



I D C T E C H N O L O G Y S P O T L I G H T

Addressing Cloud, Mobile, and Workflow Efficiency Demands with the Next Generation of Multifunction Peripherals

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The adoption of mobile devices has transformed how and where business is conducted. IDC research indicates that there will be 1.3 billion worldwide mobile workers by 2015. This represents over 37% of the total worldwide workforce. In addition, worldwide media tablet shipments are projected to grow from 69.6 million in 2011 to 222.1 million in 2016, and worldwide smartphone shipments will reach 1.3 billion by 2016.

All this mobility means that mobile workers will require access to the same resources available in the office. Business-critical content will continue to move to the cloud for secure access from anywhere and at any time. As a result, multifunction peripherals (MFPs) will need to evolve to offer a broad variety of cloud and mobile capabilities in order to adapt to this changing and evolving computing landscape. This Technology Spotlight explores the trend toward convergence within the MFP market and discusses how Canon's imageRUNNER ADVANCE MFPs provide for the evolving requirements in an increasingly mobile and cloud-based computing infrastructure.

Introduction

Traditionally, printers and copiers were considered as two separate and distinct office machines. Printers offered output from computing equipment, while copiers replicated paper originals from a variety of sources. As these markets evolved, the delta between printers and copiers shrank, creating the MFP market.

The conventional value proposition of the MFP versus other single-function office equipment is that the MFP addresses a combination of important document functions — copy, fax, print, and scan — in one machine rather than multiple devices. With an MFP, organizations could save costs in the purchase or lease of one machine to get up to four document functions. Cost savings were also available in the coordination of supplies and machine maintenance. Another common benefit highlighted in the early days of the MFP was the space savings inherent in room needed for one machine versus the space needed for four separate devices.

Over the past few years, the market has evolved considerably, and now the MFP is seen as central to this market change. Most office-oriented MFPs are built with an MFP architecture that allows a variety of document-related software solutions to be used with the device. This means that the MFP has evolved from an office device focused on producing printed and copied pages to a device that is integral to the paper and electronic document processes of the business.



IDC's predictions for the future printing and imaging market truly reflect a transforming industry. Much of this year's focus will be on emerging growth opportunities offered by an increasingly mobile and cloud-based IT infrastructure. IDC believes that mobility, cloud, and other emerging technologies will shape the future IT marketplace, including printing and imaging products. As this market evolves, customers should be thinking about working with suppliers that can provide solutions that leverage these new technologies to gain their promised benefits.

As cloud and mobility become increasingly pervasive in the market, the way that business is conducted will change. IDC's numbers indicate that the proliferation of mobile devices, an increasingly mobile workforce, and the explosive growth for cloud-based services will make "work on the go" and access to business information anytime, anywhere the norm of future work environments.

The MFP will play a critical role in this new cloud and mobile computing landscape. IDC believes new software solutions, created from the MFP's architecture, will be available to drive more efficient and cost-effective tools to create, access, process, and produce business information. Since customers will require access to assets and business information — whether they are in the office or "on the go," IDC believes the MFP provides for this need by acting as the on-ramp and the off-ramp for this business data. The next generation of MFPs means scanning documents and data to the cloud; it means being able to print from the cloud, plus a whole lot more.

Benefits

Converged mobile, cloud, and print technologies include two primary bottom-line impact benefits: cost savings and increased worker productivity.

- Ability to access business documents/information "anytime, anyplace"
- Streamlined/integrated workflow and business processes
- Faster online delivery of IT services, ease of deployment
- Improved IT staff productivity and service to users
- Ability to support and facilitate collaboration across remote and/or distributed teams and/or locations
- Integration with existing IT systems
- Increased employee and/or customer satisfaction
- Maintaining and/or improving the security of business information
- Reduced spend on software licensing and maintenance
- Revenue stream for businesses that cater to mobile workers (e.g., hotels, coffee shops, airport lounges)

Market Trends

New mobile technologies are enabling workers to perform their job tasks anytime and anyplace. These technologies — wireless or small form factors — will continue to increase market penetration as office workers seek to gain the benefits of these mobile advances. Technologies such as tablet PCs, mobile print services, and cloud are in either infancy or growth stages, leading IDC to anticipate much more activity in these specific areas in the near term to fuel the mobile market opportunity.

It should be noted that different office workers require various levels of mobility. Some want to be able to do their job outside the traditional office or cubicle; others may be traveling extensively in trains, planes, and automobiles in attempts to drive more business revenue for their companies. However, all workers want the traditional barriers of wired telephones, computers, and the like to be augmented by wireless handheld computing tools.

