



# Connect with innovation

What innovation means to Fuji Xerox  
and Xerox Corporation

# The Xerox Innovation Group's mission is to “pioneer high-impact technologies that enable leadership in core markets and to create future markets for both Xerox and Fuji Xerox.”

## Innovation keeps us at the forefront of our industry

- Together, the Xerox and Fuji Xerox group invested in excess of AUS\$2.46 billion in research, development and engineering, last year
- Ten research centres spanning Japan, the United States, Canada and Europe
- In 2007, the Xerox Palo Alto Research Centre (PARC) received R&D Magazine's “Top 100” Innovation Award
- Focus is on colour science, computing, digital imaging, work practices, electromechanical systems, alternative materials, semantic technologies and more
- Four epicenter™ innovation centres in Sydney, Shanghai, Singapore and Tokyo, focus on collaborative discovery with customers and industry
- More than 8,600 active U.S. patents, 50,000 patents worldwide over 70 years
- 5,000 world-class scientists and engineers



### *Research is undertaken where:*

- *Invention and entrepreneurship are truly valued*
- *Leading-edge research is performed and high-impact technologies are created that make a difference in the real world*
- *Gifted people from diverse disciplines and cultures are brought together to collaborate*

## Unique research themes

Innovation in the Xerox world goes beyond traditional multi-disciplinary approaches, bringing researchers and customers together in unique ways to solve real-world problems.

Some of the frontier areas that researchers pursue are:

### Reinventing technology and systems

Researchers have been continually working towards maximising our products technology capabilities whilst reducing their footprint – both physically and environmentally. With more and more subsystems under computer control, engineers are developing ways to enhance diagnostic and prognostic capabilities as well as adding new service capabilities.

### Rethinking how people work

Work, whether physical or mental, is task oriented and involves people, processes and equipment. Technology has been an enabler for simplifying work and increasing the capacity to do work. Xerox researchers are addressing many of the challenges of how people work today. For example, understanding how to manage information overload and automating repetitive tasks.

### Redefining the document

Xerox researchers are expanding the boundaries of today's documents in many directions. For example, imaging scientists are applying their expertise to invent ways of embedding information within paper-based documents. Additionally, Xerox physicists and material scientists are working with nano-particle systems and organic electronic materials to discover new ways to create display media which will have paper-like properties, but will integrate seamlessly into the digital world.

## Innovation and you

To strengthen the market relevance of all research, there is an explicit focus on what is called “Customer Led Innovation.” Researchers frequently seek opportunities to work directly with customers and routinely deploy ethnographic methods to learn about customer needs and pain points. Today the customer is also viewed as a partner in innovation and the groups researchers encourage “dreaming with customers” about what the future can be like.

## Research in Australia

For Fuji Xerox Australia, the challenge of innovation is less to do with transformative technologies and more to do with implementing tailored solutions within customer environments that solve a specific business problem. Increasingly this means ‘services innovation’, which relates to improving document intensive business processes for our customers.

Our core research activity in this area is our “Semantic Technologies” research project, undertaken in partnership with RMIT University and Common Ground Publishing, with funding from the Australian Commonwealth Government. The research investigates the evolution of the World Wide Web and its impact on documents and document-intensive business processes, in particular focusing on the context and meaning of information relevant to end user needs. Now in its final phase, this project has already yielded numerous insights into how people and organisations are communicating in the web-driven world, and, in our next research project, we will be further developing this by looking at how these technologies can both inform and report on sustainable business practices.

## What Xerox invented for Today, the 90s, 80s and 70s

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### Innovations of today

- Electronic re-usable paper
- The first plastic semiconductor transistor
- PARC spin-out “Placeware” is acquired by Microsoft to become “Microsoft Live Meeting”
- Network security and device inoperability breakthroughs lay the foundations for the future of wireless networks
- ContentGuard, a Xerox and Microsoft joint venture is acquired by Microsoft, Time Warner and Thomson
- GroupFire, a PARC breakout company, develops personalised and simplified Internet searches. Google will later acquire this technology
- Reading innovations including a DataGlyph decoder, a speed-reading machine, a reading-eye dog and a children’s book with a digital soundtrack
- Fibre array scanning technology is used to test screen for early cancer detection
- Research commences on developing low-cost, reliable solar energy

### Innovations of the 1990s

- Using ubiquitous computing research, a mobile browser was developed
- A lightweight, portable document reader including a display, computer processor, battery and network connections.
- The blue laser was developed which improved resolution in digital printing
- The world’s first high resolution active matrix liquid crystal display (AMLCD) monitor
- PARC plays a leading role in designing protocols that govern and define how the Internet works
- LambdaMOO, a multi-user domain and foundation of “chat rooms” allows more meaningful interaction on the Internet

What Xerox invented for Today, the 90s, 80s and 70s cont...

**Innovations of the 1980s**

- Continuing the development of easy-to-read computer screens
- The Xerox Encryption Unit which encodes computer signals on ordinary local-area networks is released
- PARC becomes the world-leader in DataGlyph technology
- “Text support” – a multilingual technology that became the foundation of text on the Internet
- World’s first multi-beam laser is created
- Xerox typewriters can spell-check, correct typographical errors and have a dictionary
- In 1982, John Warnock and Charles Geschke leave PARC to start Adobe
- The first integrated mouse is made available with the Xerox 8010 Star Information System
- Xerox 8000 – a network system allowing users to electronically create, process, file, print and distribute information

**Innovations of the 1970s**

- Xerox Corporation employee’s workstations are linked by Ethernet local area networks (LANs) and gateways
- The first personal computer, the Dorado, is the size of a suitcase and was the basis of personal computers of the future
- Xerox 5400 is the first Xerox copier/duplicator which connects to the Ethernet, allowing computer-to-computer communications
- The mouse ball allows the mouse to move easily around a desk
- The first feedback (solid state) laser is demonstrated
- A primitive algorithm will be the foundations of the Graphical User Interface allowing overlapping screen windows and pop-up menus on computer interfaces to be a reality in the future
- A user-friendly computer word-processing system is developed
- The Ethernet is created, allowing multiple computers to communicate over a single cable
- Smalltalk – the first object-oriented programming language is deployed. Smalltalk will later heavily influence C++ and Java programming systems

**About Fuji Xerox Australia**

Fuji Xerox Australia is one of Australia’s leading document management technology and services companies marketing innovative technologies, products and solutions.

Our mission is to be the unrivalled leader in providing print and electronic document services and solutions, as well as business process expertise to government and business communities.

With more than 12 billion pages produced on Xerox technology in Australia annually, Fuji Xerox has the experience and knowledge to design and implement document solutions for offices, print rooms, commercial printers or publishing environments, with expertise that includes Print Solutions, Software, Managed Services, Consulting and Integrating Services and Supplies.

The company, its management and its staff are driven to create sustainable value for its customers and that is reflected in its commitment to environmental responsibility and continuous improvement across all aspects of the business.

For further information, please visit [www.fujixerox.com.au](http://www.fujixerox.com.au)

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**Certified Environmental Management**

**ISO 14001 C10094 SAI Global**



Protecting the environment is a fundamental component of our company’s commitment to corporate citizenship. At Fuji Xerox Australia, we supply products that have been designed with both our customers and the environment in mind. As a world leader in the development of parts and components Remanufacturing Programs, we have made Eco-Manufacturing an integral part of our business.

All our sites have achieved ISO 14001:2004 Environmental Management System Certification, as a demonstration of our commitment to protecting the environment.