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LRS

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## Business Value Highlights

**492%**

Average five-year ROI

**10 Month**

Breakeven period

**41%**

More efficient print management

**80%**

Less printer user support

**99%**

Less unplanned printer downtime

**\$33,780**

Average annual business benefits per 100 LRS managed printers

# The Business Value of LRS EOM

## EXECUTIVE SUMMARY

The acceptance and rapid proliferation of virtual, mobile, and cloud computing in the enterprise are driving the need for business users to create, access, and share information across multiple device types — including smartphones, tablets, and thin/zero-client terminals — in real time regardless of location. One of the more surprising ways to deliver increased business value from these rapidly growing activities is optimizing the printing and distribution of documents. IT organizations will increasingly look for simplified ways to capture, store, secure, and efficiently distribute documents across the enterprise's expanding fleet of hardware and software platforms in order to more fully capitalize on modern technology adoptions, streamline business processes, and help reduce operational costs.

Today, more than ever, IT executives and managers are looking for ways to lower costs while delivering business productivity benefits to the enterprise. Likewise, holistic output management solutions bring forth advanced document delivery features and functions that can help achieve these imperatives. For instance, automated document delivery capabilities enable IT organizations to achieve significant operational savings, optimize business processes, modernize legacy applications, renovate core infrastructure, and embrace digital transformation efforts.

To that end, in fall 2015, IDC interviewed 13 organizations that use LRS Enterprise Output Management (LRS EOM) software to support their printing and document delivery requirements. IDC found that these organizations are achieving considerable value through automating and consolidating their printer operations and efficiently delivering documents with LRS EOM software solutions. As a result, IDC projects that these LRS customers will achieve an average five-year return on investment (ROI) of 492% and will break even on their LRS EOM investment in 10 months by:

- » **Ensuring print reliability.** LRS EOM makes print environments more robust and reliable, meaning that printer downtime and outages have a much lesser impact on user productivity and business operations.
- » **Realizing management and support efficiencies.** LRS EOM enables centralized print management and support as well as the effective correlation between print-

related problems and business applications, which saves IT staff time to manage and support print environments while increasing business user productivity. Without a product such as LRS EOM, IT staff often struggles in determining the exact failure point between content generation and delivery to the target destination.

- » **Reducing print-related costs.** LRS EOM provides visibility into print environments that organizations can use to optimize costs, and fewer print servers are required as a result of its high performance and scalability.
- » **Improving user productivity through functionality and reliability.** LRS EOM features create new opportunities for organizations to enable printing to support their employees and business operations in addition to increasing the agility of their print infrastructure through standardization and simplification.

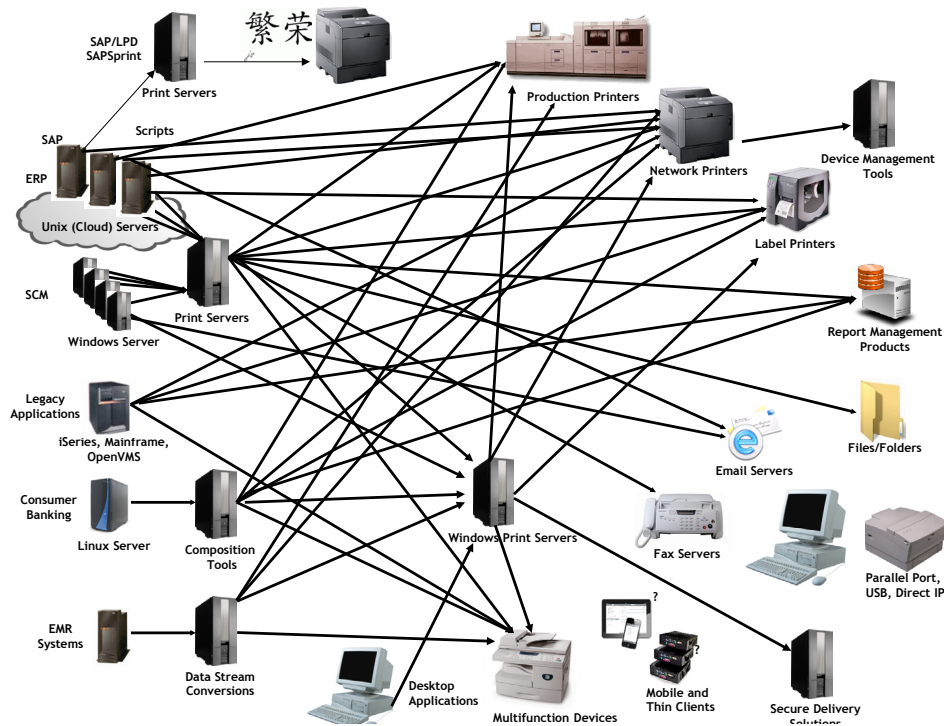
## SITUATION OVERVIEW

IT executives and managers have always been charged with lowering costs. However, to remain relevant and add increased value to the business, IT must not only simplify and optimize its management processes but also balance budget constraints with the need to deliver game-changing technologies that improve business productivity.

