

WHITE PAPER

Cutting Costs and Maximizing the Return on Your Imaging and Output Assets

Sponsored by: HP

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EXECUTIVE SUMMARY

New, powerful document distribution and management advances place imaging and output resources in an important role within critical business processes. These processes may be vertical, such as brokerage accounts, insurance claims, and FDA drug applications, or horizontal, such as invoicing and HR documentation. As a result of these trends, imaging and output resources are now being included in efforts to align business goals with IT and in efforts to maximize the return on all IT resources.

The process of optimizing the imaging and output infrastructure inevitably reveals unnecessarily high costs and underutilized assets. Indeed, for this White Paper we studied nine large enterprises in the United States, Europe, and Asia and found the majority of organizations studied reported major problems related to overall cost awareness of their imaging hardware, their ability to assess device utilization, and high costs of maintaining an often aged and out-of-date fleet of printers, copiers, and multifunction devices. Based on the experiences of these nine companies and other IDC research, this White Paper looks at the unnecessary costs and inefficiencies that typically exist within these resources and the significant opportunities to achieve cost savings, boost employee productivity, and speed up core business processes from tighter integration between the document advances of hardcopy devices and business process workflows.

In the large organizations IDC studied, we found significant benefits in terms of cost savings and improved user productivity when steps were implemented to optimize their imaging and output infrastructure. These benefits included the following:

- Significant hard cost savings, ranging from 8% to 41%, were realized from a combination of reduced hardware, supplies, and maintenance spending as well as lower IT support costs.
- Benefits beyond hard cost savings were reported as the biggest and best part of implementation. They included:
 - The availability of real-time usage data as a basis to make decisions and show actual cost reductions
 - Much-increased user satisfaction from a now balanced deployment
 - The change in user behavior enabled through usage reporting, which made users more conscious of what and how much they print

This White Paper discusses the benefits of a managed imaging and print environment and the elements that create the managed environment. When implemented, the managed imaging and print environment brings costs under control and the organization is able to achieve the full benefits of a truly flexible IT environment.

IMAGING AND OUTPUT INFRASTRUCTURE IN TODAY'S ENTERPRISE

Significant Costs from Failure to Manage

When organizations studied for this White Paper began the process of assessing their imaging and output infrastructure, most discovered significant unnecessary costs due to inefficiently deployed devices, a fleet of outdated and difficult-to-maintain devices, and excessive supplies costs. One organization found it possible to eliminate more than 10,000 unnecessary print and fax devices. It now has a goal of reducing the number of printers from 18,000 to 2,000. The reduction will include 10,000 low-end printers representing more than half-a-dozen vendors. In addition, all standalone fax machines will be eliminated. The printers and fax devices will be replaced by approximately 300 HP multifunction printers.

Each of the nine enterprises studied for this White Paper found significant cost savings in their imaging and print infrastructure, but the first step starts with a formal assessment. Other IDC studies have found that few large organizations have conducted any type of assessment of their imaging and print resources. IDC research has found that:

- ☒ Few organizations have conducted formal assessments of how to optimize the deployment of their workgroup printers, copiers, and MFPs for cost reduction and worker productivity. Those that have conducted assessments typically have done the work with internal resources that are unlikely to produce the optimal results that are achieved by formal assessments conducted by specialized third parties.
- ☒ Most IT departments do not know how many hardcopy devices are in their enterprises because of fragmented purchase decision making by line-of-business management, IT, and purchasing or operations.
- ☒ Most organizations do not know that hardcopy device utilization rates are at 5%, that 12–25% is optimal, and that they are incurring opportunity costs through underused footprints and associated supplies storage.
- ☒ Few organizations routinely track hardcopy costs companywide.
- ☒ Few organizations know that aged devices cost more in IT support, maintenance/parts, and toner; are less network-manageable; and lack advanced features/functions.
- ☒ Less than a third of organizations track IT help desk and support costs related to hardcopy.

