

Ten Web 2.0 Trends Shaping the Future of Business

By Wayne Visser

What is Web 2.0 Really?

Wikipedia defines Web 2.0 as 'web applications that facilitate interactive information sharing, interoperability, user-centred design and collaboration'. The term owes its origins to a 1999 article by IT consultant Darcy DiNucci, which challenged programmers to adapt to the spread of portable Web-ready devices. The concept was broadened out in 2005 by online media pioneer Tim O'Reilly, who gave contrasted Web 1.0 and Web 2.0 using examples: DoubleClick versus Google AdSense, Britannica Online versus Wikipedia, personal websites versus blogging, publishing versus participation, directories (taxonomy) versus tagging (folksonomy) and stickiness versus syndication, to mention but a few.

In 2006, Don Tapscott and Anthony Williams showed how Web 2.0 was set to disrupt how markets operate and how businesses are organised. They called this new paradigm 'wikinomics', defining it as 'the effects of extensive collaboration and user-participation on the marketplace and corporate world'.

Wikinomics, they said, is based on four principles:

- 1) Openness, which includes not only open standards and content but also financial transparency and an open attitude towards external ideas and resources;
- 2) Peering, which replaces hierarchical models with a more collaborative forum, for which the Linux operating system is a quintessential example;
- 3) Sharing, which is a less proprietary approach to (among other things) products, intellectual property, bandwidth and scientific knowledge; and
- 4) Acting globally, which involves embracing globalization and ignoring physical and geographical boundaries at both the corporate and individual level.

Another Web 2.0 building block is Chris Anderson's concept of 'The Long Tail' – named after the area of a statistical distribution curve where it approaches (but never quite meets) the axis. Anderson's breakthrough idea was that, in a Web 2.0 era, selling less to more people is big business. The Long Tail questions the conventional wisdom that says success is about generating 'blockbusters' and 'superstars' – those rare few products and services that become runaway bestsellers.

Anderson sums up his message by saying that:

- 1) The Long Tail of available variety is longer than we think;
- 2) It's now within reach economically; and
- 3) All those niches, when aggregated, can make up a significant market; and
- 4) The Long Tail revolution has been made possible by the digital age, which has dramatically reduced the costs of customized production and niche distribution.

Taking Tapscott and Williams' four principles (openness, peering, sharing and acting globally), plus another principle derived from Anderson's 'long tail' concept (mass customization), let's take a look at the future of business through a Web 2.0 lens:

Principle 1 - Openness

Practice 1 – Net Value Footprinting

Business has evolved over the past two decades from being highly opaque to gradually embracing a more transparent disclosure practices. This has been a result of regulation (such as the Toxic Release Inventory in the U.S., which requires thousands of American companies to report over 650 toxic chemicals) and voluntary efforts (such as the GRI, which is now developing the fourth iteration of its Sustainability Reporting Guidelines).

In a Web 2.0 world, however, transparency requirements are taken to another level. Companies are expected to go beyond GRI-based reporting, to measure and disclose their impacts across the entire product life cycle or value chain. This process of quantifying business's economic, social and environmental costs to society is sometimes called full cost accounting, or internalizing externalities. I call it Net Value Footprinting.

Net Value Footprinting is being pioneered by the likes of Patagonia (with their Footprint Chronicles™), Puma (with their Environmental Profit and Loss statement), The Economics of Ecosystems and Biodiversity (TEEB) study, and the Global Footprint Network.

Practice 2 – Forensic Impact Analysis

While progressive companies are steadily improving their transparency, there will also be millions of irresponsible companies that try to fly under the radar of regulation and public scrutiny. In an effort to be lowest cost producers or preferred suppliers to big brand multinationals, they will deliberately externalize social and environmental costs by running polluting operations that exploit cheap labour and abuse human rights.

But in a Web 2.0 world, these rogue businesses will be caught and exposed through the emerging practice of what I call Forensic Impact Analysis. This will happen through a combination of traceability technology (which finds the electronic footprints left by all businesses in the supply chain), forensic substance analysis (which can identify the source of fibres, chemicals and other product components) and vigilant activists and consumers (who will capture malpractices on mobile phones using photographs, videos and audio recordings, and leak these via online social media).

Forensic Impact Analysis is being pioneered by the food industry, which uses barcodes or RFID tags and other tracking media to monitor every step of their production process (GrapeNet in India is an example). Other examples include Karmayog (which allows online whistleblowing on corruption in India) and Wikileaks (which exposed Trafigura's dumping of toxic waste along the Ivory Coast).

