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Enlarged Europe by a Smart Service Infrastructure”
STREP – Information Society Technologies (IST)

Deliverable D1.3
New Organization
and Business Models
(1st issue)

Work package WP1 – Collaboration Framework
Task T1.3 – New organization and business models

Abstract			
<p><i>This report presents the preliminary outcomes from task T1.3 by foreseeing the work organization of Craft & Trade companies and of mediators belonging to different categories, in the perspective created by the deployment of the SEAMLESS solution. The report describes four core elements of SEAMLESS business models: Value proposition, Customer interface, Infrastructure management and Financial issues, based on current SEAMLESS project achievements and its vision. During the next phases of the SEAMLESS project each element of business models will be further evaluated and elaborated to prepare the final version of “SEAMLESS business models” for successful full deployment of SEAMLESS services in the business environment.</i></p>			
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1 Executive Summary

This report presents the preliminary outcomes from task T1.3 by foreseeing the work organization of Craft & Trade companies, and of mediators belonging to different categories, in the perspective created by the deployment of the SEAMLESS solution. These types of work organization are translated into the tentative business model that appears more suited to benefit of the new dynamic collaboration opportunities.

SEAMLESS will result in collaboration network for small Craft & Trade companies from the textile and building & construction sector to make them not only take part in the Single European Electronic Market but play also a competitive role in it.

The innovation of SEAMLESS business model is in its value adding services for target audiences and especially from the organizational perspective in strong involvement of mediators which is crucial due to the current nature of business operations of Craft & Trade companies which due to the lack of resources often relay on services of different mediators (ICT/ASP providers, chambers of commerce, chambers of craft or other similar associations).

Deliverable consists from 5 chapters. Chapter one is the “Introduction” chapter, which introduces why SEAMLESS solution is essential for Craft & Trade companies from the perspective of its distinction from existing web based e-marketplace business models.

- Chapter two refers to the “Business models” and describes the existing “Business model definitions” and introduces the existing “E-business model taxonomies”.
- Chapter three describes “Business models ontology”, composed of business elements: “Product innovation”, “Customer relationship”, “Infrastructure management” and “Financials”. This chapter introduces the overall adopted methodology for SEAMLESS business models definition.
- Chapter four describes SEAMLESS business model definition, starting with the SEAMLESS network, business scenario and services. Four business elements are described in more details. First business model element is “SEAMLESS Value proposition” which is described based on SEAMLESS value added services, opportunities and threats of its usage. Second business model element is “SEAMLESS Customer interface” described by target customers and distribution channels. Third business model element is “Infrastructure management”, defined by capabilities and partnership. The last business model element is “Financials”, composed by of “revenue models” and “cost structure”.
- Chapter five describes the remarks and further needed steps for the final issue of “New business model” definition.

This deliverable among other incorporates results from D.1.1 Requirements specification, a comprehensive analysis of the requirements collected at a significant sample of end users and mediators, D1.2. Trusted operational scenarios – defined trusted operational scenarios to capture the essence of collaboration, D3.1 Overall architecture design and D6.3.1 Exploitation and Deployment plan.

Starting from this basis, and taking into account the experience brought to the project by other RTD activities, new organizational and business models are presented in this document tentative “New eBusiness models – 1st issue”. “New business model” deliverable relays on current and expected future SEAMLESS project achievements and its vision. Based on the further SEAMLESS project development and research and SEAMLESS pilot’s feedback, new (final) issue of “New Business models” incorporating Business plan will be presented by the end of project.



2 Introduction

Small and medium-sized enterprises make up the backbone of the European economy. Across the EU, there are around 23 million SMEs; that is 99% of all enterprises. And SMEs account for about 75 million jobs. And in some key industries, such as textiles, construction and furniture-making, they account for as much as 80% of all jobs (European Commission, Enterprise and Industry (1)).

Use of modern ICT enables simplified and more effective and efficient business processes in organizations and between organizations. Development of new ICT enabled also the appearance of new service providers attracting many customers and suppliers by mediating in their business and collaboration. This result also to the new business models. One of this new business models are also e-marketplaces, which are defined as an internet based inter-organizational systems, bringing additional values to customers and suppliers (Bogataj and Pucihar, 2007; Gričar et al, 2005, Pucihar and Podlogar, 2004).

Business-to-Business e-marketplaces (“B2B e-markets”) bring together buyers and suppliers and enable them to trade on-line. In 2002, a market consolidation started, which had as positive effects on the development of new business models. Today, B2B e-markets contribute to improving efficiency and enhancing the productivity and competitiveness of European enterprises. E-markets also offer new possibilities to SMEs to access global markets and to broaden their customer base in a cost-efficient way (European Commission, Enterprise and Industry (1)).

Basically e-markets offer many opportunities to the buyers and sellers. They enable sellers to enter new markets, to find new buyers, and to increase sales with the respect to their competitiveness. On the other hand, e-markets give buyers access to a broader range of products and services offered by sellers, they can quickly compare various offerings by price and performance measures, negotiate and simply choose the best offer (Gajšek and Pucihar, 2004).

Large organizations usually adopt modern ICT and new business models much faster than SMEs, which more often stay behind (Bogataj and Pucihar, 2007). SMEs report about practical difficulties in successfully participating in such trading platforms (European Commission, Enterprise and Industry (2)). According to the data of the European Commission DG Enterprise and Industry the use of B2B Internet trading platforms may sometimes result in an uneven distribution of costs and benefits, to the disadvantage of SMEs and small suppliers. SMEs often lack of awareness, e-business readiness and resources (human, knowledge, IT and financial) (Bogataj and Pucihar, 2007). Many SMEs also consider a lack of trust and confidence as barriers to their engagement in B2B trade. In addition, there is widespread uncertainty about which B2B Internet trading platforms are reliable and sustainable, taking into account the still rapidly changing business environment in this field (European Commission, Enterprise and Industry (2)).

In order to be widely accepted, B2B e-markets should offer benefits both to buyers and sellers. This requires a reliable and trustworthy environment for electronic transactions, based on the principles of mutual fairness and partnership. Thus, there is a need to develop business practices that facilitate consensus, cooperation and business integration (European Commission, Enterprise and Industry (2)).

Direction in which e-markets will evolve is still quite uncertain, because of quickly changing environment and fast development of e-Commerce technologies. Many e-markets fail due to the insufficient value adding service provision and related to this lack of critical mass and liquidity problems. Many of e-markets merge in order to offer wider range of value added services to its customers (as for example FreeMarkets & Ariba in 2005). In the long term, only e-markets that will offer the most value added services will survive in the turbulent global economic environment (Pucihar, 2002).

Nowadays new business models are rapidly emerging due to the business environment change and fast IT development. European Commission ascertains a certain need to specifically address the needs of SMEs which represent 99% of all enterprises in EU to help them to participate and benefit from the Single European Market. Many actions are taken and many projects are funded towards supporting SMEs to faster adoption of new ICT to enable them equal participation in competitive environment.

SEAMLESS project intends to study, design, develop and experiment an advanced ICT-based service to enable a well-identified category of small enterprises, the so-called Craft & Trade companies from textile



and building and construction sector, to access the eBusiness space created by the Single Electronic Market of the Enlarged Europe (SEEM) and play an active role in establishing and running frictionless dynamic collaborations by gaining visibility, establishing relations with new partners, and collaborating across sectorial and regional boundaries.

In order to overcome limitations of Craft & Trade companies specifically in resources and innovation capability, they will be supported by intermediary organizations (mediators) that will help in adopting new technologies, adapting them to their specific needs and assuring the needed trust level.

The SEAMLESS project aim is to study and develop a suite of simple (entry level) trusted applications and services, provided by mediators, enabling the intended companies to start acting in the global electronic market with no relevant cultural, linguistic and technological restraints. This is considered the minimum condition, for the target companies, to overcome their resistance to change and achieve the critical mass which is necessary to recover their fundamental role of pillar of the European economic fabric.

Thus, it is the objective of the SEAMLESS project to study, develop and deploy such elementary services and involve mediators to provide them in the frame of a well-known and trusted environment. In order to find out the basic required functional support it is worth analyzing what happens when two companies discover each other as interesting partners and, after then, when they regularly collaborate

This deliverable focuses on first description of possible new business model for exploitation of SEAMLESS results and network to the SMEs in textile and building & construction sector.

Based on the further SEAMLESS project development and research and SEAMLESS pilot's feedback, new (final) issue of Business models will be presented by the end of project.



3 Business models

3.1 Business model definitions

Today, the borders of organizations are becoming more transparent and organizations, enabled by ICT, cooperate in changing constellations. Information, services, and products can be offered by sub-units of organizations, by single organizations or by collaborations between companies (Bouwman, 2003).

Information technology has enabled companies to redefine their business models and to reorient their internal capabilities. They are finding it necessary to collaborate in order to execute efficient operations that reduce time, costs and also fulfill customer’s demand in order to gain the competitive market position.

Business model consist of interrelations of three elements business strategy, business organization and ICT usage and together with legal and social environment, competitive forces, customer demand and technological change impact on company’s business model definition as described in figure 1.

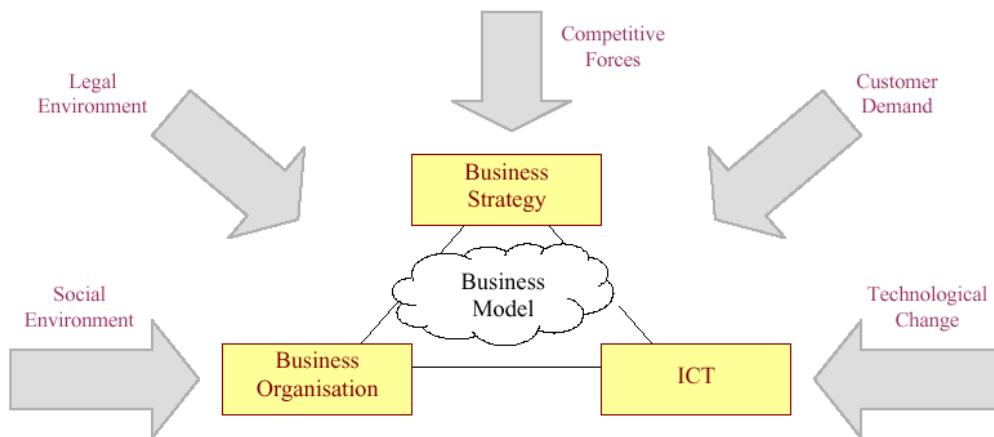


Figure 1: Environment, Business Models, Strategy, Process and Information Systems (Osterwalder, 2004)

As traditional models of eBusiness integration as EDI (electronic data interchange) are good for well-defined trading relationships, enabling point-to-point interfaces to support business transactions; there are also many promising business models, enabled by the latest ICT and Internet solutions, supporting efficient supply chain collaboration environment. One of these business models is also called e-markets.

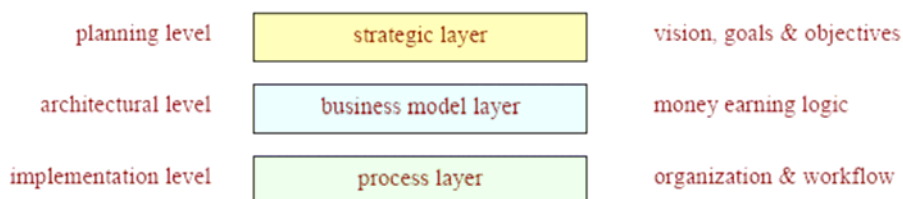


Figure 2: Business layers (Osterwalder, 2004)

Nowadays new business models are constantly emerging in e-commerce (Osterwalder and Pigneur, 2002).

Strategy, business models and process models together address similar problems (e.g. earning money) on a different business layers as introduced in figure 2.

A large portion of the extensive body of literature on business models is devoted to understanding what a business model is. There are many business models definitions by different authors. In 1998 Timmers defined business model as: (Timmers, 1998)

- An architecture for the product, service and information flows, including a description of the various business actors and their roles
- A description of the potential benefits for the various business actors
- A description of the sources of revenues.

Rappa (2005) further defines business model as a method of doing business by which a company can sustain itself - generate revenue. The business model spells-out how a company makes money by specifying where it is positioned in the value chain.

According to Weill & Veale's definition, business model can be defined as the description of the roles and relationships among a company's consumers, customers, allies and suppliers that identifies the major flows of products, information and money, and the major benefits to participants (Bouwman, 2003).

