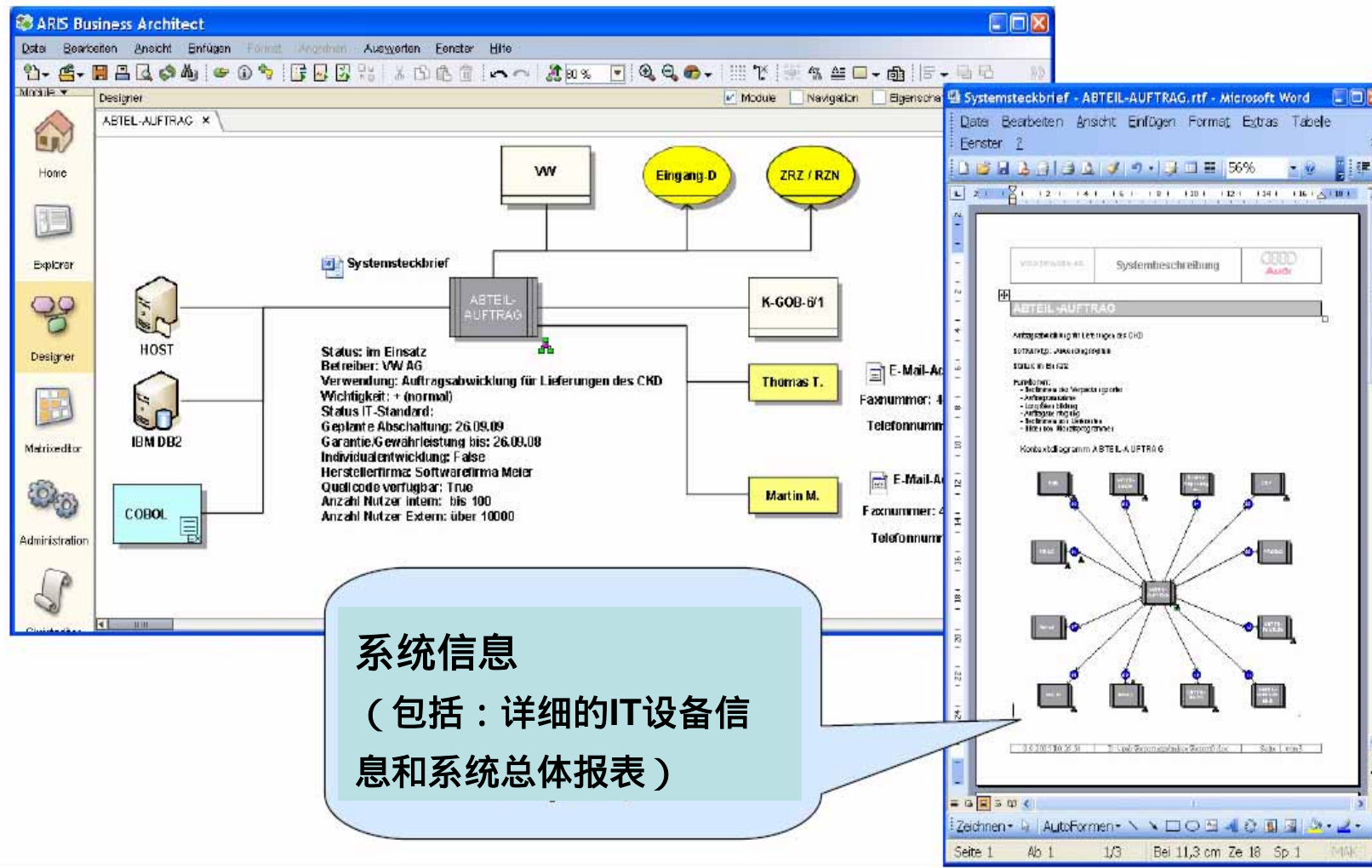
VOLKSWAGEN AG Standardization Lifecycle of Systems Audi

The following table gives an overview on the standardization lifecycle of selected IT components:

