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BENE-BUS
BENCHMARKING OF E-BUSINESS SOLUTIONS
FOR WESTERN AND EASTERN EUROPEAN SMES

While the European Union is launching its main challenge through the next enlargement the co-operation between the EU member states and the Associated countries is becoming more and more critical. A closer collaboration is thus expected at economic and political level in terms of knowledge transfer, adoption of models of sustainable growth, increasing of competitiveness and development of novel opportunities for the players. Under this framework e-commerce solutions can support the strategy towards the change but their adoption, mainly by the SMEs, should be well established and as a result of an informed decision. The BENE-BUS project is in line with this approach being mainly focused to provide the Eastern and Western European SMEs with innovative assessment models and benchmarking tools aimed at improving their way to approach e-business implementation.

Introduction

Although e-Commerce and e-Business are clearly recognised as fundamental drivers in the development of both traditional and more innovative European SMEs, many problems and access barriers still exist which slow down their full deployment in the international business context. By its very nature,

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e-Business is trans-national and encourages cross-border ordering and delivery of goods and services. It directly stimulates competition in the Single Market. The Single Market, in turn, offers electronic commerce the prospect of a critical mass of businesses and customers across national borders.

But the majority of SMEs both in Eastern and Western Europe are yet unprepared to take full advantage of this opportunity, due to a range of issues addressing technological, organisational and cultural aspects.

In order to provide a systematic and effective contribution to the solution of these problems, and therefore to ensure that European enterprises, particularly SMEs, will not lag behind in the rapid take-off of electronic commerce, it is necessary, on one hand, to stimulate a range of awareness creation activities aimed at increasing the use of electronic commerce, and on the other hand, to provide tools, methodologies and benchmarking information allowing the companies to approach the important phase of going to the Internet in a structured and safe way.

The main focus of the BENE-BUS project is therefore to make SMEs aware of the benefits and competitive advantages resulting from the implementation of electronic commerce and to promote their adoption as the result of an informed decision. BENE-BUS facilitates “adaptability, employability and entrepreneurship” by enabling through the implementation of e-business solutions, the creation of dynamic partnerships as well as genuine positioning on untapped markets.

The BENE-BUS project is a best practice focusing on the E-Business and New Methods of Work in the context of international co-operation involving Eastern European Members and New Independent States and this will foster the liaisons between the EU member states and Associated countries, mainly with regard to the economic players such as SMEs, Industrial Associations and technological transfer facilitators. In addition, BENE-BUS project facilitates “adaptability, employability and entrepreneurship” by enabling through the implementation of e-business platform, the creation of dynamic partnerships as well as genuine positioning on untapped markets.

The BENE-BUS project – funded under the IST Programme of the Fifth Framework Programme of the European Union – has started the 1st December 2000 and will end in November 2002, for the duration of 24 months.

Methodology description

The methodological approach conceived in BENE-BUS is the result of a strategy which considers as central the role of the European SMEs as new players in the e-marketplace.

The idea which supports the development of the BENE-BUS methodological framework arises from the need to position the SMEs in terms of e-business potential vis-a-vis their current situation and to plan and design the transition from the latter to the former: this will enable the SME to make an informed decision as to whether they should go to the electronic marketplace or not. In addition the methodological framework will help SMEs willing to go to the e-marketplace to identify the better solution to implement with respect to their profile in term of clients, products, services, market segmentation, channels already adopted for sale and marketing.

The methodological framework which has been developed is thus structured following a twofold objective:

- to provide an assessment model allowing SMEs to analyse their positioning in the reference marketplace under the perspective of the adoption of an e-business solution;
- to provide an initial Improvement Plan enabling them to understand the best e-solution for their own business and the way to implement this.

The first step looks like a feasibility study where a strategic analysis will be carried out in order to point out the positioning of the SMEs in the market place with respect to:

- product/service
- business scenario
- market of reference
- competitors
- new comers

The second step will be a sort of process analysis with the goal to check-up the main processes of the SME in order to comprehend how the introduction and adoption of e-commerce solutions will influence them and which changes/implementations the SME will have to introduce as consequence.

E-commerce as means and opportunity to modify the sale and marketing approach, brings a new approach towards the clients, the market of reference, the product/service sold. Also e-commerce solutions have different impact on the processes of the SME: it appears thus critical to take in consideration this in the design of the methodology.

