SiBiLO

white paper

Baking e-Commerce

Bringing SMEs into the Digital Economy

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There is a massive worldwide movement towards e-Commerce. Despite the recent regression in digital markets, investment levels are still considerable and can be expected to grow much more. The impact of this movement on Small and Medium Enterprises (SMEs) is already at a significant level. Many SMEs are drawn into the movement by being part of a supply chain, and many more will inevitably join the trend, as more e-Businesses will discover the benefits of converting their supply chains[1] into value chains[2] [VCA, 2001]. When the time comes, small, efficient and technically capable subcontractors will be required to be part of the value chain. There are realisable opportunities for the others as well: being able to reach out and sell in wider markets whilst lowering costs and providing better customer care are just a few examples. No matter on what side an SME takes place, doing business will never be the same again for them.

Adapting to the new business culture, however, still happens to be the biggest obstacle for SMEs and since they are "the cornerstone of Europe's competitive position and job creation" [CORDIS 2001] many initiatives have recently focused on finding new and better ways to bring SMEs into the digital economy. Sibilo is a spin-off company from such initiative that started at UMIST as a European funded project to train SMEs for the Digital Economy between 1999 and 2001. Sibilo now provides bespoke e-Commerce solutions to SMEs.

Our services are inevitably influenced by the way we perceive e-Commerce. While collaborating closely with SMEs and doing a substantial amount of research in the recent years, we came up with the e-Cake analogy to better explain the issues in setting up an e-Business, which will be explained in this paper.

Defining e-Commerce, e-Marketplace and Related Technologies

There have been many descriptions and definitions of e-Commerce. Most widely accepted definitions converge around businesses using information through a technical infrastructure to trade. Up to now, it has been about the telecom-based internet; therefore, the current understanding of e-Commerce is that it is about business being performed over the World Wide Web through the communication of all information necessary to completing business transactions. Although, there are also emerging technologies such as digital-TV and mobile devices, here we will concentrate on the web.

Consider how a conventional business interacts with the marketplace: It procures from suppliers, while using external services and expands into markets, and sells to customers. An e-Business, on the other hand, has a completely different way of operation: It interacts with the e-marketplace through a technical infrastructure, by which it has access to advisory services, suppliers, markets and customers. This concept can be better appreciated in Figure 1.

