Assessing and enhancing e-business processes

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ABSTRACT

Although e-commerce has become a common basis for business transactions in most markets, other elements of e-business are not as widely used yet. This paper extends and operationalizes a previously developed e-business process model by Basu and Muylle (2007). Specifically, it presents evaluation measures for each process and an instrument based on those measures, and describes an effective approach to assess firms' e-business capabilities. The assessment approach is illustrated using data from a diverse collection of firms in the Flanders region of Belgium. This is followed by an illustration of how such assessments can assist firms in identifying e-business initiatives in line with strategic and market priorities, using a subset of the firms as examples.

1. Introduction

While e-commerce poster children Amazon.com and Priceline.com, as well as other Web-based companies such as Salesforce.com, Sohu.com and Sina.com, shine on Fortune's 2010 list of 100 fastest-growing companies (Cacace et al. 2010), many entrepreneurial ventures and established firms are still having difficulty to harness the power of digital technologies in e-business. This is troubling, especially given the call by CommerceNet in 1997 for science-based theory and guidelines that support companies in selecting appropriate business models in the online marketplace (Tenenbaum et al. 1997). While a growing body of e-commerce literature presents various approaches to defining and developing e-business models, it does not provide us with an unambiguous approach to operationalize the presented models. Consequently, e-commerce researchers and practitioners lack a useful and effective approach for assessing and enhancing their e-business initiatives and models.

In this paper, we illustrate the operationalization and application of a previously developed e-business process model that firms can use to: (1) gain a broader understanding of e-business; (2) assess their current support for e-business processes, both functionally and relative to other firms, on relevant classification variables (including strategy and geographical scope); and (3) identify e-business initiatives consistent with their strategic priorities. The approach can be applied at the level of a firm or one of its business units, and it can also be adopted by an industry association representing a group of firms, or a government agency striving to enhance e-business use in its jurisdiction. We also report on the results of a research study that uses this model to assess the state of e-business practice in the Flanders region of Belgium. The study was sponsored by the Flanders District of Creativity, an agency of the Government of Flanders, in Belgium.

Despite a substantial literature on e-commerce and e-business models and frameworks, there is a lack of useful guidelines on how this work can be implemented in practice. The key contribution of this paper is an approach that firms can use to evaluate their e-business process capabilities and identify e-business initiatives consistent with their strategic context, using an e-business process model developed in Basu and Muylle (2007) and Muylle and Basu (2008). A second contribution is demonstration of its application to a diverse set of firms from one geographical region, thereby illustrating how the model could be used for e-business adoption and diffusion studies.

The paper is organized in six sections. Section 2 reviews related work on business processes in the literature. Section 3 presents the e-business process model. Then in Section 4, the methodology to apply the model is described. Section 5 illustrates the application of the model to a diverse set of firms active in the Flanders region in Belgium. Section 6 presents the conclusions and directions for further research.

2. Related work

In this section, we review past work on e-business processes. An important step in understanding business processes in digital network environments is the development of an e-business process...
typing. A typology is a conceptually based classification (in contrast to an empirically derived taxonomy) that provides a theoretical foundation for investigation (Hair et al. 1998). Prior research highlights three streams of literature that are relevant to developing an e-business process typology. A first stream of literature addresses e-business models. A second stream of literature concerns business process engineering, and a third stream of literature focuses on e-business architectures. Finally, we also review the literature on e-business evaluation measures as a basis for our approach to assessing and enhancing the extent of support for e-business processes by firms.

2.1. e-Business models

Prior research has defined business models in terms of “business concept put into practice” (Hamel 2000), “loose conception of how a company does business” (Porter 2001), “story that explains how an enterprise works” (Magretta 2002), “abstraction of a business” (Betz 2002, Eriksson and Magnus 2000), a “method” to make money (Afuah and Tucci 2001, Rappa 1998, Turban et al. 2010), and a “description” of offerings, roles, relationships, and infrastructure (Applegate 2001, Chesbrough and Rosenbloom 2002, Hartman and Sifonis 2000, Weill and Vitale 2001). Related but broader perspectives of a business model is an “architecture” for the product, service, and information flows involving a “description” of actors, roles, benefits, and revenue sources (Timmers 1999, Dubossen-Torbay et al. 2002, Krishnamurty 2003, Mahadevan 2000, Rayport and Jaworski 2001). Johnson et al. (2008) suggest customer value proposition, profit formula, key resources, and key processes as the elements of a successful business model, and McGann and Lyytinen (2002) also include technological elements. Although these perspectives on business models are beneficial to increase scholars’ and practitioners’ understanding in this area, they provide little guidance on how to structure and codify the extant knowledge on business models in electronic commerce (Alt and Zimmerman 2001, Pateli and Giaglis 2003). Efforts in this area include Petrovic et al. (2001) who view a business model as a description of the logic that lies behind the firm’s business processes, Linder and Kantrell (2000), who describe a business model in terms of the core logic for creating value, Gordijn and Akkermans (2001), who develop an ontology to define how value is created and exchanged within a network of actors, Osterwalder and Pigneur (2002), who propose an ontology founded on four pillars (product innovation, infrastructure management, customer relationship, and financial aspect), and Osterwalder and Pigneur (2009), who propose nine building blocks that show the logic of how a company can make money.

It is clear from the growing body of literature that a business model constitutes an elaborate construct involving multiple elements. Yet, a key generic element is its business process element (Alt and Zimmerman 2001, Johnson et al. 2008), as it is either directly included in the description of business model or indirectly addressed as an interlinked component in different levels of a pyramid construct (Pateli and Giaglis 2003). Laudon and Traver (2001) define a business model as a set of business processes, and Papakis et al. (2001) refer to the depiction of an inter and intra “process map” of the organization. However, the e-business model literature provides little insight into the processes required in each business model, so it is not clear what processes have to be supported.

2.2. Business process engineering

In this stream of literature, adopting a process view of the business is argued to be a useful way for studying the relationship between information technology (IT) and the way business is conducted (Davenport 1993, Hammer and Champy 1993). A business process has been defined as “a set of logically related tasks performed to achieve a defined business outcome” (Davenport and Short 1990, p. 12). Customer-facing processes involve direct contact with external customers, while back-room processes support the customer-facing processes (Davenport 1993). It is important to note that in the e-business context, both categories of processes are highly intertwined, since online support for customer-facing processes affects (and is affected by) the structuring and execution of back-end business processes.

The use of digital networks for business processes has allowed firms to extend their IT efforts far beyond the automation of traditional back-room processes. In addition to offering support for electronic commerce, e-business allows firms to create and adopt a new generation of processes that allows them to alter, and improve the performance of their inter-organizational processes with customers, suppliers, partners, and even competitors (Champy 2002).

In recent years, automation of business processes has been achieved primarily through Enterprise Resource Planning systems such as SAP ERP and Oracle Applications. As discussed in Hofmann (2008), while the traditional focus of ERP systems has been on back-end and internal processes within companies, such systems have significantly expanded their reach beyond organizational boundaries, particularly in conjunction with related technologies such as Customer Relationship Management (CRM), Supplier Relationship Management (SRM) and Supply Chain Management (SCM) systems. Furthermore, developments in the areas of Web 2.0 technologies, Software as a Service models (SaaS) (Jiao et al. 2010), open source and open process systems (Lee et al. 2009), and Services Oriented Architectures (SOA) (Papazoglou et al. 2007), have all motivated Internet-based implementations of both intra and inter-organizational processes. However, there is a lack of research on the specific functionalities of enterprise-scale systems that should be the priorities for any given firm. Anecdotal evidence from enterprise software vendors suggests that many features of packaged enterprise software are not even activated by most of their clients, and often the client firms are unaware of those functionalities.

2.3. e-Business architectures

Another stream of literature relevant to the development of an e-business process typology is work on e-business architectures. A useful starting point is the eCo architecture, proposed by Tenenbaum et al. (1997), which specifies a multi-layered collection of network, commerce, business, and market services. The primary focus of this object-oriented approach is to promote the interoperability and reuse of applications and services for e-business.

From a managerial perspective, Basu and Muylle (1999, 2003a) present a multi-layered Electronic Commerce Architecture (ECA), which consists of three levels of services: network services, commerce services, and content services. Network services are services that support the network through which e-commerce is implemented. Commerce services are based on a model of exchange processes developed by Kambil and van Heck (1998). Content services are services that are specific to a particular industry or domain. By combining a generalizable model of exchange processes (Kambil and van Heck 1998) with the technologically oriented eCo framework, the ECA provides a foundation for technology users, technology providers, and intermediaries to answer two important questions: “What are the specific processes and features I should support online, in order to exploit e-commerce?” and “What is the relative importance of the different processes and features for my particular company and industry?” (Basu and Muylle 2003a, p. 381). Towards this end, Basu and...
Muylle (2007) and Muylle and Basu (2008) have developed and empirically validated an e-business process typology based on the ECA that allows entrepreneurs, investors, and business managers to plan e-business initiatives.

2.4. e-Business evaluation measures

Prior research on e-business evaluation measures has mainly focused on extending the business value of information technology (IT) literature to the domain of e-business (e.g., Barua et al. 1995). Straub et al. (2002) describe a number of papers on e-commerce metrics in a special issue of Information Systems Research. Zhu and Kraemer (2002), for instance, highlight the need for measuring e-business initiatives. They introduce e-commerce capability as a composite index generated from a set of 20 specific variables measuring e-commerce functionalities related to information, transaction, interaction and customization, and supplier connection. Riggins and Mitra (2007) provide a framework for identifying and developing e-business metrics. This framework categorizes e-business applications and combines the e-business categorization with the strategic thrusts of the firm and the industry to help managers choose appropriate metrics.

In summary, despite an extensive literature on e-business models, processes and architectures, there is little work on ways to operationalize the conceptual formalisms and frameworks. Furthermore, while the link between e-business and firm strategy is widely recognized, there is little guidance in the literature on how a firm’s strategic context and priorities should be factored into its e-business process capabilities. The current work seeks to address this gap.

3. e-Business process model

The e-business process model we used in this study combines the e-business process typology developed in Basu and Muylle (2007) and Muylle and Basu (2008) with a consideration of the firm’s strategic context. We describe each of these in this section.

3.1. The e-Business process typology

The e-business process typology developed in Basu and Muylle (2007) and Muylle and Basu (2008) is organized in three levels, as shown in Fig. 1. The first is an infrastructural level of network services, the second is a collection of three types of generic e-business processes, and the third is a collection of specialized processes specific to a particular industry or sector.

3.1.1. Level 1: Network services

At a firm’s underlying networking layer are services and capabilities that form the basis for e-business. These include basic communication services and infrastructure components such as security and reliability. At this level, the opportunities for improvement mostly lay in efficiency and reliability rather than a quest for sustainable competitive differentiation. However, an efficient and effective network infrastructure is often a necessary condition to realize business value through support for e-business processes. Also, these services are needed regardless of the specific business process in which e-business innovation is considered.

3.1.2. Level 2: e-Business processes

At an application-specific level, companies can seek opportunities to exploit e-business in three types of processes: trade, decision support and integration processes, which are described below.

