

SOA Innovation Lab and SOPERa – open innovation for a joint agenda of users and vendors

Dr. Johannes Helbig
Member of the Divisional Board
Chief Information Officer

Leipzig, September 29th 2010

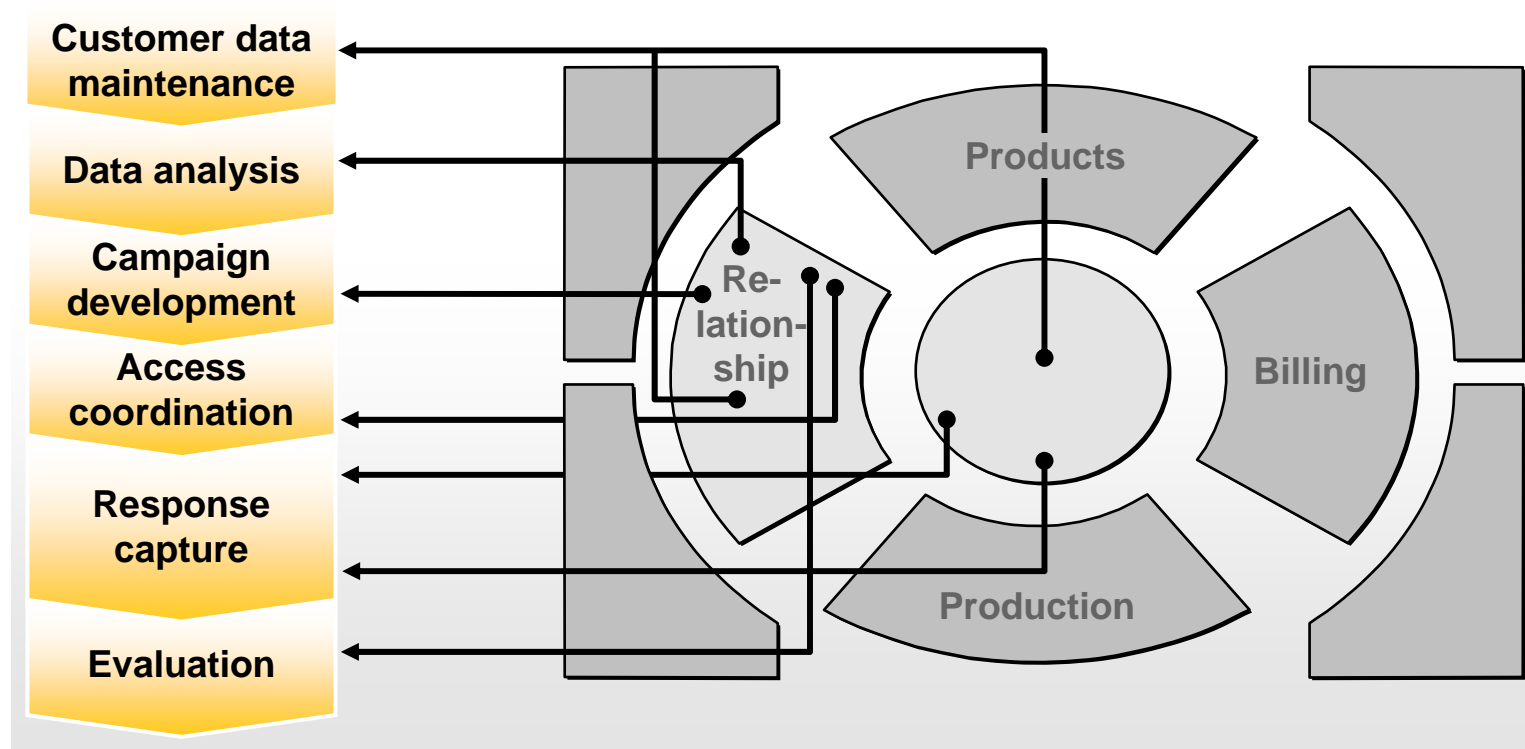
Agenda



- Business imperatives for flexible growth
- Open innovation: SOPERA
- Open innovation: SOA Innovation Lab

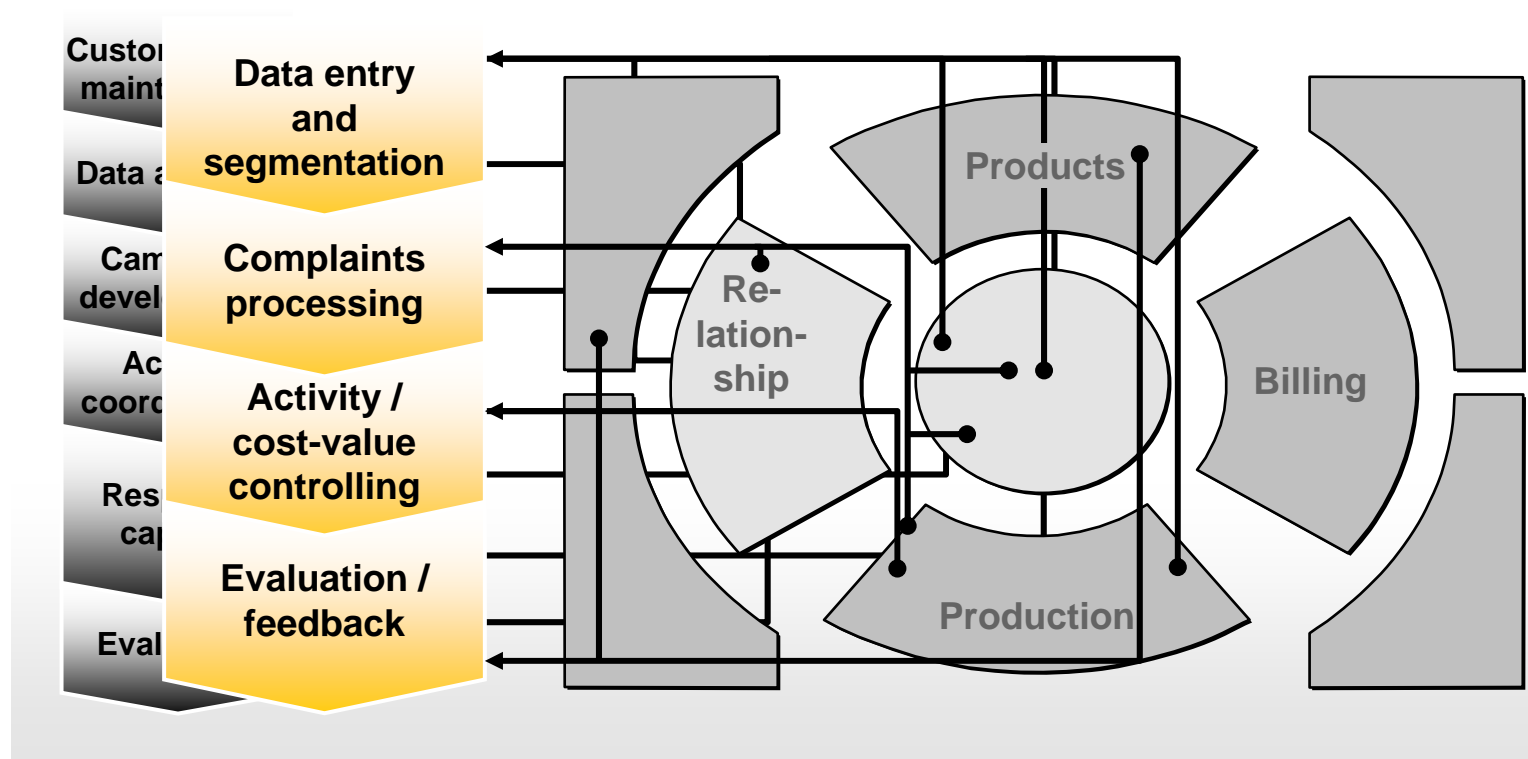
The “Lego” approach of modular services ...

Direct marketing process



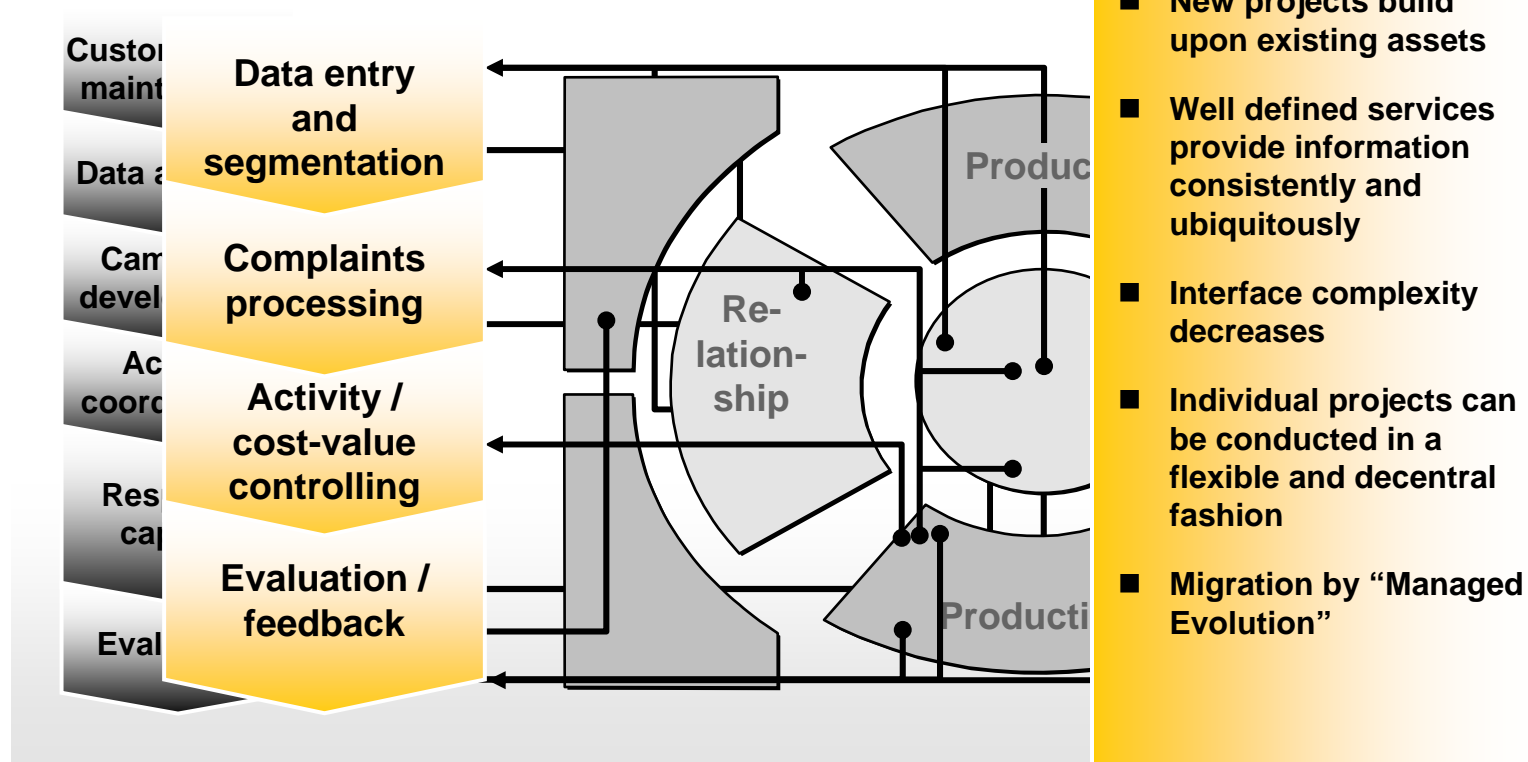
The “Lego” approach of modular services ...