Today, IT organizations are standardizing on many software and hardware components, but output management is often overlooked. This is a missed opportunity based on IDC's findings. Instead, IT organizations have historically approached printing-related problems in a tactical manner, which results in a disparate set of point solutions being implemented. Figure 1 illustrates a typical output infrastructure in large enterprise environments.

FIGURE 1

## Typical Output Environment in a Large Enterprise



Source: IDC and LRS, 2016

In most organizations, a lot of printing comes from users who create documents from a variety of client computing devices, including BYOD. In addition, organizations typically have business applications that run on various server platforms. They also have many different types of printers, multifunction devices, and other output destinations (e.g., electronic). End users and business applications create output in various formats, and this output needs to be delivered to the required destinations in the correct format. To make this happen, IT organizations often create an internally developed output infrastructure that evolves over time with little planning or coordination from different IT departments. The output infrastructure usually consists of many servers running different operating systems and a vast array of connections between this output infrastructure, the upstream applications, and the downstream hardcopy and softcopy destinations.

Because of the complexity of this improvised output infrastructure, it's expensive, prone to failure, and difficult to maintain. It can also be a source of frustration and lost productivity for end users and IT staff and prevent organizations from achieving their critical business

objectives. Therefore, it is becoming ever more essential for IT organizations to leverage scalable, comprehensive output management solutions that offer the capabilities necessary to manage the entire document delivery process from the application or client computing device to the output destination using a holistic solution as opposed to relying on multiple point products and/or disparate tools. In addition, it is equally important that these solutions are affordable and can efficiently scale with the influx of smart devices and modern technologies entering the workplace.

With the widespread use of management frameworks such as ITIL and IT service management as well as the enterprise's increasing push toward digital transformation, IT executives want as much visibility as possible into the hardware and software that support mission-critical business services and processes. In some cases, the printed output from mission-critical applications is critical itself, as in the case of shipping labels, shipping instructions, and customer order documentation.

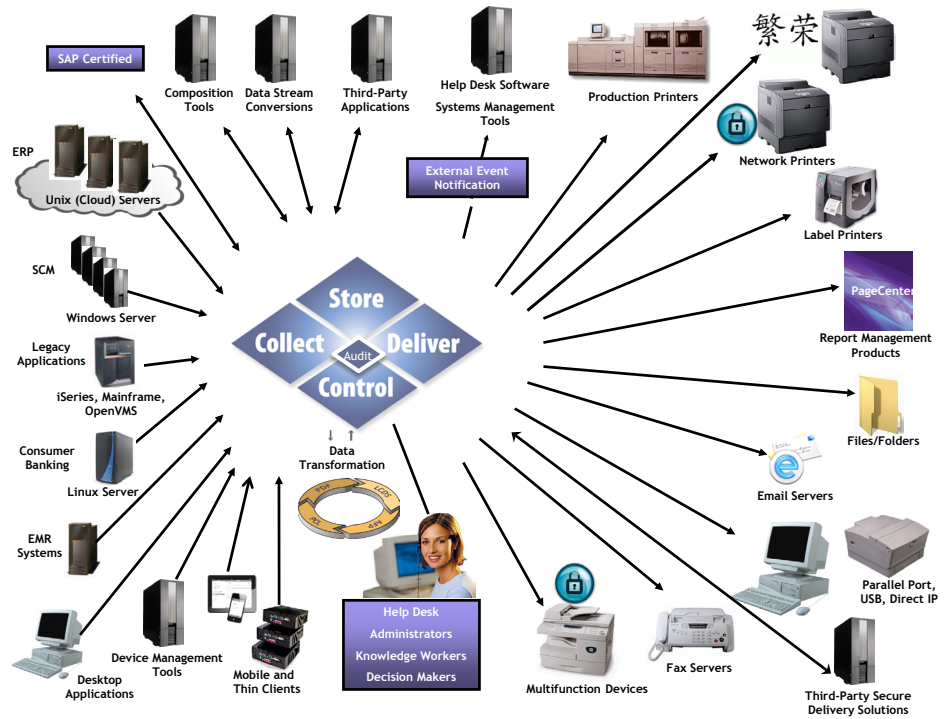
To that end, IDC believes that disruptive trends such as the consumerization of IT, BYOD, and the emergence of the Internet of Things (IoT) will result in increasingly heterogeneous and hybrid IT environments that, in turn, will continue to dramatically change how businesses create and share content. Therefore, although printing volume in the enterprise is trending down, the need for efficient, reliable, and cost-effective document delivery is expected to grow.

## LRS EOM

LRS offers advanced products designed to enable holistic output management via capabilities in centralizing, storing, auditing/tracking, analyzing, transforming, and distributing application output where and when needed. The company's flagship product VPSX is designed to streamline and simplify output management functions as shown in Figure 2.