As described by Petrovic et al, a business model describes the logic of a "business system" for creating the value that lies behind the actual processes (Petrovic et al, 2001).

Osterwalder and Pigneur define business model as a description of the value a company offers to one or several segments of customers and the architecture of the company and its network of partners for creating, marketing and delivering this value and relationship capital, in order to generate profitable and sustainable revenue system (Osterwalder and Pigneur, 2002).

Regardless of the term used, most agree that the accelerating growth of eBusiness has raised the interest in transforming traditional business models or developing new ones that better exploit the opportunities enabled by technological innovations. (Pateli & Giaglis, 2004)

E-business model adoption depends on following groups of factors (e-Factors, 2003):

- *Technology*. The company must consider them as factors in different business models which are closely dictated by external factors, like the state of technological development, user preferences and expectations, competitive environment etc. In e-business, the company should be able to ensure the overall functionality of its web services, and to make sure that technological infrastructure is conjoined with the customer needs and with other environmental factors (competition, IT-infrastructure of the region etc.).
- *Individual*. The individual thematic priority deals with the individual on a micro level and provides valuable insight into the mental processes that influence an individual's decision-making. The issue of an individual's behavioral patterns in respect to technology acceptance and adoption as well as eBusiness acceptance and adoption is very important. Individual differences can rise from propensity to trust, individual's background, environment and past experience.
- *Organization*. Organization must be understood as intra- as well as inter-organizational. It is very important to be aware that success of eBusiness model does not come out just from using the latest information technology. Main business model pillars should be considered and defined, including organization and management elements.
- *Industry*. Adoption of e-business models can be influenced by industry structure and vice versa. With respect to this influence, many organizations follow the development and meet new, dynamic models approaching the suppliers and access more customers (products customization, differentiation).



- *Society*. As new e-business models lead to new business processes and practices the influence on individual's behavior can be expected. Furthermore, the influence can be perceived in society as a whole in peoples' everyday life as much as they will affect work and employment.

A good business model remains essential to every successful organization, product or service; it incorporates the underlying economic logic that explains how value is delivered to customers at an appropriate cost (Magretta, 2002) and how revenues are generated.

How to select business models? They are usually represented by a mixture of informal textual, verbal, and ad-hoc graphical representations. These representations typically limit a clear understanding of the e-business issues that confront the stakeholders, and often perpetuate the existing gap between business executives and IT developers who must create the e-business information systems. (Cao & Chai, 2004)

3.2 E-business model taxonomies

A business model typology or taxonomy is a way of classifying different types of business models. Authors describe and classify different business models. Some of them are introduced in this chapter. Understanding of various existing business models is necessary in order to derive the new business model appropriate for SEAMLESS solution.

According to Timmers (1998), business models are versus the functional integration and degree of innovation. Timmers describes the following e-business models, which classification is show in Figure 3:

- e-shop,
- e-procurement,
- e-auction,
- e-mall,
- trust services,
- info brokerage,
- value chain service provider,
- virtual community,
- collaboration platform,
- third party marketplace and
- value chain integrator.



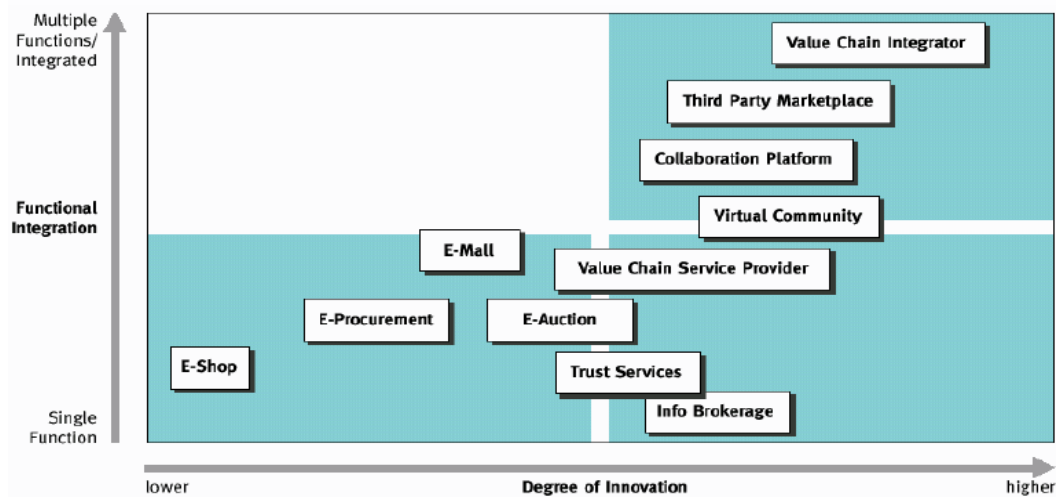


Figure 3: Business models for Electronic Markets
(Timmers, 1998)

Further on to the business model definition, Rappa (2005) presents the following categories of business models:

- Brokerage
- Advertising
- Infomediary
- Merchant
- Manufacturer (Direct)
- Affiliate
- Community
- Subscription
- Utility

Vitale and Weil (2001) define business model taxonomy as:

- Content Provider
- Direct to Consumer
- Full Service provider
- Intermediary
- Shared Infrastructure
- Value Net Integrator
- Virtual Community
- Whole of Enterprise /
- Government

Further on Turban et al define e-business models taxonomy (Viehland, 2005):

- Online direct marketing
- Electronic tendering systems

4 Business models ontology

Nowadays, business models are very complex, particularly those with a strong ICT and e-business component. The relationship between the different elements of a business model and the decisive success factors are not always immediately observable (Osterwalder, 2004).

Osterwalder & Pigneur (2002) have adopted a definition that illustrates how a business model actually works. More specifically, the authors indicate that a business model consists of four main pillars that encompass the product and service proposition of the company in the market, the customer relationship that the company maintains, the necessary infrastructure that will enable the company to realize all the above and lastly the financial aspects of the company as it can be seen in the figure 4 below.

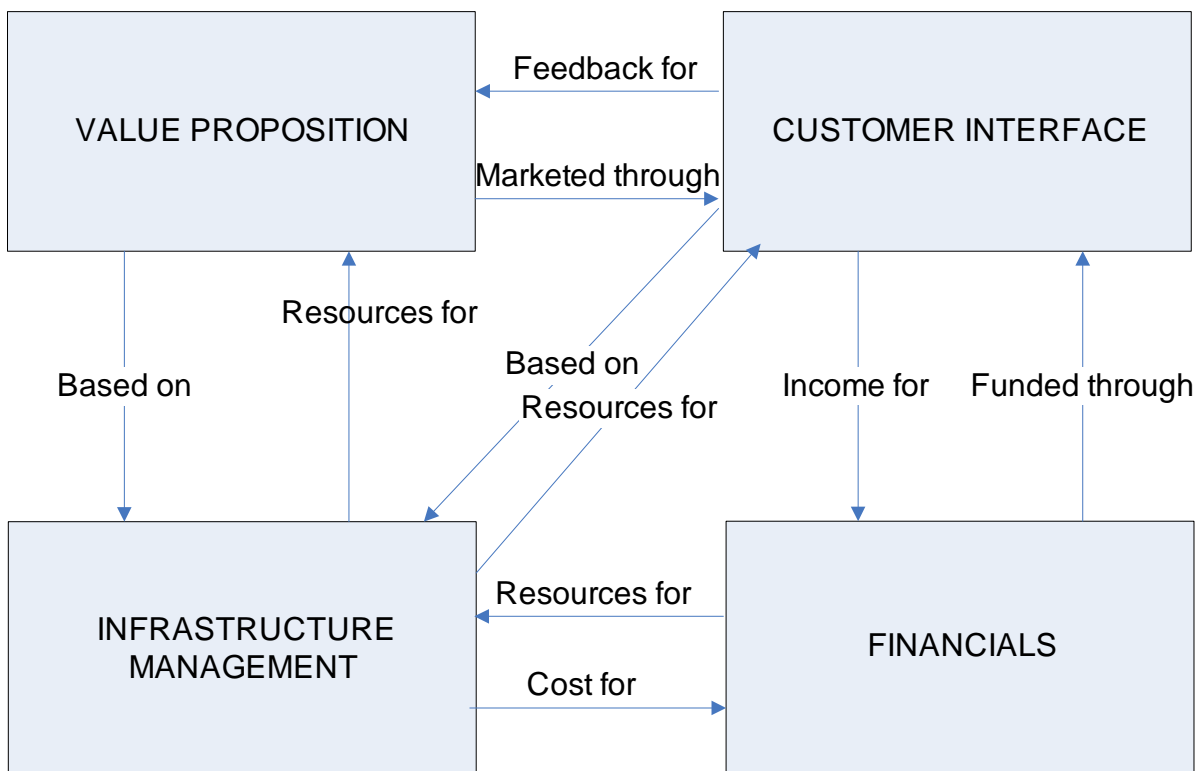


Figure 4: Business model pillars
(Osterwalder, Pigneur 2001)

Clear definition of business model pillars and their interconnections supports company to ascertain the gap between current state towards wanted business scenario in order to survive and (or) expand the market position.

Providing value to the customers is the essence of a customer-focused approach – without it, company can not do business. The question is: “What customer benefits does the company provide that create value for customers?” There are a large variety of ways to provide customer value, and not all of them will make sense in every situation.

It is recommended that companies brainstorm on each of these value propositions within the context of their own businesses to determine the potential applicability (Hoffman & Novak, 2003).

In following sections, each business model pillar is described in detailed, with the interconnections to SEAMLESS network and possibilities for business model adoption.

4.1 Value proposition

Pillar	Building Block of Business Model	Description
Product	Value Proposition	A Value Proposition is an overall view of a company's bundle of products and services that are of value to the customer.

Table 2: First business model pillar: “Value Proposition”
(Osterwalder, 2004)

The “value proposition” element covers all aspects related to the offering of the company. This comprises not only its products and services but the manner in which it differentiates itself from its competitors. Moreover, the ability to offer value to a customer demands a range of specific capabilities.

“Value proposition” element refers to the value the company offers to a specific target customer segment. ICT has created many new opportunities for value creation on the one hand and more efficient value creation on the other hand (Kambil et al., 1997).

A value proposition is characterized by its attributes (Osterwalder, 2004):

- Description (describes a part of a firm’s bundle of products and services)
- Reasoning

Captures the reasoning on why the firm thinks its bundle of products and services could be valuable to the customer – normally value is created either through use, reduction of the customer’s risk of by reduction of his efforts:

{Use}- The value of products/services derives when their attributes (e.g. features, value-added services...) correspond to customer’s needs.

{Effort}- The value of products/services derives by reducing customer’s efforts, usually through lower search, evaluation, acquisition costs, but also cheaper maintenance...

{Risk}- The value of products/services derives by reducing the customer’s needs.

(E.g. financial)

- Value level

It allows a firm to compare itself to its competitors, the most often using qualitative value scale. The measure goes from me-too value, over innovative imitation and excellence to innovation

{Me-too}- Services/products do not differentiate from the competition’s offerings.

{Innovative imitation}- Imitation of existing offerings, with new innovative elements.

{Excellence}-the value is pushed to its extremes.

{Innovation} - Introduction of a new service/product or a revolutionary combination of products/services.

- Price level

The attribute compares the value proposition’s price level with the ones of their competitors. The scale goes from free, over economy and market to high end.

- Life cycle (optional)

It should be studied over its entire life cycle

A company generally creates value for a specific customer segment. The definition of the market scope (Hamel, 2000; Afuah et al., 2001) captures the essence of where the company does and does not compete – which customers, which geographical areas, and what product segments.



To deliver the value proposition to different customers, a company must ensure that it possesses the range of capabilities that underpin the proposed value. Several authors describe how value and competencies or capabilities are interconnected (Bagchi et al., 2000; Wallin, 2000). Capabilities can be understood as repeatable patterns of action in the use of assets to create, produce, and/or offer products and services to a market (Wallin, 2000).

A “value proposition” is enabled through a range of “capabilities” and is a value for a “specific target customer segment”, which has needs to be fulfilled.

4.2 Customer interface

Customer relationship management is also very important pillar for companies. It defines interaction with customers, especially by using modern ICT in order to provide customers with richer information and also managers to gain insight on their customers buying behavior and improve customer relationship. (Osterwalder, 2004). It describes how and to whom the company provides bundle of services (products). The “Customer Interface” includes “Target Customer”, “Distribution Channel” and “Relationship” elements. The clear definition of target segment also helps a company to define the effective channels to reach its clients. Normally, the company disposes of one or several direct or indirect channels. Internet and other modern ICTs impact on how companies reach their customers. New opportunities for companies that play the role of intermediary between seller and buyer arisen. From these reasons, it is important to assess where value can be added through ICT and which functions could become redundant.