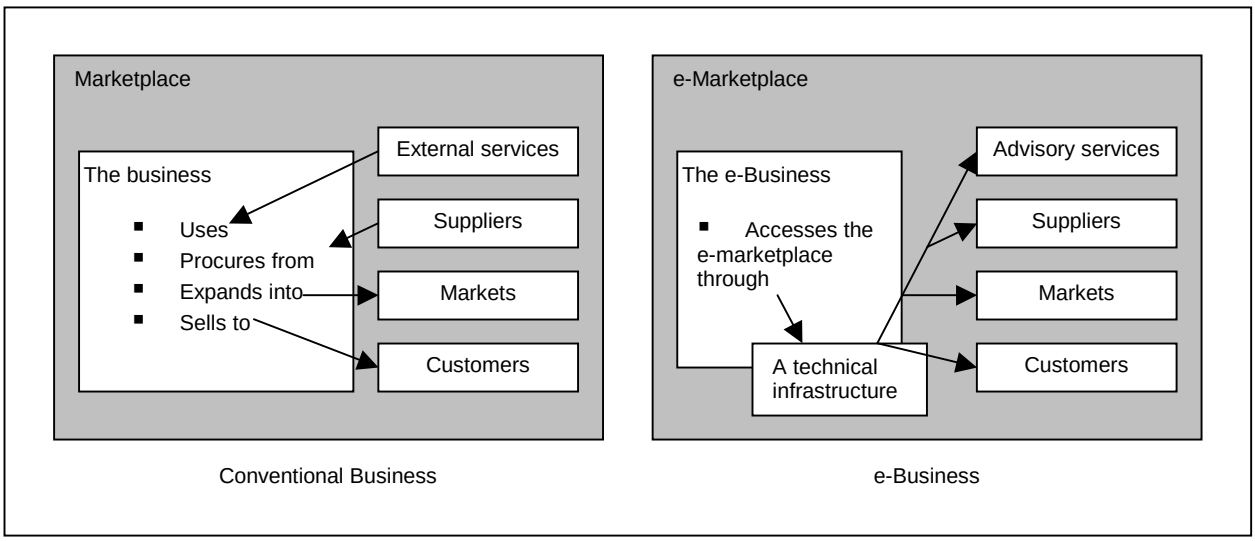

Figure 1: The difference between operation of a conventional business and an e-Business.

The difference of an e-Business operation gives the business timely, remote access to the marketplace, which in return has significant effects on the business. The business could physically be located anywhere in the world and it does not close its doors at night. Despite the common misconception of this being the biggest advantage of e-Commerce, we believe that it is neither an advantage nor disadvantage. It is merely a new culture of doing business, nothing more, nothing less. Bearing in mind how conservative some SMEs could be, convincing them to investigate the new business culture and new opportunities that come with it is the first challenge we face.

Since the single point reaching out to the e-Marketplace uses information at its core, it is worth noting that e-Commerce will draw on a range of information management practices and technologies as it evolves. Information serves a variety of purposes, the essential being facilitating transactions; processing stock/accounting records to assist business management; and recording behaviour and performance to assist business development. An information driven business delivers information to the marketplace about products, acquires information about performance from the marketplace and its customer base, and uses information to set goals and determine strategy.

We saw that the overnight success of a dot-com is no guarantee of future growth. Success has always been about sustaining business development and this will not change in the future. Information Management is the vehicle to facilitate this for e-Businesses. There are three levels to how an SME can exercise Information Management:

- Entry Level: Use of web and databases to establish an adequate technical platform to enter the e-Marketplace and sustain business growth.
- Intermediate Level: Focus on selected business goals using advanced technologies.
- Advanced Level: Replicate across business and use combined technologies.

Some of the advanced Information Management technologies are data mining, text mining, customer profiling, company profiling, and use of temporal data. Each one of them is related to a relatively large research area, hence out of scope of this paper.

To start from the entry level, an SME has to be aware of the required technology:

- *Local Network* (Intranet) allows faster exchange of information, sharing limited resources such as Internet connection, printers, scanners, CD-writers, etc., and assists group working activities.
- *Databases* allow proper management of data, which is crucial. All companies obliviously have databases of their products and customers, mostly paper-based. Putting them into a digital medium is vital and it would also help the SME

to handle enquiries originating due to European data protection laws.

- A *web site* gives easy and efficient access to the database, allowing the company to collect more data about its customers and their habits while the customers can browse through a product catalogue, select and purchase items.
- *Internet connection* makes all of the above globally available 24-7.

When customers buy from a company via the company's web site, this is called Business-to-Consumer (B2C) e-Commerce. The company can give their vendors, merchants, and partners some level of access to their database, directly via a local connection or thorough the Internet. Any transaction done this way is considered to be Business-to-Business (B2B) e-Commerce.

All of the above are affordable by SMEs as long as the technology is harnessed properly. Technology must dovetail with the business process, the people who work together to make the business work, the information people need to do their work, access to and presence in the marketplace, and access to customers and trading partners. How to accomplish this is explained in the following section.

