KEYPOINT INTELLIGENCE

ANALYSIS

MARKET INSIGHTS

EASE OF USE - ENTERPRISE DEVICES

OCTOBER 2020

Executive Summary

Ease of use is a key area of focus and a major area of investment for OEMs in the enterprise space. Virtually all of the OEMs have dedicated teams or departments to improve ease of use, and extensive research is conducted among their customers, dealers, and third-parties to ensure they meet the needs of enterprise environments. What we found from this study is that OEMs are continuing to improve upon and develop features and functions to simplify workflow-related tasks and create automation. User-preferred features like recent destinations or recent actions based on the past user experience, screens with limited button selections, as well as optional buttons for more uncommon settings all help to offset complexity with fewer mistakes. Because enterprise organizations must accommodate many different users with many different needs and workflows on a daily basis, customization (in many cases, on a user by user basis) is also an invaluable part of the product design process.

The continued development of cloud-based and serverless apps as well as onboard tools to streamline and simplify workflows and daily tasks is also of paramount concern to the OEMs. That said, there is varying opinion and execution among the OEMs on how to best handle this challenge. Some offer a very open approach, allowing customers and dealers to easily download/create free or fee-based apps and download them directly from the control panel of their MFPs. Others take a more close-ended approach, reserving the downloading of apps strictly for their dealer base.

In a post-COVID world, we can expect launches and enhancements to touchless operation and mobile apps that is geared toward limiting contact with the device itself and expanding functionality of remote operation. Voice recognition is also a very exciting development that will continue to grow and innovate. Simple voice commands that detect specific functions without touching the device would be very beneficial for the current and future work force.

Key Findings

- ◆ Usability and the closely linked benefit of accessibility are considered important to IT decision markers in large companies, most of which say their document-based business processes still require a high degree of human interaction.

    - o Usability applies to basic device functions (print/copy/scan/fax), the touchscreen and apps, maintenance and replacing consumables, as well as compatible software.

- Software solutions and cloud-based services that offer usability benefits continue to grow in importance as users and IT administrators look to simplify and streamline workflows for more effective and efficient workforces.

  o The opinions among the OEMs on how best to execute this strategy are highly varied; their degree of advancement in this area is also highly varied.

- OEMs are continuing to improve upon and develop embedded features, functions, and customization to simplify workflow-related tasks and create automation to offset device complexity.

- In a post-COVID world, we can expect launches and enhancements to touchless operation, mobile apps, and voice guidance geared toward limiting contact with the device itself and expanding functionality of remote operation.

- The perceived easier maintenance and lower total cost of ownership for business inkjet devices could be a threat to laser-based technology placements in the United States and Europe.

- Two OEMs earned BLI PaceSetter awards for their performance in enterprise ease of use, including Konica Minolta.

Recommendations

- Prioritize software, apps, and cloud-based services that help users streamline and simplify workflows.

- Other areas to prioritize include control panel and driver customization capabilities and post-COVID requirements tied to touchless operation.

  o This includes mobile apps, voice guidance, and remote operation apps.

- A consistent user experience between enterprise and desktop models can benefit workers who spend time in the office and at home.

- Design programs to make it easier for employees to acquire company-approved printers and equipment and work from home, and work between locations.

  o Simplify service contracts and the managing and ordering of supplies, and provide multi-layered security best practices to help ensure business data is adequately protected in home office environments.
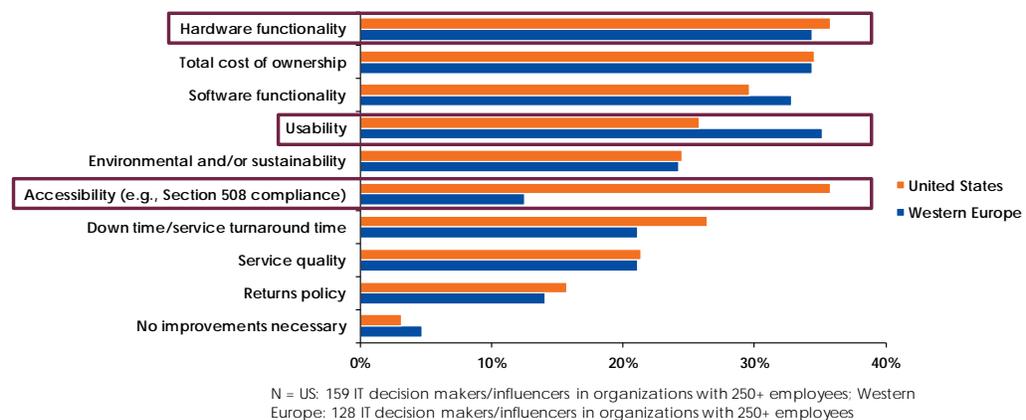
Introduction