FIGURE 2

## Overview of LRS EOM



Source: IDC and LRS, 2016

VPSX collects business process output from line-of-business applications such as enterprise resource planning (ERP), supply chain management (SCM), and electronic health record (EHR) systems, often in the form of labels, bills of lading, shipping manifests, pick lists, warehouse documents, material safety data sheets, patient medication reports, and other application-specific and industry-related document types. The VPSX solution manages this output through the entire document life cycle.

Digital forms generated by Web-based applications can also be captured by VPSX software, converted into device-ready print streams, and routed to the appropriate printer. Likewise, output from the Microsoft Office Suite and other Windows applications — such as Word files, PowerPoint slides, and PDF documents — can be captured and stored electronically in the LRS repository. This output repository works with the solution’s distribution functions to deliver documents to a nearby printer in a format the printer understands. What’s more, this functionality exists regardless of the application or client computing device being used to create, access, and/or print the documents.

To that end, a significant business value of output management is that it greatly simplifies the logical connections between disparate applications that create output and the softcopy and hardcopy destinations for that output. Furthermore, this centralized capability allows IT to collect detailed print information in order to provide management a view of printer volumes as those volumes increase or decrease or as print jobs fail to be successfully delivered. Better yet, the LRS software allows visibility into which users are printing to a specific printer, how often they print, and what they are printing and how much it costs to print. This type of print usage awareness provides IT with inclusive visibility into the cost, utilization, and performance of its printing services, allowing it to better meet service-level agreements (SLAs), gain insights into digital transformation opportunities, and more effectively communicate business value.

The majority of the organizations that IDC interviewed for this study have adopted a holistic approach to output management using LRS EOM (see Figure 3). IT organizations have a significant opportunity to reduce costs, increase employee satisfaction and productivity, and drive better business outcomes by taking a holistic approach to output management. In this context, the word “holistic” refers to consistent solutions, procedures, policies, and service levels across the entire enterprise. It does not mean addressing a checklist of features/functions with a number of point solutions. This latter approach is tactical and will not provide a standardized solution with consistent functionality and user experience from platform to platform.

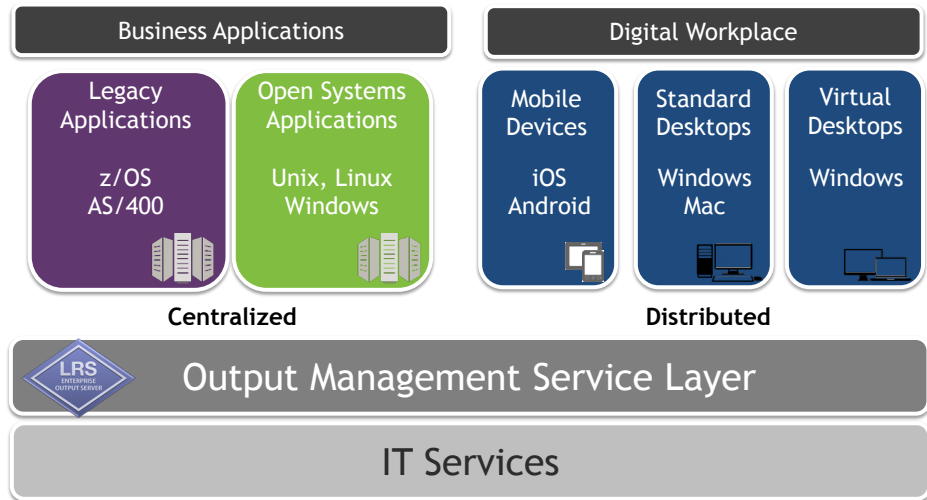
Holistic output management eliminates redundant print servers and multiple application-to-destination connections, simplifies administration through centralized management and control, and reduces cost. With holistic output management, organizations can provide consistent functionality across all applications and platforms in the form of a “service layer.” This layer insulates applications from the complexities of document distribution, and it simplifies and expedites the delivery of new services without application changes. By decoupling many functions from the application and moving them into a device-independent and platform-independent service layer, LRS EOM lets applications focus on content creation and enables IT organizations to choose/change the appropriate delivery format and destination at any time.

In an era of IT service management and cloud-based IT services, this single “printing as a service” architecture supports IT standardization by deploying a common hardware-agnostic infrastructure across the entire organization to lower support, maintenance, and training costs. Standardization also leads to greater simplification of IT infrastructure, which lets organizations respond quickly to changing business requirements.

FIGURE 3

## Holistic Output Management

Source: IDC and LRS, 2016



## THE BUSINESS VALUE OF LRS EOM

### Study Demographics

IDC interviewed 13 organizations using LRS EOM software solutions to support their printing environments. These organizations varied in size, with employee bases of 850–360,000, but were generally from the large enterprise segment, with an average employee size of 76,400. As such, these organizations maintain sizable printer environments, with an average of 61,900 employees using 14,200 printers. The organizations were split between North America (8) and EMEA (5) and represent the experiences of a variety of industries, with at least 2 organizations interviewed from the healthcare, financial services, and manufacturing sectors.