Smartphones, tablet PCs, and laptops are examples of technologies that enable the workforce. While some say such tools lessen or even eliminate print, IDC believes there is a need to facilitate printing on these mobile devices so that it will be available when desired. IDC research indicates that users still want to print from such devices, and as more content is available in the cloud, there will also be an ongoing need to provide for printed versions of this content. All in all, print will play an important role in the fast-emerging mobile and cloud computing market dynamic.

Recent research reveals that "safe" document processes will go to the cloud first. It remains to be seen how quickly more sensitive information (e.g., medical, legal, and insurance) will go in this direction. Security is still of high concern; while the cloud is expected to shape the future of computing, it hasn't completely won over the market yet. In general, organizations are looking for solutions to streamline vertical and line-of-business workflows.

Product Profile

To more tightly integrate its MFPs to address the requirements posed by an increasingly mobile and cloud-based market, Canon offers a new generation of imageRUNNER ADVANCE devices. These MFPs, together with Canon's collaboration solutions and services, provide an enterprise application and imaging platform.

This next-generation MFP strategy starts with Canon's collection of mobile and cloud printing solutions designed to facilitate a seamless transition to this new computing landscape. Solutions include the following:

- Recently announced mobile printing apps for Apple iPhone and iPad products (Canon Mobile Printing)
- Peer-to-peer mobile printing and scanning (Direct Print and Scan for Mobile)
- Cloud-based printing and scanning (Cloud Portal for imageRUNNER ADVANCE)
- Server-based mobile printing and scanning (uniFLOW)
- Cloud-based mobile printing from EFI (EFI PrintMe)

The range of solutions is necessary to meet the wide needs of various Canon customers from small businesses to large enterprises.

Additionally, Canon Business Imaging Online (CBIO) is a cloud platform and architecture that extends device function capability, such as scan to Google Docs or other cloud applications, managed document services, and mashup applications with other cloud solutions (e.g., Forms and Print Services for Salesforce.com). The CBIO infrastructure offers a range of solutions targeted at addressing worker productivity (scanning, document management), total cost of ownership, and security, particularly within a managed document services engagement involving workflow solutions.

Further, all of this needs to integrate with the customer's existing enterprise applications (e.g., ERP, CRM, ECM) as well as with traditional paper-based processes in order to automate the customer's business processes. To address this important market requirement, Canon offers an Oracle Fusion middleware solution that is designed to seamlessly integrate and automate paper-intensive and

multistep business processes with imageRUNNER ADVANCE devices and enterprise systems. This saves time and improves the customer's business processing efficiency.

This middleware works with a client's existing IT infrastructure to connect multiple enterprise applications from data to paper-based business processes. This allows organizations to connect paper from input/output devices with technologies such as ERP and CRM applications. The new platform provides the needed imaging technologies (e.g., Web services adapters) to facilitate the connection. While Web services as an application integration mechanism are certainly not new, having the imaging and device control adapters that integrate Canon's MFPs with the enterprise applications is new.

These latest imageRUNNER ADVANCE MFPs represent Canon's effort to address the evolving and diverse needs of office knowledge workers, business managers, and IT professionals. With this next-generation imageRUNNER ADVANCE platform, the system becomes a business catalyst and central hub for documents and business process workflows. This central business system is designed to integrate mobile devices, cloud-based applications, and enterprise solutions into one streamlined document and workflow architecture.

As illustrated in Figures 1 and 2, imageRUNNER ADVANCE is designed to serve as a catalyst for system convergence and technology transformation. In addition, the platform supports mobile applications and cloud-enabled devices and includes a middleware platform providing various adapters for automating paper-based processes for increased productivity and efficiency.

