Outsourcing of ICT: An Empirical Study in Swiss SMEs

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Background and Motivation

- The 19th Bled Conference is dedicated to the topic of eMergence.
- What is the current practice of IT procurement in SMEs? Are there new and emerging forms? What are the requirements regarding the future?
- Focus: Current and future procurement of information technology (hardware, software, networks, and related services).
- Final objective of the long-term study: Identification of typical ICT company patterns (= clusters).

Research Partners

ABACUS

Alpha Solutions
Alpha Bizz Alpha Tech Alpha Web

BISON GROUP

iFAS
Swiss Quality Business Software

io-market
SMART TECHNOLOGY, SIMPLE BUSINESS

Microsoft Business Solutions

PRO-CONCEPT
a step-forward software

sage Schweiz Suisse Svizzera

SAP

swisscom

Study Design

Region: Switzerland (German, French, Italian)

Target group: Sectors 2 and 3, 10 to 250 employees (38'099 companies)

Selection: Stratified random sample according to size and sector (4'393 companies)

Telephone interviews with mostly closed questions in September 2006

- **Company size:**
  - 10 – 49 employees
  - 50 – 99 employees
  - 100 – 250 employees
- **Standardized questionnaire**
- **Telephone interviews (CATI)**
- **Industry sectors:**
  - Two (Industry) and
  - Three (Services)
  - = 94 % of Swiss companies with more than 10 employees

