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1st Internal Reviewer: Dr Marko Seppa, Technical University of Tampere
2nd Internal Reviewer: Dr Robin Mansell, London School of Economics

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Table of Content

Executive Summary	5
1. Requirements & Objectives	6
1.1. Introduction	6
1.2. Vision of the DBE (Synergy)	8
1.2.1. The DBE Project and Project Timeline	8
1.2.2. Open Knowledge and Evolutionary Learning	9
1.2.3. Synergies	13
1.3. Assumptions	14
1.3.1. Propositions about actors in the regional DBE communities	14
1.3.2. Propositions about the development of the DBE communities	14
1.3.3. Propositions about synergy effects and learning in the DBE community	14
1.3.4. Propositions about uncertainties	14
1.4. (Inter) Actors in the DBE	15
1.5. Strategy for Open Knowledge and Evolutionary Learning	20
1.6. Science Learning within the DBE	23
1.7. Goals	25
1.7.1. Intra-regional goals of training	25
1.7.2. Cross-regional goals of training	25
1.7.3. The goals of training in the overall DBE program	26
2. Actions	27
2.1. Action framework in DBE context	27
2.2. Distributed delivery model	29
2.2.1. Diagnostics	29
2.2.2. Opportunity Spaces	29
2.2.3. Typologies of engagement	29
2.2.4. Known and Emergent Needs	31
2.2.5. DBE-firm interactions	31
2.2.6. Action Plan (content, channels, delivery)	33
2.2.7. Creation of the Learning & Knowledge platform and Long-Term Vision of DBE Learning Modules and Artefacts.	35
3. Management	37
3.1. Roles and Responsibilities	37
3.2. Deliverables & Milestones (first 18 months)	41
3.3. Resource allocation	43
3.3.1. Original Funds Allocation	43
3.3.2. Proposed New Funds Allocation	Error! Bookmark not defined.
3.3.3. Delta	Error! Bookmark not defined.
3.3.4. Time	44
3.4. Action Points	47
4. Review and Evaluation: A Model Driven Approach to Evaluating DBE Learning Communities Action	48
4.1. Introduction	48
4.2. Rationale for Evaluation	48
4.3. Evaluation Objectives	49

4.4. Approach to meeting the objectives	49
4.5. The DBE Evaluation Model	51
4.6. Operational aspects of evaluation	55
Annex	62
I. Key Personnel in Training and justification	63
II. 36 month Gantt for Knowledge & learning + related tasks	66
III. Work Package description (detailed for first 18 months)	67
WP 27 SME Recruitment	67
WP 28 DBE Training	68
WP 30 Transfer and Adoption (to be updated)	70
WP 33 Dissemination and Community Building (only training part)	71
IV. Updated Deliverables list (first 18 months)	72
V. Glossary	73
VI. Learning and Knowledge Platform	74
VII. Bibliography	79

Executive Summary

This document summarises the new training strategy of the DBE project, which was formulated following the Training review meeting in April 2004. It also incorporates feedback received from the two reviewers and from the European Commission project officers.

The document is supported by the Training resource plan in the Appendix.

As suggested in the recommendations, the new approach to training is closely aligned to the concept of the DBE project, which is characterised by its objective to be an evolving and adaptive self-organising system. Training is conceived both at a design level, with a higher level of abstraction which serves the purpose of allowing the concept to evolve over time, and at a level of implementation, where it is highly adaptive to the needs of the regions.

The management of training activities as conceived is carried out by the regional actors. However within the overall framework, which we are calling Open Knowledge and Distributed Learning, there is provision for a thin layer of intra-regional analysis and strategic direction, which ensures that training is linked to overall programme management.

A key principle in our learning strategy is that learning needs to be adaptive and should not be fully planned in advance, since a linear prediction would contradict the nature of the DBE project. Training needs, while predictable, are partly emergent and our strategy allows for the training mix to be fine-tuned according to actual needs of the project.

The new strategy also takes into account the need to cover the entire learning process within the project team.

Resources have been reallocated to deal with the requisite tasks in the new strategy. These resources have been calculated in detail at a regional level and set in relation to the need for implementation of the strategy.

1. Requirements & Objectives

1.1. *Introduction*

Training is a crucial component of the Digital Business Ecosystem (DBE) project. The digital infrastructure of the DBE can only play out its advantages of adaptation and self-organization if it is connected to viable regional ecosystems of SMEs that either populate the DBE with components or use its services. A central prerequisite for this is the formation of DBE *communities* around services, standards and geographical locations. Therefore experiences and current research findings from open-source communities have been integrated into our training concept.

DBE training activities address multiple levels in the project: the level of the individual DBE actor (e.g. a regional SME), the level of a regional DBE community, the cross-regional level and the inner DBE project level and its interplay between the business and the technology side.

Successful community building demands a *tactical* approach to training. It is highly dependent on involving the right participants to the right degree and at the right time. It demands new conceptual thinking aligned with the evolutionary and distributed nature of the DBE technology paradigm.

Effective training is expected to increase the viability and dynamic of local ecosystems. It thereby creates an adoption environment for the DBE that would not, under predictable circumstances, occur by itself. This is why we speak of the *catalyzing role* of training. Similar to a catalyst in a chemical reaction, DBE training activates an ecosystem dynamic that may – once the initial phases have been successfully completed – lead to sustained dynamic growth without further intervention, i.e. of its own accord and independently of investment.

This is the ultimate goal of training in the DBE project.

However, community dynamics brings an element of uncertain evolution in the conduct of training. Regional DBE training can therefore not follow a “static master plan” but has to be flexible enough to evolve jointly with the demands of the community. However, we are still expecting – and willing to ensure – some common baseline learning outcomes regardless of how they are achieved in different places.

To meet these demands, we have designed training to follow a consistent framework for actions throughout the whole DBE project life-cycle that is flexible enough to accommodate changes which are brought about by community dynamics. Our framework contains a blend of different ways to deliver training from very contact-intensive coaching sessions to more extended e-learning modules. It also mixes short-term “spot” activities like single workshops with activities over longer timeframes like project coaching.

Our framework recognizes the specific needs of the different regional actors in a DBE community. Individual training programs for each actor are designed to evolve and become further optimized within the framework. This is done by shifting the emphasis

between different building blocks and delivery channels of the training framework according to time and progress of the actors in the DBE community. This optimization of training delivery alongside the evolution of the regional communities is closely aligned with the service optimization that takes place in the DBE technology infrastructure itself.

Apart from actor-specific training programs and multiple delivery channels, the DBE training framework is designed to progress in phases that are aligned to typical formation phases of an open-source community. A parallel evaluation of the learning from training activities in each phase allows for a positive evolution of the DBE training approach as a whole and for easier replication in new regions.

Training in the DBE project is a bidirectional activity. Whereas the value of training for the regional actors (mostly SMEs) stems from very concrete help on using the DBE for their purposes and the establishing of links to other actors, the value for the DBE project lies in a better understanding of individual SME needs and in enhanced *impact* on the local business ecosystem.

In this document we outline the basic assumptions and strategic objectives that have led to our approach. We further describe the training action framework in detail and explain the underlying tactical methodology. This is linked to concrete regional action plans and a distributed training delivery model. The delivery model itself creates specific roles and management obligations for the training sub-project members.

Based on these assumptions we present a detailed bottom-up calculation of resource needs that was aligned with a revised distribution of training funds to the subproject members. Finally we explain our continuous evaluation concept and how evaluation impacts the evolution of the concrete training program.

1.2. *Vision of the DBE (Synergy)*

1.2.1. The DBE Project

The two main objectives of the DBE project are to provide Europe with a recognised advantage in innovative software application development by its small and medium-sized enterprises (software producer SMEs) and to achieve greater information and communication technology (ICT) adoption by SMEs in general. The DBE will achieve these objectives by adopting a multi-disciplinary approach based on biology, physics, business and social sciences mechanisms and models to develop an open-source distributed environment that can support the spontaneous evolution and composition of (not necessarily open-source) software services, components, and applications.

The DBE will enable a network of digital business ecosystems for SMEs and software providers to improve their value networks and foster local economic development. Four areas of research encompassed by the DBE project are: 1) ICT transfer and adoption, training, ethnography, etc.; 2) business modeling; 3) Computer Science, Software Engineering and enabling technologies (web services, software agents, distributed architectures, ontologies, etc); and 4) fundamental models (Math, Physics, Biology, AI).

One of the outputs of the project will be an open-source, component-based software infrastructure that will act as a commons to support the evolutionary optimisation of software services for SMEs. This digital infrastructure will fit the local cultural identities and socio-economic needs of SMEs to support their participation in regional and sectorial innovation clusters. The DBE will change the way SMEs and EU software providers use and distribute their products and services. It will allow SMEs to link enterprise-wide external resources and value networks, and to allocate them based on their business goals and priorities. The DBE is based on the key finding that with such an evolutionary and self-organising system Europe could harness the complexity of software production and its SME software industry could regain competitiveness in the market. This will be a long term challenge where the DBE project stands as the starting point of a global European strategy for building a competitive advantage for the EU software industry in the next future.

1.2.2. Open Knowledge and Evolutionary Learning

The DBE project sets special demands on training. Bearing in mind the “new paradigm” of the DBE, and adaptive evolutionary nature of the project, training needs to encompass characteristics such as adaptability, evolutionary and distributed nature which are at the heart of the project.

In designing a program for such a highly innovative venture such as DBE, it has also been important to consider characteristics of the adoption process of regional SMEs. This is based on insights on the innovation and diffusion process and the emergence of open-source communities.

First of all, the DBE is a new type of digital infrastructure. Hence, SMEs taking part in the DBE programme are expected to have:

- little to no prior experience in similar infrastructures
- a learned behaviour that deviates from that necessary to use the DBE and contribute to it actively

From the viewpoint of SMEs, the DBE represents a disruptive technology. It is not simply a *radical improvement* of their current way of working via a new technology, it changes their way of working.

According to Christensen¹ “*generally, disruptive technologies underperform established technologies in mainstream markets*“. This initial underperformance is an important characteristic of disruptive technologies. In terms of the DBE it means very concretely that SMEs may initially not carry out their work more efficiently using the DBE. Instead, engaging in the DBE may coincide with an initial *loss in performance* compared to traditional software development. A first development project - using the DBE - might in fact turn out to be more time consuming, insecure and probably more cost intensive than proceeding without it.

The initial markets for disruptive technologies are therefore by definition niche markets. Expecting a massive adoption wave from mainstream markets in the first phase of the DBE is unlikely although occasionally even disruptive technologies have experienced a very rapid rate of take-off. The first users will be those that

- expect to gain significant individual advantages from the new technology
- are willing to accept the initial faults or weaknesses of the new technology in exchange for these advantages

However, the second characteristic of disruptive technologies is that they are “on a trajectory of improvement that might someday make them competitive in parts of the mainstream market”.

¹ C. M. Christensen « The innovator’s dilemma », Harvard Business School Press, 1997

In evolutionary terms (see e.g. Adner and Levinthal²) a disruptive technology is a new technological species that starts by invading a small niche market and emerges with increasing speed to mass markets. The new resources the technology gains by each step support its fast development. Finally, in some cases and given favourable conditions, it can outperform established technologies and become predominant in a mass market.

According to Christensen: “no one can learn from market research what the early markets [for a disruptive technology] will be“. This makes the identification of these markets the most crucial step and the planning of the launch of disruptive technologies a “plan for learning“.

For the evolution of the DBE community this means:

- we are unable to predict the exact evolution of the DBE adoption
- we are also probably unable to predict who might - in the early development stages - gain the *most benefit* out of the DBE
- the market potential that we project into DBE, is a final (mass) market potential

However, the initial adopters might come from small niche markets that gain significant advantages from the DBE even at an early stage of development. These would be SMEs that are willing to accept the initial weaknesses of the DBE. But those initial markets have to be carefully chosen. Their characteristics must permit, that the DBE can evolve further to address other markets. It has to be avoided that the DBE gets locked into the needs of a highly specific community. However, without anchoring DBE in these initial communities, a diffusion of the DBE to the mass markets has very little probability of success

This is based on the understanding that each actor (participant in the DBE community)

- will engage in the DBE from its own strategic / tactical vantage point
- differs in the benefit it gains from the DBE as well as in the time in the evolution of the DBE where this benefit could be realized

Whereas for some expert actors it might be interesting to enter the DBE community at an early stage and drive the evolution, for many others it is more interesting to step into an existing community that has already reached a stage of maturity. Actors in a DBE community and their individual contributions—and ability to contribute—have therefore to be carefully differentiated within the training framework.

This corresponds to learnings from open-source communities. In open-source community research, initial enthusiasm for what was perceived as the free/open source movement's ability to create valuable commodities 'out of thin air' and for its bazaar style of development—an unstructured, almost organic way of creating software—has given way to better informed accounts of the structure and development

² Adner, R., Levinthal D. « The emergence of emerging technologies », California Management Review, Vol. 45, No. 1, Fall 2002

of open source communities which suggests that these communities change their modes of operation through time.

With respect to the structure of the open source projects the OSDN Hacker survey, based on a total of 684 answers obtained through a web survey on SourceForge, one of the most active foundries of open source projects, indicates that:

- projects are driven by the contributions of seasoned IT professionals, who have on average over 10 years of programming experience,
- the most important contribution of the project leader is creating the initial code base for the project. The initial code base seems to be a significant attractor of contributions and one of the main preconditions for projects to take off³

Another large survey, the Free/Libre and Open Source Software Survey and Study, funded by the European Commission:

- confirms the importance of the mix of IT professionals and amateurs, mostly students, but
- indicates that project leadership and performance are primarily issues for professionals⁴

The significance of the core group of developers is clear not only in studies across different projects but also in studies of processes internal to a project. A study on effort and cooperation within the Gnome project, for example, relied on data from public code repositories, and shows that there is a relatively small group of inner developers who are responsible for most of the output⁵.

With regard to the evolution of free/open source communities, major projects seem to be increasingly professionalized. There is hence no fundamental incompatibility between commercial interests and community-based forms of organization. This is closely linked to the fact that community members differ in the way and the intensity they participate and benefit from the community.

Within the open source world the following tendencies underline this:

- There is an increasing presence of paid contributors, programmers that are employed by companies to contribute to aspects of the project that are closely linked to their products and services. As open source projects and their participants mature, their ties with the commercial world become more solidified.
- There are more and more cases of companies being created as spin-offs of projects and of existing companies that develop symbiotic relationships with communities.

³ See (Lakhami and Wolf, 2002).

⁴ See (Ghosh et al., 2002).

⁵ See (Koch and Schneider, 2002).

- In response many projects develop mechanisms and bodies specifically designed to mediate between the community of developers and commercial players⁶.
- Open source solutions are increasingly adopted in the public sector and are gradually woven into the institutional fabric both through subsidies⁷ and by interventions at a policy level⁸ in developing and in developed countries.

It is too early to talk about the institutionalization of the open source movement, especially since it is difficult to refer to it as one movement. However, we cannot explain its success solely by considering it as a 'gift culture'.

Furthermore, viewing open-source communities as networked organization with homogeneously distributed participation and absence of self-interests is misleading. On the contrary, they seem to be composed rather of heterogeneous actors and accommodate actors with multiple interests and different ways of deriving benefit from the community.

Finally, open-source communities are not static but in constant evolution. The role of actors and the benefits are therefore dependent on time and evolutionary stage.

⁶ For a detailed account, see (O'Mahony, 2002).

⁷ See (Schmidt and Schnitzer, 2002).

⁸ See (Comino and Manenti, 2003).

1.2.3. Synergies

What do these insights on the DBE adoption- and community building process mean for knowledge transfer activities and training? Connecting DBE participants not only to a common technology infrastructure but also among themselves is crucial. Leveraging synergies using the DBE not only means synergies from sharing electronic services but also synergies from new forms of technology-mediated interaction for joint-innovation, business- and technology-development.

Training the individual DBE adopters in using the DBE will not be sufficient to address all the factors that influence the innovation process and the likelihood that the DBE will diffuse rapidly. The challenge for the DBE training activities is to find a balance between the dynamics and tactics of community building and of individualized learning through high quality training. It has furthermore to be recognized that the DBE training budget is limited, thus concentrating on those training activities that provide the most benefit to the DBE community, the individual actors and the DBE project is essential.

For the design of the training action framework, this implies that training activities must be closely connected to the *tactical engagement* of detecting and addressing the appropriate initial markets and core actors for the DBE. Training activities also have to reflect differences in the actors and in the evolutionary stages of the DBE.

Knowledge transfer and training activities contribute thus in a crucial way to the evolution of the DBE. They initiate and facilitate the evolution of the DBE by providing actors with relevant knowledge about the DBE. They further link similar actors to each other in sub-communities and facilitate the knowledge transfer among them and the creation of new sub-communities. They are essential in leveraging the synergies that the DBE promises.

Furthermore, training activities are essential in providing learning from these engagements back to the DBE project. They facilitate the knowledge transfer between actors and the DBE project.

Our final goal is that these activities should lead to a self-sustained and dynamic evolution of the DBE community. We assume that knowledge transfer activities within the community will initially demand significant support but will then become increasingly independent of the dedicated actions of the DBE project.

In the later stages, knowledge transfer and training activities could actively be taken over by members of the DBE community itself. This could finally make the community independent of further training activities of the DBE project. In the following we sum-up our assumptions and describe this process in more detail.

1.3. Assumptions

From the previous sections we can derive a number of basic propositions that provide the cornerstones for our DBE training approach:

1.3.1. Propositions about actors in the regional DBE communities

- actors will differ in the way and the time at which they can and will contribute to the DBE community
- each actor will thereby engage from its own strategic/tactical vantage point

Thus, DBE training needs to be actor-specific

1.3.2. Propositions about the development of the DBE communities

- the initial phases of community formation are critical
- initial attractiveness is only given for small regional niche groups
- with the growth of the community a core group of actors will provide leadership and the strongest support
- a balanced mix of different actor types will denote a vital community in the longer run

Thus, DBE training needs to be attentive to timing, to the evolutionary phases in which the community evolves and to the changing role and number of actors in each phase

1.3.3. Propositions about synergy effects and learning in the DBE community

- community members will engage when they perceive or experience synergy effects
- as actors are different, the perception and experience of benefits will differ
- the case for participating in the DBE is specific to the actor and can not easily be generalized, instead it has to be understood by each actor
- learning needs will differ because of the motivational differences and because of different prerequisites

Thus, DBE training needs to blend more generalized ways of delivering training (e.g. courses) with more individualized ways (e.g. coaching or workshops)

1.3.4. Propositions about uncertainties

- There are many regional uncertainties such as
 - SME community dynamics
 - Progress of research and implementation
 - Regional dynamic / adoption behaviour
- As adoption behaviour cannot be predicted, probing and learning is vital

Thus, DBE training needs to be attentive to the reaction of the regional communities and flexible enough to adapt to emerging demands. Furthermore it is an important source of learning for the whole DBE project.

1.4. (Inter) Actors in the DBE

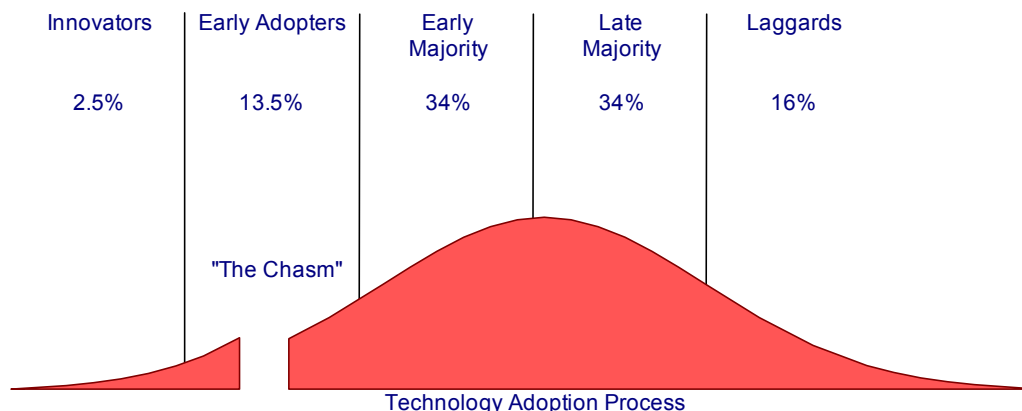
As described in the previous sections, actor differentiation is a key factor in our DBE training approach. We start from a traditional actor distinction between:

- **Adopters:** SMEs either using or developing DBE services
- **Influencers:** actors that can influence the adoption behaviour or conditions of SMEs (e.g. policy makers)
- **Internal DBE training recipients:** regional catalysts

First, we further differentiate the broad category of **early adopters** (well known from innovation research by e.g. Rogers⁹) by:

- taking into account the different engagement levels that early adopters can have in the further diffusion of the DBE
- the strongly interactive character of the DBE is likely to encourage the build-up of a critical mass of early adopters whose active participation and activities will stimulate community building and the further evolution of the DBE

As indicated by Moore's "Chasm" (1991), adoption of new technologies in a mass market is not an automatic effect. In other words, even with a large number of *users* as early adopters, the DBE will not continue to evolve unless there is a core community of active developing participants within the group of early adopters.



G. Moore 1991

Traditional quantitative approaches to innovation and diffusion research have paid little attention to the capability differences of the early adopters although there has been considerable qualitative research in this area. In our case these differences are crucial as

- The DBE is not intended to be permanently maintained by a public authority or private partners. Hence, mere adoption and build-up of a user community is not sufficient to keep the DBE alive beyond the initial project.

⁹ E.M. Rogers, « Diffusion of Innovations », Fourth Edition, The free Press, New York, 1995

- During the initial project the DBE has to be taken-over stepwise by those who are able to perform a leadership role and that are willing and able to carry the concept further and help the DBE to emerge.

The knowledge transfer and training activities have therefore to concentrate on building balanced communities that are composed of different actors which take a more or less active part in the community.

Our central measure of success is thus *not only* the number of adopters but the intensity of actors' activity in using and developing the DBE as well as in community action.

We characterize adopters by two dimensions.

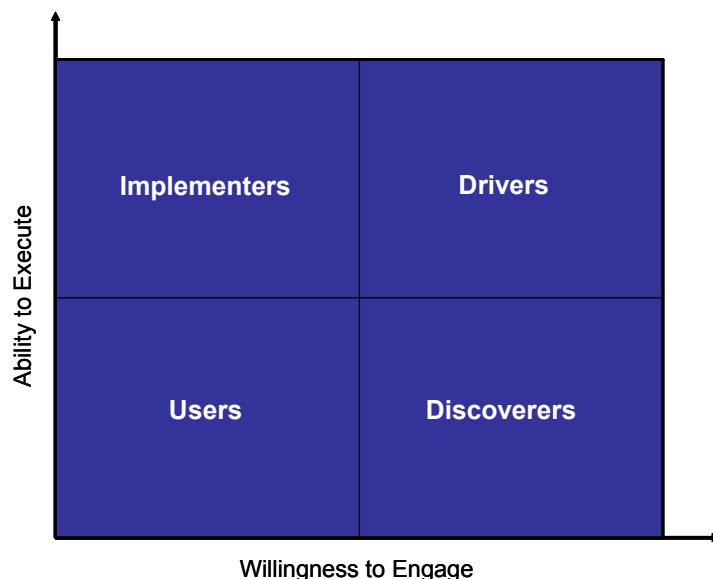
Their ability to execute - based on technological (and behavioural) competences:

- to use the DBE
- to actively take part in developing DBE components
- to contribute based on previous experiences or existing technological skills and assets

Their willingness to engage

- in knowledge sharing activities
- in building the DBE (sub)-community
- in developing the DBE further

This differentiation results in specific need-profiles, motivations and abilities to engage in the DBE. We have grouped DBE adopters in 4 clusters (typology of engagement):



In summary, we have derived the following classification of regional actors that make up the training audience (numbers indicate overall targets for the first 3 pilot regions). Following this, using the same colour coding, there is a fuller explanation of these classifications.