Complaints management process



The “Lego” approach of modular services ...

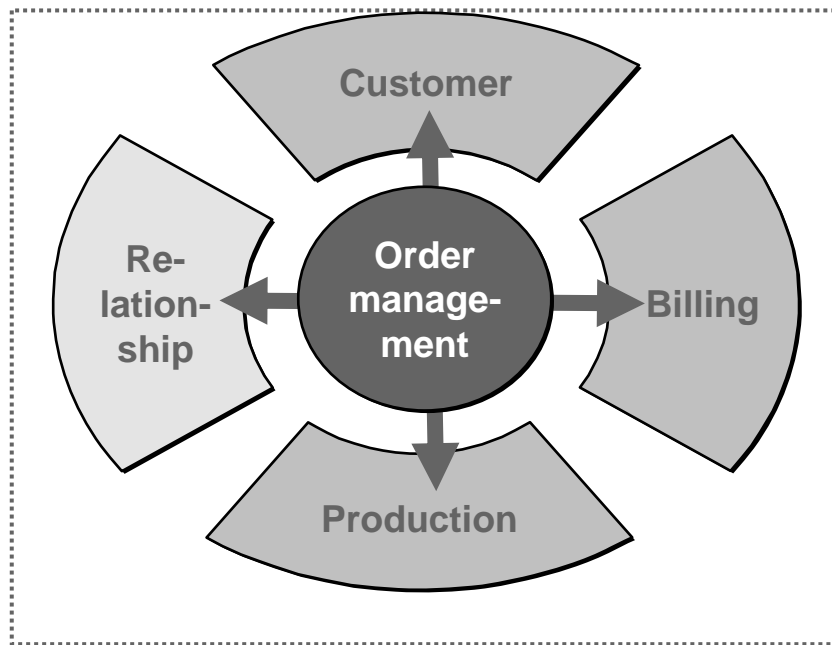
Complaints management process



- New projects build upon existing assets
- Well defined services provide information consistently and ubiquitously
- Interface complexity decreases
- Individual projects can be conducted in a flexible and decentral fashion
- Migration by “Managed Evolution”

... leads to flexible application landscapes, ...

Order Management: internal collaboration

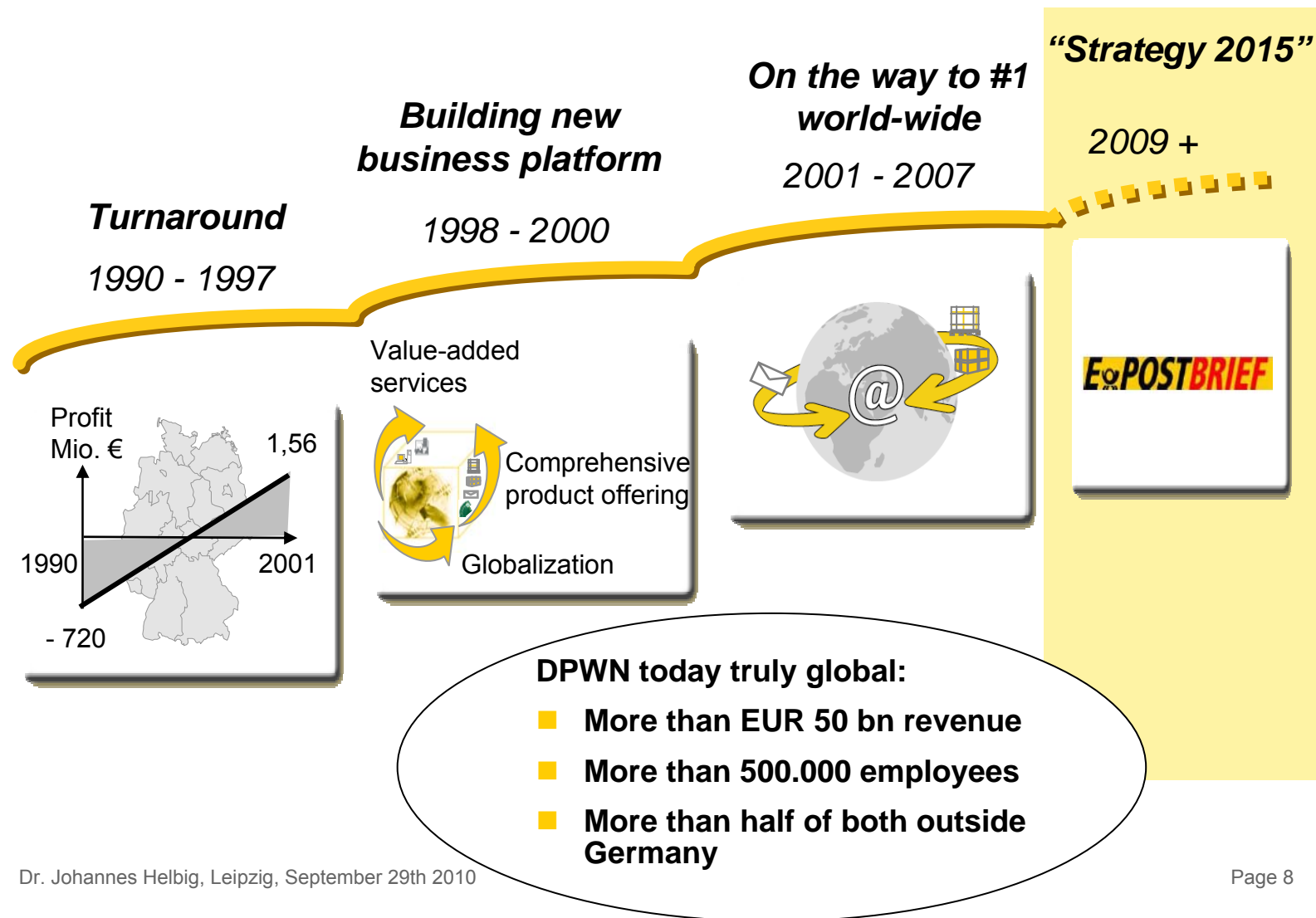


- **Business driven project:** Before Order Management, orders consisted of pallets “dumped” on a hub’s backyard
- **Target:** Simplification and consolidation of processes, also due to upcoming deregulation
- **Customer benefits:** End customer focus, paperless delivery, order information online, one face to the customer
- **Savings:** Two-digit business value by cost savings alone

Scale

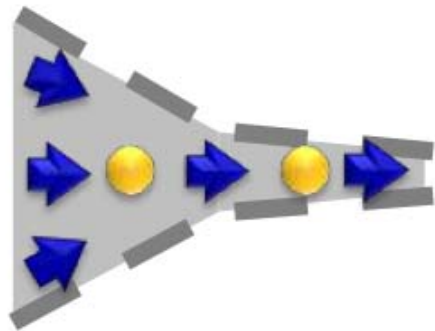
- 1,200 internal users
- Up to 10,000 external users
- up to 10,000 transactions p. h.
- 3.5 Mio. orders p. a.

... for large enterprises with high growth and innovation rates



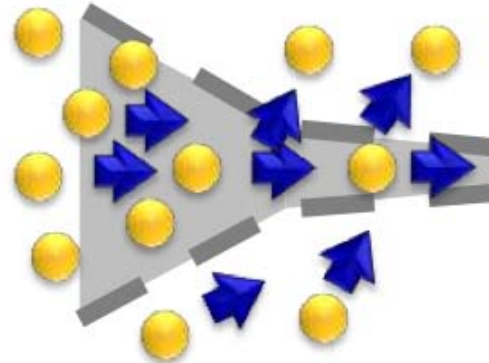


From Innovations Inside a Company Towards Networked Innovations



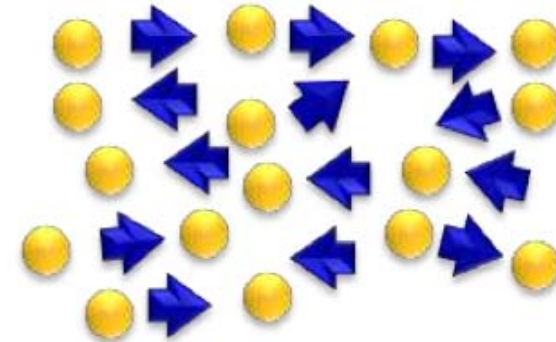
Closed Innovation

- Innovation is developed in (central research teams)
- Late killing of not winning ideas
- No input from outside the organization
- Management decides only on winning ideas



Open Innovation with Business Partners

- Innovation is developed in open company communities without hierarchies
- Darwinistic selection of winning ideas (the best survive)
- Business Partners (Suppliers/Universities) are part of the community
- Innovation ideas can leave the innovation channel



Innovation Network with the whole Business Eco System

- Innovations are developed in the whole Business Eco System (Suppliers, Partners, Customers)
- Joint Ventures with competitors to develop innovations
- Building cross channels partnerships for developing innovations

New challenges and chances in the logistics industry



The role of IT for differentiation has led to the formulation of three strategic IT imperatives



Discontinuity trigger:
■ Liberalization
■ Substitution



Transformation from traditional postal services to a global information logistics provider



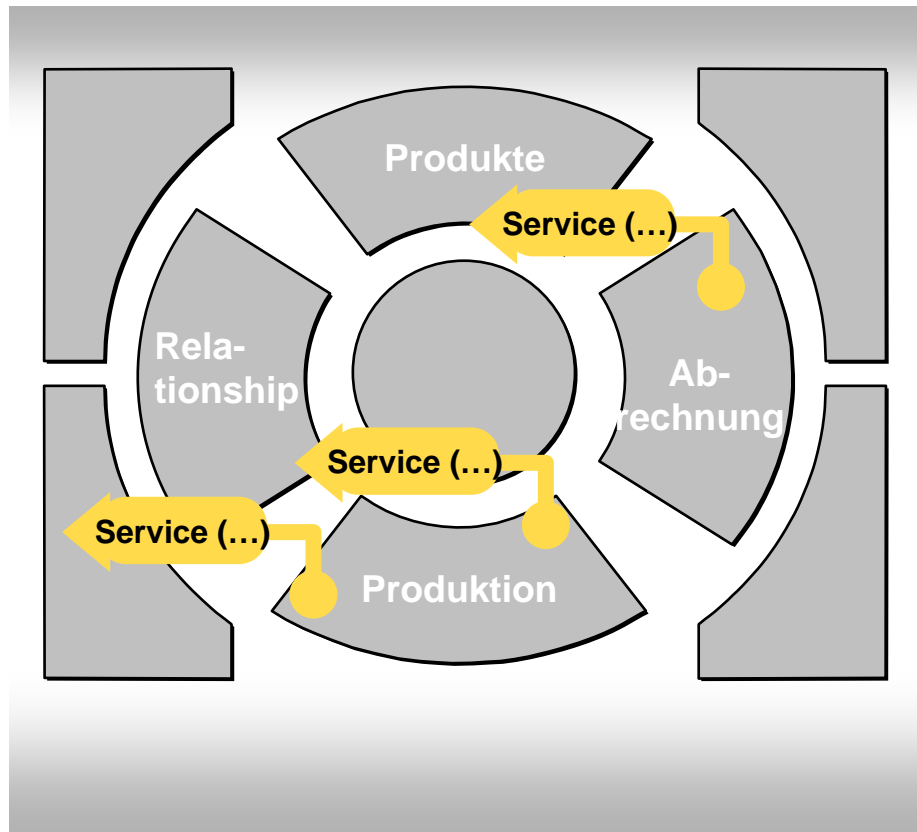
- I **Flexibilization** under uncertainty: Transform the application landscape into a robust basis for that is adaptive to strategic change
- II **From barrier to enabler:** Make the IT function a strategic responsibility of each business manager and ensure world class delivery
- III **Externalization:** Build the foundation for internal and external collaboration for new business models

... while withstanding massive cost reductions

Would you rather innovate here ...



