| Wallpaper | Murals | Image Walls | Window Coverings | Wall Graphics | Decals | Ceilings |

WALL-TO-WALL OPPORTUNITY

Interior décor applications on the Colorado series printers

Colorado series printers

A WALL-TO-WALL OPPORTUNITY FOR WIDE FORMAT

After decades of being out of favor or overshadowed by designer paints, wallcoverings are reemerging as the darling of the interior design world. Wallpaper, murals, and other large-scale décor elements represent an exploding global market. One of the biggest drivers of this explosion is the transition to wide format digital printing—a transition that reflects not only technological innovation but also several intriguing new design trends.

- Projected growth of the digitally printed wallpaper market is 25% annually through 2023.[1]

- Revenue from digitally printed wallcoverings is expected to go from $2.53 billion to $7.74 billion in the next three years.[1]

The wallcoverings market is on a roll

DIGITAL TRANSFORMATION OF THE INDUSTRY

Unlike other industries, the wallcoverings industry was not immediately affected by the digital transformation of printing. For years, most designers and wallpaper manufacturers continued to treat this décor option as a mass-market item produced under well-known brand names using conventional analog printing methods and classic design parameters.

The advent of wide format digital technology promised to take the printing of wall décor in bold new directions, with an efficient end-to-end printing process that could accommodate custom orders and smaller press runs economically, as well as rising pressure for faster turnaround. But most existing 64" latex, eco-solvent, and UV systems (except the very high-end ones) couldn't fully address the market's unique design, precision, quality, and speed requirements—or meet the productivity needs of Print Service Providers (PSPs) wanting to compete in this exciting new space.

UNCOVERING THE TRENDS

Everything changed with the introduction of the Colorado 1640 printer with UVgel technology. And the Colorado 1650 builds on the innovative characteristics of UVgel with a new set of more flexible inks and FLXfinish technology. Now you have the choice of matte or gloss no matter what the media you choose.* This new technology delivers the productivity, quality, speed, versatility, and almost unlimited creative possibilities today's wallcoverings market demands.

*All wallcovering materials that have been tested on the Colorado 1650 perform on both the gloss and matte finish.

And the timing couldn't be better: digitally printed wallpaper is expected to explode into a $7.74 billion global market by 2023.[1]

UNCOVERING THE TRENDS

You can credit the dramatic resurgence of wallcoverings to everything from the recovery of the residential construction industry to the influence of social media. On the commercial side, impetus ranges from the advent of pop-up retail and the boom in office space construction to customizing hotel and restaurant interiors based on regional or local vistas.

Whatever the inspiration, there's a whole new generation of designers and DIYers out there who are looking for fresher, more affordable, and faster alternatives to traditional wallpaper. They are finding all that and more with wide format digitally printed wall décor. And they are incredibly excited by the creative options for consumers and business customers who want to customize their surroundings, boldly express their unique style or brand image, and turn ordinary spaces into works of art.

CUSTOMERS WANT "WOW"

When it comes to specialty interior décor products, modern customers want originality and a "wow factor" that's unique to their spaces. And they don't expect their creative vision to be limited by technology. Digital offers almost infinite creative possibilities for wallpaper, murals, and other large-scale décor elements.

- Unconventional patterns that pop
- High-resolution photographic images
- Supersized graphics and geometrics
- Abstract, non-repeating designs
- On-trend ombré effects

THEY WANT IT EVERYWHERE

They also want to apply these original style statements with creative abandon and without physical restrictions. Wide format digital printing makes almost anything possible almost anywhere, from homes to hotel lobbies, from posh restaurants to executive offices.

- Entire rooms covered with a single image
- Dramatic "feature walls"
- One-of-a-kind murals
- Dynamic die cut wall decals
- Enhanced window coverings
- Custom ceilings—the "fifth wall"

AND THEY WANT IT NOW!

The interior design world also demands a more customer-centric user experience, including making wallcoverings and décor elements faster and easier to acquire whenever the mood strikes. Customer expectations can be steep: incredibly short timelines, for example. Digitally printed wallcoverings are well suited to these market conditions. Short setup times and improved production speeds of the Colorado series make it ideal for everything from low-volume specialist production to high-volume runs for commercial clients with multiple venues.