Table 1 shows the demographics of interviewed organizations using LRS EOM software.

TABLE 1

## Demographics of Interviewed Organizations Using LRS EOM

	Average	Range
Number of employees	76,400	850–360,000
Number of IT staff	1,100	26–3,700
Number of IT users	63,700	850–300,000
Number of printer users	61,900	850–300,000
Number of printers	14,200	250–32,000
Countries	United States, Canada, Germany, Switzerland, Sweden	
Industries	Healthcare, chemical, financial services, manufacturing, retail, public sector	

*n* = 13

Source: IDC, 2016

On average, these organizations have been using LRS EOM to support their printing environments for just over three years. For the most part, they are relying on LRS EOM across most of their printing environments, with LRS EOM supporting about 69% of their printers on average (9,800 printers) and almost all of their employees who use print services carrying out work on LRS-managed printers (60,000 users of printers managed by LRS). Most organizations reported either expanding their LRS printer environments or finding new ways to achieve value with LRS. A United States-based healthcare organization described its expanding LRS use case as follows: *“We’re getting more value with LRS because we’ve been using it more widely than what we put it in for originally. Originally, we put all of our EMR printers on it, and then we moved to all of our printers. And then we moved all of our Windows Enterprise printing to it. And then we moved all of our Citrix printing to it. And then we moved all of our VDI printing to it.”*

Table 2 shows the LRS EOM environments of the interviewed organizations.



TABLE 2

## LRS EOM Environments of Interviewed Organizations

	Average	Range
Number of LRS-managed printers	9,800	500–30,000
Number of users of LRS-managed printers	60,000	790–334,400

*n* = 13

Source: IDC, 2016

### Business Value Analysis

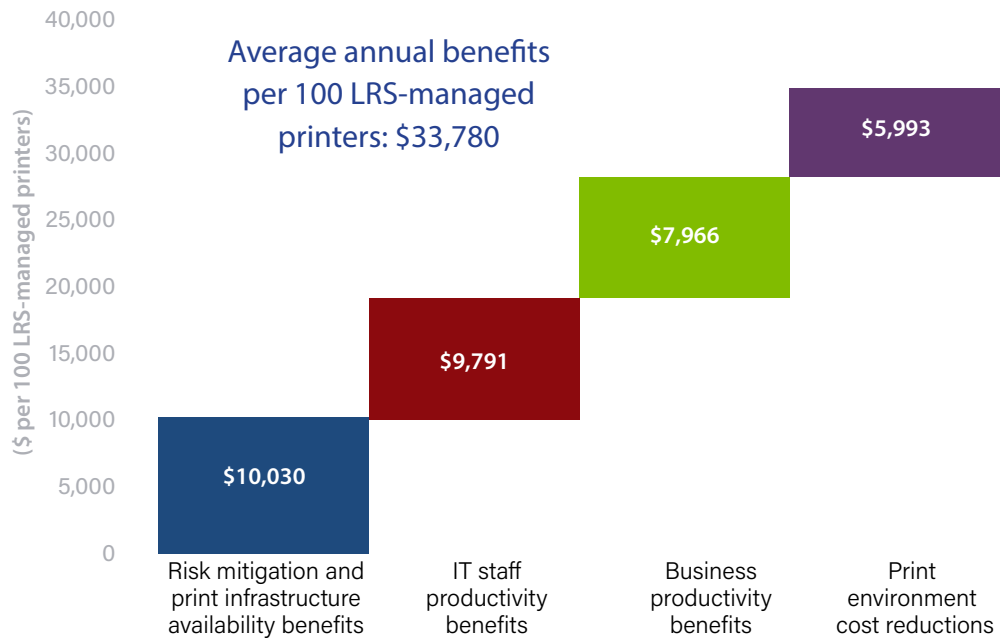
LRS customers described similar reasons for deciding to install LRS EOM software, including supporting critical document-related business processes, requiring higher printer performance and reliability, needing to consolidate and centralize their printing operations, limiting print server sprawl, and providing more print-related functionality and agility. IDC's research demonstrates that these organizations are achieving strong value, with IDC projecting that they will achieve business benefits worth an average of \$33,780 per 100 LRS-supported printers per year (\$3.31 million per organization) over five years through (see Figure 4):

- » **Risk mitigation and print infrastructure availability benefits:** Print-related problems, including downtime and outages, are substantially reduced with LRS EOM, meaning that users lose less productive time, and revenue loss associated with printer problems is minimized. IDC calculates the value of increased user productivity and limiting the impact of print-related problems on business at an average of \$10,030 per 100 LRS-managed printers per year (\$981,800 per organization) over five years.
- » **IT staff productivity benefits:** Less IT staff time is required to manage and support print environments with LRS EOM through centralized management, improved visibility across print environments, and less support time needed for print-related problems. IDC calculates that IT staff time savings and productivity gains will be worth an average of \$9,791 per 100 LRS-managed printers per year (\$958,400 per organization) over five years.