Ease of use is one way in which print technology can be assessed; the way this is done varies by type of device. For instance, devices targeted toward small and medium-sized businesses (SMBs) and small workgroups tend to integrate a different set of usability features compared to those designed for larger organizations and workgroups. While we evaluated ease of use in SMB-oriented devices last year, this particular market insight is centered on ease of use in enterprise-type A3 products. This analysis will discuss key trends in enterprise ease as use as well as the results of our recent enterprise ease of use study—including detailed scores and profiles for participants.

Key Trends

Ease of Using Print Devices Very Important Across Regions

"Usability", "ease of use", and "user-friendliness" are certainly commonly used phrases in the office technology space these days. But what does the research say about their importance? In a 2019 survey, Keypoint Intelligence asked IT decision makers and influencers at organizations with at least 250 employees what aspects of their print environment they would most like to see improved. Usability was the number one concern in Western Europe. While it was the number six priority in the United States, a very closely linked feature—accessibility—tied for first priority with hardware functionality in importance. This clearly shows that usability is a key component of functionality. Indeed, if a device is difficult to use, that device—or some of its features—may not be used at all, impacting its functionality and usefulness. In sum, it is clear the ease of using print devices is important to enterprise customers across regions.

Figure 1: In relation to your printing environment, what would you most like to see improved? Please select top three.

N = US: 159 IT decision makers/influencers in organizations with 250+ employees; Western Europe: 128 IT decision makers/influencers in organizations with 250+ employees

Source: Printing Trends in Enterprise, Keypoint Intelligence (2019)

In addition, many organizations and employees are using cloud-based services that offer usability benefits in areas like sign-up, access, interface design, application development, and payments. Considering that using cloud services for business processes is a top business objective in today's organizations (and for Western European companies, in particular), including cloud services that connect with print devices is certainly figuring into corporate decision making. In fact, multifunction printer apps that scan to cloud services/repositories are the most commonly used apps on these devices.

Figure 2: Which of the following are business priorities for your organization for the next three years? Please select the top three.
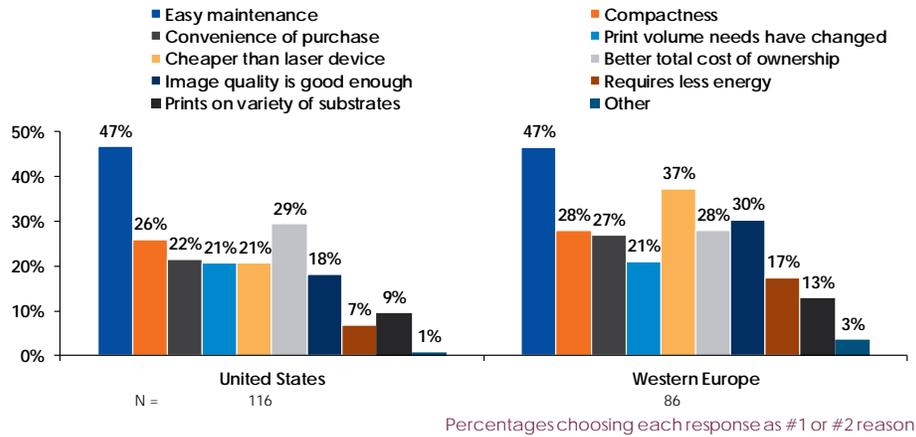

N = US: 159 IT decision makers/influencers in organizations with 250+ employees; Western Europe: 128 IT decision makers/influencers in organizations with 250+ employees

Source: Printing Trends in Enterprise, Keypoint Intelligence (2019)

Business Inkjet a Means for Usability

In the same 2019 survey, we asked a series of questions about business inkjet devices, or inkjet-based printers and MFPs with business-grade features (e.g., higher speeds, paper capacities, and cartridge yields). For instance, we asked companies with 250 or more employees with business inkjet devices why they purchased this kind of technology. These companies (which accounted for about 70% of companies with 250+ employees) were more likely to say "easy maintenance" than the other response options. This response may suggest that laser-based technology is not always the most user-friendly option in terms of maintenance. In fact, ink-based marking technology tends to require less maintenance and servicing compared to laser products, as they typically involve only a few major components (i.e., ink, an ejector or printhead, and a forced air dryer to dry the ink on the page). While this particular market insight evaluation did not include business inkjet products, we will consider testing, assessing, and incorporating these devices in the next version of this study.

