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Web 2.0 Adoption by Danish Newspapers - Urgent Need for New Business Models?

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Abstract: This paper presents findings from the development process of a general innovation framework for an ongoing Nordic R&D project on e-business and media. It focuses on the current state of the Danish news media sector and the conclusions we can draw from the "Web 2.0 activity" of the Danish newspapers. The paper concludes that the Web 2.0 implies the need for fundamental re-thinking of the business models of the news media sector and for developing a new framework for business modelling for this sector.

Key Words: Web 2.0, Wikinomics, New Media, Social Media, Newspapers, Business Models, Heterarchy
Categories: H.4.2, K.4.4, L.6.1

1 Introduction

This paper is work in progress and part of a Nordic R&D project on e-business and media supported by the Nordic Innovation Centre. The objective of this project is to identify, evaluate and develop new innovative service forms and products for Nordic service providers and new innovative software and hardware for these e-business and media products.

At the Centre for Applied ICT at the Copenhagen Business School we have developed the general framework for innovation for the project and currently we are working on a pilot study for developing new business models together with a large Danish media vendor. This pilot study focuses on the news market.

In the first section we present a survey of the "Web 2.0 activity" of traditional Danish news media. This gives rise to the question whether there is a need for development of radically new business models in the media sector. In affirmation of this we finally propose an ontology for business modelling that could support this development.

2 Survey of Web 2.0 adoption by Danish news media

The phrase Web 2.0 was coined at a conference at O'Reilly Media in 2004 and hints at an improved form of the World Wide Web. While Web 1.0 sites were mere information silos, the "upgraded" 2.0 Web enables interactive content generation by the utilization of technologies for many-to-many publishing (e.g. blogs, wikis, RSS Feeds etc.), social/collaborative software for data sharing (e.g. Facebook, YouTube or Flickr) and open source standards/source code sharing. O'Reilly Media associates different technologies, services and phenomenon with the term, see fig. 1.

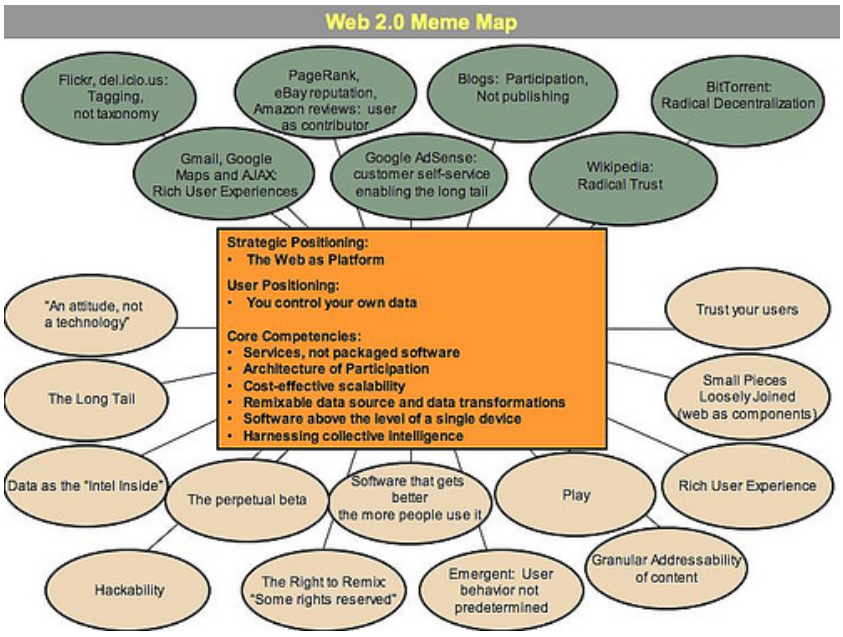

Figure 1: Meme map of Web 2.0 [O'Reilly, 2005]

To establish a better understanding of the impact of Web 2.0 on the media sector, we have done a survey of the adoption of Web 2.0 technologies and services by traditional Danish news media. Because the Web 2.0 umbrella embraces both technologies and services these will be referred to as 'features' in the following. Under the Web 2.0 umbrella we include new methods for delivery, participation and sharing, shopping, search, Web TV, and semantic/affiliated micro ads such as GoogleAds, see Table 1. These categories were developed during the process of the survey and thus, if a new feature was discovered, the categories were changed. The result are categories that frame different aspects of the Web 2.0 umbrella. A number of other features that could be included under the Web 2.0 umbrella are so widely or so little adopted, that we have chosen to list them separately, see Table 2.