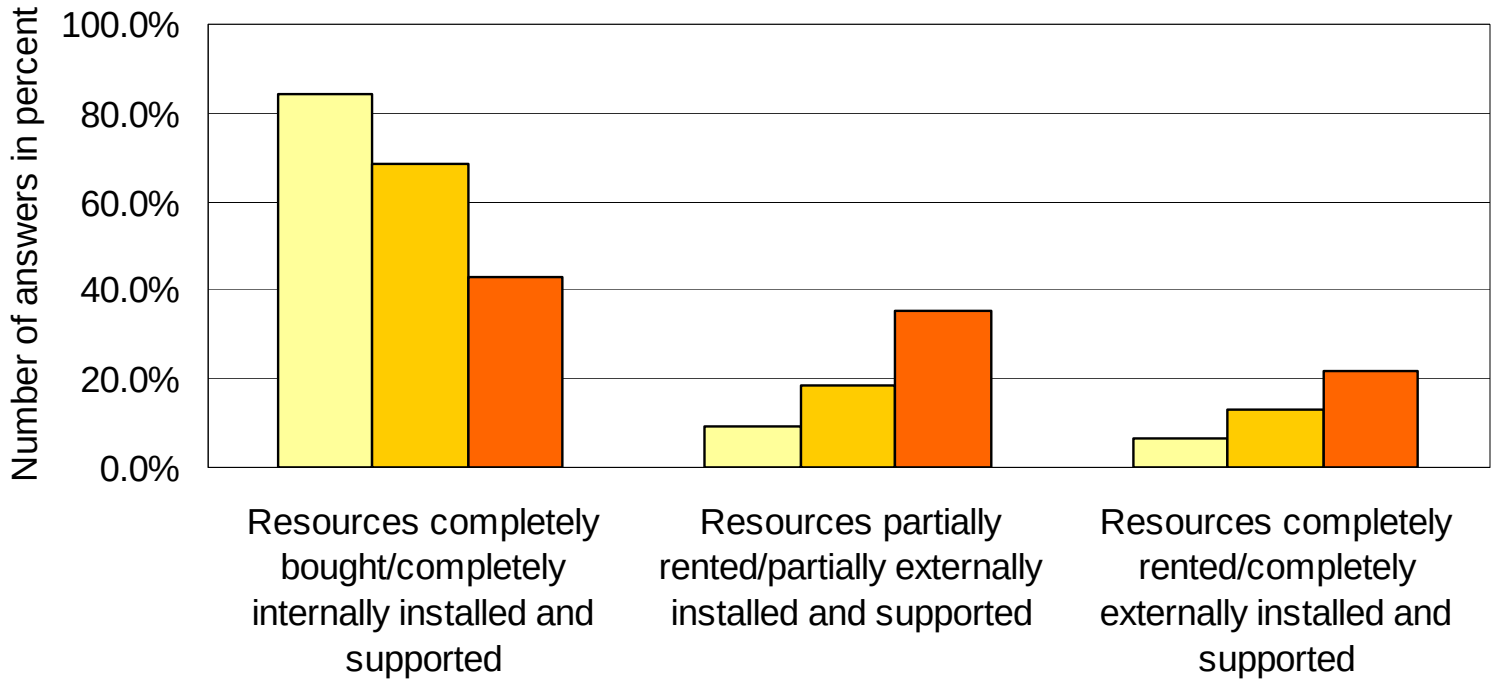
Survey and Return Rate

- Autumn 2006
- Target group: senior management
- Sample size: 4‘393
- Total usable: 901 questionnaires
  Return rate: 20.5 %
- Weighting according to industry sector and company size

Research Questions

- **Which ICT tasks are suitable for outsourcing?**
- **Which effects have been achieved with ICT outsourcing in SMEs so far?**
- **Which strategies will SMEs follow in ICT outsourcing in the future?**