	Base-Number of SMEs or Partners	Average No of Participants per SME / Partner
Developer SMEs	<i>Drivers</i> 12	5
	<i>Implementers</i> 80	3
User SMEs	<i>Discoverers</i> 15	5
	<i>Users</i> 140	3
Influencers	<i>Regional Catalyst Associates</i> 25	2
	<i>Policy Makers & Constituencies</i> 20	2
Internal DBE	<i>Regional Catalyst</i> 3	5

Developer SMEs	<p>Drivers have strong capabilities and interest to participate in the DBE at a very early stage. With a profound background in the relevant technological and business concepts they can absorb the necessary DBE knowledge faster than other participants. They are further expected to be able to start contributing actively to the DBE at an relatively early stage. Bringing in an own network of contacts to other users and developer they are expected to have a crucial role in establishing the DBE community.</p> <p>Implementers have similar technological capabilities as Drivers that allow them to develop components and contribute to the DBE. However, this larger fraction of developer SME is expected to show a less steep learning curve and reduced engagement when it comes to building the DBE community then the drivers. In the implementers category, our proposition that actors will engage from their own strategic vantage point is strongly reflected.</p>
User SMEs	<p>Discoverers have limited technological capabilities and other business interests then technology development. Therefore, they are mainly able to <i>use</i> DBE services and are not expected to contribute with components. However, they are strongly engaged and are expected to see a significant individual case in using the DBE. We expect drivers to show a steep learning curve and engage actively in acquiring and sharing DBE knowledge. Discoverers are furthermore expected to bring-in their strong personal network into the DBE community. They start more early then other users to realize the networked nature of the DBE and the benefits from strong community engagement.</p>

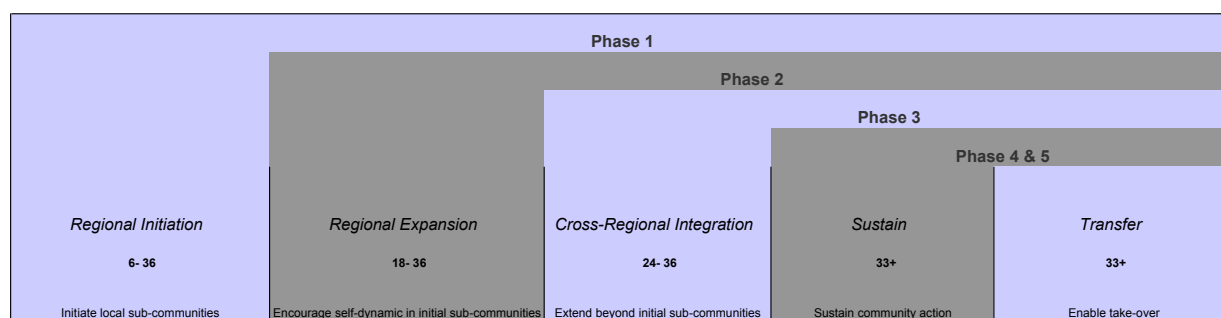
	<p>Users have similar initial capabilities to discoverers. But they are expected to be more focused on individual application and personal benefits and will initially ignore the networked character of the DBE. They are further expected to be less willing to contribute actively to the emerging DBE community or to provide own contacts. Instead they are mainly passive users of the community. In open-source communities this clusters represents the largest part.</p>
Influencers	<p>Regional Catalyst Associates are partner organizations that help the regional catalyst to fulfill its role in building the DBE community or providing concrete training blocks. They can also address local sub-groups or associated regions. Regional catalyst associates are expected to bring in own network contacts to users and developers and are also expected to help in identifying potential drivers and users.</p> <p>Policy Makers & Constituencies are important local policy influencers – mainly official institutions or public organizations as e.g. professional associations. They provide access to large communities and credibility.</p>
Regional Catalysts	<p>The regional catalyst itself is made up by a regional core training team (in the 3 pilot regions composed by members of TTC; ITA and UCE). The regional catalyst coordinates regional training and community building activities. It has therefore not to provide all regional network contacts, neither it has necessarily to provide all training delivery. Instead the regional catalyst activates other partners and influencers, identifies driver and discoverer SMEs and coordinates between these main regional actors. It thereby catalyzes the process of regional DBE community building.</p>

1.5. **Strategy for Open Knowledge and Evolutionary Learning**

In order to build a consistent strategy, the actors are of interest, but so is the evolutionary development of the DBE communities that we want to trigger and support by training and knowledge transfer.

To choose the right timing and mix of training and knowledge transfer activities, an initial vision of how the DBE community could emerge, was further synchronized with the overall project time planning and especially the parallel technological development of the DBE. The regional action plans translate this into further detail.

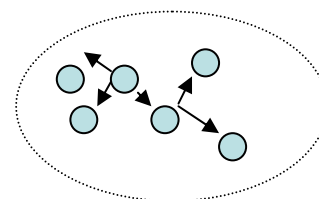
The overall vision of the emergence of the DBE can be described in 5 evolutionary phases. These should not be regarded as separate or chronological but as a multi-layer model (see project-months indications in the chart below).



The goal of the DBE knowledge transfer and training activities is to guide the DBE community through these phases and to stimulate the necessary “self-dynamic”, with the final goal being to create a self-sustaining community independent of further actions from the DBE project.

Phase 1: Initiate local sub-communities

In this initial phase the DBE project is in a push role, actively selecting, encouraging and enabling actors to join the DBE on a regional level.



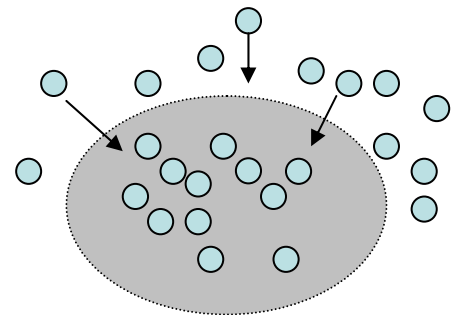
Driver SMEs are the first to be carefully selected by the Regional Catalysts and to become actively engaged for the initial DBE application domains / markets. They have to be closely integrated into the regional DBE programme activities. The aim is then to build up small sub-communities, with the help of the Driver SMEs, by attracting Discoverer SMEs that are willing to take part in the DBE even at an early stage of DBE maturity.

Sub-community actions have to concentrate on quickly realizing pragmatic short-term initial benefits from the DBE for their members. The goal of this phase is to build up small networks of strongly engaged local actors for the initial DBE application domains / markets.

Phase 2: Encourage self-dynamic in initial sub-communities

In this phase, the DBE project changes from a strong push-approach to a facilitator role. Here independent interactions between the parties are actively encouraged and rewarded by the DBE project, with the aim to strengthen initial sub-communities

The DBE project encourages the initial actors to extend the communities in order to attract Implementer and User SMEs. Initial actors are supported by the project in this activity.

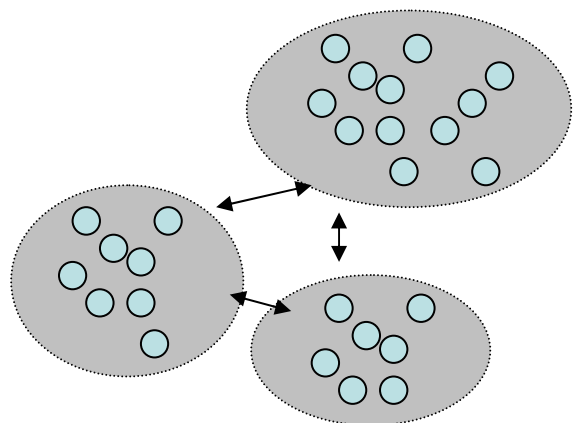


The DBE project starts to concentrate on facilitating the knowledge transfer between the actors, to increase transparency of the interactions and to build reward mechanisms depending on contributions and on success of new actor's integration.

Phase 3: Extend beyond initial sub-communities

Depending on the experiences with the initial sub-communities, the DBE project will in the next phase foster the interaction between sub-communities, with the aim to build a cross-regional DBE community.

The focus will therefore shift from the initial direct perceived advantages gained from the DBE by (probably regional and domain specific) sub-communities to the larger community of the DBE as a whole

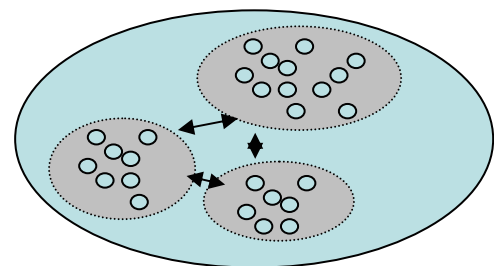


The DBE project will encourage cross-regional cooperation but also competition among sub-communities, thereby using stronger sub-communities to pull weaker ones. Sharing from strong core actors is explicitly made transparent and highly rewarded.

Phase 4: Sustain community actions

In this phase the DBE project will pull further away and handle over more responsibility to strong actors of the DBE community.

This also means to empower and enable these actors (mainly Drivers and Discoverers) actively e.g. by coaching them on how to fulfil their role as internal knowledge brokers.



Reward mechanisms have to become future oriented and sustaining. Cases to attract Implementers without explicit funding have to be built.

The project will also work on improving the infrastructure for the sharing of knowledge and make it sustainable.

The DBE project will then help to market the DBE community actively to new User groups beyond the initial actors and sub-communities and to establish contacts to new markets in which DBE could get established. It will further try to attract sponsors and collaborators.

Phase 5: Enable take-over and step-out

In the final phase the DBE project has to prepare to step-out of the direct responsibility for maintaining momentum in the DBE community e.g. for organizing events or providing trainings and workshops.

Knowledge has therefore to be transferred to key players and further actions have to be planned together with them and possible sponsors. The knowledge transfer and training infrastructure has to be taken-over by key actors or sponsors of the DBE community.

The DBE project members will further plan how to stay involved with the DBE community based on minimized efforts over a continuing period of time.

1.6. Science Learning within the DBE

It is an important goal when considering training to understand how learning and knowledge transfer can be achieved within the project team. Within the computing community this is fairly obvious with the necessity for shared development, supported by boot camps and other community building activities that are planned within the project. This is not so obvious when it comes to Science learning.

In fact, the scientific approach of the DBE—grounded in evolutionary theory and self-organizing systems—is closely interwoven with the goals and the methodology of training. Furthermore, in the design of the DBE training framework we also have to take into account the influence of science results on the DBE itself. As the DBE adoption is a process of learning, so is the development of the DBE itself. Training—and all the knowledge management activities that we sub-summed under this heading—prepares a fertile ground for the necessary exchange between the DBE project members and the DBE adopters' communities. In this sense, DBE community development and DBE development itself are two sides of the same coin. Through training, DBE community members are taking part in DBE science learning without being explicitly aware of this.

The role of science in the DBE project is not obvious to all participants. In fact, even the extent to which the science results will be able to affect the software architecture and algorithms of the DBE will be discovered in the course of the research effort.

The people who will approach the system, moreover, will not necessarily need to be aware of the scientific results of the project. It will be quite important, however, to inform the various DBE stakeholders about the science objectives, especially when they are achieved. This is because the scientific insights transcend the algorithms and architecture of the software. In the science work we are trying to understand how self-organising and self-optimising systems work *in general*, in order to develop a unified vision of the DBE that will allow a smooth integration of the technical infrastructure with the services ecosystem, with the business models of the SMEs, and with regional policies for economic growth and social development. There is growing agreement that the study of self-organising systems is intrinsically interdisciplinary and that it can inform everything from molecular self-assembly to socio-economic development. One of the main objectives of the science work in the DBE is to make this perception more quantifiable, systematic and applicable to pragmatic software engineering, business, and policy development initiatives. The unified vision is therefore something we are building together, and that will take different practical forms in the different application areas.

Given this premise, the role of the training and learning activities of the DBE is not to use the traditional approach of Knowledge Management, whereby knowledge is processed as an artefact, stored in a knowledge repository, and disseminated in a one-way broadcast from the centre. Rather, we are fostering a local/community-based approach, with different levels of knowledge (from relatively explicit to tacit/implicit), expecting and encouraging a distributed multilingual "knowledge ecosystem". The knowledge will be distributed between the various stakeholders with the clear understanding that each stakeholder has something to learn from the

others as well as something original to contribute toward the construction of a common vision.

The knowledge creation will therefore be distributed, and its transfer will take place in a manner analogous to P2P networks. Internally to the project, we have already observed that the flow of knowledge is best mediated by informal meetings and by lively discussions during formal meetings and workshops. We are envisioning the extension of this collaboration and interaction approach to the wider, and growing, DBE constituency through workshops that will be held at the Regional Catalysts sites, through web forums on the public www.digital-ecosystem.org site, through informal e-mail communications, through publications and, last but certainly not least, through word of mouth and the social networks of the SMEs themselves.

In this scenario the Regional Catalysts can be recognised to act, indeed, as catalysts of knowledge creation and dissemination. It is with this decentralised, distributed, and scalable learning architecture in mind that we have written this Training Deliverable document.

1.7. Goals

The strategic goals of DBE training are linked to the evolutionary phases as described in section 1.5. They are pursued by training-as well as evaluation-and knowledge transfer activities in each phase. In summary the following strategic goals are addressed by these activities which we sum-up under the term “training”:

1.7.1. Intra-regional goals of training

Train the individual actor and help to establish communities

DBE communities will be created to lower adoption hurdles, improve innovative performance and reduce the overall time to competence for all their members. They further shall be helped to develop an inner dynamic of growth as well as of knowledge creation and sharing. The role of the regional catalysts is to a large extent to *catalyze* this process of community formation among the regional SMEs and other local actors that take part in the DBE. On a regional level, training activities - carried out by the regional catalysts - therefore have a twofold objective: enabling the individual actor to take part in the DBE and fostering community building.

Understand and evaluate individual actors and community behaviour

Training is the activity with the closest and most intensive contact with local DBE actors. It thereby offers an interesting channel – apart from previously conducted market analysis – to understand regional SMEs and their demand. This becomes especially valid when traditional forms of training (as classroom or e-learning) are integrated with more individualized forms of coaching, workshop techniques and project engagements.

The evolutionary nature of the DBE communities and the tactical aspects of regional training delivery make it important to evaluate training activities and regional actors' reactions alongside the program and not simply at the end. We intended to analyse actively and feedback these 1st-level learnings into, on the one hand, the conduction of the regional training activities and, on the other, into other parts of the DBE project.

1.7.2. Cross-regional goals of training

Establish cross-regional community exchange

In this context, the DBE also has important *cross-regional* aspects that link to training objectives. There is first the goal to extend DBE community behaviour beyond its initial geographical limits and to integrate local DBE communities into a larger DBE community.

Furthermore, there is the intention to replicate successful patterns of regional behaviour on the other regions or – in a later stage – in new regions. This demands a closer analysis of the underlying dynamics and a careful distinction of regional or sub-community specifics.

Similar to the role of the regional catalysts, cross-regional integration has to be explicitly catalyzed. It cannot be expected to spring automatically from successful regional activity.

1.7.3. The goals of training in the overall DBE program

The DBE is constructed on different layers of abstraction: from the level of concrete fitness to local conditions to deeper fundamental levels of generalized conditions. The basic advantage of the ecosystem approach here is to allow, on the one hand, for a high degree of local adaptation and niche specificity but, on the other, also for cross-niche replication and exchange that benefit the ecosystem as a whole.

The DBE is therefore based on several tiers of abstraction of the services delivered by the DBE. It is further based on optimization routines that help to attain local fit, on the one hand, but also the optimization of underlying general service characteristics, on the other. In this way it uses consistent standards to describe and encode services.

The DBE training strategy has to align with this environment in order to fit into the overall DBE program. This carries an important implication. From a DBE strategic point of view, it is not sufficient to design and conduct individual training programs in the pilot regions, even if local DBE communities can be built successfully. But—as for the DBE services themselves—these specific regional training activities and the learnings derived from them have to be analyzed and aligned on a more abstract level. We call this: the 2nd-level of learning. Here, the link between training and DBE science learning is established.

As 1st-level learning from training provides feedback into those subprojects of DBE technological development that are concerned with the concrete fitness of services to regional needs, 2nd level learning from training provides feeds-back into those subprojects that address the underlying general mechanisms and patterns. Therefore training evaluation has to consider the multi-tier architecture of the DBE project and the DBE itself.

2. Actions

The strategic approach described in the previous section is linked to a concrete framework for training actions. As stated above, our framework is designed to allow for variety in plans at the regional level. This permits us to reflect essential differences, e.g. between regional or business sectors (opportunity spaces). Regions may differ in their readiness for electronic business, or in recognizing the potential of the DBE vision. They may also differ in their actors' composition—e.g. in the number and strength of driver SMEs that help to catalyze regional community building.

However, regional and business sector adaptation is not the only feature of our strategic training framework. We also pointed out that we allow for an evolution of the regional training programs in time by running through five evolutionary phases. Hence, our approach to the training action may be seen as a hybrid combining features of incremental learning-from-doing and traditional strategic action planning.

2.1. *Action framework in DBE context*

Our training action approach recognizes and uses evolutionary mechanisms and should not be considered a static master plan for DBE community building. We clearly acknowledge that establishing self-sustained communities is not a simple design and implementation task.

Instead, we have to take uncertainty factors into account such as:

- composition of regional SMEs according to DBE actor types (drivers, discoverers, implementers, users)—difficult to determine initially but will become clear in practice
- acceptance of DBE project training by key actors
- success of reward mechanisms
- un-anticipated dynamic effects within the community
- market dynamics and parallel technological developments

Our evaluation approach, that is closely integrated into the training action framework, therefore measures and allows for reaction based on

- level of acceptance by regional SMEs
- level and range of SMEs' participation in the DBE
- composition and evolution of the DBE community according to SME actor types

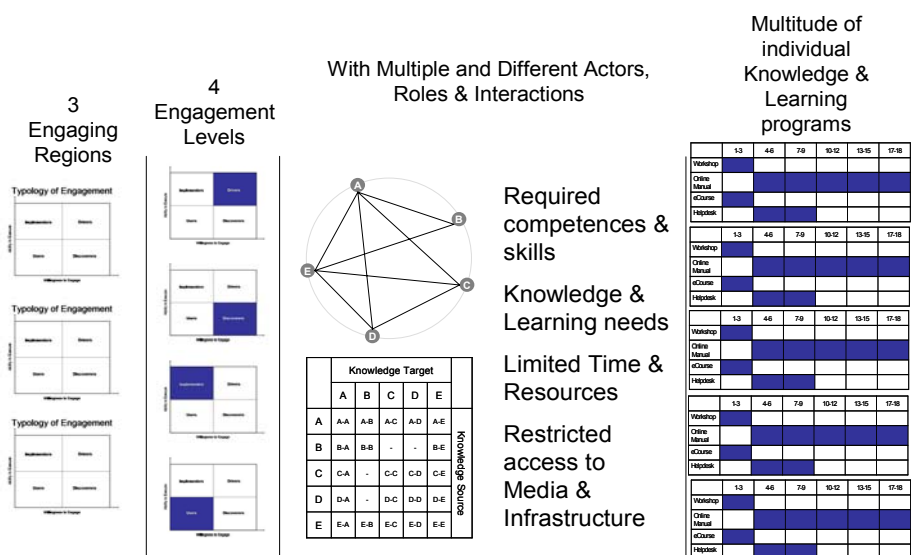
The uncertainties linked to our approach have a strong entrepreneurial character. As the DBE technology platform, the build-up of the DBE community is an innovative activity in itself.

However, the individual training actions undertaken are far from being at an experimental stage (classical training seminars and classes, project and one-to-one coaching, e-learning and online collaboration, events, reward mechanisms etc.).

Furthermore, we explicitly decided, given the innovative character of the program, to focus on established and proven pedagogical methods of *delivering* training. Rather, the innovative character of our training approach lies in the *tactical timing* of the usage, the *actor orientation* and the *mix* of these actions according to the evolutionary stages of the DBE community.

This gives the DBE knowledge transfer and training activities an interesting perspective from a research point of view. Most research on open source communities has tried to explain the formation of such communities from either a retrospective view or through parallel observation. In the DBE project we are trying to *initiate* such a community and help it emerge through dedicated actions. This is a rare chance to observe this process and will be probably of significant interest for researchers and policy makers interested in the formation of such communities.

However, our approach to training is not a research approach in itself. Instead it is a tactical approach based on an emerging strategy that takes a high degree of unpredictability into account.



2.2. *Distributed delivery model*

2.2.1. Diagnostics

Recognizing the specifics of the regional DBE community and its actors is a crucial component of our training concept. As we describe in more detail in the evaluation chapter, diagnostics of the community status are a pre-requisite for each evolutionary phase. Prior to the first real training activities, in each region initial diagnostics of the targeted SME community and other stakeholders is carried out. This is also a prerequisite for the selection and recruitment of SMEs as well as for the establishing of contact with important influencers.

2.2.2. Opportunity Spaces

Instead of focusing entirely on industrial sectors in the regions and their implicit borders, we group SMEs according to what we call the 'opportunity space' concept. We recognize possible collaborations between businesses working across sectoral boundaries.

Opportunity spaces are defined not only by how sectoral business processes are carried out today, but rather by how they could be carried out using DBE services in the future. SMEs are strongly encouraged to submit joint proposals that span more complex value chains. In addition, the initial diagnostics will focus on this point and actively propose options to SMEs. Therefore initial regional diagnostics are not only aimed at an analysis of the current status but also of opportunities.

In the training program we can take this into account not only through SME selection and recruitment but also through grouping SMEs that could probably collaborate in training workshops and joint-project coaching.

The 'Opportunity Space' selection is expected to be based on tourism and manufacturing for West Midlands, mainly manufacturing for Tampere, and mainly tourism for Aragon.

2.2.3. Typologies of engagement

As described in more detail in the previous section, we consider SMEs (ex ante) to be likely to take different stances to the DBE according to their abilities and experience. Hence, we also expect them to be interested and able to contribute differently to DBE community development. Our regional training actions are therefore based on different engagement levels. Hence, training programs, and the effort linked to them, are highly specific to actor types.

For example Driver SMEs will be engaged earlier than others and will have a significant early influence on the contents and processes of our interventions. We will work with them in a case study sense and support them intensively to become multipliers for other companies in the project. Discoverer SMEs are also likely to impact strongly on other members of the DBE community and to reveal new aspects of DBE as they experiment with it.

In addition to the different actor types, we have created a typology of training activities directed to regional actors. Training engagement levels are finally denoted by the blend of training activities a specific actor receives over the whole engagement time with the DBE project. We distinguish the following training activities:

- **One-to-one:** a personal interaction with a DBE trainer as the most intensive form of contact. One-to-one training is highly individual and has the character of coaching. It can also be used to derive very specific insights on needs and individual characteristics of an SME or other actor.
- **Workshop:** a small number of actors in an open form of training. The workshop allows to connect SMEs and other actors and to react on each participant's specific needs. It has a strong group-learning and interaction component.
- **Seminar:** a larger number of participants in a classroom setting. Participants are expected to prepare by previous readings and other preparatory work (e.g. preparing individual DBE case). A training seminar blends participation from participants with trainer presentations.
- **Class:** similar size to the seminar. However, it demands less participation from the trained DBE actors and is stronger led by the trainer. DBE training classes are similar to a classical training in a corporate environment. It is well suited to transfer explicit knowledge.
- **Personal Readings:** are required for DBE seminar preparation and partially also for classes.
- **Help Desk, Conference Calls, Virtual Meetings:** are used to stay in regular contact with trained DBE actors. According to the intensity of engagement, the virtual access of the SME to the trainer will differ. Driver SMEs are e.g. called to regular telephone conferences or virtual meetings, whereas User SMEs are simply offered a help line.
- **Courseware:** In addition to personal readings, printed or electronic material (DVDs, CDs) are used and later distributed in seminars and classes. For the participant, they are also a way to repeat training content and gain profounder insights into a DBE training block. They can further support day-to-day handling of the DBE.
- **Self-Assessment:** a less effort-intensive way to do evaluation (compared to one-to-one meetings) for larger numbers of DBE actors. Specifically designed questionnaires are used.
- **Project coaching:** a highly individual training activity that spans over a longer time period. Each regional catalyst will coach a selected group of SMEs (Drivers and Discoverers) in their realization of a concrete project with the DBE.

2.2.4. Known and Emergent Needs

Training needs fall into two distinct categories, the known and the emergent. Known needs are defined from an analysis of the DBE concept and theory, including the operational characteristics of this project (e.g. the tender by SMEs). These in turn are based on earlier learning from theory and project practice with SMEs.

We have grouped known and explicit knowledge needs in the following subject areas. These also serve us to structure our work on training content:

- DBE message & communication
- DBE learning philosophy and methods
- DBE community tools & processes
- DBE induction
- DBE bootstrap strategy and process
- DBE business potentials and practices
- DBE service development
- DBE deployment, support and maintenance in SMEs
- Using and evolving DBE services
- DBE regional policy impact & potential

Apart from these explicit knowledge needs, regional diagnostics are expected to derive insights into implicit needs and important tacit knowledge domains. These will be represented not by own learning content blocks but in the learning techniques used for each block.

Emergent needs are derived from our multiple training interactions with SMEs, regional actors and project partners. These will emerge alongside the evolution of the DBE training program. Emergent needs are recognized by our evaluation approach and flow back into the strategic training framework and into regional training action planning.

