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Technology Innovation Assessment:

Multifunction Printer Software Platforms

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INTRODUCTION

In this Market Leadership Assessment, we will investigate how Xerox is tackling the key challenges in the MultiFunction Printer (MFP) industry, the key metrics utilized by Frost&Sullivan to measure Xerox's MFP software platform against those from its competitors, and conclude with a couple of customer testimonials that provide further insight into Xerox's performance.

SIGNIFICANCE OF THE TECHNOLOGY INNOVATION AWARD

Key Industry Challenges Addressed by Xerox

The fast pace of technology development has been one of the most important issues impacting the global printing industry over the past few years. Customers are demanding increased flexibility to scan documents in several formats such as text searchable and single/multi-page PDFs. In addition, they would like to convert documents to various Microsoft Office formats (Excel, PowerPoint, and Word) and to share documents on cloud-based repositories (such as Drop Box, Google Docs, Office 365, and SalesForce.com, among others).

But there is another change taking place in order to address a key customer requirement: workflow optimization. This is part of the all-encompassing goal of improving worker effectiveness, which is also manifesting itself in the enterprise communications space under the mantra of Communication Enabled Business Process (CEBP). In the printing business, there is a similar push to reduce the human latency that exists within a process flow. New innovation in enhancing productivity and efficiency as well as enabling printers to create new products for the customer have empowered many companies to surge ahead of their fierce competitors.

"ConnectKey represents a very significant step forward in the quest for improving document workflow within an enterprise."

– Ronald Gruia, Director, Frost&Sullivan

Xerox has leveraged its innovation acumen to develop its next-generation ConnectKey® Technology platform. ConnectKey is the underlying software platform that controls the Xerox line of MultiFunction Printers (MFPs), and represents a very significant step forward in the quest for improving document workflow within an enterprise. IT departments can manage ConnectKey enabled MFP's in a straightforward fashion, making applications more accessible to their enterprises right from the devices' touch screens. In addition, the software platform offers a common user interface across a variety of devices, greatly enhancing their usability.

ConnectKey also represents a shift in the way Xerox is treating its MFPs, moving away from the old paradigm of hardware offerings towards a new, vertically integrated software platform model. The platform is 80 percent customer driven, with the remaining 20 percent coming from innovation by the Xerox engineering team. Xerox aligned its own processes, in an agile fashion, and is already reaping some good results in a short period of time after the product launch, with ConnectKey enabled MFPs driving significant incremental installs in 2013 versus 2012.

BEST PRACTICE AWARD ANALYSIS FOR XEROX

For the Technology Innovation Award, the following criteria were used to benchmark Xerox's performance against key competitors:

- Intellectual Property Strength/Uniqueness of Technology

- Impact One Year Existing Products/Applications

- Impact One Year New Products/Applications

- Impact on Customer Value

- Technology Investment Commitment

Key Performance Drivers for Xerox

Criterion 1: IP strength/uniqueness of technology

ConnectKey is much more than just a next-gen multifunction printer technology – instead, it can be thought of as a software ecosystem that provides the building blocks necessary to allow a multi-function printer to simplify an enterprise's document workflow. The model that Xerox is embracing is similar to Apple's iOS: an underlying OS platform and the applications that go on top of it. ConnectKey enables most of the Xerox MFPs to be platforms enabling third party app developers to write software that would go on top of it.

ConnectKey enabled MFPs can be connected wirelessly, allowing endpoint clients to access them while on the go, without incurring extra network infrastructure costs. Xerox is supporting protocols such as Apple Air Print™ to enable users to easily connect and print from their iOS smartphone or tablets.

In addition, ConnectKey technology features industry-leading security, which has been achieved via partnerships with vendors such as Cisco and McAfee, in order to provide extra layers of security software as well as greater visibility to IT staff. The relationship with Cisco also carries over to the energy management space, where Xerox uses the Cisco EnergyWise solution to lower power consumption in order to help an enterprise achieve its sustainability goals.

Workflow improvement is another key tenet for ConnectKey. Xerox is simplifying customer workflows via tools such as ConnectKey for SharePoint® and Business Process Outsourcing Integration through Xerox Services.