Customer relationship management is an integral component of business strategy for on-line service providers. Building and maintaining customer relationships has long been perceived as an enabler of e-commerce. On-line service providers lose \$20 to \$80 on each customer the first year because of the high cost of acquiring customers, but can make up for the loss in the long run by retaining loyal customers (Reichheld & Scheffer, 2000).

Pillar	Building Block of Business Model	Description
Customer Interface	Target Customer	The Target Customer is a segment of customers a company wants to offer value to.
	Distribution Channel	A Distribution Channel is a means of getting in touch with the customer
	Relationship	The Relationship describes the kind of link a company establishes between itself and the customer.
	Value Configuration	The Value Configuration describes the arrangement of activities and resources that are necessary to create value for the customer.

Table 3: “Customer Interface” pillar of business model (Osterwalder, 2004)

Through the use of ICT companies can redefine and ameliorate the notion of “customer relationship”. ICT supports and in some cases substitutes direct physical contact with the customer. The “customer relationship” element describes the way a company goes to market and gets in touch with its customers. Additionally, it contains the strategies of the company to collect and use customer information, in order to improve relationships and adapt the companies offering to customer needs. Finally, the company must define and outline its plans to gain the customers trust and loyalty (Osterwalder and Pigneur 2005, 82).

“Target customer”. This element refers to the segmentation of customers. Effective segmentation enables a company to allocate investment resources to target customers that will be most attracted by its value proposition.



“Distribution channel”. This element refers to the way a company “goes to market” and how it actually “reaches” its customers. This means a company must define its channel strategy: either indirect or direct channels, operated by the company or provided by a third party (e.g. agent, intermediary). ICT, and particularly the Internet, has a great potential to complement rather than to cannibalize a business’s channels. The expansion of the range of channels also increases the potential of conflicts between channels and demands strong management (Osterwalder and Pigneur 2005, 82).

“Relationships - commitments”. It is essential to establish trust between business partners when the business environment becomes increasingly virtual and the implicated parties do not necessarily know each other anymore before conducting business. There exist mechanisms to build trust in e-business environments, such as virtual communities (Hagel et al., 1997), performance history, mediation services or insurance, third party verification and authorization, and, clear privacy policies (Friedman, 2000; Dimitrakos, 2001). Customer loyalty can be understood as the outcome of the customer’s trust and satisfaction (Osterwalder and Pigneur 2005, 82).

Customers develop a relationship with a service provider as a result of repeated experiences with the service provider. Therefore, it is important to understand the individual e-business transactions, which are satisfying or dissatisfying customers and consequently influence the relationship development.

The business model should show how integrated a company’s customers are – how deeply are they involved in the value creation process and how far the value proposition is tailored to their specific needs.

Relationship commitment and trust are sentiments being identified as critically important in the development of long-term firm relationships. There is a positive relationship between trust and relationship commitment (Lancastre & Lages 2006).

Also important in the context of e-commerce is the fact that studies have shown that customer trust is a significant antecedent of a customer’s willingness to transact business with an online vendor (Jarvenpaa et al. 2000). This effect makes trust an important antecedent of e-commerce success. Once again, the definition of suited collaboration frameworks and new profitable business models is in fact a dramatic innovation objective.

Very surprisingly, the adoption of on-line escrow services is low. Apparently because on-line escrow services slow the transaction process and the fees entail an extra expenditure (Zhao et. al., 2006).

The “customer interface” pillar provides feedback for “value proposition”, is based on “infrastructure management” and is and income for the “financials element”.

4.3 Infrastructure management

Pillar	Building Block of Business Model	Description
Infrastructure Management	Capability	A capability is the ability to execute a repeatable pattern of actions that is necessary in order to create value for the customer.
	Partnership	A Partnership is a voluntarily initiated cooperative agreement between two or more companies in order to create value for the customer.

Table 4: “Infrastructure Management” pillar of business model (Osterwalder, 2004).

Internet and modern ICT have had a very high impact on the way companies organize their activities inside and with business partners.

“Infrastructure management” describes the value system configuration that is necessary in order to deliver the company’s offering and to establish and maintain a customer relationship (Osterwalder and Pigneur 2005, 83).



It is composed of the “Capability” and “Partnership” elements. Capabilities and Resources can be assured within the firm or can involve outside actors, with whom a firm enters a partnership in order to provide a specific services or carry out projects.

“Capability”. In order to create value, a company needs resources (Wernefelt, 1984). Grant (Grant, 1995) distinguishes tangible, intangible, and human assets. Tangible resources include plants, equipment and cash reserves. Intangible resources include patents, copyrights, reputation, brands and trade secrets. Human resources are the people a company needs in order to create value with tangible and intangible resources (Osterwalder and Pigneur 2005, 83).

“Partner network”. The partner network outlines, which elements of the activity configuration are distributed among the partners of the company. Shrinking transaction costs make it easier for companies to vertically disintegrate and to reorganize in partner networks (Osterwalder and Pigneur 2005, 83).

Companies are also interested in partnering for reducing risk and uncertainty and acquiring resources, knowledge they lack (not possess).

The success of such business models depends on the content and quality of the partnerships that have been established. The key factors associated with such partnerships are: (E-FACTORS, 2003)

- Number of partnerships
- Cross-selling
- Resource sharing
- Contracts/agreements
- Degree of equality
- Governance mechanisms (contracts, trust etc.)
- Co-branding
- Conflict resolution mechanisms

The “infrastructure management” element is a resource for “product innovation” and “customer interface” and a cost for the “financials” element

4.4 Financials

Name of business model element	FINANCIALS
Consists of	<ul style="list-style-type: none"> • Revenue model • Cost structure • Profit/loss
Related to	<ul style="list-style-type: none"> • Resource for Infrastructure management • Funded through Customer relationship

Table 5: “Financial aspects” pillar of business model
(Osterwalder and Pigneur 2005, 84).

Revenue model includes Revenue stream element and Pricing element. Particularly the Internet has had an important impact on pricing and has created a whole new range of pricing mechanisms (Klein, Loebbecke 2000).

The “financials” element is composed of the company's “revenue model” and its “cost structure2”, which finally define the “profit/loss” of a company. This element is a resource for “infrastructure management” and is funded through the sales in the “customer relationship” (Osterwalder and Pigneur 2005, 84).



“Revenue model”. This element measures the ability of a company to translate the value it offers its customers into money and therefore generate incoming revenue streams. A company’s revenue model can be composed of different revenue streams that can all have different pricing models. The new pricing mechanisms enabled by ICT should be used in order to maximize revenues. Particularly the Internet has had an important impact on pricing and has created a whole new range of pricing mechanisms (Klein et al., 2000).

“Cost structure”. This element measures all the costs the company incurs in order to create, market and deliver value to its customers. It sets a price tag on all the resources, assets, activities and partner network relationships and exchanges that cost the company money. (Osterwalder and Pigneur 2005, 84)

"Profit model". This element is simply the outcome of the difference between the “revenue model” and the “cost structure”. Therefore it can be seen as the culminating point and as an expression of the entire e-business model ontology.

Whereas “product innovation” and “customer relationship” shall maximize revenue, an effective “infrastructure management” shall minimize costs and therefore optimize the profit model. The “revenue model” increases the company's “profit” (or diminishes its “loss”) whereas the “cost structure” decreases “profit” (or increases “loss”) (Osterwalder and Pigneur 2005, 84).

5 SEAMLESS business model definition

5.1 SEAMLESS network

The SEAMLESS project is intended to study, design, develop and experiment an advanced ICT-based service to enable a well-identified category of small enterprises, the so-called Craft & Trade companies, to access the eBusiness space created by the Single Electronic Market of the Enlarged Europe (SEEM) and play an active role in establishing and running frictionless dynamic collaborations.

The SEAMLESS will result in Internet-based structured marketplace where companies can collaborate without geographical and technological restraints, thus overcoming the limits of the hundreds of vertical portals each adopting its own specific model.

The aim of the SEAMLESS project is thus to study and develop a suite of simple (entry level) trusted applications and services, provided by mediators, enabling the intended companies to start acting in the global electronic market with no relevant cultural, linguistic and technological restraints. It implies among other aspects in:

- Creating a self-organizing network of eRegistries/Repositories (RRs) where companies can classify their own profiles, offers and features so as to gain public visibility to potential customers and partners.
- Providing advanced, semantically-based search & find services to discover candidate partners by selecting them from the RRs on the basis of their profiles, qualification and offer.
- Establishing the conditions for confident and secure dynamic relations, negotiations and information exchanges with other companies based on agreed collaboration protocols and reciprocal trust
- Offering compliant web applications to manage general-purpose and sector-specific distributed processes, and hide the SEEM infrastructure complexity under easy and tailored user interfaces.
- Ensuring the interoperability of legacy systems by facilitated information exchanges, to integrate internal enterprise processes with external collaborations.
- Dispatching and translation services. In order to enable the communication processes envisaged by the SEAMLESS rationale, dispatching and translation services are offered thus supporting the overall SEAMLESS functions. These two facilities are intended as single service since the dispatching operation relies on the translation task.

Small companies often lack of resources (technical, knowledge, financial, etc...) and capabilities, what often result in low level of ICT adoption and make them less competitive in global business environment. Usually small companies are related to one or more mediators as for example chambers of commerce, chambers of craft, (sectoral, regional) company associations, local development agencies or application service providers, which support them to carry out basic organizational and bureaucratic activities. Thus SEAMLESS network rely on strong involvement of mediators which become the nodes of SEAMLESS networks (figure 5).



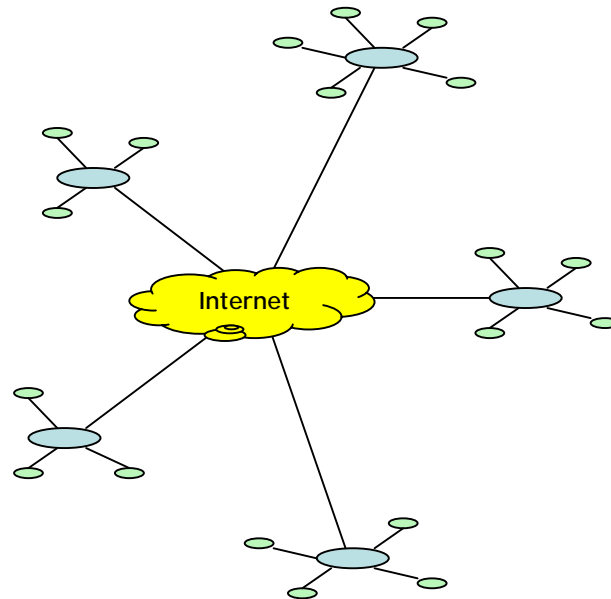


Figure 5: Seamless network with role of mediators as nodes

Mediators can interpret company needs and represent them, help adapting new solutions to the expectations of the associated companies, ensure the rapid introduction of a critical mass of companies. Then, they are the best channel to promote innovative services.

Important role in this process plays the integration and cross border collaboration of SMEs in a region.

5.2 SEAMLESS business scenario

The SEAMLESS scenario describes the possible scenario corresponds to the behavior of Small Ltd, a small company associated to Small Association:

- Small Ltd is invited by Small Association to join the SEEM and become a credible actor in the electronic market. Small Ltd accepts and receives a URL, a user code and a password.
- Through the URL Small Ltd accesses the Small Association site, is recognized as newcomer and guided in the representation of its features. It means coding and storing in the Small Association company registry/repository its profile, skills and experiences, preferred collaboration forms and contractual templates, as well as its offer of products and services. To this purpose it supported by the local ontology providing lexicon and concepts to associate the right metadata to the stored data. The work is done in the company (and association) home language.
- Few hours later Small Ltd receives an unexpected bid request for the supply of a specific product from Foreign Co, a potential new customer established in a different country. The request is issued according to one of the forms proposed by Small Ltd and made available in its home language.
- The same application suggests to Small Ltd the list of possible reactions it can take (accept, ask for more info, reject, negotiate, etc.). Small Ltd suspends the answer because the requested product calls for the collaboration of partners able to perform special activities that Small Ltd cannot cover.
- Small Ltd plans the required activities, indicates as additional resources its usual partners and fixes scheduling conditions and constraints. On the basis of the scheduler outcome, Small Ltd

uses the system to automatically send the relative bid request to the scheduled partners, including Partner Ltd for a certain activity.

