

Research Overview

Innovation For Our World

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Xerox was a pioneer in research processes able to create much of the modern digital world because of a timely availability of talented people and the unwavering support of Xerox Corporation itself, particularly its leaders. That support still goes on.

In a recent interview Xerox Chief Technology Officer Sophie Vandebroek stated that the two primary reasons that an organisation like Xerox Corporation retains and develops a global research capability is firstly to develop technologies which can provide differentiation within the marketplace and secondly, to develop products that ensure lower costs of production and activities for customers. In both cases it is the customer who determines the value of such research and therefore it is the customer who is an integral part of the innovation process.

This is an interesting contrast for Xerox, the company founded on the products developed by the “lone inventor” Chester Carlson. Xerox’s success has come numerous times from developing a disruptive technology which undermines the status quo in how documents are made and managed. Firstly, photocopying created its own market because Carlson realised that there was a need to facilitate the process of distributing information through copied documents; secondly the desktop publishing industry was created by companies including Xerox, which funded much of the basic research even if the products themselves were marketed and further developed by Apple and Adobe; and, finally, the digital printing market was created as a result of the Docutechs which complemented the desktop revolution by enabling digital files to be printed at high speed with high quality and total customisation. In each case it was new technologies developed within a research environment (it was the research labs of both Battelle and Haloid who funded the actual development of xerography) and then supported in the marketplace by the Xerox’s business and sales processes.

As business models evolve these processes become part of the organisational DNA and not only define the organisation within the marketplace but determine its future directions and capabilities.

What is interesting now in the innovation world is how these very processes themselves need to change. Xerox, like many other technology companies, has expanded into the services business, one of the only ways to combat commoditisation, and, as such is now embarking on the development of new technologies and services that are redefining the company. One of the major areas being explored is that of “Open Innovation”, where partnerships are developed with universities, researchers, other companies (sometimes competitors) and customers to develop new solutions and products. In his book studying this Professor Henry Chesbrough uses Xerox as a classic example of a company that needs to move from building everything itself to working collaboratively, something CTO Sophie Vandebroek endorses. In addition there is an emerging research area in “services innovation”, already pioneered by IBM but supported by Xerox as it seeks to reorient itself within the web-enabled communications world.

Xerox still has its global network of research centres but they work collaboratively with external organisations and, in the case of Xerox PARC, serve other customers apart from Xerox.

Former PARC Director John Seely Brown foresaw much of this and, in a 1991 Harvard Business Review article wrote that

“the most important invention that will come out of the corporate research lab is the corporation itself. As companies try to keep pace with rapid changes in technology and cope with increasingly unstable business environments, the research department has to do more than simply innovate new products. It must design the new technological and organizational “architectures” that make possible a continuously innovating company.”

Xerox was a pioneer in research processes able to create much of the modern digital world because of a timely availability of talented people and the unwavering support of Xerox Corporation itself, particularly its leaders. That support goes on and within the Xerox Innovation Group the network of research centres each focus on specific areas of expertise whilst converging to provide a diverse range of opinions on challenges and opportunities. For instance in the development of web technologies PARC is doing work on social networking, natural language processing, and the development of intelligent agents. This is complemented by Xerox Webster which is working on Semantic printing, Xerox Canada which is working on transient paper and embedded document security systems, and Xerox Europe which is focusing in semantic document systems and scanning. When viewed together Xerox is making an enormous investment in the web- driven document world, facilitating the transition from analogue to digital, physical to virtual, and back again.

As with all organisations the transition into new horizons is often painful but, as Xerox CEO Anne Mulcahy states:

“Xerox’s future hinges in part on how well the company can move beyond printing hardware and related services and into more nebulous, but potentially lucrative, office automation, content management, and business-consulting services.” (Anne Mulcahy, Xerox Chairman & CEO, 2004)

One thing about the journey is that it is impossible to travel alone. This is why Fuji Xerox Australia has embarked upon its own research into future web technologies (the Semantic Web) in partnership with both RMIT University and NICTA (National ICT Australia). The future within the services world is in recognising that success comes from collaboration and the sharing of knowledge with both customers and sometimes competitors. It relies on a divergence of perspectives and opinions and the ability to take calculated risks which may not always be successful. It is an exciting journey, and one that we hope you might be interested in sharing with us.

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If you are interested in finding out more about Fuji Xerox Australia’s research into Semantic Technologies please contact Anni Rowland-Campbell at Anni.RowlandCampbell@aus.fujixerox.com