In addition, few enterprises realize the magnitude of their spending on document production, distribution, storage, retrieval, and document/content repurposing, which IDC research suggests is 1–5% of revenues. IDC research shows that direct hardcopy costs alone (hardware, supplies, maintenance, IT support) are between 0.1% and 0.2% of revenues. Organizations are incurring excessive costs for extra footprints, supplies, maintenance, and help desk support because printers, copiers, MFPs, and fax machines are not managed. The companies interviewed for this White Paper looked to reduce these costs by optimizing elements of their imaging and output infrastructure and were able to achieve cost savings of between 8% and 41%. For example:

- ☒ A \$10 billion company with direct hardcopy costs of \$10 million per year could save \$1.5 million per year. Over five years, it would save \$7.5 million.
- ☒ A site with 1,000 or more employees pays \$213 per employee in direct hardcopy costs (toner/ink and maintenance) alone.
- ☒ Failure to place all hardcopy devices on the network so they can be managed remotely using Web tools is costing companies in terms of support costs and employee productivity. Fifteen percent of IT help desk calls are print related.
- ☒ Failure to digitize and streamline critical business processes costs organizations in employee productivity, labor costs, and missed/slowed revenue collection.

Imaging and Printing Advances Provide Powerful Benefits

As noted earlier, an organization can achieve significant cost benefits by adopting newer multifunction devices. Despite the potential benefits, enterprises have been slow to take advantage of major changes in the technologies that enable the printing, copying, faxing, scanning, and distributing of documents.

- ☒ Printing and scanning usage continues to increase, while reliance on copying and faxing decreases, resulting in grossly underutilized devices and a need for MFPs.
 - ❑ IDC research indicates that hardcopy device utilization rates have been falling and are now at a very low 5%, which is two to five times lower than the optimal range of 12–25%.
 - ❑ By replacing underutilized copiers and fax machines with network-connected MFPs, organizations achieve significant cost savings on maintenance, supplies, and help desk calls.
- ☒ MFPs and printers have experienced significant advances in the areas of document distribution and management, security, and color. Organizations are implementing these features to optimize both hardcopy device deployment and business process workflows for cost savings and productivity.

- As much as enterprises would like to be paperless, paper remains complementary to digital workflows and critical to virtually all business processes. The scan-to feature on MFPs is an effective way to bring documents into a digital workflow. It can be used to email or fax hardcopy documents or to digitally capture documents in a business process workflow. Scanning is being adopted rapidly across enterprises, from distributed to centralized environments, according to IDC research. Thirty percent of organizations said that their overall scanning volume a year from now will be high, a 36% jump from 22% today.
- Business processes from financial (e.g., purchasing, invoicing, and account statements as well as credit card, mortgage, and brokerage accounts) to human resources, marketing, and general office processes are among the most document-intensive according to IDC research. From 40% to over 50% of organizations indicated that these processes need further digitizing, which speaks clearly to the need for scanning.
- Secure transmission of electronic documents has become hugely important as a result of recent legislation. IDC research finds that security features on workgroup MFPs are in very high demand and often a requirement for most acquisitions, especially in segments, such as healthcare, banks/depository financial, and manufacturing, where regulatory compliance is a key demand driver.
- Documents can now be printed, emailed, or faxed securely by encrypting the print datastream at the point of sending (from a PC, MFP, or scanner) and decrypting it at the receiving hardcopy device. A print job can also be sent to and held at a hardcopy device until the user walks up to release it. Other new security features include secure hardcopy device hard drives and LDAP authentication at the MFP.
- IDC research confirms that increasing color output adoption is significant. Color is among the top 3 (of 11) drivers of recent workgroup hardcopy device acquisitions.

