Vertical Market Outlook Series

Office Imaging





Established in 1989, the Equipment Leasing & Finance Foundation is a 501c3 non-profit organization dedicated to inspiring thoughtful innovation and contributing to the betterment of the equipment leasing and finance industry. The Foundation accomplishes its mission through development of future-focused studies and reports identifying critical issues that could impact the industry.

Foundation research is independent, predictive, and peer-reviewed by industry experts. It is funded solely through contributions. Contributions to the Foundation are tax-deductible. Support the Foundation by making a 100% tax-deductible gift today at www.LeaseFoundation.org.

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Purpose of This Study

The Equipment Leasing & Finance Foundation (Foundation) commissioned this forward-looking report on the office imaging sector. Big Village was selected to conduct the research. This, the seventh in a series of reports on vertical equipment markets, provides an outlook on the office imaging sector in the U.S., demographic and spending trends, and key developments impacting this sector over the next one to two years. In preparing this report, Big Village utilized its pre-existing expertise, coupled with inputs from several outside industry experts and consultants, in analyzing and examining industry trends in the U.S.

How to Use This Report

This report is intended to provoke thought, conversation, and offer high-level insight for equipment finance professionals to reference in strategic planning. There are many subcategories within office imaging. This report focuses on those most relevant to the equipment finance sector, as determined by a Foundation-led Steering Committee of industry professionals.

The Office Imaging Landscape

The office imaging end-user landscape is broad in nature including every type/size of business and transaction (large/small). According to Technavio, enterprises spend 2% to 3% of their yearly revenue on imaging and printing (globally) yet consume only 10,000 sheets of paper per year on average.

This diversity of current and potential end-users can create stability to some degree; however, market and external forces are creating challenges that could negatively impact growth going forward. One vertical that stands out as a strong user of office imaging is the healthcare segment.

Definition and Composition

The office imaging market can be defined and analyzed in a variety of ways.

By Segment

Office imaging of some variety is used by a vast majority of organizations, including business enterprises of all sizes, government agencies, educational institutions, and consumers. The needs and requirements of endusers can vary based on their vertical segment. Here are some examples provided by The Imaging Channel¹:

Educational institutions "require powerful yet simple printers that offer cost-effective color in a lowmaintenance package. Reducing operational costs is also top of mind for educational institutions – from the K-12 level through to higher education." Energy usage is a factor for them, as "office equipment and computers consume 23% of electricity usage for K-12 buildings and energy costs account for 2%-4% of school district expenditures". Education is a market where there is still a need for high-quality color printed materials as learning tools, however, schools of all levels can be very cost conscious in terms of imaging supplies.

For churches and archdiocese schools, "Desktop printers are [relatively inexpensive] because the money is in the toner or ink," said Ed Reigadas with Simpli Smart Office, Inc., a dealer focused on houses of worship in the Archdiocese of New York. "But the problem is that [schools are] paying for a ton of toner cartridges, and we could see that was a poor use of their funds."

Retail and hospitality businesses may still have COVID guidelines to comply with, and some have switched to QR code menus, but many are offering single-use menus that will need to be printed. "It's important that these printed materials display professional quality now that 85% of consumers equate the quality of a company's printed materials with the quality of its services. Space can be an issue for some businesses in this space so equipment with a small footprint can be useful."

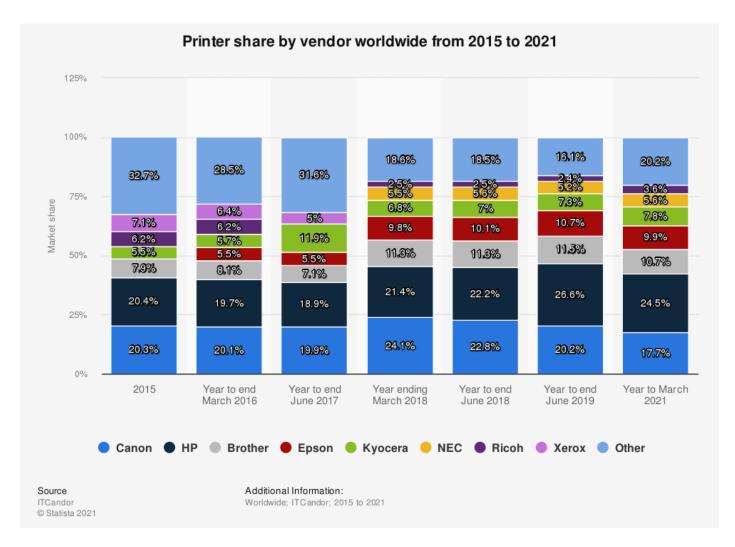
The healthcare market is a vertical that continues to use office imaging, with about 70% of medical communications being faxed, according to The Cannata Report (June 2022). This amounts to about 17 billion fax pages annually. Ross Wood, healthcare channel sales manager at ecoprintQ, a software solutions and services provider, was quoted by Cannata saying that there's a lot more than faxing going on, making the entire medical market a lucrative one for document imaging dealers. "In many medical facilities, MFPs and fax machines are almost as common as desks, and all the devices you sell are needed in small local clinics through large hospitals alike," said Wood. A trend toward healthcare facilities producing their own marketing materials was also highlighted in the article. Navin Balakrishnaraj, national practice director for healthcare