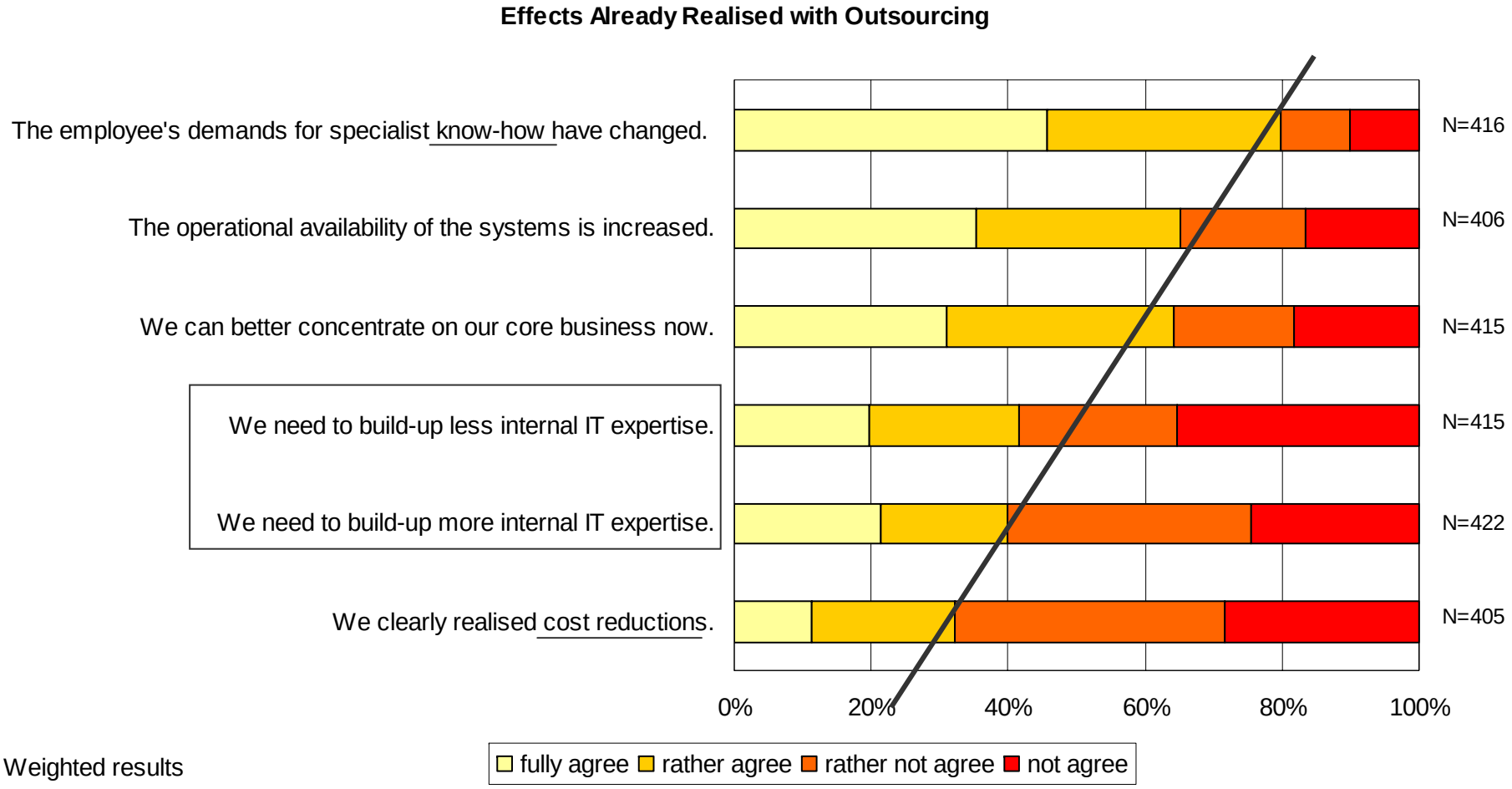
Current Degree of Outsourcing



N=896, weighted results

Effects Realised with Outsourcing

- Know-how demands change
- More ore less expertise?
- No clear cost reduction