(A) Trade processes. These processes support buying and selling online. They can both add value and save costs for business transactions. Specific trade processes include:

- Search for products, buyers and sellers
- Authentication of products, buyers and sellers
- Valuation of products
- Payment and payment clearance
- Logistics such as delivery and installation
- Customer service

(B) Decision support processes. These processes enable a firm to obtain information and use analytical models that enhance its ability to make effective business decisions. Decision support processes also allow a firm to interact with other firms in ways that help all of them make better decisions. Specific decision support processes are:

- Configuration, via configurator tools, electronic requirement determination tools and sharable Computer-Aided Design (CAD) tools.
- Collaboration with tools such as conferencing, white-boarding, electronic brainstorming and shared data repositories.
- Business intelligence, conducted with analytical tools.
- Integration processes. These processes help firms integrate their information systems to enable automation of tasks across different component information systems. This includes vertical integration between a firm and its suppliers or customers/distributors, and horizontal integration between a firm and horizontal partners (e.g., by creating integrated catalogs of products or consolidated procurement systems). Specific integration processes include:

- Data integration, allowing a firm’s software applications to access its partners’ databases, possibly across heterogeneous and autonomous database structures, software and hardware platforms.
- Application integration, involving integration of both data and applications (for example, order, payment, accounting, inventory and workflow systems) through the use of technologies such as object-oriented systems and eXtensible Markup Language (XML). (These mechanisms are often described as “web services.”) The role of application integration increases when firms adopt computer-based systems for internal integration, such as enterprise resource planning (ERP) systems.

3.1.3. Level 3: Content processes

These are processes that are peculiar to the industry or sector in which the firm operates. As such, these cannot be specified in general, but have to be identified by the firm itself (or, by an industry body such as a trade association or a regulatory agency).

3.2. Factoring in strategic context

While the above set of e-business processes is relevant to all types of firms, the relative importance of the different processes to any specific firm depends upon the nature of the firm’s strategic context (Basu and Muylle 2007, Riggins and Mitra 2007). In this
paper, we consider the firm’s competitive strategy and geographical scope of its marketing and sales, and purchasing and supply chain efforts, as key aspects of its strategic context.

As a firm automates its business processes, its online presence and activities become increasingly important to the realization of its competitive strategy. According to Treacy and Wiersema (1993), the following three value-based disciplines can be used to classify the strategic priorities of a firm: customer intimacy, product leadership, and operational excellence. Our focus on these fundamental value-based strategies is in keeping with Anderson et al. (2009) who consider this classification as meaningful and relevant for understanding how a firm can best exploit its resources to deliver superior value to customers over the long term. See also Treacy and Wiersema (1993).

The particular value-based discipline chosen by a firm can significantly impact its support for e-business processes. According to Treacy and Wiersema (1993), a firm pursuing a customer intimacy strategy, which is defined as “segmenting and targeting markets precisely and then tailoring offerings to match exactly the demands of those niches”, is best served by focusing on processes that enhance the customer experience through a better understanding and meeting of customer needs and preferences, while emphasizing excellence in quality of service for customer-facing processes; a firm focusing on product leadership, which implies “offering customers leading-edge products and services that consistently enhance the customer’s use or application of the product, thereby making rival’s goods obsolete”, benefits from placing greatest emphasis on processes that enhance the firm’s ability to develop intellectual property and proprietary technology and deliver high quality products while communicating the leadership of these products to the marketplace; finally, a firm pursuing operational excellence or “providing customers with reliable products or services delivered with minimal difficulty or inconvenience”, can benefit from paying closest attention to processes that result in (and communicate) operational reliability and cost efficiency. Using this framework, and our categorization of e-business processes, in the following section we show how strategic priorities can be factored into the relative importance of e-business processes for a firm.

In addition to the strategic focus of a firm, the geographical scope of its sourcing and marketing efforts also impact the significance of its e-business efforts. Clearly, the relative importance of online processes increases with the geographical reach of a firm’s activities. The greater a firm’s emphasis on national or global markets for sourcing and selling, the greater is the potential value of its use of e-business processes for sourcing and selling, respectively.

4. Methodology

In this section, we describe how the e-business planning model can be operationalized. We present an e-business evaluation instrument that we developed to assist firms in (1) obtaining a broader understanding of e-business, (2) assessing their current support for e-business processes, both functionally and relative to other firms, on relevant classification variables (including strategy and geographical scope), and (3) identifying e-business initiatives consistent with their strategic priorities. We then describe how we used the instrument and also discuss the appeal of the Flanders region for demonstrating the use of this e-business evaluation instrument and describe the study set of participant firms.

4.1. e-Business evaluation instrument

Support for some customer-facing trade processes can be inferred from specific features incorporated in a company’s Web site, and such Web site analysis has been the basis of previous studies of e-commerce process support (e.g., Basu and Muylle 2003a, Muylle and Basu 2004). However, some of the features required to support various other e-business processes are not visible to external visitors of a company’s Web site. Thus, the e-business capabilities of firms cannot be fully analyzed by simply examining their Web sites. For instance, processes such as decision support and integration that are geared towards suppliers, partners and/or regulators, are not discernible in this way. Instead, direct input of managers and e-business professional staff is more effective for analysis of such processes. This is in keeping with Churchill and Iacobucci (2009) who point to the use of communication as an appropriate data collection method when observational methods are not effective.

Key features and indicators of support for each of the e-business processes in the typology described earlier were identified and organized in an online e-business evaluation instrument composed of 235 questions. (The e-business evaluation instrument is available as Appendix A to this article.) Responses to these questions were then composed into a set of composite measures, expressed as a normalized percentage score indicating the level of online support for the respective e-business processes. These composite measures are listed in Tables 1a, 1b and 1c, for each of the respective e-business process types.

SCUST, for instance, refers to the extent to which a firm offers online support to help customers in finding it online. This variable is based on responses to relevant questions on the search process within the trade processes category in the instrument. These questions address issues such as the use of a registered URL, third level domain name (.be, .eu, .com), second level domain name (branded elements), first-page non-sponsored search results on firm name and product/service category (at Google, Microsoft Bing, and Yahoo!), the leading search engines in Flanders, search engine optimization, and search engine advertising (Google Adwords, Yahoo! Sponsored Search, Microsoft adCenter). They also relate to banner advertising, directories of portal websites, sponsoring, direct e-mail, e-mail newsletters, affiliate programs, comparison shopping engines, social media websites, YouTube, and Second Life. The choice of search engines is specific to the geographical region and would be different for other regions.

In the previous section, we recognized that the required support for different e-business processes depends on a firm's strategy and geographical scope, and introduced Treacy and Wiersema’s (1993) categorization of strategic value disciplines. We now show how these value disciplines can impact the prioritization of e-business processes. Using the key concerns within each value discipline as developed by Treacy and Wiersema (1993), we show in Table 2, the key e-business processes for firms choosing each of the value-based disciplines. These key trade, decision support, and integration processes relate directly to the composite variables for the different processes identified in Table 1, based on their connection to the definitions of the respective value-based strategies.

We can illustrate the basis for Table 2 with an example. Consider the key processes for the row corresponding to firms focusing on customer intimacy. The key concern for such firms is “segmenting and targeting markets precisely and then tailoring offerings to match exactly the demands of those niches” (Treacy and Wiersema 1993). Enhancement of customer-facing trade processes, particularly search, authentication and valuation, help identify the best customers, while payment, logistics and service support enhance the customer experience. Similarly, configuration tools for customers, combined with business intelligence (BI) support and information sharing with customers, help create switching costs and customer loyalty, as do data and application integration with customers. Note that for such firms, while supplier and other partner facing processes are still relevant, they may not be key priorities.
for enhancement through e-business. On the other hand, firms focusing on operational excellence are likely to focus more on e-business processes that enhance internal efficiencies and upstream (supplier-facing) processes that support internal operations.

4.2. Data collection

We adopt a key informant approach (Campbell 1955) in which knowledgeable respondents provide direct input on their firm’s e-business processes support. Given the cross-functional nature of e-business, both technology and business oriented respondents are involved in the data collection for each firm. Key informant bias is minimized through the use of multiple, knowledgeable informants for each firm (Bagozzi and Philips 1982).

Given the length and complexity of the instrument, a traditional online questionnaire (Churchill and Iacobucci 2009) was infeasible. Furthermore, if a firm did not currently support a particular feature, the respondent would have no idea what that feature entailed. At the same time, while an unstructured, informal method for collecting data such as in-depth interviews or focus groups would allow us to educate the respondent on non-trivial e-business features, such methods are geared towards collecting ideas and insights to develop tentative explanations, which is at odds with our need for a systematic approach to collect factual data in an efficient manner. As a result, we chose to go with an innovative approach by collecting the data for the study through a series of workshops.1

Table 1a

<table>
<thead>
<tr>
<th>Trade processes</th>
<th>Variable</th>
<th>Description</th>
<th>Number of questions</th>
<th>Sample question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Search</td>
<td>SCUST</td>
<td>Helping customers find your firm</td>
<td>32</td>
<td>Has your organization registered an URL/web address?</td>
</tr>
<tr>
<td></td>
<td>SSUP</td>
<td>Helping suppliers find your firm</td>
<td>4</td>
<td>Does your organization offer a supplier portal where suppliers can register?</td>
</tr>
<tr>
<td></td>
<td>SPROD</td>
<td>Helping customers find your products</td>
<td>12</td>
<td>Does your website provide an internal search engine?</td>
</tr>
<tr>
<td>Authentication</td>
<td>AORGCUS</td>
<td>Authenticating your firm to customers</td>
<td>4</td>
<td>Do you use trusted third parties that endorse your website (e.g., Verisign)?</td>
</tr>
<tr>
<td></td>
<td>ACUSORG</td>
<td>Authenticating customers</td>
<td>4</td>
<td>Do you ask the buyer for e-mail authentication?</td>
</tr>
<tr>
<td></td>
<td>AORGSUP</td>
<td>Authenticating your firm to suppliers</td>
<td>5</td>
<td>Do you display descriptive supplier testimonials?</td>
</tr>
<tr>
<td></td>
<td>ASUPORG</td>
<td>Authenticating your suppliers</td>
<td>4</td>
<td>Do you offer the option of using a digital certificate?</td>
</tr>
<tr>
<td></td>
<td>APROD</td>
<td>Authenticating your products</td>
<td>19</td>
<td>Do you facilitate interactive customer testimonials through virtual communities?</td>
</tr>
<tr>
<td>Valuation</td>
<td>VCUST</td>
<td>Valuation mechanisms for customers</td>
<td>17</td>
<td>Do you list product prices online (website, online catalog)?</td>
</tr>
<tr>
<td></td>
<td>VSUP</td>
<td>Valuation mechanisms for suppliers</td>
<td>7</td>
<td>Do you buy through templates for electronic Request for Quotations (eRFQ)?</td>
</tr>
<tr>
<td>Payment</td>
<td>PCUST</td>
<td>Payment mechanisms for customers</td>
<td>14</td>
<td>Do you support e-wallets?</td>
</tr>
<tr>
<td></td>
<td>PSUP</td>
<td>Payment mechanisms for suppliers</td>
<td>5</td>
<td>Do you support electronic invoicing by suppliers to your organization?</td>
</tr>
<tr>
<td>Logistics</td>
<td>LPHY</td>
<td>Logistics support for physical products</td>
<td>10</td>
<td>Do you offer online order tracking services?</td>
</tr>
<tr>
<td></td>
<td>LDIG</td>
<td>Logistics support for digital products</td>
<td>4</td>
<td>Do you support online delivery of digital products?</td>
</tr>
<tr>
<td></td>
<td>LSERV</td>
<td>Logistics support for services</td>
<td>5</td>
<td>Do you offer online delivery of your services?</td>
</tr>
<tr>
<td></td>
<td>LORDER</td>
<td>Logistics support for order processing</td>
<td>2</td>
<td>Do you offer order consolidation options online?</td>
</tr>
<tr>
<td></td>
<td>LSUP</td>
<td>Logistics support for suppliers</td>
<td>4</td>
<td>Do you offer your suppliers online mechanisms to coordinate pick-up of your physical goods purchases from their locations?</td>
</tr>
<tr>
<td>Customer Service</td>
<td>SUCUS</td>
<td>After sales customer support</td>
<td>10</td>
<td>Do you offer online dispute resolution services?</td>
</tr>
</tbody>
</table>

