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## A business model for an online learning community - the case of Busy City

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**Abstract:** Over the last two years Lund University has devoted much energy to create distance learning facilities for both traditional student groups and - to a growing extent - for employed people in industry and the public sector in need of continuous learning. The courses cover a number of rapidly changing fields of knowledge and competence, such as information and communication technology. This paper describes a model that have been used to create a distance learning environment for a mixed group of learners in one such field of knowledge: *business informatics and electronic commerce*. The model paves the way for a new revolutionary concept for distance learning in this field in which learning is made *by working and creating*, not only by reading and by doing. A course in this environment becomes - in fact - a directed business process!

### 1. Introduction

Distance education, or better: *distance learning*, appears to be one of these new exciting opportunities for most partners involved, i.e. students, teachers, administrators etc. Costs are reduced on both the students and the teacher's side of the virtual teacher's desk due to the fact that no special lecture halls are needed; almost no transports are needed to participate in class- or group meetings, etc. But is there a real benefit that makes distance learning a good choice *from a learning perspective*, not only from a cost oriented, economic perspective? We think so, and we will try to show in this paper why and how the distance learning process can be much more beneficial for all partners involved on a much higher value level than what a simple cost analysis may say. We will also argue that the traditional, public and open, university will have major problems to adapt to the new conditions evolving for actors on the international distance learning market.

### 2. Distance learning and the new economy

Distance learning is a good example of what is meant by the *blurred economy* [Davis 1998]. Who *are* the partners in the learning process? What *is* the product that is produced? What *is* on the bill that the consumer pays? Who *is* the producer of the values that the customer receives? In the blurred economy the business roles are not very clear, the exchange of values are more subtle than in conventional business transactions and the production seems to take place in an imaginary or virtual space, rather than at a conventional factory located in physical space.

When attempting to describe and analyse the often very sophisticated information systems used for distance learning, many existing models for systems and business development fall short because they are focused solely on the technical aspect or on the pedagogical aspect without consideration of the learning process *as a business process*. A framework for "Work Centred Analysis" - hereafter called the WCA model - was constructed by Alter [Alter 1999] to look at the work tasks and human activity components of an information system, rather than on the technological components of it. The model combines many modern concepts of modern business informatics and administration, including but not limited to Total Quality Management, and Business Process Reengineering. It is an attempt to establish a framework to describe, develop and manage complex information systems from a business management perspective. In the WCA model there is no focus however on companies and organisations that have *learning* as their primary objective.

The WCA model was modified by Wallin, Petterson and Arvidsson to better fit distance learning activities and the ideas behind the blurred economy and virtual companies, i.e. web-based business processes located to

"places that don't exist" [Nörretranders 1998]. The model has also been inspired by the new ideas of how you can gain from the Internet by expanding markets through virtual communities [Hagel 1997]. The model has been tested and evaluated on a number of actual cases of virtual companies [Arvidsson 1999]. The modified model is called *the WPA-model* (after Wallin, Pettersson and Arvidsson). Currently the WPA-model is being applied to transform a number of separate distance courses at Lund University into a more consistent framework for a virtual life-long learning community called *Busy City*. We will now present and discuss the WPA-model as a business model for an online learning community in the case of *Busy City*.

### 3. Busy City - a virtual home for life long learning in eBusiness

*Busy City* is a virtual learning community in formation, located nowhere and everywhere as a web-site under construction. It will be used as an integrated learning environment for a set of courses currently running at Lund University that are based on a specific concept for distance learning developed by the author: the *Conversity*® concept.

The *Conversity*-concept for distance learning is influenced by Giambattista Vico's general principle: *Verum Ipsum Factum*, i.e. that the Truth of something can only be established by making (producing, creating) that something. In our case: the Truth of Business Informatics and Electronic Commerce can only be established by creating possible solutions and making applications that work. To understand "money", according to this view, would mean to *create* money! And, that seems to be perfectly in order when working in a virtual learning space!

