

Xerox Research Centre Europe

Combining scientific vision with business reality

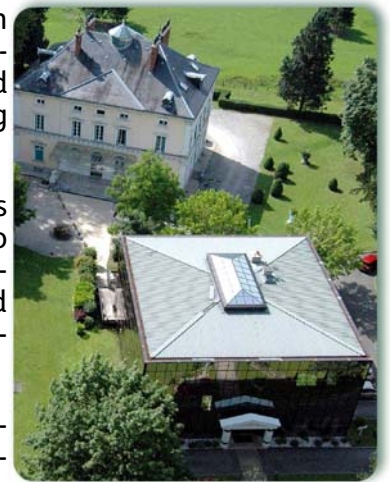
Xerox is a company that is founded on and thrives on innovation.

The Xerox Innovation Group explores the unknown, invents next generation technology and creates new business and shareholder value through its worldwide research centres.

Xerox established its European research centre in France in the early 90's to create innovative document technology and drive the corporate transition in becoming a services-led technology business.

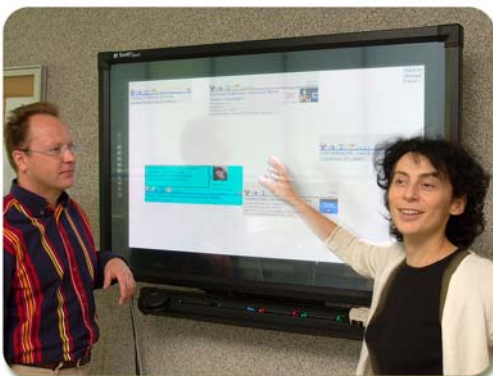
Alongside its research, the centre carries out advanced development and also hosts the European Technology Showroom, a showcase for Xerox research and an exchange forum for scientists, engineers and customers.

Xerox Research Centre Europe (XRCE) pursues a policy of open innovation and collaborates with the wider European scientific community on a variety of R&D projects.



XRCE site, France

Research & Technology

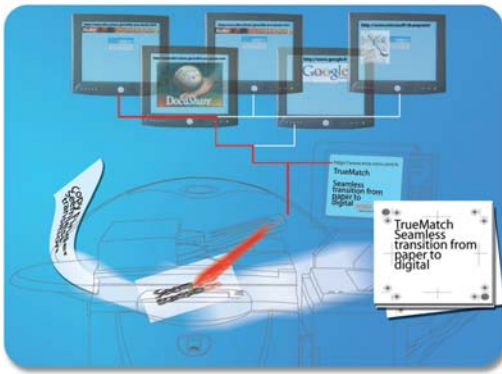


XRCE research covers a broad spectrum of activities linked to information, data and documents. These range from understanding text and images, to the generation of new documents, through to the optimization of service processes combining both human and machine elements. Our technical expertise is enriched with the knowledge gathered from our sociologists and ethnographers who develop a deep understanding of how our customers work. The result is **innovative services and solutions** that enhance our customers work processes, improve their productivity and make their businesses more sustainable.

The research carried out at XRCE is at the heart of many of the components in Xerox's **Smarter Document ManagementSM** suite, in particular the work carried out in linguistics, images and document structure.

The linguistic **text mining** technology developed by the centre since the early 90's can carry out different levels of analysis depending on the task. Basic tools are available for **13 European languages** and more advanced semantic processing functionalities in a subset of these. More recently, XRCE has created state-of-the-art technology that can perform advanced semantic and discourse analysis. Such an advanced system has numerous highly valuable applications in dealing with today's information overload including question answering, risk assessment and searching huge datasets for litigation or new drug discovery.





In imaging, XRCE was the first to produce a system that automatically recognizes the content of photographic images in a fully-generic way. Today, we are applying it to image enhancement, photo albums, security and document recognition as well as print control. Combining this 'image categorizer' with analogous technologies for automatically organizing document collections using text, we have been the first to successfully

demonstrate how machines can learn about text from images and vice versa. This allows to provide more accurate analysis and to assist in creating new information incorporating both text and visuals.

Complementary to research in linguistics and images, is understanding how documents are **structured**. Based on the eXtensible Mark-up Language (XML) we are developing methods to be able to automatically 'deconstruct' and convert scanned documents and PDF files into accessible information. This allows us to affordably streamline document intensive processes such as authoring or publishing or any work that is based upon transforming large quantities of static documents into dynamic exploitable sources. The underlying technology uses a unique combination of methods so that it learns and adapts itself to consistently achieve the best results.

XRCE research in **data mining** focuses on identifying opportunities to optimize processes. By analyzing the data our machines produce we can improve performance as well as reduce energy consumption compatible with user printing patterns. We are also applying these techniques to other data sources to continuously improve our customer support on line and in the field.

The net result of XRCE's research is innovative solutions and services that help deal with information and documents while improving processes and the use of resources.

Partners

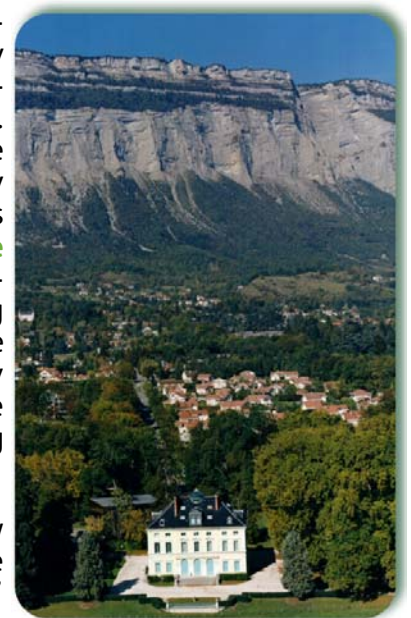


Along with our internal and external customers, the centre collaborates with academic, government and industrial research groups and participates in a variety of regional, national and European Union networks and projects. As part of its **Open Innovation** program XRCE is currently part of 7 European projects and 3 French national ones. Collaborations are also expanding to Russia and India.

Researchers are members of research review boards and expert panels and hold positions at other academic institutions. The centre welcomes visiting professors and students from across the world. It runs an extensive annual intern program and also partners with universities through the Xerox Foundation which each year funds around 40 projects at 30 colleges and universities worldwide. Our partners also include organizations who have licensed our technologies for both research and commercial purposes.

The customers that visit the XRCE Technology Showroom every year come to learn about Xerox innovations and exchange ideas and requirements for the future. This **Customer Led Innovation** process greatly enhances the innovation capabilities of the centre.

XRCE is part of the global Xerox Innovation Group made up of 800 researchers and engineers in four world-renowned research and technology centres. Researchers and engineers in Grenoble collaborate in particular with their Xerox colleagues at the Webster Research Centre in New York State and the Palo Alto Research Center (PARC) both in the USA. Approximately 80 people work at the European research centre. The Grenoble site is set in the heart of the French Alps and only a few kilometres from the city centre.



XRCE site



Contact details:

info@xrce.xerox.com

www.xrce.xerox.com

Tel: +33 (0) 476 615 050