The assessment questionnaire is the main out-put of the exposed approach. It will follow a scheme finalised at producing a model aimed at designing:

- SME market positioning;
- e-commerce impact;
- impact of the decision “to go digital” on company revenues and costs.

The logical path which is thus foreseen in this phase of the project is structured as follows: development of the questionnaire, analysis of the users requirements, carrying out of an improvement plan, including a Business Plan, for assisting and addressing the SMEs in implementing the proper e-business solutions.

In this strategy a great importance is also given to a well designed awareness and dissemination campaign with the aim of promoting the adoption of suitable e-solutions: this will help European companies and organisations to draw maximum benefits from the results of successful EU-funded R&D projects in the field of Information Society and, more specifically of Electronic Commerce. Priority will be given to Best Practice cases which are deemed to be closer to the practical needs of European SMEs.

In order to allow the fruition of the BENE-BUS results by its target users (mainly, European SMEs) a set of services are going to be designed; they will be accessible through the WEB and will be further provided by the trans-national consortium. These can be summarised as follows:

- essential direct support services to enable SMEs to implement innovative business processes based on e-business solutions implementation;
- a service supplier database of existing organisational/technical resources for supporting e-business processes of SMEs will be set up;
- an alliances network enabling SMEs to operationally implement the e-platform solutions, will be created;
- a permanent web forum will allow SMEs to ask for up to date information on the funding opportunities concerning the implementation of e-business solutions and it will enable SMEs in evaluating the existing e-business platform that best fits their requirement.

These assumptions, which the BENE-BUS partners addressed when they approached the project have now inspired the design of the conceptual basis upon which to build the overall strategy of the project and to facilitate the European SMEs *to go digital*.

Accordingly BENE-BUS is producing, on one hand, a methodology to formalise the needs of each individual SME in terms of e-commerce

implementation and to design the path for transition; on the other hand, it is performing a benchmarking exercise in order to qualify the different platforms offered on the market; thus, on the basis of the SME profile and of the outcome of the benchmarking exercise, it will be possible to make a rational choice of the best solution matching the specific needs of a given SME and to suggest the best way for implementation.

The methodology will in fact be measured on the field, through the active involvement of a user group of at least 5 SMEs identified by the project partners which will actively investigate through their preferential links established in the past years with Industrial Associations, Local business links, SMEs representatives, Chambers of Commerce and personal business contacts in order to go further for the proper selection of this first users group. A total of 15 users will be thus involved in the project – namely 3 per any country in which the project is deployed (Italy, France, Poland, Bulgaria, Rep. of Georgia). It will be thus quite significant to take in consideration mostly the Central and Eastern European site as the main problems and more critical needs in implementing e-business solutions will be probably encountered there.

Significantly through the development of the overall approach adopted by BENE-BUS including the methodological framework, the users requirement analysis and the benchmarking of the e-business solutions, the consortium foreseen to concretely implement 4 pilots cases by the end of the project.

Go-no-Go decision

One of the most critical aspect of the BENE-BUS approach is the so called “**go-no-go**” decision. An **informed decision** for any company willing to implement an e-business solution is critical for making this complex choice. BENE-BUS believes that more components have to be considered for evaluate the opportunity to *go digital*. Firstly the effort and the change to be made in terms of internal processes, organisational structure, human resources and ICT. In addition the market of reference, the kind of product/service, competitors and company business strategy are critical for addressing a proper choice in this field. The regulatory and legal framework is finally the third aspect which definitively affects the implementation of an e-business solution.

E-commerce is not good for all. An e-commerce strategy can be a right choice, but not **the** right choice. It depends – as said – on different factors. The final decision to go digital should be thus taken with respect to these factors and on the basis of a detailed costs-benefits analysis. The BENE-BUS approach is following this idea but it has also considered that it is often hard and expensive, mainly for smallest companies, to go through a deeper and detailed analysis.

BENE-BUS is therefore suggesting to make a first step and to stop at an initial but concrete level taking into consideration the bent of the company towards the e-commerce and to avoid a deeper and hard analysis which could be useless if the company would not have any interest in implementing this sort of e-solutions. This first step will be then followed by others if the interest and the proneness of the company is in favour to the e-commerce.

The proposed BENE-BUS model allows to make this first step, identifying, together with the most evident and critical users requirements also the most advisable e-commerce solutions for each kind of product/services, by providing some elements to take an informed decision to *go digital*.