...or here:

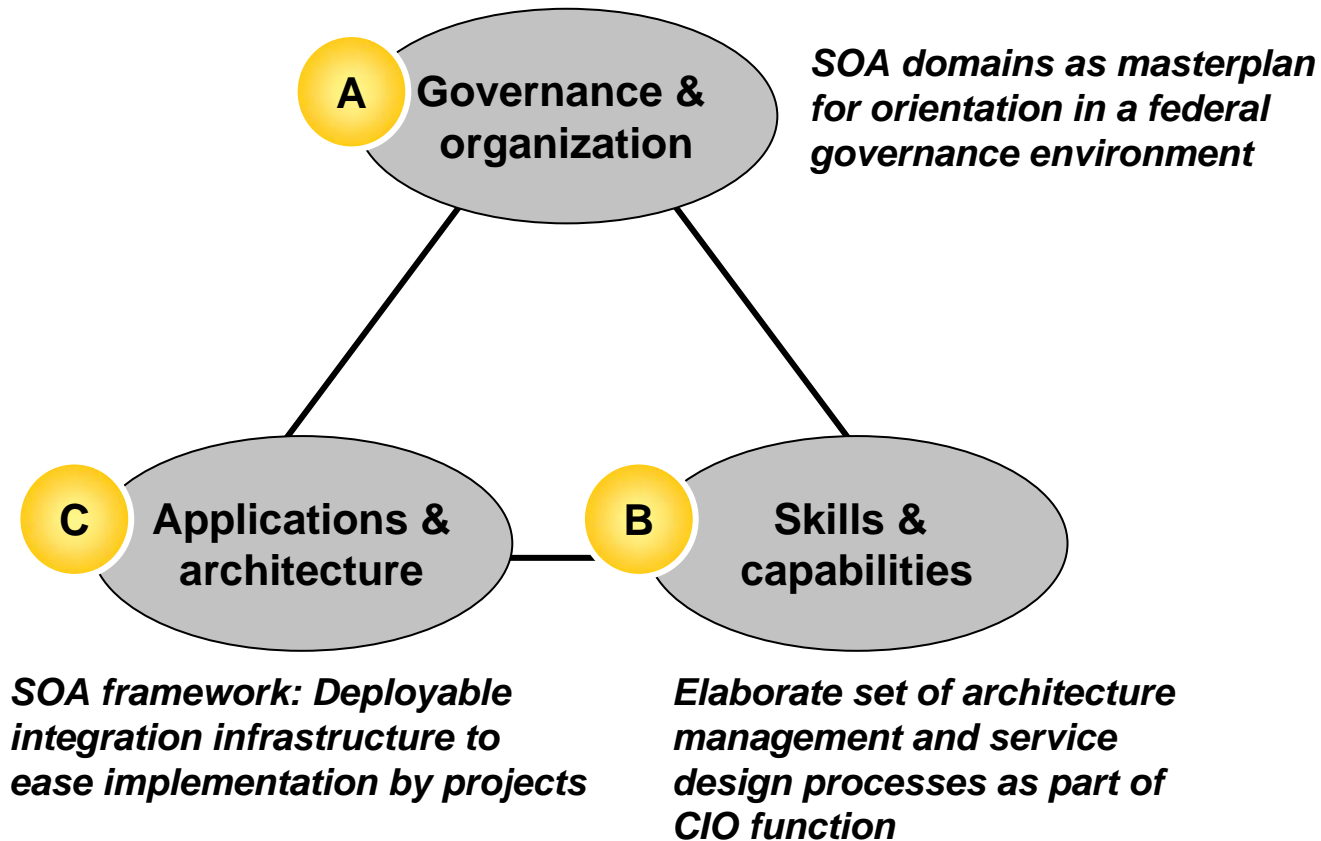


Benefits of loose coupling

- Minimize side effects
- Decouple respective development speeds while keeping service interfaces stable
- No “piggy-back interfaces”