Also new business ideas, new organisational forms etc. must of course be allowed to be created and tested in a learning environment to find the Truth of modern business organisations. Instead of separate spaces, times, rules and roles for Academic, Business and Civic activities, as in a conventional society, the *Conversity*-concept allows a mixture of these in virtual space, so that it is possible to integrate academic questioning with business development and business operations with social meetings, etc.

The *Conversity*®-concept, which is trademarked, calls for an advanced learning environment on the Web with *The City* as a basic metaphor and guiding design principle. A virtual city plan has therefore been constructed as a blueprint for *Busy City*. It is under establishment as a web-site in the knowledge domain that covers *eBusiness*, i.e. Business Informatics and Electronic Commerce. An experimental version of *Busy City* is currently being constructed as a prototype that can be visited at <http://busycity.ics.lu.se>.

### 4. The WPA-model for Busy City

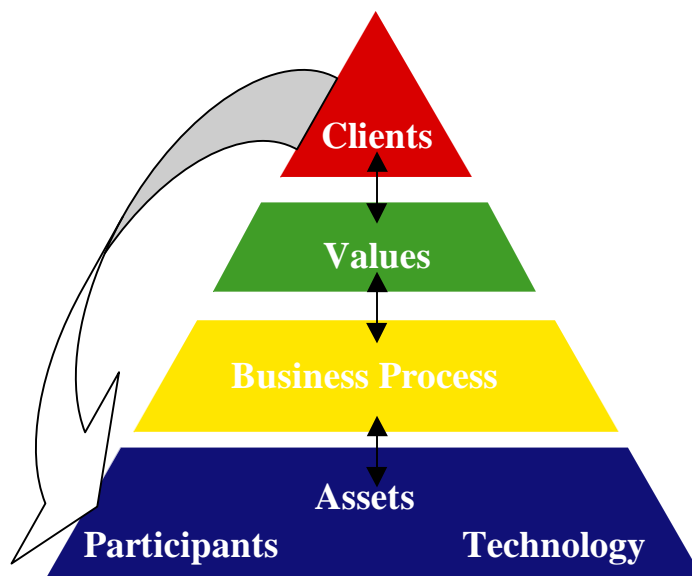
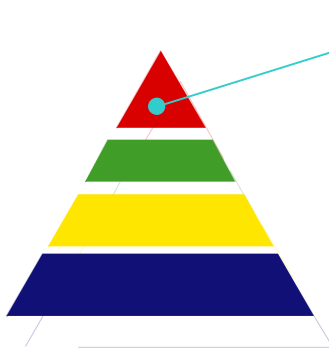


Figure 1. The WPA Model.

The model consists of *Clients*, *Values*, *Business Process*, *Participants*, *Assets* and *Technology*. To better illustrate how these components are integrated into a consistent framework, the model can be graphically represented in the form of a pyramid (see Figure 1 above). Each component will now be discussed in some detail, both in general and in the case of Busy City.

#### 4.1. Clients



**Clients** are those who benefit from the total system and its services. That is, those people who are at the receiving end of the values delivered by the business process. They are usually divided into *External Clients* and *Internal Clients*. Internal Clients are the initiators, owners and key asset holders that want to receive specific values from the business process. The External Clients are those who have no particular interest in the specific business process, only the values produced, evaluated in comparison with other offerings on the same market.

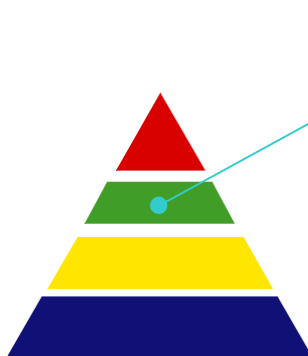
Some of the clients to Busy City are:

- Students
- Teachers
- Researchers
- Entrepreneurs
- Service providers

This means that a teacher or instructor running courses in the Busy City environment is considered to be a client. He may have to pay for a number of "studios" that his class needs to engage in the actual course. The teacher has always the choice of moving his or her course to another system. Within the specific course the teacher is of course still an external client.