THE MANAGED IMAGING AND OUTPUT ENVIRONMENT

A managed imaging and printing environment brings costs under control and allows the organization to achieve the full benefits of a truly flexible IT environment. Maximizing these savings and benefits means implementing as many of the following elements as possible:

- Balanced hardcopy device deployment achieved by using an assessment
- Remote device management enabled with network connectivity and Web management tools
- Document, image, and output management solutions

- Managed services and pay-per-use model
 - A managed service involves outsourcing elements of the imaging and output infrastructure.
 - A pay-per-use model allows variable costs, such as toner, to be based on actual usage.
- Outsourcing document production

Assessments and Balanced Deployment

A managed imaging and printing environment starts with an assessment. This is a comprehensive study of a department's, division's, or enterprise's current imaging and output environment with the goal of determining an optimal hardcopy device deployment and network infrastructure. This optimal state strikes a balance between lowest total costs and highest employee productivity, which can be opposing goals. For example, at one extreme, the lowest cost environment would be one hardcopy device shared by an entire large company, but this would yield the lowest level of employee productivity. At the other extreme, the highest cost environment is one in which all employees have their own non-network printer. Between these extremes, an optimal deployment is a mix of device types (printers, MFPs, copiers, fax machines), a mix of personal and shared devices, and the right network infrastructure and tools that together minimize costs while maximizing employee productivity.

An assessment looks at usage behavior and business process workflows around hardcopy (print, copy, fax, scan), the hard costs associated with hardcopy devices (hardware, toner, maintenance), and IT support costs around those devices (help desk as well as installation, upgrade, and redeployment IT services). Usage behavior considers employee productivity issues (distance to hardcopy device; frequency and volume of use; device redundancy/backup; and device productivity features such as speed, color, and finishing). When employees are empowered by an assessment that supports their printing and imaging needs while standardizing and simplifying the infrastructure, the result is a collaboration that unlocks the value of print resources and opens the way for the organization to evolve.

Remote Device Management

The increased use of integrated devices (printers and MFPs) instead of unconnected devices (copiers and fax machines) to deliver print, copy, fax, and scan services, combined with the use of Web tools for proactive and customized management, provides many benefits. Devices can be remotely accessed and managed using any Web browser. Remote device management tools allow designated support personnel to do such things as monitor device utilization so they can rebalance device deployment as needed or charge back departments and receive notification of hardcopy device problems and when supplies are needed.

Managing unconnected or standalone copiers and fax machines in an environment entails physically walking to or traveling to the device to troubleshoot even the simplest of problems. Moving the copy and fax functions to network-connected MFPs allows them to be managed remotely. This approach saves IT time needed to support these devices and improves user productivity through increased device uptime.

Document Management Solutions

Document management tools capture paper and electronic documents, integrating them into the business process workflows. This capability is especially beneficial in document-intensive processes in which paper documents complement a digital workflow. Digitizing the information captured from paper documents leads to more accessible information and reduced time and cost to complete critical business processes.

Software tools available with MFPs capture the information scanned from paper documents and hand off the appropriate format to a range of destinations — from fax and email to collaborative, enterprise resource planning (ERP), and customer relationship applications. Imagine customers and employees scanning documents directly to appropriate workflows or destinations such as customers, finance, legal, sales, human resources, and marketing.

Output Management Tools

Electronically represented documents can be targeted to a variety of users in a variety of formats for a variety of purposes. Such flexibility tightens delivery cycles and maximizes responsiveness to workplace demands. Versatile shared resources based on standardized components can provide great value in such situations. For example, a server in a multiplatform ERP environment can be responsible for publishing content across platforms and to various destinations such as email, fax, Web, and print.

Managed Service

Service managed onsite by a third party is more than just a repair service or lease; rather, it includes ongoing asset management, preventive maintenance, device upgrades, device moves, supplies replenishing, and adding equipment as needed.

Pay-per-Use Model

Organizations can combine third-party onsite management with a pay-per-use/utility payment model, by which the company pays only supplies and maintenance costs based on actual page volume, and the contract is adjusted periodically to reflect any changes in actual page volume. This collaborative approach simplifies the print and imaging model and maximizes the organization's ability to respond to changing needs.

Outsourcing Document Production

Strategic document outsourcing can be used to lower costs and increase efficiencies.

