

# Business models for a European e-Learning marketplace

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**Key words:** *e-learning, marketplace, business model, Metacampus*

## **Abstract:**

In this paper, we describe the development of the business model of an e-marketplace for e-learning materials. According to actual studies, current marketplaces – either public or private – will converge and integrate their processes and technologies. Marketplaces are supposed to be an easy way to put learning materials into the market and of merging the demand and offerer side.

We describe the project METACAMPUS, in which such a marketplace is developed. We give hints about the theoretical background of the development of its business model, which can serve as basis for the development of other business models in the e-learning sector.

## 1 Introduction

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A lot of e-Learning materials, contents, and resources have been produced in the meantime by a lot of institutions. Problems arise concerning the marketing as well as the re-use and re-targeting of the materials for specific user needs and target groups. Marketplaces are supposed to be an easy way for those institutions to put their learning materials into the market and to sharpen their profile. Marketplaces provide benefits for buyers (e.g. personalization and easier access), benefits for sellers/providers (e.g. new potential markets for exploiting their knowledge bases), and benefits for other trusted parties acting as partners. In this paper, we will clarify the development of an e-marketplace for e-Learning materials and describe crucial factors that are to be taken into account.

While for the development of a business model some standard aspects always have to be taken into account, special emphasis has to be put on the requirements of business models dealing with e-Learning-materials as well as institutions like universities as potential offerers.

## 2 The IST-project METACAMPUS

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The Metacampus project ([www.metacampus-project.com](http://www.metacampus-project.com)) designs, develops and tests an Internet marketplace for the selection, purchase, and delivery of those resources best fitting the customer's life-long learning needs, preferences, and profiles. In the so called Information Society it is normal to change jobs and acquire new competencies in many professional pathways. People want to improve and to extend their knowledge and understanding, which is why lifelong learning is necessary to adapt people to the changes and to achieve the challenges of the future.

The need for flexible access to personal development programmes (or human resources development in the corporate sector) is a consequence of that situation.

A substantial task of the METACAMPUS market place is to lower the search costs of merging the demand and offerer side. Within Metacampus this process is supplemented with two further innovative achievements going beyond the usual brokering tasks:

- the Training Consultant (TC) and the
- Content Assembler (CA)

The TC is a set of intelligent agents capable of generating and executing strategic decisions concerning user's needs, profile and preferences. The CA states allowable interoperations of learning objects for enabling the demanders to personalize their marketplace. It selects and packages services from the Learning Resources Catalogue and will also cover the invention and creation of new services through the aggregation of compatible objects. The Metacampus marketplace is in this manner capable to adapt, create and use learning materials for many types of learners.

Furthermore, the aims and needs of other related parties (service providers, ...) are taken into account and a financial operator will contribute to the global effort of developing and integrating e-payment solutions capable of handling a vast range of economic operations.

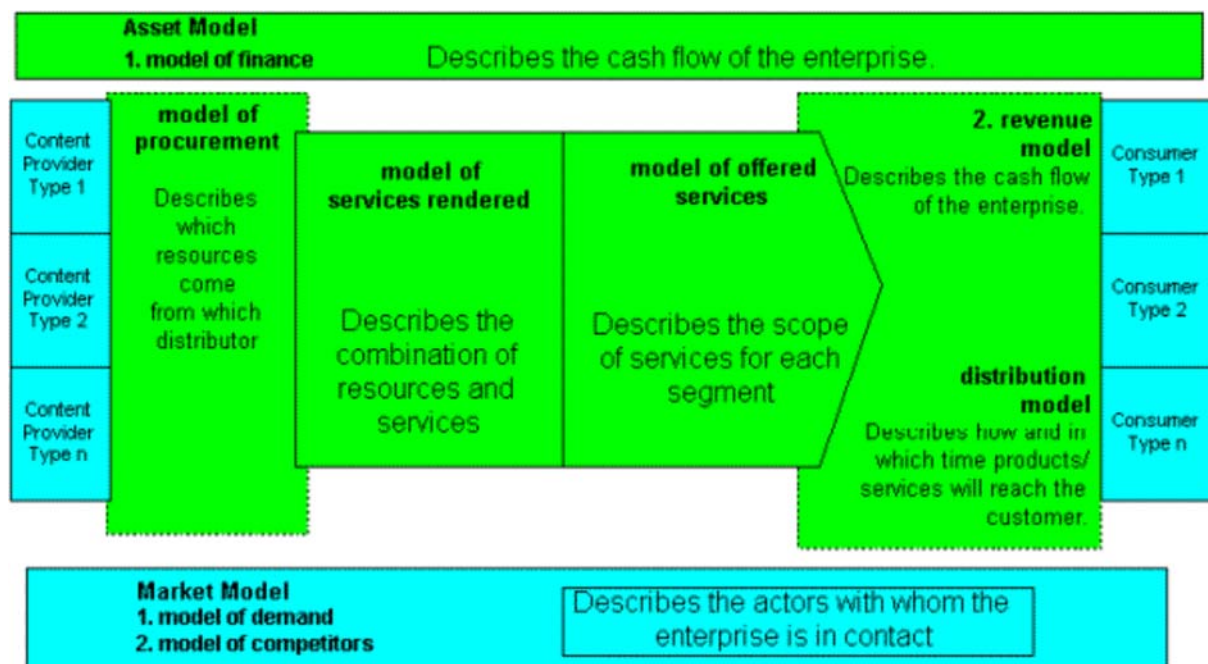
## 3 The development of a Business Model of a