**Managed Evolution:
For growth and for
shrinkage alike**

Companies seeking to adopt SOA need to address three strategic dimensions

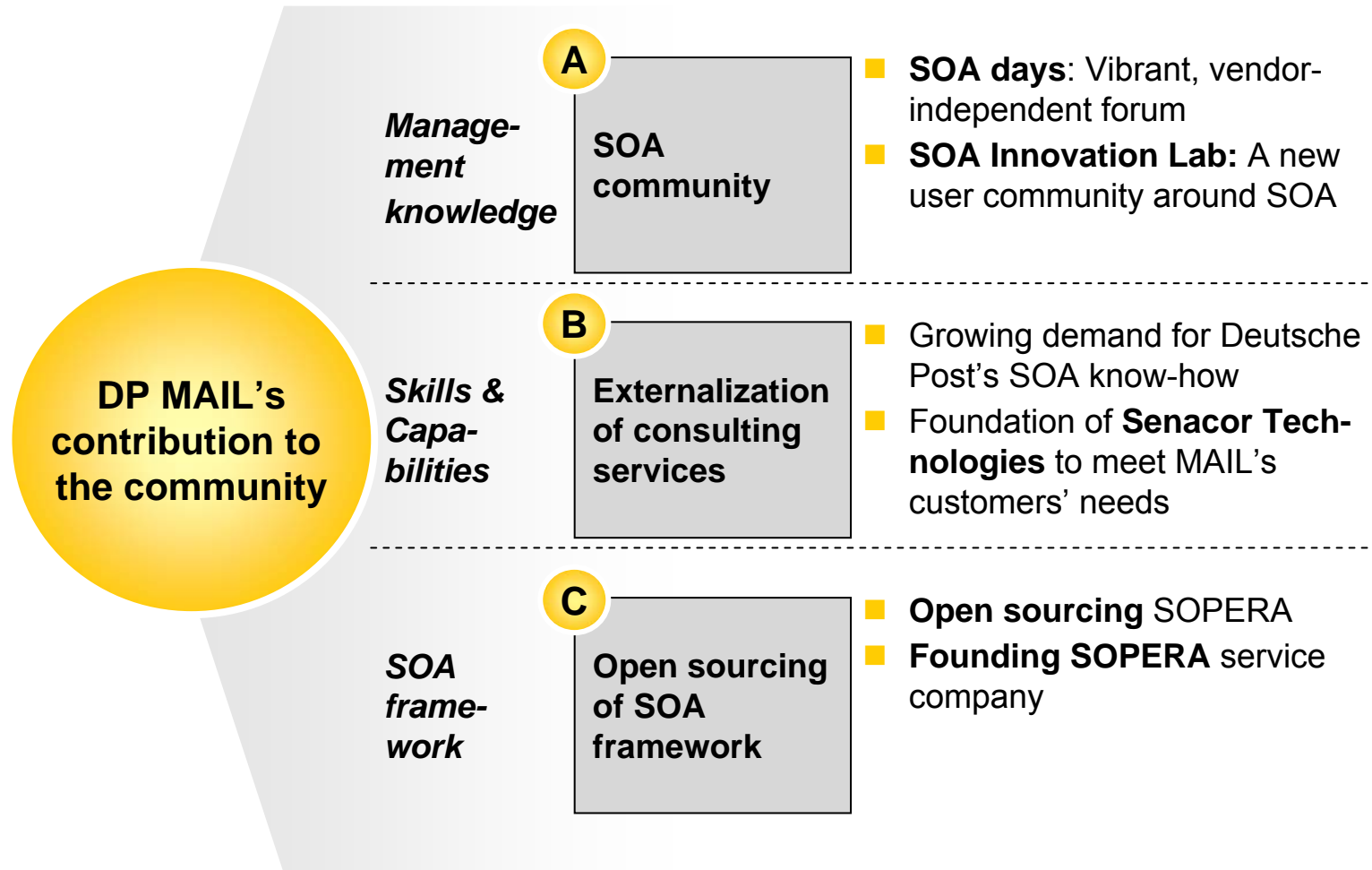


SOA Roadmap at Deutsche Post

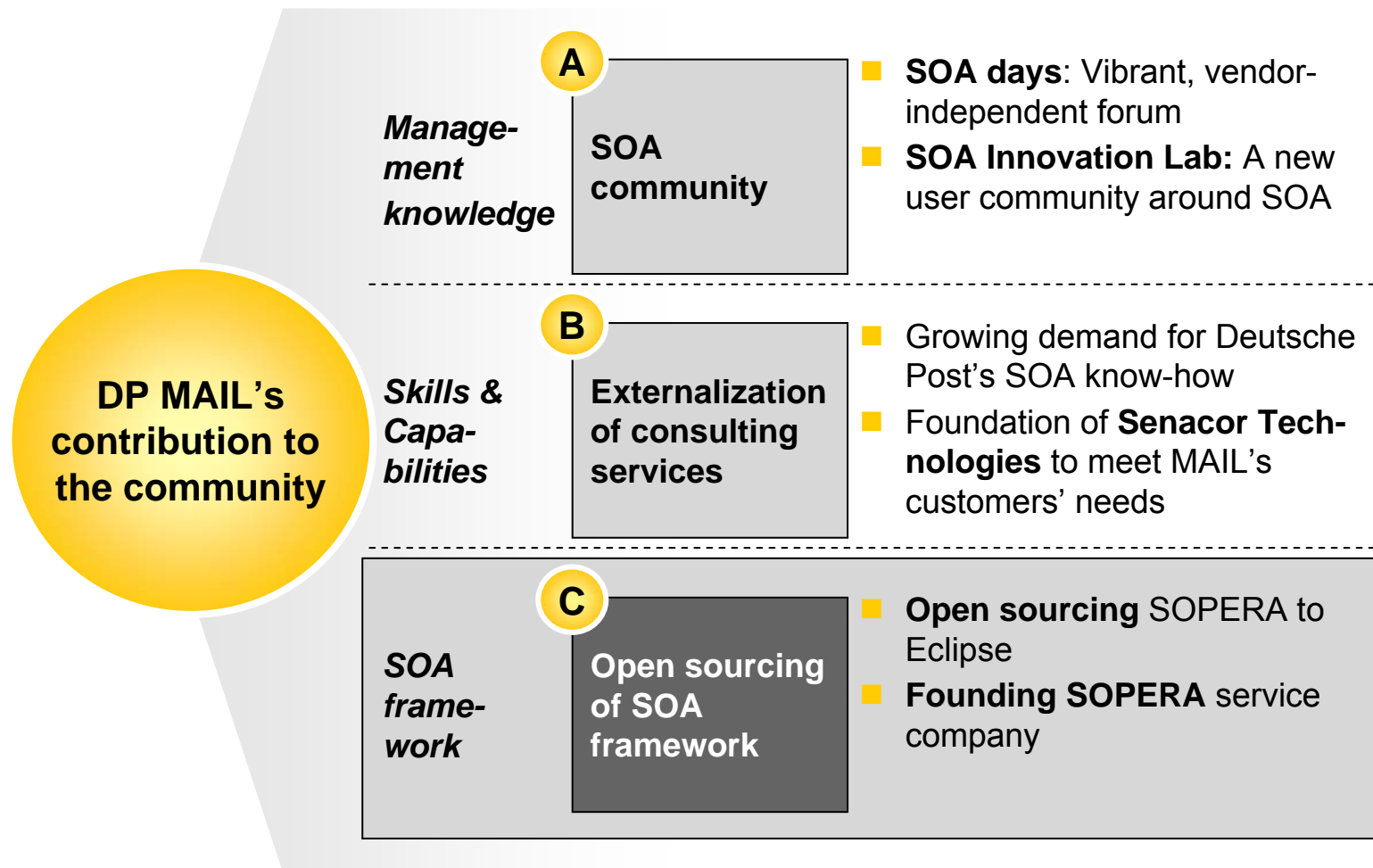


A	Governance & organization	<ul style="list-style-type: none"> SOA concept at Deutsche Post MAIL Detailed domain definition Federal architectural governance MAIL 	<ul style="list-style-type: none"> Extending scope to DHL & Global Mail Federated governance DPWN Continuous improvement of domain model 	<ul style="list-style-type: none"> Robust SOA governance model Strong enterprise architecture team 	
B	Skills & capabilities	<ul style="list-style-type: none"> Development of first service-oriented applications Definition of service design process and standards 	<ul style="list-style-type: none"> Automated service design process Widely extended service portfolio Internal consulting unit implemented to consult SOA projects 	<ul style="list-style-type: none"> Consistent service design processes Strong service modelling methodology 	
C	SOA framework	<ul style="list-style-type: none"> Proof of concept Service Backbone (SBB, now SOPERA) Service Backbone goes live Data integration functionality added 	<ul style="list-style-type: none"> Continuous functional enhancement of SOA platform Development of SOPERA as best-of-breed SOA framework 	<ul style="list-style-type: none"> Capable, proven ESB Flexible SOA technology framework 	

Externalization of knowledge, skills, and infrastructure



Externalization of knowledge, skills, and infrastructure



Agenda

- Business imperatives for flexible growth
- **Open innovation: SOPERA**
- Open innovation: SOA Innovation Lab



In 2007 Deutsche Post contributed SOPERA to Eclipse, ...

Options for Deutsche Post DHL in 2007

Goals of Deutsche Post	<u>Option 1: Replacement by a commercial product</u>	<u>Option 2: Go Open Source and found SOPERA GmbH</u>
A Continuity and high Innovation Rate	✓	✓ The acquisition of further customers drives the completion of the platform with a distributed software architecture
B Vendor Independence	—	✓ Contribution of the SOA platform to Eclipse as the leading vendor-independent consortium
C Lower cost of software	—	✓ Open Source increases the efficiency of the development and sales process
D High quality service	✓	✓ Foundation of SOPERA GmbH providing all enterprise services around the SOA platform

... causing significant attention in the industry



Nr. 14 vom 5. April 2007
www.computerwoche.de

COMPUTERWOCHE

NACHRICHTEN ♦ ANALYSEN ♦ TRENDS

COMPUTERWOCHE TV
Jürgen Geck, Chief Technology Officer von OpenXchange, im Interview

Die Post stellt ihre SOA Open Source

Der Logistikkonzern initiiert eine Nutzervereinigung für Service-orientierte Architekturen und gibt sein Framework frei.

MIT OPEN SOURCE GEGEN MICROSOFT
Wie Jürgen Geck, Cheetechnologe von OpenXchange, im Collaboration-Markt punkten will.

ALTERNATIVE ZUM BLACKBERRY
E-Mail-Empfang auf dem normalen Handy via MMS ist einen Versuch wert.

ZAHLE DER WOCHE
15 Cent – um diesen Betrag hat die Bundesnetzagentur den Mietpreis für die Teilnehmeranschluss-Leitung gesenkt. Statt 10,65 Euro zahlen Konkurrenten wie Arcor, Hansenet oder Versatel künftig nur noch 10,50 Euro als Miete für die „letzte Meile“ von den Ortsvermittlungsstellen zu den Haushalten. Während die Telekom angesichts der „besonderen Belastungen“ durch den Konzernumbau eine Erhöhung auf 12,03 Euro angestrebt hatte, wollten die Wettbewerber weniger als neun Euro durchsetzen. Beide Seiten zeigten sich unzufrieden mit dem Kompromiss.

Linux-PC: Dell beugt sich Kundenwünschen

Uf der Fachkonferenz „SOA Days 2007“ ließ Johannes Helbig die Bombe platzen: Die in jahrelanger Arbeit entwickelte SOA-Infrastruktur der Deutschen Post stehe ab sofort als Freeware zur Verfügung, erklärte der CIO des Unternehmensbereichs Brief. Spätestens bis zum Jahresende werde das „Sopera“ getaufte Framework über ein Open-Source-Lizenzmodell nutzbar sein. „Wir wollen die Eintrittsschwelle für SOA senken“, begründete der Manager den Schritt. Ziel sei es, Post-Kunden den Einstieg in SOA zu erleichtern, ohne selbst zum Softwareanbieter zu werden. Wartung, Support und Schulungen offeriert die eigens dazu gegründete Sopera GmbH mit Sitz in Bonn. Nach Helbigs Angaben handelt es sich um ein von privaten Geldgebern finanziertes Unternehmen, an dem die Post nicht beteiligt ist. Als Geschäftsführer agiert der ehemalige McKinsey-Manager Ricco Deutscher.

Eine Community für SOA
Die Open-Source-Initiative bildet nach der Lesart der Post aber nur einen Baustein um die Themen SOA in

User Group im klassischen Sinn: „Die Mitglieder müssen sowohl finanziell als auch inhaltlich substanzielle Beiträge leisten“, so Helbig im Gespräch mit der COMPUTERWOCHE. Neben der Funktion als Community werde die Gruppe Themen rund um SOA auch in Workshops vertiefen. Die Agenda ebenso wie die finanzielle Ausstattung bestimmten die Mitglieder, IT-Anbieter blieben dabei außen vor.

Post-CIO Johannes Helbig setzt auf eine herstellerebene SOA-Vereinigung.

DIESE WOCHE

Turbulenzen bei SAP

Mit Shai Agassi verliert SAP einen seiner technologischen Vordenker. Trotzdem zittern weder Kunden noch Marktforscher um den Softwarelieferanten. **Thema der Woche SEITE 5**

DSL für alle – eine Illusion

Dem politischen Versprechen, alle Teilnehmer mit Breitband zu versorgen, hält die Technik nicht stand. **Nachrichten SEITE 8**

Backup Exec 11d im Test

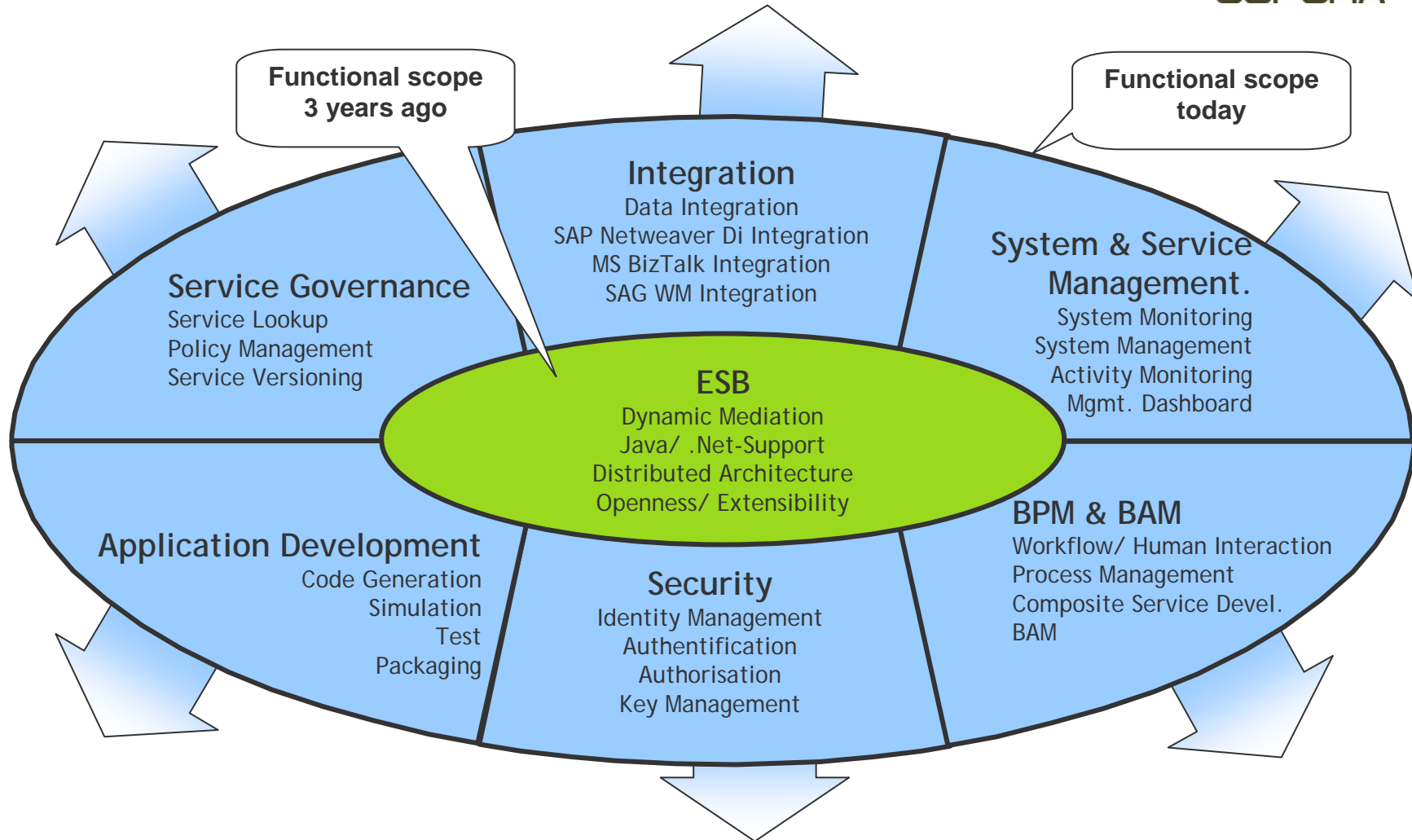
Die neue Backup-Lösung von Symantec sichert kontinuierlich und bindet mobile Rechner ein. **Produkte & Technologien SEITE 16**

Was Netweaver bietet

Viele SAP-Anwender möchten Service-orientierte Architekturen realisieren, kennen sich aber noch nicht mit der Integrationsplattform aus. **Schwerpunkt SEITE 20**

