ETeB

eBCM RAP

Modeling a piece of Art
Paving for eFuture
Summary #2

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Nordic Innovation Centre

There is a certain analogue between a model and a piece of art. Both gain the inspiration from reality, both are attempts to construct an interpretation of the reality, and both aim to serve an audience by delivering a message or an opinion concerning the reality and how to cope with it. In addition, both are often loaded with the desire from the model constructor, or from the artist, to have an impact.

Karl Henry Haglund

Modeling
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Summary #2

Rapid Evolution of the eBusiness Scene

Today's business is rapidly accelerating in phase and becoming more and more competitive on all fronts. Businesses and customers are becoming more informed and demanding on service and accountability, requiring faster transactions, shorter product "time-to-market", faster inventory and investment cycles. Service response times have become a competitive edge, as well as higher accuracy in service and product offerings and corporate social responsibility. The main driver for this paradigm shift is automation of business processes and availability of information.

For any community, entrepreneurship and creativity is a key driver, values that to a large extent thrive in small and medium sized enterprises (SMEs). Automated business processes are costly to install and require a cultural change in the way business is conducted and service offered. For the SMEs the cost of automating business operations, and thereby becoming integrated into the larger business scene, as well as the cost of adjusting to a new mindset is currently perceived to be too high. What the SMEs need is a modular approach, enabling them to gradually build their technical infrastructure and capabilities as well as recognizing other key elements required for becoming eBusiness integrated, i.e. doing business electronically.

A Modular Approach to Competitiveness

Such an approach is currently being developed in the eBCM-RAP[1], a cross cultural, multinational European project. The centrepiece of the project is the "eBusiness Community Model, eBCM", which is designed to cover all the major elements needed for advancing towards an e-Business. In the project this model is being developed and upgraded based on three studies on the status of eBusiness in the partner countries. The project partners are all members of the European Network of National Test-beds for eBusiness, ETeB.

ETeB is a multi national initiative sharing the vision of streamlined cross-border ICT enabled business practices for optimal use of resources and value creation. The partner network is represented

by public-private organizations from five of Europe's most highly motivated nations with respect to ICT development, i.e.: Estonia, Finland, Iceland, Romania and Slovenia. The eBCM-RAP project partners are

>Estonia: EIC, Estonian Informatics Centre
>Finland: TIEKE, Information Society Development Centre
>Iceland: IST, Icelandic Standards
>Romania: CCIR, the Chamber of Commerce and Industry of Romania

The mission of the eBCM Model is to operate as a cross-sectoral and multi-discipline reference point in the paradigm shift towards eBusiness by assisting the introduction, promotion, justification and implementation of the ICT enabled business practices renewal process.

Value for Stakeholder Community

The eBCM Model's design and content encapsulates a message which is relevant to almost anyone that is doing business or serving business communities, including governments and educators. Looking at the following stakeholder communities gives an insight of the possible return from utilizing a modular approach.

Small and Medium sized Enterprises

Small and medium sized enterprises (SMEs) represent a large part of a community's employment and value creation, varying between countries and regions. As active players in the community, competing for market share and profit, SMEs are looking for opportunities to participate in the new ICT enabled business practice renewal process. With limited investment resources and technical in-house expertise, the SMEs need to have a simple way to recognize the key elements of eBusiness, assess their current situation and have guidelines for how to obtain the additional capabilities, skills and knowledge. The mission of the eBCM Model is to provide that support. Having this support will shorten the SMEs' learning curve; speed up the decision process and support funding and communication.

Educators and Research Community

For educators and the research community the eBCM would also serve as a reference point in assessing necessary knowledge, skills and research focus for supporting eBusiness development. The eBCM Model itself is a pool of knowledge which has been gathered from international experts, in an open dialogue since 2001 and by the eBCM-RAP project's implementation. Utilizing a recognized model for own objectives will, for this stakeholder community result in better harmonization with business and communal needs for well educated workforce and targeted research projects, giving a higher return on time and funding resources.