System	Current Status	Evaluation	Requested for standard	To be phased in	Standard	To be phased out	2005	2006	2007
Peregrine	Blue	May 17, 2004	Feb 8, 2005	Feb 28, 2006	Feb 8, 2009	Jun 5, 2010	01.01.2005	01.01.2006	01.12.2007
Informix	Red	Jan 17, 2005	Feb 8, 2005	Dec 30, 2005	Jan 2, 2006	Jan 24, 2006			
Tomcat	Blue	Feb 8, 2005	Feb 8, 2005	Aug 30, 2006	Feb 8, 2009	Jun 6, 2013			
ARIS	Yellow	Sep 20, 2005	Jan 1, 2006	Jan 2, 2006	Feb 8, 2008	Jun 6, 2010			

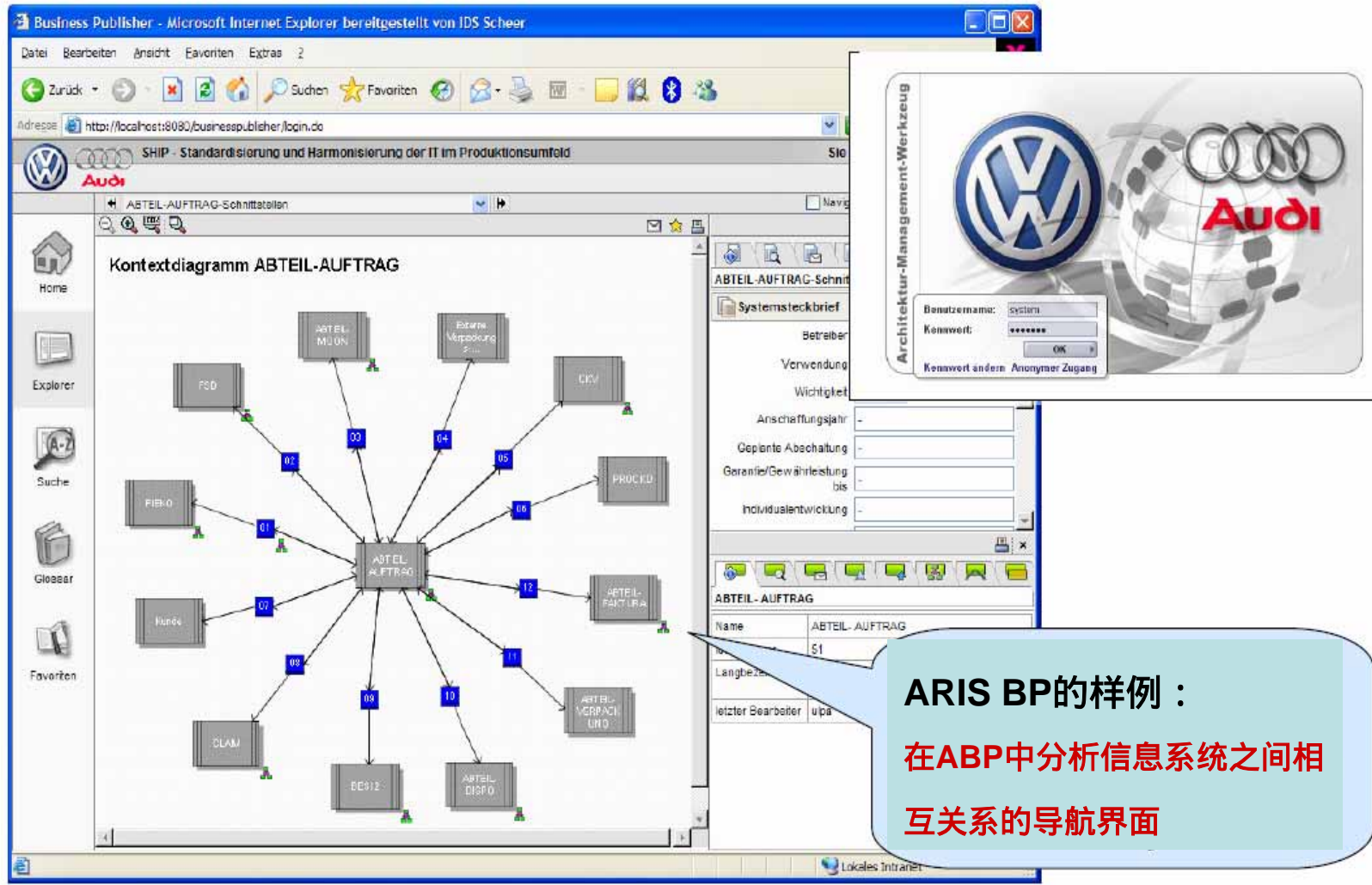


# 用于一个统一的知识库来存储和评估： 不同品牌、分支机构和地点中的系统信息





# 通过企业内部互联网Intranet , 进行以目标为导向的信息系统关系分析





# 在模型中采用严格的规范对系统信息进行维护，数据质量大幅改善

The screenshot displays the ARIS Business Publisher interface within a Microsoft Internet Explorer browser. The browser's address bar shows the URL `http://localhost:8080/businesspublisher/languageSelected.do`. The application header includes the ARIS logo and the text 'You are logged in as: \*system\*'. The left sidebar contains navigation icons for Home, IT Systems, and Favorites. The main content area is divided into three panes. The left pane shows a search for 'depart\*' with 'DEPARTMENTpackaging' highlighted in the results. The middle pane displays a tree view of system information for 'DEPARTMENTpackaging', with 'Common' selected. The right pane shows the 'System description / DEPARTMENTpackaging /' details, including fields for System Name, Short description, Consulting Status (GR), System identifier, System responsibilities, Status of standardization, In Evaluation (from), In Evaluation (until), Requested for Standard (until), To be phased in (until), Standard (until), To be phased out (until), and a Description field.

System description / DEPARTMENTpackaging /

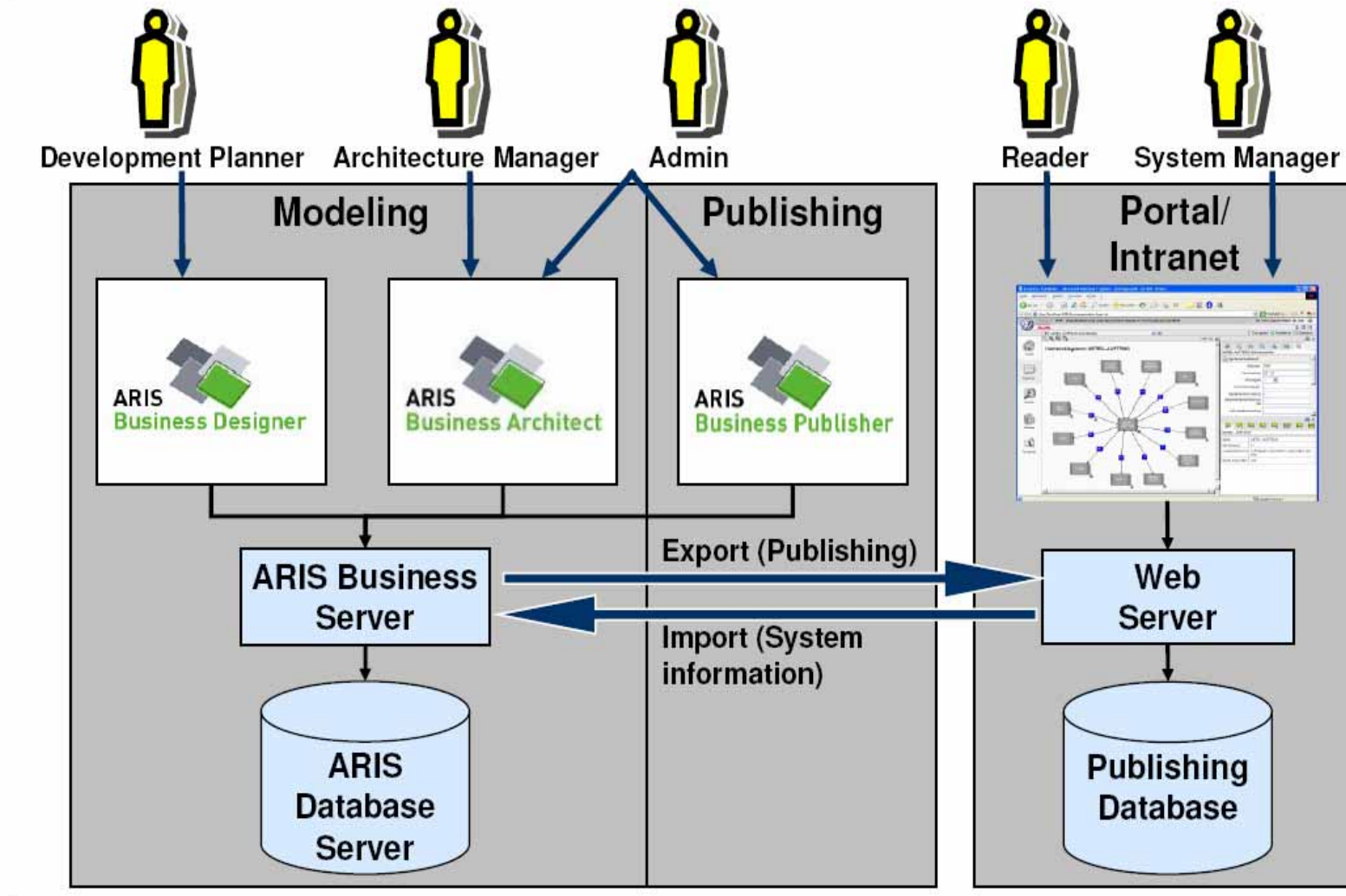
Common	
System Name	DEPARTMENTpackaging
Short description	customer order processing for component shipping, packaging
Consulting Status (GR)	Wert 2993
System identifier	order processing
System responsibilities	K-QDB-601
Status of standardization	
In Evaluation (from)	
In Evaluation (until)	
Requested for Standard (until)	
To be phased in (until)	
Standard (until)	
To be phased out (until)	
Description	shipping handles the customer order processing with the following control system - shipping orders - shipment planning - packaging control - loading