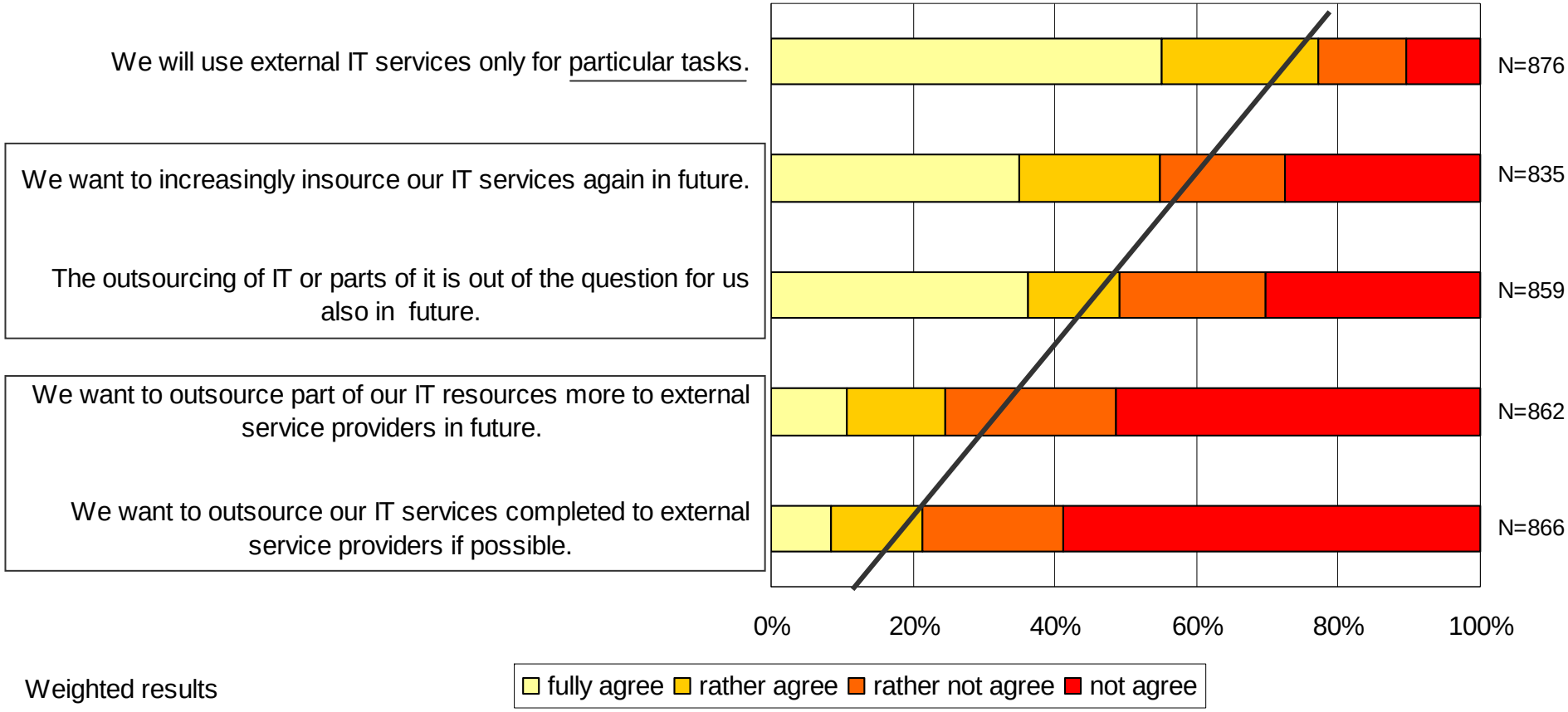


Weighted results

Future ICT Procurement Strategies

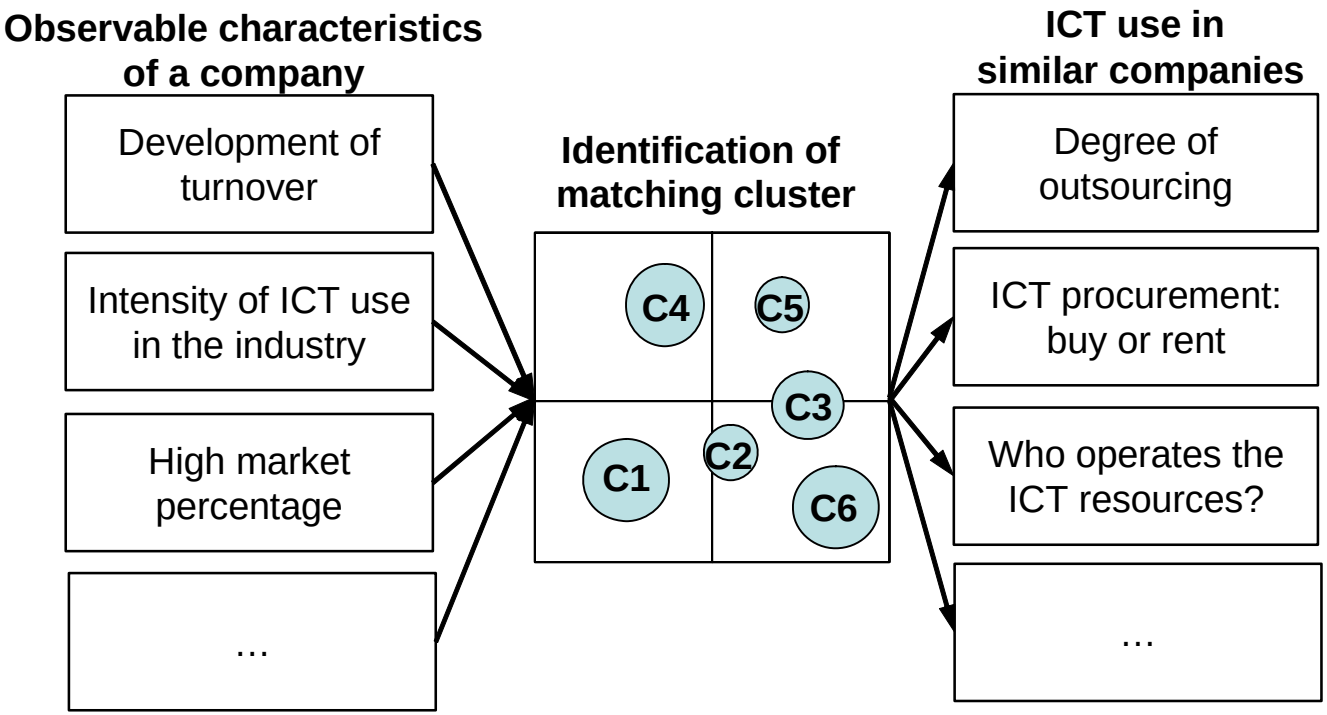
- Only particular tasks
- 50%: No outsourcing
- 20%: Future outsourcing