Table 1b

<table>
<thead>
<tr>
<th>Decision support processes</th>
<th>Variable</th>
<th>Description</th>
<th>Number of questions</th>
<th>Sample question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configuration</td>
<td>DCONCUS</td>
<td>Configuration tools for customers</td>
<td>6</td>
<td>Do you offer an online configurator tool that allows customers to select and specify products (e.g., shape, measurements, standard, etc.)?</td>
</tr>
<tr>
<td></td>
<td>DCONSUP</td>
<td>Configuration tools for suppliers</td>
<td>12</td>
<td>Do you exchange attachments of configuration documents online (e.g., complex sketches)?</td>
</tr>
<tr>
<td>Collaboration</td>
<td>CollINTIS</td>
<td>Internal information sharing</td>
<td>20</td>
<td>Indicate the technologies that your organization uses in each context by typing a ‘Y’ or ‘Yes’ in the appropriate boxes: e-mail; e-fax; VOP phone; videophone; teleconferencing; video conferencing; blog; bulletin board; chat/IM; podcast; virtual environment; white-board; data warehouse; OLAP; KMS; shared database; remote processing; e-voting; expert system; virtual reality</td>
</tr>
<tr>
<td></td>
<td>CollICUS</td>
<td>Information sharing with customers</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CollIIDSIS</td>
<td>Information sharing with distributors</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CollISUPIS</td>
<td>Information sharing with suppliers</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CollISDSSIS</td>
<td>Information sharing with firms in the district</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Business intelligence</td>
<td>DBICUS</td>
<td>BI support for individual customers</td>
<td>3</td>
<td>Do you share information with customers through online graphical tools (e.g., dashboards)?</td>
</tr>
<tr>
<td>(BI)</td>
<td>DBISUP</td>
<td>BI support for individual suppliers</td>
<td>3</td>
<td>Do you share information by providing online access to detailed databases (e.g., supplier transaction history)?</td>
</tr>
<tr>
<td></td>
<td>DBICAGG</td>
<td>Aggregate BI support for customers</td>
<td>4</td>
<td>Do you offer online analytical tools for the customer to analyze aggregate market data?</td>
</tr>
<tr>
<td></td>
<td>DBISAGG</td>
<td>Aggregate BI support for suppliers</td>
<td>4</td>
<td>Do you gather market/industry information online that is aggregated to offer best-in-segment supplier reference data (supply benchmarks)?</td>
</tr>
<tr>
<td></td>
<td>DBIOWN</td>
<td>BI support for own organization</td>
<td>8</td>
<td>Does your organization leverage online customer transaction data for assessing marketing campaign effectiveness?</td>
</tr>
</tbody>
</table>

1 Others have used workshops as a data collection method, but they are typically used to supplement the inputs obtained from questionnaires for more in-depth discussion, and to promote interaction and encourage dialogue between participants to explore the commonality and differences of views (Courtney and Winch 2003). We use workshops as an efficient method for educating participants and obtaining factual information.
A broad variety of firms, identified through the Flanders District of Creativity (the sponsor of the research), were invited to send a senior executive familiar with the firm’s e-business efforts, as well as a technical professional involved in the development of e-business capabilities, to workshops organized at a business school in Belgium. Given the lengthy instrument and the need for close interaction with the participants, the number of participating firms was restricted. In total, 24 firms participated in the study.

During the workshops, which were conducted in a computer laboratory, participants were given an overview of the scope of the study and the e-business typology. They were then walked through the online instrument, and given time to complete each section after it was explained to them. As such, the researchers provided a consistent frame of reference for the respondents, avoiding ambiguity in questions and response categories (Payne 1979). This also allowed participants to ask questions about specific items and terms, and if necessary, access their firm’s resources, to obtain the necessary information. The process was designed to get the most complete picture possible of each organization’s capabilities, as well as to expose the participants to the broader scope of e-business, in an efficient manner. At the same time, the data collection procedure was guided by concerns for validity. We maximized respondents’ willingness to give the necessary information by using fixed alternative questions that reduce the amount of work in producing an answer, directing them to their firm’s online resources for illustration and verification purposes, and by refraining from asking sensitive information (Churchill and Iacobucci 2009).

In order to obtain information on each participating firm’s strategic context, after each workshop, the participants were sent a brief online questionnaire, in which they were asked to identify their organization’s strategic priorities and e-business strategies and plans. (The strategic context questionnaire is available as Appendix B in this paper.) This was timed to enable the participants to collect such information from their organization. The data was collected, analyzed and reported in a manner that no attributed strategic information was divulged to anyone other than the organization itself. The analysis was done at two levels – first, a cross-sectional analysis across the complete set of participating companies; and second, a “personalized” analysis of each participating organization, which was used to provide feedback and guidance to that organization.

### 4.3 Flanders e-business study set

Although geographically small in scope, the Flanders region in Belgium has some appealing characteristics in the context of our study. For instance, Belgium is at the heart of Western Europe and the Euro Zone, one of the most sophisticated markets in the world. Second, the IT and telecommunications infrastructure in Belgium is highly evolved, with broadband connectivity and computerized business functions and processes available to almost all companies. And third, despite its small size, Belgium has a multilingual, multicultural society, which poses interesting challenges for IT innovations, as well as significant opportunities.

As mentioned earlier, 24 firms participated in the study, to assess their level of e-business process support and to learn about the ways in which they could use e-business in their organizations. Since the motivation of the study was not to survey the level of e-business adoption in Flanders, we did not seek to ensure that

---

**Table 1c**

<table>
<thead>
<tr>
<th>Integration processes</th>
<th>Variable</th>
<th>Description</th>
<th>Number of questions</th>
<th>Sample question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data integration</td>
<td>IDVERT</td>
<td>Vertical – with customers and suppliers</td>
<td>3</td>
<td>Do you allow your customers to access your data files for data relating to them?</td>
</tr>
<tr>
<td></td>
<td>IDHOR</td>
<td>Horizontal – with other vendors</td>
<td>2</td>
<td>Do you share product data from your databases with other sellers?</td>
</tr>
<tr>
<td></td>
<td>IDGOV</td>
<td>With government and regulatory agencies</td>
<td>4</td>
<td>Do you allow governmental/regulatory organizations to access your data files for data relating to them?</td>
</tr>
<tr>
<td>Application integration</td>
<td>IAVERT</td>
<td>Vertical – with customers and suppliers</td>
<td>6</td>
<td>Does your organization support application integration of your systems with customers’ systems?</td>
</tr>
<tr>
<td></td>
<td>IAHOR</td>
<td>Horizontal – with other vendors</td>
<td>2</td>
<td>Do you offer consolidated procurement systems with other buyers?</td>
</tr>
<tr>
<td></td>
<td>IAGOV</td>
<td>With government and regulatory agencies</td>
<td>4</td>
<td>Does your organization support application integration with governmental/regulatory agencies’ systems?</td>
</tr>
</tbody>
</table>

**Table 2**

<table>
<thead>
<tr>
<th>Strategic focus</th>
<th>Key trade processes</th>
<th>Key decision support processes</th>
<th>Key integration processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer intimacy</td>
<td>Helping customers find products, Authenticating products, Valuation mechanisms for customers, Payment support for customers, Logistics support for all products and services</td>
<td>Configuration tools for customers, Information sharing with customers, BI support for customers</td>
<td>Vertical data and application integration with customers</td>
</tr>
<tr>
<td>Product leadership</td>
<td>Helping customers find products, Authenticating products, Valuation mechanisms for customers</td>
<td>Configuration tools for customers, Configuration tools for suppliers, Internal collaboration</td>
<td>Vertical data integration with suppliers (for R&amp;D, product design, etc.)</td>
</tr>
<tr>
<td>Operational excellence</td>
<td>Helping suppliers find your firm, Authenticating suppliers, Authenticating customers, Logistics support, After sales customer support</td>
<td>Collaboration support with customers and suppliers, Internal collaboration, BI support for suppliers</td>
<td>Vertical data and application integration with suppliers, Data integration with government</td>
</tr>
</tbody>
</table>
the set of participating firms was representative of the Flanders economy. Instead, we tried to be as inclusive as possible, so that motivated firms of all types could participate. The result was a reasonably diverse set of companies that self-selected to participate in the study (Cook and Campbell 1979).

5. Discussion of results

In this section, we present the aggregate results across all participant firms. This serves to illustrate how the approach can be used to provide firms with a baseline assessment of their e-business process support, and how that compares overall against the other participants in the study. We then illustrate the use of the e-business evaluation instrument and metrics as a planning tool for enhancing e-business process support at the individual firm level. Toward that end, we discuss four study set participant firms with respect to their e-business process support baseline and opportunities for enhancement.

5.1. Aggregate results

Fig. 2 summarizes the results of the empirical study across the complete set of participating firms. Some notable observations from this were as follows:

- There is a significant variation in the levels of use of e-business mechanisms for various business processes, across the companies in the study.
- Most of the companies were far more advanced in their use of e-business for customer-facing processes than in their support of supplier-facing processes. This is consistent with the common view that e-business is primarily e-commerce (online selling). Support for the other process categories and sub-categories was around 30% or lower on average, with integration being the least supported category.
- The highest levels of support are in the areas of Search and Authentication within Trade Processes, and for Collaborative Information Sharing Internally, in the Decision Support category. In these areas, the participating companies use on average at least 40% of the commonly available e-business mechanisms.
- It is interesting to note that the mean for product authentication was slightly above 30%. The lack of online product authentication may be acceptable for dealing with established customers who are already familiar with the company’s products. However, this is an area that would require extra attention in companies seeking to use e-business to expand their markets and find new customers (Basu and Muylle, 2003b).
- There is a wide range of e-business use across the participating companies. In a number of categories, such as search, authentication, logistics and business intelligence, there are high levels of use (indicated by maximum normalized scores of at or near 1.0) by at least some Flanders companies (even though the companies achieving high levels in the different areas are not the same). Also, in some categories, there are clear outliers, as evidenced by the gap between the mean and maximum scores. Examples of this occur in almost all categories other than Search and Authentication. This suggests that while there are some companies in Flanders that are on the leading edge in these process categories, most companies in our study set are not using e-business for such processes. This also indicates that across the set of participating companies, there is a substantial wealth of expertise in e-business. Better knowledge sharing and collaboration mechanisms could therefore help the region become much more globally competitive.

In addition to the analysis across the entire set of participating firms, patterns across some specific categories of companies were also examined, and these are discussed next.

5.2. Classification benchmarks

The companies that participated in the study span a broad range of industries, size, type, and geographical scope. They also demonstrated a broad range of e-business use and capabilities. For instance, the companies ranged in their use of online sales from zero to 75%, with about half of the companies in our study set selling online. Likewise, for online purchasing, again about half of the companies purchase online. However, none of the companies in our study set did more than 30% of their purchasing online. Furthermore, the majority of the companies in our study set expect
to increase their online sales in the short term, with about 30% of them expecting their online sales to grow significantly.

In order for participant firms to compare their e-business process support against similar companies, we conducted separate analyses across a selection of relevant classification benchmarks. These benchmarks include the nature of the firm offerings in terms of product, services, or both, markets served (consumer, business, both), strategy, company size, and geographical scope in sales and buying (global vs. local/national). The results are as shown in Appendix C, and we will next share a number of key observations from these graphs.

In comparing product and service firms, we found that product companies in our study set provide higher levels of support for all the trade processes, while services firms did more in business intelligence and data integration. This suggests that product firms could use e-business to improve their internal and back-end processes, while services firms could target e-business initiatives to enhance their customer-facing processes.

In comparing B2B and B2C firms, we found that the B2C firms in our set provided higher levels of support for all customer-facing processes but consistently lower levels of support for supplier-facing trade processes.