2.2.5. DBE-firm interactions

As each actor group is running through a specific training program, we have to decide on the content blocks and training engagement for each actor type over the five evolutionary phases.

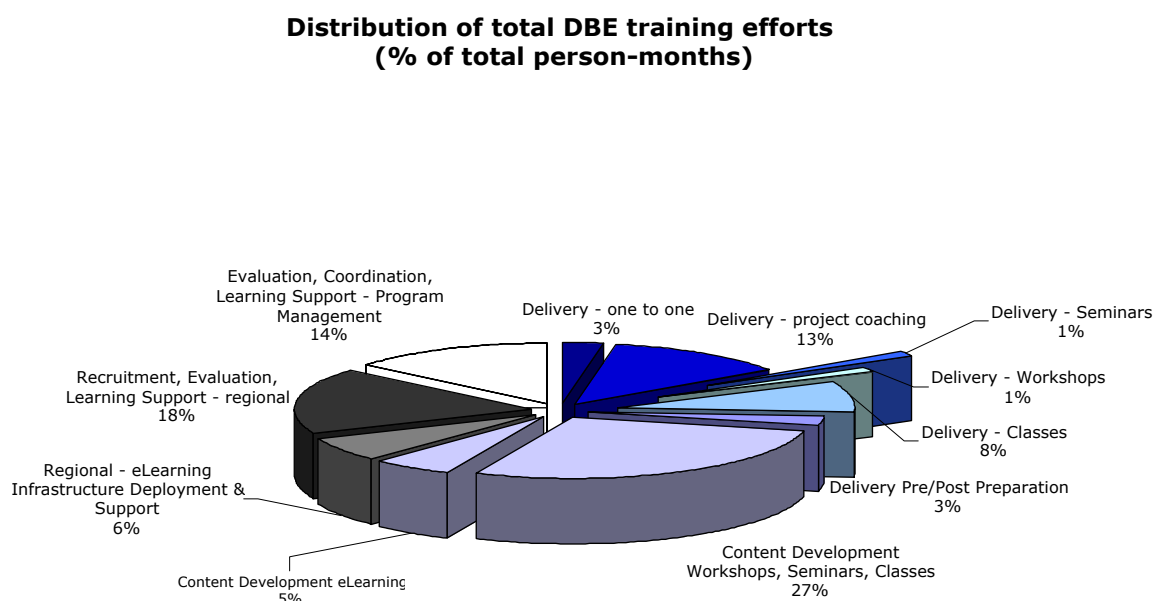
This is summed up in a table as follows:

Individual learning programmes and target audience for knowledge transfer & training activities			Phase 1											
			Phase 2					Phase 3						
			Phase 4 & 5											
			Regional Initiation		Regional Expansion		Cross-Regional Integration		Sustain		Transfer			
			6- 36		18- 36		24- 36		33+		33+			
			Initiate local sub-communities		Encourage self-dynamic in initial sub-communities		Extend beyond initial sub-communities		Sustain community action		Enable take-over			
			Learning Block	Media	Learning Block	Media	Learning Block	Media	Media	Learning Block	Media			
Developer SMEs	Drivers	DBE Induction Intensive	2,5,7	DBE development, support & maintenance	1,3,9	DBE development, support & maintenance	1,3,9	Evaluation	1,8	DBE learning philosophy and methods	2,5,7			
		DBE Service development	3,7,9	DBE Business Potentials & practices	4,5	DBE message & communication	2,7							
		DBE Bootstrap strategy and processes	3,5,7,9	Evaluation	1,8	DBE community tools and processes	4,7							
		DBE Business Potentials & practices	3											
User SMEs	Implementers			DBE Induction Short	3,5,7	DBE Business Potentials & practices	4,5	DBE community tools and processes	4,7					
				DBE Service development	4,7	DBE development, support & maintenance	1,4	Evaluation	8					
				DBE Bootstrap strategy and processes	3,5,7									
				DBE Business Potentials & practices	4,5									
Influencers	Discoverers	DBE Induction Intensive	2,5,7	DBE Bootstrap strategy and processes	3,5,7,9	DBE message & communication	2,7	DBE community tools and processes	4,7	DBE learning philosophy and methods	2,5,7			
		DBE Business Potentials & practices	4,5	Using DBE Services	3			Evaluation	1,8					
				Evaluation	1,8									
Internal DBE	Users			DBE Induction Short	3,5,7	DBE Business Potentials & practices	4,5	Evaluation	8					
						Using DBE Services	4							
Internal DBE	Regional Catalyst Associates	DBE Induction Intensive	2,5,7	DBE deployment, support & maintenance	1,3	DBE learning philosophy and methods	2,5,7							
		DBE Bootstrap strategy and processes	2,5,7	DBE Business Potentials and practices	1,2									
Internal DBE	Policy Makers & Constituencies			DBE Regional policy impact & potential	3,9									
		DBE Induction Short	2,5,7	DBE Business Potentials and practices	1,2									
Internal DBE	Regional Catalyst	DBE Bootstrap strategy and processes	1,2,5,7	DBE deployment, support & maintenance	1,3									
		DBE Learning philosophy and methods	2,5,7	DBE Regional policy impact & potential	3									
		DBE Business Potentials and practices	1,2	DBE Community Tools and processes	4,7									
		DBE message & communication	2,7											
Media Blend														
1	one to one		Target Groups											
2	workshops		I											
3	seminars		U											
4	classes		D											
5	personal readings		RCA											
6	help desk, conference call, virtual meetings		P											
7	courseware		Internal											
8	self assessment		User SME discoverer,implementer,user,											
9	project		Developer SME											
			Regional catalyst network associates											
			Regional policy makers & constituencies											

2.2.6. Action Plan (content, channels, delivery)

In order to estimate resources and effort distribution for the DBE training program, we have made some assumptions that have led to a prototype design of training action plans over all five phases of community building. This prototype plan was agreed by all regions and equalizes regional specifics through an equitable cross-regional effort distribution. Based on this, regional efforts were estimated using the sizes of the regional SME communities to be addressed.

The following pie chart gives an overview of this prototype training effort distribution.



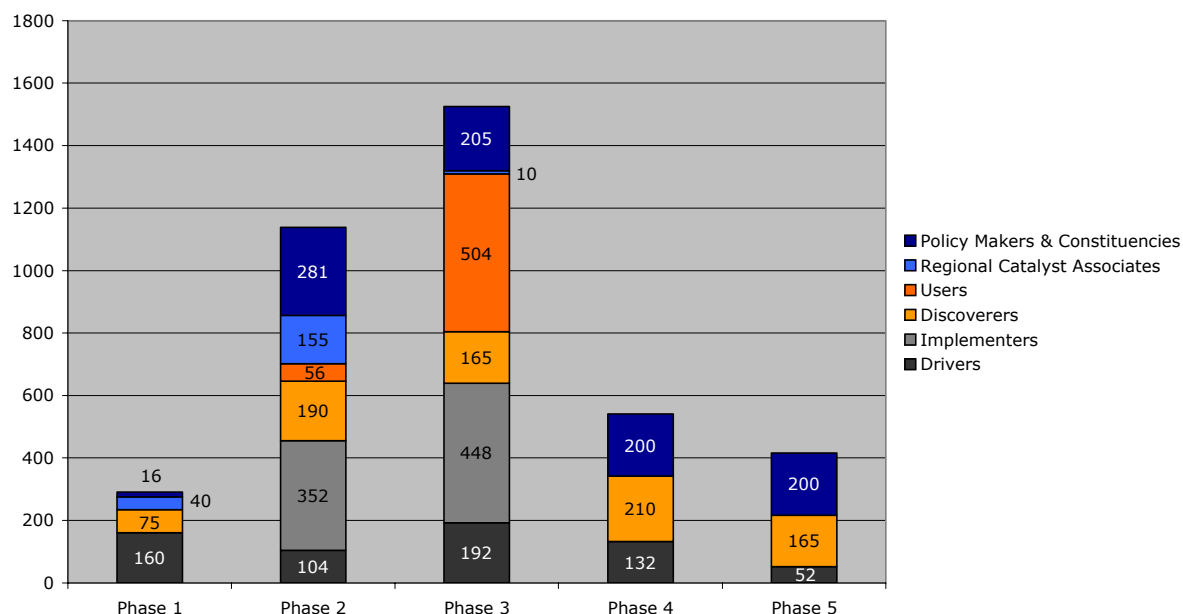
It shows the distribution of total person-months according to different training activity types.

If we then take a closer look at how this effort is distributed over phases and according to actor types, it becomes clear that the face-time a regional DBE training facilitator spends with different actors in the community is tactically distributed.

In the first phase drivers and discoverers as well as regional influencers are intensively addressed. In the second phase this is further intensified. In parallel, training engagement with users and implementers starts. In the third phase engagement with users and implementers becomes the dominant occupation of the regional catalysts, but the engagement with the initial actors is continuously maintained.

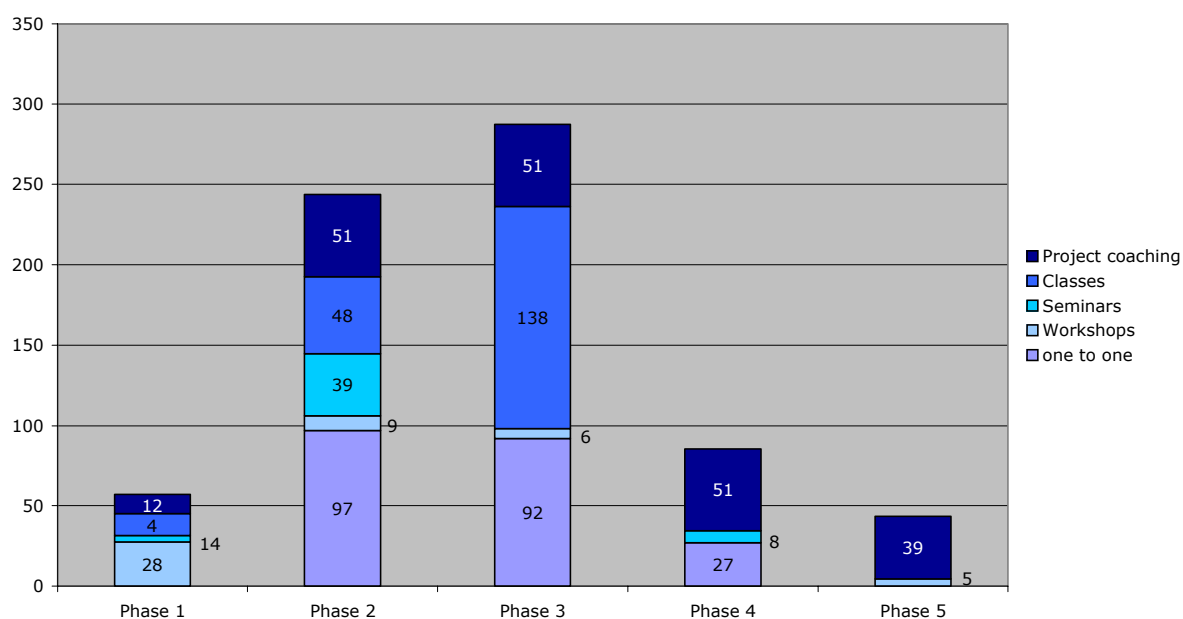
When it comes to encouraging for self-sustained community action and finally for the DBE project to step-out in phases 4 and 5, training engagement is once again emphasised for the core actors.

Face-time (hours) effort according to regional actor types and DBE community development phase



Accordingly the mix of training activities evolves from phase to phase. Whereas phase 1 is dominated by intensive on-to-one meetings, workshops and the start of project coaching, phases 2 and 3 become dominated by classes and seminars for larger groups of DBE actors.

Numbers of regional training sessions with SMEs or Influencers



2.2.7. Creation of the Learning & Knowledge platform and Long-Term Vision of DBE Learning Modules and Artefacts.

In line with the vision of establishing an open and distributed learning ecosystem, we aim to create a scalable and distributed infrastructure that will allow the regional actors to create and manage their own content and create the offering appropriate to them.

The knowledge infrastructure itself, at the start, is fairly classical in its design and largely top-down. We plan to use the infrastructure as much as possible to support local, bottom-up communities, while making it possible to manage intra-regional knowledge sharing. We make this choice because the availability of a *reliable* infrastructure for sharing knowledge and supporting distance learning.

Our longer-term vision however, we have an opportunity to move away from this classic use and to create DBE Learning Modules as DBE services themselves.

eLearning and knowledge sharing infrastructure

In the spirit of distributed learning and regional autonomy, a single platform implementation is not a preferable option. Lessons learnt point out the likely disadvantages in terms of duplications of effort, incompatibilities of systems, inconsistencies, wrong content and others. Also it is of course advisable to take into account the learnings from past experience (corporate, public, SMEs, research) and not create stovepipe, disconnected systems and to leverage each other's investments and developments (e.g. in content production).

For these reasons, a common architecture, defined by Intel, will provide a blueprint for an eLearning and knowledge sharing platform. Accessible via web-type interfaces, it enables content management and complies with the SCORM open standard for e-learning. This enables interoperability at object level, localisation, reuse, and extendibility by third parties. By additionally agreeing as a group on guidelines and standards used, it is therefore compatible with the DBE approach and infrastructure and is well positioned for a longer-term merge with the DBE itself.

The actual implementation of this platform is managed by each individual region, which may or may not choose to partner with other regions or local public / private to do so. This approach ensures regional freedom of choice as well as maximum impact of the investments in knowledge.

Technology wise¹⁰, the goal and ambition of the project is to implement the infrastructure in open source platforms. A good candidate under investigation e.g. is Moodle:



The regions themselves are responsible for launching and maintaining this infrastructure. It is the firm intention of DBE that all such infrastructures, be

¹⁰ See also Annex V for additional preliminary thinking on the approach

implemented as open source and feedback their results and contributions to the open source community.

Learning Objects equivalent to DBE Services

The eLearning and knowledge platform is an XML-based open architecture that provides a meta-data layer with which you can describe what you want to achieve in a particular teaching/learning module. This could be dubbed a “Training Content Modelling Language” in that it addresses the sequencing of concepts to be communicated and explained. It allows object referencing so the module can be enhanced with flash presentations, MPEG clips from remote meetings or lectures. The audio could then be separated in order to re-localise the video clip across the DBE regions. This could be done dynamically using existing text translation tools. Ultimately someone could have semi-real time audio translation as a DBE service that could be invoked by such a re-localisation request by a user.

Learning Modules are equivalent to DBE Service Chains

The goal of the meta-data layer could be viewed as an extension of the SCORM standard in order to allow the dynamic orchestration and optimisation of learning objects to deliver a learning module in the same way we are optimising service chains to deliver a business service.

In conclusion, the proposed platform is well positioned to become one of the first extensions of the DBE infrastructure, compatible with the original vision of the Digital Business Ecosystem (Nachira, 2002).

3. Management

3.1. *Roles and Responsibilities*

Management of the training activities is based on a distributed environment that is similar to our strategic training approach. Each region will be fully responsible for the conduct and delivery of its regional training program. But all training programs are conducted within the overall training framework as defined in the previous chapters. Therefore, all regional training programs will use a consistent structure for individual action that allows for cross-regional comparison and integrated evaluation. Within this structure regions are free to place different emphasis or use different components. Thus, each region is responsible to deliver its own project plan for training and to manage its activities accordingly.

As part of the framework, all regions will undergo the same evolutionary phases in the conduct of their training programs. This allows for cross-regional evaluation of each phase results and the transfer of best practices between regions in the integrated planning of the following phases. It also ensures transparency of regional training activities.

There is no central management of training activities. Instead, we have associated a small team with the DBE program management directly that cares for the evolution of the strategic training framework, for cross-regional evaluation and facilitation of knowledge transfer between the different participants and other parts of the DBE project. This also takes account of the crucial role that we allocate to training as a facilitator of the DBE community development and a source of knowledge about the practical adoption of DBE.

Training content development is organized in a distributed way. However, we propose to allocate a clear responsible person – either from the regions or the PM team – to each content block to ensure integration and cross-regional synergy.

E-learning content and electronic knowledge exchange is organized by regional knowledge brokers that together form a Knowledge Platform Shared Services Committee.

Finally, we have created a technical development and support team that supports the technical side of the knowledge platform that is used by all regions to create individual e-learning and knowledge sharing environments for the local community.

Each work stream needs a significant degree of regular communication and exchange between the partners and is therefore chaired and animated by a responsible team from below. In each work stream the animator has a moderating role and will facilitate the interaction between the participants. However, individual task responsibility within a work stream can still be distributed.

Work stream members meet at regular intervals and co-ordinate subtasks among each other. The animator acts as a spokesperson for the work stream and reports progress – e.g. according to overall milestones - to the DBE program management.

Per team we have further grouped the main operational tasks which relate to DBE Subproject 8 “Training” and which are reflected in Work packages with distinct objectives, tasks, deliverables and milestones.¹¹

In detail the following roles and responsibilities were allocated for training:

Regional training teams (UCE, ITA, TTC)

The regional teams are the leading actors in the Distributed Local Content production tasks (B28) and in the Open & Distributed Knowledge Transfer, Training and Communication (B27 Bis). Their tasks include:

- Detailed regional training action planning and management responsibility
- Regional resource allocation and controlling
- Selection and recruitment communication of regional actors (SMEs, influencers)
- Ongoing contact management with regional actors (SMEs, influencers)
- Conduct of training sessions according to the strategic framework (from one-to-one, workshops etc. to project coaching)
- Development of regional training content
- Conduct of regional training evaluation and analysis of regional specifics
- Administration of regional knowledge platform (“knowledge ecosystem”)
- Participation in overall DBE strategic training framework evolution

The development of training materials and contents is organised according to the table below. In each of the learning blocks one project partner takes the leading role, which means that this partner will:

- organise and guide the contents development work
- design the structure of the contents
- produce the main components of the contents
- finalise and publish the common contents in the DBE learning infrastructure

Partners acting in supporting role

- contribute to the content development as agreed with the leading partner
- localise the common contents as required by the local target audiences
- publish the localised content in the DBE learning infrastructure

¹¹ Work package, task, deliverable and milestone names may differ from these listed in the Technical Annex at the project start. The ones listed here however reflect a new approach to training in the DBE and replace the old.

These roles are reflected in the resource allocation plan of the tasks B28.

L= Lead
S= Support

	ITA	TTC	UCE	T6	IBM
DBE Learning subjects and blocks					
DBE message & communication	S	S	S	L	
DBE learning philosophy, strategy and methods					L
DBE community tools, processes and development	S	S	S		L
DBE induction	L	S	S		
DBE bootstrap strategy and process	L	S	L		
DBE business potentials and practices	S	S	L		
DBE service development	L	S	S		
DBE deployment, support and maintenance in SMEs	L	S	S		
Using DBE services	L	S	S		
DBE regional policy impact & potential	S	S	S	L	

Training strategic framework team (IBM, T-6)

The strategic framework team is compromised of the leading actors in the Training Strategy and Support tasks (B24 Bis) and the Channel Development and admin tasks (B25 bis). These tasks include:

- Represent Training in the PMEB as associate of the DBE programme management
- Responsibility for the DBE strategic training framework evolution
- Overall training resource controlling and budget reporting
- Integration into the overall DBE program management and strategy
- Integration of regional evaluation results and analysis of cross-regional (2nd level) learning from training
- Integrated cross-regional reporting on training progress to DBE program management executive board
- Develop communication channels between partners
- Knowledge transfer on cross-regional training experiences to DBE development teams
- Best practices transfer on content localisation and standards in training to regional training teams.
- Provide shareability support for content in between regions.
- Integrate evaluations of regional trainings after each phase
- Jointly analyse lessons learned from the different regional training programs
- Integrate regional planning for the next phase
- Propose adaptations of the regional action plans as well as of the strategic training framework from phase to phase

Knowledge platform technical development and support team (Intel)

The person effort of developing and supporting the platform is not part of the Training deliverable. However it is necessary to align the technical platform with the training concept and although this effort is not funded within the deliverable, it is described below. The technical development and support team leads the knowledge platform infrastructure activities (C33) and as part of that will provide:

- Concept and development of the knowledge platform
- Incorporating a strategy for content localisation, provide guidance via catalysts organisations to the regions.
- Host initial platform infrastructure
- Development of shared services to ease the transfer of knowledge between regions
- Co-ordinate between regional knowledge brokers
- Content road mapping for e-learning
- Agree on core adaptations and requirements for the knowledge platform
- Analyse and exchange learning from all regions
- Integrate technical problem solving

Communication and event coordination team (T-6)

- The Communication and event coordination team will manage the coordination of Events (B31).

3.2. Deliverables & Milestones (first 18 months) ¹²

Deliverable N.	Deliverable title	Delivery date	Nature	Dissemination level
D 28.1 (IBM)	DBE Training resource plans & Needs (version 2)	8	R	RE
D 28.5 (TTC)	Detailed phase 1 regional training action plan	10	R	PU
D 28.6 (Intel)	Guidelines and standards for content creation	12	R	PU
D 28.7 (IBM)	Cross-regional Phase 1 training evaluation report	18	R	PU
D 28.8 (Intel)	Knowledge platform architecture & standards	12	R	PU
D 28.9 (Intel)	Regional knowledge platform implementation blue-print and development roadmap	15	R	PU
D 28.10 (TTC)	Implemented knowledge platform in regions	18	O	PU
D 30.3.X (ITA)	Training Content report	18	R	PU
D 30.4.X (UCE)	Training Delivery report	18	R	PU

¹² This list presents the alternative list of deliverables which reflect the new needs of the updated training approach. The following original deliverables are no longer covered as part of the Training SP8:

N.	Deliverable title	Date	Nature	Dissemination
D 27.1	Agreements with SMEs for DBE testbed users & providers, knowledge transfer agreed	18	R	RE
D28.2	DBE Competence Framework, Competency Profile & Training Strategy	9	R	PU
D28.3	Training Plan & Content Development Plan	16	R	PU
D28.4	Training Materials available to Regional Catalysts	16	R	PU
D30.1	Plan for SME recruitment including formal channels and selection criteria	16	R	PU
D30.2	Report on initial transfer and adoption activity-stakeholder review and feedback	18	R	PU

Deliverable N.	Deliverable title	Delivery date	Nature	Dissemination level
D 33.4 (T6)	Public Conference launching the Digital Ecosystem concept	18	O	PU
D 33.5 (T6)	SMEs users, component providers and local actors - DBE Conference	18	O	PU
D 33.7.x (T6)	Integrated Projects Concertation meetings		O	PU

3.3. Resource allocation

Original Funds Allocation

Participant Role	Participant Short Name	Number of person/months	Personnel Costs	Travel and Subsistence	SAB Funds	Events/Training	Subcontracting	FUNDED
CO	IBM	16,0	304.000		120.000	59.000		483.000,00
CR	T6	6,0	29.926,8			100.000		129.926,80
CR	TTC	13,0	97.760	18.000		75.000		190.760,00
CR	UCE	25,5	120.156	18.000		75.000		213.156,00
CR	ITA	30,0	142.785	15.600		75.000		233.385,00
TOTAL		90,5	694.628	51.600	120.000	384.000	0	1.250.227,80

Proposed New Funds Allocation

Participant Role	Participant Short Name	Number of person/months	Personnel Costs	Travel and Subsistence	SAB Funds	Events/Training	Sucontracting	FUNDED
CO	IBM	13,0	234.000		84.750	59.000	57.750	435.500,00
CR	T6	6,0	29.926,8			100.000		129.926,80
CR	TTC	20,5	154.160	18.157		75.000		247.317,00
CR	UCE	29,15	137.354,8	18.078		75.000		230.432,80
CR	ITA	27,5	130.886,3	15.600		75.000		221.486,25
TOTAL		96,2	686.328	51.835	84.750	384.000	57.750	1.264.662,85

Delta

Participant Role	Participant Short Name	person/months	Personnel Costs	Travel and Subsistence	SAB Funds	Events/Training	Subcontracting	FUNDED
CO	IBM	-3,0	-70.000	0	-35.250	0	57.750	-47.500,00
CR	T6	0,0	0	0	0	0	0	0,00
CR	TTC	7,5	56.400	157	0	0	0	56.557,00
CR	UCE	3,7	17.199	78	0	0	0	17.276,80
CR	ITA	-2,5	-11.899	0	0	0	0	-11.898,75
TOTAL		5,7	-8.300	235	-35.250	0	57.750	14.435,05

Note

The subcontracting for IBM represents an additional 10.5 man months of effort dedicated to Training, not included in the 13 man months documented for IBM.

3.3.1. Time

See chart on next page (strike-through deleted sections demonstrate changes from original workplan).

