Fundación
de la Innovación
Bankinter

08

WEB 2.0
Business Opportunities from Social Networks

Mapa de Redes Sociales

The Accenture Foundation collaborates with the **Bankinter** Foundation ofInnovation to publish the report of the Future Trends Forum (FTF) and to helpadvertise the work of a leader in independent opinion on global tendencies andinnovation. In this sense, Accenture endows the FTF with the whole of its intellectualcapital and its expertise in order to make enterprises and institutions tobecome high-performance organizations.

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Many thanks.
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Executive Summary

In 2005 and 2006 the media was full of talk about Web 2.0. To a large extent, this interest was justified, given the boom in social networking sites and the billion-dollar sums being paid for some of the most emblematic websites.

But what is Web 2.0? **Web 2.0 is really a new way of doing things** so it's hardly surprising that, in the technological arena, the basic standards on which Web 2.0 applications and services are based already existed long before the concept was given a name.

Technologies that were once inaccessible to the majority of **users are now far easier to use, more developed and free and the result is a massive increase in the number of social networking sites with active participation.**

In this new way of doing things, users play an active role in the web: they not only have access to information, they also **provide content.** The more people access the service, the greater the value for other users (this is the network effect), thus fostering **the development of collective intelligence.**

To sum up, Web 2.0 is a new philosophy which has arisen out of developments in technology, enabling users not only to access information but also to create content and add value. The underlying maxim is "if it isn't shared it's lost": the more users there are contributing content, the greater the perceived value of the service.

The power of the people

Web 2.0 is having a **huge impact on society**. The average citizen is more empowered than ever in the digital age, with the capability of expressing their tastes as consumers, sharing their opinions and casting their votes. The people now have a voice: they can be heard and they are more visible.

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Furthermore, social relations are also changing, and this is reflected, for example, in the incredible boom in new **communities**. In the future, people may socialise differently than they do at present.

Interestingly, the adoption of Web 2.0 services does not follow traditional economic lines: on-line users in developing markets are just as involved or even more so than those in the developed world.

One of the areas in which Web 2.0 will have the greatest impact is **education**. The social and collaborative nature of Web 2.0 may encourage education to develop towards what is often called "collective learning". The great range of possibilities offered by Web 2.0 tools and the virtual worlds, coupled with the fact that children find it more entertaining, means that Web 2.0 holds out very good educational and business opportunities.

New opportunities in the company

From a business point of view, Web 2.0 has important implications for marketing and advertising models, and there are numerous business opportunities.

Because it requires a low initial level of short-term start-up investment and a light-weight organisational structure, **new companies can compete quickly** with traditional established companies.

There is no clear classification for all existing Web 2.0 business models in the physical world let alone on the Internet, though a rough idea might look somewhat like this:

Tactic - Direct Revenue
Advertising
Subscriptions (flat rate, variable rate, flat+fixed rate)
Transaction Commissions
Sales revenue
Revenue from services
Donations

Strategy
Mergers and take-overs
The "Long Tail"
Hard-to-copy Databases
User Confidence
Reputation
Creation of a Platform
Increase in Competitiveness
Customer Self-service
Network effect

Illustration 1. Web 2.0 business models.
Source: own preparation.

Whatever model is chosen, there seems to be some consensus that any Web 2.0 company aspiring to succeed must be **capable of generating value for the customer.** The difficulty lies in making these applications—which were not necessarily created as money-making machines—profitable and sustainable.

Web 2.0 not only offers good opportunities for creating new companies, it also offer plenty of applications for traditional ones. Among the main reasons why a traditional company uses Web 2.0 services is the possibility of **improving interaction with customers.**

According to McKinsey, over 75% of management staff now say that their companies are investing in Web 2.0 and plan to maintain or increase their investments in technological trends that encourage user collaboration.

There will be a major shift in the area of advertising, with the possibility of creating more personalised—and thus more effective—campaigns.

Waiting For the Law

In this constantly changing world, the law is always a **few steps behind**. In some cases legal gaps exist with regard to situations that arise in the Internet by virtue of its anonymity and globality; in other cases the law simply lags far behind the real situation, slowing progress and innovation. **Global solutions** need to be found that will not slow the advance of the Internet or the incentive to participate.

Firstly, given that social networking encourages user cooperation, re-use of contents and free access to information for developing collective intelligence, it is reasonable to wonder about the implications for **copyright** and **intellectual property rights.**

Secondly, value has shifted from the applications to the data they contain, and the future legal battle will therefore be over **regulation of the ownership of databases and privacy, and non-fraudulent use of such data.**

Real or virtual?

In the future, the trend seems likely to be towards an intelligent virtual world, in which avatars function according to each person's data and habits. Avatars will bring their users news and advertising for products of interest to them, educate them about subjects they might find useful and foster relationships among people with shared affinities and interests. It will be a **participative, intelligent and effective web** which will save the user time and provide an **unlimited flow of knowledge.**

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CHAPTER 1

Foreword

1 Foreword

"Web 2.0' is a marketing term," remarked Google CEO Eric Schmidt. And, of course, he was right. After some years in the wilderness, Silicon Valley has recovered its confidence and cash flow—and with them its capacity for overstatement. "Web 2.0" and its variants ("Enterprise 2.0", "Mobile 2.0" etc.) have become labels of choice for thousands of global startups.

But acknowledging that the term is overhyped doesn't mean that it's meaningless. Interesting Web businesses today contrast quite sharply with those of the dot-com era. With a few exceptions, the dot-coms were about *distribution*: using the low cost and ubiquity of the Web to deliver products, or information about products, through a radically efficient new channel. With a few exceptions, the interesting business now are about production, specifically the distributed *production*, reuse, and recombination of content, chiefly by consumers. Thus *Britannica Online* was Web 1.0; Wikipedia is Web 2.0. Pointcast, 1.0; podcasting, 2.0.

Why is this new? Because technology now makes it easy. Any network adapts to its binding constraints. Ten years ago, processing power and storage were a hundred times less efficient, broadband a rarity, and programming web sites was difficult and expensive. The web therefore evolved as a library of static, professionally-created resources ("pages") downloaded by consumers from corporate servers.

But today's PC has the power of yesterday's server, broadband is increasingly the norm, and new programming approaches (such as Perl and Ruby) maximize ease of coding instead of computational efficiency. Anybody can be a Webmaster. A more symmetrical, peer-to-peer architecture enables more symmetrical peer-to-peer behavior. Higher bandwidth and processing power allow richer content; not just photos and video, but also the rich interactivity of dynamic HTML and JavaScript: static pages evolve into interactive applications remotely delivered: the Web as *noun* becomes the Web as *verb*.

While technology makes this symmetrical, peer-to-peer behavior possible, it is human nature with its rules and norms that are making it valuable and productive. Those rules and norms define key principles of "Web 2.0": *modular architecture* and *community.*

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The architecture of Web 2.0 is "small pieces loosely joined"', as David Weinberger famously described it: modular information services that do just one thing well, but can be combined with others to create richer content. Google Maps and YouTube, for example, publish APIs (application programming interfaces) that allow any web page to download a customized map or video and embed it in other content. Because of this modularity and openness, the programming is trivial, the price zero, and no coordination is needed. About 500 published APIs thus make possible a quarter-of-a-million combinations, each the germ of a business that can be created at negligible cost. And 2,400 of these so-called "mashup" businesses have already appeared. As of this writing, there are forty-eight mashups of Google Maps with You Tube alone.

"Community" has three crucial elements. The first is significant sharing of intellectual property: the vast bulk of content posted on Web 2.0 sites is put into the public domain or published under generous licenses allowing sharing and reuse. Second, contributors are motivated by a range of intrinsic and extrinsic motivations: fun, applause, making friends, skill-building, self-advertisement, or commerce. While traditional economic motivations are present, they do not necessarily dominate. And third, trust is often based on reputation, using simple technologies to allow people or products to be rated by everyone. This serves both as a guide to navigation (as in RateMyProfessors.com or DontDateHimGirl.com), and as a guarantee of good behavior (as in eBay, where the value of preserving one's reputation is generally greater than the profit from reneging on a transaction). Sharing, non-economic motivations, and reputational trust are mutually reinforcing.

The intersections of these developments in technology, architecture, and community are at the heart of Web 2.0. And the results are already spectacular. More than 220 million members of eBay trading over $50 billion per year. One thousand people writing the 30 million lines of Linux code, competing with Microsoft's $10 billion investment in Windows Vista. Two hundred million people creating and consuming MySpace—which for American teens, commands more of their collective attention than television. Nearly 10 million "avatars"—alter egos created by members to represent them—building the metaverse of *Second Life*, a virtual world whose commercial construction would cost more than Hollywood's most ambitious movie. One hundred thousand writing the five million pages of Wikipedia, and rivaling *Encyclopædia Britannica* in a blind test of quality.

Huge swaths of Web 2.0 are not businesses at all, and will never be "monetized." Much of the content is amateur, vapid, and boring. Some of it is of questionable legality. But the implications for conventional businesses are nonetheless enormous. In a few cases (e.g. MySpace, You Tube, Google) huge shareholder value has been created. For some conventional businesses (e.g. media, *software*) Web 2.0 is a seriously disruptive technology. Every business with Web presence needs to rethink how to present itself in an era where Google is its "portal." For advertisers Web 2.0 is a new way to reach consumers and a way the consumers will influence each other whether the advertiser likes it or not. Some companies are building community sites for their customers, or distributors, or suppliers. Others are building presence in the community sites that their customers already frequent. Some companies have adopted Web 2.0 principles as a means of outsourcing innovation. Others are experimenting internally with those principles as a new means of organizing work, especially knowledge-intensive activities that benefit from sharing best-practice. The energy is extraordinary. And the phenomenon only a couple of years old.
The 2007 Future Trends Forum was focused on Web 2.0. The energy of the Forum was also extraordinary, as the following pages will show.

Philip Evans
Senior Partner, The Boston Consulting Group

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CHAPTER 2

Introduction

2 Introduction

In a constantly developing world, one of the keys to success involves knowing how to anticipate change and the possible impact it will have on us in the medium to long term future. If we master this knowledge, we can identify and capitalise on the business opportunities that will arise in the future. Certain tools are essential in achieving this goal, such as an analysis of future trends.

Bankinter set up its **Fundación de la Innovación** with a clear objective: to influence the present by looking to the future and to stimulate the creation of business opportunities at the cutting edge of technology and management, in order to promote innovation in the Spanish business world. It is an ambitious and innovative project, through which Bankinter hopes to stimulate the creation of business opportunities arising out of changes in social surroundings. With over 180 international expert opinion leaders, from different disciplines, hailing from around the world, and a superb board of trustees, the project also seeks to reinforce Bankinter's commitment to society.

The Future Trends Forum (FTF) is the leading and most fully consolidated project of **Fundación de la Innovación Bankinter**. It is the showcase of Bankinter's culture: innovation and commitment to new developments. The FTF is Spain's leading forum on long-term forecasting and innovation, and embraces leading international scientists and intellectuals. It is the only multidisciplinary, multisector and international think-tank in Europe. It seeks to convey all the objectivity of a forum enriched by a range of viewpoints, which remains unbiased and unswayed by interests of any kind.

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The forum strives to predict the immediate future by detecting the social, economic, scientific and technological trends that are most likely to change the way we live and work, analysing possible scenarios and impacts on current business models in sectors that will be most affected, and offering recommendations on how to create wealth out of this situation. These conclusions are circulated among the different strategic spheres of society.

The FTF members themselves can propose issues for discussion and a vote is taken on the ones that will eventually be addressed. The final result comes when the conclusions of this survey of employers, professionals, top management, companies and institutions are circulated. This phase takes the form of this publication and a series of lectures given in the larger cities in Spain.