The fact that the Conversity concept clearly attempts to recycle knowledge from students into the general learning environment means that a course student may also become a knowledge contributor through projects and discussion input. As a student starts producing his/her own eCommerce solution as part of a course, or give feedback of knowledge into the community he/she gradually becomes a teacher (even if he/she doesn't know it). The client may eventually become a 'super-user' who helps other citizens in their quest for knowledge, i.e. a participant. (These kinds of transformations are discussed further in Chapter 5.)

#### 4.2. Values



**Values** are produced by the *business process* and then supplied to the Clients. Values are to be divided into three subgroups:  
*Economic* values stem directly from business transactions with the clients and the participants.  
*Informational* values stem from the exchange of different types of information such as knowledge, product information or experience.  
*Emotional* values are the relations and ties that are formed between the clients and the participants.

As a system developer it is important to gather as much value as possible in all three areas. Some of the values of relevance for Busy City are:

*Economic values:*

- Course fees
- Rents of studios and project rooms
- Royalty on courseware
- Local taxes on eCommerce transactions

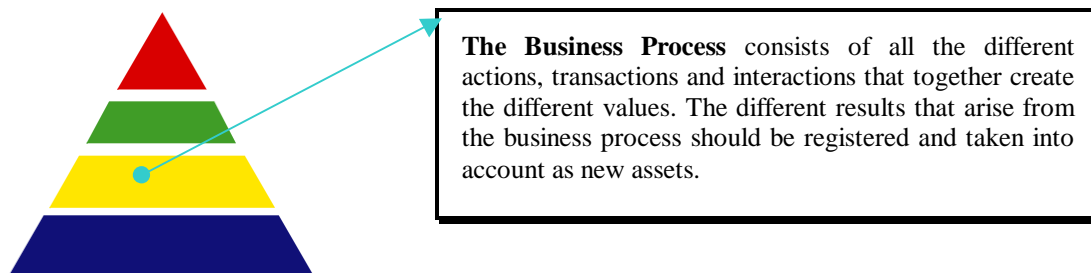
*Informational values:*

- Courseware material such as manuals, collections of articles etc.
- Books, articles, lectures notes, textbook reading guides etc.
- Video and sound from lectures, multimedia based presentations and study material
- Tests, quizzes and exams
- Student work and other results from the learning process
- Documented chats and discussions in virtual classrooms
- Addresses and links to external resources such as databases, articles and news
- Statistic data and information profiles of individual students and groups of users in Busy City
- Other products and services such as e-mail accounts, devoted space for home pages etc.

*Emotional values:*

- A meeting place where the business world and the academic world can meet. Students can make contacts with companies and vice versa.
- A stage on which clients are given the opportunity to present and discuss produced documents and digital artefacts
- A forum for small business managers who can get new contacts and exchange experiences without having to take physical distance and limited resources into consideration.

### 4.3. The Business Process



**The Business Process** consists of all the different actions, transactions and interactions that together create the different values. The different results that arise from the business process should be registered and taken into account as new assets.

The business process in Busy City is designed to actively support and enhance a complete learning process in eBusiness. All the functions and modules that are to be implemented and used in a commercial eBusiness application can be placed on a scale ranging from an absolute novice student to a fully competent eBusiness manager (see Figure 2). The vertical axis indicates the degree of "Academic" (up) vs. "Civic" (down) values that are added to the learning process as it evolves in the direction of added "Business" values.

At the left on the scale is a student that enters the Busy City Community by (1) starting a beginner's course in Information and Communication Technology (ICT). The student may take more courses in eBusiness with a different range of difficulty and subsequently move to the right on the scale (2). At some point the student decides to participate in a practice project and a group work (3) that treats the basics in creating your own very simple Internet-Shop with software for eCommerce. The student has now moved considerably on the scale and is not only using the courseware and dedicated software for use in the learning situation but also "real" eBusiness software, tools and commercial articles for full scale testing (4). As the student continuously

moves on in the right direction, he develops and implements his own fully functional eBusiness solution. The running of this solution may provide experiences that the student deems are relevant enough to feed back into the Busy City Community in which case the student has become an important participant with a commercial establishment of his own (5).