More specifically some of the elements which play a role in taking an informed decision and that have been considered into the users requirements analysis can be summarised as follows:

- difficulty to implement a proper e-business solution in terms of **time, costs, level of ICT adopted** by the company and **existence of e-solutions** already implemented in the specific sector;
- importance for the company of the product/service in terms of **purchase/sale and impact on turnover and costs**;
- expected improvements by **introducing e-commerce solutions for the strategic products/services**, taking into account their own main characteristics (for some typology of products/services e-commerce solutions are not suitable or have a minimum-low impact in comparison with traditional business model) and the specific **relationship of the company with its suppliers/customers**;
- **company's suppliers/clients bent/familiarity to adopt e-commerce solution** (it depends both on the intrinsic characteristics of the suppliers/clients, on the sector, and on the strength of the company to "impose" e-solutions to its suppliers/customers).

All these factors should be considered as a whole, since, for instance, the importance of the product/service or of the expected improvement can justify high investments which would not justified for less important, non-strategic products/services.

BENE-BUS e-business reference scheme

What's happen if an SME should decide to explore the opportunity to *go digital*? Why should an SME adopt an e-business solutions? Is it e-business good for all?

It is e-commerce good for my company?

It is important to underline that generally there are two reasons which could drive a company to introduce an e-business solution. The first reason is that the company is not satisfied by its current relationship with suppliers/clients and wants therefore to improve these relations. In other cases e-business models are introduced not for changing existing relationship but just to support them, i.e. creating a more efficient and fast information exchange where a partnership relation already exists or increasing the number of clients/suppliers reached where a market relation is used. It is necessary to note that also this second case, to be successful, requires an organisational change process, and not only the introduction of a new technology keeping on past work methodologies. It is just important to remind that the BENE-BUS methodological approach in general and the e-business reference scheme in particular only considers the **B2B** applications i.e. those solutions that are aimed at supporting the relationships supplier/clients. In fact the B2C models would require a different approach enabling to take into consideration the point of view and the requirements of the final user instead of clients such as other companies.

Besides this, the main problem approaching e-business models is to choose the right solutions for each company. As already mentioned, the choice of the e-strategy should be based on the kind of relationship existing or planned between the company and its suppliers/clients. In general, existing e-business **B2B** solutions can be divided in three groups, depending on the effects that they produce.

Solutions aimed at reducing purchase prices by strengthening the market mechanism. In particular, Internet-based solutions are useful to reduce informative asymmetries and make available a complete information. That means that clients can reach a larger number of potential suppliers, can compare their products and their prices, and can choose the better solution for their needs. All this in an easy, time saving and inexpensive way. Moreover, using e-business solutions, buyers can concentrate in a single order the demand from various branches, gaining better purchasing conditions, and suppliers can reduce surplus stock and better utilise production capacity, reducing their costs. Examples of these technologies are all the kinds of *e-Auctions*, that offer an electronic version of the traditional bidding mechanism, and the *buyer aggregation sites*, where groups of buyers agree in order to lower the price of the product/service they will achieve.

Solutions aimed at increasing the efficiency of the supply process, through the introduction of standard procedures. In this way it is possible to reduce the time needed for the transactions, to automate more repetitive

activities, and to reduce the number of errors that may occur in the managing of the order. At the same time, e-Business solutions allow real time information exchange between buyers and suppliers and reduce transaction costs introducing a direct client-supplier relation (no intermediaries) and reducing logistic and distribution costs. Most diffuse example of these solutions are *e-Procurement* systems implemented by buyers to reduce their transaction costs optimising internal processes of procurement and increasing the number of possible suppliers in order to improve purchase conditions. In a similar way, *vertical-hubs* increase the efficiency of the supply process offering a common Internet-based environment where buyers and suppliers can meet. In some cases e-hubs are focused on a single industry or a specific business process, in any case they are enhanced by tools that facilitate and support the transactions, reducing total purchasing/ selling costs.

Solutions aimed at strengthening the supply chain integration. Since these technologies allow to share information, data, and knowledge in a safe, easy, and time-saving way, they can be used to increase co-operation between companies. In particular the *collaborative tools* are solutions that provide a shared environment and a set of tools for co-operation. They are usually focused on specific functions, such as co-ordinated planning, collaborative design, document sharing, or joint engineering. Basically these tools allow to reduce duplicate activities in the supply chain and better allocate available resources, and are aimed at creating a strength and lasting relationship between suppliers and clients.

