

Welcome to the January Innovation Update where we take a look at ecosystems

## Innovation Briefing: *Ecosystems*

***An ecosystem, at its simplest, is any group of living and non living things interacting with each other. James F. Moore, who wrote "The Death of Competition," borrowed the term and dropped it into the business lexicon and in doing so shifted the way we think about business.***

Hidden in the term, but at the forefront of life scientists are notions of fragile equilibriums in a continual changing of relationships between the different life forms and the environment. There is no simple dominance of a species but a constant interaction leading to partial, temporary tradeoffs and adaptations.

For business the notion of ecosystems is starting to gain currency and represents a shift from industrial, mechanical metaphors to more organic, biological ones. This changes the way we think about business and highlights the complexity that people recognize but that businesses often oversimplify into four-box matrices.

For companies that take on the metaphor and look at their own business environment it changes the nature of decisions they make. Supplier relationships are no longer a win-lose conflict but can become a way of building a dominant role in your ecosystem.

A great example is Ericsson. Ericsson looked beyond the challenge of developing the skills and products for wireless technology to that of becoming the de facto definer of the standards. They no longer compete directly in the product space, but seek to define the standards that set the rules for the subsequent generation of radio technology, and not surprisingly those standards always seem to reflect what Ericsson ends up being good at. At the same time it has reinforced the strengths of the overall ecosystem, benefiting all the other players, such as operators or even consumers in countries with low levels of fixed connections.

Classic business analysis is very "first degree", looking at the usual suspects of competition - other companies, suppliers and customers. When they see their competitors doing something different it is dismissed as illogical and "bound to fail". Yet successful companies today think broader and further, think in systems, and think about connectedness.

Perhaps the earliest example, before people even talked about ecosystems in life sciences, was Michelin tyres. The Michelin Guide, today the pinnacle of gastronomic success, was invented by Andre Michelin, looking for a way to promote driving and give motorists a freebie, and provide information to motorists about garages, petrol stations, accommodation and where to eat for the weekend. All this, he saw, would encourage people to drive, since they could plan out their trips, their weekends, and more driving meant more tyres sold!

So what does all this mean for innovation? If we take the concept, ecosystem innovation is about innovating beyond the immediate areas of typical focus. It is about how companies seek to influence the broader ecosystem where they compete to bring about some kind of advantage for them. The advantage could be pushing them to a more dominant role in the ecosystem (such as Ericsson) or about strengthening a fragile ecosystem, or even reinforcing their position by influencing other, different players. Key to intervening is recognizing that unlike ecosystems in nature, in business the actors do not have to be passive players, unconscious of their role and connections.

Being conscious of the opportunities open to an organization fall into two camps:

Firstly, being aware of some external event outside the ecosystem, organisations see how to take advantage of it, alternatively intervening directly in changing the dynamics of the ecosystem to their own advantage. This is often the domain of technology, where companies looking outside their immediate space seize hold of opportunities that give them an edge back in their own ecosystem. The counter position is looking within your ecosystem and looking for ways to change the nature of relationships and dependencies to your advantage.

The whole energy ecosystem is changing as alternative sources of energy are becoming viable. Through their Technology Futures events Shell saw the opportunity to bring together biotechnology and fuel production; they could see how gene splicing could create plants that would produce alcohol as a by-product. Their particular insight was to see that the food-fuel debate was a non-starter, so they went straight into 3<sup>rd</sup> generation biofuels. Through a collaboration with HR Biopetroleum, a tiny government-funded start-up on the Hawaiian island of Kona, Shell has formed a new company called Cellana that will build a facility to demonstrate the commercial and technical viability of algae as a source of biodiesel.

Twitter is another technology that is starting to raise interest which is much talked about today as a microblogging tool but is very interesting from a completely different perspective as well. More and more companies are considering Twitter as a platform to launch a range of services starting with simple customer service as Southwest Airlines and Dell demonstrate. But organisations are finding this platform very relevant for other purposes as well. With the current crisis around the Swine Flu the CDC in the US is using Twitter to inform people about the latest developments and TrialX has started to use it to speed up matching participants to clinical trials, an otherwise costly exercise but vital for the development of new medicines.