This latest publication, prepared with collaboration from Accenture, offers the FTF's analysis of the new philosophy that has come to be known as "Web 2.0". Developments in technology now allow **value creation by the user.** Web 2.0 is not a new version of the Web, a communications protocol, or even a new programming language; it is a participative and effective web that will save time and provide an unlimited flow of knowledge, as well as bringing numerous business opportunities, both for creating new companies and for developing traditional ones.

The aim of the first part of the document is to define the concept of Web 2.0 and establish differences with Web 1.0, examine the current situation in the world and analyse the chief implications for society and education.

The second part identifies the sectors that will be most affected, analysing existing business models and new business opportunities Web 2.0 offers. It also lists the different applications for traditional companies, highlights the barriers to implementing them and studies the impact Web 2.0 will have on the advertising industry.

The third part of the report examines the need to adapt legislation to the new environment, without hindering the flow of knowledge while at the same time fostering a participative environment.

Finally, we will look at some possible trends in the field, such as virtual worlds and the semantic web.

Once again, the **Fundación de la Innovación Bankinter** hopes that this new publication will act as a source of knowledge, but, above all, will offer stimulation and guidance to professionals and employers from different sectors to harness the advantages and opportunities Web 2.0 can offer.

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CHAPTER 3

What is Web 2.0?

3 What is Web 2.0?

In 2005 and 2006 the media was full of talk about Web 2.0 in different media. To a large extent, this interest was justified, given the boom in social networking sites and the billion-dollar sums being paid for some of the most emblematic websites.

But **do you know what Web 2.0 actually is?**

If you don't, try answering these questions:

Have you ever used Google Maps?

Have you ever watched a video on YouTube?

Do you have your own profile on MySpace?

Have you ever walked through the streets of Second Life?

If you have, then you've experienced Web 2.0, even if you wouldn't know how to define it.

Wiki

A **wiki** is a web-page written in hypertext that can be freely visited and edited. This means that different people can post their own contributions to the same online document.

Blog

A **blog** is a regularly updated website, with a chronological set of texts or articles by one or more authors.

Try Googling "Web 2.0" and you'll get around three hundred million hits.
As is so often the case with any new concept appears, opinions are divided. While Web 2.0 has sparked interest among many users and programmers around the world, others are not only sceptical about the new development—they're downright irritated by it! They say that it's nothing more than advertising hype to try to sell existing services under new names.

Whether it's a fad or not, the term Web 2.0 (coined by Dale Dougherty of O'Reilly Media in 2003) obviously means something to everyone in the Internet world: All over the Internet, thousands of **blogs**, **wikis** and websites are either enthusing about Web 2.0 or putting it down.

But what is Web 2.0? The term itself can be misleading, so let's start by looking at what it's not. Despite appearances, Web 2.0 is not a new version of the Web, or a communications protocol, or even a new programming language. It's not even something that's uniquely associated with the Internet.

Web 2.0 is really a new way of doing things so it's hardly surprising that, in the technological arena, the basic standards on which Web 2.0 applications and

services are based already existed long before the concept was given a name. Technologies that were once inaccessible to the majority of users are now far easier to use, more developed and free and **the result is a massive increase in the number of social networking sites with active participation.** The website has ceased to be a goal in itself –the ultimate aim of the interaction with the user– to become a platform that enables inter-relation between users, active members of a community sharing a common interest or need. The result is that the users play an active role: they not only have access to information, they also **contribute content and knowledge.**

The result has been a decentralisation of the Internet in which each client is, at the same time, a server (i.e. a content creator). The more people access the service, the greater the value for other users **(this is called the network effect).**

Although the term "user" is often used, probably due to an association of Web 2.0 with the Internet, the Web 2.0 philosophy is not limited to a single platform and it might be more accurate to talk about "active clients".

We could therefore define Web 2.0 using three principles:

- Community: the user provides contents, interacts with other users, creates knowledge networks, etc.

- Technology: higher bandwidth allows data to be transferred at formerly unimaginable speeds. Instead of software packages we now have Web services. Our terminal can be both a client and server at the same time, anywhere in the world.

- Modular architecture: favours faster ad cheaper creation of complex applications.

The end-of-the-century web was a "companies web": a set of contents arranged in such a way that the greatest possible number of eyes could gather around it, see the advertising posted on it and with a bit of luck, reach into their wallets for their credit cards. The aim of the Web was largely to be a shopping mall, with advertisements, shop windows and shops, a place where people went to sell advertising and perform commercial transactions.

Ultimately, companies were merely reproducing familiar models from other environments: the Web was viewed as being just another channel. Sites were entirely one-way, receiving no type of feedback whatsoever from "spectators" beyond the "Add to my trolley" button.

Basically, in Web 1.0, users were the recipients of the technology, the contents and business, whereas in Web 2.0 they are also involved in developing the technology (open-source software), **producing contents** (blogosphere) **and getting involved in business** (Google Adsense).

The table below compares some of the different features of Web 1.0 and Web 2.0:

Web 1.0	Web 2.0
Personal pages	Blogs
Speculation with domain names	Optimisation in search engines
Pages viewed	Cost per click.
Informing	Participating, sharing
Content management systems	Wikis
Directories (taxonomy)	Tagging (folksonomy)
Loyalty	**Syndication**
Advertising with banners and pop-ups	**Contextual advertising**

Table 1. Differences between Web 1.0 and Web 2.0.
Source: Drawn from conclusions within the Future Trends Forum.

Syndication

Syndication is when the originalissuerofinformation or entertainment licences a third party to "rebroadcast" it.

Contextual advertising

Contextual advertising is when advertisements are selected and published by automatic systems, depending on the content users access.

Should we therefore see Web 2.0 as a revolution? As we have said, the technologies on which Web 2.0 is based were already around for some time before, so technologically speaking, it would be more accurate to talk about a development. In social terms, though, it is a revolution: Web 2.0 services allow users to interact and enable information to be obtained from a group, rather that a single poster, thus **encouraging the development of collective intelligence.**

These changes have important implications for marketing and advertising models, and present numerous new business opportunities, as we shall see.

To sum up, Web 2.0 is a new philosophy which has arisen as a result of the developments in technology (bandwidth and modular architecture) **making it possible for users not only to access information but to create contents and add value.** The primary maxim is "if it isn't shared it's lost": the more users there are contributing content, the greater the perceived value of the service.

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CHAPTER 4

Main implications of Web 2.0

4 Main implications of Web 2.0

http://static.scribd.com/docs/hw93s2udydnwb.swf (page 6).

4.1. Impact on Society

Something has changed. The average citizen is more empowered than ever in the digital age. They can express their tastes as a consumer, share their opinions and cast their votes. Although "historically, this power has been undervalued, it is now more important than ever"—says Javier Cremades, a lawyer specialising in freedom of speech and the media—thanks to the possibility Internet offers of creating networks and of globalising information.

One example of citizen power using new technologies, which made the news around the world, was the use of YouTube videos as a channel by US citizens in a television programme to put questions to political candidates on their election platforms.

It is evidence of the way the Internet has become an almost indispensable new tool for making politics. Politicians are campaigning in virtual communities such as Second Life and even use the video exchange portal to promote their election proposals. Conscious of this great potential, YouTube has created CitizenTube, a platform hosting videos of politicians and citizens giving their opinions or asking questions.

The adoption of Web 2.0 services does not follow traditional economic lines; online users from developing markets are just as involved—or even more so—than those in the developed world. Asia, for example, heads the market[1] in the adoption of Web 2.0 services with countries such as China, South Korea, Malaysia, Hong Kong and Philippines.

Surprisingly–according to the latest survey by Novartis' NetObserver– Spain has the lowest percentage of Internet users in Europe using Web 2.0 technology, though most Spaniards do not know the meaning of the term. The Spanish account for 27% of Europeans using Web 2.0 tools, in terms of both own contents and external contents.

According to estimates, the Spanish have posted more than 150 million photos on Flickr and 100 million on YouTube, contributed to 1.5 million articles in Wikipedia, given more than 13 million answers in Yahoo! Answers and created approximately 60 million private or commercial blogs.

Nonetheless, Spain is still a long way behind the European leaders in terms of Internet penetration, ranking only just above Cyprus, Poland, Lithuania and Portugal.

One new feature—and a key to the success of the Web 2.0 philosophy—is that ultimately it is not the publisher of the website who posts the contents and decides what's interesting and what's not. **Instead, the community itself contributes and promotes certain contents** over and above others.

This is the case, for example, with Menéame, a Spanish news promoter, or Al Gore's station Current TV, with contents created only by users, who choose what gets most airtime.

In any case, posting certain contents on the Internet doesn't guarantee that you'll automatically get millions of hits, but it is helping a vast amount of talent to come to the surface.

We still don't really realise—or appreciate—the great creative potential of the Internet. Being successful in the digital world will mean doing interesting things, but brilliant contents can come from anywhere in the world and have a global impact. This could change the way we do things in all areas of society.

Web 2.0 opens a new means of recognition for people with initiative, talent and interest. It will help empower those who do not have access to the mass media and enable people to **have a voice, be heard and enjoy greater visibility**. Already, some bloggers enjoy higher readerships than many columnists and opinion leaders.

It is also predicted that it will lead to a **more participative society,** with more user-friendly tools making it easier to post content. It's never been so easy to create and share contents, meet people and have fun through a personalised multimedia experience. The tools and channels needed to create and share texts, photos, videos and music have never been so accessible and so democratic.

Although it was previously possible to create contents, you needed good technical knowledge and a lot of determination, and that made it off-limits to a large section of the population. The only barrier today is the will to collaborate.

Citizen participation may prove crucial, affecting more areas that might first appear. Take legislation, for example. The rules governing a society are born out an attempt to answer an already-existing situation. This situation is in turn considerably influenced by public opinion—to which in this case, net surfers have a major input.

Its importance, however, does not end there. The sustainability of business models based on these new services depends on **active participation by users** (i.e. active users).

To give an idea of user participation in Web 2.0, let's take a look at the 1% rule, which states that of every 100 people who use this type of service, roughly 90 merely consult, 9 participate and only 1 actually creates contents. In the case of blogs, the rule is even more discouraging. According to UseIt, blogs have the worst participation mismatch, with the 90-9-1 rule which characterises most online communities being transformed into a 95-4.9-0.1 proportion.

This may fuel the fear of a Web 2.0 bubble; however, according to some experts, this situation will gradually change as the technology advances and Web applications emerge that are as easy to use as e-mail.

If we look back a bit, we can see that in last century's web, not only were there fewer of us, we were mostly pretty passive. By 2006, the 1996 situation had been turned on its head: over 85% of the contents on the net were created by common-or-garden users, whereas companies and the media were relegated to producing around 15% of the total.

Given the major role users play in this social web, we need to analyse the main motivations that turn Web 2.0 users into active users. According to the FTF experts, these may be grouped as shown in Illustration 1.