Governments and Communal Development Funding Organizations

Governments and communal development funding organizations share the common interest of developing programmes and actions that enhance the respective community's competitiveness, being a local community or a region. The challenge is to recognize and understand the communities' need for support and act on that need in a balanced and constructive way. For doing that there must be a way to assess a situation with reference to a set of benchmarks and indicators, conclude on the findings and act accordingly. The eBCM is a tool that serves this purpose.
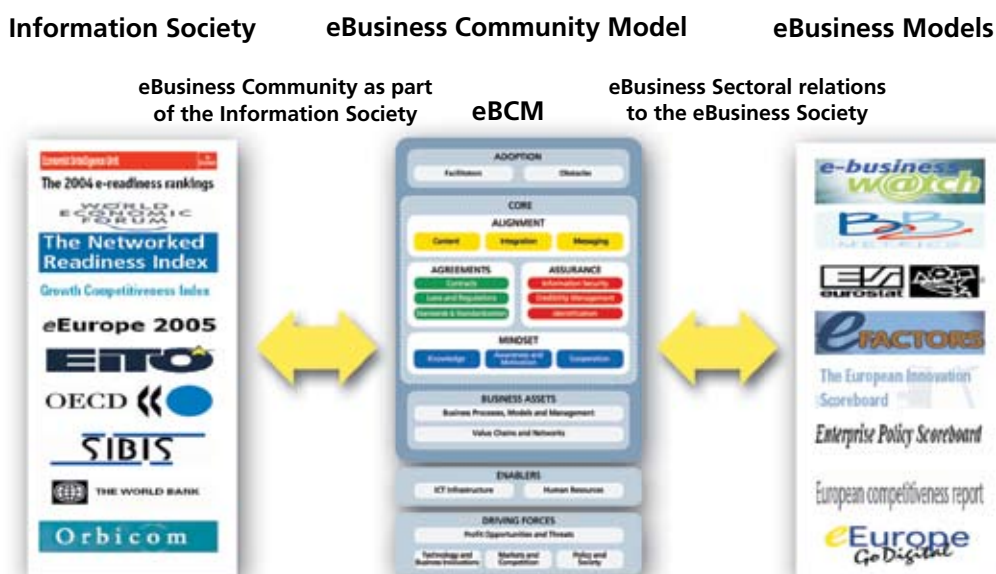
Benchmarking the eBCM Domain

The scene of different information sources offering eBusiness related material is very dispersed and uncoordinated. The eBusiness domain still suffers from ad-hoc type approaches launched with differing definitions and objectives. A large number of surveys are one-time trials and do not build upon continuity.

At present several initiatives have been launched to tackle directly or indirectly the eBusiness indicator and benchmark issue. Some of them refer to national or international trade from the national economy point of view, some attempt to measure the penetration of ICT usage within or between businesses and some concentrate especially on Internet penetration and usage of websites and portals. These are just examples of the variety of approaches. In addition, eBusiness measuring tools are often highly related to innovation scoring, measuring competitiveness and the renewal process of business, value chains and networking patterns within different branches of economy.

The eBCM-RAP research has revealed the importance for SMEs to consider and analyse their overall position in eBusiness and ICT enabled business practices renewal. This situation underlines the challenge in developing sustainable eBusiness benchmarks and indicators for the SME domain.

The following schema illustrates the eBCM Model domain in relation to other areas; either information society or eBusiness model construction.

Information Society **eBusiness Community Model** **eBusiness Models**

eBusiness Community as part
of the Information Society **eBCM** eBusiness Sectoral relations
to the eBusiness Society