Criterion 2: Impact on existing products and applications

The early feedback on ConnectKey has been extremely positive: ConnectKey enables MFP's on a year-over-year (YoY) basis are driving significant incremental installs (2013 versus 2012). This is impressive considering the product was launched only in February/March of this year.

Customized applications can be empowered by the Xerox® Extensible Interface Platform® (EIP), which now enables the creation of serverless applications to run on ConnectKey enabled MFPs, without the need for additional IT infrastructure. This allows customers to simplify and personalize the usability of their devices with a range of capabilities from support applications to scanning.

Criterion 3: Impact on new applications

Enterprise customers have been already providing Xerox with some powerful accolades, thanks in part to the same common-look-and-feel across different platforms. A lot of innovation for ConnectKey has been achieved via process innovation - Xerox is testing the software across five different MFP platforms stressing the software in different ways.

Xerox has developed APIs that will enable third party app development. One example is an application that allows employees to capture all their invoices from a trip, simplifying the entire expense report process and speeding up the time that it takes for employees to get reimbursed for out-of-pocket expenses incurred while on company business.

Criterion 4: Impact on customer value

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In a global survey sponsored by Xerox, 70% of IT managers, business managers, and mobile workers said that optimizing document flow would help them respond faster to market needs, and 62% said it would improve overall revenue. ConnectKey tackles addresses this issue by offering mobile printing and scanning solutions that integrate fully with cloud-based technologies and mobile devices. Consequently, employees can benefit from a superior convenience, increased productivity, and a more cost-effective infrastructure. The ongoing proliferation of smartphones and tablets makes it an imperative for multifunction printing devices to connect with their increasingly mobile workforces. In doing so, these devices can increase employee productivity by allowing connections "on the go", enabling knowledge workers to recover some of their "downtime" (e.g. when they are at an airport lounge, etc.).

Criterion 5: Technology investment commitment

Xerox commitment to technology innovation is well known around the world. The company's Palo Alto Research Center (PARC) captures the very essence of innovation, having been the birthplace of so many technologies that have served not only for Xerox but also for other companies including Apple and 3Com, among others. In 2012, the company reported R&D investments of $655 million, which represents about 3 percent of its revenues.

Xerox maintains monthly targets for submitting invention disclosures and quite a few of those eventually become patents. This also carries over to strategic partners such as HCL, with which Xerox maintains a unique relationship. As a result of an agreement struck between the two companies in 2011, HCL has an annual target for submitting invention disclosures. This is another example of how much Xerox relies on its IPR to go forward.

One further strong indicator of the importance given to technology innovation is the fact that Xerox received 1,215 U.S. patents in 2012, ranking the company as one of the world's top innovators. The 2012 tally includes patents from Xerox and its wholly-owned subsidiaries, including PARC. Xerox's joint venture in Japan (Fuji Xerox Co. Ltd.) obtained 686 U.S. patents in 2012. Combining both, the Xerox group garnered 1,900 U.S. patents, which placed Xerox in the top 10 on the IFI Patent Intelligence list worldwide.

CUSTOMER TESTIMONIALS

Grace Christian School

Grace Christian School is a K-12 college prep school located in Rayleigh, NC. Grace Christian is a very progressive school and all of its students from grades 4 through 12 have Mac Books that they use every day in the classroom.

When considering its key copy/printing needs, the school's key criteria include ease of use, security, going green, protecting the environment, and mobile print. All of these requirements are being handled for Grace Christian by Xerox.

With Xerox's solution, teachers can scan documents and load them into their Internet service for students, where they could be accessed by the students' Mac Books, reducing the amount of paper printing required. ConnectKey provides a secure environment, converting the school's documents into digital format, without having to worry about them being hacked into.   The mobile print function enables students to send print jobs right from their personal laptops.

In conclusion, ConnectKey addresses the top-of-mind copying/printing/document sharing concerns for the educational vertical.

Concord Hospitality

"We have many solutions on our MFP. Our teachers are very, very pleased; that just gives them more planning time, more hands-on time with the students."

- Kathy Sherrer, Office Manager, GRACE Christian School

Concord Hospitality is a hotel and management company that operates 80 hotels across the US and Canada. From an IT perspective, the company provides all of the back-office and administrative support to those hotels. ConnectKey offers Concord a more robust platform for scanning documentation, moving papers from paper to PDF format and TIFF images, scan directly into its SharePoint environment to help processes go a lot smoother and speedier, and provide end-users with a common experience.