Principle 2 – Peering

Practice 3 – Stakeholder Crowdsourcing

Companies from the Web 1.0 era still believe that focus groups, public meetings, stakeholder panels and the occasional online or in-store survey are adequate for taking the pulse of their stakeholders. At the same time, they are generally distrustful of ideas or solutions from outside their organisations. In short, they suffer from the 'not invented here' syndrome.

By contrast, Web 2.0 savvy companies realise that the world has moved into an era of crowdsourcing – a term coined by Jeff Howe in 2006 and closely linked to the earlier idea of 'wisdom of crowds' popularized by James Surowiecki. Turning this concept into practice, future business will increasingly use filtered, expert 'crowds' to monitor their reputation, get feedback on sustainable products innovations and solicit help in solving difficult ethical dilemmas.

Stakeholder Crowdsourcing is being pioneered by companies like Sony, through its two online campaigns, Open Planet Ideas and FutureScapes (to generate new sustainable technology ideas) and platforms like OpenEyeWorld, which General Electric has used to crowdsource feedback on its sustainability communications.

Practice 4 – Disruptive Partnerships

Companies have had a decade to get used to the idea of cross-sector partnerships, which have been heavily promoted through the United Nations and given a boost through inclusion in the Millennium Development Goals and being spotlighted at the World Summit on Sustainable Development in Johannesburg in 2002.

In a Web 2.0 world, however, business is expected to get into more challenging partnerships – collaborations which disrupt the status quo. For example, Greenpeace very effectively used social media to campaign against Nestle's Kit-Kat brand, after finding an Indonesian supplier that was clearing tropical rainforest to grow palm oil. A year later, Greenpeace praised Nestle for their No Deforestation commitment through its challenging partnership with TFT, a sustainable forestry NGO.

Disruptive Partnerships are being pioneered by the likes of Rio Tinto (partnering with the World Conservation Union to reduce their biodiversity impacts), BASF (through their Strategic Alliance for the Fortification of Oil and Other Staple Foods partnership with GIZ), and Netherlands flooring company Desso (using their Circle of Architects creative forum).

Principle 3 - Sharing

Practice 5 – Open-Sourcing

One of the biggest changes in the society over the past 10 years has been the explosion of social media. But this revolution goes beyond sharing our holiday photos on Facebook or the micro-blogging the minutiae of our lives on Twitter. The more fundamental innovation is a shift in thinking and practice towards 'open-sourcing', which at its heart is about co-creation.

Let's look at an example from the pharmaceutical industry to illustrate the point. After a decade under siege – with Big Pharma being accused of overpricing their patented brands and blocking access to cheaper generic (and often life saving) drugs – GlaxoSmithKline (GSK)'s CEO Andrew Witty committed GSK to put any chemicals or processes over which it has intellectual property rights that are relevant to finding drugs for neglected diseases into a 'patent pool', so they can be explored by other researchers.

Other pioneering examples include the World Business Council for Sustainable Development's (WBCSD) Eco-Patent Commons and the Creative Commons' GreenXchange, both of which allow companies to share their intellectual property 'for the common good', especially on issues like waste, pollution, climate change and energy.

Practice 6 – Wiki-Ratings

Another feature of Web 2.0 design is that it easily allows users to express an opinion on others' content – from the ubiquitous thumbs-up 'Like' feature on Facebook, to the fresh-red versus rotten-green tomato movie rating system on rottentomatoes.com.

Now, we are going beyond these simplistic approaches to dynamic, wiki-based platforms that allow the public to rate – and comment in detail – on the economic, governance, social and environmental performance of companies. One such innovative platform, where I serve on the advisory board, is Wikirate, developed by Philipp Hirche. Not only does Wikirate use a crowdsourcing approach to

ratings, but in much the same way as Wikipedia, it allows for real-time updating. Hence, an ethical infringement, or a sustainability innovation, will be reflected almost immediately in the company's wikirating.

Other pioneering examples in the ratings space are GoodGuide, WeGreen, Project Label and Scryve, although judging by SustainAbility's 'Rate the Raters' analysis, none of the 108 rating systems identified employ a methodology quite so democratic and transparent as Wikirate.