It is important to underline that this classification is neither univocal nor exclusive. In fact, available e-business solutions are even more complex and flexible, and they usually contain various tools addressing different issues and aims. Nevertheless, this analysis allows to define a reference scheme that identifies, for each kind of supplier-client relationship, the better e-business solution to be used.

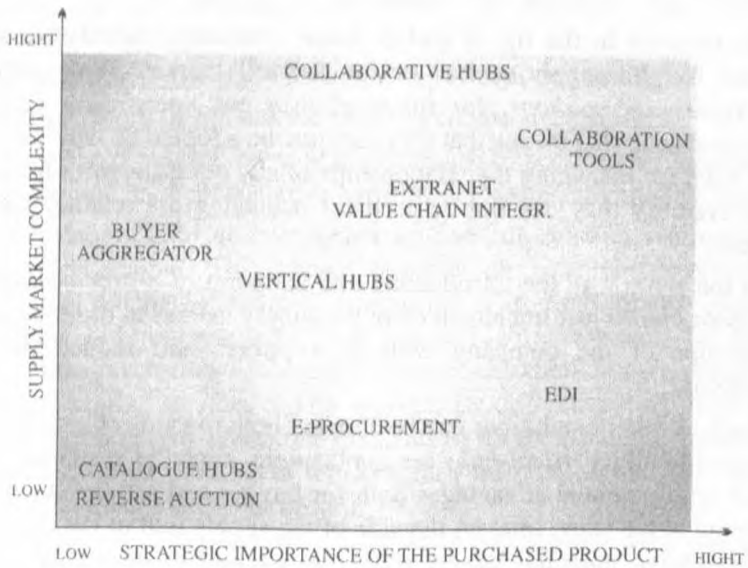


Fig. A The e-Business reference scheme: purchase market complexity

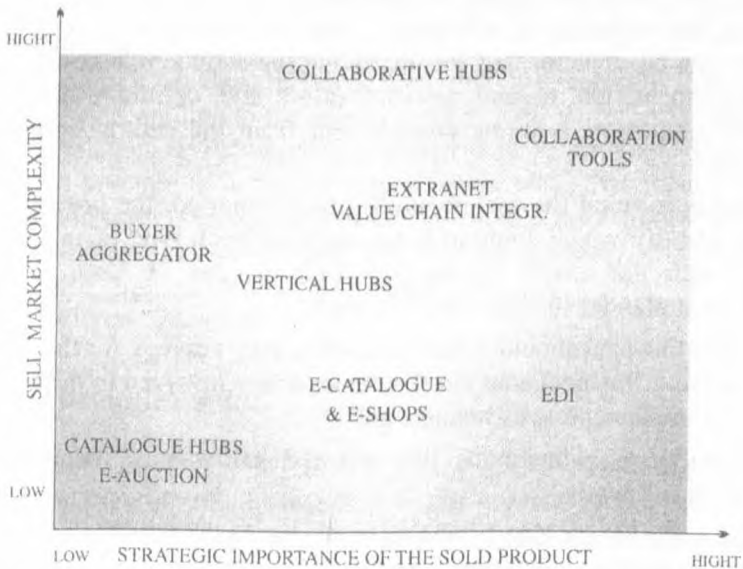


Fig. B The e-Business reference scheme: sell market complexity

As reported in the fig. A and B, some e-business models are specifically designed for the supply market or for the sell market. With respect to the *e-catalogues* and *e-shops*, for instance, they are specifically conceived for selling products; this means that they can just be adopted as way for selling and can be used for managing the relationships of any company with its own clients. On the contrary they can not be used for managing the relationships with the suppliers.

In the same way the introduction and adoption of *e-procurement* or *Buyer aggregator* can be just implemented in the supply market in order to improve the relationships of the company with its suppliers and reduce the costs for transactions.

Such as other e-solutions can be adopted both towards clients and suppliers. More specifically *Vertical-hubs* are applications aimed at matching supply and demand with potential advantages both for buying and selling. *Auctions* can be considered at the same time on the side of the supply and of the demand. Under this perspective potential buyers starts the bidding by requiring a product at a maximum price; potential sellers compete in a Dutch auction in order to gain client.

Regarding *Extranet*, *Collaborative tools* and *EDI* it is possible to assume that they are solutions aimed at enhancing the supplier/client relationship, favouring the exchange of information and automating some operations. This solutions can be implemented for improving the supplier/client relationship but their implementation require relevant effort and definitive interest of the involved companies, a strong commitment from the central company of the supply net.