- 1) Basic ICT course
- 2) eCommerce course
- 3) Group work in eCommerce
- 4) Full scale testing of eBusiness
- 5) Commercially operating virtual company

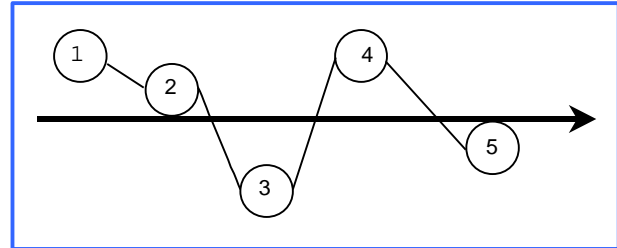
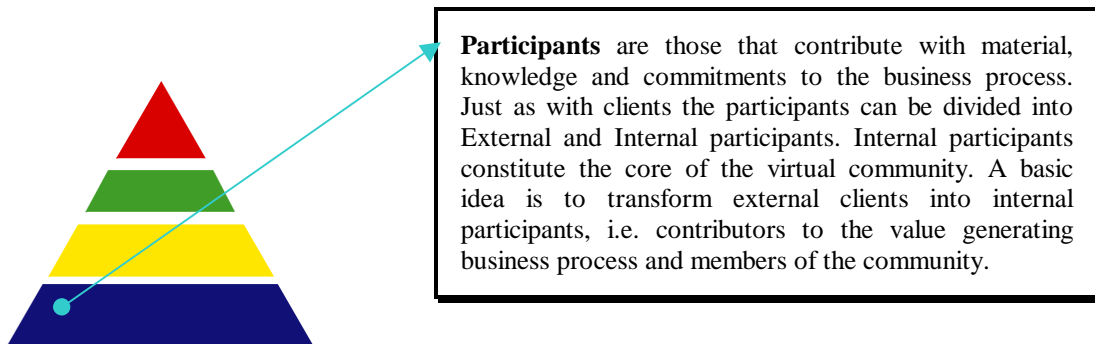


Figure 2. The eBusiness learning process

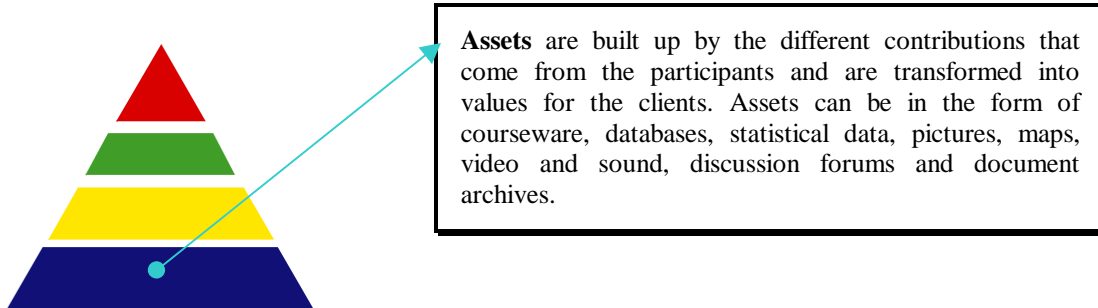
What makes this process unique from other school environments is that it fully supports the student's development from being a novice eCommerce student to the launch of a full-scale eCommerce site. The student never has to leave the Busy City environment to be able to fulfil his development. Traditional schools normally have a big time, knowledge and resource loss in a similar situation due to the fact that the students have to leave the school to be able to try out their commercial projects. In Busy City the student only has to move his project virtually from the campus district to the virtual business park of Busy City and from there on to the commercial market place in the central business district of Busy City.