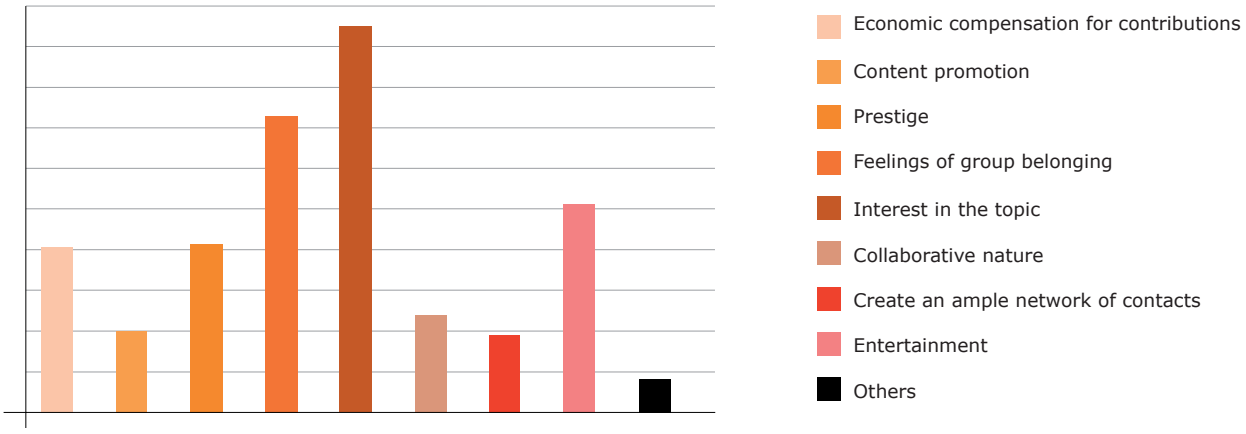


Illustration 1. Chief motivations of active users.
Source: Drawn from conclusions within the Future Trends Forum.

In recent years, there's been a lot of talk in the media of major takeovers by Web 2.0 companies and the intense traffic they generate.

There is a clear move towards Web 2.0 and large companies don't want to be left behind. Examples include Google, which has recently bought out companies such as YouTube for 1.65 billion dollars, DoubleClick for 3.1 billion dollars and the Spanish Panoramio for 6 million euro; or the buy-out of Skype by eBay, for 2.6 million dollars.

Web 2.0 society is seeing another major change affecting **social relations** between individuals, as reflected in the explosion in the number of online **communities.**

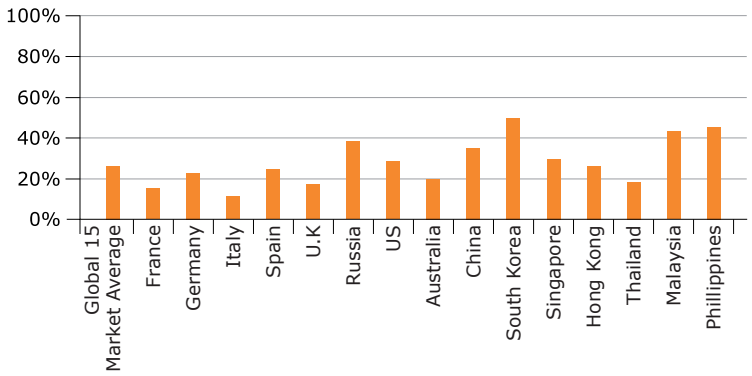
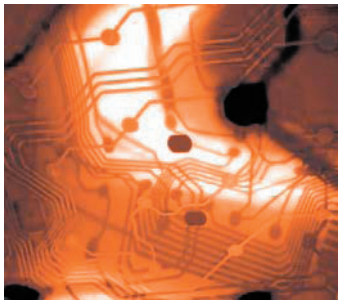


Illustration 2. Access to communities.
Source: Web 2.0. The Global Impact. Study by Universal McCann. Dec. 2006.

This increase is largely down to the fact that many businesses have seen the potential of online communities and got involved. Nonetheless, the mere fact that a community exists does not guarantee its success. Like any Web 2.0 application, its success lies in the participation of users. An article in *El Mundo* argues that for a community to be accepted, it needs to be free, easy to use, acknowledge its collaborators and be secure and effective (so that users can be sure it will be simple to find what they're looking for).

Given this growth in the number of communities, it's reasonable to presume that in the future people may socialise in new and different ways; instead of meeting for a cup of coffee, for example, they might hook up in Second Life to see a film, go dancing or meet new people—and that makes online communities a good business opportunity.



And that's what's happening. In August 2005, a month after Rupert Murdoch, the traditional media mogul, paid 580 million dollars for MySpace, the site overtook Google in number of hits, according to the online ratings bureau comScore Media Metrix. And in November 2006, MySpace clocked up 38.7 billion hits, inching ahead of the previously indomitable Yahoo!, with 38.1 billion.

The phenomenon is unstoppable. Social networking sites—like MySpace, YouTube and Facebook—rapidly evolve into mobile networks, consisting of groups of people sharing common tastes and interests who communicate over their mobile phones. Between now and 2011, it is estimated that the number of people involved in these relationship systems will triple to 174 million users. According to ABI Research, as many social communities are already being created and maintained via mobile phones and other wireless devices as over the computer.

When this sentence was written, there were 180,268,309 profiles on the Web. By the time I'd finished it, there were another 251. Every day, around 300,000 people climb on board the train; increasingly it's becoming a must for anyone who wants to be left behind in this new age.

Yet is there really a **demand for these Web 2.0 services or does it have to be created?** The opinions of some of the FTF experts are listed below:

- There is a general desire to experiment with these services and, if they are really useful, they will be widely recommended, stirring up previously unrealised demand.

- There is a clear demand for these services, which will have to be reconciled with average user connection times. As the number of users—and average connection times—increases, so too will demand for these services.

- There is a clear demand for community-oriented services, albeit still very localised in certain areas, such as content consumption (YouTube) or making contacts (MySpace).

- A demand already exists among users, and what therefore needs to be done is to give them a useful platform to allow them to do everyday things—in other words, things with a real application (such as Flickr, Twitter, etc.).

In any case, most agree that there is a demand for this type of service in one form or another, but it needs to be spurred on with positive user experiences, good contents and a collaborative spirit.

4.2.Implications for education

Education is another area where Web 2.0 will have a major impact, in terms of both teaching methods and contents. How many people with an Internet connection still turn to traditional print encyclopaedias instead of Google, YouTube or Google Maps? Very few.

Although generally speaking, young Europeans understand new technologies and media and participate in them, this does not by any means signify that educational processes have substantially improved, given that these tools have not been incorporated into classroom teaching processes.

Students learn what teachers grade highest, and the way they do so conditions the way they learn. We have to accept that exam-passing one of students' most important—if not the most important— motivations for learning; so the teacher is viewed more as a judge than a guide who helps create a relaxed classroom atmosphere that will encourage knowledge-sharing.

The social and cooperative nature of Web 2.0 could encourage education to develop towards what is often called **"collective learning"**. For the moment, it's no more than vogue term whose meaning has not been fully taken on board by the educational community. All the signs indicate that it will take a while to be assimilated.

This "collaborative learning" involves considering that possession of knowledge is not the exclusive domain of the teacher, but of the group. Each member of the group has greater accessibility to the information, enabling them to offer new perspectives that enrich the relationship and help build new, cooperative knowledge, adapted to the particular needs and features of each group, which in all likelihood will be different to those of the year before.

In this situation, the educational paradigm we need to achieve is one in which the teacher is more of a guide than an instructor—someone who works alongside the student and enables them to choose their own path.

Now we have the idea. The next step is to see whether who also have the right tools to develop it. And there they are. The Web 2.0 philosophy fits this approach perfectly and it can be used to facilitate team learning and knowledge-creation. However, it's one thing to have material and quite another to put it to an educational use that will contribute to improving the educational and learning processes.

Teachers will have to devote more time to tutorials, guidance, individual work searching out new materials, training, moderating forums, blogs, wikis, chats, etc. and less to preparing and giving classes.

It is interesting to see how the differences between traditional and new learning environments are quite similar to the differences between Web 1.0 and Web 2.0. Here too, we can see the usefulness of Web 2.0 for developing learning and the educational process.

Traditional learning environments	New learning environments
Teacher-centred instruction	Student-centred learning
Single-sense stimulation	Multisensory stimulation
Single-path progression	Multipath progression
Single medium	Multimedia
Isolated work	Collaborative work
Information delivery	Information exchange
Passive learning	Active/exploratory/inquiry-based learning
Factual, knowledge-based learning	Critical thinking and informed decision-making
Reactive response	Proactive/planned action
Isolated, artificial context	Authentic, real-world context

Table 2. Differences between traditional and new learning environments.
Source: Estándares en Tecnologías de Información y Comunicación (TIC) para Docentes. ISTE (International Society for Technology in Education).

Notes

The world of **interactivity** and **collective knowledge-building** have much to offer. New inroads need to be made to develop new ways of assessing progress and target-fulfilment in each area of education.

Today, the digital world holds out immense possibilities. For example, students could use Google Ask, Yahoo Search or Live Search to search for relevant information on the Web, use Bloglines or Blinklist to subscribe to other websites dealing with the issue and consult Wikipedia for articles of interest. Relevant pages could be saved and shared online using Furl or Clipmarks for page extracts.

The final document could be prepared with Google Docs and spreadsheets, and stored using Box.net.

Podcast

A **podcast** is an audio or video file that is distributed by means of an RSS file: users subscribe and use a downloadable program to listen to the file whenever they want.

The entire project could be coordinated with Netvibes, with a specific homepage created that would include links to all the tools or sources being used and to the document itself.

Throughout the process, because they are using collaborative tools, the students would learn from each other (cooperative learning).
Finally, the teacher could access the students' documents and information sources, enabling him or her to trace the work they have done.
Another clear example of how Web 2.0 (more specifically, Skype), **podcasts** and bandwidth are transforming education can be seen find in the area of language-learning.

Millions of people in 110 countries can download *ChinesePod* podcasts (printed dialogues or characters) free of charge and learn Chinese at home, in the office or on the bus thanks to Praxis.

There is also a premium service which includes individual chats with teachers over Skype. This experience has been used to launch a new service, *SpanishSense*, and others are expected to follow.

It's good news for students—who can learn whenever and wherever they want with native teachers—and also for businesses, because of its scalability and the possibility of providing this service on a global scale with a small number of employees.

Another example worth noting is **education in virtual worlds** like Whyville.

At some point in our lives, we've all wished we could learn and make decisions without having to suffer the negative consequences of our actions. Technology's capacity to emulate the real world now means that this type of **trial-and-error learning** is possible in an interactive process.

Whyville citizens get involved in educational activities with their friends and are challenged to solve problems in exchange for payment in CLAMS (the local currency of this virtual world).

Like the real world, you need the financial wherewithal to live on and a child (or adult) who wants to go to the movies or buy a car has to complete certain tasks to earn CLAMS that will allow them to pay their expenses. Alternatively, they can get a loan and pay it back in instalments.

So they learn not just about things like art, nutrition and science, but also finance and everyday aspects they'll come across in the real world.

All the activities have a collective and experimental component, so children learn in a group, through experience and practice, instead of just learning the theory, as they would in the traditional education system. This clearly benefits the learning process. If you're trying to teach a child to learn how to eat healthily, isn't it more illustrative to show what happens to their **avatar** if it eats badly than get them to read a book on the subject?

Avatar

An **avatar** is a person's graphic representation on-line, and takes the form of a drawing, photograph or figure.

The great range of possibilities these virtual worlds offer and the fact that children find them more entertaining, gives them great educational and business potential.
As we can see, Web 2.0 offers plenty of education and learning facilities that were already present in VLEs (virtual learning environments) such as Moodle.

Table 3 shows some of the relative advantages of VLEs over Web 2.0 and vice versa.

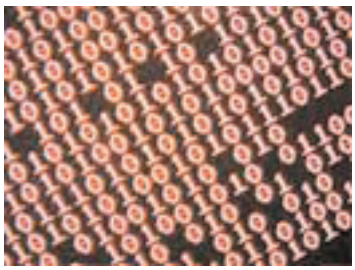
Advantages of VLEs over Web 2.0	Advantages of Web 2.0 over VLEs
Consistent user experience.	ConWider range of services which in continuous improvement (constant beta).
Access to the same tools for all students.	Students can choose tools that are useful to them.
Lower drop-out rate.	Known tools.
Greater control over students.	More customisable services.
	Quick evolution.