- » **Business productivity benefits:** Employees benefit from new functionality and mobility with LRS EOM, and higher printer performance and reliability improve their ability to leverage printing to do their jobs. IDC calculates that interviewed organizations will benefit from higher productivity with a value of \$7,966 per 100 LRS-managed printers per year (\$779,800 per organization) over five years.
- » **Print environment cost reductions:** IDC calculates that interviewed organizations will reduce costs in their print environments by an average of \$5,993 per 100 LRS-managed printers per year (\$586,600 per organization) over five years by taking advantage of enhanced visibility, new capabilities that translate to lower costs, and streamlined and consolidated print server environments with LRS EOM.

FIGURE 4

### Average Annual Benefits per 100 LRS-Managed Printers



Source: IDC, 2016

### *Risk Mitigation and Print Infrastructure Availability Benefits*

Interviewed organizations described maintaining sufficiently high printer availability to serve their businesses as a persistent challenge. In several cases, the need to improve printer uptime and limit print-related outages was a driving factor in the decision to implement LRS EOM. For interviewed organizations, printer outages were not only taking a toll on user productivity but also, in some cases, harming confidence in mission-critical business applications and processes. For example, a healthcare organization explained: *“Before LRS EOM, our users were losing faith in our EMR system. Our print servers were getting really backed up, and several thousand of our employees who rely on printing to support patients were being impacted over the six to seven hours it typically took to resolve these issues.”*

Interviewed organizations reported that they have nearly eliminated the user and business impact of print-related problems and outages since installing LRS EOM. With LRS EOM in place, these organizations are experiencing far less print-related unplanned downtime (99% less on average) impacting a more substantial number of users and reducing the frequency and impact of more limited printer outages (88% on average) (see Table 3). These types of outages can have significant productivity impacts. A manufacturing organization that relies on its printers for creating labels described the benefit of reducing the average time to resolve printer outages from four hours to one hour with LRS EOM as follows: *“Many people can go to another printer, but there are special printers for users doing labeling, and they’re losing about 25% of their productivity when we have problems.”*

Interviewed organizations attributed their ability to reduce the impact of print-related problems with LRS EOM to several factors:

- » **Centralized management and visibility**, which makes IT staff managing and supporting printers better able to identify problems and take steps to remedy them
- » **Ease of use of LRS EOM**, which enables call center personnel and other level 1 response staff to resolve issues without needing to escalate them or allowing problems to become more significant
- » **Ease of redirecting**, which allows for simple redirection of print jobs when problems occur and limits the impact of such problems on users and the business

TABLE 3

## Unplanned Downtime and Printer Outages with LRS EOM

	Before LRS EOM	With LRS EOM	Difference	Benefit (%)
<b>Unplanned downtime</b>				
Number of instances per year	9.3	0.9	8.4	91
Mean time to repair (MTTR) (hours)	1.2	0.3	0.8	72
Productive time lost per 100 LRS printers per year (hours)	177	1	176	99
Number of equivalent FTEs	9.2	0.1	9.1	99
Cost of unplanned downtime per 100 LRS printers per year (\$)	6,274	44	6,230	99
<b>Printer outages</b>				
Number of printer outages per year	344	200	144	42
Mean time to repair (MTTR) (hours)	1.1	0.5	0.6	52
Productive time lost per 100 LRS printers per year (hours)	77	9	68	88
Number of equivalent FTEs	4.0	0.5	3.5	88
Cost of printer outages per 100 LRS printers per year (\$)	2,733	320	2,413	88

*Note: For the purpose of this study, IDC distinguished between print-related unplanned downtime, which generally affects more printers and users and occurs less frequently, and printer outages, which occur more frequently but affect fewer printers and users.*

*Source: IDC, 2016*

### IT Staff Efficiencies

For many of the interviewed organizations, an important benefit of their use of LRS EOM has been its impact on their print management and printer support efforts. As a result, these LRS customers reported reducing the cost of supporting their print operations and freeing up IT staff time to invest in other IT initiatives and supporting their businesses.