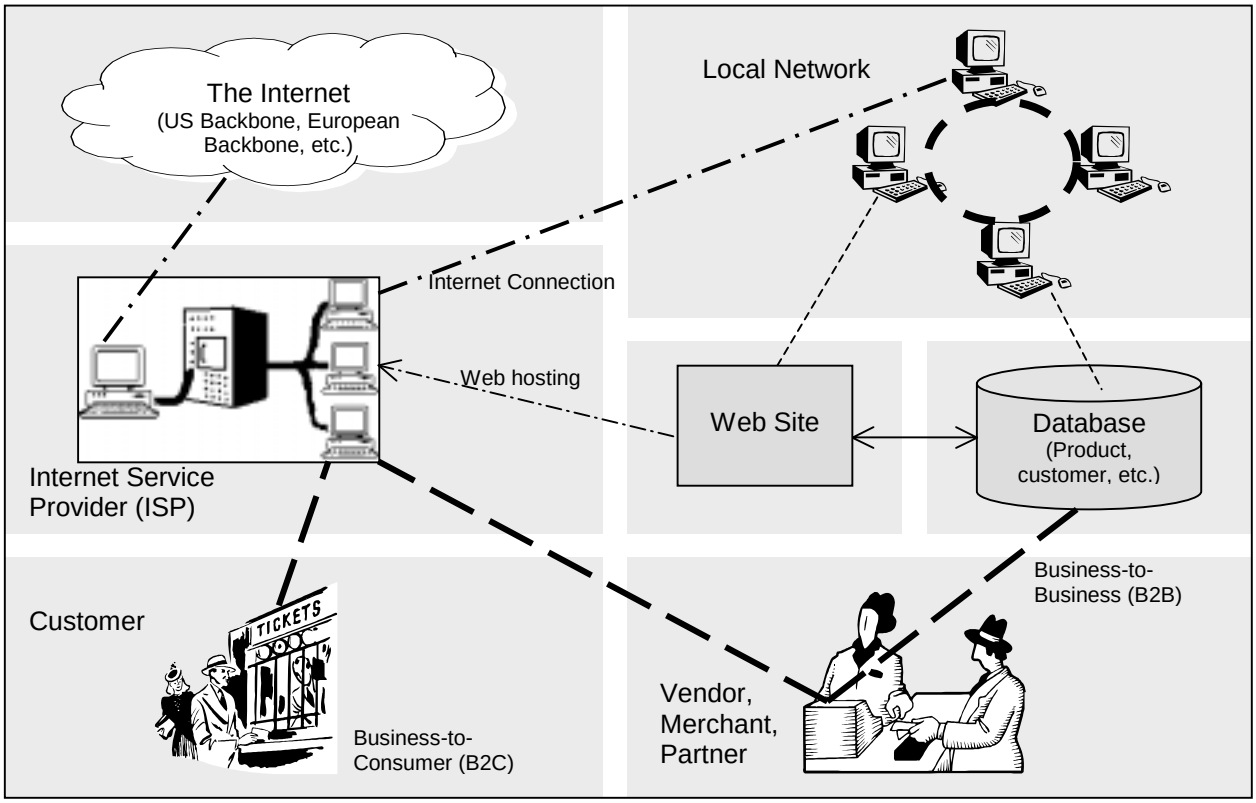

Figure 2: Technology building bricks.

How should an e-Business Be Set up? (Baking the e-Cake)

Baking a layered cake is straightforward. You first decide on the flavour, then prepare the layers, put cream between them, and put some icing on top when finished. You can then sell each slice for an acceptable price in the market. Not every cake is unforgettably delicious however. If your cake is adequately delicious to achieve acceptance, you build on your reputation and experiment with new icings, new types of cake, different sizes, etc. Setting up an e-Business is similar to baking a cake.

There are two layers to the e-Cake: the Business Model layer and Technical layer. A Business Model is "an architecture for the product, service and information flows, including a description of the various business actors and their roles; and a description of the potential benefits for the various business actors; and a description of the sources of revenues" [Timmers, 1998]. An e-Shop model, for example, allows a company to market its product and services and lets customers buy from the company through the use of a technological infrastructure. The Technical layer is the IT platform that enables the day-to-day operation of a business model and gives it access to the e-Marketplace. Building the Technical layer involves the selection and integration of the technological building bricks such as databases, web site, internet connection, etc., that were explained earlier.

In the e-Cake analogy, an e-Cake represents the market share, which an e-Business can potentially gain in an e-Marketplace, whereas a slice represents the minimum share to get into the marketplace to begin with. Refer to Figure 3 for a pictorial representation of a slice.