A ConnectKey feature that is very important to Concord Hospitality is the remote control panel, which will allow the company to remotely control the user interface, thereby easing the troubleshooting of problems with the end-users. Another compelling differentiator is the security of MFPs running on the ConnectKey environment, which will secure printing and photocopying hardware, something which was not so easily secured in the past.

Last but not least, mobile printing is a great enhancement which will spearhead the adoption of mobility within the corporate office, with users being able to send an e-mail to the copier which will automatically print a copy whenever the user shows up at the office.

The chief benefit of ConnectKey is that it empowers Concord Hospitality associates to improve their productivity, spending less time in back-office tasks and more time in enhancing their guests' experience, which is a key differentiator for the company's properties.

"One of the main benefits of Xerox is that they can make processes more efficient. Our goal is always to minimize the amount of activity that our associates have to spend in the back office and free them up to be more guest facing."

- Brian Cornell, CIO Concord Hospitality

CONCLUSIONS

Xerox is an R&D leader, committing significant human and capital resources in order to support the development of new products, as attested by its "Top 10" global ranking in patents in 2012. The company has an established innovation process that is run by the company's own CTO Office. Xerox maintains an internal web site with quarterly targets for invention disclosures; every invention disclosure gets a quality rating (a rating of 3 represents an idea pretty close to being "patent material", with very good chances of being submitted to the US Patent Office).

ConnectKey represents a big step forward in the quest for better document workflow within an enterprise or SMB.   The novel idea to leverage that as a platform for third party application development and the fostering of a larger ecosystem should make this a mainstay at Xerox for years to come. Xerox has demonstrated its commitment to deliver customer value by tackling a key industry pain point and establishing partnerships with vendors specializing in other areas such as security and energy management.

The company's ability to innovate, leverage ConnectKey as a platform for third party application development, and to create a partner ecosystem are among the key attributes leading to Xerox receiving the 2013 Excellence in Technology Innovation Award from Frost & Sullivan.

ABOUT THE AUTHOR

Ronald Gruia is the Director for Emerging Telecoms at Frost & Sullivan, where he covers topics such as NGN transitional technologies, 4G/LTE, IMS (IP Multimedia Subsystems), FMC, VoIP, SDN (Software Defined Networking), NFV (Network Function Virtualization), Carrier Messaging/Value Added Services Platforms, IPTV, IP Centrex, Triple Play Services, Enterprise Communications Systems, Unified Communications, and Video Conferencing, among others. He has spoken at conferences such as Supercomm, VON, 3GSM, MWC, CTIA, Futurecom, VMA, TMIA, IMS Expo, IPComm, Fierce IPTV, Intel Communications Summit, VON Canada, IP World Canada and Comdex Canada.

Since joining Frost & Sullivan in February of 2001, Mr. Gruia has spoken at conferences such as Supercomm, VON, 3GSM, CTIA, TMIA, VMA, IMS World Forum, IMS Expo, Futurecom (Brazil), IP Comm, Fierce IPTV, Intel Communications Summit, VON Canada, IP World Canada and Comdex Canada. He is a columnist for TheStreet.com and also writes articles for various publications (such as NGN/IMS Magazine, VoIP Magazine, Telecommunications Magazine and Telemanagement), has appeared on CNBC (US), BNN (Business News Network), Report on Business Television and TechTV (Canada), Decision TV (Brazil) and Telecom TV, and is often quoted in publications including Business Week, Forbes, Wired, API, MarketWatch, Reuters, The Street, Network World, IT Business, IT World, San Jose Mercury News, National Post, Globe&Mail and Yahoo! Canada Finance.

Mr. Gruia is an MIT graduate in Electrical Engineering, and has accumulated years of experience in the telecom industry, having held several roles at Nortel Networks' Enterprise Division, where he earned a U.S. patent.

This paper is part of the ongoing coverage of worldwide information and communications technologies markets by Frost & Sullivan (www.frost.com), an international growth consulting company. Working closely with our clients, we use advanced market research methods to identify and analyze the critical market challenges they must address to become successful competitors in their industry.