**ARIS BP的样例：**

**在发布后的数据库中，由系统  
管理员对系统信息进行维护**



# IT架构管理解决方案中的人员角色和对应的ARIS工具





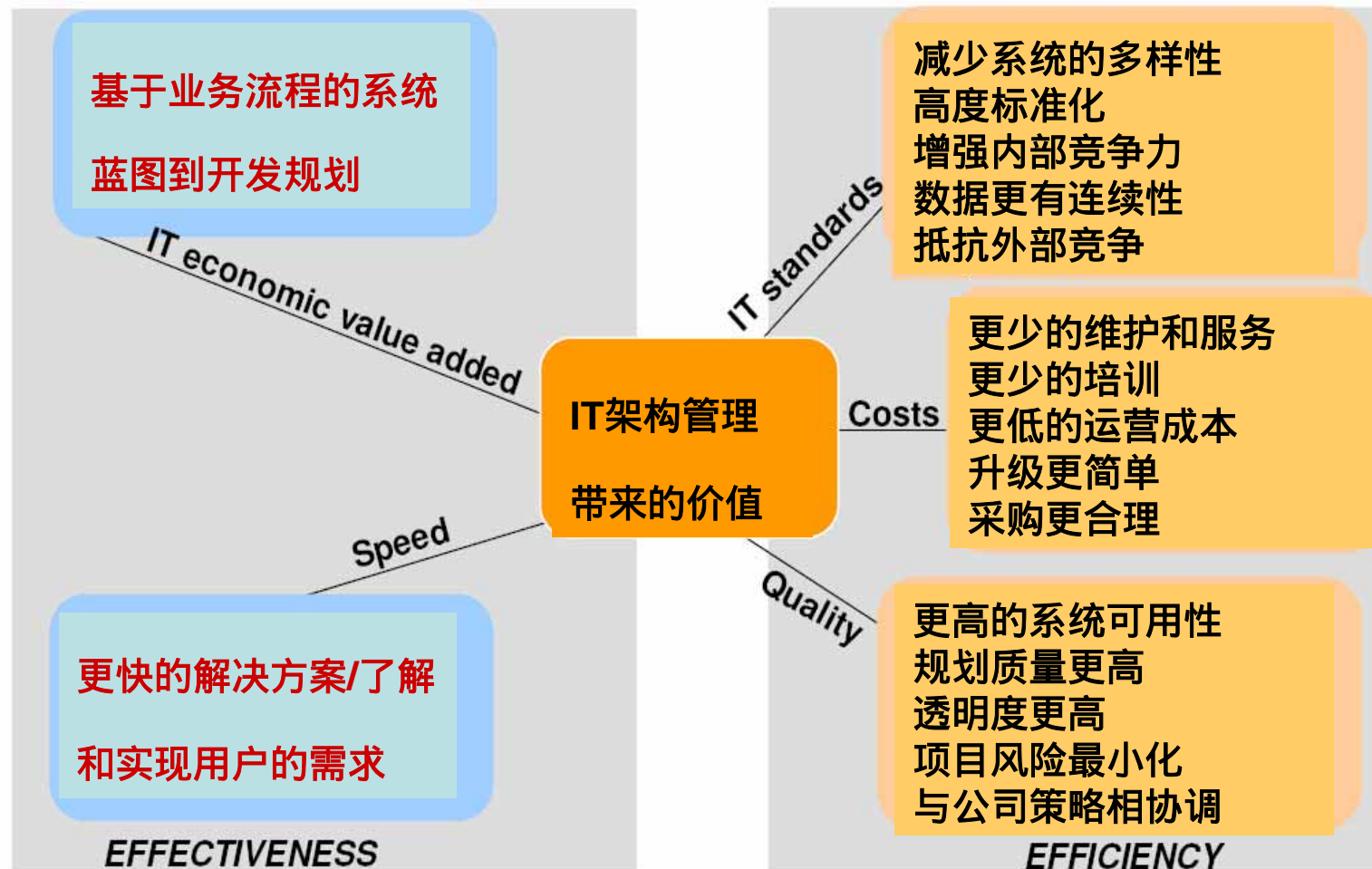
# 大众集团案例：

- 大众集团
- IT架构管理 —— 目标/定位
- 解决方案
- 业务价值

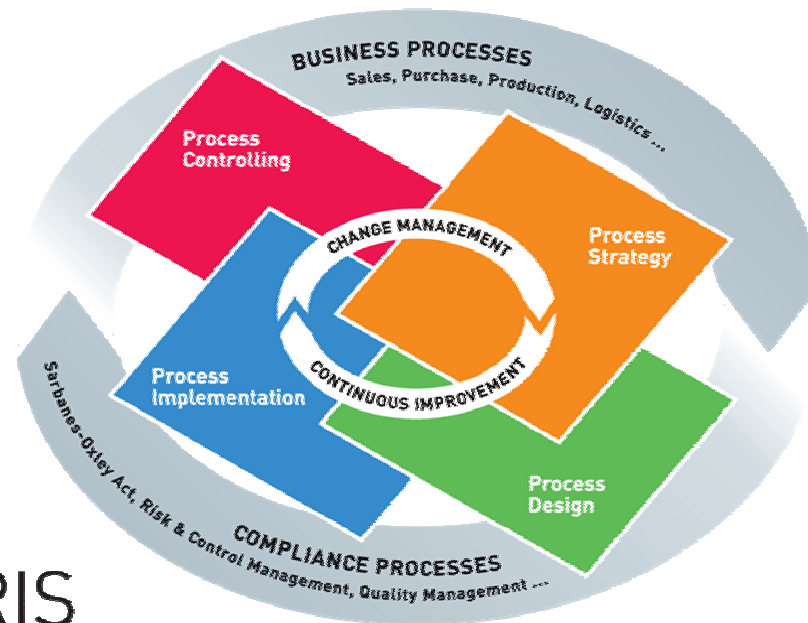




# 基于ARIS EA的IT架构管理给大众集团带来的价值







# ARIS Business Process Excellence

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Thank you for your attention



- 27 -

VOLKSWAGEN AG

2007年4月

谢谢关注!