The news media in the survey are the websites of all the Danish newspapers with national coverage, plus the three business news sub-sites (epn.dk, business.dk,

erhvervsbladet.dk) that are part of the two large media houses (JP/Politikens Hus and Berlingske Officin). All sites are categorised by affiliation to the parent organisation, those which are not part of a larger media house are categorised as independent. The total number of sites in the survey is 16, including the websites of five traditional morning news papers (Jyllands-Posten (JP), Politiken, Berlingske, Information, Kristeligt Dagblad (KrD)), one business morning paper (Børsen), one weekly paper (Weekendavisen), two tabloids (B.T., Ekstra Bladet (EB)), four free daily papers (24timer, Urban, metroXpress, Nyhedsavisen (Avisen)).

		Delivery					Participation/sharing								Shopping			Search			TV	Ads
		ePaper (pdf)	Newsletter	RSS	Mobile feed	Podcast	Blogs	Comments/Debate	Tips/sharing	Bookmark	Photo/Video/Flash (+/- sharing)	Vote/your opinion	Competitions	Games (free, pay)	Pay per tips	Mobil/PC (downloads)	Webshop (music, films, books, travels)	Tickets (cultural events)	Cultural events etc. Jobs, addresses,	Travels (info)	Dating	Web TV	Semantic/affiliated (Google, iSense)
JP/Politiken	JP.dk	x	x	x	x						x			x		x			x	x		x	
	epn.dk		x	x	x														x			x	
	Politiken.dk	x	x	x	x		x	x			x		x	x			x	x	x	x		x	
	EB.dk	x		x	x		x	x	x		x		x	x	x	x	x		x	x	x	x	
	24timer.dk	x					x	x	x			x	x		**		x						
Berlingske Officin	Berlingske.dk	x	x	x			x	x	x	x	x	x					x	x	x	x		x	
	business.dk		x	x			*	*			x								x			x	
	erhvervsbladet.dk		x	x			*	*			x								x			x	
	BT.dk		x	x			x	x	x		x	x	x	x		x	x		x	x	x	x	x
	Urban.dk	x		x		x	x				x	x		x		x	x		x	x			
	Weekendavisen.dk																						
Independent	Information.dk		x				*	x														x	
	KrD.dk	x	x	x			x	x				x					x		x		x		
	Avisen.dk	x		x			x	x											x				x
	Metroxpress.dk			x				x			x		x		**		x	x	x				x
	Borsen.dk	x	x	x	x	x								x					x			x	
Total	16	9	10	13	5	2	11	11	4	1	9	5	5	6	3	4	8	3	13	6	3	10	3

*journalist blogs with user comments ** gifts, not cash

Table 1: Web 2.0 features on Danish newspapers' websites, Feb. 2008.

As shown in Table 1 all except one of the sites in the survey offers some of the features that we have included under the Web 2.0 umbrella. RSS feeds and newsletters are the most common features and some sites also offer other forms of personal delivery such as podcasts and feeds for mobile telephone platforms. JP.dk offers the most advanced delivery service with the JP2beta, an electronic edition of the paper that updates itself whenever the user is online. Most sites allow users to participate by commenting and blogging and other interaction features such as votes, competitions and tips are also common. A few sites even offer to "pay" for tips and other user input, e.g. user profiles and links. Avisen.dk incites pro-am-journalism explicitly.

Most sites have intensive use of photo, video, sound and Flash journalism and many allow users to share visual/audio content. Most sites display WebTV. Berlingske.dk has the most user-friendly bookmark and sharing system, allowing the user to share different kinds of content using a simple, single interface. Some sites offer free games and other entertainment freeloads. Most sites include free search options for jobs, shopping, travels etc. Most offer some kind of payload and/or retail shopping (music, films, gadgets, tickets, books etc.) or links to partnering sites that offer such services. A few display ads by Google and one displays Ad Pepper Media's semantic iSense ads (MetroXpress). Figure 2 gives an overview of the total adoption.