			Year 1				Year 2				Year 3						
Sub-Project	Work Packages	Task	Months 1-3	Months 4-6	Months 7-9	Months 10-12	Months 13-15	Months 16-18	Months 19-21	Months 22-24	Months 25-27	Months 28-30	Months 31-33	Months 34-36	Task Partner	Total per partner	TOTAL
SP8: Training																	
8	WP28 - DBE Training (IBM)	B24 – Training assessment and planning and design															
		B24 bis – Learning Support (incl. Programme management, Content Sharing Guides & Standards, Evaluation, Internal Knowledge Sharing)	2	2	1	0,5	1	1	0,5	0,5	1	0,5	0,5	1	IBM	11,5	23
								0,5		0,5					T6	1	
					1	0,25	0,25	0,25	0,25	0,25	0,5	0,25	0,25	0,25	ITA	3,5	
					1	0,25	0,25	0,25		0,25	0,5	0,25		0,25	TTC	3	
					1	0,25	0,25	0,25	0,25	0,25	0,5	0,25		1	UCE	4	
		C33 - eLearning infrastructure development/tools ¹³					1	1							ITA	2	6
							1	1							TTC	2	
							1	1							UCE	2	
		B25 – Training development/deployment/execution															
		B25 bis – Channel Development & Admin				0,25									TTC	0,25	0,75
						0,25									T6	0,25	
						0,25									IBM	0,25	

¹³ Task leader Intel is funded under Research and therefore has no task and budget allocation here.

	WP30 - Transfer and Adoption (UCE)	B28 - Distributed local content production			0,5		1,5	1,5	1,5	2	1,5	1	0,5		ITA	10	32,25
					0,25		1	1	1,5	1	1,5	0,5	0,25		TTC	7	
					0,5		2	2	3	2	3	0,25	0,25		UCE	13	
					0,25			0,5		0,5					T6	1,25	
					0,5			0,5							IBM	1	
		B27 - Local and regional seminars and workshops													TTC		
		B27 Bis Open & Distributed Knowledge Transfer, Training and Communication (Delivery) (Replaces B27 and B5 e-Adoption)			0,5	0,5	1	2	2	2	1	2,5	0,25	0,25	ITA	12	30,90
					0,5	0,5	0,5	1,25	2	1	0,5	1,75	0,25		TTC	8,25	
					0,5	0,5	1	1,15	1,5	1,5	1	2,5	0,25	0,25	UCE	10,15	
								0,25							IBM	0,25	
							0,25								T6	0,25	
		B5 - eAdoption										3,5	3,5	3,5	3,5	UCE, ITA	14

SP9: Regional Catalysts for DBE																	
9	WP27 - SME Recruitment (ITA)	~~B1 - SME user recruitment~~ (Knowledge transfer included in Task 27 Bis)															0
~~B2 - SME developer recruitment~~ (Training included in Task 27 Bis)															0		
SP11: DBE System Viability																	
11	WP33 – Dissemination	B31 – Events						1,25			1			1	T6	3,25	3,25

3.4. Action Points

As result of the changes proposed in this document, the following actions need to be scheduled:

1. Get PMEB signoff for deliverable 28.1 Version 2 before submission
2. Present changes to General Assembly and get approval.
3. Start official procedure with the Commission to make the changes to the technical annex reflecting:
 - a. Changed training strategy and approach
 - b. Updates of the resource plan
 - c. Updates of the financial plan
 - d. Other changes that may effect the contractual obligations

4. Review and Evaluation: A Model Driven Approach to Evaluating DBE Learning Communities Action

4.1. *Introduction*

Evaluation is a central element of our DBE training approach. Each evolutionary phase of the training framework integrates multiple forms of evaluation to serve as a decision basis for the next phase and to provide learning back to the DBE project. In fact evaluation therefore provides us with a constant feedback loop which allows us to determine what type of training and what content is accepted, how effective it has been and how the training programme can be improved.

Evaluation therefore has to be proactive and adaptive to emerging needs. The dual nature of the learning community concept – as both a social phenomenon and a pedagogical method (Prometheus, 2001) adds to the complexity.

By using different evaluation approaches, we can assess different aspects related to DBE training such as the level of understanding of DBE among the different actors in the learning communities; and the extent of improvements in business practices.

First we explain the purposes of evaluation from the perspective of the DBE project. Then we identify the evaluation objectives from the learning community point of view. Next, different models of evaluation are analysed and an appropriate approach to evaluation is identified. Finally we provide a detailed plan of the implementation approach showing the stages of action and the expected outcomes of evaluation and demonstrate the stakeholder framework for evaluation.

4.2. *Rationale for Evaluation*

Evaluation forms an integral part of the DBE project. In a wider sense evaluation is to measure the economic success the DBE project is expected to have in the 3 core regions and initial three associate regions in Europe. However in the context of DBE training, it is essential for three types of evaluation goals to be blended appropriately. These are:

1. **Process Improvement:** how to improve the project from phase to phase through formative and responsive evaluation and quality assurance.
2. **Knowledge creation:** using evaluation to influence thinking - that is testing models and generating lessons learned
3. **Outcome Judgement:** determining if project performance meets stakeholders' expectations.

For DBE learning-communities to emerge, to self-organise and to be sustainable, actors must be involved in the creation of conditions for the following three domains – Identity, Information and Relationship (Marshall, 1997).

- **Identity** “encompasses the organisation’s meaning, purpose, and intentionality and provides the coherence around which system stability emerges.”
- **Information** “is both the medium of exchange for generative organisational learning and its source of power.”
- **Relationships** “represent the neural network of the organisation; they establish the organisation’s capacity for participation, engagement, and interconnectedness”.

Evaluation enables the project partnership to gain knowledge, make judgements and positive actions on the different training implementation approaches undertaken in each phase.

4.3. Evaluation Objectives

Evaluation of training is a collaborative activity involving the Regional Catalysts, the project partners, SME Developers and Users, Regional Catalyst Associates and Stakeholders.

The evaluation objectives must:

- Align with the learning objectives as shown in the table in Annex 1
- Create and use an open evaluation approach based on knowledge, information and collaboration
- Embed the evaluation process within the phased implementation approach followed in the project
- Create, use and maintain a continuous feedback and reporting process to meet the evaluation goals

4.4. Approach to meeting the objectives

A recent review of evaluation methods (Eseryel, 2002) proposed the following typology of classical approaches to evaluation:

Six general approaches to educational evaluation were identified (Bramley, 1991; Worthen and Sanders, 1987), as follows:

- **Goal-based evaluation:** Evaluation to assess the degree to which formal, pre-stated goals have been achieved
- **Goal-free evaluation:** Evaluation to discover the ways in which participants perceive informal goal achievement.

- **Responsive evaluation:** Evaluation to address on going concerns of a participant in ways with which they agree on next steps giving innovation through partnership.
- **Systems evaluation:** Evaluation looking at unplanned impacts outside the immediate system-in our case DBE impacts on regions' competitiveness.
- **Professional review:** Evaluation based on peer review and reflective practice, e.g. the discussion of ends and means by scientists in DBE.
- **Quasi-legal:** Evaluating the degree to which the project meets legal and other formal requirements set by authorities e.g. internal and external audit of DBE within partner institutions.

Goal-based and systems -based approaches are predominantly used in the evaluation of training (Philips, 1991)". A comparison of the models is presented below:

Kirkpatrick (1959)	CIPP Model (1987)	IPO Model (1990)	TVS Model (1994)
1. <u>Reaction</u> : to gather data on participants reactions at the end of a training program	1. <u>Context</u> : obtaining information about the situation to decide on educational needs and to establish program objectives	1. <u>Input</u> : evaluation of system performance indicators such as trainee qualifications, availability of materials, appropriateness of training, etc.	1. <u>Situation</u> : collecting pre-training data to ascertain current levels of performance within the organization and defining a desirable level of future performance
2. <u>Learning</u> : to assess whether the learning objectives for the program are met	2. <u>Input</u> : identifying educational strategies most likely to achieve the desired result	2. <u>Process</u> : embraces planning, design, development, and delivery of training programs	2. <u>Intervention</u> : identifying the reason for the existence of the gap between the present and desirable performance to find out if training is the solution to the problem
3. <u>Behaviour</u> : to assess whether job performance changes as a result of training	3. <u>Process</u> : assessing the implementation of the educational program	3. <u>Output</u> : Gathering data resulting from the training interventions	3. <u>Impact</u> : evaluating the difference between the pre- and post training data

4. <u>Results</u> : to assess costs vs. benefits of training programs, i.e., organizational impact in terms of reduced costs, improved quality of work, increased quantity of work, etc.	4. <u>Product</u> : gathering information regarding the results of the educational intervention to interpret its worth and merit	4. <u>Outcomes</u> : longer-term results associated with improvement in the corporation's bottom line, its profitability, competitiveness, etc.	4. <u>Value</u> : measuring differences in quality, productivity, service, or sales, all of which can be expressed in terms of dollars
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Source: Eseryel, 2002

The DBE training evaluation is based on different approaches according to our evaluation goals. Whereas standard *goal- and systems-based* approaches can be used for “process improvement”, they are insufficient for a deeper understanding of progress in an evolutionary context. This is mainly because they do not take into account the significant judgement differences and interdependencies between stakeholders.

An ecosystem concept – as the DBE - proposes that patterns of activity and understanding emerge from these complex interdependencies of the various actors in the system. Unplanned, informal, accidental, and ostensibly non-relevant ex ante factors may ultimately produce new learning and behaviour patterns as a result of complex or chaotic self organizing properties in such systems. Therefore, in an evolutionary context these interdependencies cannot be assumed as stable. This leads us to the limits of traditional goal- and systems-based approaches.

Hence, our evaluation approaches for “knowledge creation” and “outcome judgement” are based on a *responsive* methodology.

Given that emergence may well occur at boundaries between sub-communities in the DBE, such as between SME drivers and SME users, our evaluation plan pays specific attention to tracking and probing emergent boundary interactions and impacts.

4.5. The DBE Evaluation Model

Specifically for “outcome judgement” we will evaluate the extent to which each stakeholder is satisfied with the project learning and training system in terms of the following criteria:

- Recognition of DBE as embedded into a global learning community
- Recognition of the DBE community as a place to share and transfer knowledge, information and resources through social and electronic interaction
- Awareness of DBE goals by SMEs and other actors
- Agreed relevance of goals to own business and other actors' futures
- Analysis of needs and contributions to DBE by SMEs and other actors
- Definition of learning and development goals
- Provision of learning resources

- Agreement of learning approaches used for the actors
- Learning activity and associated business applications
- Formal and informal learning and emergence of new patterns

This will provide us with a lively and more realistic picture of the adoption and evolutionary status of the community. Thereby we will measure the extent to which stakeholders value their achievements on the following criteria (Marshall, 1997):

Identity

In terms of the efficiency and effectiveness of our performance to what extent has DBE created the conditions?

- To bring the system together to think about itself and to make decisions for itself *as a system*.
- To involve the expertise and experience of everyone in the system in creating the organization's fundamental beliefs, values, and shared purpose (mission) and encourage people to organize around them.
- To clearly and continuously identify the patterns in the organization, what the organization is trying to accomplish, and how each individual is connected to its future.
- To promote an organizational consciousness and a sense of belongingness to a larger purpose.
- To make decisions at the local level based upon a strong sense of organizational self (identity).
- To promote individual and organizational freedom and efficacy.

Information

In terms of the efficiency and effectiveness of our performance to what extent has DBE created the conditions?

- To create open and multiple pathways for communication.
- To infuse the organization with abundant information by explicitly bringing the environment's voice into the system.
- To move information everywhere in the system.
- To continuously generate and share new knowledge.
- To promote honest dialogue, feedback, and interaction.
- To keep rules simple for detecting, processing, and integrating information.
- To seek out information that is complex, ambiguous, and paradoxical and encourages people to publicly discuss and use it.
- To encourage frequent and rapid experimentation.

Relationships

In terms of the efficiency and effectiveness of our performance to what extent has DBE created the conditions?

- To create networks and webs of dialogue, interaction, and generative communication.

- To establish open access to everyone in the system.
- To promote diversity of all kinds.
- To seek opportunities to engage as many people as possible in dialogue to reinforce their interdependence, connected-ness, and sense of shared intention about the purpose and meaning of their work.
- To distribute power throughout the system.
- To encourage people to act simultaneously and to coordinate their actions with each other.
- To establish strategic internal and external alliances and partnerships.
- To cultivate mutual interdependence.
- To build capacity for reflective, collective inquiry and collaborative accountability.
- To make the organizational boundaries permeable and flexible.
- To cultivate organizational coherence while building capacity to adjust to discontinuous change.
- To avoid neatness, tolerate messiness, and enable relationships to be redundant and overlapping.

Sample Evaluation Table

Respondent Area					Evaluation Area		
Criteria	How important	What score	Value	Comments	Action	Distribution	Impact
	1-3	1-4					

The participative dimension is of special interest since the DBE brings together different perspectives across several disciplines-each adopting a distinctive if implicit mental model of evaluation criteria and processes.

What this implies is that our evaluation seeks actors' views of the value of inputs from and relationships with others in the project. In the table below derived from work by Nickols (2003) we depict the idea that each actor receives inputs from others and produces valued outputs for others to achieve their outcomes. The sum total of all such analyses contributes to the overall project evaluation.

Actors and stakeholders	Contributions	Inducements	Evaluations	Approaches
SMES	Expertise, services and software, skills, time, energy	Innovation Knowledge Relationships Quality Cost effectiveness	To what extent did the project meet your expectations	Interview
EC Project officers	Resource	Learning Capacity Building Dissemination	To what extent did the training and learning match agreed	Report feedback

			standards	
Natural Science Community	Expertise Viewpoints and concepts	Influence Feedback Learning	How much conceptual development did the project achieve in your field	Reporting in
Computer Science Community	Expertise Viewpoints and concepts	Influence Feedback Learning	How much conceptual development did the project achieve in your field	Reporting in
Business Community	Networks Skills with client companies Recruitment	Better applications Innovations Funding	How far did the project achieve results in your region Innovation Competitiveness	Reporting in

Table: Actor based evaluation: reciprocal evaluation relationships

- Similarly we will focus our evaluation on the specific attainments of actors at different phases in the project.

Actor network Stakeholder (Who)	Learning Content (What)	Learning Approach and Evaluation method used (How)	Phase (When)	Impact (Value)
SMEs <ul style="list-style-type: none"> • Drivers • Developers • Implementers • Users 	Knowledge Information	Blended Learning evaluated by goal and response based evaluation. Quasi- legal evaluation when agreements involved	1 to 5	Individual Organizational Community
Regional Catalysts	Knowledge Skills Behaviour Relationships	Workshops E learning evaluated by goal, systems, and response based evaluation.	1 to 5	SME recruitment SME achievements Project partner assessment
Natural Science Partners	Theory	Projects, text and discussion Evaluated through professional review	1 to 5	Conceptual developments
Computer Science Partners	Theory	Projects, text and discussion Project Evaluated through professional review	1 to 5	Technical applications Conceptual development

Table: A depiction of evaluation groups and features.

4.6. Operational aspects of evaluation

From an operational point of view, evaluation on DBE training activities is carried out as an integrated activity in two basic forms.

- **A standard evaluation of training delivery.** Standardized questionnaire that is filled out by the participants of seminars and classes directly after a training event. It can also be used in an online version for distant training. This evaluation instrument is used for all participants.
- **A deeper evaluation of training needs.** Evaluation in a workshop or one-on-one form. Only a small percentage of SMEs is addressed in that way. This is carried out in training blocks that are delivered in

small settings, i.e. with a small group of deeply involved driver SMEs in workshop form. It gives the opportunity to derive insights into the thinking and problems of SMEs.

Whereas standard evaluation is used for each training block, deep evaluation sessions are only used occasionally. Both types are carried out by the regional catalysts' training facilitators. Questionnaires and the evaluation model design are provided by IBM and UCE. Intel provides an online version as part of the e-Learning platform.

Data collected through these evaluation activities is summed-up and communicated to all DBE training team members by IBM. Each phase is concluded by an evaluation report that further integrates the following two derived analyses:

- **An evaluation of the overall training delivery progress (“process improvement”).** This evaluation is derived on the one hand from the project management results – e.g. the number of SMEs and participants trained per training block - as well as from the condensed results of the previous two elements.
- **An evaluation of training effects (“outcome judgement”, “knowledge creation”).** Here some factors are condensed that can be used in combination with the results from “process improvement” but also with evaluations of other parts of the DBE programme. It also contains information from deep analysis sessions with selected actors.

IBM is responsible for compiling this regular report. The analysis is carried out and agreed among all training participants and serves for internal and outer communication on the progress of the training activities. The evaluation report is coupled with recommendations for the training delivery of the next phase.

	Overall objective	Evaluate	Phase 1 Regional Initiation	Phase 2 Regional Expansion	Phase 3 Cross-Regional Integration	Phase 4 Sustain	Phase 5 Transfer
			Initiate local sub-communities	Encourage self-dynamic in initial sub-communities	Extend beyond initial sub-communities	Sustain community action	Enable take-over
Theory	Establish mutual understanding of roles among training participants.	Training delivery (per learning block and participant)	Introduce DBE to key actors (SMEs: Drivers, Discoverers; Regional Catalyst Network, Policy Makers and Constituencies)	Help key actors to take advanced positions in the community through in-depth training.	Help key actors to network and communicate beyond their local community.	Transfer DBE training / knowledge transfer practices to key actors to enable them to carry on the DBE evolution in a self-sustained way.	Engage with key actors on tactical problems and future learning philosophy to carry the DBE forward.
	Develop and improve training programs per actor type			Introduce DBE to extended actors' group (SMEs: Implementers, Users)	Deepen DBE knowledge of extended actors' group		
	Develop and improve specific content / didactics of learning blocks.		Deep evaluation of training needs ²⁾ Evaluation through cognitive goal-based and responsive approach	Standard evaluation ¹⁾ of training delivery for extended actors' group In-depth evaluation ²⁾ of first training / DBE experiences for key actors.	Evaluation through systems approach	Standard evaluation ¹⁾ of first training / DBE experiences within the extended actors' group.	Evaluation through systems and professional review approach

				Evaluation through goal-free and responsive approach		Deep evaluation ²⁾ of need development and training success for key actors. Evaluation through goal-based and professional review approach	
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Formalisation	Establish regional catalysts' roles, SME recruitment and maintain continuous contact with SMEs and other actors (e.g. regional policy makers)	Training needs of the different actors	Identify and engage local key actors	Identify and engage extended actors' group	Maintain regular intensive contact with key actors	Maintain regular intensive contact with key actors	Maintain regular intensive contact with key actors
			Deep evaluation ²⁾ of training needs (see above) for key actors Evaluation through responsive and quasi-legal approach	Standard evaluation ¹⁾ of training needs for extended actors' group Evaluation through systems and quasi-legal approach	Monitoring of training need evolution ¹⁾ Evaluation through responsive approach	Monitoring of training need evolution ¹⁾ Evaluation through responsive approach	Monitoring of training need evolution ¹⁾ Evaluation through responsive approach
Implementation	Set-up and maintain the training-delivery and knowledge transfer infrastructure. Organize and conduct trainings. Plan for adaptations when	Overall training delivery progress	Set-up and delivery of first training blocks	Plan and implement adaptations to training delivery (e.g. shift emphasis of training channels) based on first key actors' adoption experiences	Plan and implement adaptations to training delivery (e.g. play on group sizes, content mix) based on extended actors' group adoption experiences and deeper insights from key actors	Plan and implement adaptations to training impulses for knowledge sharing and cross-regional collaboration based on key-actors' experiences	Enable take-over of delivery by key actors

	moving from phase to phase (based on the adoption experiences of each phase)		Evaluate set-up of training delivery infrastructure Evaluation through goal-based approach	Evaluate delivery progress ³⁾ Evaluation through responsive approach	Evaluate delivery progress ³⁾ Evaluation through responsive approach	Evaluate delivery progress ³⁾ Evaluation through systems approach	Evaluate delivery progress ³⁾ Evaluation through professional review approach
Adoption	Evaluate training effects on DBE adoption and learn from experiences. Feed back learning into the training and overall DBE planning. Understand and adapt to the evolutionary dynamics of the DBE community.	Training effects on DBE adoption	Understand initial adoption criteria and hurdles from key actors.	Understand initial adoption criteria and hurdles from extended actors' group.	Understand regional community dynamics.	Understand sustainability criteria. (which actions are taken independently by the community which have to be supported)	Understand key-factors for take over and long-term sustainability.
			Monitoring of training effects ⁴⁾ on actors' dynamics and community evolution Evaluation through goal-free and responsive approach	Monitoring of training effects ⁴⁾ on actors' dynamics and community evolution Evaluation through goal-free and responsive approach	Monitoring of training effects ⁴⁾ on actors' dynamics and community evolution Evaluation through responsive approach	Monitoring of training effects ⁴⁾ on actors' dynamics and community evolution Evaluation through systems approach	Monitoring of training effects ⁴⁾ on actors' dynamics and community evolution Evaluation through professional review approach

1) A standard evaluation of training delivery.

Standardized questionnaire that is filled out by the participants of seminars and classes directly after a training event. It can also be used in an online version for distant training. This evaluation instrument is used for all participants.

2) A deeper evaluation of training needs.

Evaluation in a workshop or one-on-one form. Only a small percentage of SMEs is addressed in that way. This is carried out in training blocks that are delivered in small settings, i.e. with a small group of deeply involved driver SMEs in workshop form. It gives the opportunity to derive insights into the thinking and problems of SMEs.

3) An evaluation of the overall training delivery progress.

Whereas the first two evaluation types address individual participants, this evaluation is derived on the one hand from the project management results – e.g. the number of SMEs and participants trained per training block - as well as from the condensed results of the previous two elements.

4) An evaluation of training effects. Here some factors are condensed that can be used in combination with the results from 3) but also with evaluations of other parts of the DBE programme. It also contains information from deep analysis sessions with selected actors.

Annex

I.	Key Personnel in Training and justification	63
II.	36 month Gantt for Knowledge & learning + related tasks	66
III.	Work Package description (detailed for first 18 months)	67
	• WP 27 SME Recruitment	67
	• WP 28 DBE Training	68
	• WP 30 Transfer and Adoption (to be updated)	70
	• WP 33 Dissemination and Community Building (only training part)	71
IV.	Updated Deliverables list (first 18 months)	72
V.	Glossary	73
VI.	Learning and Knowledge Platform	74
VII.	Bibliography	79

I. Key Personnel in Training and justification

Organisation	Person	Role in Project / link to CV	Cost in training (applied)	Target Commercial rate (not applied!)	Provisional Effort	Average Days per month Allocated	Specific role and task	Justification of involvement for personnel with higher than average cost (> 4000-8000 €/month)
IBM	Fanuel Dewever	Work Package leader, training and eLearning expert	900	1536	170	5	Training WP leader, expert in training and blended learning for resource analysis	Expertise in blended learning, (e)learning technologies, knowledge management, programme management is required
IBM	Elmar Husman	Innovation and strategy expert	900	2120	90	2,5	Strategy related to innovation within project, responsible for adapting and developing in line with project needs	Expertise in strategy, innovation and change management. Deep understanding of complexity and evolutionary models.
IBM	Jonathan Sage	Knowledge Management expert	0	2856	18	0,5	Expert in Knowledge Management and innovation, SME development, link to Programme management	Expertise in knowledge management, ranging from social complexity to systems implementations. Monitoring of training activity in project and PMEB context.

Organisation	Person	Role in Project / link to CV	Cost in training (applied)	Target Commercial rate (not applied!)	Provisional Effort	Average Days per month Allocated	Specific role and task	Justification of involvement for personnel with higher than average cost (> 4000-8000 €/month)
T6	Andrea Nicolai	Project Manager	407,5	N/A	20	0,6	Event Lead	/
T6	Mauro Georgetti	Operational Manager	407,5	N/A	100	2,8	Event organizer	/
TTC	Petri Räsänen	Regional Project Manager, Open source business expert	456,75	1200 per day	82	2,3	Training management, training on DBE Induction, business potentials and models	Regional lead
	Jaana Heliö	Software engineering specialist	362,5	800 per day	123	3,4	Training on software development, process development, deployment, user training	/
	Heidi Huhtamella	Business development expert	362,5	1200 per day	41	1,1	Training on business models, SME needs and requirements, deployment	/
	Eeva Salminen	eBusiness Specialist	362,5	1000 per day	123	3,4	Training on induction, business potentials and models,	/

Organisation	Person	Role in Project / link to CV	Cost in training (applied)	Target Commercial rate (not applied!)	Provisional Effort	Average Days per month Allocated	Specific role and task	Justification of involvement for personnel with higher than average cost (> 4000-8000 €/month)
	Janne Pyrrö	Business development expert	362,5	800 per day	41	1,1	Training on business models, deployment	/
ITA	Miguel Perez		349,5	N/A	165	4,6	Regional business expert	/
	Enrique Melendez		312	N/A	55	1,5	Development lead and training expertise	/
	Miguel Barcelona		247,5	N/A	165	4,6	Technical support	/
	Javier Val		247,5	N/A	165	4,6	Project manager in region	/
UCE	Rod Shelton		-	N/A	174,9	4,9	project director	/
	Nagaraj Konda		147,6	N/A	408,1	11,3	training lead	/
	To be recruited		147,6	N/A	174,9	4,9	trainer / subject matter expert	/
Subcontractors	Neil Rathbone	SME communication expert	525	525	110	3.1	Communications expert	Well accepted contributor and trusted liaison to SMEs, with deep knowledge in communication strategies.