Figure 3: Please rank your main motivations to buy a business inkjet device instead of a laser. Please rank your top two choices.
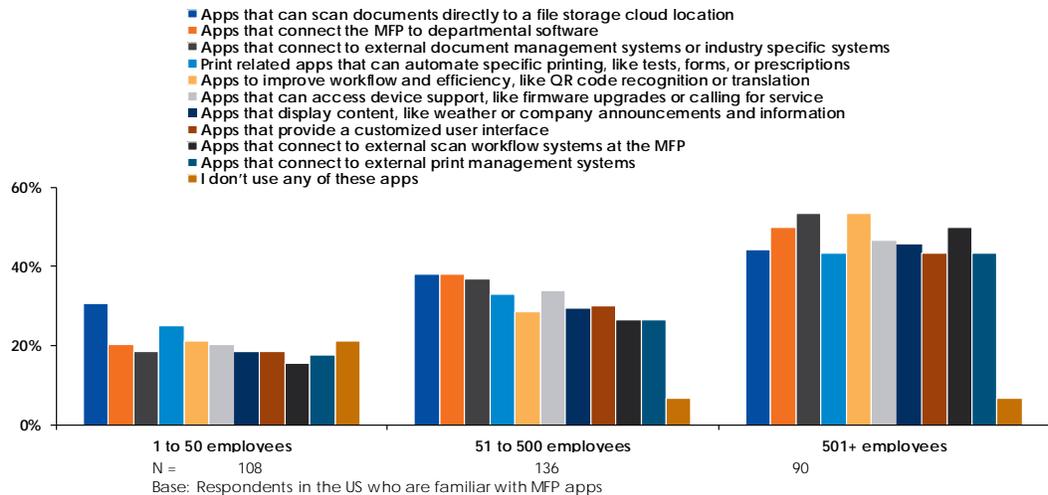
Legend:
- Easy maintenance
- Compactness
- Convenience of purchase
- Print volume needs have changed
- Cheaper than laser device
- Better total cost of ownership
- Image quality is good enough
- Requires less energy
- Prints on variety of substrates
- Other

United States (N = 116): 47%, 26%, 22%, 21%, 21%, 29%, 18%, 7%, 9%, 1%

Western Europe (N = 86): 47%, 28%, 27%, 21%, 37%, 28%, 30%, 17%, 13%, 3%

Percentages choosing each response as #1 or #2 reason

Source: Printing Trends in Enterprise, Keypoint Intelligence (2019)

Print Device Touchscreen and Apps

One big way that printers and MFPs can be easy to use is through their touchscreen and associated apps. These apps help streamline tasks by removing multi-step and/or manual processes. For example, instead of scanning a file to one's e-mail, saving the file to one's desktop PC, and uploading that file to a cloud service, users can scan that file directly to their cloud service of choice. As mentioned above, scan-to-cloud apps are the most commonly used MFP apps. The below chart shows that other connector apps, like apps connected to departmental software and external document management systems, are also relatively popular. They are particularly important in the largest of companies (501+ employees), which were most likely to be using them.

Figure 4: There are different types of MFP apps/connectors. Is your organization currently using any of these apps?

Legend:
- Apps that can scan documents directly to a file storage cloud location
- Apps that connect the MFP to departmental software
- Apps that connect to external document management systems or industry specific systems
- Print related apps that can automate specific printing, like tests, forms, or prescriptions
- Apps to improve workflow and efficiency, like QR code recognition or translation
- Apps that can access device support, like firmware upgrades or calling for service
- Apps that display content, like weather or company announcements and information
- Apps that provide a customized user interface
- Apps that connect to external scan workflow systems at the MFP
- Apps that connect to external print management systems
- I don't use any of these apps

Categories: 1 to 50 employees (N = 108), 51 to 500 employees (N = 136), 501+ employees (N = 90)

Base: Respondents in the US who are familiar with MFP apps

Source: Platforms and Apps: The Future of MFP Solutions (Keypoint Intelligence, 2018)