It can be applied in many ways, such as:

- For certain applications (e.g., marketing collateral and training manuals)
- To handle peak volume production

How a Managed Imaging and Output Infrastructure Works

Table 1 provides a detailed summary of how a managed imaging and print environment achieves cost savings and benefits.

TABLE 1

How a Managed Imaging and Output Infrastructure Works

Costs	Savings and Benefits
Direct	
Hardcopy devices and consumables	Fewer/newer/advanced devices (consolidation of brands, number of devices, and print/copy/fax/scan into MFPs) lower ink/toner, maintenance, and IT support costs. Pay-per-use/utility pricing model lowers costs further.
Space/storage	Reduces space/storage requirements for devices, ink/toner, media, and archiving paper documents.
Help desk	Moving copying and faxing to connected devices (MFPs) plus using of Web tools for remote management equals increased device reliability/uptime and IT time savings.
Records management and digitized document workflows/distribution	Digitizing records and document workflows/distribution reduces cost per record, speeds business processes (and speeds the issuance and increases revenue collection for such documents as invoices), reduces print volume and paper document storage, reduces fax costs, increases employee productivity, and increases employee and customer satisfaction.
Outsourcing	Strategic outsourcing can be applied to certain applications (e.g., marketing collateral and training manuals); to peak volume production; to turn over fleet ownership and management of office, copy center, or mailroom hardcopy devices; to turn over IT help desk support for hardcopy devices; or to pay for hardcopy device supplies and maintenance on a pay-per-use/utility payment model. Outsourcing can be more cost-effective and efficient and can free IT and enterprises to pursue more strategic focus, reducing opportunity costs.
Indirect/Soft	
Employee productivity	Increases with device uptime (e.g., digital devices [printers and MFPs] are more reliable than analog copiers and fax machines). Digitized documents and workflows automate processes, which speeds processing.
Corporate costs	Digitizing documents increases finding documents for invoicing and knowledge sharing, thereby increasing and speeding revenue collection, reducing opportunity costs, and allowing IT to be more strategically focused.

Source: IDC, 2005

SOLVING PROBLEMS THROUGH A MANAGED IMAGING AND OUTPUT INFRASTRUCTURE

Specific Problems Addressed

IDC's study of sites that adopted a managed imaging and output infrastructure found five leading problems:

- Lack of knowledge of costs associated with imaging and printing hardware
- Difficulty in assessing device utilization
- Cost of consumables
- Maintaining and repairing hardcopy devices
- Higher costs associated with an aged hardcopy device fleet

Cost Savings and Benefits Achieved

By implementing a managed imaging and output environment, the studied sites achieved average direct cost savings between 8% and 41% and significant indirect cost savings. These savings are broken down as follows:

- 37% from reduced hardcopy device equipment costs
- 28% from reduced IT support costs for printing/copying/faxing/scanning user issues (Print-related help desk calls were reduced 51%, from 15% to 7%.)
- 9% from reduced costs to order and manage inventory
- 17% from reduced costs for consumables
- 4% from reduced costs for print/copy/fax/scan repairs
- 5% from reduced costs to install and upgrade hardcopy devices

When asked about the biggest benefit and best part of the new environment, the companies indicated that they highly value the following outcomes of a managed environment:

- The availability of real-time usage data as a basis to make decisions and to show actual cost reductions
- Much-increased user satisfaction from a now balanced deployment
- The change in user behavior enabled through usage reporting, which made users more conscious of what and how much they print

CASE STUDIES

European Manufacturing Firm

This European subsidiary of a large American manufacturing company illustrates that bigger is not always better in the world of manufacturing. With 70,000 users across 21 countries in 30-plus locations, the company clearly does not have a single simple environment. The costs arising from hardware, supplies, break/fix, and help desk calls to support 18,000 devices of various brands and technologies were staggering.

Recognizing that it needed to become leaner to operate more efficiently and to cut costs, the firm decided to implement the HP Total Print Management solution within the Dynamic IT Enterprise. This was a conscious and concerted effort to ensure that IT is closely in touch with the needs of the business units so that there is alignment to achieve the business goals of the organization. In addition, simplifying the infrastructure to make it real-time responsive as well as achieving virtualization were goals of the initiative.