## European Marketplace

The term 'business model' is not consistently defined in current literature. In general a business model is what we call a description of the business activities that will lead to return. Timmers gives the following definition: "A business model is defined as the organization (or architecture) of product, service and information flows, and the sources of revenues and benefits for suppliers and customers." [1] In the following chapters, we will describe some theoretical approaches that actually build the steps in the development of the business model.

### 3.1 The approach of Wirtz

The following graphic shows the Wirtz approach from a value chain view: [2]

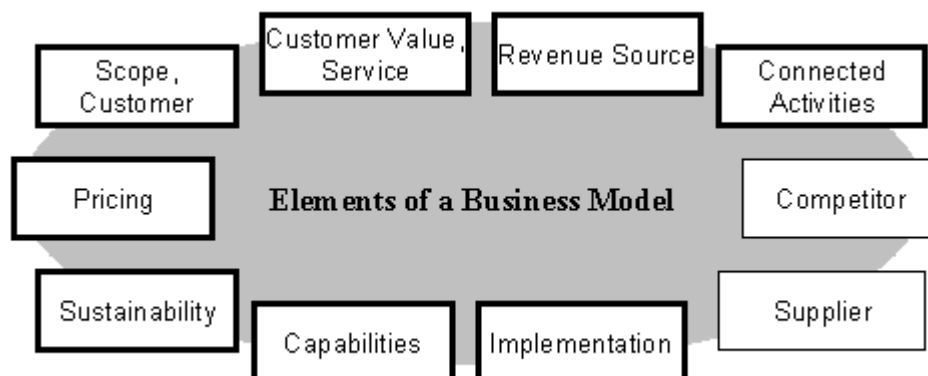


Graphic 1: Value chain view of the Wirtz` Partial model

The Wirtz approach was originally intended as the theoretical base for MetaCampus, but it had to be rejected from the actual point of research. The Wirtz approach is too sweeping and does not fit to the concrete needs at the moment, and is therefore here not described in detail.

### 3.2 The approach of Afuah and Tucci

A more focussed approach comes from Afuah and Tucci. [3] They identified eight key themes to make a business model. These themes - all focusing on the internal enterprise side - were supplemented by two key terms describing the close environment of the enterprise and helpful for the description of the METACAMPUS Business Model: "Customer" and "Supplier". The structure of the MetaCampus business model consists of parameters that define business goals, organizational and commercial relationships with suppliers, customers and competitors, products services and sources of revenue, but excluding "Capabilities" and "Implementation". These issues will be tackled in a later stage of the project in the METACAMPUS Business Plan.



## Graphic 2: Adapted business model approach by Afuah/Tucci

In this paper, only a few aspects are described in a shortened way:

### market structure

In the beginning, the target group for MetaCampus was the learning European citizen. This describes the biggest possible target group in Europe. In the long run this is by all means a practicable target group. In the short run the intended target group is defined by the potential offer that could be acquired (Learning Resource Providers = LRP) for MetaCampus and the strongest buying group of digital e-Learning resources.