IT services at All Covered, Konica-Minolta's IT and document management division, said, "One big change in the medical market was a shift from outside print-service providers to producing more documents, especially marketing materials, internally."²

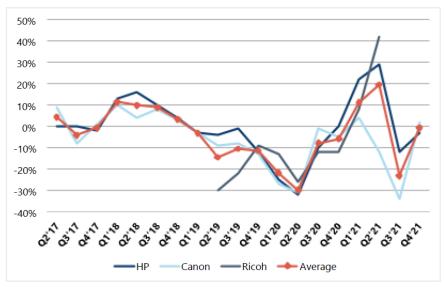
By Company

According to ITCandor data, HP is the leading printer manufacturer in terms of worldwide shipments through March 2021. Canon and Brother round out the top three.³

"In the year to March 2021, Hewlett Packard's (HP) share of global printer shipments stood at 24.5 percent, with Canon taking a 17.7 percent share of the market. HP 's market share has seen an increase of over four percent when compared to the same period in 2018."



Looking specifically at laser printers, a Jeffries research report published March 1, 2022, identified HP as the market leader in the commercial sector for most of 2021, with Canon having a jump in share in the last quarter of the year and Ricoh showing a large increase in the second quarter (their last reported quarter).⁴



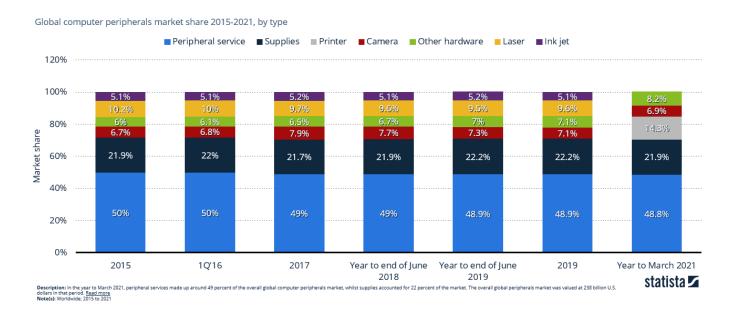
Commercial/Laser Printer Hardware Shipment Trends (Calendar Q2'17 - Q4'21)

Source: Company Data, Jefferies Research

By Product Type

The office imaging category is comprised of such equipment as standalone printers, copiers, scanners, and multifunction printers.

Statista provided an analysis based on ITCandor data of global computer peripherals by type⁵:



A JP Morgan analyst notes a shift to consumer print hardware driven by increased work-at-home environments, which is pushing commercial product prices down.

"Hardware pricing to suffer from higher consumer mix as well as the moderation of pandemic-led tailwinds. In addition to the long-term concerns around Print hardware volumes, we expect Print hardware ASPs (average selling price) to moderate, led by a decline in Commercial Print hardware typically sold at higher prices, and an increase in Consumer units sold at lower prices, as Enterprise customers look to prepare for a hybrid work environment where high-end Commercial units are partly substituted by lower-end Consumer units for a fraction of the employees".⁶

Further, a Morningstar analyst made the point that color printers are gaining more popularity due to the decline in color toner costs.⁷

By Channel

Businesses have choices when it comes to obtaining office imaging equipment. They can work directly with a manufacturer or make purchases through an office equipment vendor/dealer. Another option for the acquisition of imaging equipment is the e-commerce channel. Various retailers and dealers offer online ordering, and manufacturers such as Canon have online stores where printers and other business products can be purchased.⁸

Business owners and other end-users have the option of either leasing or purchasing (outright or through financing) their imaging equipment. In addition to selling their products directly, leading manufacturers such as Canon, Hewlett Packard, IBM, and Xerox Corporation may also offer "brand exclusive leasing contracts to businesses". Additionally, some companies lease or rent office equipment including imaging products.⁹ Maintenance contract costs for leased equipment may be bundled into the lease payment or billed separately. According to HP, the computer and printer leasing industry has declined over the past few years. Lower purchase prices on the equipment making it easier for businesses to own their equipment with a smaller initial outlay is one reason cited for this.¹⁰