Table 3. Comparison between traditional learning environments (VLEs) and new learning environments (Web 2.0).
Source: Herramientas Web 2.0 para la evaluación educativa.

Web 2.0 technologies are very attractive and offer students independence and autonomy, greater collaboration and greater learning efficiency. In practical terms, we can see that each Web 2.0 tool can be applied in different ways to learning:

Tool 2.0	Application
Blog	Used by teachers to give news, resolve students' queries or generate inter-related knowledge via posts and comments.
Wiki	Classwork. Very helpful in having a group generate knowledge, produce material together or for a teacher to provide structure, guidelines and feedback on written work.
Multimedia sharing service	Knowledge sharing. YouTube (videos), iTunes (podcasts and videocasts). Slideshare (presentations). DevianArt (artwork). Scribd (documents).
Podcasts	Provide introductory material before classes. Record classes, enabling students to go back over them. Listen to recordings of native teachers in language classes.
Videocasts	Videos of experiments.
Social networks	Put students in touch with people who can answer their questions or help them find information.
Collective editing tools	Work simultaneously or simply share work edited by different people at different times.
Content syndication and notification	Update collaborators in a team with new contents.

Table 4. Web 2.0 tools with applications in education
Source: Drawn from conclusions within the Future Trends Forum



Other Web 2.0 applications are also useful in education, such as:

- Flickr: allows notes to be made in different areas of a picture and general remarks to be entered on it. These can be used for teachers' explanations, group commentaries, etc.

- FlickrCC, which allows users to find pictures with Creative Commons licences, which can be edited and re-used for educational purposes.

However, it is necessary to be prudent and aware of certain dangers. In education, Web 2.0 not only has advantages, as Trahtemberg[2] foresaw in 2001.

Although the author recognised that the "audiovisual media world" offered cognitive benefits by accepting improvements in visual literacy skills and a better acquisition of knowledge, he highlighted three results he felt were counterproductive:

- Diminished imagination.

- Less mental effort.

- Less attention on purely verbal information.

Weighing up the advantages and disadvantages, we may conclude that Web 2.0 tools can help create an environment where collective knowledge is augmented, but a balance has to be struck between new technologies and traditional techniques, since that the latter are important for fostering certain skills such as creativity, concentration, mental effort, etc.

TRAHTEMBERG, L. (2000). "El impacto previsible de las nuevas tecnologías en la enseñanza y la organización escolar". Paper at the international seminar "The Future for Education in Latin America and the Caribbean", organised by UNESCO-Orealc. Santiago de Chile. [On line] <http://www.schwartzman.org.br/simon/delphi/pdf/trahtemberg.pdf>. [Checked: March 2007].

5

CHAPTER 5

In the company environment

5 In the company environment

Many executives and entrepreneurs know—or at least sense—the opportunities Web 2.0 offers for their businesses. Yet the question they most often ask themselves is "How can I successfully develop all these possibilities in my business and what business opportunities are there in this field?". We believe there are plenty of opportunities, to judge by the fact that by 2008, the majority of the companies on the Global 1000 list will have adopted various technological aspects of Web 2.0.

The new Web 2.0 philosophy, which requires a low level of initial investment, short company-creation period and a lightweight organisational structure allows new companies to compete quickly with traditional companies already established on the market. And traditional companies can also benefit from Web 2.0.

One of the advantages for traditional companies is that Web 2.0 enables them to unify their information flows with suppliers and customers.

In this way, a company reaches new dimensions, identifying information flows ranging from product conception, design and supplier performance all the way through to the end customer, taking in the functions of production, distribution, marketing and customers (extended enterprise).

Although Web 2.0 is a global phenomenon, it does not impact all sectors equally. Illustration 3 shows a list of sectors where it has the greatest impact, according to the FTF experts.

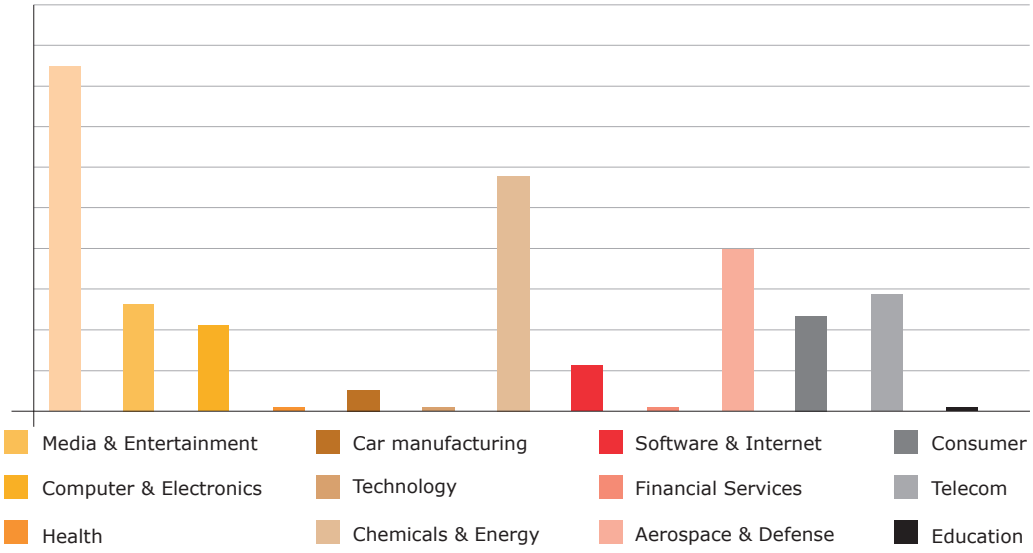


Illustration 3. Web 2.0 impact by sectors.
Source: Drawn from conclusions within the Future Trends Forum.

5.1. Business models of Web 2.0 companies

In the new Web 2.0 generation, a business model has to establish the way a company plans to make money in the long term using the Internet. Some models are quite simple. All the company need to do is offer an online service, distribute it to its customers and, if all goes well, sales revenues will exceed costs and it will make a profit; the model is that simple.

Others, however, are more complex, as is the case of free-to-air radio and television broadcasts. Anyone with a normal everyday receiver can pick up the signal and enjoy the broadcast. This process is part of a complex network of distributors, content creators, advertising agencies, listeners and viewers. With so many different agents involved, it is not always clear who generates the earnings, let alone how much they come to, because it all depends on a series of factors.

There is no clear classification for all existing Web 2.0 business models in the physical world, let alone on the Internet, but Illustration 4 gives a broad outline.

Tactical - Direct Revenue
Advertising
Subscriptions (flat rate, variable rate, flat+fixed rate)
Transaction Commissions
Sales revenue
Revenue from services
Donations

Strategy
Mergers and take-overs
The "Long Tail"
Hard-to-copy Databases
User Confidence
Reputation
Creation of a Platform
Increase in Competitiveness
Customer Self-service
Network effect

Illustration 4. Web 2.0 business models.
Source: Drawn from conclusions within the Future Trends Forum.

Long Tail

The **Long Tail** is the colloquial name given to a long-known feature of some statistical distributions (Pareto distributions). The Internet and the digital environment have changed the laws of distribution and the rules of the market. There are now two markets: the traditional one, centring on high performance by a few products, and a new and still unfamiliar market, based on accumulation of all the small sales of many products, which may equal or even exceed the conventional one. These are the old mass market and the new niche market, represented by the head and tail of the well-known statistical distribution graph.

There are therefore two ways to make money out of Web 2.0: direct or **tactica**l and indirect or **strategic**, which often go unnoticed. Some of the indirect paths lead to an increase in revenue, a rise in the number of users or a greater resistance to competition, which in turn translates into an increase in subscriptions, advertising and income from commissions.

Here are some examples of successful business models of Web 2.0 companies:

Advertising-based:

- Whyville (check video) is a virtual educational world targeted at children aged between 8 and 15. It has 2.4 million registered users around the world, whose aim is to learn, create and just have fun together. On any given day in Whyville there are between 100,000 and 150,000 children in the community (represented by avatars), with an average of 3.5 hours a month per user and 8.5 million educational games played. This virtual world gets more than 2 million visitors a month and around 60,000 new subscriptions.

  The business model of this virtual world is founded on payments from sponsors, who not only pay development costs, but also make incremental payments depending on the number of visitors. However, their contribution is not exclusively financial; they also provide knowledge. NASA, for example offers games that teach next-generation technology for long-distance space travel.

  Another form of income in this virtual world is generated through the sale of CLAMS –a virtual local currency– and premium subscriptions.

Commission-based:

- Innocentive is a new Internet-based community, which brings top scientists together to resolve major R&D challenges posed by leading companies throughout the world, in exchange for payments of up to $100,000. The online forum enables leading companies to reward scientific innovation with financial incentives.

  The main advantages of Innocentive for companies in search of solutions are access to the best scientists of the world and speed in obtaining solutions to difficult problems in the R&D area.

  However, there are also benefits for the scientists: recognition, access to significant problems in the R&D area related to their areas of interest and specialisation, the possibility of participating in the intellectual challenge

of solving world-class R&D problems and of obtaining considerable financial rewards if they come up with successful solutions.

Based on **income from sales**:

- Threadless was founded in 2000 to market T-shirts, with the distinguishing feature that users could send in their own designs. After a public vote, the best designs are printed on T-shirts, which are then sold over the Web. The creators of the winning designs are paid in cash and in coupons which they can use to buy products from the website.

  To ensure efficient stock management, users are polled prior to production in order to estimate the demand for a given design.

Donation-based:

- The Sunlight Foundation was founded in 2006 to create a bridge between politics and citizenship through technology. The site allows ordinary people to learn more about politicians, help reduce corruption, ensure greater transparency and accountability, etc.

  Some of its most important projects include: enabling access to information on Congress, encouraging citizen collaboration to provide political information, identifying areas on which taxpayers' money is spent and assessing the transparency of official websites, among others.

  The Sunlight Foundation's business model is based on financial donations and the names of its contributors are published on the website to ensure total transparency.

Not all Web 2.0 applications are profitable or generate enough revenue to Ensure the success of the business. However, many of them have succeeded in opening up a whole field of new services and new ways of satisfying users' needs, where capitalising on these opportunities is a key feature for developers, users and organisations alike.

Illustration 5 shows the principal Web 2.0-based business models in Europe, according to the FTF experts.

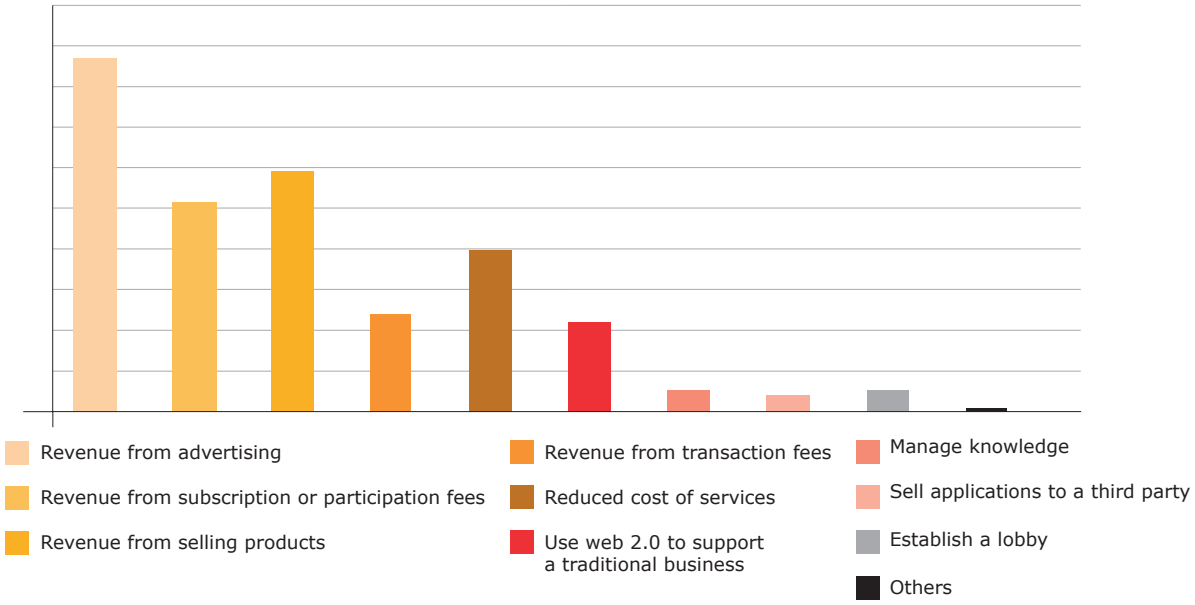


Illustration 5. Principal business models in Web 2.0 companies: Europe.
Source: Drawn from conclusions within the Future Trends Forum

Whatever model is chosen, there seems to be a certain consensus that any Web 2.0 company aspiring to succeed must be capable of generating value for the customer. The difficulty comes in making these applications—which were not necessarily created as money-making machines—profitable and sustainable.