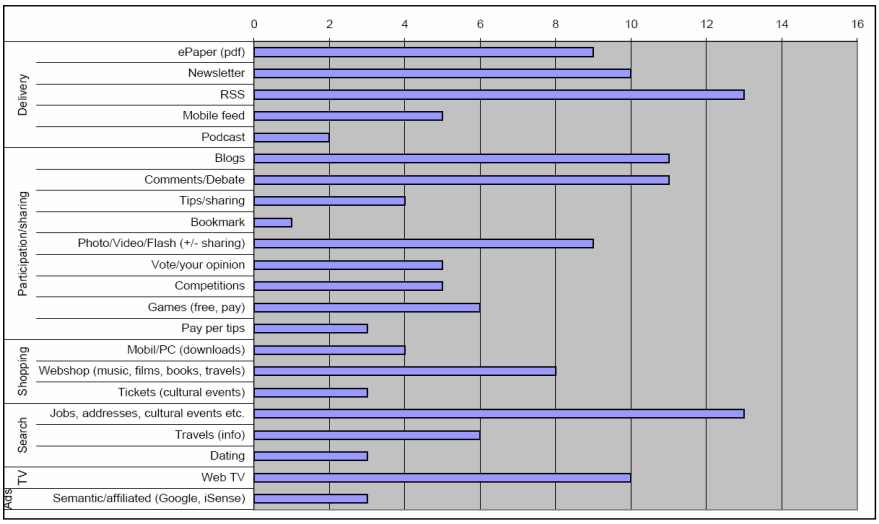

Figure 2: Overview of Web 2.0 features on Danish newspapers' websites, Feb. 2008.

Going into the details of this adoption reveals great differences in both quantity and quality of the utilization of the technologies and services. The sites affiliated with the two large media houses represents the bulk of the Web 2.0 adoption, but even though these two groups of sites have access to the same (respectively) technologies and services, they do not utilize them in the same manner. For example is the site of the free daily paper, 24timer, set up as a real *blogosphere*, the only one in the survey, while the sites of the morning paper, Politiken, and the tabloid, EB, focuses on publishing rather than participation; they offer blogging, but are not centred around it. This is also the general picture.

Table 2 lists a number of features that are either widely adopted or little adopted. As we include these features under the Web 2.0 umbrella, the listing of the little adopted features points at a variety of adoption that seem almost random, and it might also imply a vast space of unutilized possibilities for the traditional media industry.

General features – adopted by most	**Special features – adopted by few**
Partnering	Links to other news providers, e.g. international newspapers (Information)
External links	Free calendar for events posted by users (Information)
Diversification of content, sub-sites	Open Source (Information)
Hybrid media	Blogosphere/User universe (24timer)
Hyper local content	Gadgets/widgets (Børsen)
Archive search (mostly by subscription)	Webcam (Politiken)
Pay per article	Very user-friendly sharing (Berlingske)
Tip/tell your friend	Forums: Stock market, politics (business.dk)
Most read	MyPaper (JP2, Nyhedsavisen)
Related articles	OurPaper/Pro-AmJournalism (Nyhedsavisen)
Tags	Payload music, films (BT, Urban)
	Radio (Urban)
	No web 2.0 features (Weekendavisen)

Table 2: Web 2.0 related features with either wide or little adoption

Even though the data presented in the survey point at wide adoption of Web 2.0 features by the traditional Danish media sector, in comparison with the Web 2.0 adoption of the 'new media companies' such as Google, Facebook or the Danish site Arto.dk (an extremely popular social networking site for youngster) the websites of the traditional Danish media sector seem to be far from reaching their potential for Web 2.0 adoption. Our data suggests that the changes we see in traditional media are driven by the 'new media companies' and that traditional media adapts to, adopts and promotes these changes, but are not themselves drivers of change. Their Web 2.0 activity does not seem to fully embrace the new possibilities. The current adoption seems random and driven more by fashion and fascination than strategic implementation of business models.

This becomes clear when we try to derive business models from the adoption of Web 2.0 features, as there seems to be no genuine 'Web 2.0 business models' connected to the websites in the survey. Most features seem to be adopted on the basis of a single logic: Increase traffic by offering the consumer a somewhat customizable product in order to increase advertising revenues. Thus, it is not the "Web 2.0 feature" in it-self that generates revenue, and the question is, whether traditional news media industry will become capable of generating profit in the realm of Web 2.0, where companies like Google or Facebook are natives. For example are the advertising models of these companies far more sophisticated than those of traditional media, revenues are generated by facilitating access to social networks, sharing of personal information etc. – profit is very closely linked with the user's "Web 2.0 activity". This seems not to be the case in traditional media today.

These findings are in accordance with Krueger, who states in her conclusion [Krueger, 2006, p. 292] that "Online news is … an excellent example of how the newspaper industry in the physical world is grappling with the changes which moving to cyberspace requires". On the use of business models in the news media she finds [Krueger, 2006, p. 296]:

"Most descriptions of Internet business models were rather static …, and failed to take into account the dynamics of increasingly complex market environments. My findings make clear that the Internet gives business models a new flexibility that did not previously exist."