Bearing in mind the specifications above reported, the presented schemes allow to identify which solution better supports each type of relationship and, together with the results of the gap analysis, can be used to define the improvement plan for the considered company.

Finally this plan should define the outsourcing strategy for the development of the chosen e-Business solution. The main actors involved in the technological support for implementing e-Business are:

- Equipment providers: who provides the hardware (Computers, Servers, Networks, Routers, ...)
- Basic Software providers: who provides the basic software to run hardware and to implement e-solutions packages
- Internet access providers: who allows the connection to Internet

- Computing service provision: providers of services for hardware management and assistance
- Financial services providers: who supports payment transactions
- Logistic service providers: delivery and warehouse management
- Internet service providers: provide a wide range of services for Internet, like web site creation, e-catalogue development, marketing, advertising, etc.

Each company should choose which services to develop internally, and which one to out-source. This choice depends on size, competencies and resources of the company: usually, companies with high brand awareness develop original, in house solutions (that require high investments for internal integration and management), while small enterprises exploit simple outsourcing solutions. These kind of services can be provided by different actors or by single actors (called merchant providers) that concentrate all the needed capabilities in one global and complete package of services; they manage back office and front end aspects of the e-business solutions.

The more innovative model of technological outsourcing for e-business is the ASP, Application Service Provider. ASP is a company owning server and software running on it; the users/clients pay the access to application, and manage it through browsers or simple equipment put in their local PCs. The ASP is a further intermediary between users and software provider. The ASP model reduces costs for implementation and so facilitates SMEs to access the e-business environment.

In conclusion, it is thus recommended that the company chooses its e-business strategy according to the overall strategy and, in particular, according to the kind of relationship it wants to establish with its suppliers and clients. Afterwards it is possible to define an improvement plan, that should consider both technical and organisational aspects, and human resource involvement. This plan should also define the outsourcing policy of the company, considering the available and the required skills and competencies, and comparing costs and effects of the different solutions.

Expected strategic results

The BENE-BUS project developments will be critical under different ways.

As first the support and enhancement of the competitiveness of European SMEs (both in European Union countries and in Central and Eastern European Countries) by facilitating their access and fruition of the electronic commerce marketplace.

Moreover an increase of the co-operation level among Western and Eastern European countries entities including Trade Associations, Public Administrations, Educational and Training centres, legal assistants, financial and investment institutions, is expected in order to increase the level of implementation of a Single European Market.

BENE-BUS will continuously promote permanent awareness raising and dissemination actions aimed at supporting and fostering the competitiveness of European Small and Medium enterprises through the use, customisation and integration of e-platform solutions enabling a new way of managing their business processes and in the assistance to SMEs in implementing best practice solutions (in the field of e-applications) deriving from the results of previous Information Society R&D projects.

Finally it will sustain the Eastern and Western European SMEs in partaking in EU funding Programmes, thus increasing the level of international relations via joint European R&D Information Society projects.

Business benefits

Within this context, the BENE-BUS project will have twofold immediate impacts: on one side the vigorous growth of electronic based processes implementation within Eastern European SMEs will be encouraged; the expertise and skills grouped in the trans-European project partnership including SMEs associations, e-solutions providers, consultancy companies and research centres, is deploying a set of services and tools able to sustain and promote the proper adoption of e-business applications mainly targeted to the SMEs. The evident business benefits can be thus considered under a different perspective: for the potential users the analysis of their requirements and the aware positioning on the marketplace will enable them to adopt an informed decision whether to go digital and to fully adopt a series of steps at organisational, managerial and technical level including HR, training, IT, BPR with the goal to implement the best solution. The services providers will enhance their competencies and will develop new ones in view of the establishment of critical support services system tailored for Eastern Western European enterprises, SMEs representatives, Trade and Industrial Associations, Business Links and any other interested entity willing to exploit the opportunities arisen with the e-commerce.

Conclusion

The enhancement of the Eastern and Western European SMEs competitiveness in the e-commerce marketplace can be considered the main contribution of the BENE-BUS project both to the challenge for the SMEs to go digital and for the Associated countries interested in the forthcoming enlargement to adopt novel models of developments and to provide the players acting on the marketplace with solutions, methodologies and support tools enabling them to improve their performances and to stay on the market more competitively.

Thus it is expected that the successful completion of BENE-BUS will provide a significant boost to the take-up of e-business solutions in European SMEs with a particular emphasis on East-West business links.

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