So, what are the keys to making Web 2.0-based businesses sustainable? This is what the FTF experts say:

- Achieving a "network effect", i.e., offering a useful service for users which also increases in value as the number of connections increases.

- Creating a product or service that the user will use. In the case of advertising-based business models, it is also very important to ask how exponential growth can be achieved through user participation.

- A large user base—given that these companies have only a small unit margin.

- Understanding the percentage of their time and available income and expenses the customer is willing to devote.

- Being a profitable business for all those involved. Profitability is often not measured in economic terms, but, if the ultimate aim is for the business model to be sustainable, some sort of profit must be made.

- Confirming the business' position as a stable source of income.
- Finding a market niche for a business and offering a good service that satisfies an existing demand.
- Achieving interaction with the user. If there is no user input, there's no Web 2.0.

In short, business models for companies Web 2.0 share many features with those of traditional companies, although it is particularly important to achieve active participation by the user in order to ensure the sustainability of the model.

5.2. Web 2.0 applications for traditional companies

Viral marketing

Viral marketing a strategy whereby people are encouraged to forward a marketing message to others, leading to an exponential growth in the numbers viewing the message.

Web 2.0 not only offers good opportunities for creating new companies, it also has many applications for traditional companies.

According to The Economist most executives agree that Web 2.0 is going to **change the way they relate internally and externally**, with a shift towards greater networking.

Apart from the increase in communication, one of the reasons the managers give for using these applications is cost reduction, especially in customer care (so important in many companies), R&D (by using the customer as a betatester), and advertising (by replacing advertisements with viral marketing.

The illustration lists the most useful Web 2.0 tools, according to a survey of 250 management staff by InformationWeek Research:

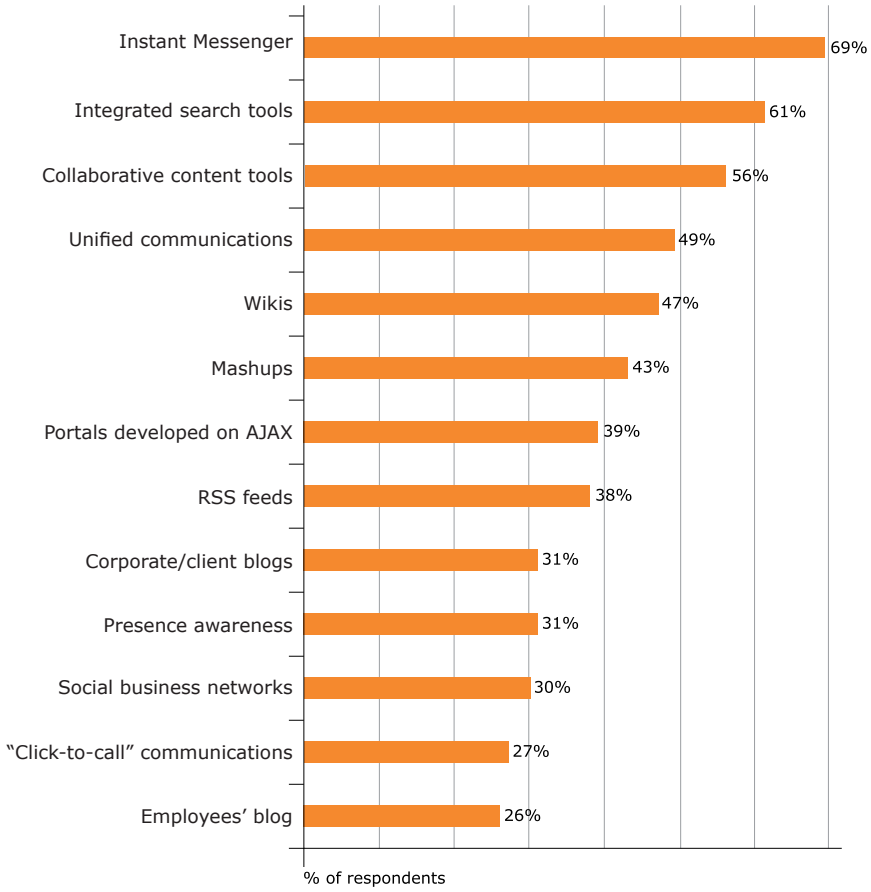


Illustration 6. Most useful Web 2.0 tools.
Source: Information Week Research survey.

Mashup

A **mashup** is a web application that uses resources from more than one online source to create a new service.

Web feed

In IT jargon, a **web feed** is a data format used to provide frequently updated content. Web feeds generally include the headlines of news stories or articles, often accompanied by a short summary. They are widely extensively in blogs.

Although they do not feature in the list, it's also worth mentioning webtop applications. These are traditional desktop applications (word processors, spreadsheets, project management tools, etc.) which can be used across a network. Although they are not yet in mass use, these applications will bring major savings in companies, in licences, disk space, LAN loads, etc.

The fact that the executives are aware of the usefulness of these tools is in itself very significant. Yet to what extent are they actually investing in them?

According to McKinsey [3] , more than 75% of executives claim that their companies are investing in Web 2.0, and they seem to be willing to maintain or increase their investments in this type of technology, which fosters user collaboration.

As Illustration 7 shows, the level of acceptance in the company varies depending on the tool under consideration.

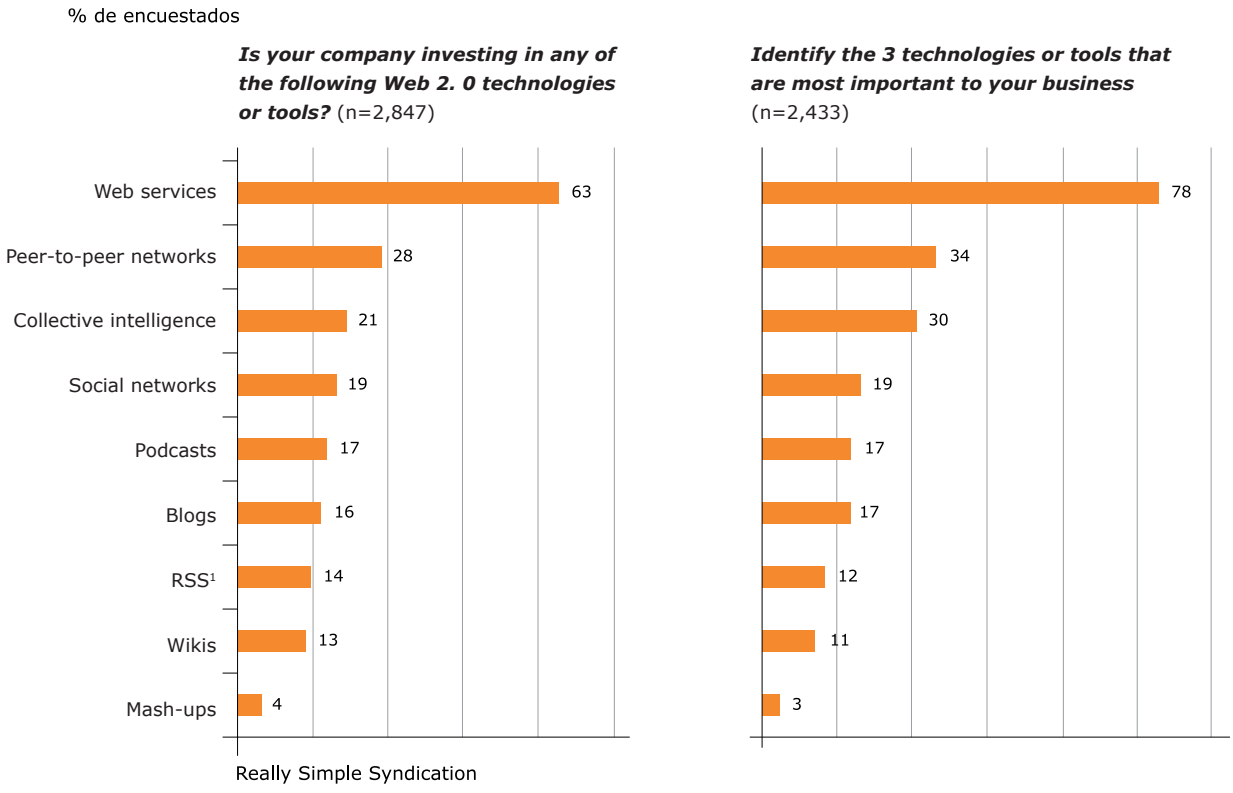


Illustration 7. Web 2.0 technologies in traditional companies.
Source: 2007 McKinsey Survey on Internet Technologies.

However, if we compare the tools that executives consider most useful with actual investment levels, the figures don't match. For example, the InformationWeek survey shows that companies invest more in RSS than in wikis or mashups but consider the latter two to be more useful.

In any case, this data is general and varies depending on the type of company. We can draw a distinction between two separate groups of companies making this kind of investment:

http://www.mckinseyquarterly.com/article_abstract_visitor.aspx?ar=1913.

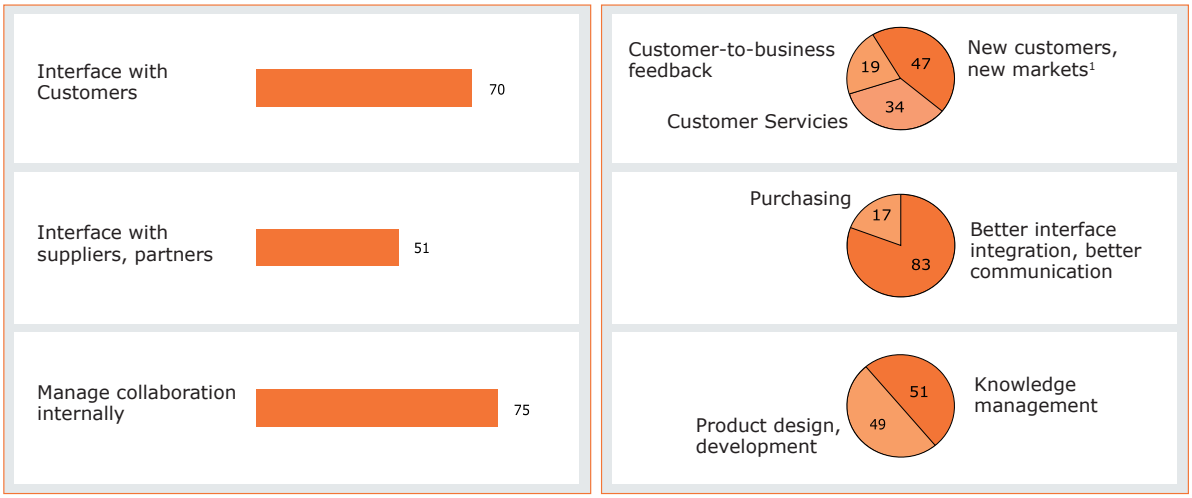
Collective intelligence

Collective intelligence is a system that seeks to unite the experience of a group as opposed to a single individual, thus generating knowledge through collaboration.