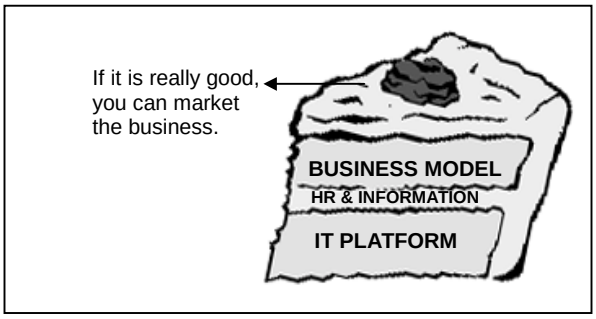

Figure 3: e-Cake

Layers with different sizes and divergent tastes do not make a good cake. All the layers should fit together and with the market. A complex business model and a supporting weak technical platform do not go together, for example. The opposite is also valid: Overspending for technology to support a weak business model would make the whole venture vulnerable to potential competitors. Both these layers should be supported by sufficiently trained people and adequate information for them to run the operation. All this in the end should fit together with the e-Marketplace. If there is no existing demand for the products or services the business provides, or a plentiful demand could not be generated by marketing, the first option to be considered by the management should be to not go through with setting up the business. Finding the right *balance* between these factors is crucial.

From the management perspective, the goals are choosing the right model for the business, delivering it into service, and getting a return on investment. From the technical perspective, the goals are building the technical layer, supporting its use, maintaining it and evolving it to requirements (Figure 4). The management considers the following steps to evolve the slice:

- Market analysis for business/product base;
- Set clear goals and strategy;
- Choose a basic business model or create one and determine its refinements to meet the opportunity;
- Create a unified model, and identify information requirements and skills considerations;
- Take into account legal considerations;
- Match to a technical configuration that can support this;
- Design and cost;
- Build and validate technical solution; and
- Introduce to service.

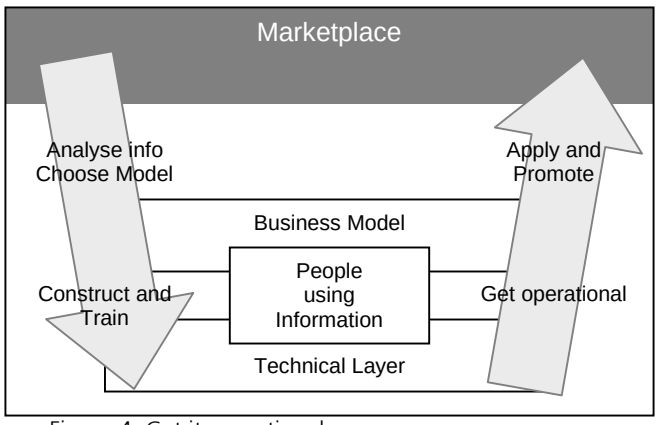

Figure 4: Get it operational

Although it sounds straight forward, this process is what makes baking the e-Cake a complex task for SMEs. The process explained above is a *cycle* and to assure continuous competitiveness, e-Businesses have to go through this cycle every day. Staying on the higher ground requires not only following up the market but also creating new business models, lobbying for laws, developing alternative technical solutions, and many other tasks; in other words, the business must drive the technology rather than the technology driving the business. The challenges for SMEs are twofold: First, to go through that cycle even once, an SME should have the necessary financial and human resources. Second, the Internet, along with related technologies and laws, are the most rapidly changing media ever and that makes it hard for SMEs to cope with the pace. This is a culture an SME should gain if it wants to be a part of the digital economy and it is solely up to the SME to acquire it.