1. *Digitally Printed Wallpaper Market by Substrate (Nonwoven, Vinyl, Paper, Others), by Print Technology (Inkjet, Electrophotography), by End-use Sector (Residential, Non-residential, Automotive & Transportation), and Region—Global Forecast to 2023*, MarketsandMarkets, June 2018.

A PROMISING NEW MARKET SPACE FOR PSPs

Traditional approaches don't cut it

Not all approaches to printing wallcoverings are in sync with these trends, however, or put PSPs in prime position to compete with (or join) the growing number of online graphics providers in this potentially profitable market space.

Continuing to use conventional approaches certainly presents a myriad of challenges.

- **Cost** is a key issue. High-end 3.2 m UV and latex digital presses capable of producing an exceptional level of quality are expensive to own and run. With wallpaper offset presses—in addition to a huge footprint and huge price tag—tooling is costly to produce and store and materials have a limited shelf life.

- **Labor investments** are considerable with analog approaches as well. Setup is time-consuming, and the entire production process requires constant hands-on management.

- **Color accuracy** and consistency are top concerns and can cause production headaches. With conventional processes and inks, colors can be difficult to match and repeat with precision.

- **Production time** makes analog processes economically unsuitable for niche projects such as custom wallcoverings. They require high-volume production with generous timelines to be practical and profitable.

- **Dimensional consistency** can be a problem. Heat-based evaporative technologies for curing and drying latex or eco-solvent inks can lead to media stretching or deforming; and inks containing water can cause media to swell.[2]

Printing wallcoverings and interior design elements with prevailing digital and inkjet technologies also forces PSPs to make other compromises—especially between quality and productivity.

THE BIGGEST COMPROMISE: QUALITY VS. PRODUCTIVITY

Décor applications are subjected to close scrutiny, so they demand precision image reproduction, smooth output with no banding, and excellent repeatable color in addition to color and geometric consistency across the printed image and from panel to panel. But with existing digital and inkjet technologies, using higher-quality print modes to achieve top-caliber output necessitates a dramatic slowdown in output speed.

Production speed can be a key limitation for prevailing digital technologies. With latex and eco-solvent inkjet systems, dot gain/coalescence limits the volume of ink that can be laid down at one time, requiring more passes to achieve the desired image quality. The only options are to slow down the process or sacrifice quality for higher output speeds. Neither choice is ideal for delivering what today's trend-conscious wallcoverings customers or the bottom line demand.

2. Gustavson, Denise M. "Canon U.S.A. Launches Colorado Printer Based on UVgel Technology." Printing Impressions. April 01, 2017. https://www.piworld.com/article/canon-u-s-a-launches-colorado-printer-based-on-uvgel-technology/.
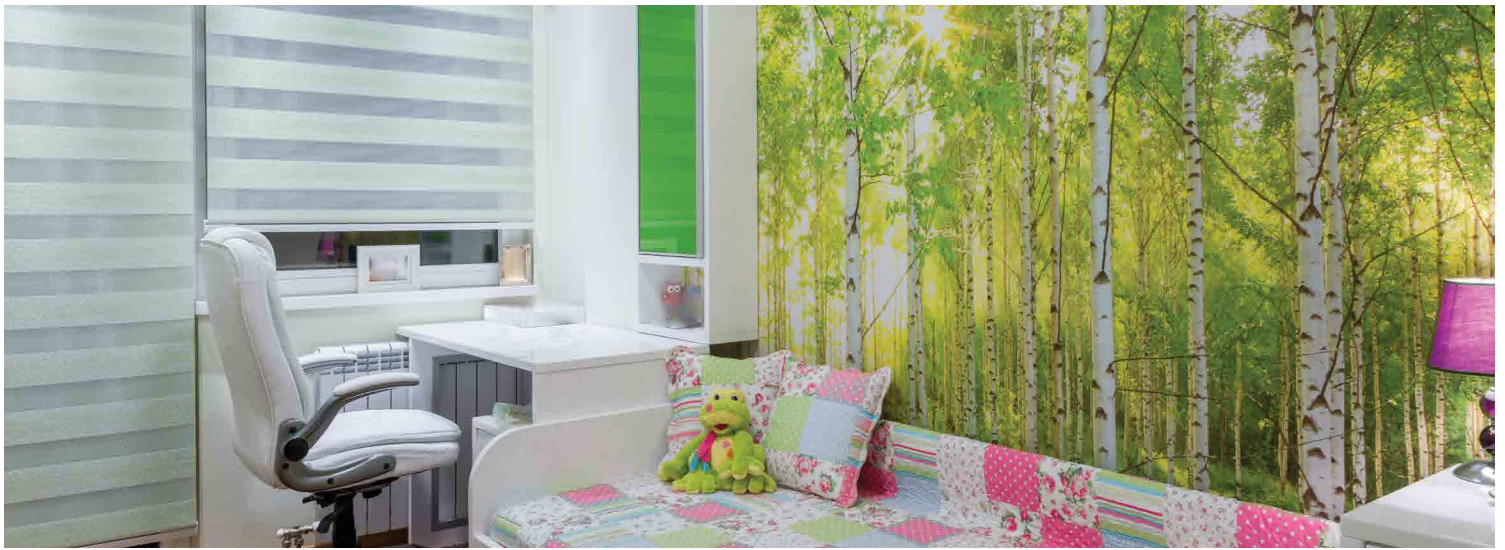
FOR CONVENTIONAL INKS, THE WRITING'S ON THE WALL