Future ICT Procurement Strategies (Upcoming Five Years 2007-2011)



Weighted results

Search for typical ICT company clusters



Questions:
- What are the observable characteristics for the clustering of SMEs?
- Which observable characteristics influence the need for ICT?

Questions:
- What are the characteristics that mark the clusters?
- How different are the clusters?
- How are the clusters characterised?

Questions:
- How are companies different regarding their needs of ICT?
- What are common characteristic of ICT needs?

Emerging Clusters

	Number of the Cluster					
Factor	**1**	**2**	**3**	**4**	**5**	**6**
Development of sales in the business sector in the last 3 years	steady	steady		steady		
Production processes in the business sector are characterised by the application of ICT.		rather agree	rather not agree	rather agree		rather agree
We reached a high market share in our target markets.	rather agree	rather agree	rather agree		rather agree	rather agree
We stand out from the competition because our products have unique features.	rather not agree		rather not agree	rather not agree	rather not agree	
The configuration of the company-to-company coordination and order-processing between ourselves and our clients is crucial for our competitiveness.		rather agree	rather not agree	rather not agree	rather not agree	rather agree
Our clients recognise that we are an innovative company. We are usually first to market with our innovations.	rather agree	rather agree	rather agree			rather agree
Number of Companies in the Cluster	**99**	**134**	**98**	**64**	**78**	**147**

N = 620

Emerging Clusters

- Cluster 1: The heavily ICT reliant, innovative, supply-chain-oriented, standard product suppliers
- Cluster 2: The future-oriented, product-focussed suppliers
- Cluster 3: The miscellaneous suppliers with a strong turnover
- Cluster 4: The non-innovative, standard product suppliers with low market percentage.
- Cluster 5: The high turnover, heavily ICT-reliant, non-innovative standard product suppliers
- Cluster 6: The high turnover, specialised product suppliers

Bivariat Analyses

1. Experiences with outsourcing
2. Plans for outsourcing/degree of outsourcing (buy or rent)
3. IT expertise
4. Triggers and influencers for outsourcing

Cluster 1: The heavily ICT-reliant, innovative, supply-chain-oriented standard product suppliers

- These companies have experiences with outsourcing but have not managed to gain measurable cost reductions.
- One third of this group does not rule out outsourcing for further ICT procurement.
- The companies state that they need remarkably less IT expertise within the company when they choose to outsource IT services.
- Compared to the other clusters, customers' wishes are an important trigger for IT outsourcing (in 20% of the cases).
- Typical examples for this cluster could be wholesalers and retailers selling standard products (e.g. office supplies).

Cluster 2: The future-oriented, product-focussed suppliers

- Similar to cluster 1, these companies have experiences with outsourcing but have not managed to gain measurable cost reductions.
- They do not intend to increase their ICT outsourcing.
- At the same time they do not want to increase the level of internal ICT activities.
- The conclusion from these two statements is that companies in this cluster are satisfied with the current state of ICT procurement.
- In this cluster, customers' wishes are the most important trigger for IT outsourcing (in 25 % of the cases).
- Possible company examples for this cluster are service-oriented companies e.g. a provider of store fittings in large department stores or in general companies specialised in customized products.

Cluster 3: The diverse suppliers with a strong turnover

- The non-observable characteristics are as “miscellaneous” as their profile.
- They do not want to outsource ICT.
- Since their production processes do not require much ICT and B2B processes are not crucial for their business it is likely that this is a group which uses ICT only very scarcely and thus does not consider outsourcing the little ICT that they are using.
- Possible examples in this cluster are innovative companies in the healthcare sector, companies in promising business sectors, repair of consumables, or the building industry.

