A strategic approach to disruptive technologies
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Disruptive change requires new strategies. When conditions change rapidly, organisations find their former approaches which have led to success in the past, are no longer effective. It can be hard to let go of these approaches if they have been a source of competitive advantage. This leads many managers to assume that successful responses to disruptive change are a matter of luck. But it is possible to craft strategies to best exploit opportunities ahead of the competition.

Disruptive technologies/ disruptive innovations

Harvard professor Clay Christensen coined the term disruptive technology, which he later renamed disruptive innovation. He identified that it was not the technology itself which was disruptive, but its impact on strategy or business models.

Christensen’s theory developed the previous body of literature about discontinuity of organisational change. In summary:

1. A disruptive technology emerges. Initially it cannot match the performance of the existing dominant technology, on the factors which customers traditionally value.

2. The distinctive features of the disruptive technology are valued by a small fringe segment of customers, and increasing numbers of new customers. It is also typically cheaper, simpler, smaller or more convenient.

3. Incumbent players in the market conclude that investment in the disruptive technology is irrational, since their most profitable customers don’t want and can’t envisage using new products based on the new technology. New entrants to the market who exploit the disruptive technology concentrate on fringe or emerging markets.

4. The disruptive innovation develops so that new products meet the standards of performance expected by the bulk of the market; the new technology displaces the previous one and thus the new entrants to the market displace the incumbents.¹

Web 2.0 as a disruptive technology

The music, newspaper or travel industries show how the internet has overturned business models. In those examples, the change was about access to and sharing of information, very much the first wave of the internet. The second wave of the internet (hence the term Web 2.0) is about collaboration and will affect every organisation, not just those for whom information is their core ‘product’ such as music and media businesses.

It’s not hard to find commentators to enthuse about the scope and depth of impact of Web 2.0 technologies on business.

John Chambers, CEO Cisco predicted in 2007 ‘Social networks, wikis, tele-conferencing and other technologies that allow interaction on a large scale could change entire business models…’

In its 2007 report ‘The business value of Web 2.0 technology’, IBM advised how Web 2.0 could deliver more sustainable competitive advantages. IBM comment that because Web 2.0 is about how people collaborate and communicate, business models based on Web 2.0 strategies are more difficult to replicate than efficiencies based on e.g. traditional process engineering. Therefore they represent an opportunity to gain an unassailable advantage over the competition.

And Tim O’Reilly, technology guru and originator of the term Web 2.0 recently updated his predictions for the powerful effect that Web 2.0 would have on business thus: ‘1990-2004 was the match being struck; 2005-2009 was the fuse; and 2010 will be the explosion.’

Timing is everything when exploiting opportunities. This demands effective scanning of the environment to identify upcoming technologies.

Many readers will be familiar with research by leading IT research and advisory company Gartner Inc, specifically their hype cycles for emerging technologies. This represents graphically the stages through which a technology goes through as it matures. The cycle starts with ‘Technology Trigger’ as the technology grows in visibility until it reaches the ‘Peak of Inflated Expectations’ after which follows a ‘Trough of Disillusionment’ before realism slowly returns in the ‘Slope of Enlightenment’ which builds and settles at the ‘Plateau of Productivity.’ The length of the cycle varies for different technologies.

Gartner suggested in its hype cycle for 2005, that wikis had recently ‘peaked’ but would reach comfortable productivity in 5 – 10 years. At or around the peak in 2008 and 2 - 5 years from plateau was corporate use of social
computing platforms (or their in-house equivalents) according to the 2008 hype cycle.

Crafting an effective strategic response

Organisations need a multidisciplinary team to consider the potential impacts of new technologies throughout all their activities. The perspective of a single discipline – for example, marketing – should not be allowed to dominate, nor should the enthusiasm of a small group of evangelists set the agenda. It’s particularly important for Web 2.0 initiatives that they aren’t characterised as the sole domain of the marketing or advertising department.

Clay Shirky, author of Here Comes Everybody has a tactic for harnessing the enthusiast, and avoiding the premature commitment to a single course of action. He advises ‘Find the person who’s got the big idea, who’s got the idea that could transform everything once it’s adopted, and lock them out of the building. Do not let them back in until they come back with 10 medium-sized ideas or 100 small ideas.’

Authors of an HBR article ‘Mapping your innovation strategy’ endorse this approach. Whilst believing that the best chance of creative growth comes from basing strategies on disruptive innovation, they comment ‘most companies intuitively sense that the best place to look for growth is outside of – but not too far from – their core business.’

An effective strategic response is one which suits the external environment, and fits with the organisation’s culture and characteristics. The following stages are implied:

1. Identify which developments will be significant and whether the timing is right to benefit from being an early adopter. Understand what the technology is, how it might it develop in the future, and what new benefits it offers.

2. Analyse the potential impacts of the technology for one’s organisation. What advantages might it provide over existing (or shortly forthcoming) offerings? How does this extra functionality appeal to customer’s expressed (or latent) needs?

3. Consider what might prevent or impede one’s organisation’s commercialisation of these technologies; and develop a route map to market.


3 ‘Mapping your innovation strategy’, Anthony SD, Eyring M & Gibson L, HBR May 2006
Three basic strategies are identified in the HBR article, illustrated by historic and current examples.

The first is referred to as ‘the back-scratcher approach’, which reaches a previously unaddressed ‘itch’. In this scenario, the company offers a better solution to customers, and gains market share as the competition is too fragmented or is otherwise hampered from responding. Examples: Federal Express; Instant messaging.

The second is ‘the Extreme Makeover’ in which companies concentrate on making the low end of the market more attractive. There may be little competition in this market segment, but valuable opportunities to create products which are just good enough. Such products will lack the full range of features or functionality offered to other customers, but can be produced at sufficiently low prices to satisfy low-end customers. Examples: Toyota Corona; Tata Industries Nano sub $3000 car

The final strategy is the ‘Bottle-neck Buster’, in which a new technology removes a previous constraint to market growth. Customers are no longer excluded from the market because of a lack of skills, access or resources. Examples: personal computers; blogs.
Conclusions

The following is not a complete list, nor even a prioritised list of the different ways Web 2.0 might impact business, but some of the significant contributions Web 2.0 techniques offer include:

- more effective data exchange and collaboration with others in the supply chain;
- the creation of corporate communities amongst a distributed workforce;
- the enabling of customer-self service; and
- the ability to speed up product development cycles.

Web 2.0 enthusiasts have a role to motivate and inspire corporate leaders about the new opportunities offered by this disruptive innovation; but organisations will need to focus their response through the lens of ‘business fit’ to ensure their strategies deliver sustainable competitive advantage.

To find out more read CIMA’s report Beyond enthusiasm: Making the business case for your organisation’s use of web 2.0. Read about twenty organisations which have invested in web 2.0 - from successful initiatives such as Nike’s Human Race to Wal-Mart’s short lived teen networking site, The Hub.

CIMA also provides a guide to building a robust business case for your organisation’s use of web 2.0, including how to frame the decision and measure return on investment.

www.cimaglobal.com/web2.0forbusiness