In considering strategic priorities, our assessment was based on the senior executive’s perspective on how the firm delivers superior customer value in terms of the three value-based disciplines discussed earlier: operational excellence (OE), product leadership (PL), and customer intimacy (CI) (Treacy and Wiersema 1993, Anderson et al. 2009). We found that PL-focused firms had the highest levels of support for trade processes. OE-focused firms provided relatively higher support for supplier-facing processes and logistics, although the absolute levels of support in these areas were low across the board. And finally, both CI and OE-focused firms had surprisingly low levels of support for e-collaboration, particularly across organizational boundaries, which could be windows of opportunity for them.

With respect to firm size, we found that the larger firms in our study set uniformly provided more support for online trade processes, which may be explained by larger IT budgets and resources such as ERP systems. At the other extreme, the small firms had more invested in online support for decision support and even integration (at least more than medium-sized firms). This may be due to their realization that building relationships with larger business partners is crucial for them. The surprising laggards in many areas were mid-sized firms. This may be because they lack both the resources of large firms and the nimbleness of small firms.

In comparing companies based on their market scope, we found that the companies that primarily sell to a local or national market were more aggressive in using e-business for logistics and integration, probably because they were more familiar with their business partners. However, the levels of support for other processes were similar across both groups. On the other hand, when comparing firms based on their buying and supply chain focus, we found that local and national sourcing firms were consistently more aggressive in their use of e-business than global sourcing firms, across all processes. These results were seemingly counter-intuitive. However, they make sense if the issue of trust and the barriers of culture, language and distance are considered.

### 5.3. Analysis of selected firms

In order to illustrate our approach, we next present an analysis of four participating firms that differed substantially in terms of industry and size. We assess their existing e-business process support, and then identify some areas of opportunity for each of them, based on their strategic priorities and geographical scope. Since we promised anonymity to participating firms, the company names are disguised.

**Alpha Bank**. Alpha Bank is a large bank and insurance provider serving households and self-employed professionals (it does not target firms and corporations). It operates through a large distribution network of independent offices and strives to build lifelong relationships with its employees, customers, and office managers. In addition to its offline operations, it provides Internet banking services to its customers. Online sales amount to 5% of revenues, while the company does no online purchasing. Alpha views customer intimacy as its key strategic priority and strives to expand its online operations to significantly increase online sales in the national market.

Alpha’s e-business process support is shown in Fig. 3. It shows that the firm’s support for online trade processes is quite limited. Three areas of e-commerce that are supported are authentication, logistics and payments, which are useful for supporting existing customers. In the area of decision support, Alpha has developed some online business intelligence support for customers. However,
these support levels are still low, below 40% of the possible capabilities for all the composite measures. Also, Alpha does not support online integration with any external stakeholders and its overall e-business capabilities for interacting with and/or supporting suppliers are very low.

Given its strategic focus on customer intimacy and online sales growth in the local market, Alpha could benefit from more extensive and comprehensive e-commerce capabilities as it seeks to find new customers, particularly its online support for customer-facing processes such as authentication of the organization and products to customers, customer service, and configuration. This will enhance its ability to acquire new customers, especially if it wants to extend its geographical focus beyond the local and national market. Data and/or application integration for key trade and decision support processes could provide some significant strategic and operational benefits, particularly with suppliers and government agencies, but given its B2C focus, integration with customers may have limited scope, besides opportunities to increase customer intimacy through decision support or integration.

**Beta Laboratory Supplies.** Beta Laboratory Supplies is the local division of a large multinational laboratory supplies and distribution company that caters to specialized research labs and facilities in pharmaceutical, biotech, industrial, educational, and government organizations. The division supplies customers in the national market with lab supplies through a sophisticated logistical system and employs highly qualified workers that assist lab professionals with technical and logistical services. In its quest for operational excellence, Beta also offers advanced e-business capabilities to its customers and suppliers, with online sales around 50% of revenues and online spend amounting to 30% of total spend. Beta anticipates significantly increasing both its online sales and online spend over the next year.

As shown in Fig. 4, Beta’s baseline for e-business process support is quite strong with online support of customer-facing trade processes well above average for the study set. However, online support for supplier-facing trade processes is less consistent, with high levels for authentication of suppliers and online payment. Online support for collaboration and configuration is relatively high, while there is no business intelligence support for individual customer and suppliers. High levels of business intelligence support are observed at the aggregate levels for both groups though. In the area of integration, Beta offers strong support for vertical application integration.

Given Beta’s strategic focus on operational excellence, it should enhance online support for supplier processes to achieve cost savings and process efficiencies, while also reinforcing relationships with suppliers. As extensive logistics support is crucial for operational excellence, Beta could go beyond its support for order processing online and further improve its logistical processes. Although Beta has reasonable levels of online support for configuration and collaboration, there is room for improvement in both areas. Improved business intelligence support for individual customers and suppliers may also help by creating switching costs, and possibly even motivate customers and suppliers to move more of their business to Beta.

**Gamma Translation Services.** Gamma Translation Services is a small subsidiary branch of a large Asian corporation that offers translation, print and desktop publishing services throughout the world. The subsidiary coordinates technical translations into all European and Asian languages for customers in global markets by tapping into a pool of strictly selected linguistic specialists and supporting their work with project management and dedicated translation quality assurance software. Gamma’s key strategic priorities are both customer intimacy and operational excellence. It has recently begun to buy and sell online and wishes to slightly grow the current levels of online sales (1% of total revenue) and online spend (1% of total spend) across the globe.

As can be seen from Fig. 5, Gamma’s support for customer-facing trade processes is low across the board, with no support for authentication, payment and customer service. It does not support online configuration, but does support collaboration, business intelligence to individual customers and suppliers, and vertical data integration.

Since Gamma is a small firm serving a global market, stronger online authentication of both the firm and its products and services would be crucial in finding new customers (and suppliers). Furthermore, with an information product that can be delivered digitally, improved valuation and payment capabilities could significantly enhance online sales. In the decision support area, it should improve its online support for business intelligence, particularly for its own use in optimizing operational processes, and at the aggregate level to further support customer intimacy.
Given that its business is service and information intensive, improving data integration capabilities will help Gamma to be more responsive to changing customer situations and needs. However, unless the services are automated, application integration may not be useful.

**Delta Displays.** Delta Displays is a medium-sized division of a global technology company specialized in visualization solutions. Delta offers leading edge video walls and control room solutions for mission critical applications in various professional markets around the world. Its key strategic priority is product and technology leadership and it operates globally both in its marketing and sales, and its purchasing and supply chain activities. Currently, it has no online sales. While it wants to grow its online revenue slightly, Delta is also concerned with how else e-business can support its highly specialized business activities.

Delta has significant e-business capabilities in a number of trade processes relative to the other companies participating in the study but needs enhancement of supplier authentication, valuation support for customers, and online payments [Fig. 6] In the area of decision support, configuration is supported quite extensively for customers but it should consider augmenting its high levels of e-collaboration support with online business intelligence services. This may be perceived by customers and suppliers as a valuable additional service, and help reinforce relationships with them, and also help identify opportunities for innovation. With respect to integration, better data and application integration support could create switching costs for both suppliers and customers, and also enable greater cost effectiveness of internal business processes. This is particularly important for a B2B company which has relatively demanding supply chain requirements (in complexity and/or volume of orders).

A summary of the key characteristics of the sample firms, and the analysis of their capabilities is provided in Table 3. It is interesting to note that the e-business capabilities of these firms are
reasonably consistent with our model, though there are significant gaps (and thereby opportunities for e-business innovation) in each case. For instance, Alpha Bank focuses on some customer-facing trade processes, which is consistent with their focus on customer intimacy, but there are several trade processes, as well as decision support processes to enhance the customer experience, that are not well-supported. On the other hand, Delta Displays, with a product leadership focus, sees value in online trade processes, configuration and collaboration support, but lacks support for some processes that are key for such firms (as shown in Table 2), such as valuation, supplier authentication and supplier payments (within trade processes), and integration with suppliers.

6. Conclusion

This paper contributes to e-business research in two ways. First, it shows how companies can analyze their e-business capabilities in terms of a broad and comprehensive model of e-business processes. It does so by presenting both an online instrument based on the key online process types in the model, and a process (based on combining detailed online instruments with an interactive workshop) to implement the analysis. Although there is a significant literature on e-business models, there is very little work that provides insight into the operationalization of such models and concepts in the context of an individual firm. Thus, even when a model seems reasonable, most practitioners are unsure how to actually relate the model to their e-business activities and capabilities. Our online instruments, combined with the workshop approach, can help both managers in firms as well as researchers doing empirical studies using such models. Furthermore, our approach can be easily replicated by individual firms. For instance, a firm can organize a workshop for both business and IT executives, leading the participants through the online instrument and the follow-up questionnaire, compile the results in terms of the measures that we have developed, and then evaluate the results as in our figures, to assess its e-business capabilities.

A second contribution of the paper is that it demonstrates how companies can analyze their e-business capabilities with suppliers and integration. The results of this study can also be used to foster a broader awareness of e-business expertise across different organizations in a given region, and also to develop e-business capability benchmarks. As with the individual firm analysis, such cross-sectional analysis can be readily implemented in practice. For instance, workshops for relevant groups of firms can be conducted, to enable the firms to assess their capabilities relative to industry or regional benchmarks.

A limitation of the results presented in this paper is that they are based on a relatively small number of firms. This is a result of the significant commitment of time and resources that are required of each participating firm, to attend a workshop or an orientation to the instrument, complete the instrument itself, as well as the follow-up questionnaire. Clearly, as data from more firms is added to the repository, we will gain more insights into the level of e-business capabilities of companies within our test market. Furthermore, the data in our study represents a limited “snapshot” into the Flanders market only, and thus does not provide insights on the progress of firms’ e-business planning and process innovation. Our experience shows that the e-business framework covers a broader span than most firms’ conceptualization of e-business. One indication of this is that many of the participating firms learnt about new ways to exploit the Web that supported their strategic priorities. While this benefits the firms, it also muddies the waters in terms of analyzing e-business adoption and diffusion at these firms, complicating any longitudinal analysis of e-business process innovation at these firms.

Nevertheless, this work can serve as a useful starting point for longitudinal analysis of e-business adoption in the Flanders region, as well as a model for similar studies in other regions. Our future research plans include similar studies conducted within specific industry sectors, where industry-specific channel structures could be factored into the study and its analysis, as in Basu and Muylle (2003a). An additional application of the model used in this paper is to develop an “e-business capability index”, which could be used to classify firms on a broader basis than existing approaches (Riggins and Mitra 2007).

Acknowledgments

The authors gratefully acknowledge the sponsorship and financial support of the Flanders District of Creativity, as well as the assistance with data processing of Sourabh Singh at the Cox School of Business.

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### Table 3
Summary of sample firm analyses.

<table>
<thead>
<tr>
<th>Industry (type)</th>
<th>Alpha Bank</th>
<th>Beta Lab Supplies</th>
<th>Gamma Translation Services</th>
<th>Delta Displays</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size</td>
<td>Banking (B2C)</td>
<td>Lab supplies (B2B)</td>
<td>Translation services (B2B)</td>
<td>Computer displays (B2B)</td>
</tr>
<tr>
<td>Strategy</td>
<td>Large</td>
<td>Large</td>
<td>Small</td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td>Customer intimacy</td>
<td>Operational excellence</td>
<td>Customer intimacy</td>
<td>Product leadership</td>
</tr>
<tr>
<td>Online sales (scope)</td>
<td>5% (national)</td>
<td>50% (national)</td>
<td>1% (global)</td>
<td>0% (global)</td>
</tr>
<tr>
<td>Online buying (scope)</td>
<td>0%</td>
<td>30% (national)</td>
<td>1% (global)</td>
<td>0% (global)</td>
</tr>
<tr>
<td>e-Business capabilities</td>
<td>Authentication, Payment, Logistics BI for customers</td>
<td>Customer-facing trade processes Configuration Collaboration</td>
<td>Search and authentication of suppliers, Logistics Collaboration Individual BI for customers and suppliers</td>
<td>Trade processes Configuration Collaboration</td>
</tr>
<tr>
<td>Recommendations</td>
<td>All trade processes (search, authentication of organization to customers, customer service) Configuration</td>
<td>Improve trade process support for suppliers More configuration and collaboration BI support for individual customers and suppliers</td>
<td>Authentication, valuation, payment and customer service Better e-collaboration</td>
<td>Valuation and payment Supplier authentication</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Aggregate BI</td>
<td>Integration with suppliers</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vertical application integration</td>
<td>Data integration</td>
</tr>
</tbody>
</table>
Appendix A

Survey Form for Flanders DC project

Welcome to the e-Business Adoption Survey. This is a joint project of the Cox School of Business at Southern Methodist University and the Vlerick Leuven Gent Management School, under the sponsorship of Flanders DC.