Principle 4 - Acting Globally

Practise 7 - Prototyping

Innovation has always used prototyping – i.e. designing a working sample of new products and services. The difference in a Web 2.0 world is that prototypes are launched early, as imperfect versions, to solicit rapid user feedback in a process often called 'beta-testing'.

One way to bring about such rapid, open-source prototyping is through competitions. Take the X-Prize, for example, which describes its mission as 'bringing about radical breakthroughs for the benefit of humanity' in five areas: education; global development; energy & environment; life sciences; and exploration. Through this platform, multimillion-dollar prizes are offered for innovative solutions in everything from 'progressive automotive' and 'oil cleanup' to 'health sensors' and 'diagnostic technologies'.

Another pioneering example is Virgin's \$25 million Earth Challenge, for 'a commercially viable design which results in the net removal of anthropogenic, atmospheric greenhouse gases so as to contribute materially to the stability of the Earth's climate system.'

Practise 8 - Smart Mobbing

Web 2.0 technologies have spawned a new type of protest activity, called smart mobbing. This simply means using real-time media and sharing platforms – especially SMS texts and status updates (like tweets on Twitter) – to rapidly organise a crowd.

Examples include 'viral' text messaging in the Philippines that helped to oust former President Joseph Estrada in 2001 and the use of Twitter during the Arab Spring uprisings in 2011. Smart mobs can also co-ordinate virtual activity, such as when the 'hacktivist' group Anonymous encouraged its followers to launch cyber attacks against Visa, MasterCard, PayPal and other companies opposing Wikileaks in 2011. Similarly, Greenpeace encouraged smart mobbing following its 2010 campaign against Nestle's Kit-Kat brand. The campaign video was viewed by half a million people in 4 days, and unleashed a flood of angry comments on Nestle's Facebook page.

Smart mobbing can also be used positively, such as when 'Mission 4636' created an SMS text mapping emergency communications system after the 2010 Haiti earthquake. In future, companies and governments will increasingly need to anticipate and respond to activist smart mobs, as well as seeding their own.

Principle 5 - Mass customization

Practise 9 - App Farming

Despite some great new gadgets over the past few years – such as the iPad – the war of the computing giants has turned into a 'battle of apps'. Underlying this explosive trend, by April 2012, Apple claimed to have 615,000 apps and 43,000 iOS-based app developers, while Google had 430,000 apps and 10,000 Android-based app developers.

Apps (software applications) are essentially neatly packaged, user-friendly online services, ranging from games (e.g. Angry Birds, Scrabble) and music (e.g. Spotify, Shazam) to education (e.g. NASA, Spelling Bee) and business (e.g. HBR Tips, EasyMoney 1.0). There is also a new generation of apps focused on social and environmental solutions. Google Play lists more than 400 sustainability-related apps. The most popular is BlaBlaCar, which connects drivers with empty seats with people looking for a ride, allowing users to post on, and search, the biggest European car sharing community.

Other popular apps in this genre include GoodGuide (for ethical shopping), carbon footprint calculators (Google Play lists five) and educational games like 'Sustainable me'. Hence, businesses of the future will be judged on whether they can seed and grow farms of apps that provide solutions to the world's most serious challenges.

Practise 10 – Plug-and-Play

The final Web 2.0 savvy practise is to think in terms of 'plug-and-play' solutions. Essentially, this is a form of smart technology that detects its operating environment, installs whatever software is needed and is operational without any action by the user.

To take a simple example, rather than having to manually unplug or switch off household electrical devices to save energy, a plug-and-play device in the home automatically detects all idle devices and disables them remotely. Similar approaches apply to optimal energy-efficient heating and cooling of buildings (i.e. indoor climate regulation) and low-carbon driving, which automatically chooses the emission-minimizing acceleration and cruise speeds.

Plug-and-play also applies to our shopping preferences. In the future, we will have automatic product filters that match our personal preferences – whether it is for fairtrade, organic, beauty without cruelty, or health. When shopping online, we will only see products that match our personal criteria. Similarly, in-store we will be alerted to products that meet our standards – a process achieved through auto-scanning by our mobile devices of in-store barcodes and associated criteria-linked product databases.

Conclusion

The message is clear for business. Web 2.0 is not just about everybody being continuously online. Rather, it is about a business new mind-set that thinks in terms of the collective intelligence of its stakeholders, the co-creation of solutions to our global challenges, and the use of technology to achieve speed and scale in spreading innovation to those parts of the world that have the biggest and most urgent unmet needs.

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