It appears there is a great opportunity for these kinds of apps, as the largest of companies (501+ employees) say, on average, about 60% of their document-based business processes are manual—requiring a high degree of human interaction. When asked about desired characteristics for these apps, firms were split about 50/50 as to whether they would like apps to come pre-installed on the device at no charge (51%) or be optional for download and installation (49%)

Figure 5: What percentage of your organization's document-based business process are manual, requiring a high degree of human intervention?
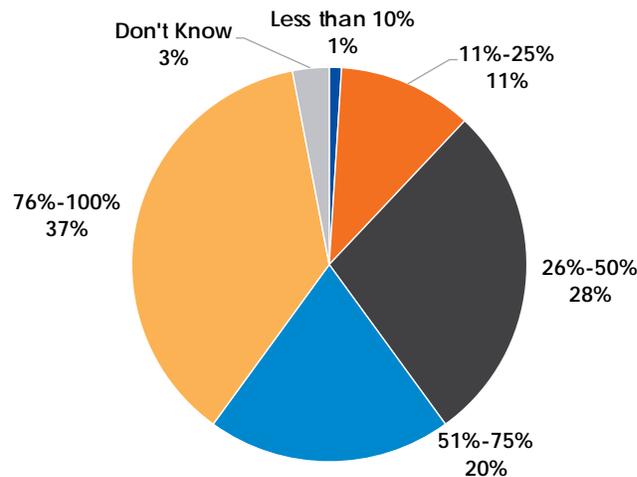
N = 100 IT decision makers and influencers in US companies with 501+ employees

Source: Platforms and Apps: The Future of MFP Solutions (Keypoint Intelligence, 2018)
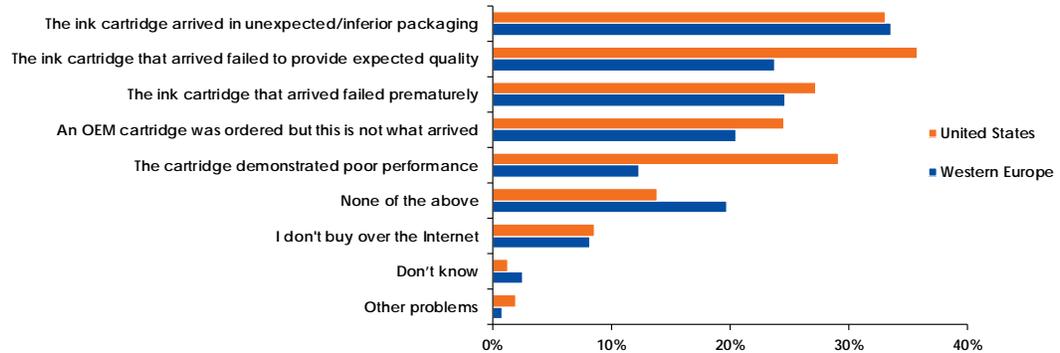
It will be interesting to see if print vendors come up with new technologies and methods for releasing print jobs and initiating scans, copies, and faxes that do not involve using the printer touchscreen in light of the COVID-19 pandemic. People are being very cautious about touching surfaces these days; as such, easy-to-use ways to operate the device without touching it (or touching it minimally) may be worthwhile.

Usability of Print Supplies

The concept of "usability" is often utilized to describe print devices as well as software and apps, including print- and document-related solutions. It can also be applied to print supplies like ink and toner. As examples, certain marking supplies may be easier to replace or refill than others, and certain ones may not be able to be used due to poor quality or mechanical defects. Regarding the second point, recent Keypoint Intelligence research revealed quality and usability issues associated with a good portion of ink cartridges over the Internet.

Figure 6: If you shop on the Internet, do you know if any of the issues or items below have become a problem?

The ink cartridge arrived in unexpected/inferior packaging
The ink cartridge that arrived failed to provide expected quality
The ink cartridge that arrived failed prematurely
An OEM cartridge was ordered but this is not what arrived
The cartridge demonstrated poor performance
None of the above
I don't buy over the Internet
Don't know
Other problems

■ United States
■ Western Europe

N = US: 151 IT decision makers/influencers in organizations with 250+ employees that purchase A4 inkjet devices
Western Europe: 122 IT decision makers/influencers in organizations with 250+ employees that purchase A4 inkjet devices

Source: Printing Trends in Enterprise, Keypoint Intelligence (2019)

Furthermore, supplies that are automatically shipped when needed also contribute to ease of use. In a recent Keypoint Intelligence survey of new at-home workers (due to the COVID-19 pandemic), 38% of US respondents who recently purchased a printing device said they set up an ink or toner auto-resupply plan, where new marking supplies are sent when levels in their printer are low.