There are 235 questions in this survey

Section 1: Organization

In this section, we obtain information about you and your organization. This information will enable us to contact you with our results and report. The information that you enter in this survey will not be disclosed to anyone outside the research team in a form that would enable you or your organization to be identified.

1 [S1 Name] What is your Name? *
Please write your answer here:

2 [S1 Email] What is your email address?
Please write your answer here:

3 [S1 Company] What is the name of your company/organization? *
Please write your answer here:

4 [S1 Address] What is your mailing Address?
Please write your answer here:

5 [S1 Question 1] What is your function/role/title in your organization?
Please write your answer here:
6 [S1 Question 2] Are you providing input for:
Please interpret the word "organization" based on your answer to this question.

* 
Please choose only one of the following:
- A Firm
- A Business unit
- A Product/Service Line

7 [S1 Question 4] Your organization sells

* 
Please choose only one of the following:
- Physical products
- Digital Products
- Services
- Multiple/all

8 [S1 Question 5] Your customers are mainly

* 
Please choose only one of the following:
- consumers
- businesses
- both

9 [S1 Question 6] How big is your organization in terms of full time equivalent employees?
Please write your answer here:

<p>| |</p>
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10 [S1 Question 7] What are your organization's annual revenues? (E.g., EURO 10MM; $10 MM; SEK 10MM)

Please write your answer here:

<p>| |</p>
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11 [S1 Question 8a] How big is your organization in terms of Office locations?

Please write your answer here:

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12 [S1 Question 8b] If your organization produces goods, how many Manufacturing locations does it have?

Please write your answer here:

<p>| |</p>
<table>
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<th></th>
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</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>
13 [S1 Question 8c]
How big is your organization in terms of Retail locations that it owns and/or operates?

Please write your answer here:

14 [S1 Question 8d]
If your organization is a distributor, how many Distribution locations does it have?

Please write your answer here:

15 [S1 Question 9]
To the best of your knowledge, how many years has your organization been in business?

Please write your answer here:

16 [S1 Question 10]
What are the main lines of business of your organization?

Please write your answer here:

17 [S1 Question11 Part1]
In which industry or industries is your organization active?

* Please choose all that apply:
- Landbouw, jacht en bosbouw
- Visserij
- Winning van deelstoffen
- Industrie
- Produktie/distributie van electriciteit, gas, water
- Bouwmijterheid
- Groot- en kleinhandel; reparaties auto's en huishoudelijke artikelen
- Hotels en restaurants
- Vervoer, opslag en communicatie
- Financiële instellingen
- Onroerende goederen, verhuur en diensten aan bedrijven
- Openbaar bestuur
- Onderwijs
- Gezondheidszorg en maatschappelijke dienstverlening
- Gemeenschapsvoorzieningen, social cultureel

18 [S1 Question11 part2]
If you know your NACE code(s) ...
please enter the code(s) here:

Please write your answer here:
Section 2: Trade Processes: Search

This section focuses on how your organization supports processes for buying and selling online. We consider six trade processes: search; authentication; valuation; payment; logistics; and support.

SEARCH: The process of finding relevant entities and objects for any business trade, enabling buyers and sellers to locate each other to exchange goods and services.

19 [S2S Question1] HELPING CUSTOMERS FIND YOUR ORGANIZATION ONLINE

Has your organization registered a URL/web address?

* 

Please choose only one of the following:

☐ Yes
☐ No

20 [S2S Question2] Which of the following top / third level domain names did it register?
(www.secondleveldomain.thirdleveldomain)
(multiple answers are possible)

* 

Please choose all that apply:

☐ .com
☐ .be
☐ .eu

21 [S2S Question3] Have you included brand elements in your second level domain name (e.g., www.recticel.be)? *

Please choose only one of the following:

☐ Yes
☐ No

22 [S2S Question4 part1] Does your website appear in the first page of non-sponsored links when keying in your firm name at:
- Google.com and/or Google.be *

Please choose only one of the following:

☐ Yes
☐ No
23 [S2S Question4 Part2]
Does your website appear in the first page of non-sponsored links when keying in your firm name at:
- Yahoo.com and/or Yahoo.be
* 
Please choose only one of the following:
☐ Yes
☐ No

24 [S2S Question4 Part3]
Does your website appear in the first page of non-sponsored links when keying in your firm name at:
- Microsoft Live and/or MS Bing
* 
Please choose only one of the following:
☐ Yes
☐ No

25 [S2S Question5 Part1]
Does your website appear in the first page of non-sponsored links when keying in your product/service category at:
- Google.com and/or Google.be
* 
Please choose only one of the following:
☐ Yes
☐ No

26 [S2S Question5 Part2]
Does your website appear in the first page of non-sponsored links when keying in your product/service category at:
- Yahoo.com and/or Yahoo.be
* 
Please choose only one of the following:
☐ Yes
☐ No

27 [S2S Question5 Part3]
Does your website appear in the first page of non-sponsored links when keying in your product/service category at:
- Microsoft Live and/or MS Bing
* 
Please choose only one of the following:
☐ Yes
☐ No

28 [S2S Question6] Do you optimize your website to improve its non-sponsored links ranking? 
* 
Please choose only one of the following:
☐ Yes
☐ No
29 [S2S Question7 Part1]
Do you engage in search engine marketing (by buying keywords) to appear in the list of sponsored links at:
- Google (Google Adwords) *

Please choose only one of the following:
- Yes
- No

30 [S2S Question7 Part2]
Do you engage in search engine marketing (by buying keywords) to appear in the list of sponsored links at:
- Yahoo (Yahoo Sponsored Search) *

Please choose only one of the following:
- Yes
- No

31 [S2S Question7 Part3]
Do you engage in search engine marketing (by buying keywords) to appear in the list of sponsored links at:
- Microsoft Live (Microsoft adCenter) *

Please choose only one of the following:
- Yes
- No

32 [S2S Question8]
Do you engage in banner advertising on portal websites specific to your business? *

Please choose only one of the following:
- Yes
- No

33 [S2S Question8b] If so, please specify which portal(s):

Please write your answer here:

34 [S2S Question9] Does your organization appear in the directories of portal websites specific to your business? (e.g.,
yellow pages, electronic marketplace) *

Please choose only one of the following:
- Yes
- No
<table>
<thead>
<tr>
<th>Question Number</th>
<th>Question and Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>35 [S2S Quest9b]</td>
<td>If so, please specify which portal(s): Please write your answer here:</td>
</tr>
</tbody>
</table>
| 36 [S2S Question10] | Do you sponsor portal websites specific to your business? * Please choose only one of the following:  
  - Yes  
  - No |
| 37 [S2S Quest10b] | If so, please specify which portal(s): Please write your answer here: |
| 38 [S2S Question11] | Do you engage in direct e-mail campaigns to generate online traffic? * Please choose only one of the following:  
  - Yes  
  - No |
| 39 [S2S Question12] | Do you distribute an e-mail newsletter? * Please choose only one of the following:  
  - Yes  
  - No |
| 40 [S2S Question13] | Do you advertise in/sponsor e-mail newsletters of others? * Please choose only one of the following:  
  - Yes  
  - No |
| 41 [S2S Question14] | Do you engage in affiliate programs through which you pay a commission to websites referring a customer to you (e.g., Google Adsense)? * Please choose only one of the following:  
  - Yes  
  - No |
| 42 [S2S Q14b] | If yes, which ones? Please write your answer here: |
43 [S2S Question15] Do you participate in comparison-shopping engines?

* 
Please choose only one of the following:

□ Yes
□ No

44 [S2S Quest15b] If so, which one(s)?

Please write your answer here:


45 [S2S Question16] Does your organization use social media websites (e.g., LinkedIn, Facebook) to attract customers online? *

* 
Please choose only one of the following:

□ Yes
□ No

46 [S2S Quest16b] If so, please specify which one(s):

Please write your answer here:


47 [S2S Question17] Do you post online movies about your organization on Youtube? *

Please choose only one of the following:

□ Yes
□ No

48 [S2S Question18] Does your organization participate in virtual worlds such as SecondLife? *

Please choose only one of the following:

□ Yes
□ No

49 [S2S Question19] HELPING SUPPLIERS FIND YOUR ORGANIZATION ONLINE

Does your organization offer a supplier portal where suppliers can register? *

Please choose only one of the following:

□ Yes
□ No
<table>
<thead>
<tr>
<th>Question Number</th>
<th>Question</th>
<th>Answer Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 [S2S Question20]</td>
<td>Do you offer e-mail services through which suppliers can register?  *</td>
<td>Yes, No</td>
</tr>
<tr>
<td>51 [S2S Question21]</td>
<td>Do you offer templates for electronic Request for Information/Proposal (eRFI/eRFP)?  *</td>
<td>Yes, No</td>
</tr>
<tr>
<td>52 [S2S Question22]</td>
<td>Does your organization participate in an electronic marketplace to tap into new suppliers?  *</td>
<td>Yes, No</td>
</tr>
<tr>
<td>53 [S2S Question23]</td>
<td>HELPING CUSTOMERS SEARCH FOR PRODUCTS/SERVICES IN YOUR WEB SITE</td>
<td>Does your website provide an internal search engine?  *</td>
</tr>
<tr>
<td>54 [S2S Question24]</td>
<td>Does your website provide forms with specific criteria for product/service search?  *</td>
<td>Yes, No</td>
</tr>
<tr>
<td>55 [S2S Question25]</td>
<td>Does your website provide a site-index/site-map?  *</td>
<td>Yes, No</td>
</tr>
<tr>
<td>56 [S2S Question26]</td>
<td>Do you offer an online product/service catalog?  *</td>
<td>Yes, No, Yes, in the Website</td>
</tr>
<tr>
<td>Question</td>
<td>Description</td>
<td>Options</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td><strong>57</strong></td>
<td>[S2S Question27]Do you offer e-mail services to facilitate product/service search? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td><strong>58</strong></td>
<td>[S2S Question28]Do you engage in website usability research to improve the visitor’s website experience? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td><strong>59</strong></td>
<td>[S2S Question29]Can visitors personalize the website (e.g., my.companyname.com)? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td><strong>60</strong></td>
<td>[S2S Question30]Do you offer RSS (Really Simple Syndication) feeds? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td><strong>61</strong></td>
<td>[S2S Question31]Do you offer alternative OFFLINE mechanisms to support search (e.g., order a catalog, Toll-free number to talk to a sales representative)? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td><strong>62</strong></td>
<td>[S2S Question32] Other than the firms you have mentioned above, do you have any external partners that help support the search process online? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td><strong>63</strong></td>
<td>[S2S Quest32b]If yes, which partners?</td>
<td>Please write your answer here:</td>
</tr>
</tbody>
</table>
**Section 2: Trade Processes: Authentication**

A core set of activities used to ensure the authenticity of the trading parties, the quality of the products and services being traded, and the conformance to the contract or agreement among parties.