As with many applications, a lot of the technical problems encountered in the digital printing of wall décor can be traced directly to the pros and cons associated with current ink technologies. No single available option— latex, eco-solvent, or UV—checks off all the boxes.

Canon took this as a challenge and set out to develop a comprehensive, breakthrough solution that would retain the strengths of existing ink options, eliminate their limitations, and deliver something totally different. Canon UVgel technology is that solution.

BREAKING THE RULES: CANON UVgel TECHNOLOGY

Canon UVgel technology is a game-changing innovation that, in combination with Canon's 64" Colorado series roll-to-roll printers, creates a new paradigm for wide format:
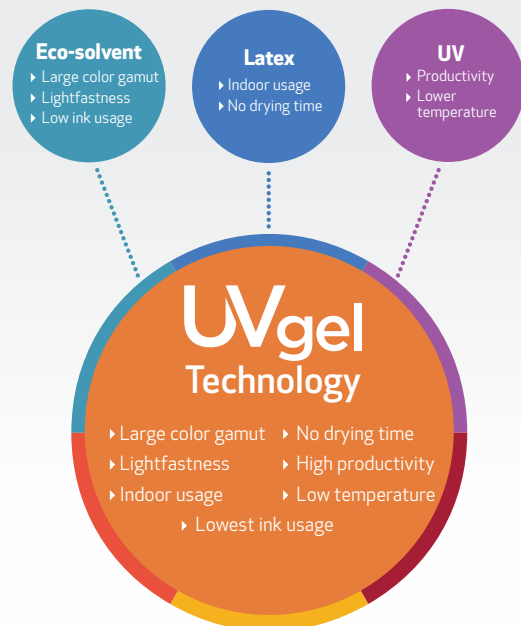
- **Industrial speed** and end-to-end productivity for the growing volume of fast turnaround jobs
- **High output quality** suitable for a wide applications spectrum, including demanding interior décor projects
- **Outstanding media versatility** so PSPs can produce multiple applications using a single device
- **Rapid return on initial capital** investment and low ongoing running costs

CATEGORY V, TYPE II CERTIFIED*		
CERTIFICATIONS	**Colorado 1640 printer**	**Colorado 1650 printer**
Type II Certification Roysons DreamScape 20 oz.	Yes	Yes
Type II Certification Neenah DigiScape II 17 pt.	Yes	Yes

What is Canon UVgel Technology?

Canon UVgel technology comprises several specially developed elements:

- Canon UVgel piezoelectric printhead (with automated nozzle compensation)
- Canon UVgel ink
- Low-heat media platen
- LED curing

When combined, these technical innovations work together seamlessly to address the compromises PSPs have to make when choosing between latex, eco-solvent, or conventional UV inks.

The Canon Colorado Type II certification gives us the Federal Wall Covering standard approval for ink and media for this application. This certification allows for printing without any need of UV coating or lamination for durability. Media and ink have to pass together to meet this standard.