- Communication-centred companies, who invest more in RSS, blogs and podcasts.
- Knowledge-centred companies, which invest more in mashups, peer-to-peer networks, social networks and collective intelligence.

What are the principal uses of these tools? Their purpose is not so much to win over audiences as to **improve information processing and distribution in the internal area, encourage employee collaboration and improve communication with customers and suppliers.**

The results of the McKinsey survey are shown in Illustration 8.



[1] Sum of responses for entering new markets and acquiring new customers in existing markets

Illustration 8. Main uses of Web 2.0 in the company.
Source: 2007 McKinsey Survey on Internet Technologies.

Looking to the future, Illustration 9 shows the main reasons that FTF experts believe will lead companies to use Web 2.0 services.

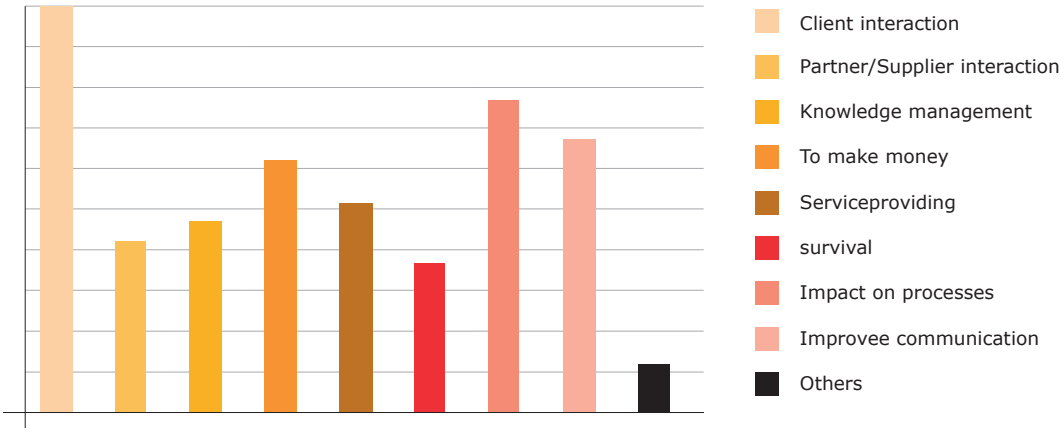


Illustration 9. Principal needs that encourage companies to use Web 2.0.
Source: Drawn from conclusions within the Future Trends Forum.

On their own, these would appear to be reason enough to persuade the most hardened sceptic, but they are not the only ones. Other important reasons include reputation management, commitment to the blogosphere, providing better customer experience and cost-cutting.

So according to the McKinsey survey, companies currently appear to be using Web 2.0 to manage collaboration internally, whereas in the long term, according to the FTF experts, their reasons for incorporating these technologies will target improved customer interaction.

As well as these utilities, the main benefits of Web 2.0 for these companies are:

Notes

- Greater efficiency of applications.
- Greater customer satisfaction resulting from improved communication.
- Increased navigation of internal and external information, especially on product consumption and use, through semantic technologies.
- Feedback on new products from Web 2.0. communities.
- Greater control over public image by the company, which will be able to "sell itself" better by pinpointing bloggers and other influential Web users.
- Optimisation of the marketing department's budget through web-based strategies.

- Boost to the creation of, or move towards, an extended enterprise, a business strategy which is becoming increasingly popular and is essential in formulating competitive strategies for success.

Browsing the net we can see some examples of Web 2.0 applications being used by traditional companies, such as on-line brainstorming by a leading computer manufacturer a wiki to harness the fan base.

Although many companies have engaged with Web 2.0 technologies, however, there are still barriers to incorporating them into traditional companies. Illustration 10 shows the main barriers, according to the FTF experts.

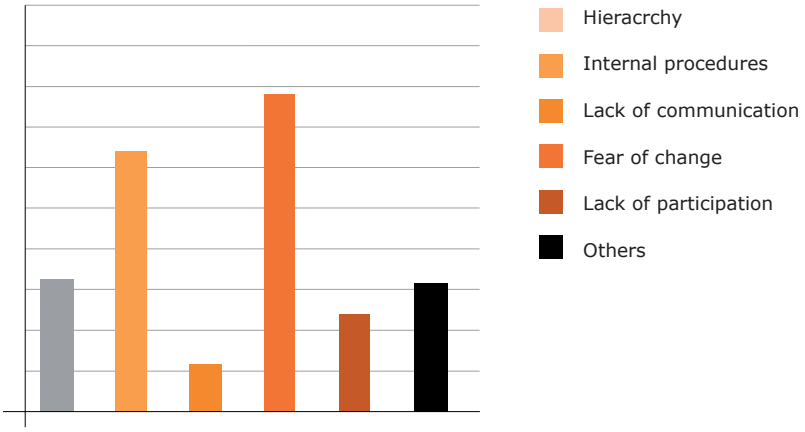


Illustration 10. Barriers to Web 2.0 in companies.
Source: Drawn from conclusions within the Future Trends Forum.

And there's more. Other barriers include ignorance of what Web 2.0 really is, a false feeling of control, leadership that insists on a bottom-up value within the hierarchy and the complexity of the systems.

Likewise, many executives are prevented from investing in these new technologies by a fear (that poor counsellor) of repeating previous experiences when they not only failed to achieve the anticipated returns on their investment, but actually failed to recover it.

Doesn't this all sound a bit like the 1980s, when many companies held out against buying computers? With the benefit of hindsight, it seems like a fairly quaint stance. For many people, Web 2.0 still sounds like science fiction, but interest

in this type of application continues to grow, and it is therefore reasonable to presume that it will be useful in the future. As time goes by, it will be used ever more widely and, as always, the early bird will have the competitive edge.

For anyone interested, Gartner recently set out the following recommendations for companies wishing to get on the Web 2.0 bandwagon:

- Expose your trickiest business and technology challenges to open forums and learn how to identify real contributors.
- Solicit and respond to customers' input, feedback and new service ideas through communities of customers.
- Use social network analysis software to map out how information and ideas flow among your people.
- Pilot virtual markets in which customers and employees can trade "virtual shares" in promising ideas and innovations.

Another important aspect that needs to be analysed in this area of Web 2.0 business is the impact the new philosophy will have on venture capital (VC) and investment companies.

Although, as we have already seen, Web 2.0 offers plenty of new business opportunities, a priori these require less initial capital. As a result, the opportunities for VC will come in later phases in the growth or expansion of this type of company.

Because less initial capital is needed, more projects will emerge and new ideas will be developed which can be taken up by venture capital investment if they grow to be big enough to require such a capital injection.

In turn, this large quantity of new ideas and companies necessitates a search for new models of selection and assessment by investment companies.

Many of these Web 2.0 companies involve a significant "trial and error" component. As a result, many VCs will wait to see results, generally related to a user base, before getting involved in investment. Here there is a risk that these investment companies may be pipped to the post by other strategic buyers, unless the VCs can offer companies something extra in addition to funding.

5.3. Advertising

The most common Web 2.0 business model is the advertising-based one. It may therefore be helpful to analyse the budget spent on Internet advertising, the medium's percentage of penetration and some of the differences between traditional and Internet advertising.

A new study by JupiterResearch, entitled *Media Consumption Patterns: Online Vies with TV As Primary Medium*, suggests that Internet users spend as much time on this medium as on television. However, advertisers continue to target most of their advertising budgets on television and the print media. Internet advertising accounts for little over 2% of total advertising spending in Spain, though it is growing at a rate of over 50% per annum.

Why is this? The answer is simple: it is partly due to the fact that users spend over half of their time online communicating, either by e-mail or by messenger, but, above all because television in Spain reaches nearly 90% of the population, whereas Internet use is below 20%, as the General Media Survey [*Estudio General de Medios*] performed between October 2006 and May 2007 shows (see Illustration 11).

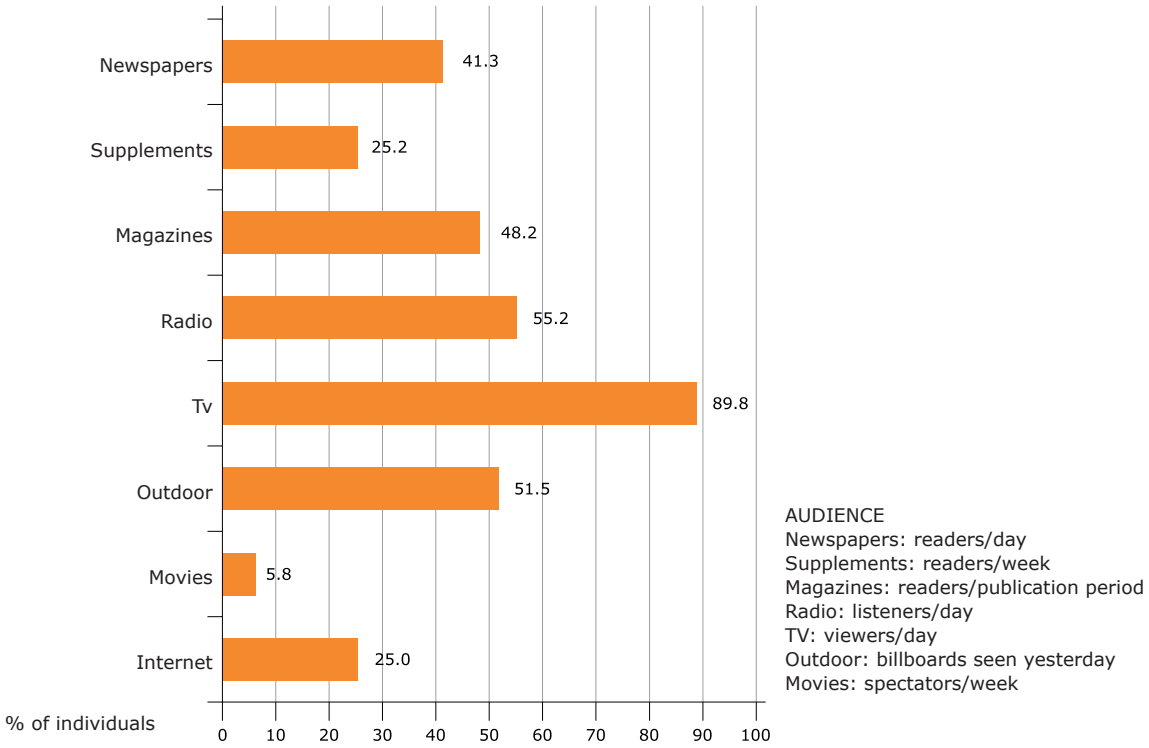


Illustration 11. General Media Audience Ratings.
Source: Asociación para la Investigación de Medios de Comunicación.

Nonetheless, in segmentation terms, a medium like television is quite inefficient and as a result, the Internet and Web 2.0 are very attractive for marketing heads.

RSS

RSS is a simple XML-data format used to syndicate (rebroadcast) contents to subscribers to a particular site.