**65 [S2A Question1]**

**AUTHENTICATION OF YOUR ORGANIZATION TO CUSTOMERS**

Do you use trusted third parties that endorse your website (e.g., Verisign)? *

Please choose only one of the following:

- Yes
- No

**66 [S2A Question2]** Do you display press releases to support authentication of your website? *

Please choose only one of the following:

- Yes
- No

**67 [S2A Question3]** Do you update your website content frequently? *

Please choose only one of the following:

- Yes
- No

**68 [S2A Question4]** Do you have blog(s)/vlog(s) directed to customers? *

Please choose only one of the following:

- Yes
- No

**69 [S2A Question5]**

**AUTHENTICATION OF CUSTOMERS**

Do you ask the buyer for offline authentication mechanisms (e.g. telephone call, postal)?

Please choose only one of the following:

- Yes
- No
<table>
<thead>
<tr>
<th><strong>70 [S2A Question6]</strong></th>
<th>Do you ask the buyer for e-mail authentication? *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
</tr>
<tr>
<td>☐ Yes</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>71 [S2A Question7]</strong></th>
<th>Do you offer the option of using a digital certificate? *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
</tr>
<tr>
<td>☐ Yes</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>72 [S2A Question8]</strong></th>
<th>Is registration required before a buyer can transact (user ID and password)? *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
</tr>
<tr>
<td>☐ Yes</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>73 [S2A Question9]</strong></th>
<th>AUTHENTICATION OF YOUR ORGANIZATION TO SUPPLIERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you use trusted third parties that endorse your website (e.g., Verisign)? *</td>
<td></td>
</tr>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
</tr>
<tr>
<td>☐ Yes</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>74 [S2A Question10]</strong></th>
<th>Do you display press releases to support authentication of your website? *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
</tr>
<tr>
<td>☐ Yes</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>75 [S2A Question11]</strong></th>
<th>Do you have blog(s)/vlog(s) directed to suppliers? *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
</tr>
<tr>
<td>☐ Yes</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>76 [S2A Question12]</strong></th>
<th>Do you display descriptive supplier testimonials? *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
</tr>
<tr>
<td>☐ Yes</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
</tr>
</tbody>
</table>
77 [S2A Question13] Do you facilitate interactive supplier testimonials through virtual communities? *
Please choose only one of the following:
○ Yes
○ No

78 [S2A Question14] AUTHENTICATION OF SUPPLIERS
Do you ask the supplier for offline authentication mechanisms (e.g. telephone call, postal)? *
Please choose only one of the following:
○ Yes
○ No

79 [S2A Question15] Do you ask the supplier for e-mail authentication? *
Please choose only one of the following:
○ Yes
○ No

80 [S2A Question16] Do you offer the option of using a digital certificate? *
Please choose only one of the following:
○ Yes
○ No

81 [S2A Question17] Is registration required before a supplier can transact (user ID and password)? *
Please choose only one of the following:
○ Yes
○ No

82 [S2A Question18] AUTHENTICATION OF PRODUCTS & SERVICES
Do you provide descriptive information on product quality? *
Please choose only one of the following:
○ Yes
○ No

83 [S2A Question19] Do you display descriptive customer testimonials? *
Please choose only one of the following:
○ Yes
○ No
<table>
<thead>
<tr>
<th>Question Number</th>
<th>Question Text</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>84</td>
<td>Do you facilitate interactive customer testimonials through virtual communities? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td>85</td>
<td>Do you give information on how your offerings perform with respect to standards on quality? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td>86</td>
<td>Do you give information on how your offerings perform with respect to competitors? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td>87</td>
<td>Do you display expert opinions (trusted third parties) to assure the quality of the products? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td>88</td>
<td>Do you have an online warranty – return policy? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td>89</td>
<td>Do you offer online purchase on a trial basis? *</td>
<td>Yes, No</td>
</tr>
<tr>
<td>90</td>
<td>Do you allow customization of the product quality assurance process by guiding the buyer to particular parts of discussions in virtual communities that address the product? *</td>
<td>Yes, No</td>
</tr>
</tbody>
</table>
91 [S2A Question27] Do you allow customization of the product quality assurance process by guiding the buyer to particular parts of discussions in virtual communities that address particular product attributes the buyer is interested in?

* 
Please choose only one of the following:

- Yes
- No

92 [S2A Question28 Part1] Do you have any external partners that help support the authentication process of your organization to customers?

* 
Please choose only one of the following:

- Yes
- No

93 [S2A Quest28 Part1b] If yes, Could you identify your key partner(s)?

Please write your answer here:

94 [S2A Question28 Part2] Do you have any external partners that help support the authentication process of customers to your organization?

* 
Please choose only one of the following:

- Yes
- No

95 [S2A Quest28 Part2b] If yes, could you identify your key partner(s)?

Please write your answer here:

96 [S2A Question28 Part3] Do you have any external partners that help support the authentication process of your organization to suppliers?

* 
Please choose only one of the following:

- Yes
- No

97 [S2A Quest28 Part3b] If yes, could you identify your key partner(s)?

Please write your answer here:
98 [S2A Question28 Part4] Do you have any external partners that help support the authentication process of suppliers to your organization?

* Please choose only one of the following:

- Yes
- No

99 [S2A Quest28 Part4b] If yes, could you identify your key partner(s)?

Please write your answer here:

100 [S2A Question29] Please list any innovative or unique features that your website offers with respect to the authentication process and provide the URL of the page where these features appear:

Please write your answer here:
Section 2: Trade Processes: Valuation

The process and methods of negotiating and discovering a purchase or sales price for a product.

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Question</th>
<th>Instructions</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>101 [S2V Question1]</td>
<td><strong>ONLINE PRICING OF PRODUCTS AND SERVICES</strong></td>
<td><strong>Do you list product prices online (website, online catalog)?</strong></td>
<td>Yes, No</td>
</tr>
<tr>
<td>102 [S2V Question2 Part1]</td>
<td><strong>Do you refer to other mechanisms in your website for customers to obtain prices?</strong></td>
<td><strong>Please choose all that apply:</strong></td>
<td>Email, Tel call, Other</td>
</tr>
<tr>
<td>103 [S2V Question2 Part2]</td>
<td><strong>If other: please specify:</strong></td>
<td>Please write your answer here:</td>
<td></td>
</tr>
<tr>
<td>104 [S2V Question3]</td>
<td><strong>Do you offer discounts/promotions online (e.g., items on sale, volume discounts)?</strong></td>
<td><strong>Please choose only one of the following:</strong></td>
<td>Yes, No</td>
</tr>
<tr>
<td>105 [S2V Question4]</td>
<td><strong>Do you offer customized discounts online (e.g., loyalty discounts, competitive discounts)?</strong></td>
<td><strong>Please choose only one of the following:</strong></td>
<td>Yes, No</td>
</tr>
<tr>
<td>106 [S2V Question5]</td>
<td><strong>Do you claim to have the lowest prices?</strong></td>
<td><strong>Please choose only one of the following:</strong></td>
<td>Yes, No</td>
</tr>
</tbody>
</table>
107 [S2V Question6] Do you guarantee to have the lowest prices by matching lower prices from competitors? *
Please choose only one of the following:

☐ Yes
☐ No

108 [S2V Question7] Do you show prices of competitors? *
Please choose only one of the following:

☐ Yes
☐ No

109 [S2V Question8] Do you sell through templates for online negotiations? *
Please choose only one of the following:

☐ Yes
☐ No

110 [S2V Question9] Do you sell through templates for online auctions? *
Please choose only one of the following:

☐ Yes
☐ No

111 [S2V Question10] Do you sell through templates for online exchanges? *
Please choose only one of the following:

☐ Yes
☐ No

112 [S2V Question11] Do you provide tax (or VAT) computation? *
Please choose only one of the following:

☐ Yes
☐ No

113 [S2V Question12] Do you provide shipment cost information? *
Please choose only one of the following:

☐ Yes
☐ No
114 [S2V Question13] Do you provide currency conversion? *
Please choose only one of the following:
- Yes
- No

115 [S2V Question14] Can the customer rent or lease the product online? *
Please choose only one of the following:
- Yes
- No

116 [S2V Question15] PRICING ONLINE FOR SUPPLIERS
Do you buy through templates for electronic Request for Quotations (eRFQ)? *
Please choose only one of the following:
- Yes
- No

117 [S2V Question16] Do you buy through templates for online negotiations? *
Please choose only one of the following:
- Yes
- No

118 [S2V Question17] Do you buy through templates for online auctions (reverse auctions)? *
Please choose only one of the following:
- Yes
- No

119 [S2V Question18] Do you buy through templates for combinatorial auctions? *
Please choose only one of the following:
- Yes
- No

120 [S2V Question19] Do you buy through templates for online exchanges? *
Please choose only one of the following:
- Yes
- No
121 [S2V Question20] Do you have any external partners that help support the valuation process online? If yes, which partners?

Please write your answer here:

122 [S2V Question21] Please list any innovative or unique features that your website offers with respect to the online valuation process and provide the URL of the page where these features appear:

Please write your answer here:
Section 2: Trade Processes: Payment and Settlements

These processes define the terms and methods of payment permitted and ensure the settlement of payments in the online exchange.

123 [S2P Question 1] ONLINE PAYMENTS BY CUSTOMERS
Do you allow online customers to make purchases without registering on your Web site?
*  
Please choose only one of the following:
☐ Yes
☐ No

124 [S2P Question 2]
Do you provide subscription/account-based online sales?
*  
Please choose only one of the following:
☐ Yes
☐ No

125 [S2P Question 3]
Do you support e-wallets?
*  
Please choose only one of the following:
☐ Yes
☐ No

126 [S2P Question 4]
Do you provide an online shopping cart mechanism?
*  
Please choose only one of the following:
☐ Yes
☐ No

127 [S2P Question 5]
Do you support online wire payments?
*  
Please choose only one of the following:
☐ Yes
☐ No
128 [S2P Question6]
Do you support online payment processes through trusted third parties (e.g., PayPal) where only non-sensitive information is exchanged online?
*
Please choose only one of the following:
○ Yes
○ No

129 [S2P Question7]
Do you support online credit card payments?
*
Please choose only one of the following:
○ Yes
○ No

130 [S2P Question8]
Do you support smart card payments online?
*
Please choose only one of the following:
○ Yes
○ No

131 [S2P Question9]
Do you support software based e-cash payments online?
*
Please choose only one of the following:
○ Yes
○ No

132 [S2P Question10]
Do you allow the buyer to customize his online payment options?
*
Please choose only one of the following:
○ Yes
○ No

133 [S2P Question11] Do you offer the buyer the option to open an online account with your company? *
Please choose only one of the following:
○ Yes
○ No
134 [S2P Question12]  
Do you set a credit limit for each online buyer?  
*  
Please choose only one of the following:  
☐ Yes  
☐ No

135 [S2P Question13]  
Do you provide differentiated online payment programs (e.g., gold program conditions for heavy users)?  
*  
Please choose only one of the following:  
☐ Yes  
☐ No

136 [S2P Question14]  
Do you allow for installment/lay-away payments for online purchases?  
*  
Please choose only one of the following:  
☐ Yes  
☐ No

137 [S2P Question15]  
ONLINE PAYMENTS TO SUPPLIERS  
Do you support electronic invoicing by suppliers to your organization?  
*  
Please choose only one of the following:  
☐ Yes  
☐ No

138 [S2P Question15b]  
If so, which platform(s) do you support?  
Please write your answer here:

139 [S2P Question16]  
Does the company have any other external partners that help support the payment process?  
*  
Please choose only one of the following:  
☐ Yes  
☐ No
140 [S2P Question16b]
If yes, which partners?
Please write your answer here:

141 [S2P Question17]
Please list any innovative or unique features that your website offers with respect to the payment process and provide the URL of the page where these features appear:

Please write your answer here:
Section 2: Trade Processes: Logistics: Physical Products

THIS SECTION IS FOR COMPANIES THAT SELL PHYSICAL PRODUCTS

142 [S2L Question 1] Which of the following product delivery options are supported? Multiple answers are possible. *

Please choose all that apply:

☐ offline delivery by your organization
☐ offline delivery by distributor/retailer
☐ physical pick-up by the customer
☐ We do not sell physical products

143 [S2L Question 2] In case of offline delivery by distributor/retailer: can the customer choose a distributor/retailer from multiple choices on your Web site?