Größe ist kein Argument

A Continuity and innovation: 3 years later, SOPERÄ comprises a complete integration suite

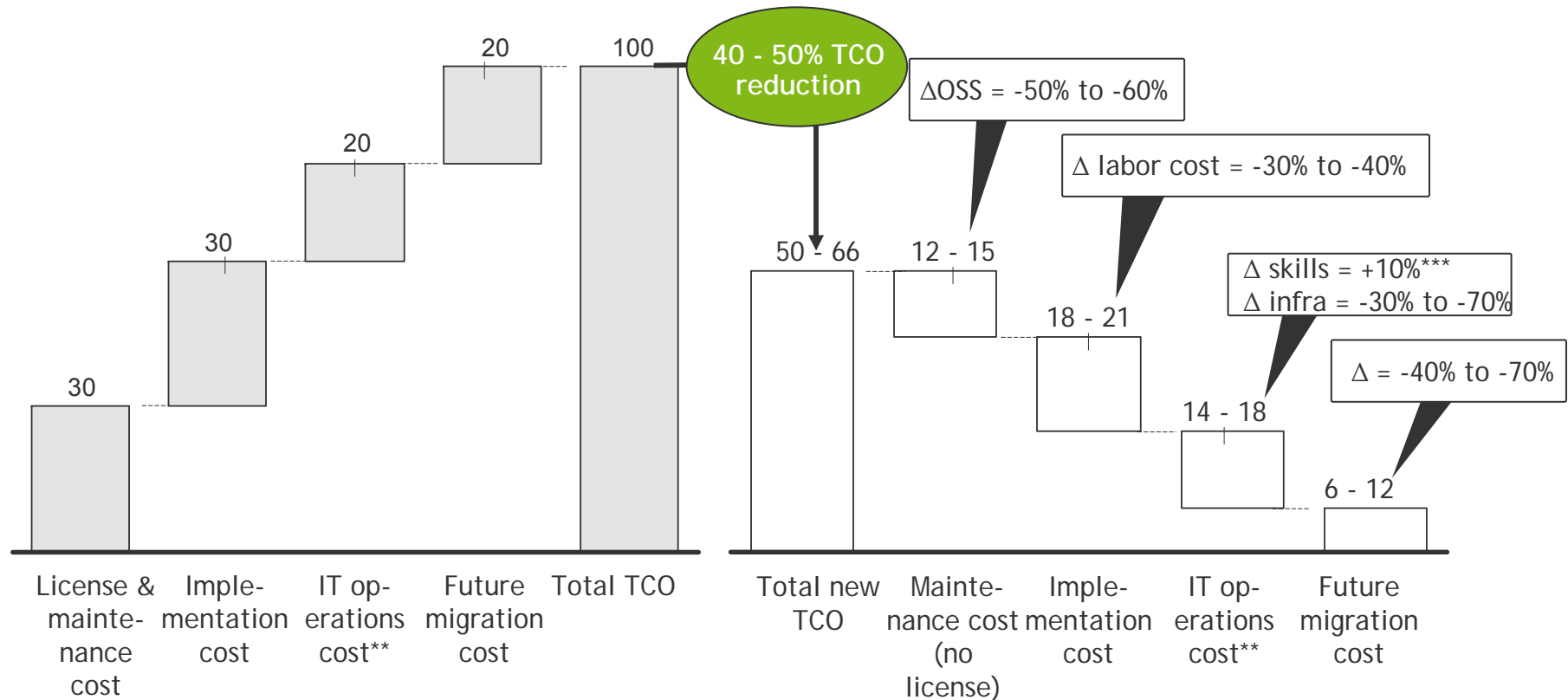


B Lower cost: Due to a different development and sales process, SOPERA has significant lower cost ...



TCO breakdown for TIBCO or IBM WebSphere MQ Integration

TCO for SOPERA



* Cost split for new generation tools, e.g., ESB
 *** Additional 10% skills needed but at 30 - 40% less salary level
 Source: DPDHL, McKinsey

** 50% people skills, 50% infrastructure

B Lower cost: ... and the eco system of customers and partners has reached a critical mass



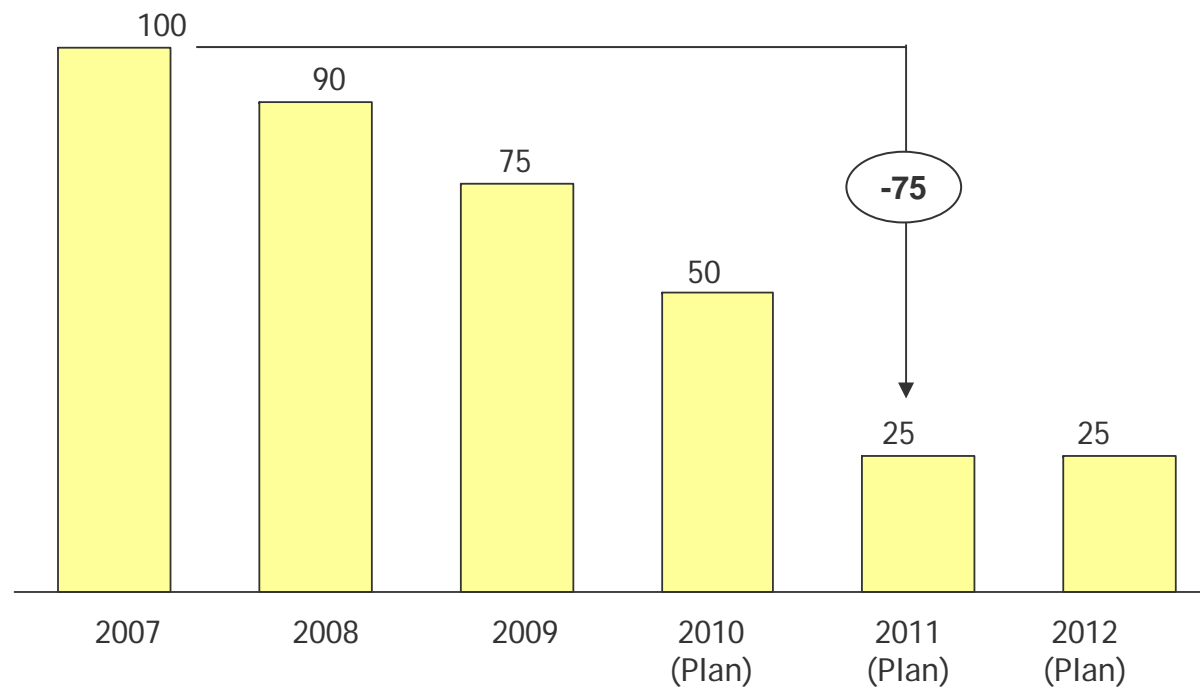
More than 30 Customers ...

... and 20 Consulting/SI Partners

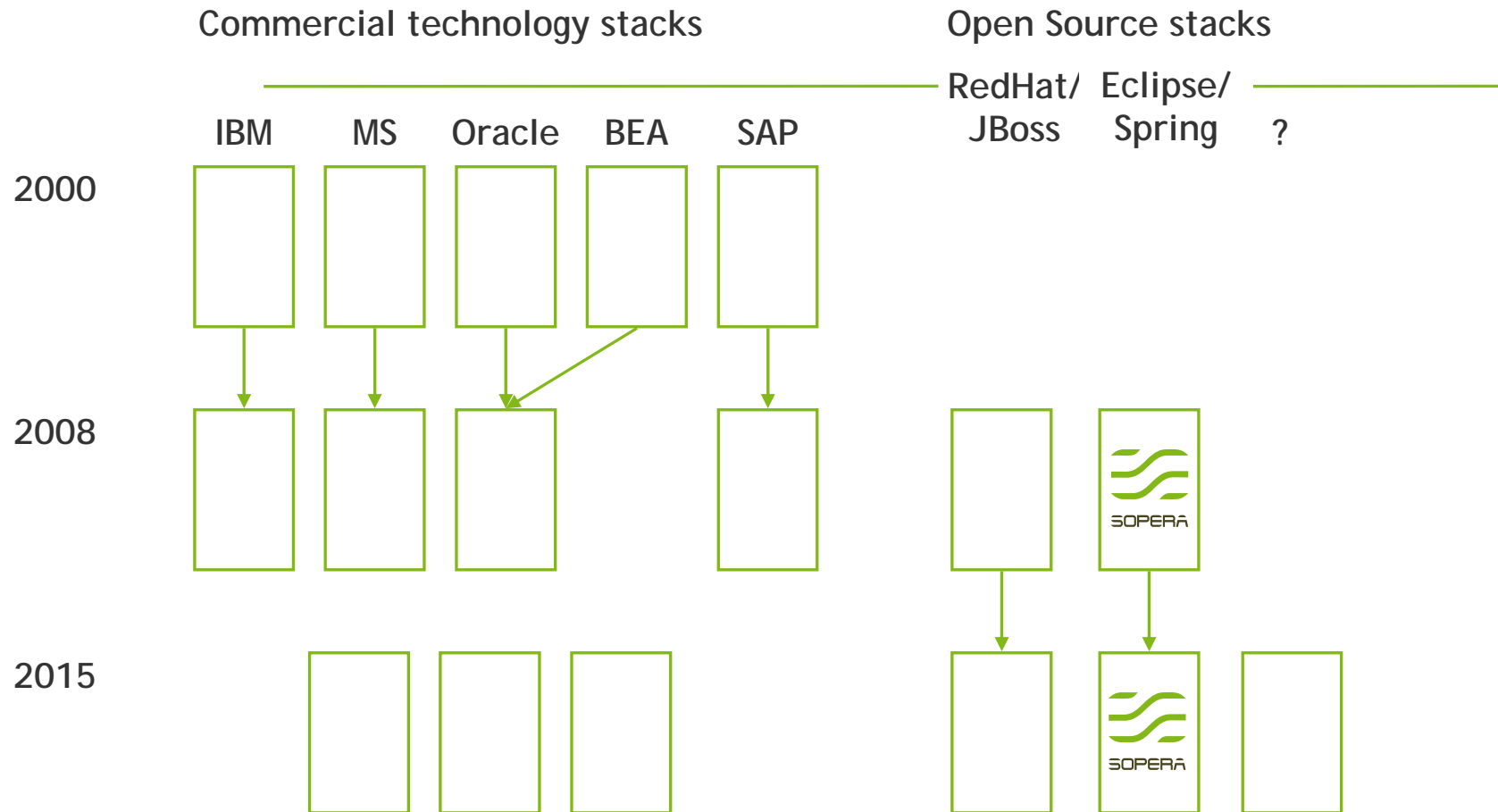
<p>Technology Partners</p>						

B Lower cost: Deutsche Post reduces its costs of integration infrastructure by 75% within 4 years