Web feeds are documents in RSS format. This format allows users to filter news, subscribe to certain sections and ignore others, and receive alerts when news breaks that will interest them. It is unquestionably an experience with which traditional media will find it difficult to compete. The picture of a group of editing staff deciding what news to include in the paper or on the TV is a think of the past.

Over the last five years, the Internet has brought about a profound social change. This is what is known as the **democratisation of the media**, whereby millions of people have been transformed from mere consumers into media producers.

There will therefore be an ever greater number of media and it will be increasingly complicated to reach consumers, who will be more scattered in this micromedia environment. Instead of reading the local print newspaper, they will read microcontent written by someone with the same interests as them, or listen to podcasts on an issue so specific that the radio would never have the time and resources to devote a programme to it.

This fragmented environment in which Web 2.0 thrives, makes it possible to send out commercial messages that are extremely relevant to a very specific target audience. Instead of targeting advertising at a uniform mass over television or the press, companies will now be able to target their messages more effectively.

Advertising agencies will therefore have to prepare to reach smaller and smaller target groups. New technologies will enable them to **target advertising messages at people with a specific interest** in the product, for which they'll have no choice but to use blogs, podcasts and videocasts, among others.

The American chain of department stores Target is a good example of the use of Web 2.0 technologies by companies to communicate with customers. In December 2005 it began publishing its offers for the week in RSS format, so that consumers with an RSS reader could receive the offers directly on their computers (and soon in other devices), together with the news of the day and articles from their favourite blogs.

The publicists' strategy has changed and their target audience now consists of opinion leaders, who can get the message across to a much more segmented audience, any time, anywhere.

Added to this is the fact that **consumers will want to communicate with companies** and play a more active role than that of mere receivers. Advertising agencies therefore have to learn to get into dialogue with customers, instead of simply putting out a mass message.

Surreptitious advertising has proved inefficient for reaching a given segment, whereas contextual advertising programs, such as Google Adsense, offer a range of advantages:

- They make it possible efficiently to segment the market by stakeholders and by geographical areas.
- They allow very low cost advertising campaigns, tailored to a lower budget.
- They offer the possibility of keeping up the advertising campaign and monitoring results and benefits on a daily basis, provided the relationship between investment and income is positive and is performed over the Internet, as is the case, for example, with e-commerce.
- They make it possible to work with a broad range of options for assessing users' responses to each advertising strategy.
- They capitalise on viewing of the advertisements (as a billboard advertisement does), without generating expenses for the advertising company until the customer shows real interest and clicks on the ad.

Contextual advertising is just one example of how advertising in general will change.

We are used to being constantly bombarded with advertisements. Traditionally, advertising has consisted of a one-way communication, in which companies know more than consumers about product acceptance. This picture is changing, however. Thanks to new technologies, consumers can communicate with each other far more readily, obliging advertising to be more sincere and more transparent.

The connectivity of new technologies has favoured the emergence of viral marketing, or self-propagating advertising, an important phenomenon given the good returns some brands are garnering with very little investment. Viral marketing, however, does not just consist of videos doing the rounds over the Internet, nor is it exclusive to the Internet, though Web 2.0 connectivity has made it even more workable.

6

CHAPTER 6

Legality and ethics

6 Legality and ethics

On the Internet, a single individual can have several different identities, various e-mail accounts, different nicknames and even different profiles. Taken to the extreme, they can even create a new identity in Second Life and be and have everything they ever wanted.

In this continuously changing world, the law always lags a few steps behind and although the issue of identity was already raised during the dot-com boom of the 1990s, Web 2.0 involves a series of unresolved legal and ethical questions.

Despite the fact that the social web is supposed to be all about sharing knowledge and ideas (some futurist videos are even predicting the complete disappearance of copyright), in 2004, the publisher that had coined the term, O'Reilly Media, registered "Web 2.0" as a brand. On the face of it, it was a massive contradiction and one which also arises when legal questions are posed on Web 2.0.

Given that the social web encourages cooperation, re-use of contents and free access to information for developing collective intelligence, **what happens to royalties and intellectual property rights?**

The success of the participative web lies largely in the existence of active users who have contributed contents. If they obtain nothing for their participation and do not own the rights to their work, who can guarantee that they will continue working as content creators, and won't prefer to operate through some other channel?

Without intellectual property, Web 2.0 runs the danger of users ceasing to contribute contents. This would stem the flow of knowledge and the Web 2.0 philosophy itself: "If it isn't shared, it's lost". To prevent this happening, a formula needs to be found to allow knowledge to be shared without de-incentivising people who are willing to do it.

Will intellectual property slow the advance of the Internet? Public opinion at large and that of the FTF experts is divided. Nearly 53% of the experts felt that intellectual property would not slow the advance of the Internet, for the following reasons:

- Rapid development of ideas thanks to the Web 2.0 philosophy will lead to the emergence of better ideas in a very short period of time (two to three years), thus reducing the relevance of patents.

- The Spanish Intellectual Property Act is now obsolete and needs to be updated to cater for the Internet.

- Although most communities suffer reiterated copyright violations by owners (YouTube, Facebook, MySpace, etc.), solutions are expected to be found soon, given that some are owners of intellectual property and are therefore committed to finding a solution

The remainder of the experts consider that intellectual property will be an obstacle, citing the following reasons:

- Difficulty in sharing contents.

- As Web 2.0 matures, active users will demand payment or hold back the copyright to the contents, and the service providers will have to give in.

- The Intellectual Property Act will have to evolve with the Internet as it has done to date: until it does so, it will restrict the development of Web 2.0.

- While a lack of control or copyright over content would remove incentives to participate, an excess would choke innovation.

- In the short or medium term, conflicts over intellectual property will inhibit the development of certain aspects of the Internet. Nonetheless, the most affected parties are beginning to realise that it is in their own interest to have a more open attitude, though this change in mentality may take some time.

- Many industries and businesses are based around capitalising on ownership. Internet and digital contents allow almost free access to contents with distribution models that are free of geographical frontiers, necessitating new principles, practices and regulations.

Notes

- Legislation will always be one step behind real practice on the web.

- Companies have yet to learn to build a viable business model in a world where intellectual property is open, and will put up strong resistance to change, hindering the development of a more open environment.

- When society and government are aware of the value of their individual contributions, they will seek to reward them, with the result that content ownership will be negotiated and the law respected.

Perhaps the best way of encouraging participation without getting in the way of

innovation is to adopt an intermediary stance. The FTF experts were therefore asked who should have the rights of authorship. The following are some of their answers:

- The rights will belong to a combination of contributors, service providers and the public domain, depending on the application.

- Nobody will own exclusive rights. All contributors will share non-exclusive rights; for example, a person who contributes to an article in the Wikipedia will have shared rights on that article.

- Rights will be established depending on the context (e.g. Wikipedia: nobody; Flickr: the photographer).

- In the long term, a model similar to the Creative Commons licence should serve the interests of the community. Without something along these lines, there is a danger of an intellectual property war breaking out that will shackle innovation and benefit no one except the lawyers.

- If the owners of the contents and the application are not the same, the former will have to choose: free access to everyone, access limited to certain communities, payment for consumption, etc.

As we can see, this is difficult issue to solve and one that will affect other sectors. Another hot potato is the question of the peer-to-peer (P2P) networks, used essentially to share and download music from the Net.

In Spain, the Federation of Consumers in Action (Federación de Consumidores en Acción, FACUA) has made it clear that both the use of P2P networks and the copying of discs and films will continue to be legal provided that it is not carried out "for a profit and in prejudice to third parties". Indeed, a precedent has already been established: a judge acquitted a defendant who had been accused of downloading and sharing music on the Internet, on the grounds that the practice is not criminal provided there is no intention to make a profit and moreover it is protected under the right to private copying.

This right to private copying exists in Spain, but not in the English-speaking world, so the case highlights not only the intrinsic problem of copyright and intellectual property, but also the need—given **the global nature of the Internet—for international regulation.**

Juan Freire, professor at the University of La Coruña and well-known blogger, has posted an interesting article on his blog on the controversy over whether Creative Commons (CC) licences (see Appendix 1) are necessary in Spain or

whether they might be counterproductive. There are two main arguments against Creative Commons:

1. CC licences are not needed in Spain because the usage rights CC seeks to include are already granted, in one form or another under Spanish legislation (e.g. private copying).

2. The use of CC licences might have an undesired effect, restricting freedoms that already exist in Spain but for which Creative Commons is fighting in the United States.

There are two basic reasons why licences might be useful in Spain in the fight for a free culture:

1. The problem of intellectual property and free culture is eminently political, social and economic in nature. The laws should only be the reflection of the decisions of the citizens and should be adapted to them.

2. Culture and, in general, knowledge have been globalised. We need global game rules and the CC licences represent the international initiative with the greatest chance of success in defending a free culture against the lobbies who would prefer to extend author's rights and copyright to indefinitely restrict all rights of usage.

As we have already said, a war is being waged over the technology (P2P networks), and the CCs have now begun the battle on the legal front.

Looking further into the issue of intellectual property, Bernard Goleen, CEO of Navica (a company specialising in Open Source solutions), writing in CIO Today on ODF and Web 2.0 argues that, since free licences have irreversibly eroded the proprietary software market, the aim now is to keep a hold on clients by controlling their data.

One thing the social networks do have is an enormous amount of socio-demographic information which has yet to be tapped, but which is certainly very valuable.

It therefore seems likely that the next great battle will not be over licences—a war that has already been won—or author's rights—a battle that is close to completion—but over regulation of the ownership of data obtained from customers. The problem with this front is that we are still not entirely aware that it is a front.

Furthermore, given that the Internet favours user anonymity, now that the Web

is based on people participation, the issue arises of **content control**. How can an anonymous user with a nickname be made responsible for the contents? Sound it be the application that monitors the contents? Nonetheless, if the owner of the application does not own the copyright to those contents, he or she must not change them. If it is taken to the extreme, content control stops the flow of information and innovation.

So who should monitor content and behaviour in Web 2.0? The answers of the FTF experts were as follows:

- Basic moderation tasks should be included in the application and users should also act as moderators. Nonetheless, in some cases an external figure will be required to take charge of the task.

- The only scalable solution is self-government. There will be many conflicts in which national governments seek to impose their jurisdiction over online communities but in the long term, these measures will fail.

- The fact that the user collaborates does not mean that they should have control. Contribution is voluntary and, therefore, the consequences of ownership and control should be proportional and should be adapted, taking into account that this is a community.

- The borderline between content ownership and content control is blurred. Control flows from "nobody" to "everyone" and so does ownership.

- There is no on-size-fits-all solution to all situations. For example, children's rights must be protected, as must government security and breaches of privacy, and acts of fraud must be monitored.

- There should be a move towards control by users.

- Depending on the nature of the activity, top-down control can be exercised by governments or moderators. The important thing is to clearly identify from the very beginning who is responsible for controlling contents.

- Taking Wikipedia as an empirical example, we may deduce that allowing a pure peer model is not a success—some form of control is needed from time to time. In the case of the Wikipedia, a number of editors are appointed who in the event of a dispute take the final decision on the way the articles should be written. It is not always practical to do away with all hierarchy. The type of structure will depend on the service.

- The Internet, by its nature, is global. Certain international institutions define a series of "best practices", rules and regulations, which are enforced by national governments and international bodies (e.g. denying people or companies that break the rules access to the Internet).

- Depending on the content and nature of the application, in some cases the user can self-regulate or use feedback to meet this goal. The use of moderators should not be ruled out, who can help establish the rules, categorise contents and moderate conversations.

Summing up, in certain cases there are legal lacunas for certain situations which can arise in the Internet because of its anonymous and global nature, and in other cases the law lags far behind the real situation, slowing development and innovation. **Overall solutions are required that will not slow the advance of the Internet or the incentive to participate.**

The value has shifted from the applications to the data they contain, and the future legal battle will therefore be over regulation of the ownership of databases and privacy, and non fraudulent use of such data.