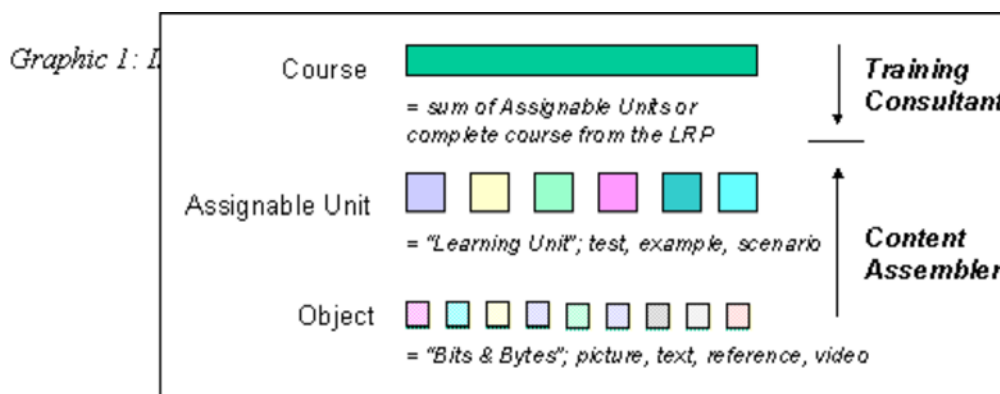
### customer value / services

The question of what kind of services MetaCampus will offer is the most important one. 'Services' are now defined as a group of tasks which have to be compiled seriously in order to manage the whole transaction inside an e-Learning marketplace. These integrated services in sum are the customer's value and will lead us later to the customer buying cycle.

Different from other competitors, MetaCampus will not only offer a catalogue of content from which a customer could choose something. It will be the only one to support the matching process between the required content and the offered contents in a serious way. This will be managed by the Training Consultant (TC).

This TC must be able to identify the knowledge gap of the customer and to make a pedagogical and economical customised suggestion on what the customer should buy. In order to obtain the trust of the customer, the system should give a preview of what the customer could expect. Another much more comfortable and innovative service is given by the Content Assembler. The Content Assembler (CA) supports a kind of customisation on a qualitative higher level than the TC. It allows a recombination of parts of already existing courses to form a new course generated to the individual needs of a customer.

Beside the fact that there is no European marketplace for e-Learning in the moment (and already this would be a sufficient distinction from other LRPs, who only offer their own products), the TC and the Content Assembler are the crucial and innovative success drivers of MetaCampus. The following graphic shows the difference between the TC and the Content Assembler and also the possible and aspired level of recombination of different resources.



### competitive market situation

A European **b2c** marketplace in a closer sense that supports every phase of the buying cycle within a marketplace, a service covering as many steps in the consulting, brokerage and delivery process like MetaCampus (with "European" content) does not exist yet on the European market.

### suppliers

MetaCampus will address the requirements of those suppliers who own and/or handle considerable learning material/services:

- big LRPs (private universities, publishers, e-Learning enterprises like Smartforce)
- small-sized LRPs (public universities, LRPs who serve only special market niches)
- micro-sized Provider (teachers, professors, trainer, e-Learning tutors)

### pricing

The MetaCampus marketplace, as far as LRPs are concerned, will take into consideration the billing system that has already been used in order to form the LR's price catalogue. MetaCampus operators will negotiate with the LRPs about the pricing policy for the LR's that are going to be delivered through the marketplace. The existing pricing systems will need to be adapted in order to meet MetaCampus' marketing strategy, i.e. pricing will have to consider the current trends in the Internet-based business environment and the lifelong learning area.

### revenue sources

Considering revenue, MetaCampus will negotiate a fixed commission (percentage of sales revenue) for “brokering” the services (“brokering” in a broad sense including all services offered to LRPs).

### connected activities

Connected activities underline the competence of the enterprise. Consequently, a connected activity for MetaCampus will be “publishing” (information on e-Learning literature, newsletters, link lists and information about e-Learning events like conferences or fairs) which underlines the competences in e-Learning and builds up trust among customers.

### sustainability

Continuous development of the TC and Content Assembler technology and the enlargement of the course offer will achieve sustainability. The aim is the technological and content leadership.

Based on the approach of Afuah and Tucci we get a first grip on the MetaCampus business model. The next question that had to be answered is, are there aspects which have to be taken into account when we talk about Internet business models? Indeed there is an approach which focuses on this issue.