One key characteristic of the eBCM Model is to monitor the ability of companies to develop their eBusiness. As a result of gaining knowledge and improving their abilities the companies become better motivated to take necessary and major steps in the renewal of their business practices, and they will be more likely to succeed in implementing solutions.
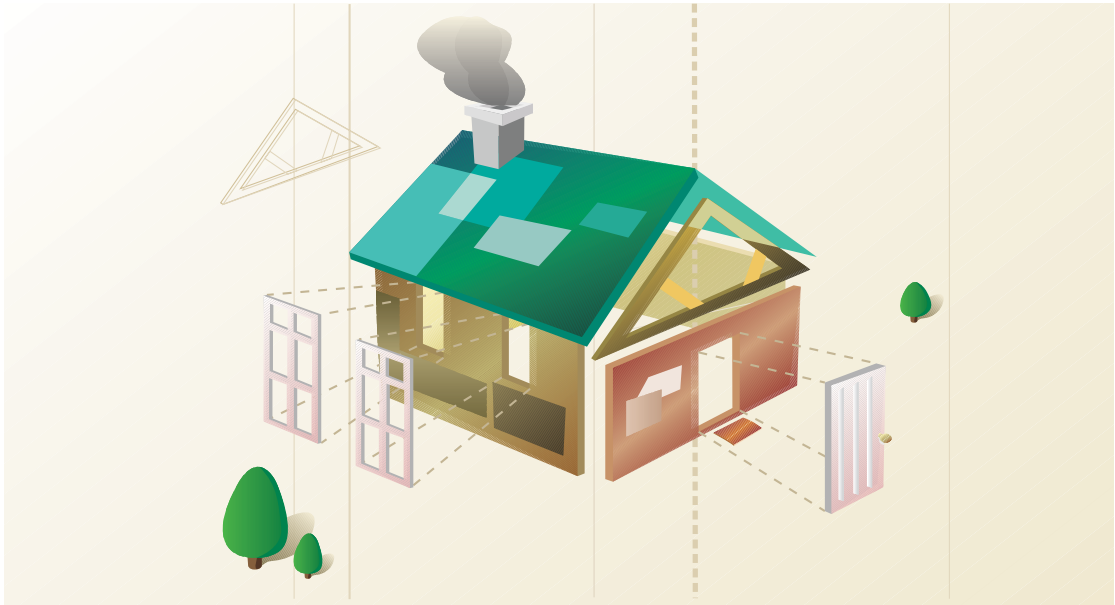
The eBCM Model

The eBCM Model provides a general assessment platform for eBusiness and respective activities, and in addition, a working arena for benchmarking and indicator based studies covering eBusiness development and maturity follow-up. The approach will allow several means for assessment, from a direct reference point to benchmarking in terms of identifying, understanding and adapting outstanding eBusiness practices and state-of-the-art solutions and applications in order to improve stakeholder performance.
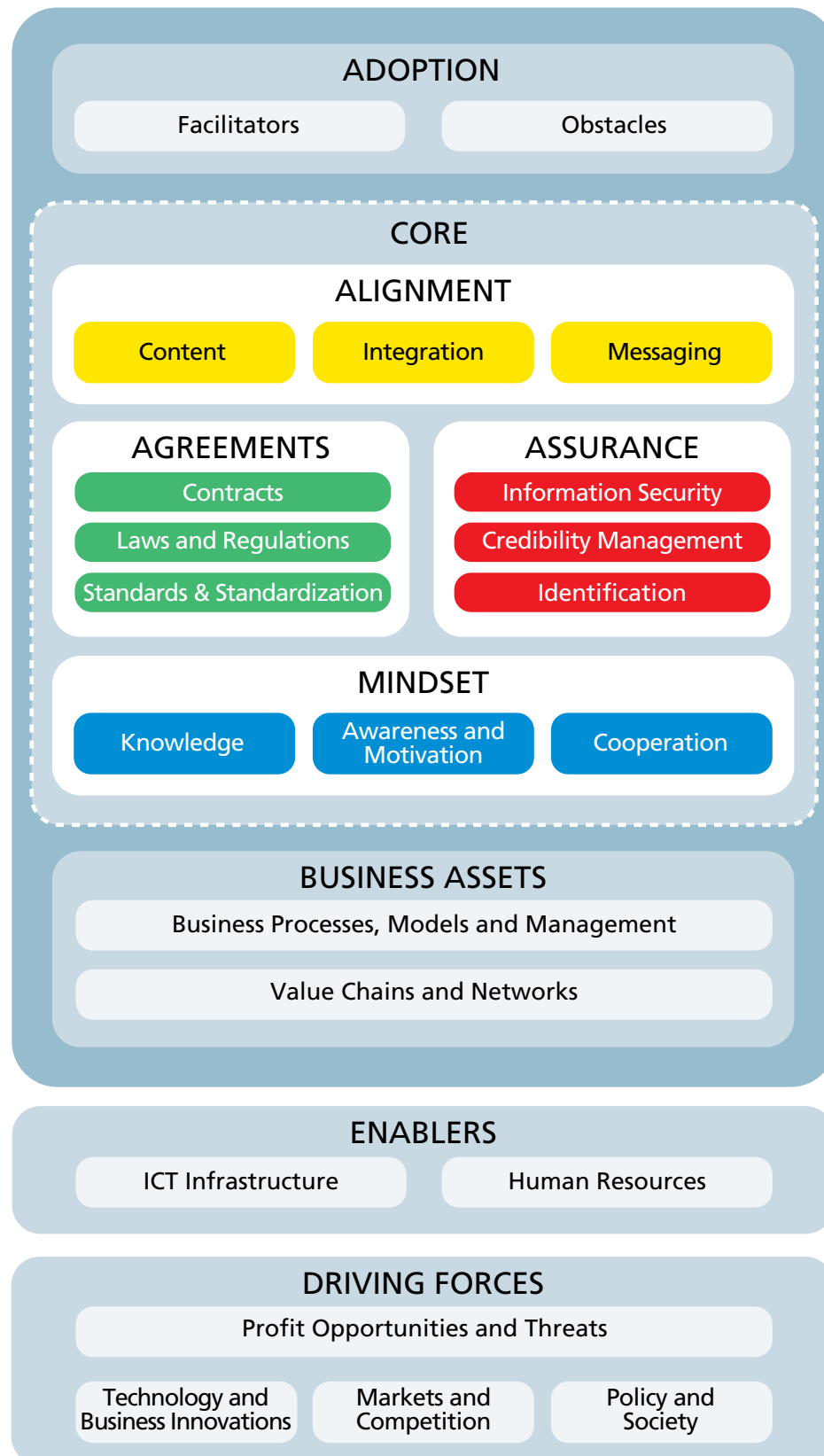
In addition, the eBCM Model has a number of other promotional roles like:

- An action trigger for means and measures to tackle barriers and obstacles for eBusiness practices adoption and breakthrough;
- A tool of reference for setting community development and research funding strategies and respective decision making, and idea generator within national and international fora;
- A tool of reference for the development of eBusiness curricula, education and training materials and methods;
- An optimisation tool when taking decisions on the allocation of scarce eBusiness practices development resources, aiming for optimal "value for money".

Further, due to its collaboratory nature, the eBCM approach allows for the following more general opportunities:

- A cooperation platform of bridge-building nature, bringing together stakeholders of different background and discipline, still necessary for the sound progress of ICT enabled business practices adoption;
- A case study reservoir, organised according to the model structure, including as example descriptions of successful business renewal schemes and initiatives, and other type of best practices, and
- An eBusiness landscape illustrator, providing an overall multi-view picture of the evolving

The structure of the eBCM Model interim version 2.6 is the following:

ADOPTION

Facilitators

Obstacles

CORE

ALIGNMENT

Content

Integration

Messaging

AGREEMENTS

Contracts

Laws and Regulations

Standards & Standardization

ASSURANCE

Information Security

Credibility Management

Identification

MINDSET

Knowledge

Awareness and Motivation

Cooperation

BUSINESS ASSETS

Business Processes, Models and Management

Value Chains and Networks

ENABLERS

ICT Infrastructure

Human Resources

DRIVING FORCES

Profit Opportunities and Threats

Technology and Business Innovations

Markets and Competition

Policy and Society

ITC enabled business practices and its development pressures and routes.

The Core

Building Blocks, each of them covering a specific key issue in understanding and managing eBusiness; *Building Block Clusters*, representing essential eBusiness sub domains and consisting of a number of strongly related building blocks. There are four clusters in the eBCM core.

• *Mindset.* In order to promote ICT enabled business practices it is important to create an environment with enthusiasm, a virtual accelerating cycle and an atmosphere leading to adoption. For any development, there needs to be the right "mindset" in place, including the necessary knowledge, the awareness about the opportunities and the motivation to take action, and effective fora for cooperation of measures taken.
The cluster Building Blocks: *Knowledge, Awareness and Motivation,* and *Cooperation.*

• *Agreements*. The business environment includes numerous agreements of different categories. Some agreements are informal, some formal by nature. Some are voluntary recommendations, some compulsory. The landscape is wide for agreements with differing strength; binding, guideline-type and recommendations to follow generally accepted codes of conduct. A prerequisite for a solid set of agreements is a stable set of supplier independent definitions and terminology.
The cluster Building Blocks: *Laws and Regulations, Standards and Standardization,* and *Contracts.*

• *Assurance.* Establishing the necessary trust and confidence between business partners is to a very large extent a subjective issue affected by the reputation and image of the organizations or enterprises in question. This refers to the overall perceived identity and credibility, which are essential both in the traditional business as well as in the business practices with strong ICT penetration and network visibility.
The cluster's Building Blocks: *Information Security, Identification,* and *Credibility Management.*