Ease of Working, Printing, and Scanning from Home

Another facet of enterprise ease of use is how easy it is for workers within enterprises to work and print from home. Many office-based workers are now working from home, for safety reasons, as a result of the COVID-19 pandemic. In addition, many would prefer to keep working home even after the COVID-19 threat has passed. For instance, within the United States, about 57% would prefer to work from home at least some of the time.

Figure 7: How has your working from home experience been?

I would like to split my time between office and home in the future
28%

I would prefer to be at the office instead of at home
42%

I like working from home and hope to continue to do so full time even after it's safe to go back to the office
29%
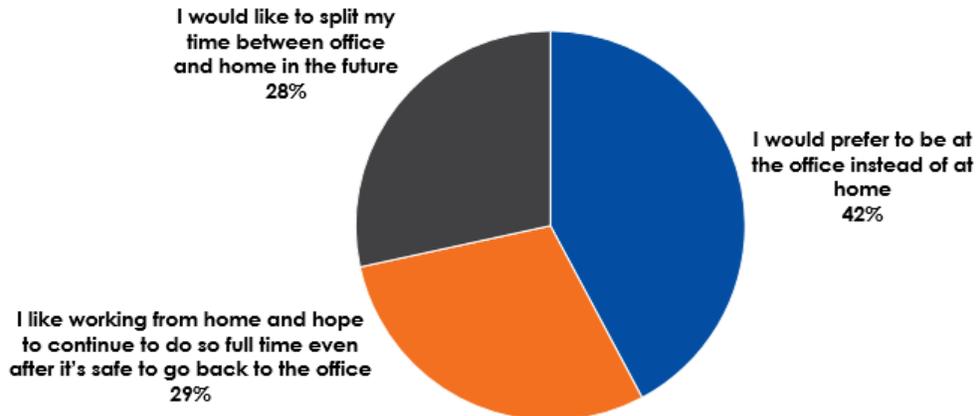
N = 289 new work-from-home employees in the United States

Source: The US Future Office Survey: Working from Home During COVID-19 (Keypoint Intelligence, 2020)

Given this reality, it is important that employees are properly equipped to work from home—including being able to easily print and scan when they want. This may mean using a new printer or MFP (possibly supplied by the company) or enrolling in an auto re-supply program where toner or ink is automatically shipped to the employee when levels are getting low. In addition, with new home workers saying the top business challenges associated with working from home is collaborating with colleagues (46% in the US) and accessing work files and materials (42% in the US), an opportunity exists for easy-to-use collaboration, conferencing, and file sharing tools.

Vendor Evaluation Methodology

For our enterprise ease of use evaluation, we assessed lab testing results for A3 multifunction laser copiers made by the leading document imaging OEMs from an ease of use perspective[1]. Over a period of two months, devices were tested in our lab in areas including reliability, image quality, productivity, and usability. Very thorough and time-intensive tests were conducted, and high standards and criteria must be met for devices to achieve high marks. For ease of use, the scoring is separated by typical functions (print, scan, and copy capabilities), management (job management, multitasking, and feedback), and user maintenance (loading media, misfeed removal, and consumables replacement). Everything is weighed and measured based on importance and performance. We also invited these OEMs to complete a questionnaire focused on enterprise ease of use; they also had the option of presenting additional information to our analysts on a conference call.

As for lab testing performance, we looked at the following ease of use categories:

- **Ease of Use for Print:** This includes typical features on the main screen, the clarity of feature labeling, the level of customization, the ease of programming jobs (including preset capability and simplicity), "green" features, secure print, USB print, direct print, and mobile printing.

- **Ease of Use for Scan:** This includes the ease of entering data, scan preview, blank-page removal, scan to USB, job build, and searchable PDF.

- **Ease of Use for Copy:** This includes the control panel design and menus, customization/shortcuts, job build, paper/toner status, help function, and proof copy.

- **Ease of Use for Job Management:** This includes the ability to see the time remaining until job completion, whether jobs can go to separate queues, the ability to move jobs, and the ability to modify jobs beyond quantity.