Please choose only one of the following:

☐ Yes
☐ No

144 [S2L Question 3] In case of physical pick-up by the customer: does your Web site let the customer choose from multiple pick-up locations?

Please choose only one of the following:

☐ Yes
☐ No

145 [S2L Question 4] Do you offer multiple delivery options (e.g. postal, Fedex) on your Web site?

Please choose only one of the following:

☐ Yes
☐ No

146 [S2L Question 5] Do you identify physical stores in your Web site?

Please choose only one of the following:

☐ Yes
☐ No

147 [S2L Question 6] Do you offer online information on the nearest dealer or store (i.e. show the point of sale closest to the customer’s location)?

Please choose only one of the following:

☐ Yes
☐ No
Section 2: Trade Processes: Logistics: Digital Products

THIS SECTION IS FOR COMPANIES THAT SELL DIGITAL PRODUCTS

These are information products or products that can be delivered in digital form. Examples include information products such as news, tokens such as airline tickets, and experience products such as music and movies.

148 [S2L Question7]
Do you offer online order tracking services?

Please choose only one of the following:

☐ Yes
☐ No

149 [S2L Question8]
Do you support online delivery of digital products?

* Please choose all that apply:

☐ Yes
☐ No
☐ We do not sell digital products

150 [S2L Question9]
In case of online delivery: are multiple-source sites provided, i.e. do you allow the customer to select the nearest server to download the content from?

Please choose only one of the following:

☐ Yes
☐ No
Section 2: Trade Processes: Logistics: Services

THIS SECTION IS FOR ORGANIZATIONS THAT OFFER SERVICES

151 [S2L-S Q1] Do you offer online delivery of your services? *

Please choose all that apply:

☐ Yes
☐ No
☐ We do not sell services

152 [S2L-S Q2] If online delivery is offered, do you provide multiple options/sites/formats?

Please choose only one of the following:

☐ Yes
☐ No

153 [S2L-S Q3] Can customers combine online and offline mechanisms to obtain your services?

Please choose only one of the following:

☐ Yes
☐ No
Section 2: Trade Processes: Logistics: Order Process

154 [S2L Question10] SUPPORT OF THE ORDER PROCESS
Do you offer basic order status services online? *
Please choose only one of the following:
- Yes
- No

155 [S2L Question11] Do you offer order consolidation options online? *
Please choose only one of the following:
- Yes
- No

156 [S2LQ12] Do you offer your suppliers online mechanisms to coordinate pick-up of your physical goods purchases from their locations?
Please choose only one of the following:
- Yes
- No
Section 2: Logistics Extra Questions

157 [S2L Question12 Part2]
Do you have any external partners that help support the logistics process online? *

Please choose only one of the following:

☐ Yes
☐ No

158 [S2LQ12-2b] If yes, which partners?

Please write your answer here:

159 [S2L Question13]
Please list any innovative or unique features that your website offers with respect to the logistics process and provide the URL of the page where these features appear:

Please write your answer here:
### Section 2: Trade Processes: Support Services

Process of supporting the customer after the transaction.

<table>
<thead>
<tr>
<th>Question Number</th>
<th>Question Description</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>160 [S2SU Question1]</td>
<td>Do you offer after sales customer service through online descriptive information on product use, repair and disposal?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>161 [S2SU Question2]</td>
<td>Do you offer after sales customer service through interactive online (e-mail, chat, webex) technical training and education on product use, repair and disposal?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>162 [S2SU Question3]</td>
<td>Do you offer online dispute resolution services?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>163 [S2SU Question4]</td>
<td>Is it possible for customers to give feedback online (complaints – suggestions)?</td>
<td>Yes, No</td>
</tr>
<tr>
<td>164 [S2SU Question5]</td>
<td>Are community features provided that let customers interact with other customers online?</td>
<td>Yes, No</td>
</tr>
</tbody>
</table>
165 [S2SU Question6]
Do you allow the customer to purchase a service contract online? *

Please choose only one of the following:

☐ Yes
☐ No

166 [S2SU Question 7]
If you do allow the customer to purchase a service contract online, do you offer a choice of service contracts?

Please choose only one of the following:

☐ Yes
☐ No

167 [S2SU Question8]
Do you have any external partners that help support the customer support process online? *

Please choose only one of the following:

☐ Yes
☐ No

168 [S2SU Q8b] If yes, which partners?

Please write your answer here:

169 [S2SU Question9 ]
Please list any innovative or unique features that your website offers with respect to the customer support process and provide the URL of the page where these features appear:

Please write your answer here:
Section 3: Decision Support Processes

This section focuses on how your organization supports online processes that enable individuals and firms to obtain information and use analytical models that enhance their ability to make effective business decisions. We consider three such processes: configuration; collaboration; and business intelligence.

Section 3: Decision Support: Configuration

This process helps buyers define needs, and helps buyers and sellers to interact to develop a product/service that can meet those needs.

<table>
<thead>
<tr>
<th>170 [S3C Question1]</th>
<th>CONFIGURATION SUPPORT FOR CUSTOMERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you exchange attachments of configuration documents online (e.g., complex sketches)? *</td>
<td></td>
</tr>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
</tr>
<tr>
<td>☐ Yes, With Versioning Control</td>
<td></td>
</tr>
<tr>
<td>☐ Yes, Without Versioning Control</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>171 [S3C Question2]</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you offer an online configurator tool that allows customers to select and specify products (e.g., shape, measurements, standard, etc.)? *</td>
<td></td>
</tr>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
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<tr>
<td>☐ Yes with Version Control</td>
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<tr>
<td>☐ Yes without Version Control</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>172 [S3C Question3]</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you offer an online configurator tool that allows customers to assemble products from standardized components (cf. Dell)? *</td>
<td></td>
</tr>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
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<tr>
<td>☐ Yes with Version Control</td>
<td></td>
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<tr>
<td>☐ Yes without Version Control</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>173 [S3C Question4]</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you offer an online configurator tool that supports sharable Computer Aided Design (CAD)? *</td>
<td></td>
</tr>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
</tr>
<tr>
<td>☐ Yes with Version Control</td>
<td></td>
</tr>
<tr>
<td>☐ Yes without Version Control</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>174 [S3C Question5]</th>
<th>Do you offer an online shared workspace for technical product design? *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please choose only one of the following:</td>
<td></td>
</tr>
<tr>
<td>☐ Yes</td>
<td></td>
</tr>
<tr>
<td>☐ No</td>
<td></td>
</tr>
</tbody>
</table>
175 [S3C Question6] Do you support application sharing for technical product design? *
Please choose only one of the following:
- Yes
- No

176 [S3C Question7] CONFIGURATION SUPPORT FOR SUPPLIERS
Do you exchange attachments of configuration documents online (e.g., complex sketches)? *
Please choose only one of the following:
- Yes
- No

177 [S3C Question8 Part1]
Do you offer templates for electronic Request for
- Information (eRFI)? *
Please choose only one of the following:
- Yes
- No

178 [S3C Question8 Part2]
Do you offer templates for electronic Request for
- Proposal (eRFP)? *
Please choose only one of the following:
- Yes
- No

179 [S3C Question8 Part3]
Do you offer templates for electronic Request for
- Quotation (eRFQ)? *
Please choose only one of the following:
- Yes
- No

180 [S3C Question9]
Do you use scenario and optimization tools to configure supply offer combinations? *
Please choose only one of the following:
- Yes
- No
181 [S3C Question10]
Do you offer an online shared workspace for technical product design?

* 

Please choose only one of the following:

☐ Yes
☐ No

182 [S3C Question11]
Do you support application sharing for technical product design?

* 

Please choose only one of the following:

☐ Yes
☐ No

183 [S3C Question12 Part1]
Do you have any external partners that help support the configuration process online for customers?

* 

Please choose only one of the following:

☐ Yes
☐ No

184 [S3C Q12-1b] If yes, which partners?

Please write your answer here:


185 [S3C Question12 Part2]
Do you have any external partners that help support the configuration process online for suppliers?

* 

Please choose only one of the following:

☐ Yes
☐ No

186 [S3C Q12-2b] If yes, which partners?

Please write your answer here:


187 [S3C Question13]
Please list any innovative or unique features that your website offers with respect to the configuration process and provide the URL of the page where these features appear:

Please write your answer here:
S3C: Decision Support: Collaboration

In this section, we examine the types of technologies and mechanisms that are currently used in your organization to support e-collaboration.

Please indicate the technologies that your organization uses to support ONLINE COLLABORATION, both internally and/or with external parties.

<table>
<thead>
<tr>
<th>188 [S3C Q1] INFORMATION SHARING TECHNOLOGIES to support COLLABORATION, both internally and/or with external parties.</th>
<th>Internal</th>
<th>Customer</th>
<th>Distributor</th>
<th>Supplier</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronic Fax</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Digital/VOIP Phones</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Videophone Devices</td>
<td></td>
<td></td>
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<tr>
<td>Teleconferencing</td>
<td></td>
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<tr>
<td>Videoconferencing</td>
<td></td>
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<tr>
<td>Blogs</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Bulletin Board</td>
<td></td>
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<tr>
<td>Chat/Instant Messaging</td>
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<tr>
<td>Podcasting</td>
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<tr>
<td>Virtual Environments (e.g., Second Life)</td>
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<tr>
<td>White-Board</td>
<td></td>
<td></td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>189 [S3C Q2] INFORMATION PROCESSING AND ABSTRACTION TECHNOLOGIES to support COLLABORATION, both internally and/or with external parties.</th>
<th>Internal</th>
<th>Customer</th>
<th>Distributor</th>
<th>Supplier</th>
<th>District</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Warehouse</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Online Analytical Processing (OLAP)</td>
<td></td>
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<tr>
<td>Knowledge Management System</td>
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<tr>
<td>Shared Databases</td>
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<td></td>
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<tr>
<td>Remote Processing</td>
<td></td>
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<tr>
<td>Electronic Voting</td>
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<tr>
<td>Expert System</td>
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<td></td>
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<tr>
<td>Virtual Reality</td>
<td></td>
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</tr>
</tbody>
</table>
190 [S3C Q3] Do you have any external partners who help support your online collaboration processes? *

Please choose only one of the following:

☐ Yes
☐ No

191 [S3C Q3b] If so, please list your key partners (separated by commas)

Please write your answer here:

192 [S3C Q4] Please identify and innovative or unique features of your online collaboration processes that have not been covered here, and if possible, provide a URL where such features are demonstrated.

Please write your answer here:
Section 3: Decision Support: Business Intelligence

This includes the online provision of information about the organization to customer and/or suppliers, as well as analytical tools that allow customers and/or suppliers to model and analyze their activities as part of their planning processes.