Cluster 4: The non-innovative, standard product suppliers with low market percentage

- These companies have had experience with outsourcing, but have not, like those in cluster 1 and 2, managed to gain cost reductions.
- Interestingly, they are very clear about not wanting to outsource more ICT services in the future.
- On the contrary, they are the only ones who want to build up an increasing amount of internal ICT services.
- They believe that IT expertise has to be built up by the company itself which is in line with the statement that they do not want to outsource ICT to others.
- Their corporate (or IT) strategy is *not* a driving force for the procurement of ICT.
- "Process orientation" or the "increase of profitability" are *not* seen as triggers for new IT systems. In 80 % of these companies, customers play little or no role in the decision process regarding ICT procurement.
- Examples are companies selling consumer goods or offering company-related services (e.g. lawyers, tax consultants).

Cluster 5: The high turnover, heavily ICT reliant, non-innovative standard product suppliers

- This group has had experience with outsourcing and a remarkable number of companies have – and this differentiates this group from the others – actually managed to gain cost reductions.
- Not surprisingly, members of this group are most likely to outsource their ICT to other parties in the future.
- They believe that IT expertise still has to be guaranteed inside the company.
- Guidelines in their corporate (or specialised IT) strategy influence their decisions for ICT procurement.
- Customers, on the other hand, have almost no influence on these decisions.
- Examples for this group are manufacturing companies or hotels and restaurants (for which the industry turnover has slightly increased over the last years).

Cluster 6: The high turnover specialised product suppliers

- This group *does not* intend to further outsource ICT in the future.
- At the same time, they *do not* want to increase the level of internal ICT activities.
- As already seen for cluster 2, companies in cluster 6 are happy with the current state of ICT procurement.
- Triggers for ICT procurement are rooted in corporate (or IT) strategy.
- This is the only group who states that an improved “process orientation” is a trigger for the purchase of new IT systems.
- Increased profitability is a top priority for these companies.
- Again, customers have little influence on the IT decision process.
- Examples for companies in this cluster are manufacturers of specialised machines and the manufacturing industry in general (in which turnover has slightly increased over the last years).

Conclusions

- **The purchase of ICT resources will remain for the time being the dominant sourcing strategy.**
- **The majority of SMEs achieved positive effects with (selective) outsourcing. Employees must be trained, educated and, where necessary, supported, so that they can master the changing demands.**
- **Smaller SMEs tend to be more open-minded towards outsourcing than larger companies.**
- **Suppliers of external ICT services specialised on selective, definable services are at an advantage. External service provision is most often made use of in the area of *Maintenance and Support*.**
- **The clusters need to be further validated with the help of future surveys and with qualitative case studies (eXperience database).**

Thank you for your attention.