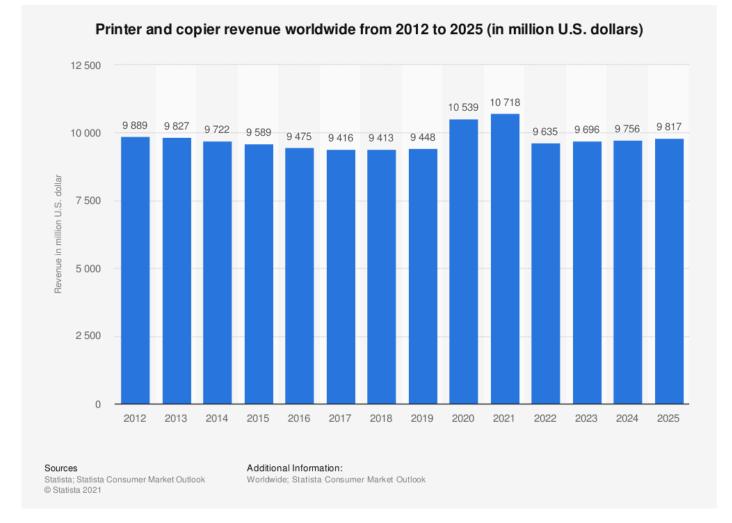
Purchasing imaging products through an office equipment dealer has some advantages, including the opportunity to see machines from different brands in a single location. This could allow for the combining of products from multiple manufacturers to create a customized solution for a business.¹¹ An additional benefit gained from purchasing through a dealer may be an enhanced level of service. Dealers can be easier to contact when there is an issue or service is needed. A call to a dealer may be fielded by a technician; calls to manufacturers often go through a call center. Technicians working with dealers often work on a variety of equipment brands and "get more opportunities to exercise and perfect their skills". There may also be a perceived "Buy Local" benefit from purchasing through a nearby dealer.¹² Office equipment dealers have faced supply chain issues through the pandemic. Additionally, there has been consolidation in this sector. Channel e2e reported that "office equipment dealers, multi-function printer (MFP) partners, copier resellers, and managed print services (MPS) partners remain busy buying one another".¹³ These factors have and may continue to impact the inventory that can be offered by the dealers and perhaps take away the local advantage to some extent.

Market Size and Future Growth

Published information reviewed indicates a decrease going forward both in terms of hardware and page volume on a global basis.

According to Statista analysis, global revenue of the printer and copier market in 2020 was over USD 10 billion. The Statista Consumer Market Outlook estimates that global revenue will increase in 2021 slightly before beginning to decrease to around \$9.8 billion by 2025.¹⁴

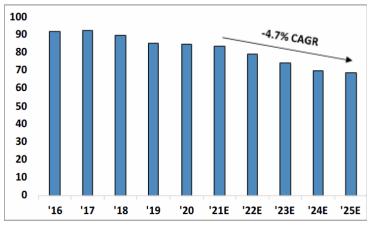
Statista provided an analysis based on ITCandor data of global computer peripherals by type :



A JP Morgan report from December 2021 identified some favorable near-term demand drivers for print hardware:

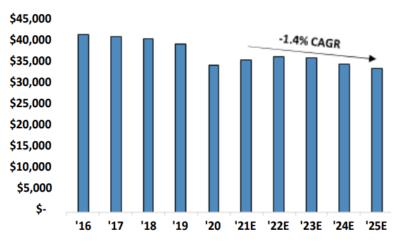
- 1. "strong backlogs for print hardware heading into 2022 led in part by enterprise demand for upgrades
- 2. supply chain constraints leading to a gap between demand and supply, delaying revenue recognition into 2022 over 2021
- 3. backlog booked at favorable prices which were elevated on account of the pandemic".¹⁵

However, their presentation of Gartner data shows a decline in global shipments and revenue through 2025.¹⁶



Global Print Shipments Millions

Source: Gartner data; JP Morgan report



Global Print Hardware Revenue \$ in Millions

Source: Gartner data; JP Morgan report

An alternative way to gauge this market is to look at print page volume. According to IDC, about 450 billion fewer pages were printed from home and office devices worldwide in 2020; this is attributed to COVID-19 disruption. IDC explained that the print volume had been dropping before the pandemic but COVID steepened the decline. 2.8 trillion pages were printed globally in 2020, which is a drop of 14%.

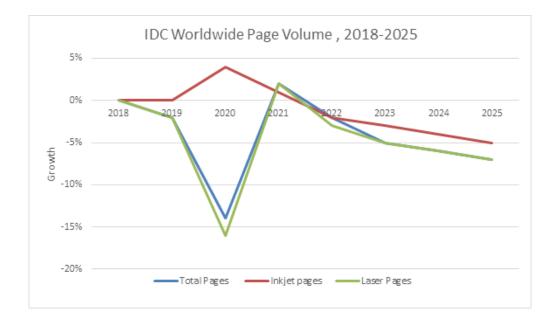


Chart source: The Register.com; IDC data

Looking ahead, Illona Stankeova, IDC Europe senior research director for Imaging Devices & Document Solutions, stated, "Pages printed at home will not offset declines in offices as organizations and governments continue to pursue paperless initiatives and digital transformation agendas."¹⁷