Time savings and efficiencies begin with managing print environments; interviewed organizations reported needing 41% less staff time to manage their print environments with LRS EOM (see Figure 5), saving an average of 70 hours or \$3,715 in staff time per 100 LRS printers (including time savings installing print drivers and adding/removing printers

from networks, as described below). Print management efficiencies result from the ease of collecting, storing, and delivering documents with LRS EOM and from being able to manage their printing environment centrally. One organization explained: *“The time we spent on print management is definitely reduced because of LRS EOM’s interface. We have 15 people who manage printers who now spend 50% of their time managing printers, whereas it was more like 70% before.”*

Interviewed organizations also noted the ease of installing print drivers (62% less time on average) and adding or removing printers from their networks with LRS EOM (60% less time on average). They described spending too much time on these tasks before installing LRS EOM and credited LRS EOM software with automating these processes and reducing or even eliminating the amount of staff time spent on them. One organization explained: *“Installing print drivers is built into our management system with LRS EOM. We used to spend 100 hours every six months building out all of the images, and now we probably spend 20 hours every six months because they are already in one place.”*

Further, LRS EOM substantially reduces the amount of staff time needed for responding to print-related problems, saving an average of 114 hours or \$6,076 in staff time per 100 LRS printers. Interviewed organizations told IDC that they experience fewer print-related problems, need less time to address these problems, and need to escalate problems less often. This happens because LRS simplifies the steps involved with output management for these organizations, reduces the likelihood of print servers causing disruptions, and enables users to quickly and easily move to different printers when issues do occur. As a result, interviewed organizations require 80% less staff time to support their printer users when problems occur as a result of fielding 58% fewer print-related calls and needing 52% less time on average to handle these calls. In addition, 57% more print-related help desk tickets are handled in their entirety by level 1 response teams, allowing organizations to save time and expenses associated with engaging more skilled and expensive level 2/level 3 response teams.

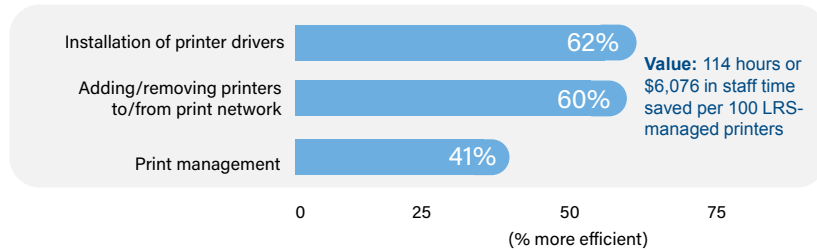
FIGURE 5

## IT Staff Efficiencies with LRS EOM

### Print user support, including call center/help desk



### Print environment management and deployment



Source: IDC, 2016

## Business Productivity Benefits

LRS EOM is also helping interviewed organizations enable employees to work more effectively and efficiently and even drive improved business results. With LRS EOM, besides higher reliability, organizations can offer more functionality with printers. In particular, organizations benefit from the ability to provide agile, scalable printing environments and robust printing capabilities to mobile users. For many users, these benefits translate to higher productivity, especially when they have jobs that rely on printers when serving customers.

Interviewed organizations provided several examples of how they are leveraging improved printer functionality to improve employee performance and business operations (see Table 4):

- » **Customer-facing employees.** A governmental organization described how its employees who perform counter services were experiencing substantial printing delays prior to its deployment of LRS EOM. These delays hindered the ability of these employees to serve constituents in a timely and effective manner and led to inefficiencies at the point of constituent contact and dissatisfaction with

governmental services. It explained how LRS EOM has enabled these employees: *“We have hundreds of employees at different locations who need timely and reliable printing to serve customers who use our counter services. LRS EOM has made these employees able to do about one-third more work by limiting printing-related delays, and they can better serve customers.”*

- » **New printing functionality.** A manufacturer described the speed with which LRS EOM can give its users new printing functionality as a benefit by providing the example of using it to communicate with databases to bring enhanced capabilities to printers.
- » **Supporting customized printing.** A manufacturer reported that LRS EOM has enabled it to reduce the time to market for certain custom orders: *“On average, LRS reduces the time we need to handle custom orders by 50%, so we can get these orders out faster.”*

TABLE 4

## User Productivity Impact of LRS EOM

User Productivity Benefits	
<b>Enhanced printing capabilities</b>	
Number of users impacted	481
Average productivity gain (%)	2.0
Additional productive time per user impacted per year (hours)	39
Number of equivalent FTEs	9.8
Productivity benefit per 100 LRS printers per year (\$)	6,691
<b>Enhanced mobility</b>	
Number of users impacted	1,294
Average productivity gain (%)	0.14
Additional productive time per user impacted per year (hours)	2.7
Number of equivalent FTEs	1.9
Productivity benefit per 100 LRS printers per year (\$)	1,275