• *Alignment* is an integrating building block cluster, bringing together the fabrics of different ICT supported business processes and the necessary eBusiness community content descriptions, adaptation to different environments and partnerships, business transaction construction and respective message exchange means, preconditions and practices.
The cluster's Building Blocks: *Content, Integration*, and *Messaging.*

Adjacent Elements

There are two categories of Adjacent Elements:

I) *Elements which are within the direct power of individual organisations to operate and decide upon:*

• *Business Assets,* set of elements and factors identifying key business processes, models and management as well as value chains and networks evitable for businesses to create and maintain dynamic and ac-hoc based cooperation structures, where different resources meet and work together to achieve a common goal, thus integrating their value production abilities.
The elements: *Business Processes, Models and Management,* and *Value Chains and Networks*

• *Adoption,* set of elements and factors providing information from various sources about issues related to eBusiness adoption, i.e. how the ICT enabled business renewal is progressing, and

identifying obstacles, barriers, gaps of knowledge etc. problems in the progress and take-up of new business practices, and serves as an integration point of the findings and messages provided by the individual building block based benchmarks and indicators.
The elements: *Facilitators* and *Obstacles*

II) *Elements which are regarded as background given factors. These elements illustrate the general environment, prerequisites, need and motivation related issues important for eBusiness development and implementation. Individual organizations have to adapt themselves with respect to these factors and take action accordingly.*

• *Driving Forces* are set of elements and factors identifying internal or external forces such as technology and business innovations, the evolving markets and the turbulent competition scene, policy and society level issues, and the emerging new possibilities for profit opportunities as well as threats for success.
The elements: *Profit Opportunities and Threats, Technology and Business Innovations, Markets and Competition,* and *Policy and Society*

• *Enablers* are set of elements and factors referring to key prerequisites for ICT enabled business practices and for establishing a well-functioning eBusiness environment.
The elements: *ICT Infrastructure* and *Human Resources*
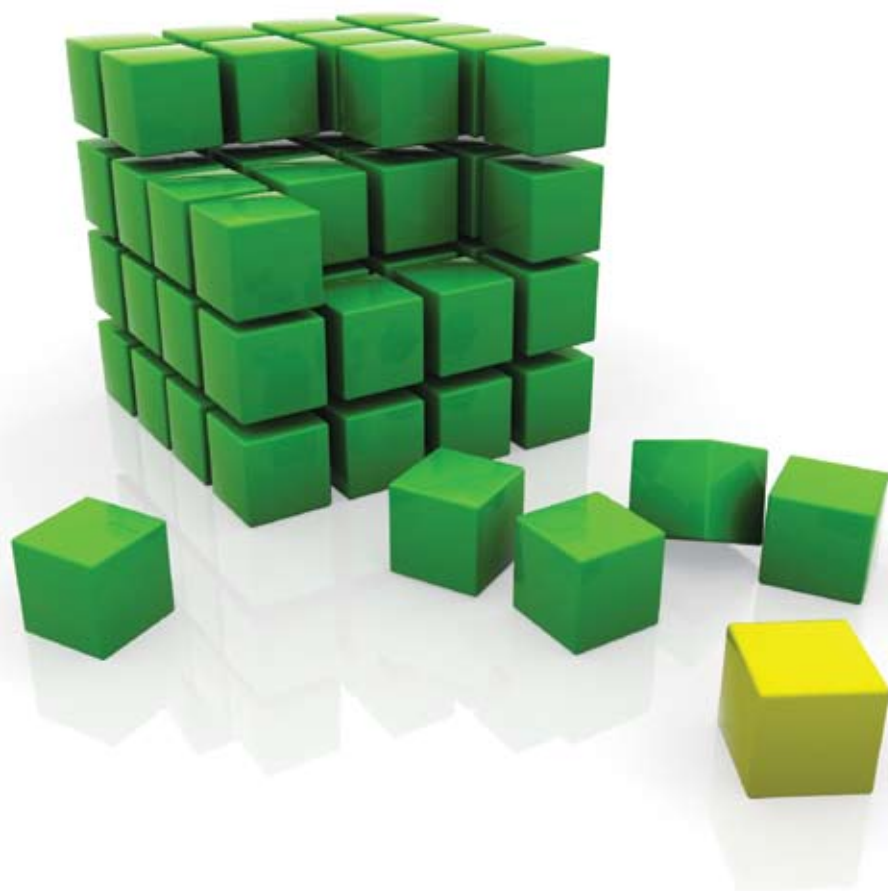
The eBCM-RAP Project Research

Research Round # 1 – National eBusiness Profiles

The eBCM-RAP Research Round # 1 conducted in 2005 served as the first step to assess the eBusiness scene from the SME point of view in the context of the eBCM Model Core building blocks and building block clusters.