Krueger also checked whether existing definitions, frameworks, taxonomies and components in the area of Internet business model research were valid for Internet business models in the news and music sectors. She concludes, that they were, but that they "… just did not go far enough and weren't flexible enough for a constantly changing new business environment." Osterwalder makes a similar conclusion in his dissertation [Osterwalder, 2002].

The authors of Wikinomics [Tapscott and Williams, 2006] note that though the significance of 'prosumers' – a term originally coined by Allan Toffler in 1980 to describe how the gap between producers and consumers is blurring – is now widely recognized, prosumption is still not embraced by traditional business:

"… most still confuse prosumption with "customer centricity", where companies decide what the basics are and customers get to modify certain elements." [Tapscott and Williams 2006, p. 125]

From different perspectives Tapscott and Williams, Tim O'Reilly [O'Reilly 2006] and James Surowiecki, author of the much cited "The Wisdom of Crowds"

[Suroweicki, 2005], all state that the entire world of business will be undergoing never precedented changes as a consequence of the rise of the wise, creative, collaborating and sharing crowd that is the powerful core of Web 2.0. Accordingly, these authors point at a need for radically new approaches – businesses need to embrace collaboration, user-generation, re-mixing, copying, hacking etc. When the consumer become producer and vice versa the neo-classical economic models crumble. For the traditional media industry the need to take action is especially urgent:

"In no other industry is the tension between the pre-existing power of producers and the increasing power of self-organized customer communities so pronounced." [Tatscott and Williams, 2006, p. 137]

The survey of the current state of the "Web 2.0 activity" of traditional Danish media confirms these authors' claims. If profitable "Web 2.0 business models" are to be developed by the traditional media sector, we believe it is necessary to disregard the traffic related advertising models as the primary source of revenue and start to concentrate innovative forces on the development of business models that incite collaboration, embraces genuine user-generation, targets and involves networks and maybe foremost: Are independent of the traditional publishing based business models of traditional media.

But are these business models fundamentally different from those of traditional media?

3 New business models?

After an analysis of a manifold of business and e-business models (e.g.: Applegate [Appelgate, 2001], Timmers [Timmers, 2002], Cherian [Cherian, 2002], Afuah and Tucci [Afuah and Tucci, 2001], Weill and Vital [Weill and Vital, 2002], Amity and Zott [Amity and Zott, 2001], Rappa [Rappa, 2002]) Hedman and Kalling ask:

"….does the Internet, dot-com and the networked economy require new business models?" [Hedman and Kalling, 2002, p. 134]

And they answer: NO! Hedman and Kalling claim that even if the so-called old business model might be greatly affected by e-business models, nothing has changed except alterations of the causality between the components of the business model.

"Every firm, wherever they compete (the Internet or the real world), needs a market with customers and has to offer services and fullproducts at a certain price at a certain cost. The offering has to be developed and produced through activities and an organization that use resources to convert production inputs into offers." [Hedman and Kalling, 2002, p. 234]

This conclusion is in accordance with Porter [Porter, 2001], [Porter, 2008], who still claims that his strategic model from the seventies [Porter, 1979] can be used even in a world of rapid change and extreme complexity. Only minor alterations in the Five Forces and the Value Chain are needed, but the six basic principles behind his thinking are not threatened. Rationality and analysis in any industry is still the most used approach. Porter writes:

"In our quest to see how the Internet is different, we have failed to see how the Internet is the same. While new means of conducting business has become available, the fundamentals of competition remain unchanged. The next stage of the Internet's

evolution will involve a shift in thinking from e-business to business, from e-strategy to strategy. Only by integrating the Internet into overall strategy will this powerful new technology become an equally powerful force for competitive advantage" [Porter 2001, p. 78].

Even without the "e" business models based on the strategic framework of Porter are based on neo-classical economic thinking. To develop genuine "Web 2.0 business models" there seems to be a need for new frameworks for business model development. According to Gordijn and Akkermans [Gordijn and Akkermans, 2003] classical e-business models focus on IT Architecture and/or Business Processes. This is in accordance with the findings of both Krueger [Krueger, 2006] and Osterwalder [Osterwalder, 2002]. However, Gordijn and Akkermans point to the fact that there is a need for a third perspective; the value perspective. So in their ontology – named the e^3-value model - all three perspectives are represented:

- Business managers who decide whether or not to go ahead with forming the value constellation.
- Business architects who design business processes and responsibility structures.
- IT architects who design IT support for business processes.