- Small Ltd decides that it is time to search for a new partnership in alternative to Partner Ltd. Then it sends to the Small Association site a request for candidate partners meeting a specific profile (region, company size, desired activity, supply time, etc.). the request is broadcasted to the interesting SEEM nodes.
- Within the fixed deadline Small Ltd receives indications of three candidate partners discovered by the system in the respective registries. One of them, New Ltd, is particularly interesting and Small Ltd starts negotiating with it until a bid has been obtained.
- Small Ltd takes its time to compare the two bids coming from Partner Ltd and New Ltd. The day after it decides and concludes the negotiation with the selected company (while the system automatically closes the negotiation with the other).
- Now all the data needed to answer the Foreign Co request are available. Small Ltd reacts accordingly and the negotiation continues up to the electronic signature of the contract. On this basis, also the contract with the scheduled partners is finally signed.
- Following these contracts, a number of info and document exchanges take place during the following weeks, according to the specific collaboration protocols. Small Ltd is involved, on the one side, in the envisaged collaborative work with the selected partners and, on the other side, in communications with the customer Foreign Co. Both these relations are regulated and supported by the SEAMLESS workflow manager.

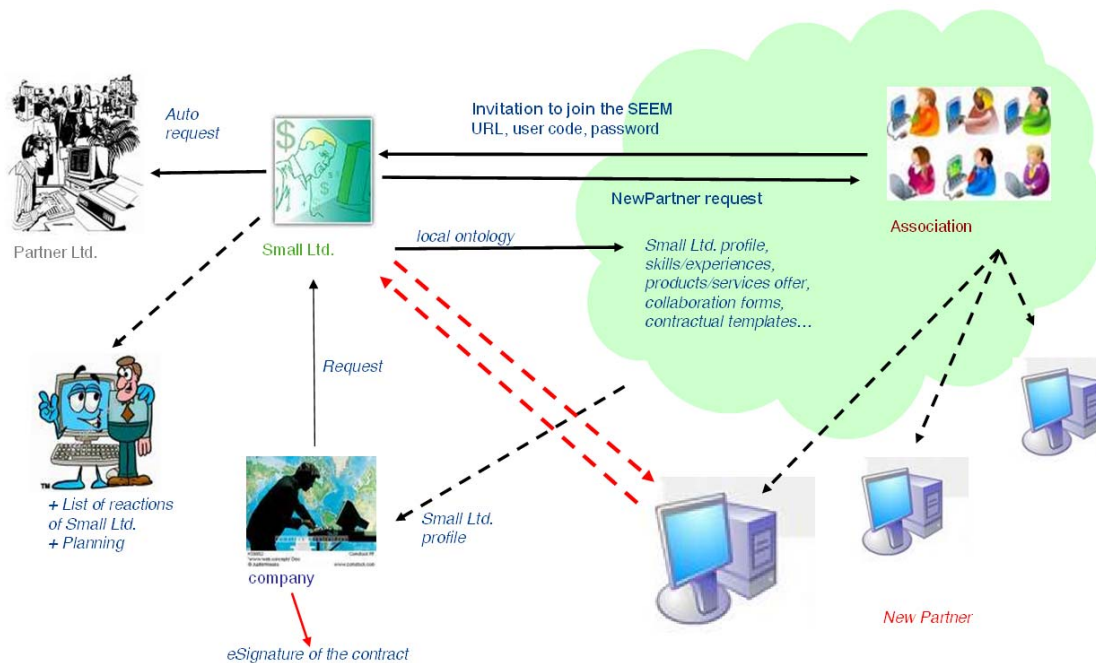


Figure 6: SEAMLESS scenario

New business models in relation to SEAMLESS services are exploring opportunities using and implementing new and efficient ICT-based services and adopting new innovative ways of work allowing quicker response times at a lower cost.

SEAMLESS network can be win-win scenarios, with both: the providers and the users experiencing real business benefits – if the right model is adopted. The following sections address the key issues of choosing the right business model for SEAMLESS adoption.

5.3 SEAMLESS services

The business functionalities that SEAMLESS is asked to offer to its Craft & Trade companies users are the following (D3.1 Overall Architecture Design - Addendum):

- **Profile definition.** Companies define their profiles in terms of company information along with products information. The COMM ontology concepts are adopted to carry out this task.
- **Partner search.** Companies and casual users look for potential partner by expressing query criteria that are automatically matched against the SEAMLESS companies profile in order to retrieve the list of only those companies satisfying the users' criteria.
- **Negotiation.** The phase during which customer companies describe their demand and supplier companies define their offer in order to find a business agreement. The negotiation is typically executed once a specific business partner has been find out in by means of the partner search functions. The negotiation is represented by the configuration task where customers access the supplier offer and specifies the details of the requested products (services).
- **Collaboration.** Customers and suppliers produce and exchange business documents in order to formally track their business activity.
- **Integration.** If the Company users already store information in a proprietary system, specific functions for automatically exchange data with the SEAMLESS network should be defined and implemented.

The figure 7 outlines how these functions are arranged in suitable and coherent application modules.

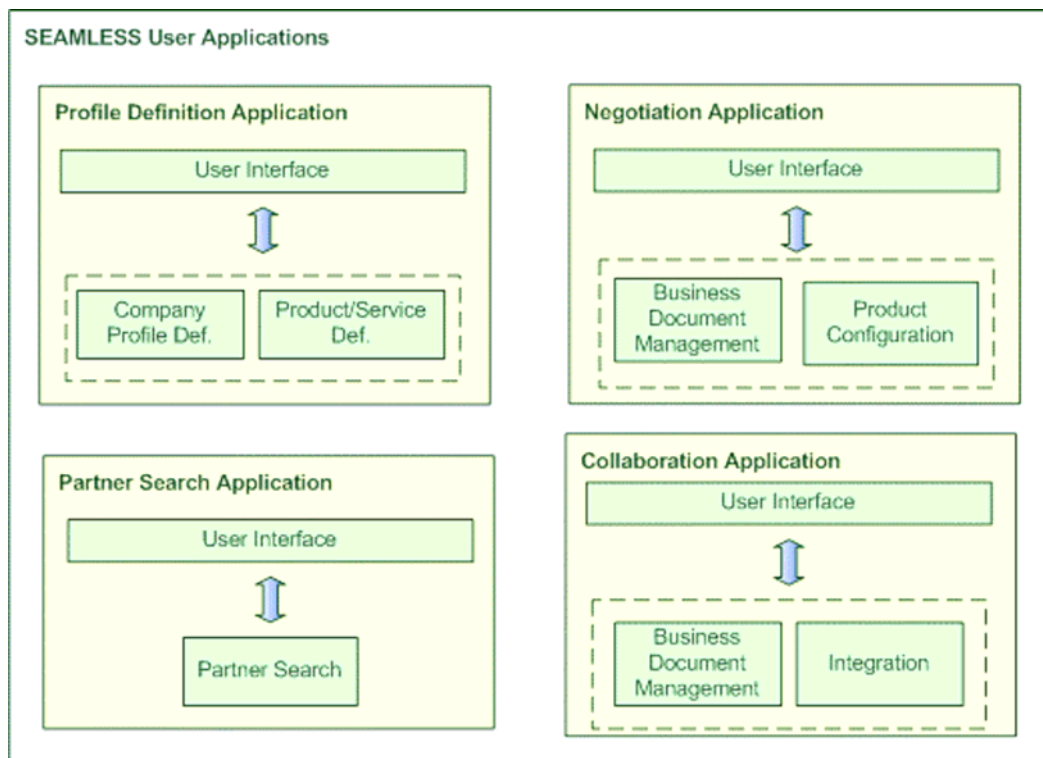


Figure 7: SEAMLESS user applications
(D3.1 Overall architecture design – addendum)

Although SEAMLESS is more than just e-marketplace, some possible benefits for C&T companies from SEAMLESS are very much related to the some e-marketplace business models' benefits. Basically, e-marketplace enables sellers to enter new markets, to find new buyers, and to increase sales. Conversely, an eMarketplace gives a buyer access to a broader range of products and services offered by sellers. A buyer has the option to quickly compare various offerings by price and performance. E-marketplace services support the exchange of large amounts of data regarding supply and demand between buyers and sellers, and the implementation of the business transactions (DeSisto, 2000; Lenz, 2000).

The success of the e-marketplace depends on the perceived net benefit of buyers and suppliers. From the viewpoint of transaction cost economics, information technology helps to reduce transaction costs, risks, and coordinating costs of e-marketplaces.

The e-marketplace operator is defined as a “middleman” providing special intermediary functions. These functions must be valuable enough for participants, e.g:

- Cost saving
- Process support (co-ordination of a large number of different players – architects, structural engineers, authorizing agencies...)
- New market creation
- More efficient price finding process

In order to successfully meet user requirements of the potential SEAMLESS users – C&T companies from textile and building and construction section, user requirements have been collected by SEAMLESS partners (Deliverable D1.1 Requirements Specification and its addendum).

The value proposition of e-marketplace service providers is to provide a wide range of services to all the participants on the e-marketplace. Also very important are services that ensure a higher level of trust between buyers and sellers in e-marketplace (Bailey and Bakos, 1997; Bakos, 1998; Archer & Gebauer, 2000, Dai & Kauffman, 2001).

As trust is one of the most important factors impacting the use of new business models, especially Internet based trading platforms, where companies might first meet with potential business partners, the possible trusted operational scenarios were studied and presented by SEAMLESS partners (D1.2 Trusted operational scenarios).

As SEAMLESS services must be offered in simple, cost efficient and transparent way, overall architecture design was elaborated and prepared by SEAMLESS partners (D3.1 Overall Architecture design addendum).

Deliverables D1.1 Requirements specification with addendum, D3.1 Overall Architecture design with addendum and D 6.3.1 Deployment and exploitation plan 1st issue, among other documents are the base documents for setting up the definition of SEAMLESS business model (1st issue).

5.4 Element 1: SEAMLESS value proposition

The main purpose of a company is the creation of value that customers are willing to pay for. This value is the outcome of a configuration of inside and outside activities and processes.

Value proposition refers to the value that SEAMLESS solution/services can offer to the specific target customer segment. Value proposition of SEAMLESS solution/services refers to the web based collaboration environment for Craft & Trade companies. Basically SEAMLESS offers its customers to create its company and products/services profile, search via partner's network, negotiate and collaborate in their respective language. Technology enables automation of business processes, integration and translation.

Innovation of the SEAMLESS model is also strong involvement of mediator, which is strongly required due to the lack of capabilities of Craft & Trade companies, which often lack in ICT adoption, knowledge, financial resources, and technical support and also trust to the new business environment. With mediator



involvement higher level of trust and adoption of the SEAMLESS solution by Craft & Trade companies is expected.

Possible benefits and threats (risks) of SEAMLESS usage can be adopted from the Pucihar & Podlogar (2003), for the identification of SEAMLESS value proposition and potential benefits for users:

Possible benefits of SEAMLESS for sellers	Possible benefits of SEAMLESS for buyers	Possible benefits of SEAMLESS use for sellers and buyers
Easy and fast entrance to new markets	Easy and fast entrance to new markets	Lower transaction costs
Selling at every time	Easy and fast comparison between offers of many sellers	Better co-operation between buyers and sellers in product development processes
Physical store not needed anymore	Fast selecting of best offer	Better image of organization
Less mistakes in order management and fulfillment	Fast purchasing without long term relationships contracts	Lower marketing costs
Faster detection of new buyers for lower costs	Lower negotiation cycles	Faster time of new product to the market
Possibilities for sales increasing	Lower procurement costs	Simplifying of business processes
Lowering of superfluous Inventory	Ordering at any time	Better customer relationship management
More efficient production planning	Order status tracking	Less mistakes
More efficient product development	Easy changing of orders Consolidation of minor value orders	

Table 1: Possible benefits of SEAMLESS use (adopted from Pucihar & Podlogar, 2003)

Possible threats of SEAMLESS use for sellers	Possible threats of SEAMLESS use for buyers	Possible threats of SEAMLESS use for sellers and buyers
Loss of direct relationship with buyers and possibility of loss of existing buyers	Loss of direct relationship with suppliers	Lack of trust between buyers and suppliers, while they first meet in "SEAMLESS"
Stronger negotiation power of buyers	Possible unreliability of unknown sellers	Lack of trust to eMarketplace intermediary
Payment of commission to the intermediary (also in trading with existing buyers)	Lack of trust in products and services quality	Lack of services that would support whole business processes.
Buyers have strong relationship with existing suppliers (are not ready to get new ones)	Uncoordinated different ways of supplying	
Lots of time, knowledge and funds necessary for eCatalogue creation and management		

Table 2: Possible threats (risks) of SEAMLESS usage (Adopted from Pucihar & Podlogar, 2003)

Service description	Reasoning	Value level	Life Cycle
Dispatching and translation services	{Effort}	{Innovation}	{Value use}
Profile definition	{Effort}	{Innovation}	{Value use}
Partner search	{Effort}	{Innovation}	{Value use}
Negotiation	{Me-too}		{Value use}
Collaboration	{Me-too}		{Value use}
Integration	{Me-too}		{Value purchase}

Table 3: SEAMLESS value proposition

Reasoning:

{Effort} - reducing customer's efforts by creating value through lower search, evaluation and acquisition costs, but also easier and cheaper maintenance, operations and training.