A Morningstar analyst noted in a June 2022 report that "headwinds remain for printers and related supplies as enterprises strive to lower IT costs and encourage individuals to read on a screen instead of print." Further,

"The printing market is surrounded by unknowns in the consumer and commercial segments. Both markets are highly cost competitive and vendors rely on selling supplies, like ink cartridges, as a recurring revenue stream. Individuals are forgoing the print button by reading documents on screens, and e-signatures replaced the need to print and scan documents. HP's commercial hardware business faces the risk of businesses incentivizing employees to print fewer items and for companies to outsource managed print services to third-party providers over HP. The A3 printing market has large incumbent players and HP's movement into the market could create an unsupportable pricing environment as vendors possibly keep existing clients through price concessions. Also, as 3D printing becomes more widely accepted for manufacturing and industrial applications, 3D printing vendors can consolidate and for the market to become cost sensitive like traditional printing".¹⁸

Macroeconomic Environment

Several factors have recently impacted the space, including those related to labor and employment, new work models, the changing office landscape, and supply chain issues.

Labor/Employment

Like most businesses, the imaging industry experienced the impact of the great resignation. Matteo Recanatini, marketing director at Offix, says this "will cause companies to ratchet up their employee engagement and retention practices."¹⁹ Remote work solutions and technology will also be important as businesses adapt to create a flexible work environment.

Additionally, Chris Falzett, VP of sales and marketing at TOPP Business Solutions, notes that given the tight labor market combined with the need for businesses to accomplish more with fewer people, clients will more frequently seek managed IT outsourcing partners that allow them "to utilize personnel assets geared towards their core operations."²⁰ Falzett also commented, "With the way wages are being increased, it seems like everybody's jumping ship for a couple more dollar[s]. Managed IT continues to be a growth area as customers want to have the least amount of internal headcount as possible. I don't think loyalty is ultra-high right now, so the customer finds more continuity in outsourcing it at this point."²¹

New Work Models - Remote/Hybrid Work

Remote work was widely adopted when the COVID-19 pandemic hit, and the future of work is likely to see hybrid models of work continue. In fact, a Gallup survey indicates that 59% of employees prefer a hybrid work set-up. Additionally, Insider Intelligence indicates that offering flexible work models remains a competitive benefit for companies.²²

According to Keypoint Intelligence's 2021 Future of Office Survey, over 30% of respondents said printing, copying, and scanning was a business challenge that cost them the most time while working from home.

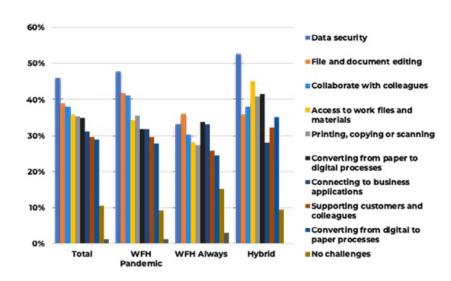


Chart Source: CSA Addresses Hybrid Workplace Pain Points, Key Point Intelligence

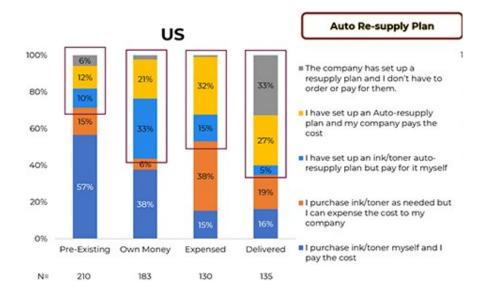
As businesses continue to adapt to flexible work models, they will need to make sure employees are properly equipped wherever they

are working. Dealers that can take advantage of these new business needs will ultimately be successful.

"Dealers with access to diverse product lines were able to create these work-from-home bundles consisting of everything from the laptop and accessories to the software, modem, printer, and IT services that tie it all together. Not only is this an additional revenue opportunity, it creates the ability to expand managed print solutions (MPS) to encompass home office devices. Capturing clicks, vital to office technology dealers, doesn't need to stop at the office wall."²³

OEMs have shifted their strategies to better serve hybrid and remote models and are accomplishing this largely by embracing cloud solutions that are accessible anywhere.²⁴ Beyond pandemic-related adjustments to work styles, companies continue to work on their digital transformations. According to a Keypoint Intelligence study, "leading OEMs are well-equipped to help their customers embrace digital transformation, with each offering a strong portfolio when it comes to content digitization, management, and collaboration."²⁵

Remote/hybrid work has also impacted the Print-as-a-Service (PaaS) space. The image below, with data from Keypoint Intelligence's The Future Office survey, shows devices WFH users have to print for work. The highlighted areas indicated PaaS offerings.