#### 4.4. Participants



Due to the nature of the Busy City environment it can, at times, be hard to tell if a user is in fact a client or a participant. The main difference is that a participant contributes more in delivering something to the business process than what a client is supposed to do. But in the case of Busy City most of the clients will at some stage contribute to the system and then in reality become participants. (A more detailed discussion of this will be done in Chapter 5.)

#### 4.5. Assets

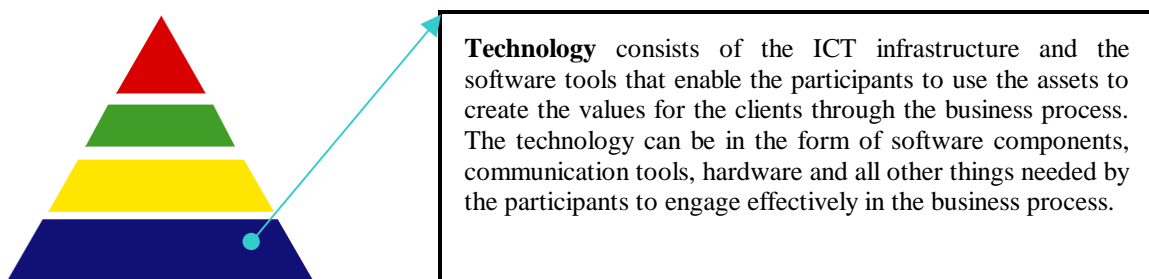


Most of the assets in the Busy City environment consist of the knowledge that is accumulated in the network of participants and clients of the system, i.e. the learning community. The protection and maintenance of individual, group and community assets are not very easy and have to be supported by the right technology. In order to secure the assets and transform them from *personal intellectual capital* into a formally owned and secured property of *structural community capital*, documentation and registration of the business process becomes a very important factor in Busy City. The system should be built in such a way that all the material created within the system should be saved for future reference and (re-)use. Most of the actions, transactions and interactions occurring in "hot" districts, should also be logged and be made traceable. Among the many different assets a few can easily be pointed out:

- Statistics
- Published material
- Existing knowledge about the business process
- Discussion forums and Chats
- eCommerce solutions
- Traced user activity

One very important aspect of assets in Busy City is that in difference to conventional and "tangible" assets, such as machines and furniture, the "intangible" assets of Busy City seem to *increase in value* by using them, just like other common goods, e.g. a language. That means that the business process does not really cost very much in terms of resource consumption and destruction. Instead, the chance is very high, that the business process has *a double loop of productivity*, creating positive feedback of added value to the assets used in the business process.

#### 4.6. Technology



Although Lund University already has a distance learning system called LUVIT (Lund University Virtual Interactive Tool) [LUVIT 1999], Busy City is clearly differentiated from this environment by being "a virtual learning community for creative and collaborative distance learning in the field of business informatics in general and electronic commerce in particular" [Wallin 1999]. The vision is for an environment that inspires and mediates continuous learning and exchange of experience through hands-on training in electronic commerce. Busy City acts as a catalyst for exchange of knowledge between many diverse groups of people, as in a normal city, creating a local culture of its own.

The installation of Busy City as a Conersity in the field of eBusiness paves the road for a three-tier implementation, including the following functional areas:

- conventional distance education tools for the creation and distribution of courses and course material on the web, such as web-publishing facilities
- community tools allowing all participants in Busy City to communicate in a variety of ways
- knowledge domain specific tools and functionalities for 'hands-on' training and experimental work in virtual laboratories set up for specific subject matters, such as payment systems in eCommerce, geo-object design tools in Business GIS etc.

In operational terms, the idea is to create an on-line community that allows different types of users to cooperate and collaborate in a virtual environment. The ability to share and discuss information quickly through real-time chat and newsgroups is one such function area. The ability to work in groups and collaborate in specific projects by sharing group documents is another. The third tier of functionality for Busy City demands an environment in which eBusiness concepts may be simulated or implemented, using other community members as a "realistic" market for testing a business concept. Busy City and its citizens will then be the pilot market with the first set of commercial clients for a new virtual company - if the test is successful.