{Me-too} - Services offered to customers does not differentiate itself from the one of the competition's

Value level:

{Innovation} - Introduction of a completely new service or a revolutionary combination of services

Life cycle:

{Value use} - The value that comes from the actual consumption of a products and services

{Value purchase} - Value created during the purchase phase by facilitating customer's experiences

Detail description of SEAMLESS services for Craft & Trade companies and their value proposition to the specific customer segment is described in more detail in the table 6.

Service description/Reasoning	Value level/Innovation
<p>Profile definition</p> <p>Every mediator provides its associated companies with a function to represent their own main characteristics. This step lets the Company supply the information to describe the generic features and to gain visibility on the SEAMLESS infrastructure. Along with textual information, the Company can upload unstructured data e.g. binary objects, links to company attributes and insert contact person references. The company data include: The name of the company, Company short or usual name (if any) allowing easy identification by partners, URL of the Company web site (if any), Type of organization, such as no-profit, limited co., stock co, cooperative, and the like, Number of employees, Multiple attribute expressing availability of ICT supports, Multiple attribute to list the languages the company can use in business collaboration, Indication of the last yearly revenues of the company. Also, the following data is available:</p> <ul style="list-style-type: none"> • Taxonomy term(s) associated to company to classify its activities (sectorial classification) • Company tax identifier, e.g. VAT code or fiscal code. 	<ul style="list-style-type: none"> • Define own profile in local language • Visibility in global market • Strong involvement and help provided by Mediators <p><i>Example: Define own profile</i></p> <p>Company B is willing to gain visibility in the global market, then it asks its mediator M(B) how to do it. Mediator provides the function to describe and publish the company profile according to the adopted common data model, taxonomy and vocabulary. This ontology is expressed in the local language and mirrors the mediator nature.</p> <p><i>Example: Classify own offer</i></p> <p>Company B is particularly interested to be found by potential partners for the products and services (generally: the products) it can offer. Its mediator M(B) provides a further function to classify this offer according to the adopted ontology and the resulting information is</p>

<ul style="list-style-type: none"> • Certificates of the company • Place(s) where the company is located • Regions where the company acts or sells • Activities performed by the company in the past (partner name, relation type...) • Reputation-building elements of the company • Measure of company visibility (counter of the requests for quotations received, counter of the times the company was selected by the partner search function...) • Subjective feedbacks from partners <p>Moreover, Company can make available the list of offered and demanded products. Each offered / demanded product or service has a family name describing its content that is associated to one or more taxonomy concepts. This association corresponds to the classification use case in the above scenario. Additionally, for each offered / demanded product, Company can define an unlimited number of configuration parameters in order to complete the product classification. It is worth noticing that both offer creation / editing and demand creation / editing includes the same system functionality concerning product classification and parameter definition.</p>	<p>published. This is a rough product representation that however assures the possibility for company B to be found in a first-step selection.</p>
<p>Service description/Reasoning</p>	<p>Value level/Innovation</p>
<p>Partner search</p> <p>It includes the services allowing the associated company to search for possible partners independently of whether they are associated to this mediator or to another SEAMLESS node. The Company performs a search activity anytime it needs to look for potential new partners, either buyer or seller. The search task is broadcasted from the LOCL service to all the COMM service to which it is registered. The same broadcasting procedure is performed from a COMM service to a GLOB service and between two GLOB services.</p> <p>In order to carry out the task, the searching criteria have to be provided according to the following organization. “Sector and Activity” section let the Company choose a particular taxonomy term that is intended to be related to the searched companies as demand (buyer) or offer (seller). In particular, as a result of the sector and view point selection, Company is able to focus its attention to a part of the entire taxonomy (that matches with the searches criteria) in order to select the concept used in the partner search procedure.</p> <p>Secondly, the “Further Search Attributes” is intended to provide a means for filtering the candidate partners according to specific profile, e.g. name, country, turnover, etc.</p>	<ul style="list-style-type: none"> • Global Search for partners • Search in local language in global market • Matching the profile attributes in global ontology • Represent further needs in terms of the mediator ontology and language • Filtering facility based on the common data model, taxonomy and vocabulary <p><i>Example: Search for partners</i></p> <p>Company A is willing in turn to find candidate partners and uses to this purpose the specific function provided by its own mediator M(A). This function includes a filtering facility based on the common data model, taxonomy and vocabulary adopted by M(A). Although differing in language and in some company profile attributes the matching companies found in the SEAMLESS network are reported to company A in a form that is understandable since it is based on the mediator M(A) common ontology.</p> <p><i>Example: Search for products</i></p> <p>When searching for candidate partners, company A is specially interested to those supplying certain products and, at this stage, the only</p>

<p>The Search result is a table containing a list of all the Companies responding to the partner search criteria (sector, viewpoint, further search attributes). Associated to each Company name there is a set of details better trashing out the Company feature, such as address information, email, telephone number, and so on.</p>	<p>possibility to do this is using generic keywords. Even in this case the matching companies are reported to company A in a form that is understandable since it is based on the mediator M(A) common ontology based on companies own offer classification.</p> <p><i>Example: Model own products/configure demand</i></p> <p>Company B knows that if selected by potential partners this will ask for more detailed information about its offer. A specific function provided by its mediator M(B) allows it to characterize every products family by a free number of parameters and their options. In order to start the negotiation phase, the searching company A accesses this parameterization and uses it to explain better which kind of products it is demanding. Once again the critical point for company A is the possibility to represent the needs in terms of the mediator M(A) ontology and language, even thought using parameter and options defined by another company possibly in another language and another ontology.</p>
<p>Service description/Reasoning</p>	<p>Value level/Innovation</p>
<p>Negotiation</p> <p>Negotiation includes the services allowing the associated company to establish relations with a candidate partner by exchanging information on the respective demand/offer up to requests for quotation and bids. A more articulate description follows. The Company contacts the potential partners in order to establish a partnership. Once a partner has been chosen, the Company selects his product(s) to be requested. The negotiation is performed via the exchange of two different business documents, namely Request for Quotation and Quotation.</p>	<ul style="list-style-type: none"> • Negotiation support for sending and receiving messages in respective languages and ontologies • Automatic support on e-Contracting in order to establish trust worthy trading relations with unknown partners <p><i>Example: Ask for quotation/issue quotation</i></p> <p>The product configuration defined by company A is the basis to ask company B for a quotation. Company B perfectly understands the request since it is expressed in terms of the parameters and options introduced by itself in the product modeling phase. Then company B is in condition to issue the quotation and possibly propose to company A further parameters to consider in the following interactions so as to precisely identify the desired product. The negotiation is supported in such a way that company A and B keep using transparently their respective languages and ontologies when sending and receiving messages to/from the partner.</p> <p><i>Example: Agree on contract</i></p> <p>The successful negotiation phase normally ends with a contractual agreement between the two</p>

	<p>parties. In spite of the interesting research works performed on eBusiness contracts, this step is hardly supported by automatic functions especially when the actors are small companies not used to establish trade relations with unknown partners. The SEAMLESS project assumes that the mediator role on contractual agreement is even more important than in other phases, but renounces at this stage to develop a specific ICT support function.</p>
<p>Collaboration</p> <p>In this scenario, the two main companies (Main Parties), namely Seller (Provider) and Buyer (Consumer), have completed the negotiation step successfully by establishing a commercial partnership. The partnership gives rise to a (series of) Business Transaction(s) between these main parties. In a single Business Transaction several items (products, services and processes) are usually negotiated between the Seller and the Buyer. The execution of the Business Transaction is a process, where different activities take place and different events occur as a result of these activities. Along with the Seller and Buyer, other parties participate in the Business Transaction and perform the corresponding activities according to their roles.</p> <p>The intended business documents range from request for quotation (negotiation phase) to invoice (collaboration phase).</p>	<ul style="list-style-type: none"> • Support of business e-documents exchange in the trading procedures <p><u>Example: Plan partner activities / inform on availability</u></p> <p>The leading company A periodically plans the activities that are required to satisfy the customer demand. Some activities are assigned to external partners, including those found in the discovery phase. In principle, when planning the activities of external resources the leading company must know their current availability e.g. in terms of maximum volumes, lead times and the like. This information must be provided by the partner companies, e.g. company B, according to an established protocol. The planning phase, and the communication protocol itself, are very much depending on a number of variables such as leading company habits, product nature, production model, market conditions. Then it was decided that the SEAMLESS platform will not include, at this stage, a planning functionality with the related ancillary facilities.</p> <p><u>Example: Issue supply order / receive order</u></p> <p>The outcome of the planning activity, that we imagine will be carried out by the legacy system, in a list of purchase or work orders some of which to be addressed to partner companies. Company A sends the relative orders to company B in such a way that the sent document is written according to the MA common ontology and the received document is read according to the MB common ontology.</p> <p><u>Example: Issue order progress / update order state</u></p> <p>While the order execution is in progress it</p>

	<p>happens that the leading company A is interested to know which is its current state or the supplier company B is interested to communicate delays or exceptions. This is done by exchanging documents in such a way that the sent document is written according to the sender common ontology and the received document is read according to the receiver common ontology.</p> <p><i>Example: Issue dispatch advice / update delivery state</i></p> <p>Whenever a batch of products is dispatched by the supplier company B to the leading company A (no matter if intermediate or final delivery) it is normally preceded or accompanied by a dispatch advice. Once again this is done by exchanging documents in such a way that the sent document is written according to the sender common ontology and the received document is read according to the receiver common ontology.</p> <p><i>Example: Issue invoice / receive invoice</i></p> <p>Finally, when the order has been completely executed and the products completely delivered by the supplier company B to the leading company A, the supplier company issue the devised invoice. Even in this case it is done by exchanging documents in such a way that the sent document is written according to the sender common ontology and the received document is read according to the receiver common ontology. The SEAMLESS collaboration support ends at this point since the following payment function is already provided by a number of different channels.</p>
<p>Integration</p> <p>The Integration scenario provides the use cases representing the main tasks required for creating a robust interface between the SEAMLESS network and the Company enterprise system. The role of the interface is twofold: creating SEAMLESS business documents with proprietary information (import data from enterprise system) and feed the same enterprise system by means of SEAMLESS data (export data to enterprise system). In order to achieve such a goal, the Company takes advantage of the proper mapping structures.</p>	<ul style="list-style-type: none"> • Integration with existing company enterprise resource systems and other applications for business documents exchange
<p>Dispatching and translation services</p> <p>In order to enable the communication processes envisaged by the SEAMLESS rationale, dispatching and translation services are offered thus supporting the overall SEAMLESS functions. These two facilities are intended as single service since the dispatching operation relies on the translation task.</p>	<ul style="list-style-type: none"> • Dispatching and translation services <p><i>Example:</i></p> <p>If two companies are belonging to different SEAMLESS nodes and different GLOB services, all the dispatch and translation steps must be implemented.</p>

<p>dispatching operation relies on the translation task.</p>	<p>Company A leverages the “LOCL to COMM broadcast” service for dispatching information to the proper SEAMLESS nodes. The translation service is able to transform the information of the Company A enterprise system according to the COMM ontology. In a dual way, the Mediator invokes the “COMM to LOCL broadcast” when Company B is receiving an information from Company A. In this case, the translation performed is from COMM ontology to Company B enterprise system.</p> <p>Different SEAMLESS nodes can exchange information by dispatching and translating it according to the relevant GLOB ontologies (“COMM to GLOB broadcast” service). The node A invokes the dispatch functions provided by the GLOB A service which is in charge of performing all the required translation processes. Finally, the information is translated according to the GLOB B ontology (“GLOB to GLOB broadcast” service), then dispatched to the node B (“GLOB to COMM broadcast” service).</p>
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Table 6: SEAMLESS services and their value proposition