Keypoint Intelligence identifies two big takeaways from this image:

- Compared to employees who are using a printer that they already had before the pandemic, employees with newly acquired printers are at least twice as likely to be attached to a form of PaaS for ink or toner.²⁶
- When a respondent is using a device that their employer delivered to them, close to 75% report that those devices are attached to a PaaS plan.²⁷

Additionally, PaaS has been deemed a requirement for the future:

"Print-as-a-Service was a great idea before the pandemic. Now (and for the foreseeable future), it's a requirement. PaaS is as essential as offering MFPs instead of just single-function printers. Any vendor who hopes to ride out the pandemic offering the same old, same old and expecting things to return to normal are doomed."²⁸

The Changing Office Landscape

Hybrid work schedules and companies cutting back on office space mean changing office layouts and equipment, including computers and printers.²⁹

"The growth in remote and distributed printing has led to the need for solutions that enable employees to connect wherever they are and to move seamlessly between on-site and remote workplaces. It has also resulted in increased demand for remote fleet management capabilities and managed print services (MPS). And because the cloud enables remote printing and helps organizations easily store and share large volumes of documents, there's been an increase in the use of cloud storage."³⁰

There has also been increased utilization of workflows that combine print and digital output. The concept of a paperless workplace is appealing to some. However, there are a few areas that will continue to drive demand for print, including the need for physical signatures, hard copy communications, and a consumer preference for paper.³¹ Workflow solutions that allow people to move between a digital and physical world will ultimately be in demand.

Changes in work environments and price drops have also shifted purchasing plans. A factor impacting the type of office imaging equipment purchased is the continuing trend in remote and hybrid work models. The Imaging Channel Market Trends Survey (2021 data) found that "76% of dealers reported that during the past year, customers asked them for printer/copier bundles for WFH employees (23% said that question was asked extremely often); 66% said customers asked about remote work collaboration tools, and 65% asked about home network and document security solutions." The survey also found that "a good percentage of SMBs see high value investing in technology that supports their remote workers and more than three-quarters say that it is extremely/very important that their vendors provide strong data security and privacy solutions".³²

Supply Chain Issues

Similar to other industries, office imaging products were also impacted by supply chain shortages. Printer manufacturers and other industry players suffered due to complex supply chains that rely on manufacturing and components from places far from where the products end up.³³

"One broken link in the supply chain—whether it is a factory shut down due to COVID spread, computing chips being impossible to procure, or a lack of workers available to load shipping containers at ports—means that product cannot move in the way it needs to—especially as many customers are resuming investments in print (and scan) technology."³⁴

Additionally, supply chain challenges may be driving up the price and/or trade-in value of used equipment.³⁵ It remains to be seen how this increased value holds up as availability issues ease.

Some OEMs avoided major issues by keeping strong lines of communication with dealers about the availability of products and it will be imperative to do so in the future.³⁶ Ray Belanger, president of Bay Copy, also anticipates that the impact of supply chain shortages will cause clients to hold on to equipment longer.³⁷

"Extensions/lease renewals, rather than new equipment placements, could well be a familiar theme in 2022. This, of course, will drive dealers down various avenues for new/replacement revenue."³⁸

Technology

Technology is evolving in the space to focus more on sustainability, security, and helping businesses work towards digital transformation goals.

Digital Transformation

As businesses continue their digital transformation journeys, manufacturers have created offerings to bolster those efforts. In February 2021, Xerox announced a new high-speed scanner designed to respond to digital transformation objectives as the need to access more business content grew.³⁹ Business demands arising from working remotely or hybrid have fast-tracked solutions that tackle specific problem areas for automation.⁴⁰

Other companies help businesses with their digital transformations by providing solutions for cloud-based document management. An example of a vendor assisting organizations with their digital transformation is Lexmark, who this year announced that it has been named a Leader in the IDC MarketScape Worldwide Print in the Distributed Workforce 2022 Vendor Assessment. One of Lexmark's strengths recognized by IDC is the following:

"Lexmark 'has a strong portfolio of verticalized solutions and a deep bench of subject matter experts to help organizations design and implement programs to meet very specific objectives in areas around print optimization, workflow automation, and digital transformation for the distributed workforce. Its cloud-focused strategy for addressing the demands of the distributed workforce is factually supported by its reliance on data and should translate into making the correct calls for its customers."⁴¹

Cloud Connectivity

Cloud-based solutions are one technology trend impacting print management. On-premise print solutions are not completely gone; however, many of the latest print solutions leverage the cloud.⁴² Cloud solutions have accelerated recently as it was observed that companies that already had cloud-based document management in place did not struggle as much when employees shifted to remote work.⁴³ Besides work-from-home advantages, the cloud is easier to manage.