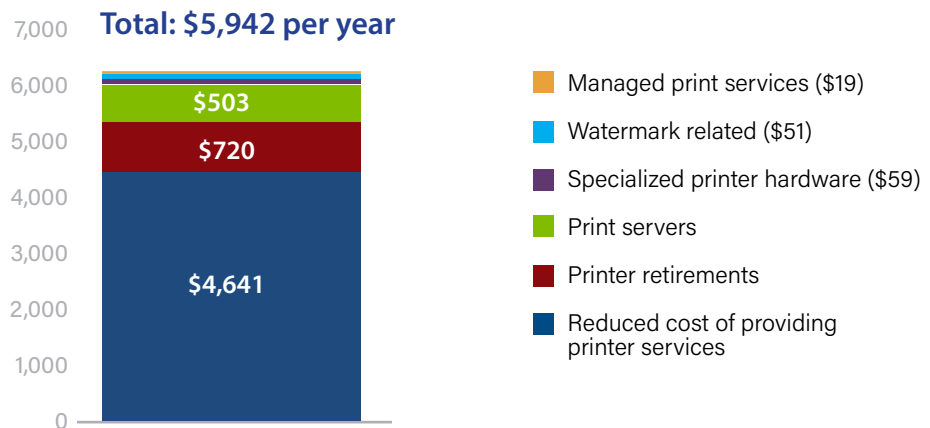
Source: IDC, 2016

### Print Environment Cost Reductions

Interviewed organizations also reported that LRS EOM enables them to minimize the amount of infrastructure they need to support their printing-related operations and to save on costs associated with this infrastructure (see Figure 6). Most interviewed organizations have consolidated their print server environments with LRS EOM; organizations that have leveraged LRS EOM to reduce or consolidate their print server environments reported needing 62% fewer print servers with LRS EOM. Those organizations have been able to achieve these print server efficiencies because they are not experiencing print server overloads, and they have centralized printing operations, minimizing the need for distributed infrastructure across offices or branches. For example, one organization reported consolidating its distributed print server base from several hundred print servers to three production LRS VPSX servers — a reduction of 95%. For several organizations, consolidating their print server environments was a primary objective of implementing LRS EOM. Several organizations described this in terms of scalability of print servers with LRS EOM. A healthcare organization noted: *“What LRS promised as far as scalability for our printing environment didn’t seem possible, but it actually is.”* In addition, visibility with LRS has enabled several organizations to retire printers they do not need, adding additional cost savings. A multinational organization with operations in several industries reported: *“With LRS EOM, we know every printer that we have, and we know where it is, and we know how much it prints. We used this information for our last RFQ for managed print services, and we saved a lot of money.”*

FIGURE 6

### Print Environment Cost Savings per Year with LRS EOM



Source: IDC, 2016



## ROI Analysis

IDC recorded results from interviews with LRS EOM customers to inform this study's analysis. IDC used the following three-step method for conducting its ROI analysis:

- » **Gathered quantitative benefit information during the interviews using a before-and-after assessment.** In this study, the benefits included staff time savings and productivity gains, user productivity increases, increased revenue, and device-related cost reductions.
- » **Created a complete investment (five-year total cost analysis) profile based on the interviews.** Investments go beyond the annual costs of using LRS EOM and can include additional costs related to the solution, such as migrations, planning, consulting, configuration or maintenance, and staff or user training.
- » **Calculated the ROI and payback period.** IDC conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of LRS EOM over a five-year period. ROI is the ratio of the net present value (NPV) and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

In addition to the methodology that is standard for IDC's ROI analyses, IDC applied the following methodology with regard to LRS EOM licenses:

- » **LRS EOM license costs.** IDC treated license costs as a one-time up-front cost. Term licenses (six interviewed LRS customers) were treated as a one-time five-year cost except for one organization with a three-year license, which was treated as renewable at the end of year three. Perpetual licenses (seven interviewed LRS customers) were assumed to have a use span of seven years, so IDC apportioned five-sevenths of the cost of perpetual licenses up front.
- » **LRS EOM maintenance costs.** IDC assumed a maintenance cost of 18% per annum for LRS customers with perpetual licenses and assumed that maintenance costs were included in the one-time cost for customers with term licenses.

Based on this methodology, Table 5 presents IDC's analysis of the average discounted benefits, discounted investment, and return on investment for the LRS customers interviewed for this study. IDC calculates that these organizations will invest a five-year average discounted total of \$19,900 per 100 LRS-managed printers (\$1.95 million per organization) in supporting their print environments with LRS EOM, including license and maintenance costs, as well as IT staff time costs for deployment, migration, and

support, as well as additional training and support costs. IDC projects that in return, these organizations will achieve business benefits with a discounted five-year value of \$117,600 per 100 LRS-managed printers (\$11.51 million per organization) as described in this study. For these LRS customers, this would mean an average five-year ROI of 492% and breakeven on their LRS investment in 10 months.

TABLE 5

### Five-Year ROI Analysis

	Per Organization	Per 100 LRS-Managed Printers
Benefit (discounted)	\$11.51 million	\$117,600
Investment (discounted)	\$1.95 million	\$19,900
Net present value (NPV)	\$9.56 million	\$97,700
Return on investment (ROI)	492%	492%
Payback period	10 months	10 months
Discount rate	12%	12%

Source: IDC, 2016

## Challenges And Opportunities

### Challenges

Because printing costs are usually associated with deep overhead costs, or are not billed back to customers, it is not always easy to demonstrate the value of output management until hard metrics are available to identify existing printing costs (e.g., how many users are using the most paper and in which departments, where printer queues are forming and how long those queues are, or which departments make the most demands of printer resources). While LRS addresses this issue with its Innovate/Audit product, the challenge of cost visibility will remain until such solutions gain widespread adoption.