Cost of SOPERA development and support in percent

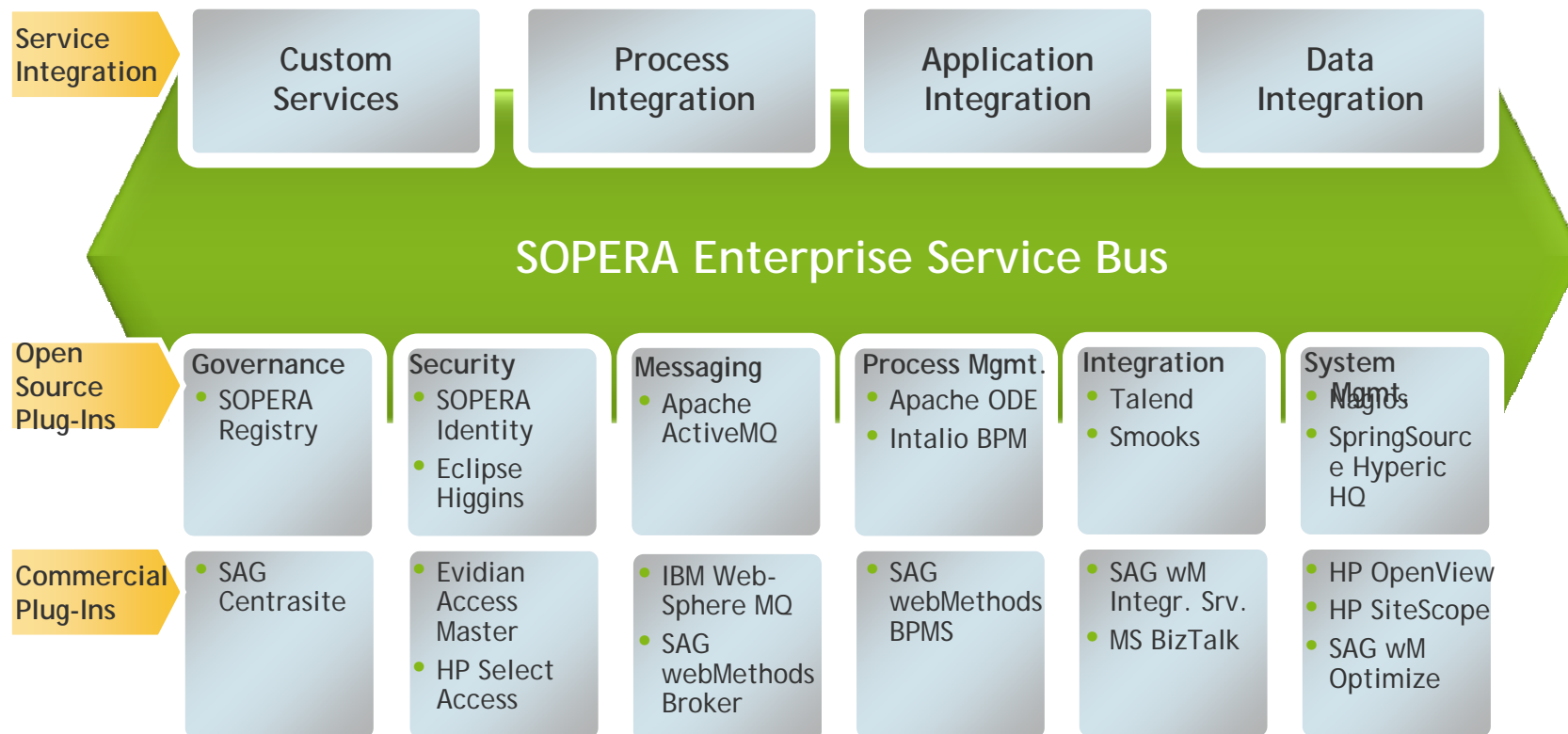


C Vendor Independence: Driven by cost structure, commercial stacks consolidate, open source stacks emerge



C

Vendor independence: Through its modular architecture SOPERA avoids lock-in



D SOPERA GmbH offers all enterprise relevant services for the SOA platform

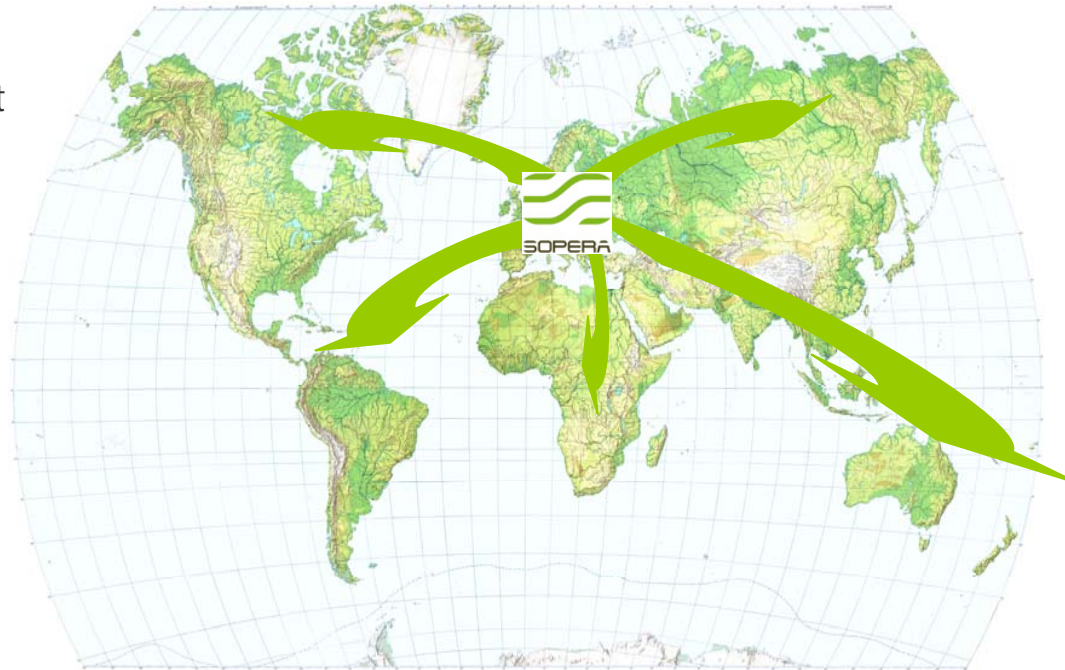


Services	Description
Support & Maintenance	1 st , 2 nd and 3 rd levels support including hot fixes, bug fixes, recurring updates and upgrades
Technical Consulting	Offering consulting services like installation support or custom development
Sponsored development	Development sponsored by a customer which becomes part of the standard distribution
Training	Comprehensive training, certification programs

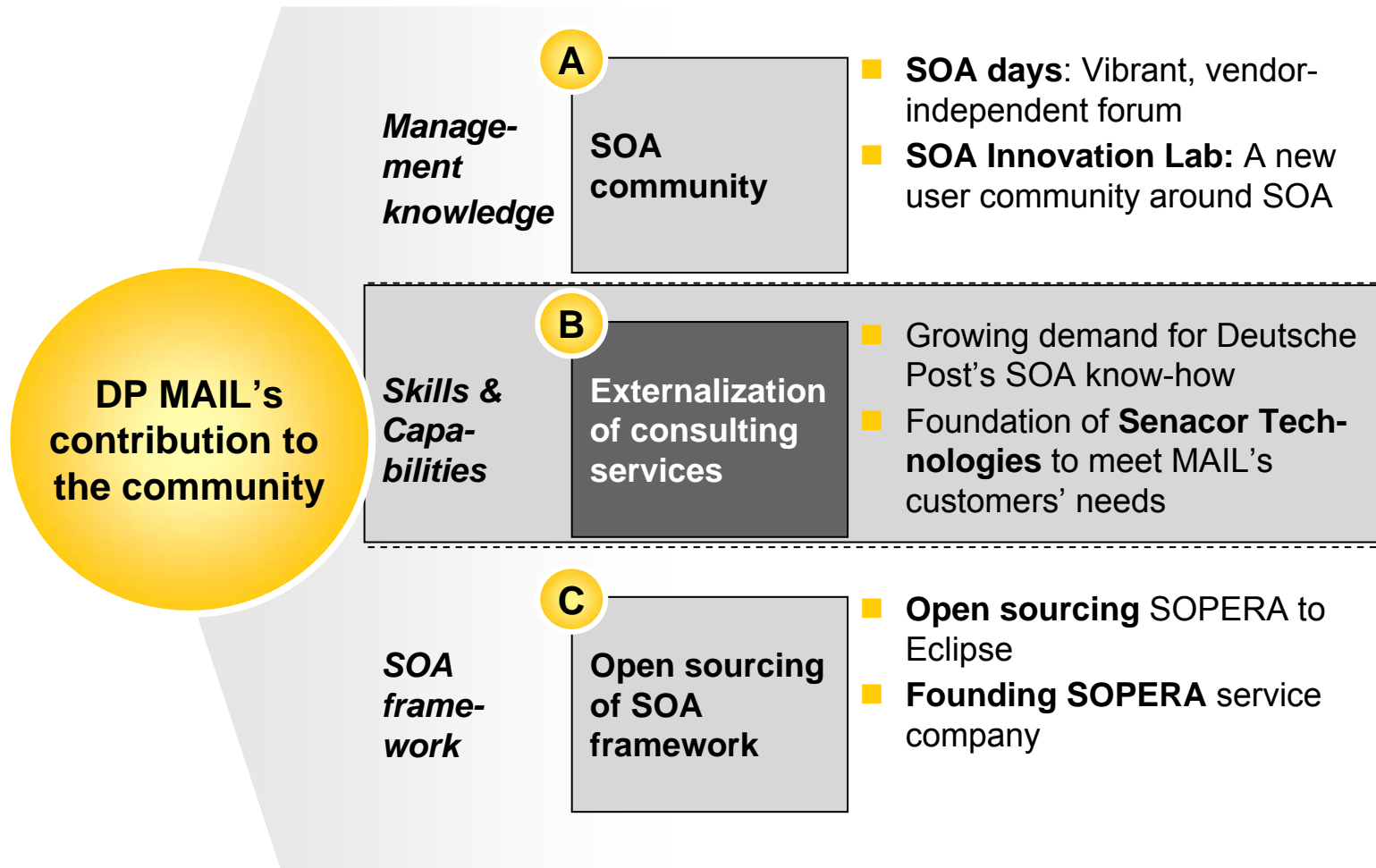
As a next step, SOPERA starts its international expansion