Our findings based on the survey of the use of Web 2.0 features by traditional Danish news media are in accordance with these conclusions of Gordjin & Akkermans as far as Business Processes and IT support is concerned. What is lacking is the value constellation.

However, the claim for the inclusion of dynamic value-constellations needs a deeper analysis. It is related to the developments in transaction cost theory as formulated by the Nobel Lauterate Ronald Coase. In his Nobel Lecture in 1991 he states, that incorporating transaction costs into standard economic theory will be very difficult as economists are extremely conservative in their methods. And he continues to argue, that it also would be extremely complex and in the present state of ignorance in economics it will not be easy to discover what factors and what kind of organization are needed to handle - i.e. minimize - transaction costs.

The reason for this is that standard economic theory has been based on the assumption that transaction cost is zero, which makes it very difficult for economists to include them. Coase [1991] says: "Like most scientists, as Thomas Kuhn has told us, are extremely conservative in their methods, and have not been inclined to attempt it."

What stands as Coase' fundamental insight is:

Either, to minimize transaction costs by internalizing these costs through hierarchies based on competition,
Or, to minimize transaction costs by externalizing and sharing these costs through cooperative networks based on mutual trust.

The traditional e-business models are based on the concept of internalizing transactions costs, while it is our claim that "new" e-business models should be based

on the other concept of externalizing transaction costs. However, this calls for new ways of organizing also.

4 Heterarchy as a way handling transaction costs

One of the most prominent scholars that have tried to make a societal analysis of the conditions for organizing in the future is Manuel Castells. In his three volume work: The Information Society he uses Coase's theories to define what he calls the network.

In "The Rize of the Network Society" Castells [Castells, 1995, vol. I, p. 21] states, that one of the key features of informational society is the networking logic of its basic structure, which explains the use of the concept of "network society". And he explains that components of "informational society", such as social movements or the state, exhibit features that go beyond the networking logic, although they are substantially influenced by such logic, as characteristic of the new social structure.

So, the "network society" does not exhaust all the meaning of the "informational society", but we must realize that a new agent of capitalist competition has arrived: *the network enterprise*. And Castells [Castells, 1995, Vol. I, p. 198] concludes:
"For the first time in history, the basic unit of economic organization is not a subject, be it individual (such as the entrepreneur, or the entrepreneurial family) or collective (such as the capitalist class, the corporation, the state). As I have tried to show, *the unit is the network*, made up of a variety of subjects and organizations, relentlessly modified as networks adapt to supportive environments and market structures. What glues together these networks?"

In accordance with the claim of mutual trust as the basis of externalizing transaction costs Castells calls this glue for the "ethical foundation of the network enterprise" and the "spirit of informationalism?"

On this spirit of informationalism Castells [Castells, 1995, vol. I, p. 191] says that, it:
"… is a multi-faceted, virtual culture, as in the visual experiences created by computers in cyberspace by rearranging reality. It is not a fantasy, it is a material force because it informs, and enforces, powerful economic decisions at every moment in the life of the network. The network enterprise learns to live within this virtual culture. Any attempt at crystallizing the position in the network as a cultural code in a particular time and space sentences the network to obsolescence, since it becomes too rigid for the variable geometry required by informationalism."

In good accordance with both Coase and Castells others have taken the argument even further. One example is the work of Prahalad & Krishnan [Prahalad & Krishnan, 2008]. They claim that

- the old sources of competitive advantage - access to technology, labor, and capital - are no longer unique differentiators for most firms.
- the new source of competitive differentiation may lie in the internal capacity to reconfigure resources in real time.
- clearly documented, transparent, and resilient processes are a must.

Prahalad & Krishnan [Prahalad & Krishnan, 2008, p.11] go on to state, that this transformation must be built on two basic pillars:

1. "Value […] based on unique, personalized experiences of consumers. Firms have to learn to focus on one consumer and her experience at a time, even if they serve 100 million consumers. The focus is on the centrality of the individual. We will designate this pillar as N = 1 (one consumer experience at a time)

2. No firm is big enough in scope and size to satisfy the experiences of one consumer at a time. All firms will access resources from a wide variety of other big and small firms - a global ecosystem. The focus is on access to resources, not ownership of resources. We will designate this pillar as R = G (resources from multiple vendors and often from around the globe)"

So their formula is N=1 and R=G. Thus any e-business model must be able to handle this formula as well as establish ways to organize and externalize transactions costs.