"Rather than paying internal IT resources to build extensive corporate networks, maintain oneoff implementations of various technologies, and keep abreast of ever-shifting security concerns, businesses can outsource all that complexity and responsibility."⁴⁴

Additionally, "the cloud is driving developments in remote remediation, helping ensure that dealer service techs are mostly out of sight but not completely out of mind."⁴⁵ Since remote and hybrid work is not likely to disappear any time soon, cloud solutions will continue to emerge in the space. Additionally, cloud-based solutions are likely to gain even more traction as companies continue their digital transformations. According to Statista, the cloud management and security services segment is expected to grow by 17.3% in 2022.

Another benefit of the cloud for businesses is the ability to create efficiencies by digitizing documents. Digital document management, which can be cloud-based, is suggested for businesses that are looking to reduce their paper usage.⁴⁶ According to Forrester (2020 data), 71% of IT decision-makers who come from companies that do not consider digitizing document workflows as a "standard protocol" say that this attitude is changing. While this may be positive from a sustainability point of view, it can pose a challenge for the office imaging space as it is a driver in paper use reduction.

Sustainability

Technological advances such as enhanced cloud services can also play a role in a more sustainable future. For example, "shifting customers from many on-premises servers to the cloud presents the opportunity to reduce IT consumption of energy and related carbon emissions."⁴⁷ Additionally, recycling programs and the longevity of products will be important as consumers become more aware of the environmental impact of devices.

Keypoint Intelligence offers its opinion on the topic:

"Consumers are better informed than ever before, and the pressure for vendors to publish sustainability targets and achievements is growing as they become increasingly important in informing purchasing decisions. Many vendors are doing well with reducing waste for their offerings, ticking many boxes for longevity, PCR content, recycling programs, carbon offset programs, remanufactured offerings, and using fewer material types. Transparency and clarity are key. Any inconsistency between message and action will be seen—and "greenwashing" will not be tolerated."⁴⁸

According to the Waste Electrical and Electronic Equipment Forum, in 2021 waste from electronic and electrical equipment (WEEE) totaled an estimated 57.4 million metric tons and is growing by 2% to 3% every year. Implementation of the three R's (reduce, reuse and recycle) is one way businesses can cut back on waste.⁴⁹

- Reduce: This should be the first line of attack by reducing the materials used in the manufacturing of electronics to minimize impact during the product's life and afterlife.
- Reuse: A device that is reused stays in active use, so it is not being sent to landfills or factories to be repurposed. One way to ensure that a product can be reused is by repairing and replacing broken components in an otherwise functional device, such as a copier, scanner, or MFP.
- Recycle: This should be the last resort. Recycling electronic components can recover valuable materials, but it can also create pollution and improper recycling can release toxic chemicals that contaminate soil, water, and air.

Office technology dealers have an important role to play in sustainability and there are a few ways they can reduce the amount of electronic waste produced annually.⁵⁰

- 1. Partner with compliant recycling and refurbishment centers
- 2. Work to reuse or repair parts whenever possible
- 3. Raise awareness of the importance of environmental responsibility among customers and employees alike

Refillable ink is another way that vendors can bolster their sustainability credentials.⁵¹ Jani Kemers, VP, print and supplies at Tech Data Europe, argues that refillable ink and toner tank printers have more sustainability benefits than the circular economy because they reduce electronic waste by eliminating the need to produce a cartridge.⁵² While these insights are based on the European market, this sentiment likely impacts the U.S. market as well. Growth in this area is also evident when looking at products that major companies in the space offer, such as EPSON's EcoTank printers or Canon's Megatank Continuous Ink System Printers.

Security

According to Ricoh's Security Guide, "Security threats are no longer limited to personal computers, servers or networks. Printing devices — even basic laser printers — need countermeasures against a diverse range of threats. As multifunction printers have evolved, they have become core IT assets in their own right. The computing capability of what have been traditionally categorized as Printer/Copiers" has grown, but so too have potential threats".⁵³ According to Ricoh, these threats can include:

- Malicious access via networks
- The tapping into and alteration of information over the network
- Information leaks from HDD storage media
- Unauthorized access via a device's operation panel
- Improper access through fax telephone lines
- Information leaks via hardcopy
- Security policy breaches due to carelessness⁵⁴

Further, the security risk landscape has expanded along with the expansion of an organization's network. It is now commonplace for copiers to be accessed directly through a company's computers. As remote work increased, home-based devices may have been added to the corporate network.⁵⁵

The cloud had created new vulnerabilities within the remote landscape, making small companies just as susceptible to attacks as larger companies.⁵⁶ Print management companies are enhancing security within their offerings. For example, MPS Monitor announced that its MPS solution is SOC 2 Type 1 compliant, meaning it complies with recognized industry standards and provides "what it calls the most secure cloud infrastructure for remote monitoring and management of print devices".⁵⁷