Figure 1

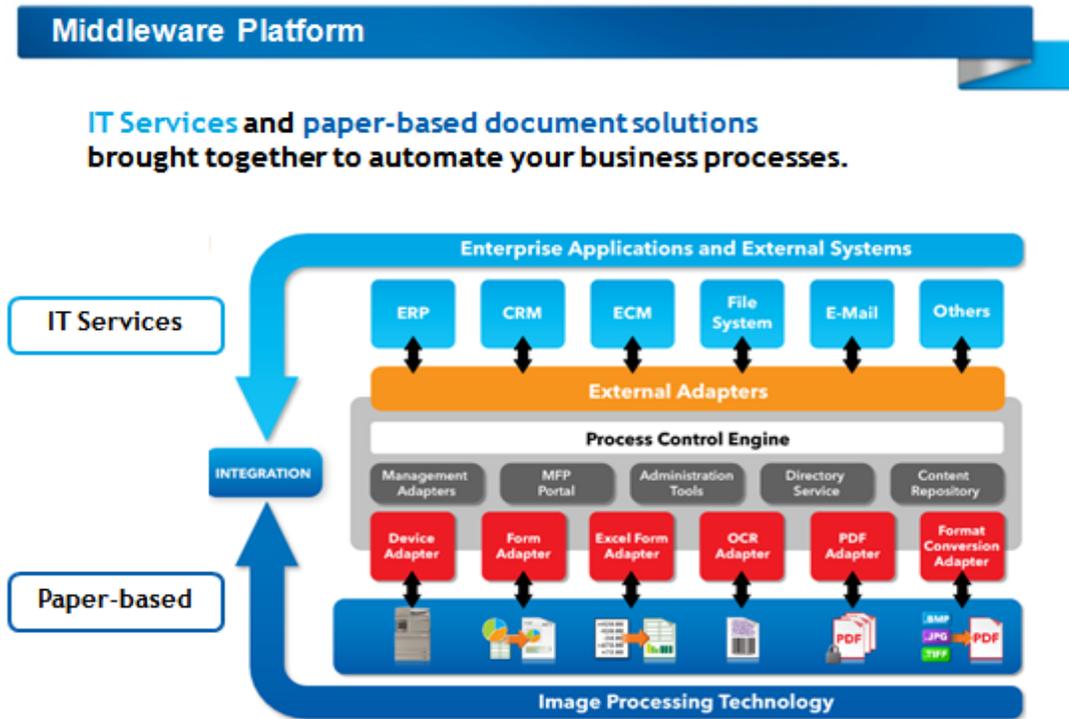
Canon imageRUNNER ADVANCE Next-Generation Platform



Source: Canon

Figure 2

Oracle Fusion Middleware for imageRUNNER ADVANCE



Source: Canon

Workflow Enhancements

The imageRUNNER ADVANCE next-generation platform is designed to transform a series of individual processes into a continuous integrated workflow of shared information. Enterprise connectivity and an IT-friendly middleware platform enable Canon's imageRUNNER ADVANCE MFPs to be part of an overall solution to streamline customer workflows. Additionally, the platform is designed to improve end-user productivity; next-generation models come standard with solutions such as the imageRUNNER ADVANCE Desktop Quick Printing Tool, which is designed to make it easy to drag and drop documents for printing, faxing, and creating PDFs using standard and customized document templates. For business applications that require the integration of hardcopy documents into electronic workflows, these latest imageRUNNER ADVANCE models offer the Scanning to Office Open XML feature as standard and now support scanning to both .pptx and .docx. In addition, Searchable PDF (OCR) is standard.

Security Enhancements

Canon offers many solutions to address the security needs of devices, document workflow, and end users. Offerings include flexible authentication and access control solutions, secure printing and faxing handling capabilities, and enhanced scanning solutions and improvements to the MFP and its hard drive. For example, the imageRUNNER ADVANCE next-generation series includes HDD Erase, which protects sensitive information by ensuring that latent images are overwritten after each device task. In addition, the HDD Lock Function is a new standard feature that protects all of the data stored on the hard drive from being accessed by a PC, even after the hard drive is removed from the device.

Challenges

With any market transformation, existing vendors need to position themselves for the inevitable change. Canon has a long-established legacy as a great manufacturer of technology products. Now, the print/MFP market is shifting from a focus on the machine to a focus on the services and software platform. This is a substantial adjustment in the traditional business model, and IDC expects some consolidation to occur as a number of vendors fail to make the transition.

However, IDC believes that print/MFP manufacturers are making this transition to help support the growing demands of the marketplace for integrating paper-based documents with mobile and cloud-based technologies. Canon is in the critical stage of making this adjustment and has taken steps with cloud, mobile, and services solutions to remain a force in the future market. Making these business model changes is challenging, and the consequences of making the right or wrong moves are significant. While Canon still has to go through several stages before it completes the transition, the company appears to be moving in the right direction.

Conclusion

The IT marketplace is entering a new phase in the computing landscape that will be dominated by cloud, mobility, and other key technologies. To maintain market relevance, print/MFP vendors need to carve out their place in this transitioning marketplace. Mobile devices, such as laptops, tablets, and smartphones, will be the norm for business information computing today and in the future. Current and future printers and MFPs need to demonstrate a value proposition that integrates these emerging technologies and trends. If Canon takes this path and adequately addresses the challenges described in this paper while avoiding pitfalls, the company should find success.

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