Another example is the extended research on networks that David Stark and his colleagues at Columbia University, New York, have carried out. They have termed the new kind of emerging organizational form: *heterarchy*. This concept encompasses all that is needed to incorporate 'distributed intelligence and diversity of values' into a third organizing principle – along with the more traditional concepts of hierarchy and market. Stark [Stark, 2008, p. 21] explains:

"Mid-20th century, there existed a general consensus about the ideal attributes of the modern organization: it had a clear chain of command, with strategy and decisions made by the organizational leadership; instructions were disseminated and information gathered up and down the hierarchical ladder of authority; design preceded execution with the latter carried out with the time-management precision of a Taylorist organizational machine. This consensus was still strong thirty years later when economist Oliver Williamson published an article [based on Oliver Williamson's critique of Coase's theory, authors addition] in the *American Journal of Sociology* confidently assuming that he could embrace all economic activity within only two logics of coordination – "markets and hierarchies." By the end of the century, the main precepts of that ideal organizational model would be challenged. The primacy of relations of hierarchical dependence within the firm and relations of market independence between firms was giving way to relations of interdependence among networks of firms and among units within the firm.

Heterarchical forms do not take the boundaries of the firm and the boundaries of its internal units as fixed parameters. (…) the boundaries of the firm, especially those in fast-breaking sectors, are criss-crossed by dense ties of interlocking ownership and complex patterns of strategic alliances. Where the environment is most volatile and uncertain, the real unit of economic action is increasingly not the isolated firm but networks of firms."

And Stark [Stark, 2008, p. 25] continues the explanation of heterarchy:

"Heterarchy represents an organizational form of distributed intelligence in which units are laterally accountable according to diverse principles of evaluation. Two key features are at work here. In contrast to the vertical authority of hierarchies, heterarchies are characterized by more cross-cutting network structures, reflecting the

greater interdependencies of complex collaboration. They are heterarchical, moreover, because there is no hierarchical ordering of the competing evaluative principles."

The heterarchical organizing includes two features: (1) the feature of heterarchically distributed intelligence organized through lateral accountability, and (2) the heterarchical organization of diversity as rivalry among performance principles. Both these features are a response to the increasing complexity of the enterprise's environment.

The first feature is based on a radical decentralization in which virtually every unit becomes engaged in producing value. The result is to increase the autonomy of work units from central management. Authority is no longer delegated vertically but instead emerges laterally.

The second feature is central to the problems of worth in organizations. As Stark says, we must thus first explore the concept of *accounts*. And Stark [Stark, 2008, p. 31] explains:

"Etymologically rich, the term simultaneously connotes bookkeeping and narration. Both dimensions entail evaluative judgments, and each implies the other: Accountants prepare story lines according to established formulae, and in the
accounts given by a good storyteller we know what counts."

In short: Heterarchies create wealth by inviting more than one way of evaluating worth and values.

5 Conclusion: A new business model ontology for the traditional media sector?

As the ontology of the e^3-value model points out, any e-business model should include the following qualities: (1) economic value that are created, exchanged, and consumed by all actors, including who is doing business with whom, (2) power elements, not only prices themselves, but the actors who select the service or product, (3) cover all important issues in order to create a viable and sustainable comprehensive, transparent model, (4) incorporate an encouraging way of visualising for better mutual understanding and communication, (5) focus on possibilities for dynamic innovation and strategy.

An essential feature of this value quality in e-business modelling is the concept of network. In the neo-classical economic thinking the "Porter-stakeholders" (competitors, buyers/customers, vendors) is taken to be very constant in the industry. But in a knowledge economy where these stakeholders dynamically and constantly change into each other - and at the same time and in the same space exchange knowledge - the value creation and exploitation processes are totally determined by the network constellation of the actors and their offerings. In the words of Castells: The business unit of the future is *the network*. Castells explains [Castells, 1995, vol. I, p.170-1]:

"…co-operation and networking offer the only possibility to share costs, and risks, as well as to keep up with constantly renewed information. …. Under the conditions of fast technological change, networks, not firms, have become the actual operating unit. … This enterprise has the specific form that goals and the change of goals, shape and endlessly reshape the structure of means."

This kind of enterprise, the network, must be able to generate knowledge and process information efficiently in order to adapt to the variable geometry of the global economy. It must be flexible enough to change its means as rapidly as goals change, under the impact of cultural, technological, and institutional change. And it must constantly innovate both its products/services and its business model, as innovation becomes the key competitive weapon. These characteristics are indeed features of a new economic system, and business modeling must be able to handle this challenge by developing business models that reflects cooperative exchanges of value.

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