"Security is a fundamental component of MPS Monitor's culture and strategy. Everything we do is centered on protecting users' information and IT assets. The SOC 2 Audit is further independent proof of MPS Monitor's security posture which gives new and existing customers peace of mind knowing that their security is our first priority. Our Information Security Management System, now audited as compliant to both ISO/IEC 27001 and to SOC 2, provides the highest security profile currently available in our industry." - MPS Monitor CEO Nicola De Blasi

The increased need for organizations to use contractors, gig workers, and third parties due to labor shortages has also increased security risks. These workers may need to "have access to business-critical applications such as email, chat, collaboration, finance, and HR, among many others. The dilemma is that these same applications are often where organizations' most precious and sensitive data are found".⁵⁸ According to Security Magazine, a company's cybersecurity team should employ "last mile control,":

Cybersecurity teams require advanced controls at the point where users interact with the applications to ensure all users, including contractors, are working with critical application data appropriately. This includes controlling copy/paste actions, file downloads, screenshots, printing, and saving content, among others. Such controls should not impede user work; rather, they should ensure they can work in their fluid, natural way across applications.⁵⁹

Payment and Financing

Options for Equipment Acquisition

Options for office imaging acquisition include purchasing outright, purchasing through financing, or leasing.

Businesses need to weigh numerous factors when deciding to buy or lease imaging equipment such as printers and copiers. There are financial advantages to ownership; the equipment becomes an asset and can be included as a property item when calculating net worth. Further, business expenses may be able to be counted as deductions or expenses on tax returns. According to "(IRS)Section 179 depreciation rules, businesses can deduct the full cost of most printers in the same year they put them into service. This means that you don't have to write off the value of the expense slowly over a schedule but can count the entire purchase price at once. For a business investing in a new fleet of printers, this has significant tax benefits." However, the purchase could involve a large upfront investment which would be compounded if multiple printers are purchased at the same time.⁶⁰

Leasing requires a lower initial investment with monthly payments. This could be of benefit to an enterprise's cash flow. Some lease agreements may offer a "trade-up" option which would increase a business's access to the latest technology. Leases may fall under a Section 179 deduction. On the other hand, there may be financial disadvantages to leasing; the leased printer cannot be considered a business asset. The cost of a lease usually can be written off, but may not provide "the same returns as an outright purchase... If you purchase outright, you'll take a bigger benefit upfront, unlike leasing, where it's spread out over time." Leasing may put restrictions on the usage of the machine. The lease agreement may limit the number of pages printed and who can access the printer; there may also be requirements regarding the paper or ink that needs to be used.⁶¹

Various lease options are available. P3 Cost Analysts described two lease types:

"Fair Market Value Leases: The most common type of lease is a Fair Market Value (FMV) lease. These will have lower monthly payments, but the lessee has no ownership of the property. These leases won't show on the balance sheet of a business and have no rent-to-own agreement, making them ideal for owners who never want to own the copier.

\$1 Out Leases: Companies that would like to own the copier one day might consider the less common option, a \$1 Out lease. It's called this as you own the machine at the end of the lease for \$1, meaning the entire amount of the machines was financed over the lease. Monthly rates will be higher, but they will go towards the price of owning the machine at the end of the lease. That said, there is little benefit to owning a copier long-term. The older the machine is, the higher a copier company will typically charge for the maintenance contracts which can easily exceed the lease price. By upgrading the machine every 4 or 5 years, and altering the price escalation terms in the contract, a company can avoid such costs".⁶²

Financing options for purchases include vendor-specific equipment financing and financing obtained through the dealer where the purchase is being made. Businesses also have non-equipment-specific alternatives such as using a line of credit, credit cards, and Small Business Administration loans.⁶³

An additional purchase option is the acquisition of remanufactured/refurbished equipment. According to Keypoint Intelligence:

As markets understand that the take, make, and discard process is unsustainable, circularity and

the reuse of products before recycling is having a disruptive effect on the ways we think about our consumption habits. This change started as we all were forced to consider the impact of COVID on our home and work lives. The mounting evidence of global warming, combined with shortages in the supply chain caused by a lack of microprocessors and soaring energy costs, is forcing us to consider how we can make better use of what already exists today.

The office printing market has not been immune from these disruptors. The refurbishing and sale of used equipment had previously been a relatively incremental activity for resellers, dealers, and their technicians. Yet, some manufacturers have taken the opportunity to make better use of returning hardware and structured remanufacturing processes to place used equipment back into the market.⁶⁴

Managed Services

According to IMARC "managed print services (MPS) are customized and integrated solutions used for streamlining the printing fleet of the organizations. They are offered by third-party service providers to optimize and manage the overall document output generated by the enterprises. MPS can be deployed on-premises, on the cloud, or in hybrid environments. It involves the assessment, selective or general replacement of hardware and service components and tracking of printers, fax machines, scanners, copiers, and multipurpose printing (MFP) devices. MPS anticipates the printing requirements by analyzing organizational operations and providing enhanced visibility and control of the input and output. This aids in minimizing costs, preventing device downtime and optimizing the usage of ink, paper, and energy."⁶⁵