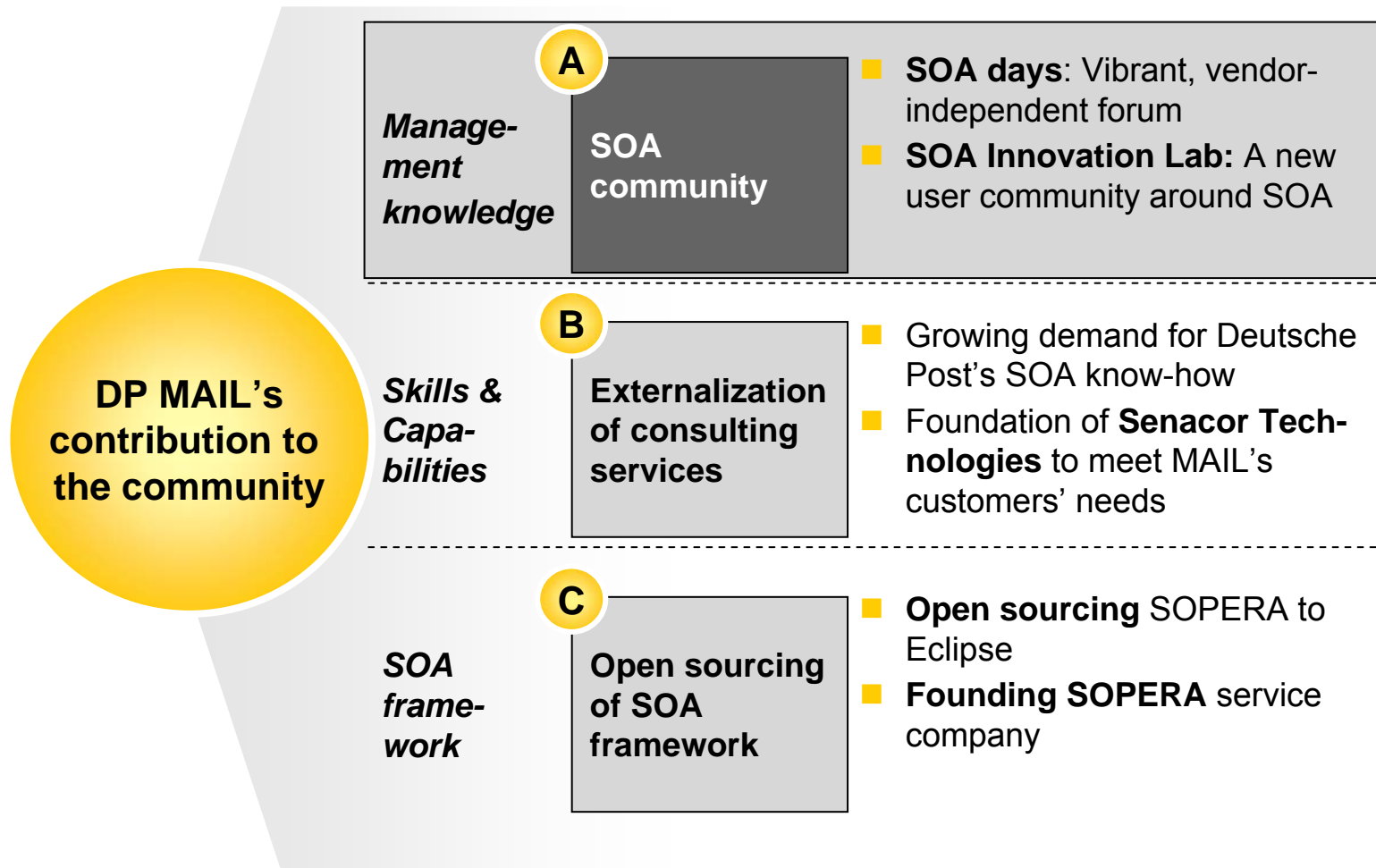
- SOPERA is now strong enough in its home market Germany to start its expansion to other geographical regions
- SOPERA already started an expansion to Brazil and rest of Europe via distributors
- SOPERA is in negotiations with international investors to raise funding for the expansion to North America and Asia



Externalization of knowledge, skills, and infrastructure



Externalization of knowledge, skills, and infrastructure



Agenda

- Business imperatives for flexible growth
- Open innovation: SOPERA
- **Open innovation: SOA Innovation Lab**
 - **Objectives and structure**
 - Current workstreams

SOA Innovation Lab is the first EAM business initiative in Germany

SOA INNOVATION LAB – THE NEED



- Inflexible and complex IT landscapes represent a major challenge of modern large enterprises
- SOA and EAM have grown into robust approaches, which, however, have to be enhanced and operationalized
- Today, user companies are at the top of SOA development. The agenda, however, is driven by providers

How can we, as users, ensure knowledge availability and development, and lower the entry threshold for EAM?

SOA Innovation Lab is the first EAM business initiative in Germany



Netzwerk für SOA-Erfolg

Mit dem SOA Innovation Lab startet die erste deutsche Businessinitiative zu SOA und Architekturmanagement.



Build expertise and explore new approaches within large corporate IT users

... to develop flexible and efficient IT application landscapes

... by means of Service-oriented Architectures (SOA) and other methods of Enterprise Architecture Management (EAM)

Mission

Educate and train employees in SOA methods

Share best practice between members

Develop and test new procedures and approaches

Objectives

Every company defines their degree of individual commitment

WORKING MODES

Content commitment

Community

**Projects/
Workstreams**

**Academic
advisory board**

Involvement

- Topic proposals
- Knowledge exchange

- Project participation
- Project funding

- Propose and staff research projects
- Report on market trends

Only prerequisite for membership are vital role of EAM for business success and active participation

Management commitment

General meeting and management board

- Setting objectives
- Governance
- Decision on topics and projects
- Administration of funds

Growing number of members



Workshops offer an intense environment for learning

1

SOA COMMUNITY – WORKSHOPS

		
Agenda 2. Workshop SOA Innovation Lab		
■ Begrüßung der Teilnehmer	Dr. Helbig	9:30 – 9:45
■ „Architekturorientiertes IT-Management der ERGO“ – Vortrag und Diskussion	Hr. Salz	9:45 – 10:45
■ SOA bei der Zurich – Vortrag und Diskussion	Hr. Lermann	10:45 – 11:45
■ Ergebnisse, Diskussionen und nächste Schritte Workstream I: SOA/EAM-Landkarte*	Dr. Mai	11:45 – 13:00
<i>Mittagspause</i>		13:00 – 14:00
■ Ergebnisse, Diskussionen und nächste Schritte Workstream II: SOA-Trainings	Dr. Scherdin	14:00 – 15:00
■ Ergebnisse Diskussion und nächste Schritte Workstream III: SOA Technologie Stack	Dr. Manke	15:00 – 15:15
■ Vorstellung, Diskussion und nächste Schritte Satzung und Gründung SOA Innovation Lab*	Alle	15:15 – 17:00
■ Nächste Schritte	Alle	17:00 – 18:00
<i>Ende der Veranstaltung und anschließende Cocktails/Dinner</i>		18:00
* Inkl. Kaffeepause		
Agenda 2. Workshop SOA Innovation Lab		Seite 1

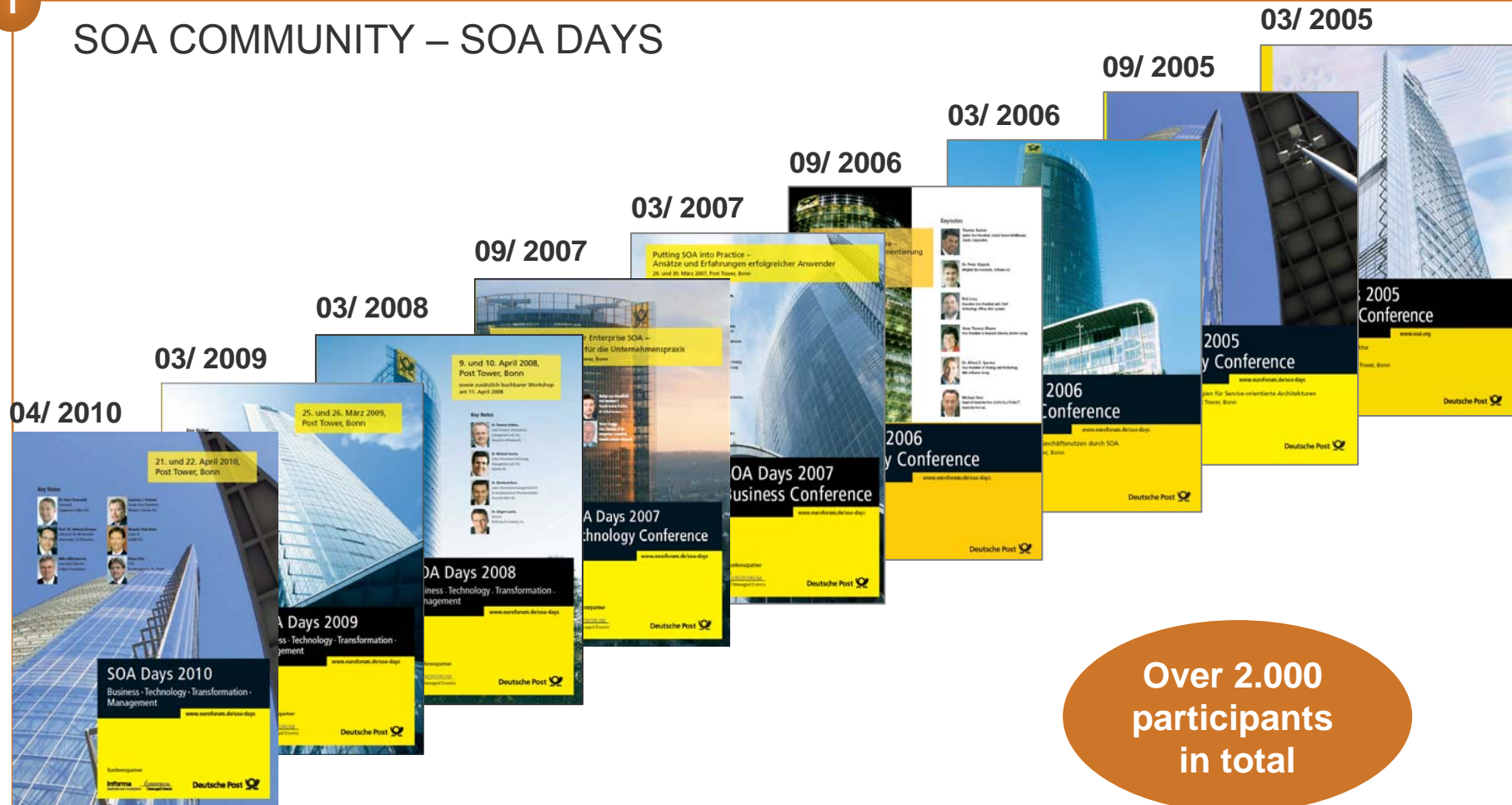
Focus on relevance to practice

- Workshops on selected topics aimed at developing concrete, applicable measures for the participants
- Format:
 - 1-2-day workshops on selected topics
 - 15 to 25 participants (chief architects)
 - CIO involvement
 - Networking opportunities in evening programme
- Approx. 4 workshops per year at different locations

Conferences offer a wide platform to share practical experiences

1

SOA COMMUNITY – SOA DAYS



Agenda

- Business imperatives for flexible growth
- Open innovation: SOPERA
- Open innovation: SOA Innovation Lab
 - Objectives and structure
 - **Current workstreams**

Workstreams focus on practical relevance

CURRENT WORKSTREAMS

Workstreams

- | | |
|---|---|
| I
Enterprise
Architecture
Management | <ul style="list-style-type: none">■ SOA governance■ SOA terminology and maturity model■ Business case of SOA■ Management of target architectures |
| II
Usage of SOA | <ul style="list-style-type: none">■ SOA and security■ SOA and standard platforms (ERP)■ Integration of external service offerings |
| III
SOA methods
and tools | <ul style="list-style-type: none">■ SOA trainings■ Formal definition of SOA |



A comprehensive training has been developed ...