The research was conducted amongst the eBCM-RAP partner countries Estonia, Finland, Iceland and Romania, thus producing national eBusiness readiness profiles. The profiles described the national general eBusiness landscapes in terms of policy actions and the regulatory framework, main eBusiness related initiatives and major achievements, eBusiness driving forces and obstacles, success stories, best practices and reasons for failure as well as national roadmap elements for the future.

This part of the research delivered a number of issues to be recorded in the eBCM Model scope and structure. It also clearly indicated the diversity of SMEs to be addressed and served by the eBCM Model, and the many different stakeholders involved in the eBusiness readiness improvement mission. Foreseen roles and usage patterns were identified and recorded. Valuable information was gained on how to benchmark eBusiness development and set criteria for selection of indicators.

As the result of the Research Round # 1 field study, during the first half of the year 2006, further elaboration of the eBCM Core took place, and in order to link the eBCM Core in a wider frame of reference, a number of Adjacent Elements were introduced, defined, described and inserted in the overall eBCM Model structure. Likewise, the Research Round # 1 findings and results were used in preparation of the Research Round # 2.

The Research Round # 1 is documented in the eBCM-RAP Report 1: Modeling a Piece of Art – Paving for eFuture, October 2005, and the respective Summary and Results Document, introducing the extended eBCM Model overall structure, in 2006.

Research Round # 2 – Companies' eBusiness Readiness

Research Round # 2 was a questionnaire-based field study with samples of SMEs in the participating countries. The main objective was to gain material, directly from the SMEs themselves, about the present state-of-play of the utilization of ICT enabled business practices and, based on the knowledge gained, to further develop the eBCM-RAP research methodology and elaborate the eBCM Community Model.

The target group was enterprises within trade and manufacturing branches. The task was to survey the field from their viewpoint and remain within the eBCM Core domain. The questions were presented according to the eBCM Model Core domain structure with references to the candidate benchmarks of the eBCM Version V 2.0. The method used was telephone interviews.

The national field interviews covered all the 12 eBCM Model Core block domains and included 36 (12 x 3) questions in total. The overall sample of SMEs interviewed was 105. Thus the sample was not valid to draw direct conclusions about the eBusiness state-of-play but was wide enough to provide trustworthy input for tuning of the eBCM Model.

The study indicated that a large number of the randomly interviewed SMEs were not familiar with several of the elements of eBusiness and the eBCM Model. Partly this seems to be due to the new concepts like cyber identity or credibility management, which are not a part of the SMEs ordinary vocabulary. And partly this may be due to a relatively low level of eBusiness knowledge within SMEs. There are forerunners and laggards, and the variation is wide.

Additionally, the field study showed that most of the SMEs have a very pragmatic attitude and are not interested in more general issues. They speak in terms of applications and functions, which are implemented or not. Likewise, any specific interest in background structures, development and activities requiring shared effort or participation (even if considered important as such, for example standardisation), is not regarded as their task. Such activity should be taken care of by some other stakeholders like public authorities or professional organisations.