In addition, senior-level IT executives are frequently looking for integrated solutions across multiple IT functional areas such as in the datacenter and managing servers or rolling out mission-critical applications. As a result, there is not as much visibility around a solution or set of solutions that address a single pain point, such as a printing queue, unless high-profile issues are associated with printer output, such as being unable to troubleshoot a printer problem resulting in a delay in the delivery of a customer's critical order.

To that end, silos within the IT department can be a key challenge in effectively addressing the optimization of print/document-related services. IDC's conversations with high-level administrators and CIOs have revealed a lack of understanding about output management. Therefore, IT organizations have historically approached printing-related problems in a piecemeal fashion, which often results in a disparate set of point solutions being implemented. This kind of tactical print infrastructure is often what CIOs inherit when they join an organization, and it can inhibit them from achieving their critical IT objectives.

Thus IT leaders should strongly consider implementing a holistic output management solution to foster IT standardization, simplification, and transformation. It is recommended that when IT leaders seek to enhance/renovate their core infrastructure, they also consider the systems that support print. This is especially true as organizations plan their future digital platform. Business leaders are increasingly looking to IT to deliver technologies that allow employees to access and utilize corporate data, applications, and communication resources across multiple device types, including tablets and smartphones, fostering new print and output management use cases.

## Opportunities

IT executives must be made aware that a business case can be successfully made around output management, which must increasingly focus on mitigating the complexities associated with the rapid adoption of virtual, cloud, and mobile computing technologies in the workplace. This business case must revolve around not just the savings associated with efficient output management and/or reducing print servers but also the ability to embrace mobile workforce and digital transformation initiatives. Likewise, IT organizations must clearly demonstrate their ability to enable business imperatives as well as effectively manage future output management growth, whether that growth occurs organically or through mergers and acquisitions.

Another opportunity exists as IT executives in smaller companies also need visibility into their output capabilities yet may lack the market awareness that output management solutions exist or that these solutions can automate some of their manual processes for output management. Again, IT executives must be made aware that a business case can be successfully made around output management, particularly as it relates to the rapid influx of smart devices such as tablets and phones as well as mobility workforce trends, driving increased complexity to IT operations, security, and support.

Likewise, LRS must continue to clearly articulate the unique benefits that IT organizations stand to gain by leveraging a holistic approach to output management versus the usage

of multiple disjointed point products. For instance, by leveraging a comprehensive output management solution, IT can insulate applications from the complexities of document distribution and in turn provide consistent functionality across a wide range of applications, platforms, and device types.

## SUMMARY AND CONCLUSION

On-demand access to corporate applications and data is no longer a nice-to-have in today's demanding environment; it is an outright necessity. Likewise, BYOD, mobility, virtualization, and cloud technologies are adding significant complexity to today's IT landscape. And these trends show no signs of slowing. As a result, more and more IT executives are challenged to empower users with modern technologies while reducing costs as well as maintaining proper governance and control over their organizations' increasingly diverse and burgeoning IT assets.

One of the more surprising ways to enable a more mobile and global workforce while saving operational costs that IT executives and administrators may overlook is in optimizing the printing and distribution of documents. Likewise, as IT organizations continue to mature their infrastructure and services through the increased utilization of virtualization, cloud, and mobile technologies, many of them will realize that the need for document control as well as reliable, efficient, and cost-effective document delivery remains essential in optimizing business user and IT staff productivity.

## APPENDIX

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from current users of LRS EOM as the foundation for the model. Based on these interviews, IDC performs a three-step process to calculate the ROI and payback period:

- » Measure the savings from reduced IT costs (staff, hardware, software, maintenance, and IT support), increased user productivity, and improved revenue over the term of the deployment.
- » Ascertain the investment made in deploying the solution and the associated migration, training, and support costs.
- » Project the costs and savings over a five-year period and calculate the ROI and payback for the deployed solution.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

- » Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and manager productivity savings.
- » Downtime values are a product of the number of hours of downtime multiplied by the number of users affected.
- » The impact of unplanned downtime is quantified in terms of impaired end-user productivity and lost revenue.
- » Lost productivity is a product of downtime multiplied by burdened salary.
- » Lost revenue is a product of downtime multiplied by the average revenue generated per hour.
- » The net present value of the five-year savings is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.

Because every hour of downtime does not equate to a lost hour of productivity or revenue generation, IDC attributes only a fraction of the result to savings. As part of our assessment, we asked each company what fraction of downtime hours to use in calculating productivity savings and the reduction in lost revenue. IDC then taxes the revenue at that rate.

Further, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

*Note: All numbers in this document may not be exact due to rounding.*

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