MODULES FOR TRAINING CURRICULUM

SOA Introduction	Business SOA	SOA Technical Design	SOA for Managers
<ul style="list-style-type: none"> ■ Initial situation ■ Challenges ■ Objectives ■ Design principles ■ Fields of action ■ Implementation strategy ■ Conclusion and outlook 	<ul style="list-style-type: none"> ■ Business processes ■ Domain model ■ Service management and design ■ Service identification ■ Business service specification ■ Service quality 	<ul style="list-style-type: none"> ■ Service design processes ■ Technical service specification ■ Service communication ■ Integration concepts ■ Technical quality assurance ■ Security ■ Orchestration ■ SOA technical platforms ■ Operations ■ Service implementation ■ Overview of technical standards ■ Types, environment, operation, object, scope, planning, automation of tests 	<ul style="list-style-type: none"> ■ Tasks ■ Guidelines ■ Roles and committees ■ Processes ■ Application landscapes ■ Strict requirements vs. benefit argumentation ■ Monitoring instruments ■ Strategic preliminary considerations ■ Selection of implementation strategy ■ Tactical measures ■ Operational implementation ■ Best practices
- 1 day -	- 2 days -	- 2 days -	- 1 day -

... tailored for a comprehensive set of target roles

TARGET GROUPS

Role	Description	Prior Knowledge	4 Training Modules			
			SOA Intro-duction	Business SOA	SOA Technical Design	SOA for Managers
Manager	CIO, CTO, division managers	No operational IT know-how				X
Project Manager	Responsible for managing SOA implementation in initiatives	Basic IT know-how	X			X
Enterprise Architect	Designs corporate IT landscapes (not individual IT systems!)	Enterprise architecture, system integration	X	X	X	O
Service Designer	Prepares business and technical service specifications	Analysis and design of IT systems	X	X	X	
Business Analyst	Records and models business processes and requirements	No technical IT know-how, system analysis	X	X		
System Architect	Specifies individual IT systems (architecture, technology choice)	Know-how on design/development of individual IT systems	X	O	X	
Operator	Implements and operates the specified IT systems	Implementation, integration and operation of individual IT systems	X	O	X	O

Legend:

- X Should
- O Could

Examples from training material

SOA Introduction

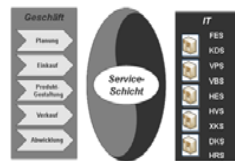
Business SOA

SOA Technical Design

SOA for Managers

Eine Service-Orientierte Architektur wird typischerweise in einem Modell aus vier Architektur-Schichten dargestellt

STRUKTUR EINER SERVICE-ORIENTIERTEN ARCHITEKTUR



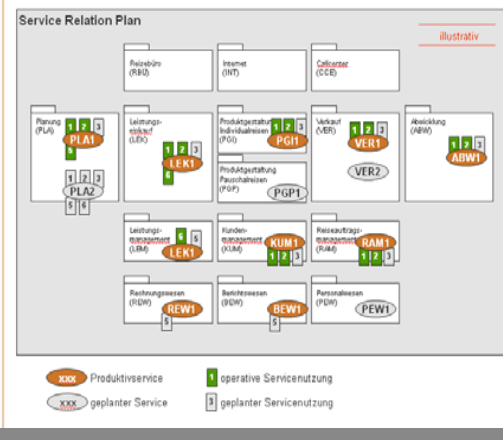
Architektur-Schichten
Fachlichkeit
IT

Inhalte

- Abbildung der Geschäftsprozesse zur Erreichung der Geschäftsziele und der zugehörigen Ressourcen in Form von dynamischen Abläufen
- Aufbauorganisation

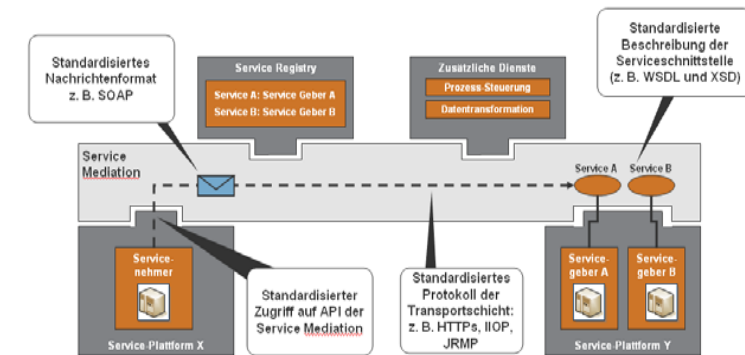
Visualisierung bestehender und geplanter Servicenutzung beeinflusst Serviceausbau

BEISPIEL: SERVICE RELATION PLAN



Bei der Servicekommunikation sind Standards zu berücksichtigen

ANFORDERUNGEN - STANDARDISIERUNG



- 1 Reisebüro
- 2 Internet
- 3 Call Center
- 4 Planung
- 5 Leistungserwerb
- 6 Produktgestaltung Individualreisen
- 7 Produktgestaltung Pauschalreisen
- 8 Verkauf
- 9 Abwicklung
- 10 Leistungsmanagement
- 11 Kundenmanagement
- 12 Reiseauftragsmanagement
- 13 Rechnungswesen
- 14 Buchhaltungswesen
- 15 Personalwesen

Workstreams focus on practical relevance

CURRENT WORKSTREAMS

Workstreams

I Enterprise Architecture Management

- SOA governance
- SOA terminology and maturity model
- Business case of SOA
- Management of target architectures

II Usage of SOA

- SOA and security
- SOA and standard platforms (ERP)
- Integration of external service offerings



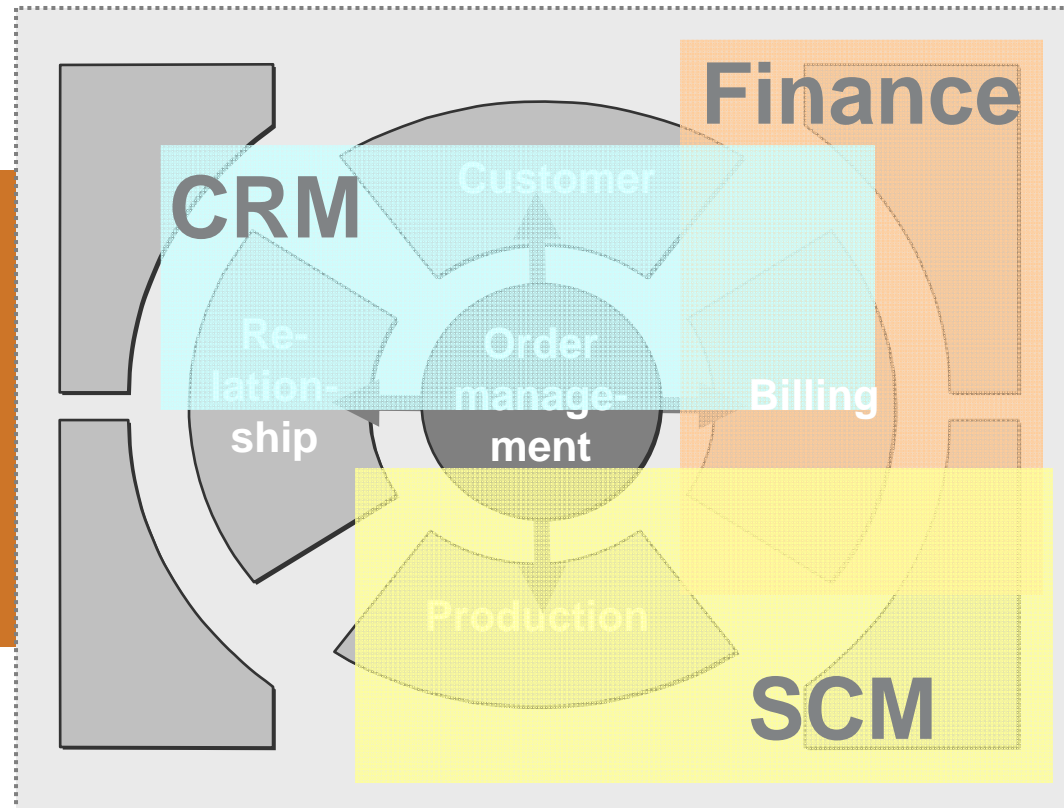
III SOA methods and tools

- SOA trainings
- Formal definition of SOA

The architectural challenge of standard platforms

The Challenge

How to match vendor solutions to the architecture blueprint of the user?



Current obstacles

User perception

SOA approach is vendor specific

- Vendor domain map doesn't match user map
- Vendor specific semantics and data models
- Incompatible technology (ESB, repository,...)

Products are only SOA enabled

- SOA as wrapper, internally still monolith
- Granular technical view (over 3.000 services)
- Dependencies between services

Business model not SOA adopted

- Deployment unit still is the monolith
- License model not adopted to service usage

We assessed different vendor solutions based on a SOA readiness survey

Dimensions

Sample questions

Strategy

- SOA positioning in overall strategy?
- Which business processes benefit?

Business Architecture

- Mapping into user domain models?
- Cross-industry harmonization of semantics?
- Vendor and user services to merge?

Application Architecture

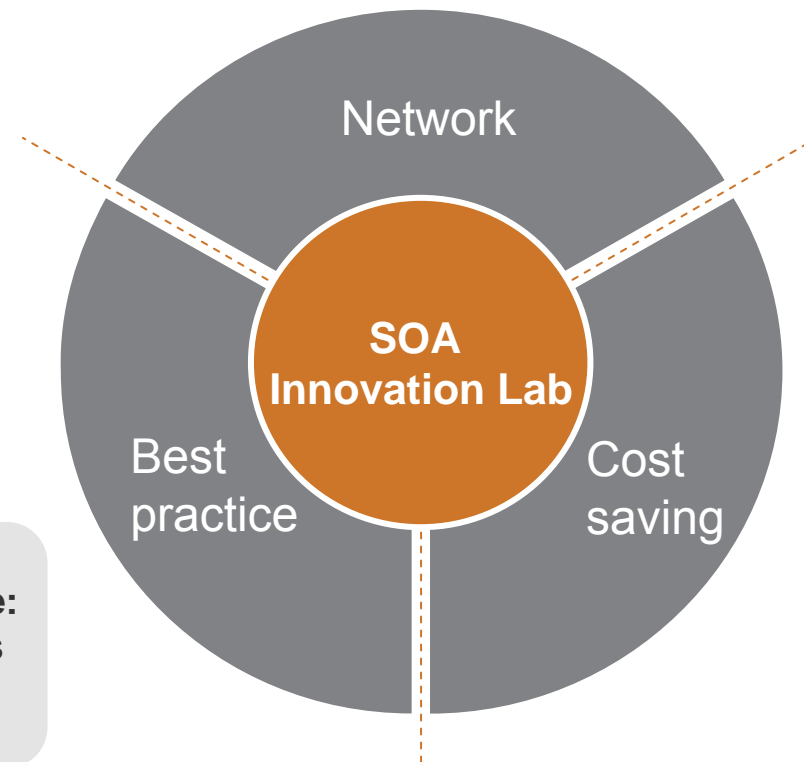
- Laid out for component usage?
- Products using SOA inside?
- Technology independence?

Service and Operations

- Case examples?
- SOA consulting?

SOA Innovation Lab – Experiences gained in the first two years

Share success: Access to relevant SOA and EAM insights via members, external experts and universities



Learn from experience:
Focus on proven results and solutions

Join forces:
Comprehensive end products involving only limited effort of each individual member

Open innovation



Open standards

Open source

Open service interfaces

Open knowledge exchange

... and many open questions