EUROPEAN
CURRICULUM VITAE
FORMAT



PERSONAL INFORMATION

Name	DEWEVER, FANUEL
Address	WOLUWE GARDEN – WOLUWEDAL 22 – 1932 SINT- STEVENS-WOLUWE - BELGIUM
Telephone	+32 2 416.51.24
Fax	+32 2 416.51.24
E-mail	Fanuel.dewever@be.ibm.com
Nationality	Belgian
Date of birth	16/11/1974

WORK EXPERIENCE

- | | |
|---|---|
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>September 2001 - Now</p> <p>IBM Business Consulting Services</p> <p>Consulting</p> <p>Consultant Learning & Development</p> <p>Consulting and Project Management in Learning, Knowledge Management and Collaborative Workplace assignments with focus on the human performance factors which allow people to work effectively and efficiently in support of strategic and process goals, to build critical skills and competencies, and to promote organizational learning.</p> <p>Consulting on performance systems that support human performance, processes to manage competencies and skills in support of organizational goals, and learning and measurement processes in support of business requirements.</p> <p>Provide expertise in instructional design methodology and the application of the appropriate learning strategies that will solve business problems.</p> <p>Work with clients infrastructure to determine appropriate delivery methodologies, make best use of technology, and apply creative design methodologies for the selected delivery environment.</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>April 2001 – May 2001</p> <p>Docent inc.</p> <p>eLearning Software,</p> <p>Pre-sales consultant</p> <p>As member of the Sales Team supporting the sales efforts in a technical capacity.</p> <p>Assessing the customer's business requirements.</p> <p>Presenting the product architecture to and build a custom product demonstration for the customer.</p> <p>Provide input to Product Marketing and Engineering with regard to market trends and future product requirements.</p> <p>Assisting the Sales and Marketing teams with tradeshow and seminars.</p> |
| <ul style="list-style-type: none">• Dates (from – to) | <p>October 1998 – December 2001</p> |

- Name and address of employer
 - Type of business or sector
 - Occupation or position held
- Main activities and responsibilities

Newcom Information Systems

Consulting

Associate Consultant Knowledge Management (2001)

Market Education Specialist (1998-2000)

Consulting blue-chip and e-business companies in knowledge management and corporate portals

Design of Knowledge Management Architecture, Methodology and Framework

Research, market analysis & tool selection, consulting

Strategy and Business development

Organising International Conferences and Seminars (DWH & BI, CRM, KM, E-Business)

Project planning and management

Partner and sponsor negotiations

Internet consulting, webvertising, general marketing.

EDUCATION AND TRAINING

- Dates (from – to)

Post-graduate Organizational and Managerial Informatics, 1999

Applied Economics (majors in Marketing and Informatics), 1998

Vrije Universiteit Brussel

- Name and type of organisation providing education and training

Management, applied economics, marketing, information sciences.

- Principal subjects/occupational skills covered

University Diploma

- Title of qualification awarded

- Level in national classification (if appropriate)

PERSONAL SKILLS AND COMPETENCES

Acquired in the course of life and career but not necessarily covered by formal certificates and diplomas.

MOTHER TONGUE

DUTCH

OTHER LANGUAGES

ENGLISH, FRENCH, SPANISH, GERMAN

- Reading skills
- Writing skills
- Verbal skills

excellent, excellent, good, basic

excellent, good, basic, basic

excellent, good, basic, basic

SOCIAL SKILLS

[Describe these competences and indicate where they were acquired.]

AND COMPETENCES

Living and working with other people, in multicultural environments, in positions where communication is important and situations where teamwork is essential (for example culture and sports), etc.

ORGANISATIONAL SKILLS

[Describe these competences and indicate where they were acquired.]

AND COMPETENCES

Coordination and administration of people, projects and budgets; at work, in voluntary work (for example culture and sports) and at home, etc.

TECHNICAL SKILLS

MICROSOFT OFFICE, PROJECT, VISIO

Page 2 - Curriculum vitae of
[SURNAME, other name(s)]

For more information go to

www.cedefop.eu.int/transparency

www.europa.eu.int/comm/education/index_en.html

www.eurescv-search.com

AND COMPETENCES
*With computers, specific kinds of
equipment, machinery, etc.*

LOTUS
MINDMAP
CENTRA, LOTUS VIRTUAL CLASSROOM, SKILLSOFT, SABA, ... KNOWLEDGE
KNOWLEDGE MANAGEMENT TOOLS
MICROSOFT FRONTPAGE
DREAMWEAVER ULTRADEV
DOCENT ENTERPRISE 4.8
HTML, XML, JAVASCRIPT, SQL

ARTISTIC SKILLS
AND COMPETENCES
Music, writing, design, etc.

D.J.

OTHER SKILLS
AND COMPETENCES
Competences not mentioned above.

- Project & Programme Management
- Presentation Skills
- Process Analysis, design & improvement
- Change management
- eLearning, knowledgemenagement

DRIVING LICENCE(S)

B

ADDITIONAL INFORMATION

- Team player, outgoing with a good sense of humor, I love sports, going to the movies, travel or enjoying a quiet evening with friends.
- Cross-disciplinary experience (management consulting, strategic consulting, project management, marketing, operational roles, etc.)
- Extensive exposure to emerging technologies and management concepts, including eBusiness, eLearning, competence management, knowledge management, business intelligence, customer relationship management, data warehousing, corporate portals, and other web-based solutions
- Demonstrated responsibility in managing strategic relationships
- Management, team leadership, strategic thinking and analytical abilities
- Excellent oral, written and verbal communications skills
- Good inter-personal skills, including developing relationships at the executive level
- Experience planning, developing, launching or managing web-based initiatives
- Ability to flourish in a high-energy, high-intensity environment
- Ability to travel (25 - 50% regularly, more occasionally)

ANNEXES

NONE

**EUROPEAN
CURRICULUM VITAE
FORMAT**



PERSONAL INFORMATION

Name	ELMAR HUSMANN
Address	IBM BUSINESS CONSULTING SERVICES BEIM STROHHAUSE 17 20097 HAMBURG GERMANY
Telephone	++49 172 66 73 555
Fax	++49 40 6389 4711
E-mail	ehusmann@mac.com; huselmar@de.ibm.com;
Nationality	German
Date of birth	30/01/1971

WORK EXPERIENCE

- | | |
|--|--|
| • Dates (from – to) | 02/1998 – 04/2002 full-time employee
04/2002 - ongoing flexible contract / part-time research leave |
| • Name and address of employer | IBM Business Consulting Services (previously PricewaterhouseCoopers Consulting) |
| • Type of business or sector | |
| • Occupation or position held | Managing Consultant |
| • Main activities and responsibilities | Member of the German Strategy Practice |

EDUCATION AND TRAINING

- | | |
|--|---|
| • Dates (from – to) | 10/1991 – 12/1997 |
| • Name and type of organisation providing education and training | RWTH Aachen
Ecole Polytechnique Federale Lausanne
Ecole Centrale Paris |
| • Principal subjects/occupational skills covered | Engineering, Bio/Chemical Process Systems Design, Advanced numeric Control and Simulation |
| • Title of qualification awarded | Dipl.-Ing. (RWTH Aachen) , DEA (Ecole Centrale Paris) |
| • Level in national classification | Master |
| • Dates (from – to) | |
| • Name and type of organisation providing education and training | INSEAD (1999), Cambridge University - The Judge Institute of Management (2002)
HEC Paris (2003/04), Ecole Centrale Paris (2003/04) – Strategy & Technology Group |
| • Principal subjects/occupational skills covered | Post-graduate Studies in Technology and Innovation Management, Organizational Change and Intra/Entrepreneurship |
| • Title of qualification awarded | Enrolled in PhD. in Management Program at Ecole Centrale Paris |
| • Level in national classification | Post-graduate |

PERSONAL SKILLS AND COMPETENCES

*Acquired in the course of life and career
but not necessarily covered by formal
certificates and diplomas.*

MOTHER TONGUE

OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

SOCIAL SKILLS AND COMPETENCES

*Living and working with other people, in
multicultural environments, in positions
where communication is important and
situations where teamwork is essential
(for example culture and sports), etc.*

ORGANISATIONAL SKILLS AND COMPETENCES

*Coordination and administration of
people, projects and budgets; at work, in
voluntary work (for example culture and
sports) and at home, etc.*

TECHNICAL SKILLS AND COMPETENCES

*With computers, specific kinds of
equipment, machinery, etc.*

ARTISTIC SKILLS AND COMPETENCES

Music, writing, design, etc.

OTHER SKILLS AND COMPETENCES

Competences not mentioned above.

DRIVING LICENCE(S)

ADDITIONAL INFORMATION

GERMAN

ENGLISH; FRENCH

EXCELLENT

EXCELLENT

EXCELLENT

EXTENSIVE WORKING AND LIVING EXPERIENCE (MORE THAN 1 YEAR) IN FRANCE AND SWITZERLAND
SHORTTERM PROFESSIONAL EXPERIENCES IN SINGAPORE, USA, IRELAND, UK
REGULAR EXPOSURE TO MULTINATIONAL TEAMS
SEVERAL DEMANDING COACHING RELATIONSHIPS WITH SENIOR LEVEL CLIENTS

MEMBER OF THE CORE LEADERSHIP TEAM FOR STRATEGY SERVICES IN GERMANY (60 CONSULTANTS)
PROJECT LEADERSHIP – STRATEGY DEVELOPMENT, PROGRAM MANAGEMENT AND IMPLEMENTATION
(F.E. ORGANIZATIONAL SET-UP)

LEADERSHIP EXPERIENCE OF CONSULTING TEAMS OF UP TO 10 PEOPLE (EXCLUDING CLIENTS AND
OTHER PARTNERS) ESPECIALLY IN NEW BUSINESS AND INNOVATIVE VENTURE SETTINGS

GOOD OVERVIEW ON CURRENT IT TRENDS IN CRM, EBUSINESS AND KNOWLEDGE MANAGEMENT
ENGINEERING BACKGROUND IN BIOPROCESS AND CHEMICAL ENGINEERING WITH SPECIAL ATTENTION TO
ADVANCED IT-APPLICATIONS (AUTOMATION, CONTROL, SIMULATION, ANALYTICS) IN THESE AREAS

JAZZ GUITARIST

FATHER OF 2 CHILDREN

X

CONSULTING CLIENTS: BMW, DAIMLERCHRYSLER, SIEMENS, VODAFONE, SEVERAL START-UP
COMPANIES

EUROPEAN
CURRICULUM VITAE
FORMAT



PERSONAL INFORMATION

Name	VAL, JAVIER
Address	C/ MARIA DE LUNA, 8, 50018, ZARAGOZA, SPAIN
Telephone	+34 606 331 636
Fax	+34 976 71 6539
E-mail	jval@ita.es
Nationality	Spanish
Date of birth	08-11-1975

WORK EXPERIENCE

- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
- MARS 2003-PRESENT**
Instituto Tecnológico de Aragón, C/Maria de Luna 8, Zaragoza, Spain
Telecommunications & New Technologies
Project Manager
Preparation of RFQs for technological projects of different sizes and control the timing, costs of the project.
- Dic2001-Dic2002**
Lucent Technologies España, S.A. C/Avenida de Bruselas, 8, 28108 Alcobendas, Madrid, Spain.
Telecommunications
Tier 1
In contact with customers, working out new products and functionalities for the Surepay service (Pre-Paid and Post Paid) and for the Virtual Private Network preparing RFQs for Telefonica (Spain and Central and South America), Vodafone Spain, Vodafone Portugal, ...
Coordinate the work of Tier 3 people for the development of the different projects. These centers were in England and China.
- ABR2000-Nov2001**
Lucent Technologies España, S.A. C/Ronda de Valdecarrizo, Tres Cantos, Madrid, Spain
Telecommunications
Tier 3 - Project Manager
Responsible of the North American Region Virtual Private Network, coordinating a team of 4 engineers to design, develop and integrate the product in different countries (United States, Brazil, New Zeland, Australia) controlling the activities and dates for delivery of the product itself and on site.
Responsible of other SW development in other Network operators as Eplus, in Germany.
- FEB1999-MAR2000**
Lucent Technologies España, S.A. C/Ronda de Valdecarrizo, Tres Cantos, Madrid, Spain
Telecommunications
Intelligent Network Software Developer
Develop Intelligent Network Services: Virtual Private Networks.

EDUCATION AND TRAINING

- Dates (from – to) 2002 – 2003 (12 months)
- Name and type of organisation providing education and training Instituto de Empresa, IE, Business School
- Principal subjects/occupational skills covered MBA related subjects: Strategy, Financials, Costs, Marketing ...
- Title of qualification awarded MBA for Professionals (Executive Education)
- Level in national classification A
- Dates (from – to) 1997-1998 (18 months)
- Name and type of organisation providing education and training University of Illinois, Chicago.
- Principal subjects/occupational skills covered Electronics, microelectronic, computing, ...
- Title of qualification awarded Master of Science (M.S.) Degree in Electrical Engineering & Computer Science
- Level in national classification A
- Dates (from – to) 1993.1998
- Name and type of organisation providing education and training Centro Politécnico Superior de Ingenieros de la Universidad de Zaragoza
- Principal subjects/occupational skills covered Science basic subjects (Maths, Physics, Programming, ...), telecommunication specific subjects (Antenna, Cryptography, Microwaves, digital communications, ...)
- Title of qualification awarded Telecomunicación Engineer
- Level in national classification 8,1/10.0

**PERSONAL SKILLS
AND COMPETENCES**

*Acquired in the course of life and career
but not necessarily covered by formal
certificates and diplomas.*

MOTHER TONGUE

OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

- Reading skills
- Writing skills
- Verbal skills

**SOCIAL SKILLS
AND COMPETENCES**

*Living and working with other people, in
multicultural environments, in positions
where communication is important and
situations where teamwork is essential
(for example culture and sports), etc.*

**ORGANISATIONAL SKILLS
AND COMPETENCES**

*Coordination and administration of
people, projects and budgets; at work, in
voluntary work (for example culture and
sports) and at home, etc.*

**TECHNICAL SKILLS
AND COMPETENCES**

*With computers, specific kinds of
equipment, machinery, etc.*

**ARTISTIC SKILLS
AND COMPETENCES**

Music, writing, design, etc.

**OTHER SKILLS
AND COMPETENCES**

Competences not mentioned above.

DRIVING LICENCE(S)

ADDITIONAL INFORMATION

ANNEXES

NEGOTIATION SKILLS

COMMUNICATION SKILLS

GOOD UNDERSTANDING OF NEW TECHNOLOGIES AND OTHER KNOWLEDGE AREAS.

SPANISH

ENGLISH

excellent

excellent

Good

ITALIAN

good

basic

good

COORDINATION OF TECHNICAL PEOPLE. I HAVE ACQUIRED THIS SKILL SINCE I STARTED TO WORK AS TIER 3 IN LUCENT, BUT EVEN DEEPER WHEN THEY STARTED TO BE BLACK BOXES FOR ME WHEN I BECAME TIER 1.

EASINESS TO COMMUNICATE CONCEPTS. I HAVE BEEN ACQUIRING THIS SKILL SINCE I WORKED AS A SWIMMING MONITOR WHILE STUDING TILL MENTORING NEW ENGINEERS IN LUCENT.

MANAGING BUDGETS AND TIMING OF THE PROJECTS, DIMENSIONING THE WORK. I STARTED TO ACQUIRE THIS SKILL SINCE I ECAME TIER 1 IN LUCENT WHERE I HAD TO START PREPARING RFQ AND COORDINATE MY WORK WITH PROGRAM MANAGERS.

I HAVE ACQUIRE A WIDE RANGE OF TECHNOLOGICAL SKILLS SINCE I HAVE DEVELOPPED MY STUDIES AND PROFFESIONAL CAREER IN THAT AREA: FROM SW DEVELOPPER IN DIFFERENT LANGUAGES (JAVA, C++,) TO DIFFERENT COMUNICATION TECHNOLIES AND PROTOCOLS BOTH WIRELINE AND WIRELESS (GSM, GPRS, TCP/IP, ANSI, ISS771, ETSI, ...)

B1

**EUROPEAN
CURRICULUM VITAE
FORMAT**



PERSONAL INFORMATION

Name	ENRIQUE MELÉNDEZ ESTRADA
Address	ITA, C/MARÍA DE LUNA, 8, 50018, ZARAGOZA, SPAIN
Telephone	(work) +34 976716285 / (mobile) +34 657412588
Fax	+34 976716201
E-mail	emelendez@ita.es
Nationality	Spain
Date of birth	21-05-1968

WORK EXPERIENCE

- | | |
|--|---|
| • Dates (from – to) | 1994 - Today |
| • Name and address of employer | Instituto Tecnológico de Aragón (ITA)
c/María de Luna, 7, 50015, Zaragoza, Spain |
| • Type of business or sector | Area of Electronics and New Technologies
Department of Software Technologies and Multimedia Systems |
| • Occupation or position held | Project Manager |
| • Main activities and responsibilities | |
| • Dates (from – to) | 1994-1995 |
| • Name and address of employer | Escuela Técnica de Gestión Comercial y Marketing del ESIC (CAI – Zaragoza) |
| • Type of business or sector | Training / learning of Marketing and Business |
| • Occupation or position held | Teacher |
| • Main activities and responsibilities | Subjects:
“Matemáticas Empresariales” (pupils of 1 st year) and
“Operaciones Comerciales y Financieras” (pupils of 2 nd year) |

EDUCATION AND TRAINING

- | | |
|--|--|
| • Dates (from – to) | 1993-1994 |
| • Name and type of organisation providing education and training | IAF (Instituto Aragonés de Fomento) , funded by CEL (Centro Español de Logística) |
| • Principal subjects/occupational skills covered | <ul style="list-style-type: none">○ Production Activity Control (PAC)○ Inventory Management (IM)○ Systems and Technologies (S&T)○ Just-in-Time (JIT)○ Master Planning (MP)○ Material and Capacity Requirements Planning (MRP & CRP) |
| • Title of qualification awarded | APICS (American Production and Inventory Control Society) |

- Level in national classification
(if appropriate)

- Dates (from – to)

- Name and type of organisation providing education and training

- Principal subjects/occupational skills covered

- Title of qualification awarded

- Level in national classification
(if appropriate)

PERSONAL SKILLS AND COMPETENCES

*Acquired in the course of life and career
but not necessarily covered by formal
certificates and diplomas.*

MOTHER TONGUE

OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

SOCIAL SKILLS

AND COMPETENCES

*Living and working with other people, in
multicultural environments, in positions
where communication is important and
situations where teamwork is essential
(for example culture and sports), etc.*

ORGANISATIONAL SKILLS

AND COMPETENCES

*Coordination and administration of
people, projects and budgets; at work, in
voluntary work (for example culture and
sports) and at home, etc.*

TECHNICAL SKILLS

AND COMPETENCES

*With computers, specific kinds of
equipment, machinery, etc.*

A

1986-1993

Centro Politécnico Superior de Ingenieros Industriales de la Universidad de Zaragoza (CPSUZ)

Ingeniero Superior Industrial, especialidad Eléctrico (Electrical Engineer)

A

NEGOTIATION SKILLS

COMMUNICATION SKILLS

GOOD UNDERSTANDING OF NEW TECHNOLOGIES AND OTHER KNOWLEDGE AREAS.

SPANISH

ENGLISH

GOOD

GOOD

GOOD

[Describe these competences and indicate where they were acquired.]

[Describe these competences and indicate where they were acquired.]

- **WEB STANDARDS (W3C):** CSS, HTML, X3D, XHTML, ACCESIBILITY, USABILITY, ELEARNING (SCORM)
- **SOFTWARE LANGUAGES:** C, C++ (MSVISUAL C++), VISUALBASIC, VISUALJ++, JAVA, JAVASCRIPT, CGI (SCRIPTS EN UNIX Y PERL), PASCAL, BASIC, ADA, ENSAMBLADOR 680x0, ENSAMBLADOR 80x86.
- **DESCRIPTION LANGUAGES AND GRAPHIC LIBRARIES:** HTML, VRML, GL, OpenGL, RENDERMAN, RIB, DXF, IGES.
- **OPERATING SYSTEMS:** IRIX, MAC OS, UNIX, DOS, WINDOWS 3.11, 95 Y NT.
- **HARDWARE - WORKSTATIONS:** SILICON GRAPHICS (ONYX, INDIGO), POWERMAC, POWERPC, PENTIUM, MACINTOSH, HP, SUN , CONVEX, SPARC, VIDEO SONY BETACAM WITH BROADCAST, NO LINEALES DE VIDEO (MEDIA 100).
- **SOFTWARE APPLICATIONS:** (MULTIMEDIA) SOFTIMAGE, EDDIE, ADOBE, RAY-TRACING (RENDERING, LIKE SOFTIMAGE); ADOBE PHOTOSHOP; SOFTWARE DEVELOPMENT FRAMEWORKS,

For more information go to

www.cedefop.eu.int/transparency

www.europa.eu.int/comm/education/index_en.html

www.eurescv-search.com

ARTISTIC SKILLS
AND COMPETENCES
Music, writing, design, etc.

[Describe these competences and indicate where they were acquired.]

OTHER SKILLS
AND COMPETENCES
Competences not mentioned above.