The analysis revealed that there is a broad diversity among SMEs in their present stage of adoption of eBusiness practices. A general observation is that the eBusiness arena is not regarded by SMEs as an integrated opportunity but instead interpreted as a list of specific services that are used or not. The field study exposed number of interesting and important issues at the eBCM block level, which will require additional analysis and consideration. A key issue to consider is how to address the diverse community of SMEs and varying business branches, business plans, organisational size and level of knowledge.
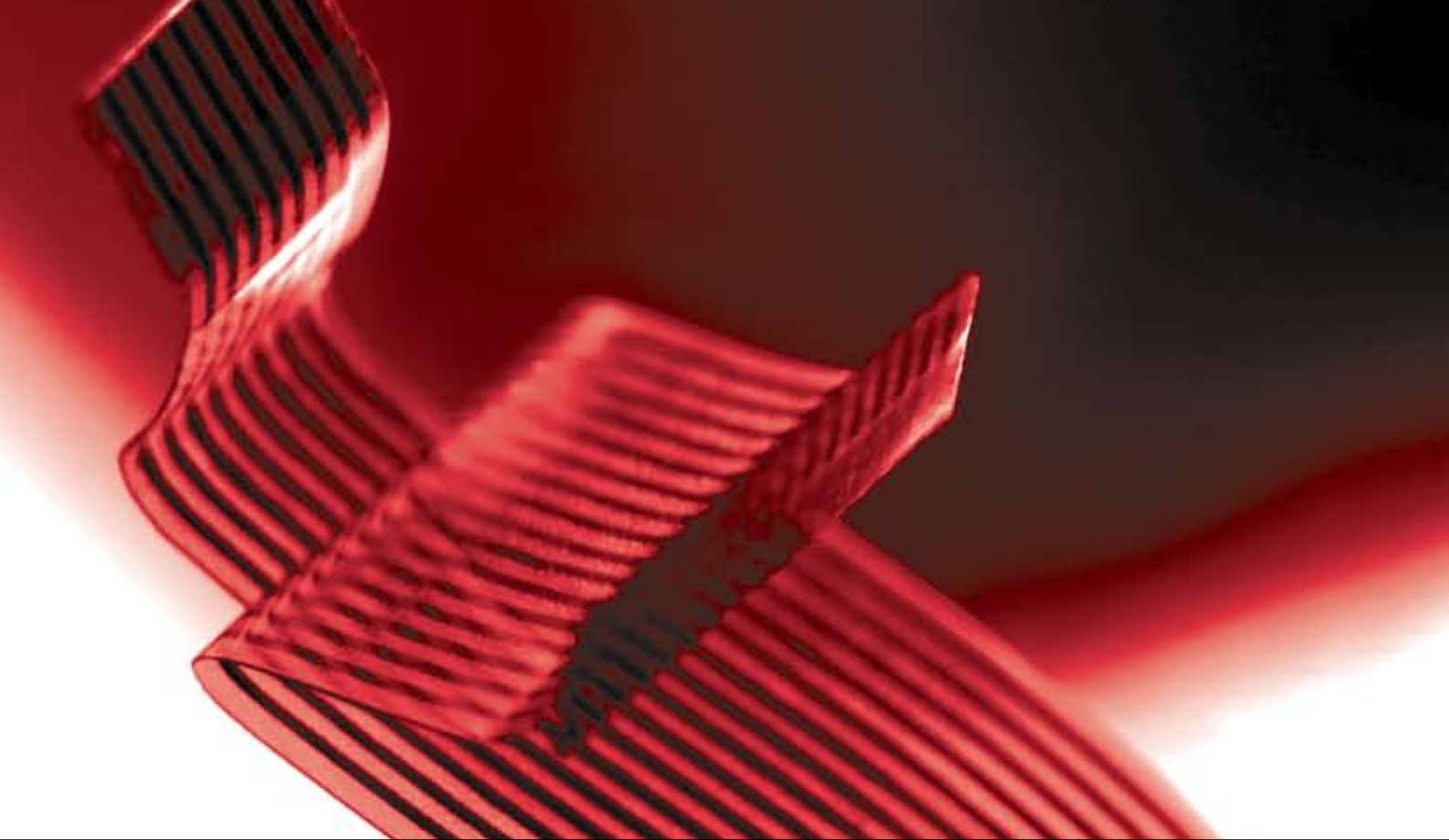
Research Round # 3 – The status of eBusiness

Research Round # 3 marks the final stage of the eBCM-RAP project. This exercise will be an assessment of the status of eBusiness in the partner countries, using the generic eBCM model for information gathering and validation purposes. The research will take place in May 2007.

The Way Forward

The main task for the final stages of the eBCM-RAP project is to prepare the eBCM Model for delivery, i.e. to make it available for the eBusiness community stakeholders as a tool to promote and monitor ICT enabled business practices renewal.

According to the eBCM-RAP Project Plan this is to be done by tuning the eBCM Model to act as a generic entity in the ETeB context and as a suitable benchmark for national, regional and sectoral eBusiness developments. The third and final Research Round will utilize the eBCM Model to assess the eBusiness status in partner countries. After final tuning of the eBCM, based on the third exercise of using the model as an assessment tool, the generic eBCM Model will be introduced in the autumn of 2007 in a conference and by publication describing its nature and objectives as a tool for eBusiness assessment.

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