The product of the mentioned cycle is an enabler for the niche business. If the product is good, someone might buy it. This is one of the most imperative features of e-Businesses: *The brand should be able to sell itself along with the product or service being sold.* Even though this

concept is perceived differently by large organizations, it has the following two meanings for SMEs:

i. Trade in e-Commerce is done over a technological platform, which in a sense hides the business behind the technology being used. In return, building trust in e-Commerce is a noteworthy issue. A single-person company might *look* as big as Amazon.com if the web site is good enough. The opposite is also true. A very large corporation might look small if its web site does not reflect the size of the business. The web site, or in more general terms, the interface that is used to interact with the customer, is the icing. Every measure should be taken in order to ensure that the icing is good enough to make the cake recognized among the many others next to it. A customer, for example, should choose a web site from within a large list produced by a search engine and trust the contents to buy from it, i.e. 'pay for the brand name' along with the cost of the product.

ii. The know-how gained while going through the cycle once is exceptionally valuable. If an SME achieves that in a niche market and builds a brand image, it could well be acquired by a large corporation. Before the recession in the digital economy, we saw many examples of such cases. Most of those ventures proved unable to get the balance of their slice right however and no longer exist today. This makes the successful e-Business ventures even more valuable.

For SMEs to achieve such success, we have some recommendations. To begin with, focusing the business from the first cycle is a fundamental notion. As emphasized before, the slice should be balanced and complete. It has to have adequate width to focus on business goals and depth to sustain follow through return on investment. Another bit of advice we give to SMEs is the old saying, "Don't bite off more than you can chew." A slice that is big enough to cover the aim is all that is needed for starters. A smaller slice wouldn't be enough to get over hunger, i.e. wouldn't satisfy the demand, just like a large one would be left on the plate, i.e. it would be overspending on something that wouldn't be fully used. There are also many potential risks involved in each step. The SME should know and be able to manage those risks.

Once the first cycle is successfully completed, it is then about growth and sustaining the e-Business, which is again part of the e-Commerce culture mentioned before. The SME should develop the ability to refocus on a new niche. Business should be prepared for new ventures, such as:

- New, bigger slices could be prepared. Amazon.com, for example, started off by selling books, then expanded its product line to include goods from electronic devices to baby products.
- Different types of cake could be baked. A successful e-Shop operator might decide to open an e-Mall or an e-Auction site, for instance.
- The same slice could be sold with various icings. The e-Business could be expanded to foreign markets with the local language support, for example.

If an opportunity arises, the business should be configured for the new venture.

There is no predefined formula to guarantee the success of a business. Not every cake baked has the same taste. Likewise, not every business is guaranteed to have the same quality or place in a market where conditions change with every second.

So is all this a tall order for SMEs? We believe in doing it properly or not at all. If an SME starts in the right way, growth is likely to be achieved.

It would take a good amount of time and financial resources for an SME to accomplish all that is described here on its own through experiment; thus, proper support to instruct them on how to cope with the mentioned challenges, and guidance in starting up their e-Ventures are essential. In other words, SMEs need a good partner.

Sibilo with its wide range of products and services is ready to support SMEs for starting up their e-Business. We have baked e-Cakes before and we know e-Commerce inside out. Please visit our website for more information about our services and how Sibilo can help your business to get into the Digital Economy:

www.sibilo.co.uk

[1] Supply chain is a network of autonomous or semi-autonomous business entities collectively responsible for the procurement, manufacturing, and distribution activities associated with one or more families of related products.

[2] Value chain is a high-level model of how businesses receive raw materials as input, add value to the raw materials through various processes, and sell finished products to customers.

Acknowledgements

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About the Author

Ekin Caglar, co-founder and current Managing Director of Sibilo UK, has a BSc degree in Computing Science from University of Manchester Institute of Science and Technology (UMIST). He has a wide range of expertise, from programming to networking and he specialises on Internet applications and Databases. After working on several large-scale commercial IT projects as a freelance consultant, he joined the ESF and ERDF funded eTrainer project to develop and provide e-Commerce training to local Small and Medium Enterprises (SMEs) and later on to UMIST and University of Surrey students. At present, Mr. Caglar continues to bring SMEs into the digital economy at Sibilo.