TEACHER (OF DIFFERENT SUBJECTS):

- RESPONSABLE COORDINATOR AND TEACHER OF COURSE "CONCEPTOS AND TÉCNICAS OF DISEÑO PROFESIONAL IN INTERNET" SEPTEMBER A NOVIEMBRE 1997. CADI – ITA- TRACOR.
- INVITED TEACHER IN 5TH OF INGENIERÍA DE INFORMÁTICA (CPSUZ) IN JUNIO 1997. SUBJECT: JAVA.
- COORDINATOR RESPONSABLE AND TEACHER OF COURSE "MULTIMEDIA: PRODUCCIÓN AND DESARROLLO", CON THE TEMA OF TRATAMIENTO DIGITAL DE IMAGEN, VIDEO AND SONIDO DE 21 HOURS FOR DPTO. DE INFORMÁTICA OF COUNCIL OF ZARAGOZA. MAY 1997.
- TEACHER IN COURSE "TÉCNICAS DE FOTORREALISMO" FOR COUNCIL OF ZARAGOZA. SUBJECT: INFOARQUITECTURA AND APLICACIONES MULTIMEDIA. ABRIL 1997.
- TEACHER IN TRACOR DURING MARCH 1997. SUBJECTS: JAVA, VRML, IDENTIDAD CORPORATIVA.
- TEACHER IN POSTGRADO DE "LA COMUNICACIÓN IN LENGUAJE DIGITAL: TECNOLOGÍAS DE IMAGEN, SONIDO AND MULTIMEDIA" OF CPSUZ. SUBJECTS: ESTEREOSCOPIA AND RENDERMAN (RIB). ABRIL-JUNIO 1997
- TEACHER IN COURSE "TÉCNICO IN APLICACIONES MULTIMEDIA" PARA ARGILAN, CENTRO DE DISEÑO. AYUNTAMIENTO DE VITORIA (GASTEIZ). SUBJECT: MACROMIND DIRECTOR. NOVIEMBRE 1996
- ORGANIZADOR, COORDINATOR RESPONSABLE AND TEACHER IN COURSE "3D: LA NUEVA FRONTERA IN INTERNET" IMPARTIDO POR ITA. OCTUBRE 1996. SUBJECTS: SHOCKWAVE, VRML, HTML, QUICKTIMEVR, JAVA, INVENTOR, ETC...
- TEACHER IN THE COURSE "UNIVERSO DE LA IMAGEN POR COMPUTADOR", IMPARTIDO IN THE INSTITUTO TECNOLÓGICO DE ARAGÓN (ITA), NOV-DIC 1995. SUBJECTS: SONIDO DIGITAL, FX AND POSTPRODUCCIÓN, INTERNET (HTML, VRML, JAVA), PRÁCTICAS.
- TEACHER IN THE COURSE "NUEVAS TECNOLOGÍAS DIGITALES APLICADAS" DE FORMACIÓN AL TEACHERADO OF INSTITUTO SAN VALERO DE DISEÑO INDUSTRIAL AND GRÁFICO. PERIODO FEBRERO A JULIO 1996. SUBJECTS: DISEÑO INDUSTRIAL DE PRODUCTO, IDENTIDAD CORPORATIVA AND APLICACIONES, SONIDO DIGITAL.
- INVITED PONENT: 3º DE INGENIERÍA DE INFORMÁTICA (CPSUZ) (MAY 1996). SUBJECTS: "LIBRERÍAS GL AND ACELERADORES GRÁFICOS" AND "DISEÑO INDUSTRIAL DE PRODUCTO".
- TEACHER: "TÉCNICO IN APLICACIONES MULTIMEDIA". JANUARY TO JUNE 1995. SUBJECT: "TRATAMIENTO DE IMAGEN, VIDEO AND SONIDO". ARGILAN: CENTRO MUNICIPAL DE DISEÑO (FONDO SOCIAL EUROPEO). AYUNTAMIENTO DE VITORIA - GASTEIZ.
- TEACHER: "PROGRAMAS DE DIFUSIÓN PARA LA INNOVACIÓN AND THE DESARROLLO TECNOLÓGICO", DICIEMBRE 1994 A MARCH 1995. SUBJECT: "INFOGRAFÍA APLICADA AL DISEÑO DE PRODUCTO, COMUNICACIÓN DE PRODUCTO". CENTRO DE TECNOLOGÍAS DE LA INFORMACIÓN AND LA COMUNICACIÓN (AYUNTAMIENTO DE VITORIA - GASTEIZ).
- TEACHER: "ARMONÍA DIGITAL", INERO A JULIO 1995. SUBJECT: "BASES MATEMÁTICAS AND FÍSICAS OF SONIDO DIGITAL". OFICINA DE DIFUSIÓN TECNOLÓGICA (AYUNTAMIENTO DE VITORIA).
- PONENTE INVITADO: POSTGRADO DE INFORMÁTICA OF CENTRO POLITÉCNICO SUPERIOR DE LA UNIVERSIDAD DE ZARAGOZA (CPSUZ). SEMINARIOS DE INFORMÁTICA GRÁFICA. SUBJECTS IMPARTIDOS: "DISEÑO DE PRODUCTO" AND "ACELERADORES GRÁFICOS (ENTORNO SILICON GRAPHICS)". MARCH 1995.
- PONENTE INVITADO: UNIVERSIDAD DE INGENIERÍA TÉCNICA IN LA ALMUNIA DE DOÑA GODINA (MAY 1995) AND PARA INGENIERÍA DE INFORMÁTICA (CPSUZ) (ABRIL 1995). SUBJECT: "CÓMO SE REALIZÓ THE VIDEO PROMOCIONAL CIUDAD JARDÍN: PUERTA DE LOS PIRINEOS".

DRIVING LICENCE(S)

B1

ADDITIONAL INFORMATION

PUBLICATIONS AND ARTICLES:

- **ISBN 84-921747-0-6.** DEP. LEGAL V-2677-1996: " ACTAS DEL CEIG'96, CONGRESO ESPAÑOL DE INFORMÁTICA GRÁFICA".
- **ISBN 1-85312-319-6; ISBN 1-56252-243-4:** "VISUALIZATION AND INTELLIGENT DESIGN IN ENGINEERING AND ARCHITECTURE II". COMPUTATIONAL MECHANICS PUBLICATIONS. CAPÍTULO: "THE ALEPH PROJECT: IMAGE SYNTHESIS USING ILLUSION AND PHYSICAL BASED RENDERING".
- **ISBN 84-600-9035-3:** "DESCRIPCIÓN DEL INTERFACE RENDERMAN".
- **ISBN 84-600-9036-1:** "GUÍA DE REFERENCIA DEL TRAZADOR DE RAYOS ALEPH v.2.0".
- "MAPPING. REVISTA DE CARTOGRAFIA. SISTEMAS DE INFORMACIÓN GEOGRÁFICA Y TELEDETECCIÓN". Nº21, PAG. 36-38. ENERO 1995. ARTÍCULO: "VISUALIZACIÓN REALISTA POR COMPUTADOR. APLICACIONES A LA CARTOGRAFÍA".
- **ISBN 90-5199-385-4 IOS Press, ISBN 4-274-90209-9-C3055 OHMSHA:** "ADVANCES IN INFORMATION TECHNOLOGIES: THE BUSINESS CHALLENGE". PÁG. 498: ARTÍCULO: "COMPUTER AIDED DESIGN FOR GENERATING PHOTOREALISTIC SYNTHETIC FLOOR".

CONGRESSES AND EVENTS:

- **CEIG'94:** CONGRESO ESPAÑOL DE INFORMÁTICA GRÁFICA. JUNIO 1994. REALIZADO EN EL INSTITUTO TECNOLÓGICO DE ARAGÓN (ZARAGOZA). ORGANISATION SUPPORTER.
- **.VIDEA'95:** 2º CONGRESO INTERNACIONAL, 12-14 JUNIO 1995, LA CORUÑA. TÍTULO DE LA PONENCIA: "VISUALIZATIONS AND INTELLIGENT DESIGN IN ENGINEERING AND ARCHITECTURE", POR WESSEX INSTITUTE OF TECHNOLOGIES (ENGLAND). PONENT.
- **.CEIG'96** CONGRESO ESPAÑOL DE INFORMÁTICA GRÁFICA. JUNIO 1996. REALIZADO EN LA UNIVERSIDAD DE VALENCIA. TÍTULO DE LA PONENCIA: "UNA EXPERIENCIA DE VISUALIZACIÓN DE UN GRAN PROYECTO URBANÍSTICO". PONENT.
- **MEDIANET'97:** CONGRESO INTERNACIONAL DE STÁNDARES DE MULTIMEDIA. JUNIO 1997. ATENAS (GRECIA). PONENCIAS DE MESA DE DEBATE SOBRE DISTINTOS ASPECTOS DE LA MULTIMEDIA EN EMPRESAS DEDICADAS A SU DESARROLLO. ASSOCIATED MEMBER.
- **EMMSEC'97:** EUROPEAN MULTIMEDIA, MICROPROCESSOR SYSTEMS AND ELECTRONIC COMMERCE CONFERENCE AND EXHIBITION. FLORENCIA, ITALIA. 3-5 NOVIEMBRE 1997. TÍTULO DE PONENCIA: "COMPUTER AIDED DESIGN FOR GENERATING PHOTOREALISTIC SYNTHETIC FLOOR". PONENT.

ANNEXES

[List any attached annexes.]

EUROPEAN
CURRICULUM VITAE
FORMAT



PERSONAL INFORMATION

Name	BARCELONA LIÉDANA, MIGUEL ANGEL
Address	INSTITUTO TECNOLÓGICO DE ARAGÓN, MARÍA DE LUNA 8, E-50018 ZARAGOZA
Telephone	(34-1) 976 716 250
Fax	(34-1) 976 716 201
E-mail	mabarcelona@ita.es
Nationality	Spanish
Date of birth	22.03.1977

WORK EXPERIENCE

- | | |
|---|---|
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>NOVEMBER 2002 –ONWARDS</p> <p>Instituto Tecnológico de Aragón, María de Luna 8, 50018, Zaragoza, Spain</p> <p>Electronics and New Technologies</p> <p>Software technologies and multimedia systems department</p> <p>Technical manager. Software analysis, design and development.</p> <p>Participant in several European projects:</p> <ul style="list-style-type: none">- Home Access System for Video based IP Tele-services (Fifth Framework Programme)- Compliance Assessment for IPCable Components (Fifth Framework Programme)- Delivering video-based IST services into European HOMEs (Fifth Framework Programme)- SUP: Sécurité - Urgence Pyrénées (INTER-REG IIIA, Onwards) |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>MARCH 2002 - NOVEMBER 2002</p> <p>Teltronic S.A.U., Polígono Malpica, C/ F-Oeste, 50057, Zaragoza, Spain</p> <p>Radiocommunications</p> <p>Software applications department, Research And Development group</p> <p>Software analysis, design and development. Developer for a call center system with several protocols: TETRA, GSM, GPRS, Trunking.</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>APRIL 2001-MARCH 2002</p> <p>Instrumentación y Componentes S.A., Carretera de Madrid s/n Km. 315,8, Edificio ExpoZaragoza, 50012, Zaragoza, Spain</p> <p>Medical instrumentation, electronics and computing</p> <p>Software department</p> <p>Software Process Responsible. Project Manager. Definition of a development software process. Writer of a software quality guide.</p> |

EDUCATION AND TRAINING

- Dates (from – to)
- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered

- Title of qualification awarded

- Dates (from – to)
- Name and type of organization providing education and training
- Principal subjects/occupational skills covered

- Title of qualification awarded

- Dates (from – to)
- Name and type of organization providing education and training
- Principal subjects/occupational skills covered

- Title of qualification awarded

- Dates (from – to)
- Name and type of organization providing education and training
- Principal subjects/occupational skills covered

- Title of qualification awarded

MAY 2004

Asociación de Ingenieros en Informática de Aragón

Web Services

- Introduction.
- Architecture.
- XML (Extensible Markup Language).
- SOAP (Simple Object Access Protocol).
- WSDL (Web Services Description Language).
- UDDI (Universal Description, Discovery and Integration).
- Using gsoap.

Course certificate.

APRIL 2004

Asociación de Ingenieros en Informática de Aragón

New Technologies Management.

- Process Management.
- Project Management.
- Human Resources.
- Quality.
- Efqm (European Foundation for Quality Management).

Course certificate.

FEBRUARY 2003 – AUGUST 2003

Universidad Nacional de Educación a Distancia

J2EE: Advanced Java Applications for professional business.

- J2EE architecture.
- J2EE technologies: Servlets, JSPs, JDBC, JavaMail, XML, RMI, CORBA, JNDI, and JMS.
- Working with Enterprise JavaBeans.
- J2EE Reference Implementation.
- Working with JBoss.
- Deployment EJBs.

Course certificate.

JULY 2002

Asociación de Ingenieros en Informática de Aragón

UML and RUP.

- Software Engineering.
- UML (Unified Modeling Language).
- Software Process.
- RUP (Rational Unified Process).

Course certificate.

- Dates (from – to)
- Name and type of organization providing education and training
- Principal subjects/occupational skills covered

- Title of qualification awarded

- Dates (from – to)
- Name and type of organization providing education and training
- Principal subjects/occupational skills covered

- Title of qualification awarded

- Dates (from – to)
- Name and type of organization providing education and training
- Principal subjects/occupational skills covered

- Title of qualification awarded

- Dates (from – to)
- Name and type of organization providing education and training
- Principal subjects/occupational skills covered

- Title of qualification awarded
- Level in national classification (if appropriate)

JANUARY 2002

Asociación de Ingenieros en Informática de Aragón

Good Practices in Software Engineering.

- Coding standards.
- Comments and file headers.
- Bug Tracking: bugzilla.
- Issue Tracking.
- Version controlling: cvs.
- Logging and debugging.
- Compiling: Makefiles, ant.
- Metrics.

Course certificate.

JANUARY 2002 – FEBRUARY 2002

Instituto Tecnológico de Aragón

JAVA Programming.

- JAVA introduction: Java Virtual Machine.
- Basic Java: datatypes, exceptions, basic classes.
- Java Swing and AWT.
- Distributed programming with Java: sockets, rmi, corba.
- Databases with Java.

Course certificate.

SEPTEMBER 2001

Escert (Equipo de Seguridad para la Coordinación de Emergencias en Redes Telemáticas).

Internet Security.

- Hacking tools.
- How to protect your server.

Course certificate.

SEPTEMBER 1995 – JULY 2001

Centro Politécnico Superior, Universidad de Zaragoza.

- Software Engineering.
- Computer Architecture.
- Databases.
- Operating Systems.
- Programming Languages.
- Distributed Systems.
- Security.
- Software Process.

Computer Engineer.

7

**PERSONAL SKILLS
AND COMPETENCES**

*Acquired in the course of life and career
but not necessarily covered by formal
certificates and diplomas.*

MOTHER TONGUE

OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

**SOCIAL SKILLS
AND COMPETENCES**

*Living and working with other people, in
multicultural environments, in positions
where communication is important and
situations where teamwork is essential
(for example culture and sports), etc.*

**ORGANISATIONAL SKILLS
AND COMPETENCES**

*Coordination and administration of
people, projects and budgets; at work, in
voluntary work (for example culture and
sports) and at home, etc.*

**TECHNICAL SKILLS
AND COMPETENCES**

*With computers, specific kinds of
equipment, machinery, etc.*

**ARTISTIC SKILLS
AND COMPETENCES**

Music, writing, design, etc.

DRIVING LICENCE(S)

SPANISH

ENGLISH

Excellent

Good

Good

- INTERCULTURAL SKILLS: I AM EXPERIENCED AT WORKING WITH EUROPEAN PEOPLE.
- MEDIATING SKILLS: COORDINATING PEOPLE FROM DIFFERENT COMPANIES.
- TEAM WORK.

- TECHNICAL COORDINATION.
- PROJECT MANAGEMENT:

- SOFTWARE ENGINEERING. UML, ANALYSIS PATTERNS, DESIGN PATTERNS, ARCHITECTURAL PATTERNS. SOFTWARE PROCESS: RUP.
- ADMINISTRATOR OF OPERATING SYSTEMS: UNIX, LINUX, WINDOWS.
- SOFTWARE DEVELOPMENT: JAVA, C++, C#, C, POWERBUILDER, PASCAL, ADA, PHP.
- DISTRIBUTED COMPUTING: WEB SERVICES, CORBA, RMI, RPC, SOCKETS, MOBILE AGENTS.

I PLAY THE PIANO.

B1

**EUROPEAN
CURRICULUM VITAE
FORMAT**



PERSONAL INFORMATION

Name	PEREZ MIGUEL
Address	C/ MARIA DE LUNA, 8, 50018, ZARAGOZA, SPAIN
Telephone	+34 976 716288
Fax	+34 976 71 6539
E-mail	maperez@ita.es
Nationality	Spanish
Date of birth	07-11-1964

WORK EXPERIENCE

- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
 - Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
 - Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
- FEBRAURY 2004-PRESENT**
Instituto Tecnológico de Aragón, C/Maria de Luna 8, Zaragoza, Spain
Electronics & New Technologies
R&D Engineer
Project management and consultants activities
- MARCH 1997- FEBRAURY 2004**
Instituto Tecnológico de Aragón, C/Maria de Luna 8, Zaragoza, Spain
Electronics & New Technologies
Area Director
Strategic plans, Human resources management
- FEBRAURY 1997- OCTUBER 1993**
Instituto Tecnológico de Aragón, C/Maria de Luna 8, Zaragoza, Spain
Electronics & New Technologies
R&D Engineer
Electronics and telecommunications development activities

EDUCATION AND TRAINING

- Dates (from – to)
 - Name and type of organisation providing education and training
 - Principal subjects/occupational skills covered
 - Title of qualification awarded
 - Level in national classification (if appropriate)
 - Dates (from – to)
 - Name and type of organisation providing education and training
- 2003 – 2004
Instituto de Dirección y Administración de Empresas, INDAE, Business School
- MBA related subjects: Strategy, Financials, Costs, Marketing ...
- PADE for Professionals (Executive Education)
- 1991-1993 (24 months)
Centro Politécnico Superior de Ingenieros de la Universidad de Zaragoza

• Principal subjects/occupational skills covered	Electronics, medical, computing, ...
• Title of qualification awarded	Master of Medical Engineering (M.S.) Degree in Medical Engineering
• Level in national classification (if appropriate)	
• Dates (from – to)	1985.1991
• Name and type of organisation providing education and training	Facultad de Ciencias Físicas
• Principal subjects/occupational skills covered	Science basic subjects (Maths, Physics, Programming, ...), electronics specific subjects (analog and digital design, optical communications,...)
• Title of qualification awarded	Physicist Sciences degree
• Level in national classification (if appropriate)	

PERSONAL SKILLS AND COMPETENCES

*Acquired in the course of life and career
but not necessarily covered by formal
certificates and diplomas.*

MOTHER TONGUE

OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

SOCIAL SKILLS AND COMPETENCES

*Living and working with other people, in
multicultural environments, in positions
where communication is important and
situations where teamwork is essential
(for example culture and sports), etc.*

ORGANISATIONAL SKILLS AND COMPETENCES

*Coordination and administration of
people, projects and budgets; at work, in
voluntary work (for example culture and
sports) and at home, etc.*

TECHNICAL SKILLS AND COMPETENCES

*With computers, specific kinds of
equipment, machinery, etc.*

ARTISTIC SKILLS AND COMPETENCES

Music, writing, design, etc.

OTHER SKILLS AND COMPETENCES

Competences not mentioned above.

DRIVING LICENCE(S)

ADDITIONAL INFORMATION

ANNEXES

NEGOTIATION SKILLS

COMMUNICATION SKILLS

GOOD UNDERSTANDING OF NEW TECHNOLOGIES AND OTHER KNOWLEDGE AREAS.

SPANISH

ENGLISH

Excellent

Good

Good

COORDINATION OF TECHNICAL PEOPLE. I HAVE ACQUIRED THIS SKILL IN EUROPEAN PROJECT SINCE TRHID FRAMEWORK PROGRAMME, INVOLVED IN SEVERAL IST PROJECTS AND MANAGEMENT HUMAN RESOURCES TO TECHNICAL PROJECT TO ENTERPRISES.

MANAGING BUDGETS AND TIMING OF THE PROJECTS, DIMENSIONING THE WORK. I STARTED TO ACQUIRE THIS SKILL SINCE I BECAME AREA DIRECTOR IN ITA AND MORE CONCRETALY WORKING IN THE FINANCIAL AND ADMINISTRATIVE ISSUES IN THE AREA.

I HAVE ACQUIRE A WIDE RANGE OF TECHNOLOGICAL SKILLS SINCE I HAVE DEVELOPPED MY STUDIES AND PROFFESIONAL CAREER IN THAT AREA: FROM SW DEVELOPPER IN DIFFERENT LANGUAGES (C, C++,) TO DIFFERENT COMMUNICATION TECHNOLOGIES AND PROTOCOLS (CABLE, ADSL, ...) , AND ELECTRONICS DESIGN (MICROCONTROLLERS, FPGA,...).

B1

**EUROPEAN
CURRICULUM VITAE
FORMAT**



PERSONAL INFORMATION

Name	ROJAS LUNA, FRANCISCO
Address	8, MARÍA DE LUNA, 50018, ZARAGOZA, SPAIN
Telephone	34 976716250
Fax	34 976716539
E-mail	frojas@ita.es
Nationality	SPAIN
Date of birth	03/071968

WORK EXPERIENCE

- | | |
|---|--|
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>From Febr. 2004 to today
Instituto Tecnológico de Aragón
R+D
TIC Area Director
42 people coordination, strategic objectives, external representation</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>From Nov. 1999 to Febr. 2004
Instituto Tecnológico de Aragón
R+D
Head of Software Technologies and Multimedia Systems Department
10 People coordination, TIC sector expert</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>From Febr. 1997 to Nov. 1999
Instituto Tecnológico de Aragón
R+D
TIC Project Manager
Projects Management</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>From Oct. 1993 to Febr. 1997
Sociedad Aragonesa de Tecnologías Aplicadas
Audiovisual
Team Leader of Computer Graphics Section
Coordination of engineers in computer graphics projects, client final contact</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>From Apr. 1992 to Oct. 1992
Aragon Pavillion S.A. at EXPO'92 Sevilla
Entertainment
Team Leader of Computer Graphics Section
Audiovisual Maintenance</p> |

EDUCATION AND TRAINING

• Dates (from – to)	1986-1992
• Name and type of organisation providing education and training	Centro Politécnico Superior, University of Zaragoza
• Principal subjects/occupational skills covered	Electrical/Electronic Engineering Research Project Management Business management Industrial Engineer
• Title of qualification awarded	
• Level in national classification (if appropriate)	

**PERSONAL SKILLS
AND COMPETENCES**

*Acquired in the course of life and career
but not necessarily covered by formal
certificates and diplomas.*

MOTHER TONGUE

OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

- Reading skills
- Writing skills
- Verbal skills

**SOCIAL SKILLS
AND COMPETENCES**

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multicultural environments, in positions
where communication is important and
situations where teamwork is essential
(for example culture and sports), etc.*

**ORGANISATIONAL SKILLS
AND COMPETENCES**

*Coordination and administration of
people, projects and budgets; at work, in
voluntary work (for example culture and
sports) and at home, etc.*

**TECHNICAL SKILLS
AND COMPETENCES**

*With computers, specific kinds of
equipment, machinery, etc.*

**ARTISTIC SKILLS
AND COMPETENCES**

Music, writing, design, etc.

**OTHER SKILLS
AND COMPETENCES**

Competences not mentioned above.

DRIVING LICENCE(S)

ADDITIONAL INFORMATION

SPANISH

FRENCH

GOOD

GOOD

GOOD

ENGLISH

GOOD

BASIC

BASIC

3 MONTH OF INTERNATIONAL SCHOLARSHIP IN HUNGARY (INSTITUTE OF TRANSPORTS) DURING THE FALL OF BERLIN WALL

RESPONSIBLE INTERNATIONAL RELATIONS IN A JUNIOR ENTERPRISE DURING UNIVERSITY

SIX MONTHS OF (7x24) TECHNICAL WORK INTO A MULTICULTURAL EVENT (1992-UNIVERSAL EXPOSITION OF SEVILLA)

MEMBER OF HONOUR OF AN UNIVERSITY COLLEGE

17 RESEARCH PUBLICATIONS

ONE PATENT

CRAFT, INTERREG, IST PROJECTS

ADMINISTRATION OF 42 PEOPLE (85% BSc); 2M€ BUDGET

REGIONAL TIC EXPERT

EXTERNAL EXAMINER FOR THE UNIVERSITY OF WALES VALIDATED BSc (HONS) IN COMPUTER SCIENCE AT PRIVATE ORGANISATION CESTE, ZARAGOZA

AND INVITED SPEAKER TEACHER IN TECHNICAL CONFERENCES AND POSTGRADUATE PROGRAMS

COMPUTER GRAPHICS

C PROGRAMMING

HUMAN RESOURCES OUTILS

PROJECT MANAGEMENT OUTILS

HIGH CREATIVITY

COMPUTER ANIMATION

TREKKING, MOUNTAIN CLIMBING

(1983-1987) CHILDREN'S EDUCATOR IN NATURE PROGRAMS

YES (B-1)

Co- FOUNDER OF G.I.G.A. GROUP AT UNIVERSITY OF ZARAGOZA <http://giga.cps.unizar.es>

EL INTERFAZ RENDERMAN. J. A. GUTIÉRREZ, J. A. ZAMORA, F. ROJAS, P. LATORRE, F.J. SERÓN. RESEARCH REPORT RR-93-19, SYSTEM ENGINEERING AND COMPUTER SCIENCES, DPTO. INGENIERÍA ELÉCTRICA E INFORMÁTICA, CENTRO POLITÉCNICO SUPERIOR, UNIVERSIDAD DE ZARAGOZA (1993)

EL INTERFAZ RENDERMAN. J. A. GUTIÉRREZ, J. A. ZAMORA, F. ROJAS, P. LATORRE. MÉTODOS NUMÉRICOS EN INGENIERÍA VOL. I. PAG. 731-742. DL. B-20.386-1993 ISBN. 84-87.867-25-1 Ed. F. NAVARRINA Y M. CASTELEIRO SEMNI

UN SISTEMA COMPUTERIZADO PARA LA INTEGRACIÓN DE LOS PARÁMETROS ESTIMATIVOS DE LA DATA DE LA MUERTE. ANÁLISIS DE SESENTA CASOS EN EL CADAVER RECIENTE J. ASO, J.A. COBO, J. CORRONS, J.M. ARREDONDO, F.J. SERÓN, F. ROJAS, A. SORIA III JORNADAS CATALANAS DE ACTUALIZACIÓN EN MEDICINA FORENSE BARCELONA, NOVIEMBRE 1995

VISUALIZACIÓN 3D Y 4D DE ALGUNAS MAGNITUDES PROVENIENTES DE LA SIMULACIÓN NUMÉRICA DE LA DINÁMICA DE LOS FLUIDOS. F. ROJAS, S. BALDASSARRI, J.A. GUTIÉRREZ, J. FERRER MÉTODOS NUMÉRICOS EN INGENIERÍA VOL. II. PAG. 1563-1577. DL. B-5288-96 ISBN. 84-87867-71-5 Ed. M. DOBLARÉ, J.M. CORREAS, E. ALARCÓN, L. GAVETE, M. PASTOR SEMNI

EL ESTADO DE LA REALIDAD VIRTUAL: SOLUCIONES INMERSIVAS Y DE SOBREMESA. POSIBILIDADES DE DESARROLLO. F. ROJAS RESEARCH REPORT RR-96-01 DPTO TECNOLOGÍA DEL SOFTWARE Y SISTEMAS MULTIMEDIA INSTITUTO TECNOLÓGICO DE ARAGON (1996)

UNA EXPERIENCIA DE VISUALIZACIÓN DE UN GRAN PROYECTO URBANÍSTICO E. MELÉNDEZ, G. LÓPEZ, A. SORIA, J.A. GUTIÉRREZ, J.A. MAGALLÓN, F.J. RODRIGUEZ, F. ROJAS VI CONGRESO ESPAÑOL DE INFORMÁTICA GRÁFICA PAG. 289-307 DL. V-2667-1996 ISBN-84-921747-0-6 Ed. P. BRUNET, F. SERÓN, R. VIVÓ

COMPUTER AIDED DESIGN FOR GENERATING PHOTOREALISTIC SYNTHETIC FLOOR E. MELÉNDEZ, F. ROJAS, F.J. CORTÉS, R. CASTELLOTE, F. GÓMEZ, F.J. SERÓN ADVANCES IN INFORMATION TECHNOLOGIES: THE BUSINESS CHALLENGE, P 498-505 ISBN 90-5199-385-4 IOS PRESS, ISBN 4-274-90209-9-C3055 1997 Ed. IOS PRESS, OHMSHA

VALORACIÓN DE LAS LESIONES CAUSADAS A LAS PERSONAS EN ACCIDENTES DE CIRCULACIÓN. BARECORP A. SORIA, F. ROJAS, F.J. SERÓN, J.A. COBO, J. ASO ISBN-84-458-0704-8 1998 MASSON S.A.