In respect to the company behavior SEAMLESS services are divided into the two phases (D3.1 Overall Architecture design Addendum):

- Discovery and negotiation phase (figure 8):
 - Define own profile/search for partners
 - Classify own offer/search for products
 - Model own products/configure demand
 - Ask for quotation/issue quotation
 - Agree on contract
- Collaboration phase (figure 9)
 - Plan partner activities/inform on availability
 - Issue supply order/receive order
 - Issue order progress/update order state
 - Issue dispatch advice/update delivery state
 - Issue invoice/receive invoice

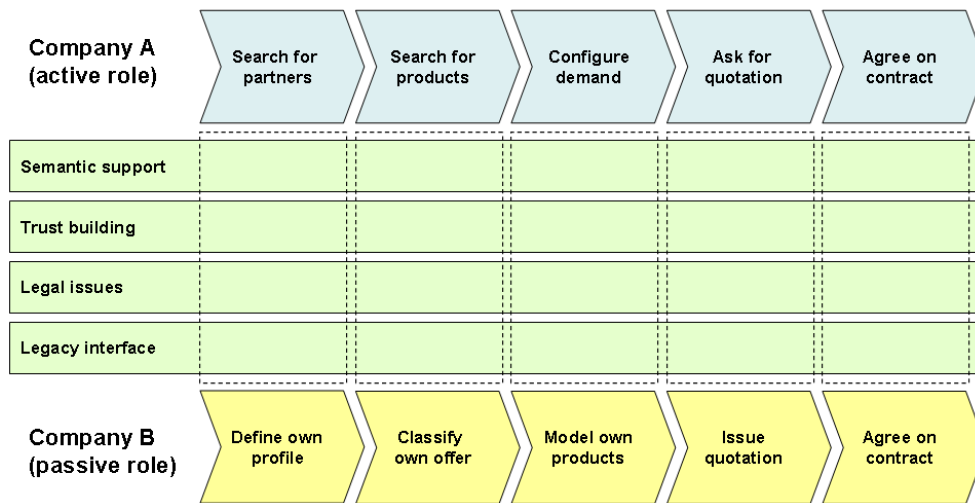


Figure 8: Company behavior in the discovery and negotiation phase

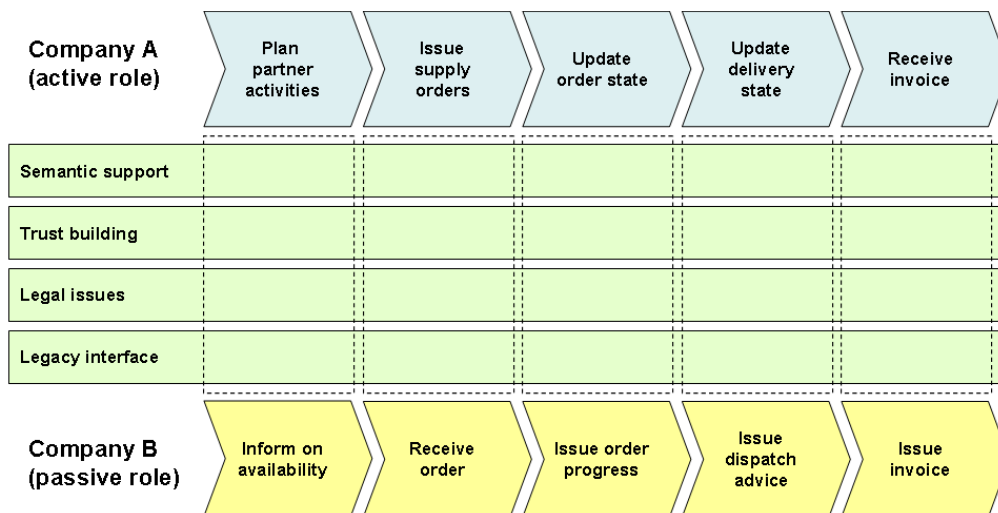


Figure 9: Company behavior in the collaboration phase

5.5 Element 2: SEAMLESS customer interface

Customer relationship management is also very important pillar of business model. It defines interaction with customers, especially by using modern ICT in order to provide customers with richer information and also managers to gain insight on their customers buying behavior and improve customer relationship (Osterwalder, 2004). It describes how and to whom the company provides bundle of services (products).

The “Customer Interface” includes “Target Customer”, “Distribution Channel” and “Relationship” elements. The clear definition of target segment also helps a company to define the effective channels to reach its clients. Normally, the company disposes of one or several direct or indirect channels. Internet

and other modern ICTs impact on how companies reach their customers. New opportunities for companies that play the role of intermediary between seller and buyer arisen. From these reasons, it is important to assess where value can be added through ICT and which functions could become redundant.

5.5.1 SEAMLESS target customers

Small and medium-sized enterprises make up the backbone of the European economy. Across the EU, there are around 23 million SMEs; that is 99% of all enterprises. And SMEs account for about 75 million jobs. And in some key industries, such as textiles, construction and furniture-making, they account for as much as 80% of all jobs (European Commission, Enterprise and Industry (1)).

Due to the fact, that large organizations often adopt new ICT based business models much faster than SMEs, which often stay behind, the solutions in this field are needed.

SEAMLESS is focused to provide value added services for specific customer segment, which are Craft & Trade companies from textile and building & construction sector. SEAMLESS is willing to provide Craft & Trade companies a number of value added services in order to provide them web based collaborative environment helping them to access the single European market and streamline business operations.

From the perspective of building the necessary critical mass of users of SEAMLESS collaboration environment also larger organizations could be interesting customers for the SEAMLESS network. Larger organizations often already do business with a number of SMEs in their supply chains. If such large organization becomes a SEAMLESS user, it could impact the SMEs in their respective supply chain to adopt the SEAMLESS collaboration environment.

From the user perspective of the SEAMLESS network Craft & Trade company might be:

- Associated to one mediator for accessing the SEAMLESS applications in order to take advantage of the SEAMLESS facilities or
- Casual user not subscribed to the SEAMLESS network that can access a limited set of the SEAMLESS facilities.

Mediators, such as chambers of commerce, chambers of craft, (sectorial, regional) company associations, local development agencies or application service providers, which support small companies to carry out basic organizational and bureaucratic activities, are another important customer segment. SEAMLESS network relay on strong involvement of mediators which become the nodes of SEAMLESS networks. Mediators can interpret company needs and represent them, help adapting new solutions to the expectations of the associated companies, ensure the rapid introduction of a critical mass of companies. Then, they are the best channel to promote innovative services.

Another customer segment that must be considered for exploitation of SEAMLESS solution present those organizations categories that can potentially be interested to assume the roles in developing new or extending existing SEAMLESS nodes (as some have already done by committing themselves to the project Consortium).

These organizations will be the driving force behind the expansion of the SEAMLESS network and they will be addressed by the project dissemination campaign and (hopefully) attracted by the proposal for the commercial deployment of the respective services. These organizations were identified in Deployment and exploitation plan and are classified in the following categories (D.6.3.1 Deployment and exploitation plan):

- **ICT companies as developers.** The envisaged SEAMLESS technological infrastructure, including a set of entry level applications and services for partner search, negotiation and collaboration, and for automatic translation of queries and business documents, is a core component to start realizing the SEEM but is not enough by itself to ensure its full operation. ICT companies, especially SMEs, can participate and benefit in the SEEM development by proposing (SEAMLESS compliant) applications targeting specific needs and then enriching the overall SEAMLESS service offer. Also, applications must be developed to bridge the distance between the SEEM infrastructure and pre-existing enterprise systems and registries, and make them interoperable. There is therefore significant opportunity for ICT companies (third parties) that learn about SEAMLESS to invest potentially time and effort to understand how they can use



the project concepts and ideas to approach the SEEM. This is indeed a powerful deployment potential the SEAMLESS Consortium is very much interested to exploit.

- **Company associations as promoters or providers.** Company associations, sector specific or regional, especially those whose members are small and micro companies, provide as a rule a number of fundamental services to their members, in particular with respect to legal and fiscal information availability and by now they also support remote access to on-line information. To this purpose they already manage (e-) registries and (e-) catalogues and enjoy full trust by their members when they suggest new or additional services to their associates. Therefore, they are an important class of candidates especially for mediators as well as promoters that support or endorse local mediators i.e. leading a large population of companies (their members) to the SEEM as envisioned by SEAMLESS.
- **ASP providers as mediators.** Similarly, Application Service Providers can assume the role of mediator. In particular telecom operators since in recent years the role of telecom operators has grown dramatically in terms of market penetration thanks to the offer of an increasing number of services associated with fixed, but especially for mobile telephony. Currently they are best positioned to develop and propose on the market proprietary versions of the SEEM infrastructure and suitable applications for their effective use. A tentative list of relevant applications service providers includes:
 - **eRegistry and eCatalogue Managers**, that manage company registries or sector specific catalogues of products and services (chambers of commerce, certification-of-origin agencies and sometimes municipalities). In the perspective of the SEEM, these institutions are ideal candidates to provide, manage and interoperate the SEEM-compliant eRegistries/Repositories.
 - **Internet and application service providers.** Many companies from, almost all sectors and regions, are already used to buy connectivity and services from ISPs and ASPs. The introduction of the SEEM would take great advantage from convincing these providers to include the SEEM functions into their offer and proposing it to their customers.
 - **eMarketplace integrators.** The present vertical eMarketplaces present very limited interoperability potential, as they are not conceived for collaborating with each other. This is, indeed, one of the main factors behind pushing to realize the SEEM concept. A technical approach such as SEAMLESS proposes can be attractive to convert the existing disperse and fragmented eMarketplaces towards a SEEM.

5.5.2 SEAMLESS distribution channels

This element refers to the way a company “reaches” its customers. ICT, and particularly the Internet, has a great potential to complement business’s channels and streamline business operations.

SEAMLESS collaboration environment will offer its customers new business opportunities – reach out new buyers and new suppliers and more efficient support to conduct business transactions in electronic way.

The “Distribution Channel” should be studied over the customer’s entire buying cycle (Osterwalder, 2004):

- Awareness,
- Evaluation,
- Purchase,
- After sales.

Customer relationship management is an integral component of business strategy for on-line service providers. Building and maintaining customer relationships has long been perceived as an enabler of e-commerce. On-line service providers lose \$20 to \$80 on each customer the first year because of the high cost of acquiring customers, but can make up for the loss in the long run by retaining loyal customers (Reichheld & Schefter, 2000).



Customers develop a relationship with a service provider as a result of repeated experiences with the service provider. Therefore, it is important to understand the individual e-business transactions, which are satisfying or dissatisfying customers and consequently influence the relationship development.

The business model should show how integrated a company's customers are – how deeply are they involved in the value creation process and how far the value proposition is tailored to their specific needs.

The following table presents suggested SEAMLESS channel strategy:

Channel	Awareness	Evaluation	Purchase	After sales
SEAMLESS website / Internet	Banners, personalized e-mail Online courses on SEAMLESS topics	Customer responses	Inclusion to the SEAMLESS network	Support and further data
SEAMLESS "University"	Promotion of SEAMLESS vision SEAMLESS pilots	Recommendations from pilots (pilot's feedback)	Customer experiences	Courses on the use of SEAMLESS services
Mediators / Technology providers / Content providers	Advertising of new SEAMLESS services & model Educational courses on SEAMLESS topics	Customer reviews, critics, expert recommendations	Inclusion to the SEAMLESS network	Personalized support
Media (articles, movies, SEAMLESS related events...)	Mass advertising	Feedback of interested companies	Free of charge newsletters to the mailing lists of interested companies and potential SEAMLESS users	

Table 7: SEAMLESS Reach out channel strategy

5.5.3 SEAMLESS relationships - links with customers

SEAMLESS consortium understands the necessity of implementation of trust building mechanisms in order to achieve loyalty of SEAMLESS users. Achieving the trust between potential business partners in SEAMLESS collaboration environment is very important to make Craft & Trade companies to use SEAMLESS services and conduct business transactions.

SEAMLESS consortium partners consider trust as a trustor willingness to rely on an exchange partner in whom the trustor has confidence. Confidence refers to credibility of benevolence of the exchange partner.