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[1] While this particular market insight evaluation did not include business inkjet products, we will consider testing, assessing, and incorporating these devices in the next version of this study—especially considering the extent to which our survey-takers consider business inkjet products user-friendly.

- ◆ **Ease of Use for Multitasking:** This includes the possibility of multiple destinations, interrupt auto-resumes, interrupted job runs while interrupt job is programmed, and adequate number of jobs stored in queue.

- ◆ **Ease of Use for Feedback:** This includes print job completion notification, print job deletion notification, paper status, toner status, audible and visual alerts, number of people who receive alerts, as well as custom alerts.

- ◆ **User Maintenance:** This includes ease of loading media, ease of removing misfeeds, and toner replacement.

Our vendor questionnaire covered the following areas:

- ◆ Importance of ease of use for product design

- ◆ Methods of ensuring products are easy to use, including staff focused on ease of use

- ◆ New features and capabilities to improve usability of enterprise-level devices

- ◆ Planned innovative features to improve ease of use for production

- ◆ Potential solutions to improve ease of use in a post-COVID world

- ◆ Methods to help customers adjust to working from multiple locations from an ease of use standpoint

- ◆ Preloaded apps/onboard tools

- ◆ Top apps (highest usage) that are not server-based

- ◆ How apps can be downloaded and portion that are free versus fee-based

- ◆ Device cloud connectivity

After gathering all the data, our analysts used a proprietary rating scale to calculate point totals in the key areas studied. Based on the scores, two OEMs—including Konica Minolta—earned BLI PaceSetter awards in Ease of Use: Enterprise Devices.

Overall Score Analysis

For our evaluation, we used a relative scoring model—scaling from the highest score achieved as well as weighting for segments that have more relative importance. In this case, we gave the highest weighting to in-house lab testing, which included typical functions (print, scan, and copy capabilities), management (job management, multitasking, and feedback), and user maintenance (loading media, misfeed removal, and consumables replacement). Everything is weighed and measured within each of these individual areas based on importance and performance. Each company's vision and approach were also scored based on their completion of our ease of use questionnaire and (in some cases) follow-up discussions around importance of product

design to ensure products are easy to use, upcoming innovations, post-COVID capabilities, as well as apps and onboard tools. The following profile outlines how Konica Minolta fared in vision and approach, technology and offerings, as well as performance.

Vendor Profile

Konica Minolta

As mentioned above, Konica Minolta earned a BLI PaceSetter award for enterprise ease of use. The company received stellar marks for vision and approach, typical functions, and user intervention.

Figure 8: Konica Minolta Ease of Use Enterprise Landscape Graphic

	Typical Functions	Job Management	User Intervention	Vision and Approach
Konica Minolta				

The darker the shade of blue, the higher the score in this study

Vision and Approach

Konica Minolta's emphasis on ease of use for product design and development is evidenced by its i-Series messaging: "Simple. Secure. Convenient." Users have come to expect intuitive operation with minimal touches as well as the ability to customize the control panel and tailor workflow based on their needs and preferences (e.g., they may prefer using a native MFP app, integrated solution, or print driver).

To optimize product design on its new i-Series, the company conducted UI usability testing with a design company located in London—aiming to ensure such goals as easy-to-see and intuitive icons as well as a unique UI design. Konica Minolta has also used customer feedback to implement various improvements, including simplified management settings and network setting changes, improved on-screen instructions, a better layout of buttons, and an improved user guide.

As part of its effort to enhance device ease of use, Konica Minolta kept the main functions that are frequently accessed by end users and designed the interface to have these settings easily available. In addition, features like copy shadow removal (frame erase), create a booklet (booklet making via copy made), and Memory Rx Box have wizard-style apps that users can always download from Konica Minolta´s MarketPlace. In their place is a card-like, streamlined interface with quick and easy access to the functions most commonly used. All settings related to a function (i.e., copy, scan, fax, and User Box) are on one screen. While the new control panel has really been designed from the ground up,

Konica Minolta still thought enough to include easy access to its legacy control panel for users most comfortable with using that.

Technology and Offerings

To enable a remote workforce, Konica Minolta offers several remote services and applications. For instance, the solution dokoni SYNC & SHARE combines hardware and solutions to let people work from home in a flexible, collaborative, efficient, user-friendly, and secure manner. The idea is they can access the content and tools they need to succeed—no matter where they are located. With Workplace Hub, an optimized, fully-managed VPN connection as well as multi-layered security best practices can be provided to help ensure business data is adequately protected.