Additionally, the Managed Print Services Organization (MPSA) defines MPS as "the active management and optimization of business processes related to documents and information, including input and output devices".⁶⁶

Specific services offered by MPS providers can include proactive management of devices, performance analysis, device repair, supply restocking (paper, ink cartridges, etc.), device installation, device upgrading/ updating, implementation of network security protocols, and deployment of waste reduction programs.⁶⁷ There are several pricing models available. Common ones include cost per print, toner only, and service only. Some emerging pricing models include per device ("paying an amount based on the number and type of devices you include in your Managed Services plan") and flat rate ("a monthly investment where your technology is managed, and your business is supported").⁶⁸

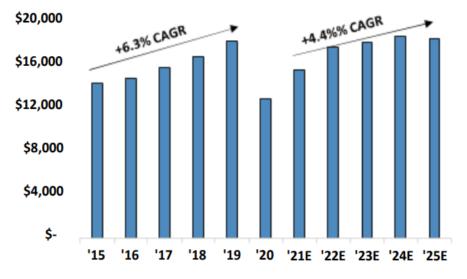
There are some possible disadvantages to working with an MPS. Often MPS services are offered in bundled packages and some of the included services may not be needed, resulting in a customer potentially paying more than what they need to. The potential for "inconsistent pricing" is called out:

"When it comes to MPS pricing, there are typically three main categories including equipment, services, and supplies. Depending on which MPS provider you work with, these categories will be priced differently. In many cases, vendors will give a great rate in one category while increasing the prices in the other categories. Customers are drawn to these low rates in one category while not knowing that they're, in fact, being overcharged in the others".⁶⁹

Another pricing option is building the entire print program cost into a per-page charge:

"This might be \$.05/page, with 100,000 pages per month minimum, as an example. This might look like a great deal on the surface, but this is often significantly higher than just paying for the leases and other costs themselves (provided they are properly negotiated using industry benchmarks)".⁷⁰

JP Morgan feels that managed print services should be the only growth area for companies in the sector to target; explaining that "even as page volumes remain challenged, we see a revenue opportunity from companies migrating their business models to Managed Print Services, which for example includes HP+ and HP Instant Ink subscriptions."⁷¹ The firm is forecasting a 4.4% growth (CAGR) in managed print service revenues over the next four years.



Managed Print Services Revenue \$ in Millions

Source: Gartner data; JP Morgan report

Technavio has a similar outlook projecting the global managed print services market to grow by USD 6.28 billion with YOY growth of 4.12% during 2021-2025.⁷² IMARC Group has a slightly higher estimate expecting the market to grow at a CAGR of around 6% during 2021-2026.⁷³

Speaking specifically of Xerox (who does offer managed print services), a Morningstar analyst noted that MPS may not be the best option for small to medium size businesses:

While the SMB channels Xerox Partner Print Services and XBS constitute 25% of MPS revenue and is growing in the mid-single digits, we think that this success will be short-lived. We suspect the value proposition of print services for SMBs is much less than that for enterprises, as we think it will be hard for SMBs to justify the costs of managed print services—a service to ultimately save money--given that the smaller size of the business likely will mean smaller fleets.⁷⁴

According to IMARC, some key players in the managed services sector include ARC Document Solutions Inc., Brother Industries Ltd., Canon Inc., HP Inc., Konica Minolta Inc., Lexmark International Inc., Ricoh Company Ltd., Sharp Corporation, Toshiba Corporation, WeP Solutions Ltd, and Xerox Corporation.⁷⁵

In Conclusion

Going forward, the industry will face challenges related to paper use reductions; however, there are some bright spots supporting a continuing need for office imaging equipment and services. One is the managed print services market, which appears to be a growth area going forward. MPS includes a variety of services, from the management of devices to the implementation of network security protocols among others. As page volumes are challenged, MPS should be an area of focus, according to JP Morgan analysts, because there is revenue opportunity from companies migrating their business models to MPS.

Print-as-a-Service is another area for potential growth and has been deemed a requirement for vendors who want to survive going forward.⁷⁶ PaaS grew especially among employees who acquired a printer during the pandemic.

As many industries shift to digital document management, one industry that remains promising is healthcare. According to the Cannata Report, about 70% of medical communications are faxed, which amounts to 17 billion fax pages annually.

Sustainability will also continue impacting the space with offerings such as refillable ink allowing companies to boost sustainability credentials.

As businesses continue their digital transformations there are opportunities for new products and technology in the space. However, it is important to note that there are certainly challenges that need to be faced. The shift to remote and hybrid work; solutions such as cloud storage and document sharing and corporate/ government initiatives around digital transformation all lead to a reduction in paper use. Being aware of the forces playing in this industry will be helpful to those providing leasing and financing as they work with their clients to find the best possible solution to their imaging needs.

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