## 3.3 Internet business models: The Tapscott approach

Tapscott et al. identify the following five business models. [4] The “Aggregation” and “Value Chain Integrator” (see grey boxes), give input for the business scenarios of MetaCampus:

	<b>Agora</b>	<b>Aggregation</b>	<b>Value Chain Integrator</b>	<b>Alliance</b>	<b>Distributive Network</b>
Main theme	Dynamic pricing	Selection and convenience	Process integration	Creativity	Allocation / distribution
Value proposition	Liquidity – converting goods into a desirable price	Optimisation of selection, organization, price, convenience, matching and fulfilment	Design and delivery of an integrated product or service that meets a specific set of customer needs	Creative collaboration in aid of a goal shared across a community of contributors	Facilitate the exchange and delivery of information, goods and services
Customer role	Market player	Buyer	Value driver	Contributor	Sender/Recipient
Knowledge focus	Timing Market intelligence	Market segmentation Supplier offering fulfilment	Innovation Supply chain management	Community Creativity Standards and roles	Network optimisation Visibility and transparency
Key process	Price discovery	Needs matching	Product design Supply chain management	Innovation	Distribution
Examples	Yahoo EBay Priceline AdAuction MetalSite FreeMarkets	Amazon.com Chemdex HomeAdvisor Webvan ETrade	Cisco System Dell Comp. General Motors	America Online Linux MP3	Enron UPS AT&T Wells Fargo

Tab. 1: e-business models / Tapscott

In an Aggregation model, one company leads in hierarchical fashion, positioning itself as a value-adding intermediary between producers and customers. The leading aggregator takes responsibility for selecting products and services, targeting market segments, setting prices, and ensuring fulfilment. The aggregator typically sets prices and discounts schedules in advance. An Aggregation model offers a diverse variety of products and services, with zero to limited value integration. Retailers and wholesalers are prime examples of Aggregations. Their value proposition are the key services (as shown in Tab. 1) which have to be realized

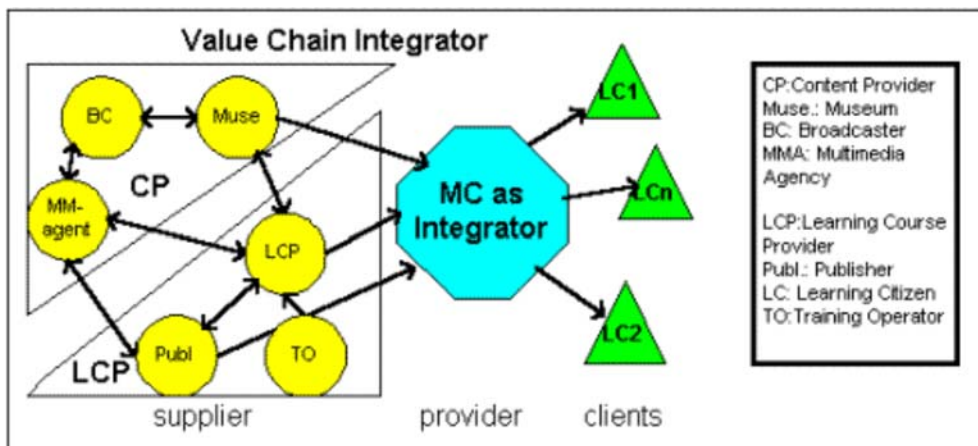
as well as possible.

Graphic 4: Aggregation

Beside these value propositions, *Tapscott* gives some general key success factors of an *Aggregator*:

- design value propositions that let customers conduct business “their way”
- treat everyone as an information Aggregation
- organize content to enhance customer experience and control
- extract value from customer communities
- face the fulfilment challenge

In *Value Chain Integration*, the context provider structures and directs a network to produce a highly integrated value proposition. The output meets a customer order or market opportunity, whilst the seller has the final say in pricing. It may be fixed, somewhat negotiable, or highly negotiable. The value proposition of *value chain integration* is the design and delivery of an integrated product or service that meets a specific set of customer needs.



Graphic 5: Value Chain Integrator

The general key success factors of a *Value Chain Integrator* are:

- provide service-enhanced customer solutions
- connect with every customer
- become agent for communication exchange between suppliers
- focus on what counts
- develop expertise in relationship management

To answer the question of whether MetaCampus tends more to the “Aggregation” business model or to the Value Chain Integration business model, we have to focus on the *technical* services which will be developed in the project. These are:

- Authentication broker
- Training consultant
- Content Assembler
- Financial Operator
- User Database
- Learning Resource Catalogue.

In Graphic 6 these technical services are attributed to the two different business models. Incidentally, this distinction could also be described with our already known terms “marketplace” and “education broker”. A marketplace has to fulfil the following three functions:

- matching buyers and sellers (supporting determination of product offers, search, price discovery),
- facilitation of transactions (logistics, settlement, trust),
- giving institutional infrastructure (Legal, Regulatory).