Another way Konica Minolta aims to simplify work for users is through preloading certain apps onto its MFPs. These include the Announcement, Paper Templates Lite, and Simple Copy apps. And when additional apps are desired, they can be added directly from the Marketplace via the MFP touchscreen or the user's PC. About half of these are free, while the other half have a price. According to Konica Minolta, the most commonly used MFP apps are Scan to Google Drive, Scan to SharePoint, and Scan to OneDrive. Another app with ease of use benefits is the custom user interface design tool, which allows departments to create custom MFP user interfaces. In addition, the free and recently updated Assistance app provides easy online access to instructions on frequently performed operations—meaning users never have to leave the MFP for assistance. As for mobile apps, the bizhub Remote Panel app for iOS and Android lets users operate the control panel from their mobile device—which may be a simpler solution in certain situations.

Beyond apps and remote work capability, Konica Minolta offers vibration feedback in its i-Series control panel to further enhance the user experience. This feature immediately alerts the user that their keystrokes have been recognized. Also on the control panel, the expanded tilt panel range as well as panel adjustments available lets users easily see the panel—no matter their height or the room lighting. Features like the card-style user interface (providing all selections related to a function on one screen) and the quick copy screen (letting users see all main settings in once glance) also contribute to MFP ease of use through reducing the number of clicks and pop-ups needed.

Konica Minolta has various other plans for enhancing device ease of use. For instance, the upcoming Personalize Follow-You Persona technology allows individual users to personalize their MFP panel with the apps, tools, and tiles they use most to get work done. They can also personalize the language of the home screen and the home screen's background with a custom image. These panels are then tied to the users' authentication, allowing them to access their own personalized panels at any MFP. This solution comes with an

admin and user online portal for license/device/user management, reporting, advanced personalization, and capabilities.

The company is also launching MFP Tiles, a new technology introduced for iSeries devices. Designed to streamline the number of taps required at the MFP, they provide customers with direct access to important functionality right at the MFP home screen. Three tiles are currently available: The Dispatcher Phoenix Workflow Tile, the Dispatcher Phoenix Release2Me Tile, and the bizhub SECURE Notifier Tile.

Performance

In our testing, Konica Minolta saw above-average performance in quite a few areas of print ease of use—including typical features on main screen, level of customization, ease of programming jobs, secure print, and USB print. Konica Minolta's print driver supports the ability to customize an entire tab, and the simple creation of presets.

When it came to scanning, areas of strength included scan preview, scan to USB, and the process of entering addresses manually. Noteworthy with scan preview capabilities is the ability to see more than just one page, enlarge view, onscreen editing, page rotation, as well as the ability to pinch and enlarge. In addition to encrypted PDF, scan to USB supports the creation of folders and storage into subfolders. Konica Minolta also shined in the area of copying ease of use with a strong showing for control, including slide and swipe, smart-phone like navigation, a greater level of customization/shortcuts, a help function, and proof copy. Konica Minolta's devices also offer accurate status on toner remaining and paper at the control panel, web utility, and driver, and it is accurate at all three locations (which is not always the case on models tested from other OEMs).

Beyond print/copy/scan, Konica Minolta received high marks in a variety of job management, multitasking, and feedback categories. For example, compared to the competition, they scored well for print/copy in same queue, the ability to send files to multiple destination types, and print job completion notification. In the category of user maintenance, toner replacement with prompt, guidance on the display, and part number on the inside of the cover/door and cartridge were all rated as above average. In addition, clearly accessible misfeed removal areas as well as the level of guidance for misfeed removal were also areas of strength.

opinion

Opinion

Large companies across many regions are looking to improve the usability of their print environments with the knowledge that ease of use can save time, boost productivity, and ultimately enhance profitability. In the enterprise print space, ease of use can take many forms—including the ease of programming and managing jobs, using the device touchscreen, replacing supplies, and navigating compatible software.

As today's A3 MFP manufacturers continually build more workflow capabilities into these machines (including those tied to cloud services, mobile devices, and productivity software), they are also striving to regularly enhance the simplicity of using their devices—whether through newer models, frequent and seamless firmware updates on existing models, or better software tools. OEMs like Konica Minolta have proven to be leaders in the enterprise ease of use arena, serving as good models for other players aiming for greater user-friendliness.

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