Busy City has a need for a very diverse functionality ranging from course administration, over easy production and deployment of course materials, real-time as well as newsgroup type communication, to an easily configurable eCommerce laboratory. Requirements such as maintainability, price and flexibility for continuous development, scalability to cope with growing user numbers and integration of pre-made modules with full transparency towards the end user, has lead to the identification of certain technical criteria for choice of an ICT-platform for Busy City. The platform is now under implementation with the goal to allow a higher volume of traffic in the city in the beginning of year 2000.

## 5. The graduation system for Busy Citizens

The client cycle, indicated by the flow from Clients to Participants in the graphical illustration of the WPA model (see Figure 1, Chapter 4), is a way of describing the maturity phase for the different clients and participants. It is a description of the life of an 'average' citizen in Busy City, and what phases he/she will go through while being related to Busy City as a learning community:

1. *Visitor*, a tourist that anonymously investigate Busy City and its surroundings to get an answer to the question: "what's in it for me"
2. *Guest*, a visitor that wants to stay for a while with a temporary dwelling to return to, also willing to accept the existence of an environment with certain rules of conduct to stay inside the virtual Busy City wall.
3. *Client*, a guest who has registered and has been granted the license to use Busy City and its facilities on a more regular basis, normally limited to certain parts of the city, such as the Campus district.
4. *Customer*, a client (normally a student) who invests time in learning and using some specific facilities in specific zones and make value transactions by following a specific course in the Busy City environment. A customer has both the right and the duty to express wishes and demands on how the actual services and facilities along the route of the course could be adjusted to better fit the customer, being blind for instance.
5. *Participant*, a customer who engage in discussion groups, make contributions of own intellectual capital and collect experiences of specific business processes going on, such as a virtual field trip as a group exercise in a course.
6. *Citizen*, a participant who has decided to appeal for and has been granted a citizenship with certain rights, but also certain duties, as a registered Busy Citizen. All citizens are equipped with a virtual passport, a virtual credit card, a virtual driving licence etc. - things that make life in Busy City more comfortable.

7. *Resident*, a Busy Citizen who has settled down in the Busy City environment and has created a "home" for life-long learning experience in Busy City. A resident has a residence with a permanent address in Busy City with resources for communication, storage of private belongings, private online meetings etc.
8. *President*, a residential Busy Citizen who has established a virtual estate of intellectual property rights in Busy City, for instance as a shop owner, a filmmaker or a service provider. A president has the capacity to represent such an establishment and/or a group of clients (of all grades) as their official spokesman.
9. *Hero*, a Busy Citizen that has managed to do great things of high value for all inhabitants of Busy City or has made an innovation that reduce the costs, burdens and risks of being a Busy Citizen.

Obviously, this kind of a grading system necessitates a rather high functionality of the member administration tools to be used in Busy City on behalf of the Busy Citizens.

## 6. Conclusions

Distance learning might be one of the new great business opportunities in the new, globally connected, but blurred economy. To succeed, radically new business models have to be worked out to make it possible to

- *de-think* a number of taken-for-granted truths about learning and the learning process, and to
- *re-think* a number of old, good ideas about learning as a creative life-long exercise, and to
- *pre-think* or anticipate how the traffic of questions and answers in a specific knowledge domain should be regulated to make the communication effective and productive when billions of people are interconnected world-wide in real time to discuss a subject matter, and to
- *think loud* on good metaphors and design principles for good learning environments for the next millennium to enable new occupational careers based on life-long learning opportunities.

This paper has indicated how this can be done in one such knowledge domain: eBusiness. The recommendation is to take *The City* as such a metaphor: The City as a meeting place with regulated traffic, restricted access to certain areas and an atmosphere of its own, created by those who live and work there. Busy City, as an application of these general ideas, will be opened for the international public in January 2000. (Applications for Citizenship can be made in advance and will be highly appreciated.)

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