The education broker is defined as something that will facilitate the discovery of courses of different providers and allows their combination to coherent course packages. It provides a best match of vocational demands, academic offerings, and individual learning conditions. According to the already defined *technical* services of MetaCampus, we can make the following distinction:

Graphic 6: Similar notation and the technical services of MetaCampus

### 3.4 The hybrid business model of MetaCampus

The central theme of the *aggregation* model (Marketplace) is the big selection of products (in our case LRs) and the development of a very convenient way for the customer to meet his needs. This will be supplemented by the process of integrating the *value chain integrator* (education broker). MetaCampus will be a mixture of an *aggregation* and a *value chain integrator*, or in other words a mixture of a marketplace and an education broker. The aim is to support both groups of value propositions and to develop a hybrid business model that offers the sum of both value propositions:

- Selection (customer needs - non traditional market categories should dictate the scope)
- Organization (support personalizing - people who invest time in customising their MetaCampus page are more likely to return)
- Price (discounts depending on the volume of purchase or on the purchase of complementary courses)
- Convenience
- Matching
- Fulfilment
- Design and delivery of an integrated service (course build by the Content Assembler) that meets a specific set of customer needs.

The key processes standing behind this value propositions and which can be understood as ultimate goals are:

- Matching of the needs
- Product design
- Supply chain management

How can we manage to reach these ultimate goals of an e-Learning marketplace like MetaCampus? The answer can be found with the help of the approaches given by *Langenbach* (who describes the key activities of an electronic education mall like MetaCampus) [5] and *Muther* (who identifies the customer buying cycle for electronic customer care - a key to our functionality catalogue). [6] These approaches were picked up and modified in the next chapter.

## 4 Some functionalities of the marketplace METACAMPUS

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*Langenbach* remarks that the market is not a place, a thing or a collective entity. The market is a process actuated by the interplay of the activities of the various individuals. The question is, how could these coordination and cooperation activities be electronically supported? The key is the complete consideration of all phases (processes) of the customer buying cycle. [5]

Thinking about the act of purchase in general, we can distinguish four phases:



Graphic 7: Customer buying cycle for MetaCampus

These four process phases have to be supported by MetaCampus. It has to manage several functions inside these different phases.

But we do not only want to support the primary functions of a marketplace, we also strive for brokerage processes. So there is a need for an intermediary. In general, the Internet supports the effect of Dis-Intermediation in order to reduce the transaction costs by the so-called electronic brokerage effects. The electronic brokerage effect simply means that electronic markets, electronically connecting many different buyers and suppliers through a central database, can fulfil the same function as an intermediary. This is valid without exception for all electronic tradable products with low asset specificity and easy descriptiveness. This kind of transaction is classified as *execution driven*. Opposite this kind of transaction we have the products that are *consultant driven*.

MetaCampus will be a marketplace for consultant driven services. This means there is a need for

intermediary activities. Because of the heterogeneity, variety and specification of learning resources, it is only really conceivable to deal with them like shares on a stock exchange.

Through *Langenbach* we can identify the following roles of a market intermediary standing in close relation to the above described value propositions and which have also to be managed by MetaCampus:

- Aggregation (provision of one-stop shopping)
- Trust (provision of authentication and secure communications)
- Facilitation (exchange of messages between customers and suppliers)
- Matching (provision of marketing information to suppliers)

The following phase model focuses on the fulfilment of all these general tasks:

<b>Value propositions Aggregation / Value Chain Integrator</b>	<b>Tasks of a marketplace</b>	<b>Intermediaries / education broker activities</b>
<ul style="list-style-type: none"> <li>· Selection</li> <li>· Organization</li> <li>· Price</li> <li>· Convenience</li> <li>· Fulfilment</li> <li>· Design and delivery of integrated services</li> </ul>	<ul style="list-style-type: none"> <li>· Matching buyers and sellers (determination of product offerings, search, price discovery),</li> <li>· Facilitation of Transactions (logistics, Settlement, Trust),</li> <li>· Giving Institutional Infrastructure (legal, regulatory).</li> </ul>	<ul style="list-style-type: none"> <li>· Aggregation (provision of one-stop shopping)</li> <li>· Trust (provision of authentication and secure communications)</li> <li>· Facilitation (exchange of messages between customers and suppliers)</li> <li>· Matching (provision of marketing information to suppliers)</li> </ul>

Tab. 2: General tasks

The next step is to determine those functions in the different phases of the customer buying cycle which will add to the realization of the value propositions, tasks and activities identified and described before and which will at last lead to the fulfilment of the key processes.

All the above-described topics can be achieved by fulfilling eighteen tasks which were worked out. According to the restricted place, they are not described in detail in this paper. For the end, we give just a short example of one task:

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