As a result of employing a managed service, the firm was able to gain benefits on many levels. First is the cost savings realized by reducing annual expenditures on the imaging and print environment by 23%. Second is the effect on the help desk and support. Due to the proactive nature of the managed service, help desk calls related to printing have decreased 57%. Third, the new environment is more streamlined and simple in that the firm has consolidated under one brand of products, leading to better and faster support, with remote administration playing a part in managing 10 sites.

More important than the hard cost savings are the reports of increased productivity across the board by users. To build on the initial success, the firm is in the process of a major consolidation of output devices, which involves replacing 10,000 printers, 2,000 copiers, and 2,000 fax machines with 200–300 MFPs. This consolidation is expected to help drive utilization levels higher, and the fully networked environment will allow the firm to pursue document management through electronic document routing and workflow management. As the firm works closely with counterparts in the United States, these steps will create additional cost savings (as inbound faxes are eliminated) and additional efficiencies (through faster business cycles).

Southeast Asian Healthcare Provider

The hospital serves nearly 1 million patients per year and generates more than \$100 million in revenue. The hospital has approximately 2,000 employees and has offices throughout the Asia/Pacific region.

Printing is an extremely important process for the hospital, affecting processes from the point of admittance through discharge, invoicing, and payment. The hospital's base of printers was relatively decentralized, a reflection of the highly specialized printing requirements of each department. This proliferation of individual and department-level printers — many of which were aging and increasingly unreliable — inflated the hospital's consumables and repair costs. Help desk costs related to printing were also an emerging problem, with many calls related to mundane issues such as running out of ink or paper jams.

To lower its costs, the hospital looked for a way to improve efficiency and make information more transparent. Importantly, major reductions and/or changes in its installed base were not considered viable options. This to a large extent reflects the hospital's desire to minimize the impact on core processes. "Our desire was to improve printing processes and efficiency, but not by imposing pain on our staff, which would be counter to our goals of improving their efficiency and effectiveness. What's more, people simply won't tolerate it," according to the IT representative we spoke with.

Instead, the hospital established a managed service agreement with HP under which HP would provide all devices and manage the entire environment, (including consumables management and break-fix) for a flat per-page charge. HP also deployed Web Jetadmin across the hospital's 30 departments to provide device usage reporting and to support help desk activities. The hospital decided to go with this usage-based, managed service approach for both operational and financial reasons. First, the hospital knew it needed expertise that it didn't have in-house. Second, the arrangement enabled the hospital to avoid upfront capital expenditures because it was able to treat its pay-per-use costs as operating expenses.

By adopting a managed service model, the hospital has reduced nearly all of its imaging costs. In the area of consumables, administrative management costs fell by more than 80%, while the overall cost of consumables fell by 10%. One of the biggest improvements of the new arrangement was a major reduction in help desk activities related to printing. With remote device management capabilities enabling help desk staff to proactively troubleshoot problems, the share of help desk calls related to printing has fallen from 25% to under 5%. This reduction is also seen as a proxy for broader productivity improvements in the employee base as a whole.

Energy Company

This North American supplier of electricity and natural gas products and services consists of 22,000 employees. While a preponderance of employees is located at corporate headquarters, the organization supports 200 remote sites that account for 70–75% of the company's printing equipment.

Before the company implemented a managed imaging and print solution, its printers and copiers were handled by two different organizations. Consumables were ordered at the individual and workgroup levels, and therefore tracking costs was an ad hoc proposition. Personal printers were common.

At this writing, the energy company is in the midst of a balanced deployment, which began with the consolidation of printer and copier management into a single organization. That organization assesses the needs of individual business areas and develops a support plan based on that area's actual usage patterns.

Nearly at the halfway point, the balanced deployment has replaced over 90% of its individual printers and hundreds of fax machines with MFPs shared by an office or by a workgroup. Remote device management allows the organization to automatically generate usage reports, from which the company can verify that the right devices are deployed in the right places, and to stock consumables at appropriate levels. Reporting also supports ongoing assessments of user satisfaction — only when users willingly adopt the new printing model can cost reductions be fully realized.