Trusted operations scenarios deliverable (D.1.2.) presents the following trust building mechanisms:

- Technology trust (Identity management, access control, data encryption and security)
- Trust marks
- Information quality
- Certificates & Reputation mechanisms (Rating, Forum)



- Contract execution support
- Online dispute resolution
- Escrow services
- Standardization (Service agreements, ontology)

In order to raise the trust in SEAMLESS business environment SEAMLESS consortium partners already identified possible SEAMLESS trust mechanisms (D.1.2. Trust building scenarios) in different stages (processes) in the SEAMLESS network which could be implemented in SEAMLESS solution. Possible trust strategies for different processes in SEAMLESS network are presented in the Table 8.

Process: <i>Registration on the SEAMLESS platform</i>	Trust building strategies
Reading “code of conducts”	“Code of conducts” helps company to understand all discretions, duties and terms. This document will select and reject companies which won’t accept platform’s rules
Enter authentication and contact information	It will be necessary for company to fill minimum of requested information (contact information)
Account creation	Platform creates account for company
Approve contact information	Mediator approves contact information. This activity helps to identify effort of some companies to multiple registrations.
<i>Company is now registered and all necessary trust building information is verified.</i>	
Fill company profile	Company could enter the SEAMLESS platform and fill profile. In the company profile there is contact information, information about products and company, status of business activity, certificates, references and preferences for reference, ODR and Escrow activities.
<i>Company, at this time, could use services provided on the SEAMLESS platform (searching, adding references...etc).</i>	
Approve reference	Partners within SEAMLESS (if existing) approve references for this company. Internal references from SEAMLESS platform won’t be visible to others before partner’s approval

Process: <i>Partner search</i>	Trust building strategies
Specify search criteria	Company can define search criteria. Besides basic search criteria (country, sector, product families...), company can select trust building search criteria (information from company profile like certificates, references, feedbacks, rating, historical aggregated data or preferences)
Search for partners	According to selected criteria system finds partners
View search results	Platform displays search results with possibility of sorting.
<i>Company can start negotiation with displayed candidates.</i>	

Process: Negotiation and contract proposal creation phase	Trust building strategies
Select candidates for RFX	Company can select candidates from reference list or from searching results. Important trust building attributes are visible. (selected data information from company profile) If company chooses candidate directly from reference list it is not necessary to create RFI (in this case company creates RFQ/RFP)
Send RFI/Answer to RFI	RFI is not formalized document and this means that in many cases can not be translated (free text). RFI can be used also for requesting samples.
Send RFQ/Send quotation	RFQ/RFP are formalized documents so at the platform can be translated.
Create/Send/Change/Approve contract proposal	Company can create contract proposal by using basis clauses and templates. For contract creation can company also load previously saved template. System will automatically integrate negotiated data to contract proposal. Company can use outsourced comprehensive specialized database of clauses and templates. Consequently company sends proposal for modification until it is approved by both partners.

Process: Contract execution and settlement phase	Trust building strategies
Send order/invoice	Company can manually create and send order/invoice. Company according to negotiation sends order/invoice. Documents are automatically generated from negotiation outputs. This mechanism increases trust because it could help avoid mistakes in order and invoice filling
Receive order/invoice	Partner receives order/invoice
<i>Seller fulfills order and buyer receives ordered items</i>	
<i>Problem with goods and services is identified (by partners)</i>	
Problem resolution	Partners can solve problem without platform (small problem – current practice) Partners can solve problem within platform (small problem) and problem solving flow into new negotiation Partners can solve problem within platform (bigger problem) and can use ODR according to used

	strategy
Check contract conditions	Buyer sends payment to Escrow partner (Internal, Bank or ES provider – according to used strategy) and he checks contract conditions at all steps of the contract
Approve transactions	Buyer approves transaction and Escrow partner sends payment to Seller In the case of problem see Problem resolution
Seller/Buyer reputation feedback	Partners (Seller/Buyer) can give reputation feedback to each other. The feedback can be focused on several contractual issues (payment, quality of product, after sale service, delivery,...). Partners can use discussion forum for discussion of some problems emerged or appreciation of behavior.

Table 8: SEAMLESS trust building strategies

Furthermore, the SEAMLESS relationships with customers could be established also through personalization, profiling - Information gathering in order to excel in customer relationship.

SEAMLESS services offer customers to set up the company and product/service profile to negotiate and collaborate in dynamic web based collaboration environment as detail described in the chapter 4.3.1. SEAMLESS services also enable dispatching and translation services with ontology management.

From the technology and services perspective tracking of customers behavior is possible within the SEAMLESS collaboration environment. It will be possible to track what kind of requests and offers will be issued by company and how many transactions will be conducted by each SEAMLESS user. Evaluation of SEAMLESS customers' behavior from the business perspective will be possible by each SEAMLESS customer.

Also mediators, which associate Craft & Trade companies – SEAMLESS users will have strong role in information gathering regarding the customer satisfaction of SEAMLESS network users. One of the media for data gathering could be also web based customer satisfaction survey.

Based on this data, SEAMLESS service providers will be able to evaluate new business opportunities – to reconfigure and/or develop new services for its customers in order to exploit its services even further to other industry sectors.

5.6 Element 3: SEAMLESS infrastructure management

ICT and particularly the Internet have had a fundamental impact on the way

companies organize their activities inside and with their business partners. A wide range of different web based business models offered by mediators (as for example e-marketplaces) have arisen during the expansion of the Internet development offering organizations new possibilities of conducting business in the new Internet markets.

One of the new web based solutions focused on specific needs of Craft & Trade organizations is also SEAMLESS collaboration environment. In order to ensure all the necessary value adding services to the companies, infrastructure management needs to be defined.

“Capabilities & Resources”. Capabilities and Resources can be assured within the company or can involve outside actors, with whom a company enters a partnership in order to provide a specific services



or carry out projects. The aim of SEAMLESS is to involve the outside partners in order to exploit SEAMLESS solution in the market.

Grant (Grant, 1995) distinguishes tangible, intangible, and human assets. Tangible resources include plants, equipment and cash reserves. Intangible resources include patents, copyrights, reputation, brands and trade secrets. Human resources are the people a company needs in order to create value with tangible and intangible resources. The tasks in the activity configuration are fulfilled by in-house resources or by partner network.

5.6.1 SEAMLESS capabilities & partnership

The core capabilities of the SEAMLESS network concern the domain of supply chain excellence, enabling the companies to be visible at the Single European Electronic Market, searching for new partners, negotiating and supporting business transactions.

Because of their limited resources, SMEs have problems to be completely autonomous in an increasingly complex world. Then, most of them become members of (sectorial, regional) associations that help them carrying out elementary organizational and bureaucratic activities. In other cases the intended companies find the required support on the market, at application service providers, or even at local development agencies, chambers of commerce, technology transfer centers and universities.

Partnership is very important business model element for SEAMLESS services, as the SEAMLESS network requires partnerships in order to provide excellence bundle of services.

In general, partnerships and alliances have become an essential component in the strategies implemented by most of companies (Osterwalder, 2004). Companies are also interested in partnering for reducing risk and uncertainly and acquiring resources, knowledge they lack (not possess).

The support assured by these mediators is fundamental to introduce small companies into the SEEM. Mediators are the actors that can correctly interpret the company needs, deploy the new solution, and help adapting it to the expectations of the single company. Moreover, mediators can ensure the rapid introduction of a critical mass of companies, to make the SEEM work on the large scale as a system.

Also the mediators are pressured to pursue profits in two main streams: firstly, to conquest new markets (geographical expansion and/or the introduction of new products/services), such as new technologies or skills and by cutting costs through the adoption of new technologies and skills.

Through SEAMLESS, mediators are expected eventually to be able to organize their client companies into a global digital business ecosystem, from different countries and sectors that will have access to a single electronic market and allow frictionless collaboration between participating companies.

The mediator is in fact a service provider organization that in the context of SEAMLESS assumes the responsibility to provide the associated SMEs with the initial set of SEAMLESS offered services. Mediators could be for example chambers of commerce, chambers of craft, (sectorial, regional) company associations, local development agencies or application service providers. Figure 10 presents the partners and their roles in the SEAMLESS network.



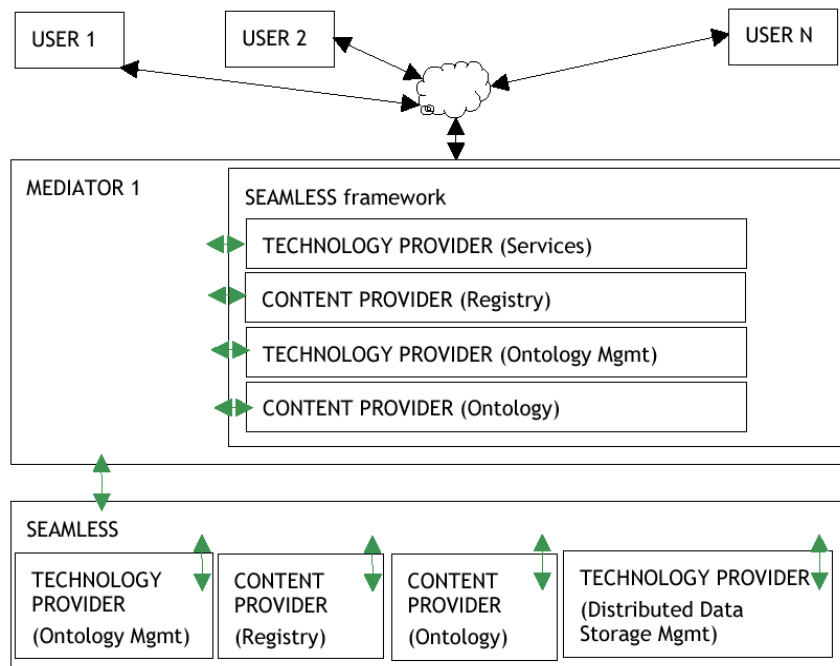


Figure 10: SEAMLESS network
(D6.3.1 Deployment and exploitation plan, pg. 19)

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The ambition of the SEAMLESS project is creating the organizational and technological conditions to enable mediators, from different countries and sectors, to become nodes of the SEEM network and provide the associated companies with the services needed to access the SEEM and collaborate with other companies.

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Through SEAMLESS, mediators are expected eventually to be able to organize their client companies into a global digital business ecosystem, from different countries and sectors that will have access to a single electronic market and allow frictionless collaboration between participating companies.

The mediator is in fact a service provider organization that in the context of SEAMLESS assumes the responsibility to provide the associated SMEs with the initial set of SEAMLESS offered services as already presented in Table 5 – Bundle of SEAMLESS services.

Core to the concept of SEAMLESS is a hierarchy of ontologies that will support interoperability within the SEAMLESS network. The Global ontology (GLOB) includes all the concepts that are used to exchange information within the network, and can be seen as the reference knowledge of the system. Common ontologies (COMM) include the concepts relevant to a single SEAMLESS node, namely the mediator, and their contents are in fact the union of all the local ontologies (LOCL), each LOCL representing the concepts used by a single company (user organization) when sharing or exchanging information with other companies. The COMM ontology is common to all the companies associated to that mediator and constitutes a view (expressed in the local language) of the global SEAMLESS ontology (GLOB). This approach allows every single company to keep using its own language and data organization, that is, its local ontology (LOCL). By mapping this (just once) into the mediator knowledge (which in turn maps onto the GLOB ontologies), this peer-to-peer ontology-interconnection allows automatic translation and takes care of multi-lingual representation of queries and business documents.

Mediators can play a fundamental facilitation role to support organizational changes in the perspective of virtual network creation and operation with the availability of open source solutions, content providers managing the registries.

In order to provide the bundle of services, partnership between different target groups is needed: Technology providers for ontology management, distributed data, storage management.

The SEAMLESS focus is building strong partnership in textile and construction industries, with the prosperities to expand into different industries. Therefore, reliance on strategic relationships in order to increase client base is needed. If these relationships fail the business and operating results could be materially harmed.

How to make partnership work?

In order to succeed, network partners need to overcome the following main challenges (Boston Consulting Group, 2000):

- The partnership must make business sense for everybody (every partner should deliver real value)
- Technical obstacles must be overcome (integration of services within the general architecture)
- A sensible financial arrangement must be reached
- Questions about customer ownership must be addressed
- Potential regulatory obstacles must be taken into account

Further step of SEAMLESS project will be to attract other stakeholders e.g. mediators, ICT/ASP providers, integrators and other interested parties to assure wide exploitation of SEAMLESS solution.

5.7 Element 4: SEAMLESS financials issues

The financials element is the culmination of an e-business model. The best products and services and the finest customer relationship are only valuable to a company if it guarantees long-term financial success.

The financials element is composed of the company's:

- Revenues model and
- Cost structure,

which finally define the profit/loss of a company.