APLICACIÓN INFORMÁTICA PARA LA ESTIMACIÓN DEL INTERVALO POSTMORTAL. DATACION A. SORIA, F. ROJAS, F.J. SERÓN, J. CORRONS, J. ASO, J.A. COBO ISBN-84-458-0715-3 1998 MASSON S.A.

WEB-BASED CREATION, DEVELOPMENT AND VISUALIZATION OF MULTIMEDIA COURSES E. MELÉNDEZ, S. BALDASSARRI, J. LARROY, F.J. SERÓN, F. ROJAS WBLE'2000: WEB BASED LEARNING ENVIRONMENTS PÁG: 135-138 ISBN 972-752-035-9

A VRML PRACTICE TOOL FOR CONTINUOUS AND DISTANCE TRAINING F. ROJAS, S.

BALDASSARRI, J. R. LAMENCA, M. RINCÓN, F.J. SERÓN WBLE'2000: WEB BASED LEARNING ENVIRONMENTS PÁG: 58-60 ISBN 972-752-035-9

ENTORNO DE SIMULACIÓN DE BAJO COSTE PARA MÁQUINAS-HERRAMIENTA DE CNCS. BALDASSARRI, F. ROJAS, E. MELÉNDEZ, J. LAMENCA, M. RINCÓN, J. LARROY, F.J. SERÓN CEIG 2000: CONGRESO ESPAÑOL DE INFORMÁTICA GRÁFICA. PÁG: 385-386 ISBN 84-80-21-314-0

HERRAMIENTA DE AYUDA AL DISEÑO DE JUNTAS DE CULATAS. BALDASSARRI, G. LÓPEZ, F. ROJAS, J.A. GUTIÉRREZ, F. J. SERÓN INGEGRAF'00: XII CONGRESO INTERNACIONAL DE INGENIERÍA GRÁFICA ISBN 84-8448-008-9

SOFTWARE LABORATORY FOR PHYSICAL BASED HUMAN BODY ANIMATION F. ROJAS, S. BALDASSARRI, F. J. SERÓN LECTURE NOTES IN COMPUTER SCIENCE 2492: ARTICULATED MOTION AND DEFORMABLE OBJECTS - SPRINGER-VERLAG. ISBN 3-540-00149-2. PÁGINAS 226-240. ED. FRANCISCO J. PERALES, EDWIN R. HANCOCK. PUBLICADO POR SPRINGER.

A HUMAN LOCOMOTION SYSTEM FOR THE CALCULUS OF MUSCLE FORCES S. BALDASSARRI, F. ROJAS, F. J. SERÓN ICCB'03: INTERNATIONAL CONGRESS ON COMPUTATIONAL BIOENGINEERING DEPÓSITO LEGAL: Z-2045-2003. PÁGINAS 351-358.

LAS COMUNICACIONES MÉDICAS Y SU FUNCIONAMIENTO EN LUGARES AISLADOS, F. ROJAS, J. MARIÓN. IN PRESS

**EUROPEAN
CURRICULUM VITAE
FORMAT**



PERSONAL INFORMATION

Name	SEETHARAMON KONDA, NAGARAJ
Address	BUSINESS SCHOOL - UCE, B42 2SU, BIRMINGHAM, UNITED KINGDOM
Telephone	+44 121 331 6239
Fax	+44 121 331 7781
E-mail	nagaraj.seetharamon.konda@uce.ac.uk
Nationality	Indian
Date of birth	25, 04, 1968

WORK EXPERIENCE

- | | |
|--|--|
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>January 2003 to till date</p> <p>University of Central England, Perry Barr, Birmingham B42 2SU, United Kingdom.</p> <p>Education</p> <p>Researcher</p> <p>Participate and contribute to research</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>August 2001 to August 2002</p> <p>RVS Infotech Limited, 242 Trichy Road, Sulur, Coimbatore 641 402, India</p> <p>ICT</p> <p>General Manager</p> <p>Business Development in Europe</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>March 2000 to July 2000</p> <p>Convergent Software Limited, Oxford House, 15 Rustum Bagh Road, Bangalore 560 017, India</p> <p>ICT</p> <p>Consultant</p> <p>Development of Mobile Telecom Applications</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>July 1996 to March 2000</p> <p>BPL Cellular Limited, BPL Innovision Centre, 54 Richmond Road, Bangalore 560 025, India.</p> <p>Mobile Telecoms</p> <p>Assistant General Manager</p> <p>Technology and Value Added Services Strategy</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>June 1989 to June 1996</p> <p>Tata Telecom Limited, 144 Shubaram Complex, M G Road, Bangalore 560 025, India.</p> <p>Telecommunications</p> <p>Assistant Manager</p> <p>Product Management, Sales & Marketing</p> |

EDUCATION AND TRAINING

- Dates (from – to)
- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered
- Title of qualification awarded
- Level in national classification (if appropriate)

- Dates (from – to)
- Name and type of organisation providing education and training
- Principal subjects/occupational skills covered
- Title of qualification awarded
- Level in national classification (if appropriate)

PERSONAL SKILLS AND COMPETENCES

Acquired in the course of life and career but not necessarily covered by formal certificates and diplomas.

MOTHER TONGUE

OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

- Reading skills
- Writing skills
- Verbal skills

- Reading skills
- Writing skills
- Verbal skills

SOCIAL SKILLS

AND COMPETENCES

Living and working with other people, in multicultural environments, in positions where communication is important and situations where teamwork is essential (for example culture and sports), etc.

ORGANISATIONAL SKILLS AND COMPETENCES

Coordination and administration of

*Page 2 - Curriculum vitae of
[SURNAME, other name(s)]*

September 2001 to September 2002

Business School, University of Central England, Perry Barr, Birmingham B42 2SU, United Kingdom

Business Management & Strategy, Marketing Management, Finance & Accounting Management, Operations & HR Management, Information Management, IT Strategy

Master of Business Administration in Information Management

Distinction

June 1985 to April 1989

College of Engineering, Anna University, Guindy, Chennai, India

Electronics and Communications Engineering

Bachelor of Engineering

High First Class

Sourashtra

ENGLISH

EXCELLENT

GOOD

GOOD

TAMIL

EXCELLENT

EXCELLENT

EXCELLENT

HINDI AND KANNADA

BASIC

HAVE BEEN ACTIVELY INVOLVED IN SOCIAL, CULTURAL AND SPORT ACTIVITIES. WAS THE SCHOOL REPRESENTATIVE FOR THE NATIONAL SOCIAL SERVICE ORGANISATION INVOLVED IN PROVIDING SERVICES TO THE DISADVANTAGED COMMUNITY, CHILDREN, ORPHANS AND PEOPLE WITH MEDICAL NEEDS. HAVE ORGANISED AND PARTICIPATED IN SEVERAL EVENTS IN PARTS OF INDIA.

BEEN INVOLVED IN MANY CULTURAL EVENTS DURING SCHOOL AND COLLEGE DAYS. INTERESTED IN CARNATIC MUSIC, ESPECIALLY IN VIOLIN.

A KEEN SWIMMER AND CRICKET PLAYER. HIGHLY INTERESTED IN SPORTS AND GAMES.

Some of my achievements to demonstrate the competencies are:

1. Led a team to achieve leadership positions in the telecommunications market in Bangalore, India.
2. Managed \$50 Million GSM Project in 3 states of India.

For more information go to

www.cedefop.eu.int/transparency

www.europa.eu.int/comm/education/index_en.html

www.eurescv-search.com

people, projects and budgets; at work, in voluntary work (for example culture and sports) and at home, etc.

3. Led the Mobile Operator to leadership position in offering customised and innovative value added solutions to its customer base.
4. Researched into evolutionary Business Models for Mobile Multimedia Services for a UK based telecoms organisation.
5. Successful management of Y2K project for the Indian Mobile Operator.
6. Created and used SME consultancy model for the Digital Business Ecosystem Project.
7. Managed an E-Learning environment for the Building Entrepreneurial Clusters Project.

**TECHNICAL SKILLS
AND COMPETENCES**
*With computers, specific kinds of
equipment, machinery, etc.*

COMPETENT TO USE THE FOLLOWING EQUIPMENT, METHODOLOGIES AND SOFTWARE: PCs AND LAPTOPS, PDA, MOBILE PHONES, MS OFFICE, MS PROJECT, VISIO, MIND MANAGER, SSADM, SQL, C LANGUAGE, TURBO PROLOG, HTML, DREAMWEAVER

**ARTISTIC SKILLS
AND COMPETENCES**
Music, writing, design, etc.

BASIC SKILLS IN PLAYING GUITAR

**OTHER SKILLS
AND COMPETENCES**
Competences not mentioned above.

DRIVING LICENCE(S)

UK and Indian Driving License

ADDITIONAL INFORMATION

PUBLICATIONS
KONDA, N S (2002), "STUDY OF EMERGENT BUSINESS MODELS: REVENUE MODELS, VALUE PLANE FORMATIONS AND STRATEGIES FOR SUCCESSFUL MMS DIFFUSION"

SHELTON R, KONDA N S (2004), "A DISCOURSE ON BUSINESS MODELS, KNOWLEDGE MANAGEMENT, LEADERSHIP, CULTURE AND INNOVATION MANAGEMENT", FORTHCOMING

ANNEXES

[List any attached annexes.]

EUROPEAN
CURRICULUM VITAE
FORMAT



PERSONAL INFORMATION

Name	RÄSÄNEN PETRI MATTI JUHANI
Address	KIRKKOVERÄJÄNTIE 6 A 12 33950 PIRKKALA, FINLAND
Telephone	+358 40 7723 008
Fax	+ 358 3 316 5552
E-mail	petri.rasanen@hermia.fi
Nationality	Finnish
Date of birth	06.07.1966]

WORK EXPERIENCE

- | | |
|---|--|
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>1.8.2003 -
Technology Centre Hermia Ltd, Hermiankatu 1, Tampere
Technology and Business Development, Regional Development
DIRECTOR
Director of the Finnish Center of Open Source Software (COSS)
ICT team leader
Project management
ICT consulting and advising</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>1.1.2003 –31.10.2003 (part time)
Interlock yritysvälmennus / Korman Group Oy, Laukontori 6 a 2, Tampere
Management Consulting
SENIOR CONSULTANT
Organisational Development
Team Building
Personnel training</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>1.8.2000 – 30.6.2003
Secgo Group Ltd, Hämeenpuisto 21, Tampere
Software products, services and projects
HUMAN RESOURCES MANAGER, DIRECTOR OF HUMAN RESOURCES
Personnel strategy and policies
Recruitment and competence development
Member of Management Board
Head of administration services</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector | <p>1.8.1996 – 31.8.2000
VTT, Technical Research Centre of Finland, Tampere
Research and Development</p> |

- Occupation or position held
 - Main activities and responsibilities
- RESEARCH SCIENTIST, SENIOR RESEARCH SCIENTIST**
 Project and programme sales and management
 Supplier network process development
 Team Management
 Business process re-engineering
 Management consulting
 Personnel training
- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
- 1.1.1993 – 30.10.1996
 University of Tampere
 University
RESEARCHER
 Research projects execution and management
 Regional innovation systems
 New production systems
 Management of organizational change

EDUCATION AND TRAINING

- Dates (from – to)
 - Name and type of organisation providing education and training
 - Principal subjects/occupational skills covered
 - Title of qualification awarded
 - Level in national classification (if appropriate)
- 2000-2001
 EQA Consulting
 Training programme for HR management
 HR strategies, policies and practices
- Dates (from – to)
 - Name and type of organisation providing education and training
 - Principal subjects/occupational skills covered
 - Title of qualification awarded
 - Level in national classification (if appropriate)
- 1994-1998
 University of Tampere
 Sociology
 Management of organisational change
 Licentiate of Social Sciences
 Advanced
- Dates (from – to)
 - Name and type of organisation providing education and training
 - Principal subjects/occupational skills covered
 - Title of qualification awarded
 - Level in national classification (if appropriate)
- 1986-1993
 University of Tampere
 Sociology
 Business Administration
 Master of Social Sciences
 Advanced

**PERSONAL SKILLS
AND COMPETENCES**

*Acquired in the course of life and career
but not necessarily covered by formal
certificates and diplomas.*

MOTHER TONGUE

FINNISH

OTHER LANGUAGES

ENGLISH

excellent

excellent

good

SWEDISH

good

basic

basic

GERMAN

good

basic

basic

- Reading skills

- Writing skills

- Verbal skills

- Reading skills

- Writing skills

- Verbal skills

- Reading skills

- Writing skills

- Verbal skills

SOCIAL SKILLS

AND COMPETENCES

*Living and working with other people, in
multicultural environments, in positions
where communication is important and
situations where teamwork is essential
(for example culture and sports), etc.*

ORGANISATIONAL SKILLS

AND COMPETENCES

*Coordination and administration of
people, projects and budgets; at work, in
voluntary work (for example culture and
sports) and at home, etc.*

TECHNICAL SKILLS

AND COMPETENCES

*With computers, specific kinds of
equipment, machinery, etc.*

ARTISTIC SKILLS

AND COMPETENCES

Music, writing, design, etc.

OTHER SKILLS

AND COMPETENCES

Competences not mentioned above.

DRIVING LICENCE(S)

[Describe these competences and indicate where they were acquired.]

[Describe these competences and indicate where they were acquired.]

[Describe these competences and indicate where they were acquired.]

[Describe these competences and indicate where they were acquired.]

AB

ADDITIONAL INFORMATION

[Include here any other information that may be relevant, for example contact persons, references, etc.]

ANNEXES

[List any attached annexes.]

EUROPEAN
CURRICULUM VITAE
FORMAT



PERSONAL INFORMATION

Name	HELIÖ JAANA
Address	KIERIKANKUJA 2 B 5, 33710 TAMPERE, FINLAND
Telephone	+358415436469
Fax	
E-mail	Jaana.Helio@hermia.fi
Nationality	Finland
Date of birth	29.10.1967

WORK EXPERIENCE

- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
- 19.1.2004 – STILL CONTINUING**
Tampere Technology Centre, Hermiankatu 1, 33720 Tampere, FINLAND
Public sector
Software Specialist
Research on collaboration between proprietary SMEs and open source projects from software requirements engineering point of view.
- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
- 1.9.1996 – STILL CONTINUING (ON A STUDY LEAVE UNTIL 09/2004)**
TietoEnator Ltd., Häkiläpolku 3, 33100 Tampere, FINLAND
ICT sector
Project manager, Software Engineer
Management of customer projects, development of customer systems both as a customer responsible and a software engineer
- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
- 1.11.1995 – 31.8.1996**
Nokia Networks, Tampere, FINLAND
Telecommunications sector
Software Engineer
Responsible for the development of a hardware management application, which was part of the GSM-network management system.
- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
- 1.10.1990 – 31.10.1995**
Nordea Bank, Fidenta, Espoo, FINLAND
Banking and Finance sector
Software engineer, project manager
Responsible for the development of bank statement. Project manager twice, once concerning the bank statement, once concerning the management of bank cards.
- Dates (from – to)
 - Name and address of employer
 - Type of business or sector
 - Occupation or position held
 - Main activities and responsibilities
- 12.6.1989 – 30.9.1990**
SKOP-Financing, Espoo, FINLAND
Banking and Finance sector
Software Engineer
Responsible for developing both existing and new financing software applications.

EDUCATION AND TRAINING

- | | |
|--|---|
| • Dates (from – to) | 09/2000-07/2004 |
| • Name and type of organisation providing education and training | Tampere University of Technology |
| • Principal subjects/occupational skills covered | Knowledge and Information management, Industrial Engineering and management, multimedia |
| • Title of qualification awarded | Master of Science in Engineering |
| • Level in national classification (if appropriate) | University degree |
| | |
| • Dates (from – to) | 01/1987-05/1989 |
| • Name and type of organisation providing education and training | ATK-instituutti, Helsinki, Institute providing software engineering education |
| • Principal subjects/occupational skills covered | Software Engineering, Corporate management |
| • Title of qualification awarded | Bachelor of Computer Science |
| • Level in national classification (if appropriate) | |

PERSONAL SKILLS AND COMPETENCES

*Acquired in the course of life and career
but not necessarily covered by formal
certificates and diplomas.*

MOTHER TONGUE

FINNISH

OTHER LANGUAGES

ENGLISH

Excellent

Excellent

Good

SWEDISH

Excellent

Good

Basic

FRENCH

Basic

Basic

Basic

GERMAN

Basic

Basic

Basic

SOCIAL SKILLS

[Describe these competences and indicate where they were acquired.]

AND COMPETENCES

*Living and working with other people, in
multicultural environments, in positions
where communication is important and
situations where teamwork is essential
(for example culture and sports), etc.*

ORGANISATIONAL SKILLS

[Describe these competences and indicate where they were acquired.]

AND COMPETENCES

*Coordination and administration of
people, projects and budgets; at work, in
voluntary work (for example culture and
sports) and at home, etc.*

TECHNICAL SKILLS

PROGRAMMING LANGUAGES: JAVA, HTML, C++, DELPHI, C, XML

AND COMPETENCES

DATABASES: SQL SERVER, ORACLE

*With computers, specific kinds of
equipment, machinery, etc.*

OPERATING SYSTEMS: WINDOWS, UNIX

OFFICE PROGRAMS: WORD, EXCEL, POWERPOINT, PAINTSHOP PRO

ACQUIRED DURING THE LAST 15 YEARS OF WORKING

ARTISTIC SKILLS

[Describe these competences and indicate where they were acquired.]

AND COMPETENCES

Music, writing, design, etc.

OTHER SKILLS
AND COMPETENCES
Competences not mentioned above.

[Describe these competences and indicate where they were acquired.]

DRIVING LICENCE(S)

ADDITIONAL INFORMATION

[Include here any other information that may be relevant, for example contact persons, references, etc.]

ANNEXES

[List any attached annexes.]

EUROPEAN
CURRICULUM VITAE
FORMAT



PERSONAL INFORMATION

Name	SALMINEN, EEVA VILHELMIINA
Address	RONGANKATU 2-4 B 52, 33100 TAMPERE, FINLAND
Telephone	+358-40-573 1477
Fax	
E-mail	eeva.salminen@tut.fi
Nationality	Finland
Date of birth	01. 09. 1975

WORK EXPERIENCE

- | | |
|---|--|
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>OCTOBER 2001 - PRESENT</p> <p>eBRC / Tampere University of Technology
university, public
Project Operations Manager
Being in charge of and responsible for the project operations. Building and managing partnerships and stakeholder relationships. Coordinating and managing national and international research and development projects.</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>April 2001 – August 2001</p> <p>California State University, Hayward, USA
university
Assisting Instructor
Planning and developing graduate level courses in marketing.</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>APRIL 2000 – DECEMBER 2000</p> <p>Solteq Ltd and Tampere University of Technology
Private software and university
Master's thesis
Master of Science Thesis in "Defining strategic performance measures in information system supplier's customer companies". In addition to defining the strategic performance measures, the project included studying the IT supplier's products and business models, and case companies' strategies and business processes.</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>September 1998 – July 2000</p> <p>Tampere University of Technology, Institute of Industrial Management
university
Instructor
Planning and developing courses and course material, giving lectures and exercises, and writing exams in industrial management (corporate finance, accounting, marketing, management), as well as recruiting and leading assistants.</p> |

EDUCATION AND TRAINING

- | | |
|--|--------------------------------------|
| • Dates (from – to) | January 2001 – December 2001 |
| • Name and type of organisation providing education and training | California State University, Hayward |
| • Principal subjects/occupational skills covered | e-Business option |
| • Title of qualification awarded | MBA |
| • Level in national classification (if appropriate) | |
-
- | | |
|--|---------------------------------------|
| • Dates (from – to) | August 1995 – December 2000 |
| • Name and type of organisation providing education and training | Tampere University of Technology |
| • Principal subjects/occupational skills covered | Industrial Engineering and Management |
| • Title of qualification awarded | M. Sc. (Eng.) |
| • Level in national classification (if appropriate) | |

**PERSONAL SKILLS
AND COMPETENCES**

*Acquired in the course of life and career
but not necessarily covered by formal
certificates and diplomas.*

MOTHER TONGUE

OTHER LANGUAGES

- Reading skills
- Writing skills
- Verbal skills

- Reading skills
- Writing skills
- Verbal skills

- Reading skills
- Writing skills
- Verbal skills

SOCIAL SKILLS

AND COMPETENCES

*Living and working with other people, in
multicultural environments, in positions
where communication is important and
situations where teamwork is essential
(for example culture and sports), etc.*

ORGANISATIONAL SKILLS

AND COMPETENCES

*Coordination and administration of
people, projects and budgets; at work, in
voluntary work (for example culture and
sports) and at home, etc.*

TECHNICAL SKILLS

AND COMPETENCES

*With computers, specific kinds of
equipment, machinery, etc.*

ARTISTIC SKILLS

AND COMPETENCES

Music, writing, design, etc.

OTHER SKILLS

AND COMPETENCES

Competences not mentioned above.

FINISH

ENGLISH

excellent

excellent

excellent

SWEDISH

good]

good

GOOD

FRENCH

GOOD

GOOD

BASIC

COMMUNICATION AND INTERPERSONAL SKILLS

STUDYING AND LIVING ABROAD

TEAM SPORTS

R&D PROJECT TEAMS

TIME MANAGEMENT AND ORGANISATION SKILLS

PROJECT MANAGER RESPONSIBILITIES

Managing project portfolios

**BASIC COMPUTING SKILLS (OFFICE APPLICATIONS, INTERNET AND E-MAIL ,EBUSINESS APPLICATIONS,
ERPS, CRMS, ETC.)**

WORK AND EDUCATION

MUSIC AND DANCE

PIANO AND FLUTE PLAYING

DANCE AND GYMNASTICS

Oral and written presentation skills

Business knowledge

Management skills

Analytical problem-solving skills

DRIVING LICENCE(S)

Yes

ADDITIONAL INFORMATION

[Include here any other information that may be relevant, for example contact persons, references, etc.]

ANNEXES

[List any attached annexes.]