Bank

This organization supports 100,000-plus employees using 85,000 document-handling devices in branch locations spread over the eastern United States. The IT organization is tasked with helping line managers keep their groups' documents flowing by providing resources, information, and support. Multiple hardware brands in hundreds of branch locations pose a huge challenge for the support staff to keep the equipment running and make it very difficult to accurately assess the costs of the ongoing operation.

The IT organization has taken the initiative in standardizing document resources and document management across the company, both for the benefits that an enterprise perspective can offer to line managers for decision support and for the support savings inherent in simplifying the installed resource base.

Key components of the bank's document management strategy include reducing the number of personal printers, reducing the total number of devices by introducing MFPs, adopting a standardized document workflow model, and providing Web-based print management. These measures promise to reduce call volume to the support desk. Although these measures are companywide, their implementation is carried out on the group level in conjunction with line managers to ensure that measures taken are appropriate and will meet with a high rate of adoption.

METHODOLOGY

IDC conducted in-depth interviews with nine large organizations in the United States, Europe, and Asia. Seven of the nine companies are organizations with 10,000 or more employees, and the remaining two have between 1,000 and 5,000 employees. All of the sites are HP customers, and the company names were provided to IDC by HP. The interviews covered the companies' imaging and output challenges and the cost savings and benefits achieved by implementing a managed imaging and output infrastructure.

This document also presents supporting research from two IDC studies: *U.S. Hardcopy Market Vertical Industry Analysis* and *Hardcopy Page Volume Analysis: An On-Site U.S. Business Study*.

CHALLENGES

Achieving the benefits of a managed imaging and output environment requires a thorough and accurate assessment of the total environment, and a successful implementation will require changes. A key supplier challenge is convincing organizations that they cannot conduct assessments independently as effectively as they could as part of a partnership with an experienced imaging and output supplier. Organizations often do not appreciate the scope of the opportunities to make positive changes and the skills required to effect them. The experienced imaging and output supplier must educate prospective customers on the essential components, methodologies, and tools for a successful implementation.

A second challenge the imaging and output supplier faces is helping the customer rationalize the roles of its own IT, operations/facilities, and purchasing departments in implementing and maintaining a managed environment.

A third challenge for the imaging and output supplier is having the expertise needed to help customers change business process document workflows to benefit from the new MFP document advances. Suppliers either must have such vertical and horizontal expertise in-house or must have an ecosystem of partners to call upon.

FINAL THOUGHTS

The opportunity to achieve significant savings through a managed imaging and output environment is real. In addition to the direct cost savings, organizations will see improvements in employee satisfaction and productivity. Companies we studied for this White Paper reduced direct costs by 8–41% and printer-related help desk calls by 51%. Although many companies may be aware that their imaging and output environment is burdened with unnecessarily high costs, it is difficult for them to take the first steps to a solution, partly because of the fragmented responsibilities for the various components that make up the imaging and output infrastructure and the daunting scope of the undertaking. To help organizations maximize the return on their imaging and output infrastructure, IDC offers the following advice to suppliers and their customers:

- ☒ Access an external party, regardless of whether that party or the enterprise itself will do the implementation. Look for a partner that can articulate the benefits and pitfalls of hardcopy device consolidation and how it will go about ensuring that its recommendation will address both cost reduction and employee productivity. Maximizing one over the other will fail to achieve true ROI. Also look for a partner with a track record of satisfied customers.
- ☒ Ensure the implementation plan details and maximizes both cost savings and employee productivity gains.
- ☒ Get early buy-in from both C-level executives and end users.
- ☒ Implement as many elements of a managed imaging and output environment as appropriate for the enterprise.
- ☒ Develop an enterprisewide implementation plan.
- ☒ Train end users on new equipment and processes.
- ☒ Create, implement, and enforce policies to sustain the desired environment.

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