7

CHAPTER 7

Trends

7 Trends

What comes after Web 2.0? Two of the trends that have been identified are metaverses or virtual worlds and Artificial Intelligence thanks to Web semantics.

The move towards consolidation of virtual worlds is an Internet phenomenon. Several examples already exist, such as WhyVille, Second Life, Habbo and The Sims Online. All the evidence suggests that by 2011, four out of every five Internet users will be actively participating in a virtual world.

Users have opposing reactions to these virtual worlds. On the one hand there are the enthusiasts, who predicate the social and business potential and the possibilities for individual and collective creation. On the opposite side of the fence sit the detractors, who find the use of these tools—often slow and complex—to be frustrating. If the user isn't handy with the application, they are condemned to be a "second-rate avatar".

This opposition between the two positions is reproduced in business. Some see the phenomenon as an up-and-coming trend and are eager to join in so as not to miss out on business opportunities; others remember the dot-com bubble and are more reluctant to invest in virtual worlds.

Even the press can't makeup its mind, alternately heaping praise and criticism on the concept. For example, *Time* and *Wired*, magazines, having lavished praise on Second Life in 2006, by 2007 were writing it off as "empty" and a "bubble".

As in any process of innovation, opinion swings and uncertainty are the order of the day.

Notes

Given the impact Second Life has had on the media and business, let's take a close look at this particular case.

Second Life (SL for short) is a virtual 3D world of social interaction created by Linden Lab and founded by Philip Rosedale, distributed across a broad network of servers and accessible over the Internet. The program offers its users (or "residents") tools to create their own identities, change the world and participate in its virtual economy, which is governed by the same rules that operate on the real market.

For users, two of the great appeals of Second Life are a) the fact that you can reinvent yourself by designing a virtual three-dimensional figure (or avatar) which will represent you in that world, and b) the possibility of making money.

Second Life has its own economy and currency, the Linden dollar (L$), which is used for buying and selling the articles and services created in the virtual world. In the virtual world, there are around 250 Linden dollars to the US dollar.

In mid 2007, there were over 40,000 businesses in Second Life with a positive cash flow and more than 45 multinationals had a presence in the virtual world.

One of the questions most often asked is the real population of this virtual world. Television and newspapers talk about millions of avatars. Official figures show 8.5 million subscriptions. Of these, only 5.7 are single users (some users have more than one account).

Many claim that this large number is due to an orchestrated advertising campaign which distorts the real figures, with many users registering once out of curiosity and never entering the world again.

An example of the opposite case is *World of Warcraft*, an online role game similar to Second Life, though without the same media hype, which has already attracted over five million users who pay every month for access.

Behind the great Second Life phenomenon lies a much less surprising situation. It was recently found that 85% of the people registered in the game created by the American company Linden Lab drop their avatar immediately after creating it. One possible reason for this mass exodus is the complexity of the program: it can take several hours to create a personalised avatar; learning to use the basic tools of Second Life takes at least two hours and the process of getting the most out of the game can take several weeks.

Of the remaining 15% of users –approximately 1.4 million people – not all are regulars. There are normally no more than 35,000 residents at any one time in the various areas of Second Life. Most are looking for a parallel world where they can have fun and do things they can't do in the real world.

Despite the fact the numbers are not what they seem and many multinationals are leaving Second Life, the media continues to come up with some remarkable stories such as the birth of the first specialist Spanish communication media, SecondNews, which will report on relevant events in this parallel world; or the fact that Europe's leading vehicle-rental company Europcar has become the first firm of its kind to recruit employees in Second Life using InfoJobs, Spain's leading employment website—the first portal in the country to open an office in the virtual space

Why should anyone want to invest in this virtual world when so many people seem to be leaving it? More than economic gain, many companies have been attracted by the media impact that involvement in this virtual universe brings. In Spain, where it is still an unusual step for a company to take, any that do open shop in the virtual world are practically guaranteed media coverage. Indeed, it is estimated that 62% of Second Life users in Spain heard about it through the media.

Nonetheless, this strategy is not sustainable in the long term either for the company or for Second Life and companies need to understand that it is first and foremost a social meeting place and therefore a unique opportunity to strike up novel and more direct ties with their customers. This is how business models should be oriented; otherwise, this modern-day bubble will burst.

In Second Life it is calculated that around six hundred million dollars changes hands every day, so even if the number of users is not as high as it might have seemed or some multinationals are leaving the metaverse, there is still a considerable market out there.

Paul Fleming, president of Barcelona Virtual, says in his interesting article "La verdad sobre Second Life" that SL is the future of online marketing. He considers it to be a good initiative, despite the relative scarcity of avatars, the barriers to entry and a lack of interesting content. Others, however, run Second Life down simply because they have a vested interest in the success of new and alternative Web 2.0 projects. In the same month that *Wired* criticised Second Life, Newsweek ran a cover story on it, listing the many virtues of the new medium, and the much-respected Economist called it an innovation incubator.

Many companies and users appear to be abandoning Second Life, particularly for two reasons. Firstly, Second Life has invested heavily in technology without asking its users whether it is what they really want or whether they would prefer something simpler. Secondly, because the virtual world is entirely unmanaged, the company is letting go some very valuable information on its users, their tastes and their needs, and thus possible means of ensuring loyalty.

Nonetheless, there is a market, and the potential of Second Life is vast, so if the focus were on basic services, and investment was extended in accordance with user demand, Second Life could have an influential place on the Internet.

As we have already said, the sustainability of Web 2.0 business models depends largely on **having active users and satisfying their needs**. To discover how this story ends, we will have to wait and see whether, despite having fewer

active users than previously announced, Second Life will learn to listen to them and whether, once the hype is over, the real number of users increases and the volume of transactions continues to grow.

One example of a successful virtual world is Whyville. As already mentioned, this is an educational platform targeted at children aged between 8 and 15, parents and teachers.

Education tends to be a participative process in which knowledge is generated from group communication and the teacher takes on a purely support role for students.

Whyville perfectly matches this trend, providing a tool that children can use to learn about eating habits, art, mathematics and physics, by carrying out specific tasks in groups.

Because it simulates a real environment, the student can also experience and learn in a different, fun and appealing way, based on practice, in a highly controlled environment with continuous monitoring.

The success of this educational platform lies in its capacity to adapt to some of the new trends (digital education and virtual worlds), thus satisfying the demand of its users.

As well as the virtual worlds, there is a move towards **the semantic web**, which is being developed by Tim Berners-Lee, who invented the World Wide Web in the early 1990s. The underlying idea came from the origins of the Internet.

With rare exceptions, contents posted in websites are difficult for computers to understand and are only meaningful to real people. The aim, therefore, is to add new information in a computer-comprehensible structure. Computers could emulate and improve knowledge acquisition by the user, using artificial intelligence, so that machines could **"think"** and make websites meaningful; hence the name, the semantic web.

In contrast to implicit semantics, the chaotic growth of resources and the absence of a clear organisation in the existing web, the aim of the semantic web is to classify, structure and annotate the resources using explicit machine-processable semantics.

This will not be easy. The transition from the existing web to the semantic web may come at a very high cost in time, effort and resources, given the volume of content that already forms part of the web. It will therefore be necessary to find a way of automating the conversion process, albeit only partially.

Semantic web

The semantic web is an extension of the World Wide Web, with a higher level of significance, in which any Internet user can find answers to their questions in a faster and more simple way thanks to better defined information.

Another major difficulty in creating the semantic web will be to reach a consensus on idea association in a community, since the perception of the world varies between different people. For example, a dietician and a biologist both have a knowledge of plants, but they represent the subject very differently and it would probably be wrong to impose the same representation for both groups.
Despite the complexity and the cost involved, there is great interest in the corporate world, the public sector and academia in making the semantic web happen, since it is seen as being an important development for the future progress of the information society.

Although it is not clear when it will be developed and exactly what form it will take, use of the term Web 3.0 has spread like wildfire and it is predicted that, in a not too distant future, virtual networks will be intelligent enough to make a semantic composition of websites.

In the future, the Web will be an intelligent virtual world, in which our avatars will move and act in accordance with our data and our habits. The concept of static information, as in books, articles and images, will be replaced by knowledge flow.

The avatars will be in charge of bringing us the type of news we generally read and advertising products of interest to us, educating us in areas that might be useful to us and socialising with people who have shared affinities and interests. It will be a **participative**, **intelligent and effective web** which will save us time and provide us with an **unlimited flow of knowledge**.

Notes

Appendix

Glossary

A

AJAX (Asynchronous Javascript and XML): a set of technologies that faster and smoother development of more interactive web applications.

Avatar: a person's graphic representation on the Internet, in the form of a drawing, photograph or other figure.

B

Betatester: someone who uses programs whose executables have passed the development phase or are highly functional, but are not yet entirely stable. Betatesters contribute their time and knowledge of computers to detect bugs in the software, either reporting them to the developers or fixing them themselves.

Blog (also known as a weblog): is a regularly updated site with a chronological set of texts or articles by one or more authors.

Blogger: the author of a blog.

Blogosphere: the total set of all blogs.

C

Collective intelligence: a system that seeks to unite the experience of a group as opposed to a single individual, thus generating knowledge through collaboration. For the first time, the Internet allows collective intelligence to be used on a potentially mass scale and in a highly cost-effective way.

Crowdsourcing: business technique coined by Tim O'Reilly, whereby companies get users to perform certain tasks.

E

Extended enterprise: a business that does not limit itself to managing its own value chain, but also takes into account other associations in its sector, from raw material suppliers to end customers.

F

Folksonomy: practice and method of collaboratively creating and managing tags to annotate and classify contents.

L

Lobby: a pressure group that uses a range of strategies to exercise influence over the centres of executive or legislative power, in order to advance their own interests or those of the groups they represent.

M

Mashups: a web application that uses resources from more than one online source to create a new service.

Metaverse: an environment where humans interact socially and economically in the guise of avatars, using software, in a cyberspace that emulates the real world, but does not have its physical limitations.

P

Podcasts: Audio files (generally in mp3 or ogg format) and video files (known as videocasts or vodcasts) distributed by means of an RSS file, allowing users to subscribe, using a program that downloads the clip and allows them to listen to it whenever they want.

Peer-to-peer: computer networking between equals. More commonly known as P2P. This kind of network

has no fixed clients or servers, but a series of nodes which simultaneously act as clients and servers of the other nodes in the network. P2Ps are useful for many purposes, but are most often used to share audio, video, text, software and data files in any digital format.

R

RIA (Rich Internet Applications): web-based browser applications that do not have to be installed on the computer. They allow rapid interactivity and execution.

RSS (Really Simple Syndication): a simple data format used to syndicate contents to subscribers to a site.

S

Social network: area of dialogue and coordination, in which people and organisations gather with a common purpose, sharing rules and values. Social networking has enabled people to work in cooperation, share common resources, conduct activities that benefit participants, develop wider and closer ties, create a sense of belonging and pool their knowledge, experience and know-how, by establishing relations of exchange and reciprocity.

T

Taxonomy: in its general meaning, the science of classification.

V

Viral marketing: a strategy whereby people are encouraged to forward a marketing message to others, leading to an exponential growth in viewing.

W

Web feed: in IT jargon, a web feed is a data format used to provide users with frequently updated content. Web feeds generally include the headlines of news stories or articles, often accompanied by a short summary. They are used extensively in blogs.

Webtop: set of networkable applications that have traditionally been seen as belonging to the desktop, such as word processors, spreadsheets, project management tools, etc.

Wikis: hypertext websites that anyone can access and edit freely. This means different people can bring their own input to the same document online.

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