193 [S3B Question1] HELPING CUSTOMERS ANALYZE THEIR BUSINESS WITH YOUR ORGANIZATION

Do you share information with customers through online graphical tools (e.g., dashboards)? *

Please choose only one of the following:

☐ Yes
☐ No

194 [S3B Question2] HELPING CUSTOMERS ANALYZE THEIR BUSINESS WITH YOUR ORGANIZATION

Do you share information by providing online access to detailed databases (e.g., customer transaction history)? *

Please choose only one of the following:

☐ Yes
☐ No

195 [S3B Question3] HELPING CUSTOMERS ANALYZE THEIR BUSINESS WITH YOUR ORGANIZATION

Do you offer online analytical tools for the customer to analyze its data with respect to your business? *

Please choose only one of the following:

☐ Yes
☐ No

196 [S3B Question4] HELPING SUPPLIERS ANALYZE THEIR BUSINESS WITH YOUR ORGANIZATION

Do you share information with suppliers through online graphical tools (e.g., dashboards)? *

Please choose only one of the following:

☐ Yes
☐ No

197 [S3B Question5] HELPING SUPPLIERS ANALYZE THEIR BUSINESS WITH YOUR ORGANIZATION

Do you share information by providing online access to detailed databases (e.g., supplier transaction history)? *

Please choose only one of the following:

☐ Yes
☐ No
198 [S3B Question 6]
Do you offer online analytical tools for the supplier to analyze its data with respect to your business? *

Please choose only one of the following:

☐ Yes
☐ No

199 [S3B Question 7]
SHARING AGGREGATE CUSTOMER INFORMATION ONLINE

Do you share aggregate information through online graphical tools (e.g., dashboards)? *

Please choose only one of the following:

☐ Yes
☐ No

200 [S3B Question 8]

Do you share information by providing online access to detailed databases? *

Please choose only one of the following:

☐ Yes
☐ No

201 [S3B Question 9]

Do you offer online analytical tools for the customer to analyze aggregate market data? *

Please choose only one of the following:

☐ Yes
☐ No

202 [S3B Question 10]

Do you gather market/industry information online and engage in collaborative filtering to offer personal recommendations to customers, based on the buying and evaluation patterns of other customers? *

Please choose only one of the following:

☐ Yes
☐ No

203 [S3B Question 11]

SHARING AGGREGATE SUPPLIER INFORMATION ONLINE

Do you share aggregate supplier information through online graphical tools (e.g., dashboards)? *

Please choose only one of the following:

☐ Yes
☐ No
204 [S3B Question12] Do you share information by providing online access to detailed databases?  
* Please choose only one of the following:  
☐ Yes  
☐ No

205 [S3B Question13] Do you offer online analytical tools for the supplier to analyze aggregate supply market data?  
* Please choose only one of the following:  
☐ Yes  
☐ No

206 [S3B Question14] Do you gather market/industry information online that is aggregated to offer best-in-segment supplier reference data (supplier benchmarks)?  
* Please choose only one of the following:  
☐ Yes  
☐ No

207 [S3B Question15] LEVERAGING YOUR ORGANIZATION'S ONLINE DATA FOR ITS OWN PURPOSES  
Does your organization leverage online supplier transaction data for the purposes of spend analysis and supplier relationship management?  
* Please choose only one of the following:  
☐ Yes  
☐ No

208 [S3B Question16] Does your organization leverage online customer transaction data for assessing marketing campaign effectiveness?  
* Please choose only one of the following:  
☐ Yes  
☐ No

209 [S3B Question17] Does your organization leverage online customer transaction data for the purposes of customer profitability analysis?  
* Please choose only one of the following:  
☐ Yes  
☐ No
| **210 [S3B Question 18]** | Does your organization use online product lifecycle management tools to support the product innovation process? * 
| Please choose only one of the following: |
| ☐ Yes |
| ☐ No |

| **211 [S3B Question 19]** | Do you support internal prediction markets online that allow employees to buy and sell stocks related to important business questions such as: will we increase our unit sales by 10% this quarter? * 
| Please choose only one of the following: |
| ☐ Yes |
| ☐ No |

| **212 [S3B Question 20]** | Do you have any external partners that help support the business intelligence process online? * 
| Please choose only one of the following: |
| ☐ Yes |
| ☐ No |

| **213 [S3B Q20b]** | If yes, which partners? 
| Please write your answer here: |

| **214 [S3B Question 21]** | Please list any innovative or unique features that your website offers with respect to the business intelligence process and provide the URL of the page where these features appear: 
| Please write your answer here: |
Section 4: Integration Processes

This final section focuses on how your organization supports processes that help it to integrate its information, computing and communication systems, on either an intra-firm or an inter-firm basis. We consider two processes here: data integration and application integration. Integration may be at the level of EDI or at the level of direct integration of enterprise systems such as CRM, SRM, and PRM.

Section 4: Integration Processes: Data Integration

This allows a firm’s software applications to access its partners’ databases.

<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>215</td>
<td>Vertical Data Integration</td>
<td>Do you allow your customers to access your data files for data relating to them? *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Please choose only one of the following:</td>
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<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>216</td>
<td>Vertical Data Integration</td>
<td>Do you allow your distributors/retailers to access your data files for data relating to them?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Please choose only one of the following:</td>
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<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>217</td>
<td>Vertical Data Integration</td>
<td>Do you allow your suppliers to access your data files for data relating to them? *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Please choose only one of the following:</td>
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<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>218</td>
<td>Horizontal Data Integration</td>
<td>Do you share product data from your databases with other sellers? *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Please choose only one of the following:</td>
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<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>219</td>
<td>Horizontal Data Integration</td>
<td>Do you share supply chain/procurement data from your databases with other buyers? *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Please choose only one of the following:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No</td>
</tr>
</tbody>
</table>
220 [S4D Question 6]
DATA INTEGRATION WITH GOVERNMENT AND REGULATORY AGENCIES

Do you allow governmental/regulatory organizations to access your data files for data relating to them?

*  

Please choose only one of the following:

☐ Yes
☐ No

221 [S4D Question 7] Do you have any external partners that help support data integration?

*  

Please choose only one of the following:

☐ Yes
☐ No

222 [S4D Q7b] If yes, which partners?

Please write your answer here:


223 [S4D Question 8]
Please list any innovative or unique features that your website offers with respect to the data integration process and provide the URL of the page where these features appear:

Please write your answer here:
Section 4: Integration Processes: Application Integration

This involves the integration of both data and applications through technologies such as XML (eXtensible Markup Language) of applications such as order, payment, accounting, inventory and workflow systems.

224 [S4A Question1]
VERTICAL APPLICATION INTEGRATION

Does your organization support application integration of your systems with customers' systems? *

Please choose only one of the following:

- Yes
- No

225 [S4A Question2]
If you integrate applications with customers, is the application integration:

Please choose only one of the following:

- Mandatory
- Optional

226 [S4A Question3]
Does your organization support application integration with distributors'/retailers' systems?

Please choose only one of the following:

- Yes
- No

227 [S4A Question4]
If you integrate applications with distributors/retailers, is the application integration:

Please choose only one of the following:

- Mandatory
- Optional

228 [S4A Question5]
Does your organization support application integration with suppliers' systems? *

Please choose only one of the following:

- Yes
- No
229 [S4A Question6]
If you integrate applications with suppliers, is the application integration:

Please choose only one of the following:

- Mandatory
- Optional

230 [S4A Question7] HORIZONTAL APPLICATION INTEGRATION

Do you offer catalog systems that are integrated with other sellers' catalog systems? *

Please choose only one of the following:

- Yes
- No

231 [S4A Question8]
Do you offer consolidated procurement systems with other buyers? *

Please choose only one of the following:

- Yes
- No

232 [S4A Question9] APPLICATION INTEGRATION WITH GOVERNMENT/REGULATORY AGENCIES

Does your organization support application integration with governmental/regulatory agencies' systems? *

Please choose only one of the following:

- Yes
- No

233 [S4A Question10] Do you have any external partners that help support application integration? *

Please choose only one of the following:

- Yes
- No

234 [S4A Q10b] If yes, which partners?

Please write your answer here:

235 [S4A Question11] Please list any innovative or unique features that your website offers with respect to the application integration process and provide the URL of the page where these features appear:

Please write your answer here:
Appendix B

**FDC Follow-up Form**

This form addresses some background features of your organization that complement the information collected in the workshop in early June.

Your responses will be kept confidential, and will not be shared with other organizations in any attributable form.

It should take you about 5 minutes to complete the form.

There are 8 questions in this survey

**Strategy and Scope**

Some basic questions on your organization’s strategic priorities, and the scope of key value chain components.

1. **[OrgIdent1]** What is the name of your company/organization? *
   
   Please write your answer here:

2. **[OrgURL]** What is the URL (web address) of the organization for which you completed the e-business assessment at the workshop? *

   Please write your answer here:
3 [Strategy1] How important is each of the following strategic priorities for your organization? *

Please choose the appropriate response for each item:

<table>
<thead>
<tr>
<th>Priority</th>
<th>Extremely Low</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Extremely High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Intimacy</td>
<td>0</td>
<td>Ø</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Product/technology Leadership</td>
<td>0</td>
<td>Ø</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Operational Excellence</td>
<td>0</td>
<td>Ø</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

A CUSTOMER INTIMACY strategy places greatest emphasis on:
- Understanding and meeting the needs and preferences of customers
- Excellence in quality of service for customer facing processes

A PRODUCT/TECHNOLOGY LEADERSHIP strategy places greatest emphasis on:
- Intellectual property and proprietary technology
- Excellence in product quality and product performance

A OPERATIONAL EXCELLENCE strategy places greatest emphasis on:
- Cost efficiency and cost leadership
- Excellence in operational processes

4 [GeoScope1] How important is each of the following markets for your organization's marketing and sales efforts? *

Please choose the appropriate response for each item:

<table>
<thead>
<tr>
<th>Market</th>
<th>Extremely Low</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Extremely High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Market</td>
<td>0</td>
<td>Ø</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>National Market</td>
<td>0</td>
<td>Ø</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Global Market</td>
<td>0</td>
<td>Ø</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

The LOCAL market includes customers in the city(ies) where your organization has sales/retail locations.

The NATIONAL market includes customers that are in OTHER cities but within the same country.

The GLOBAL market includes customers in other countries.
5 [GeoScope2] How important is each of the following markets for your organization’s purchasing and supply chain efforts? *

Please choose the appropriate response for each item:

<table>
<thead>
<tr>
<th>Market</th>
<th>Extremely Low</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Extremely High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Market</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>National Market</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Global Market</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

The LOCAL market includes suppliers in the city(ies) where your organization has operations.

The NATIONAL market includes suppliers that are in OTHER cities but within the same country.

The GLOBAL market includes suppliers in other countries.

6 [OLSIs] Please indicate the level of your organization’s online sales as a percentage of total revenues per year. *

Please write your answer here:


7 [OLSspnd] Please indicate the percentage of your organization’s spend that is done online per year. *

Please write your answer here:

Your organization’s spend is the amount of money it spends on supply chain and procurement purchases each year.

8 [SlsGrwth] How much do you expect your level of online sales and spend respectively to change over the next year?

Please choose the appropriate response for each item:

<table>
<thead>
<tr>
<th></th>
<th>Decrease Significantly</th>
<th>Decrease Slightly</th>
<th>About the Same</th>
<th>Increase Slightly</th>
<th>Increase Significantly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online Sales</td>
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<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Online Spend</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Appendix C. Results for classification benchmarks

Figs. C1–C6.
**Strategic Priorities**

![Graph showing strategic priorities comparison](image1)

**Fig. C3.** Comparison of Companies based on their Strategic Priorities.

**Company Size**

![Graph showing company size comparison](image2)

**Fig. C4.** Comparison of Companies based on their Size (by Revenues).
GLOBAL vs LOCAL/NATIONAL SALES

Fig. C5. Comparison of Companies based on their Market Scope (for sales).

GLOBAL vs LOCAL/NATIONAL BUYING

Fig. C6. Comparison of Companies based on their Purchasing Scope.

References


Hofmann, P. ERP is dead, long live ERP. IEEE Internet Computing, 12, 4, 2008, 84–88.