EUROPEAN
CURRICULUM VITAE
FORMAT



PERSONAL INFORMATION

Name	GIORGETTI MAURO
Address	VIA GENOVA 30 – 00184 ROME
Telephone	+39 06 47823286
Fax	+39 06 47882798
E-mail	m.giorgetti@t-6.it
Nationality	Italian
Date of birth	12 OCTOBER 1972

WORK EXPERIENCE

- | | |
|---|--|
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>2000- PRESENT</p> <p>T6 – Via Genova 30 – 00184 Rome, Italy</p> <p>Research on applied ICT</p> <p>Partner & Project Manager</p> <p>Responsible for several national and international projects on IT and Tourism and Cultural heritage (such as FETISH-ETF, DAFNE, ASWAD, HARMONISE). Since November 2003 I'm the Operational Manager of the of the Digital Business Ecosystem IP project, funded by EC in the VI FP</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>1999</p> <p>CONSORZIO CIVITA – Via del Corso, 300 – Rome, Italy</p> <p>Research on Tourism and Cultural Heritage</p> <p>Project Manager</p> <p>I worked for some European projects, being responsible for the Training activities and managing the Italian activities.</p> |
| <ul style="list-style-type: none">• Dates (from – to)• Name and address of employer<ul style="list-style-type: none">• Type of business or sector• Occupation or position held• Main activities and responsibilities | <p>1999</p> <p>FIT Consulting</p> <p>Research on Tourism and Transport</p> <p>Project Manager</p> <p>I was also researcher in FIT Consulting, working in statistical models for some European projects, such as Mesudemo</p> |

- | | |
|--|---|
| <ul style="list-style-type: none"> • Dates (from – to) • Name and address of employer <ul style="list-style-type: none"> • Type of business or sector • Occupation or position held • Main activities and responsibilities | <p>1998</p> <p>Trinity College, Oxford</p> <p>Research on Social science</p> <p>Researcher</p> <p>In 1998 I was researcher and assistant of Professor Franzosi at the Oxford University (Trinity College), Oxford (UK), within the Social Studies and Administrative Unit, working in Network models, social statistics and econometric.</p> |
| <ul style="list-style-type: none"> • Dates (from – to) • Name and address of employer <ul style="list-style-type: none"> • Type of business or sector • Occupation or position held • Main activities and responsibilities | <p>1997</p> <p>TMT Ppragma</p> <p>Research on Social science</p> <p>Researcher</p> <p>In 1997 I worked as researcher in some research and marketing companies, such as T.M.T. Pragma, being in charge of network development and flow analysis, as well as mobility management, applied both to tourism and transport domains.</p> |

EDUCATION AND TRAINING

- | | |
|--|--|
| <ul style="list-style-type: none"> • Dates (from – to) • Name and type of organisation providing education and training • Principal subjects/occupational skills covered <ul style="list-style-type: none"> • Title of qualification awarded • Level in national classification (if appropriate) | <p>1992-1996</p> <p>“La Sapienza”, University of Rome</p> <p>Statistics, Socio-economic,</p> <p>BA in Statistics, <i>Magna cum Laude</i></p> |
|--|--|

**PERSONAL SKILLS
AND COMPETENCES**

*Acquired in the course of life and career
but not necessarily covered by formal
certificates and diplomas.*

MOTHER TONGUE

ITALIAN

OTHER LANGUAGES

ENGLISH

GOOD

GOOD

GOOD

- Reading skills
- Writing skills
- Verbal skills

French

BASIC

BASIC

- Reading skills
- Writing skills
- Verbal skills

SOCIAL SKILLS

AND COMPETENCES

*Living and working with other people, in
multicultural environments, in positions
where communication is important and
situations where teamwork is essential
(for example culture and sports), etc.*

2003: PROFESSOR IN BUSINESS ADMINISTRATION – MASTER

ORGANISATIONAL SKILLS

AND COMPETENCES

*Coordination and administration of
people, projects and budgets; at work, in
voluntary work (for example culture and
sports) and at home, etc.*

TECHNICAL SKILLS

AND COMPETENCES

*With computers, specific kinds of
equipment, machinery, etc.*

ARTISTIC SKILLS

AND COMPETENCES

Music, writing, design, etc.

OTHER SKILLS

AND COMPETENCES

Competences not mentioned above.

DRIVING LICENCE(S)

A (Moto) and B (car)

ADDITIONAL INFORMATION

Publications 1998:

Cooperation in the article: "*Narrative as Data: Linguistic and Statistical Tools for the Quantitative Study of Historical Events*" , International Review of Social History, 1998 (Franzosi)

Cooperation in the book "*From words to numbers*", Roberto Franzosi, Cambridge Press 1999

Article on American Journal of Sociology: "*Semantic grammar and network analysis*", 1999

ANNEXES

[List any attached annexes.]

II. 36 month Gantt for Knowledge & learning + related tasks

Sub-Project	Work Packages	Task	Months 1-3	Months 4-6	Months 7-9	Months 10-12	Months 13-15	Months 16-18	Months 19-21	Months 22-24	Months 25-27	Months 28-30	Months 31-33	Months 34-36
SP8: Training														
8	WP28 - DBE Training Centre of Excellence (IBM)	B24 Bis- Learning Support	2	2	4	1,25	1,75	2,25	1	1,75	2,5	1,25	0,75	2,5
		C33 - E-learning infrastructure development/tools					3	3						
		B25 Bis- Channel Development & Admin				0,75								
8	WP30 - Transfer and Adoption (UCE)	B28 - Distributed local content production			2		4,5	5,5	6	5,5	6	1,75	1	
		B27 Bis - Open & Distributed Knowledge Transfer, Training and Communication (Delivery)			1,5	1,5	2,5	4,9	5,5	4,5	2,5	6,75	0,75	0,5
SP11: DBE System Viability														
11	WP33 - Dissemination (T6)	B31 - Events						1,25			1			1

III. Work Package description (detailed for first 18 months)

WP 27 SME Recruitment

In WP27 “SME Recruitment”, no training related activities are foreseen anymore. Hence Tasks B1 and B2, respectively “SME User Recruitment and Knowledge Transfer” and “SME Developer Recruitment and Training” are no longer included in this workpackage.

WP 28 DBE Training

Work package number	28	Start date or starting event:				1	
Participant id	IBM	TTC	UCE	ITA	T6		
Person-months per participant:	9,75	6,25	3,75	3,75	0,75		

Objectives

- Make possible the implementation of a distributed network of Open Knowledge and Evolutionary Learning.
- Support the DBE development, implementation, transfer, adoption and sustainability via communication, knowledge sharing and training and self-learning activities.
- Build a common delivery architecture and leverage it via the use shared and agreed standards, guidelines and methodologies.

Description of work

The DBE approach to communication, knowledge transfer and training starts from the premise of distributed management and regional independence. The coordination of these activities therefore happens within a virtual team with different responsibilities allocated to different partners for different tasks. Tasks include:

B24 Bis – Learning Support (replaces B24 - Training assessment, planning and design)

Learning support activities include the programme management of these activities within the agreed framework and strategy, the development and application of Content Sharing Guides & Standards, the Evaluation of quality and impact, and finally the improvement Internal Knowledge Sharing.

B25 Bis – Channel Development & Admin (Replaces B25 - Training development, deployment and execution)

This task is concerned with the development of communication channels between project partners and other actors. The channels concern the means by which training/learning content, i.e. e-learning, and other communication may be transmitted between partners and other actors in the project.

C33 - eLearning infrastructure development/tools

Training activities will be supported by an integrated eLearning and knowledge sharing platform. This task will establish the infrastructure including content, mark-up, delivery, storage, propagation and updates. Each region will create and manage its knowledge platform, based on a common architecture and with the use of common development standards.

- Definition of the guidelines for the creation and the management of the knowledge platform
- Definition of the requirements and the specifications of the knowledge platform
- Definition of recommendations and Best Known Methods
- Definition of the roles and the duties for the management of the Knowledge Platform
- Definition of the architecture and templates for the knowledge components
- Pilot for the Knowledge platform
- Local implementation, management and maintenance of the infrastructure

Deliverables

D 28.1 (IBM)	DBE Training resource plans & Needs (version 2) (month 8)
D 28.5 (TTC)	Detailed phase 1 regional training action plan (month 10)
D 28.6 (Intel)	Guidelines and standards for content creation (month 12)
D 28.7 (IBM)	Cross-regional Phase 1 training evaluation report (month 18)
D 28.8 (Intel)	Knowledge platform architecture & standards (month 12)
D 28.9 (Intel)	Regional knowledge platform implementation blueprint and development roadmap (month 18)
D 28.10 (TTC)	Implemented knowledge platform in regions (month 18)

Milestones and expected result

M 28.1	Training strategy, resource plans agreed and approved (month 9)
M28.2	Local action plans ready and started (month 10)
M28.3	Guidelines and standards to be used agreed and accepted (month 13)
M28.4	Blueprint ready (month 18)
M28.5	Local deployment finished (month 19)
M28.6	Evaluation in and cross-region finished (month 18)

WP 30 Transfer and Adoption

Work package number	30	Start date or starting event:					7
Activity Type							
Participant id	UCE	ITA	TTC	IBM	T6		
Person-months per participant:	7,65	11,5	2,75	3,25	3		

Objectives

The objective of this work package is to enable the transfer of DBE knowledge to SMEs and other stakeholders. The necessary steps are to engage and recruit Driver SMEs entailing an awareness raising process, stimulating interest and motivation to be involved, and enabling positive action towards the project. Transfer will involve understanding the needs of SMEs to be able to recognise learning needs and barriers, as well as to begin to formulate, design and enact responses regarded as effective by learners and trainers (localisation of DBE). This work package will also serve to evaluate content and delivery systems within the regional network that can be used for initial knowledge sharing, and for assessing regional and national initiatives and programmes

Description of work

B27 Bis - Open & Distributed Knowledge Transfer, Training and Communication (Delivery)

This task will ensure the implementation and application of the agreed training strategy during the different evolutionary phases of the DBE. The delivery itself will be managed through a blend of 9 modes of delivery and supported through an eLearning and knowledge sharing infrastructure. The delivery modes will be selected based on the needs of the community such as personal needs; organisational needs; and comfort factor and the type of competence development programme.

B28 - Distributed local content production

The task is for the curriculum development through a distributed approach. The regional studies conducted illustrate that the learning needs of the three regions are different and need to be addressed through a strategy for content production and delivery. These are likely to be a top down approach to content development for regional needs – develop individual modules and a bottom-up approach to content bundling or customisation and delivery – develop tailored competence development programme.

Deliverables

D 30.3.X (ITA) Training Content report (month 18)

D 30.4.X (UCE) Training Delivery report (month 18)

Milestones and expected result

M 30.1 Training content produced by and available in each region (continuous)

M30.2 Training delivered according to individual planning (continuous)

M30.3 Plan for SME recruitment for formal channels and selection criteria available (month16)

M30.4 Evaluation initial transfer and adoption activity-stakeholder review and feedback (month 18)

WP 33 Dissemination and Community Building (only training part)

Work package number	33	Start date or starting event:				16	
Participant id	T6						
Person-months per participant:	1,25						

Objectives

The presentations of the DBE IP Project results will take place at national and international level through a number of different dissemination activities deployed in two main phases:

In the first 18 months, our marketing strategy focuses on potential adopters who have been previously identified: SMEs catalysts, scientific and research communities, industrial e-forums and decision makers in the IST domain. We will begin the initial dissemination activities focused on the initial promotion of the project through the Branding Identity and Strategy, the Dissemination material, the Web Presence, a kick-off event and all relating actions needed for reach our potential adopters (mainly SMEs on Catalysts); we will also participate in events: at national and international level.

Description of training work

B31: Events

- Kick-off event for the launching of the DBE Project;
- Exhibits and participation at B2B trade shows;
- Public Conference launching the Digital Ecosystem concept (month 7)
- Organisation of the 1st ecosystems' components providers, users, and local actors Conference, for potential SMEs' users, solution providers and for Calls communications
- Invitations to visit partners organisations and meetings with key personnel (for potential adopters and new-comers);
- Trainer to Trainers 1st workshop (Month 18)
- Focused workshop sessions by invitation to researchers, industrial and SMEs marketing and technology managers and even to higher level management.
- Annual meetings in each of the Consortium respective Countries.

Deliverables

D 33.4 Public Conference launching the Digital Ecosystem concept (month 18)

D 33.5 SMEs users, component providers and local actors - DBE Conference (Month 18)

D 33.7.x Integrated Projects Concertation meetings (TBD. See Deliverable list in Technical Annex)

Milestones and expected result

M 33.3 Public Conference launching the Digital Ecosystem concept (month 18)

M 33.4 SMEs users, component providers and local actors - DBE General Conference (Month 18)

IV. Updated Deliverables list (first 18 months)

Deliverable N.	Deliverable title	Delivery date	Nature	Dissemination level
28.1 (IBM)	DBE Training resource plans & Needs (version 2)	8	R	RE
28.5 (TTC)	Detailed phase 1 regional training action plan	10	R	PU
28.6 (Intel)	Guidelines and standards for content creation	12	R	PU
28.7 (IBM)	Cross-regional Phase 1 training evaluation report	18	R	PU
28.8 (Intel)	Knowledge platform architecture & standards	12	R	PU
28.9 (Intel)	Regional knowledge platform implementation blue-print and development roadmap	15	R	PU
28.10 (TTC)	Implemented knowledge platform in regions	18	O	PU
30.3.X (ITA)	Training Content report	18	R	PU
30.4.X (UCE)	Training Delivery report	18	R	PU
D 33.4 (T6)	Public Conference launching the Digital Ecosystem concept	<u>18</u>	O	PU

V. Glossary

SME – Small and medium sized enterprises

DBE – Digital Business Ecosystems. Used to describe the project as well as the infrastructure it wants to provide.

eLearning – form of distance learning using web or computer based media

Business – domain that groups the project partners that look at the business and socio-economic aspects of the DBE

Science – domain that groups the project partners that look at the scientific aspects of the DBE

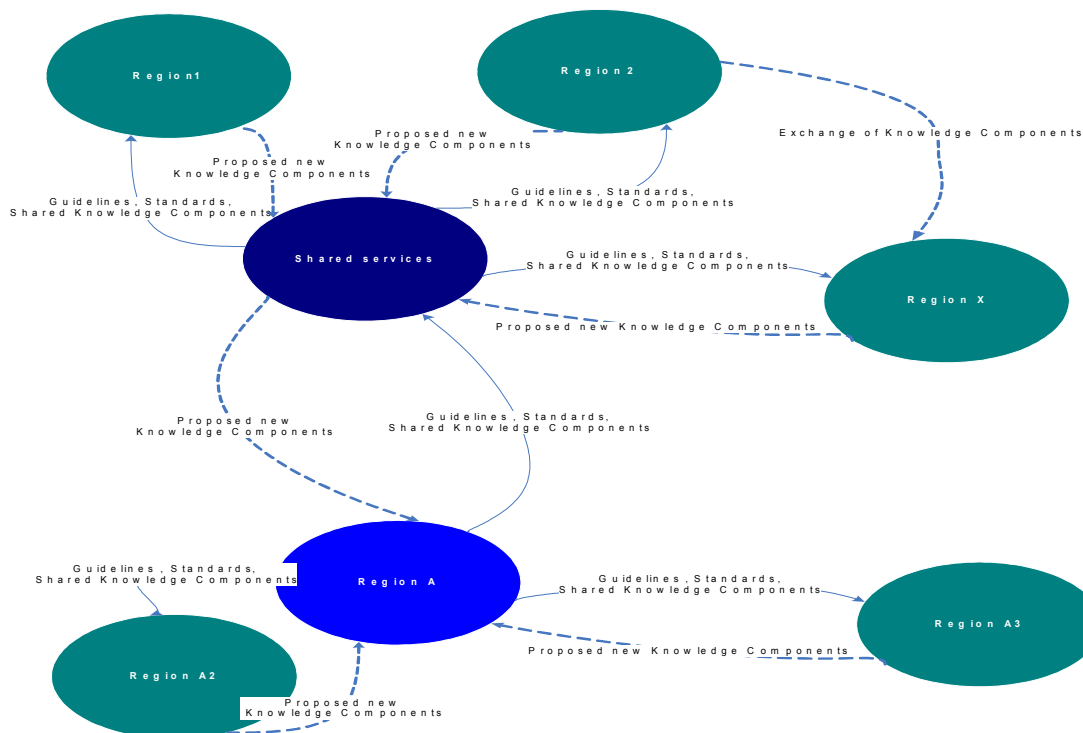
Computing – domain that groups the project partners that look at the business aspects of the DBE

VI. Learning and Knowledge Platform

This section provides some preliminary thinking for further discussion from Bertrand Dory (Intel) in addition to the information provided in section 2.2.7.

The content will be created, stored, managed and delivered on a shared and scalable network of knowledge platforms (KP). Each region will manage and maintain its knowledge platform, thereby creating a regional 'knowledge ecosystem'. The knowledge platform will be interoperating with other knowledge platforms. This will give the different regions the autonomy to create and deliver their own knowledge offering, and also to re-use and re-purpose the knowledge created by the other communities and regions.

Corresponding to our underlying training framework and similar to the multi-tier architecture of the DBE itself, common content standards and e-learning service structures will ensure re-usability and easier transfer of knowledge in-between regions. We refer to this inner core of the distributed knowledge environment as “shared services”. Here is how the system should look like once it is operational:



This architecture allows for different scenarios for the inter-operability between knowledge platforms. There is first of all a contribution to the core. All other regions can then use this contribution through the shared services. However, the

architecture also allows for direct exchange with other regions (this can be the case when the same language is used, or when there are a lot of synergies between two regions). In this case the contribution is only shared between these two regions.

Different types of regional actors with individual interests and competences are likely to participate in different ways in the evolution of the content but also of the learning & knowledge platform itself according to the individual benefits they derive from it and their ability to contribute. The architecture is designed to be open and flexible enough to allow for multiple ways of usage and individual adaptation. In this sense, regional knowledge ecosystems are fostered.

Infrastructure

The infrastructure is the “plumbing” for the management, delivery and tracking of eLearning or Knowledge Components. Its building blocks are:

Regional Ecosystems

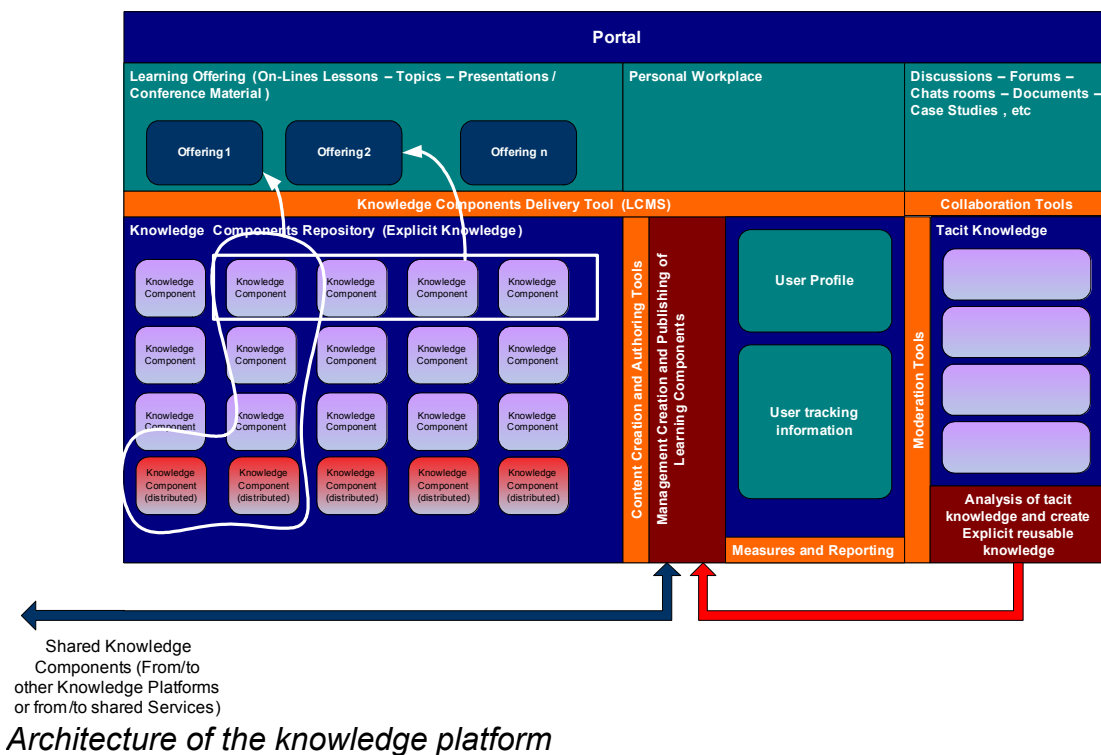
The ecosystems will be replicated in the different regions. These will be catalyzed and managed by specific regional groups. These groups will be appointed and monitored by the Regional Catalysts of the DBE. Each regional ecosystem is based on standards, guidelines and sharing of information across the knowledge platform.

Shared Services

The shared services are the set of the services that allow this sharing of knowledge, best methods and learning components across the different regions. Therefore, processes to facilitate cross-regional knowledge sharing are established.

The knowledge platform

All the Learning components will be stored on the knowledge platform. These components will all be created and packaged using specific DBE guidelines and standards. These standards will be made available to all Regional Catalyst or drivers that want to create a platform. The advantage of using standards is that the components can be easily re-purposed or re-used, and can be delivered on any platform (that is compliant with the standard). We will use global standards, such as SCORM, for the packaging of the Learning Components. Some Meta-data may be specific to the DBE projects, and will be documented in the guidelines. This is to allow and facilitate re-use across the different knowledge platforms.



The knowledge platform will contain explicit knowledge components and assets for the DBE. The Content will be accessed via a portal. As there many different types of users, from developers, end-users, drivers and contributors, the portal must be able to allow easy navigation and accessibility to the content for all these users.

The different components of the knowledge platform are:

- **The End-user Portal:** The Knowledge components will be organized in learning offerings accessible via a portal. Learning offerings are groups of learning components, and can be on-line lessons, on-line topics, conference/presentation material, classroom material. As there many different types of users, from developers, end-users, drivers and contributors, the portal must be able to allow easy navigation and accessibility to the content to all these users. In addition to the access to the learning components, the portal will also contain content pages, news pages, and other links to other resources or other DBE portals.
- **The Explicit Knowledge Repository¹⁴:** this is the repository where all the knowledge assets and components will be stored and managed via the content management system. This repository

¹⁴ Explicit Knowledge

This is the “official” regional offering. These knowledge Components can be used as e-Learning courseware or on-the-job refresher, or as material for synchronous sessions.

should be controlled and the publishing access restricted to a pre-defined group of users.

- **The Content Management System:** this system will allow the cataloguing and the management of the content for the brokers of the site, and the content publishers of the knowledge components. The content management system will also deliver the different assets and components to the users and the learners.
- **The Practical Knowledge Repository¹⁵:** this is the repository where any user can contribute to the project knowledge creation and sharing. The knowledge is created using on-line forums, chat rooms, or by publishing best known methods, white papers, or case studies.

Blended Approach

The knowledge platform will be designed to maximize the possibility to use blended learning scenarios. This makes it possible for the learner to choose an ideal mix of learning media for his or her own learning needs. Knowledge is organized in components that can be used in an on-line lessons or courseware, or during face-to-face sessions or conferences.

Here are some possible scenarios of using a blended approach to maximize the learning and the efficiency of the knowledge components and the offering.

Organizational roles

Regional knowledge broker

A regional knowledge broker will manage the knowledge platform components, ensuring that components are up-to-date and are working. The knowledge broker can be an individual/SME, group of individuals/SME or any committee).

The knowledge broker will also validate the quality and the correctness of new knowledge components, and that these are compliant with the guidelines and recommendations to facilitate the sharing, re-use or localization of these components within other knowledge platforms in

¹⁵ Experience or practical knowledge

The Explicit knowledge is created by the users themselves. It is not created by the region or by the shared services. This knowledge is created on forums, bulletin boards or by sharing “Best Known Methods”. This kind of knowledge is used:

- by the DBE knowledge ecosystem, to create new Explicit Knowledge components, and enrich the offering at the regional or at the DBE level (via the shared services)
- by advanced users to get more advanced and specialist information
- by users when specific information is needed
- by users to see how other are using the DBE.

DBE. The role of broker is also crucial in the analysis of the knowledge created by contributors, which is codified or transformed into explicit knowledge assets. Where needed, he/she will consult a subject matter expert.

Knowledge platform shared services committee

In order to define shared services for the knowledge platform and to agree on content and learning service standards, regional knowledge brokers join in a DBE knowledge platform shared services committee (see management chapter). This is equally shared by a member of the IBM team working on the evolution of the strategic training framework as well as by a member of the Intel team working on the technical development and maintenance of the platform. Intel is responsible for leading this.

Knowledge platform technical support and development team

Technical development and support of the platform is provided by Intel. This also includes the technical realization of shared services and the support of regions in using these services in the creation of their knowledge ecosystems as well as in the sharing of knowledge and learning content with other regions.

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