5.7.1 SEAMLESS Revenue models

This element measures the ability of a company to translate the value it offers its customers into money and therefore generate incoming revenue streams. A company's revenue model can be composed of different revenue streams that can all have different pricing models. The new pricing mechanisms enabled



by ICT should be used in order to maximize revenues. Particularly the Internet has had an important impact on pricing and has created a whole new range of pricing mechanisms (Klein et al., 2000).

As indicated above; the pricing method can be “fixed” (price does not differentiate in function of customer characteristics, not value dependant and not based on real-time market conditions. The major mechanisms of this category are pay-per-service use and subscription.

On the other hand, there can be also “differential pricing” which is product-feature-dependant, customer-characteristic-dependant, volume-dependant and value-based pricing.

Transaction fees are usually set as a percentage of the transaction value and charged to sellers or, less often, to buyers or both. They have been under a downward pressure, falling from 2–8% of transaction value in 1999 to 0.5–2% in 2000, and very likely to below 50 basis points before long. It is also predicted that in the future, the main source of value created by the eMarketplaces will be in the area of collaboration, e.g. services that allow companies to manage their inventories, design products, and manage projects (Boston Consulting Group, 2000).

Membership fees are recognized ratably over the period of the agreement. Transaction revenue is recognized at the time our service is considered as completed. Development fees are recognized as development services are performed, while royalty fees are recognized according to the period of the related contract. Revenues from product resale are recognized when the product is shipped or delivered, depending on the shipping terms associated with each transaction.

In the context of the SEAMLESS network and services exploitation and deployment all this revenue models must be considered.

In the SEAMLESS network, the mediators could benefit through revenue from the participation of the associated user companies to the SEAMLESS supported eMarketplace, either subscription based or on a per-service use basis. To extend that they are the front ASP for the user organizations and operate the respective portals, the mediators also target collateral income (e.g. advertising etc.).

From the perspective of SMEs and Craft & Trade organizations, SEAMLESS services must be simple to use and also based on low price that SMEs and Craft & Trade organizations could afford. Subscription fees (yearly) could be one of the most suitable revenue models from that perspective. The base for the calculation of the subscription fees could be the current price of outsourcing applications that SMEs are currently using. Also transaction fees could be a part of the revenue model. The calculation of the overall SEAMLESS network participation fees for SMEs must be done in the study involving the current ISP/ASP providers by partners in the SEAMLESS consortium

Financial arrangements have two sides: at the input side distribution of costs and risks is essential, while at the output side the division of revenues is essential. If involved actors don't get a fair share of the revenues they are most likely to drop out of the network and hamper the viability of the business models. Also from that perspective further studies need to be done by the SEAMLESS consortium to adopt the proper revenue model for ASP/ISP and mediators, which will offer SEAMLESS services.

The table 9 below presents main advantages and limitations of exposed revenue models.

Revenue Model	Comments	Advantages	Limitation
Transaction fees	<p><u>Explicit transactions fees</u></p> <p>It may be calculated as a:</p> <p>A percentage of the value of the goods traded</p> <p>Flat rate per trade (per order or per line item)</p> <p><u>Invisible transaction fees</u></p> <p>There is no visible cost to either party and yet there is a</p>	<p>Can be directly tied to savings (both: process and price savings)</p> <p>Important revenue source when high transaction volume is reached</p>	<p>If process savings are not completely visible use of the system is discouraged</p> <p>Transaction fees likely to decrease with time</p>

	revenue stream for the marketplace operator. The revenue opportunity is very dependent on the size of the margins and the ability to create volume orders from multiple buyers.		
License fees		Creates incentives to do many transactions Customization and back-end integration leads to lock-in of participants	Up front fees is a barrier to entry for participants Price differentiation is complicated
Subscription fees	Entry to the marketplace – flat rate or dependent on the turnover of the company Subscriptions for services Subscriptions to cover storage and updating the catalogue..	Creates incentives to do transactions Price can be differentiated Possibility to build additional revenue from new user groups	Fixed fee is a barrier to entry for participants
Fees for value-added services	Value added services come in a wide variety of forms, including: Financial and payment services Collaborative services (e.g. enabling designers to share and manage documents) Integration into the buyer's or supplier's back-office system The provision of marketing advice to suppliers (charged on a project basis) Advertising...	Service offering can be differentiated Price can be differentiated Possibility to build additional revenue from established as well as new user groups	Cumbersome process for customers to continually evaluate new services
Advertising fees		Well targeted advertisements can be perceived as value-added content by trading participants Easy to implement	Limited revenue potential Badly targeted advertisements can be disturbing element on the web site

Table 9: The Advantages and Limitations of Revenue Sources
(Hope et. al., 2001; Bruun et. al., 2002)

5.7.2 SEAMLESS Cost structure

This element measures all the costs the company incurs in order to create, market and deliver value to its customers. It sets a price tag on all the resources, assets, activities and partner network relationships and exchanges that cost the company money.



Further study will need to discover which costs need to be calculated to offer the full range of SEAMLESS network services. From that point of view technology related costs and organizational related costs need to be further elaborated and explained for all the partners involved in SEAMLESS network services. This is also very much related in the revenue model establishment and the cost and profit share of all the parties involved.

From the perspective of target customers which are Craft & Trade companies low costs model needs to be defined.

5.8 SEAMLESS business model sketch

In figure 11, SEAMLESS business model sketch is presented, incorporating all 4 business model elements:

- Product innovation
- Customer relationship
- Infrastructure management
- Financials



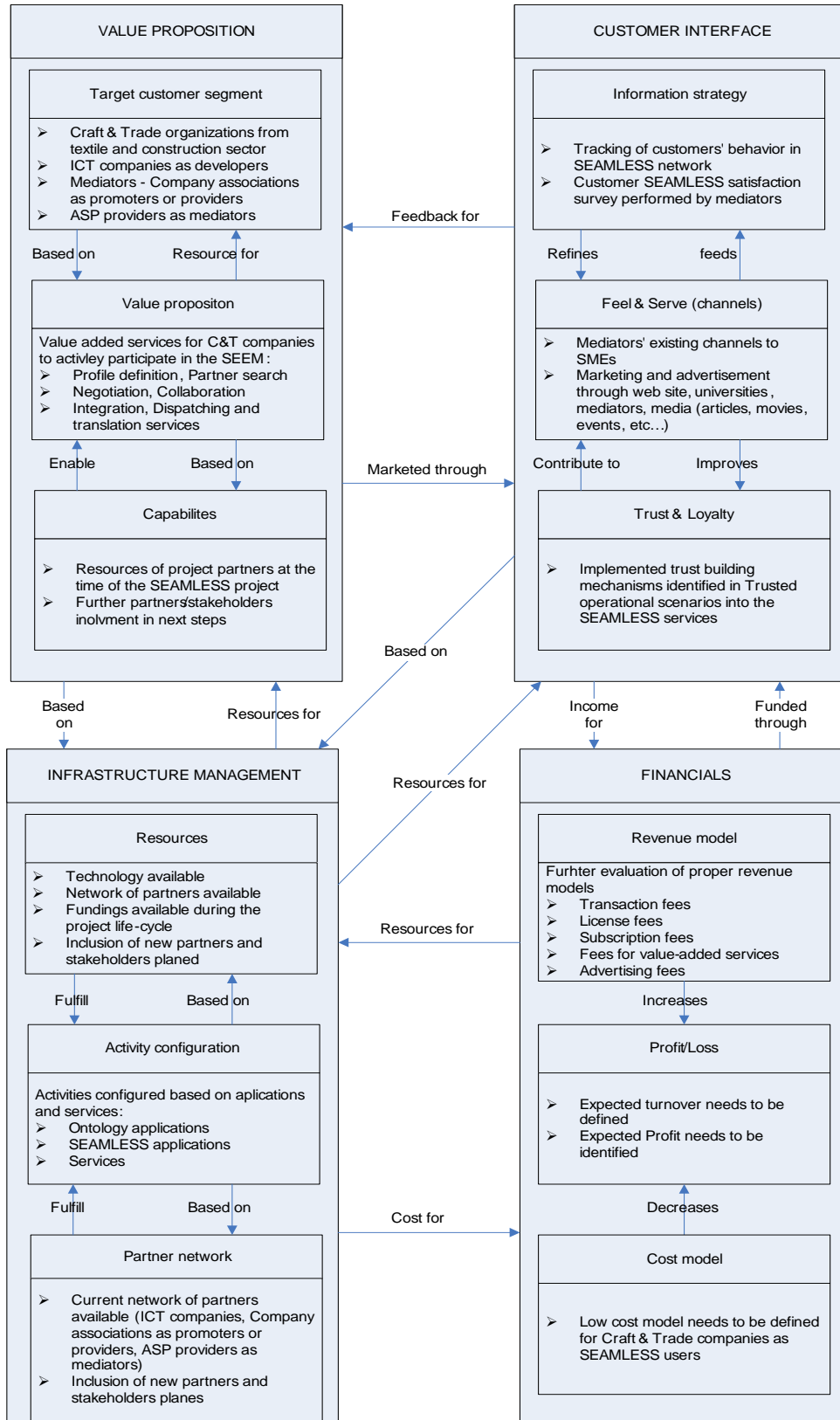


Figure 11: SEAMLESS business model sketch

6 Remarks and further steps

This deliverable is a base document and starting point for the final issue of the “New business models – final” deliverable that is expected to be provided by the end of the SEAMLESS project in order to show the clear possibilities for successful SEAMLESS deployment in the business environment.

It relays on the current SEAMLESS project achievements and its vision for future development. Base on the adopted methodology SEAMLESS tentative business model is described incorporating all 4 business models elements:

- Value proposition
- Customer interface
- Infrastructure management
- Financials

Based on first assessment towards SEAMLESS business model some open questions have arisen.

For example, first business model element “value proposition” could already tentatively be described, as the SEAMLESS is focused on offering the web based collaboration framework with the value added services for SMEs. For the next issue of “New business models” the implemented SEAMLESS value added services with all the available business scenarios will be evaluated during forthcoming pilot phase in the SEAMLESS project, where mediators will involve interested Craft & Trade companies. Their feedback information about the available services and its way of usage will be crucial in this phase for further development. Also the mediators will be expected to provide their experiences with SEAMLESS pilots. For these purpose the interviews will be developed for the Craft & Trade companies participating in the SEAMLESS pilot phase.

The second business model element “customer interface”, which refers to the way a company “reaches” its customers, also raises some issues, which need to be further studied and assessed. For example target customers are already well defined, but further definition will have to be done for distribution channels. Strong awareness creation activities and marketing actions need to start immediately in order to attract the potential SEAMLESS customers. For that purpose local workshops will be organized by each mediator and university partner in their respective countries. Web site will be prepared with more attractive information for potential SEAMLESS users and stakeholders. Each mediator will prepare clear links from their perspective websites to the SEAMLESS web site. Also flyers will be prepared for different target groups – users and stakeholders. Participation of each partner in different workshops, local events, conferences and also personal visits to the potential SEAMLESS stakeholders will be done.

More issues still remain open in the third and fourth business model elements “infrastructure management” and “financials”. These issues will be further elaborated in the state of “pilots”, which is the next step and task in the SEAMLESS project.

From the perspective of “infrastructure management” resource, capabilities and partner network for the pilot state and during the SEAMLESS project life-cycle are defined, but further elaboration of these elements is needed for the exploitation and deployment of SEAMLESS network and services in the real business environment after the end of the project. Strong identification and cooperation with stakeholders will have to be established based on needed partner network for full deployment of SEAMLESS services. Each partner will identify potential stakeholders and partners in his respective country. Presentation of SEAMLESS services and interviews will be performed in this phase.

The same issues appeared for the “financials” business model element. Existing revenue models must be studied in order to deploy the most suitable revenue model for all the partners in the SEAMLESS network. Due to the nature of SEAMLESS business model value, that intends to offer value added services, negotiation and collaboration business environment to the Craft & Trade companies in the SEEM, low cost model, which Craft & Trade companies could afford, should be implied. Interviews will be performed with existing and potential identified mediators to identify how SEAMLESS services could be offered by mediators, what would be the level of fees and revenue model. On the other side also interviews will be done with interested SMEs to identify which revenue model will be most suitable for

them and more clearly what is the level of price that they are willing to pay for SEAMLESS value added services.

The next tasks in the project will be critical in order to elaborate, identify and apply all the necessary SEAMLESS business model elements which will reflect to the SEAMLESS business plan for SEAMLESS network successful deployment.



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