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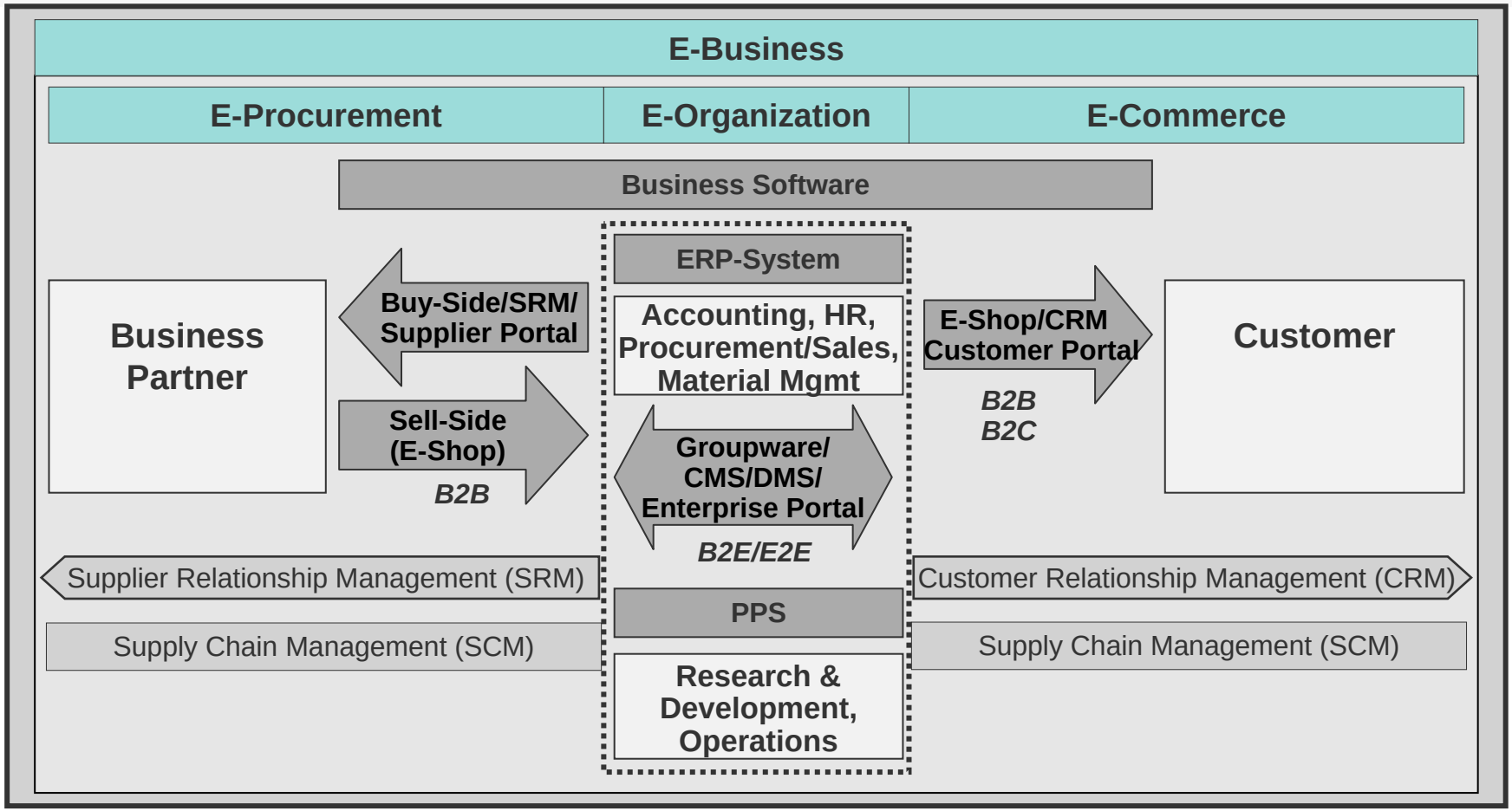
Weighting factors according to company size and business sector

Business sector	Company size [number of employees (full-time equivalent)]		
	>=10 & <50	>=50 & <100	>=100 & <=250
Manufacturing, industry	2.862	0.444	0.262
Power, water utility	0.159	0.058	0.047
Construction company	3.986	0.733	0.171
Trade, repair of durable goods	2.795	0.337	0.139
Hotels and restaurants	3.922	0.377	0.121
Transport and telecommunications	2.154	0.302	0.088
Banking and insurance	1.151	0.159	0.060
Company-related services	8.720	2.649	0.464
Public administration	0.505	0.186	0.106
Education	5.085	1.098	0.288
Health and social services	2.080	0.860	0.183
Other services for third parties	0.838	0.117	0.043

Source: Swiss Federal Statistical Office (SFSO); own calculations



Legend

E-Business-View	Role/Function	Management	Application

B2B – Business-to-Business
B2C – Business-to-Consumer
B2E – Business-to-Employee
E2E – Employee-to-Employee

ERP – Enterprise Resource Planning
PPS – Production Planning and Steering
SCM – Supply Chain Management
SRM – Supplier Relationship Management

CMS – Content Management System
CRM – Customer Relationship Management
DMS – Document Management System

The Questionnaire