Similar to Ericsson's example, the entire business of telecommunications at the moment is clearly in a period of disequilibrium, where new environments and new challenges are opening up. In a very biological way the players will have to adapt. The whole stable ecosystem of consumers, operators and technology is shifting as mobile technology is going broadband and opens hundreds of new business opportunities. Already m-commerce has taken off, but other areas such as telemedicine, currently being explored in India are looking promising. Companies like Bharti with their slimmed down and highly flexible model, as well as sitting in such a dynamic environment, are perhaps best placed to evolve to a position of centrality. However the foreseeable future looks a lot like a period of significant interdependence and exploration as companies need to work out which paths and which combinations will give them a strongly influential position. Doing nothing and trying to remain in glorious isolation is certain to push them to the periphery.

Adopting the second approach, Starwood did this very adeptly when they looked at their very commoditised world and started to explore how they could change their position. Hotels within categories typically look and feel very similar, and cost about the same. Location is often the only real differentiator. Starwood, through their analysis, came up with the idea of the "Heavenly Bed". In a typical hotel this is a small part of the total equation, but Starwood saw the opportunity to shift the

nature of choice, and hence the balance of the ecosystem, to one they could dominate. So much so that after researching the bed market they had to design their own since none on the market were good enough. So successful has the bed been that Starwood have set up as a retailer to sell the bed to contented guests. It might have been that an outsider, a bed company saw the opportunity and changed the dynamic of the hotel industry (as Apple have done with the mobile telephone business). Starwood's success was in reevaluating their own offer and working out how they could change the parameters of choice.

Apple, in the mobile telephone world has clearly changed the configuration of the telecommunications sector. Having burst into the telecommunications world Apple is shifting the centre of gravity of customer loyalty from the operators to the handset providers. All across the industry this is changing the dynamics of the business. Operators are concerned about becoming "fat pipes", telco equipment suppliers fear for declining revenues and are grasping for alternative routes to market outside operators, handset manufacturers are challenged on their basic technology focus. Amid these turbulences, Apple set up its app store - having already pulled customer loyalty toward itself, it figured worked out a way of cementing it by creating a conduit for others to develop catchy apps at low prices to deepen the relationship (and heighten the switching cost). So Apple has effectively introduced another whole species into the environment, these software writers, and has become their route to market. There is discussion about whether this will be a fad or not, but Apple is clearly counting on a network effect, so as its app base expands so the draw to push apps through the Apple route increases. Other players, be it operators, handset providers or even the telco equipment manufacturers are rushing around trying to find their own apps platform; a whole new ecosystem has been born.

The strength of ecosystem thinking is in how it changes perspectives looking at the same issues, a shift from a "cause and effect" mechanical metaphor to a more evolutionary biological thinking, which in itself brings up different ideas.

Some companies, like Apple clearly think in this way, and organically evolve their businesses as thinking, consumer and technology evolve. For others it often requires a structured stimulus, some kind of tool to help. One such approach is the one Shell has used in its Technology Futures program. This is approach is about bringing in enough diversity outside your immediate business space (this will include technology, consumer and socio economic commentators as well as industry) and exploring sufficiently far ahead to work out what the probable opportunity spaces are. As in the example for Shell this enabled them to see how an external technology could benefit their pursuit for life after peak oil, and where the real opportunity lay (i.e. not in the food-fuel conflict).

Another approach we have found that works well is to use case study stimulus. By providing a company with stimulus around what other companies in other industries have done, by describing their journey companies, we can find patterns in their journey that replicate or at least remind them of some of their own challenges. At a recent event we talked about the Starwood example in some detail, which spurred a discussion around "what is our bed?"

In conclusion, ecosystem innovation is quite a mouthful, but it is a convenient shorthand to explore many of the industry disrupting changes that are increasingly commonplace. Some companies just seem to do it as part of their way of thinking; others have successfully used more structured ways of getting there. What is clear is that the companies that are thinking in this way are both successfully adapting and gaining a march on their more traditionally minded competitors.

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