THE TOTAL PACKAGE: COLORADO SERIES PRINTERS, POWERED BY CANON UVgel TECHNOLOGY

No compromises necessary

The world's fastest 64" roll-to-roll printer brings radical creativity to the booming wallcoverings market. It offers unprecedented productivity, quality, and cost-effective operation while exceeding the elevated expectations of today's interior design customers.

BREAKTHROUGH PRODUCTIVITY

Incredible usable print speed plus exceptional output quality means end-to-end productivity only previously possible using multiple roll-to-roll engines or a larger flatbed print engine. It's perfectly calibrated for today's short lead times, whether producing small batches, one-offs, or high-volume projects.

INDUSTRY-LEADING QUALITY AND CONSISTENCY

Effortlessly produces sharp, brilliant, consistent high-resolution prints with the widest color gamut and high repeatability. Low-temperature curing process means media doesn't stretch or deform (as in latex- or eco-solvent-based technologies), even with the longest panels.

NEVER SEEN BEFORE AUTOMATION

With two media rolls (and even types) online at the same time, plus automated change and feeding of media, operator involvement is limited, and production management is simplified. Meanwhile, on-the-fly maintenance technology helps facilitate unattended printing, reduce print waste, and provide consistent print quality and higher uptime.

MEDIA FLEXIBILITY AND APPLICATION RANGE

Designed for excellent interaction with a wide variety of substrates, woven and non-woven, vinyl, paper, PVC-free substrates, and self-adhesives. Helps enable production of multiple interior décor applications on a single device—from conventional wallpaper to one-of-a-kind murals, wall decals, window treatments, and more. And now, with the FLXFinish technology option on the Colorado 1650 printer, you can choose the finish for your job.

LOW COST OF OPERATION

The lowest operational costs in its class, including 40 percent reduction in ink and printing costs, on average, when compared to other 64" roll-to-roll technologies, plus labor costs savings of about 30 percent.

EXCEPTIONAL DURABILITY

Durability is critical for many wall décor applications, especially in demanding environments. Output is washable and scrubbable, abrasion resistant, and able to withstand strong light without fading. Not even alcohol, acetone, or glass cleaner can remove UVgel ink!

SAFETY AND SUSTAINABILITY

Regulatory requirements for wallcoverings cover everything from smell to VOC emissions, heavy metals, and washability. Canon UVgel technology delivers a large color gamut, similar to eco-solvent inks, but combines it with the environmental benefits and safety profile of latex inks. Odorless prints are certified for immediate indoor use, even in sensitive environments such as schools and healthcare facilities, under the UL GREENGUARD Gold Certification Program.

TURNKEY SOLUTION WITH FINISHING PRODUCTS

Since they are instantly dry and cured, prints with UVgel ink can be handled right away and are suitable for immediate post-processing, such as precision cutting—further helping to improve end-to-end productivity.

END-TO-END WORKFLOW SOLUTION

ONYX® Thrive™ software delivers a scalable print production solution based on Adobe® technologies. The result is true end-to-end PDF workflow, from digital file submission through color management, printing, and cutting. ONYX Thrive Production Manager browser-based user interface enables workflow control from anywhere, helping to optimize both operator and output device productivity.

A simple, yet radically different printing process

- Inside the printheads, UVgel ink is heated and turns from gel into liquid.

- The temperature-controlled platen maintains the substrate at a constant 82.4°F, regardless of environmental factors.

- On contact with the media, liquefied ink drops return immediately to a gel state and are instantly "pinned" to the media, assisted by a partial LED "precure" process.

- The solidified state of the pinned gel dot prevents coalescence (merging) between individual ink drops, delivering optimal control over dot gain and best-in-class color accuracy and consistency.

- Precise control of dot gain means more ink can be deposited in fewer passes, helping to improve speed.

- By eliminating the need for immediate curing, higher print speeds can be sustained throughout the entire process, helping to increase productivity.

- Full LED UV curing takes place after the image is completely formed and gelled on the media for a smooth surface. And, with virtually no heat used in the curing process, there is no opportunity for the media to be stretched or deformed.

- Prints are instantly dry, requiring no evaporative drying process.

Jeff Burris, CEO of Group Imaging

Wallpaper mural produced and installed by Group Imaging

SUCCESS BY DESIGN

Group Imaging Inc.

Want proof the Colorado 1640 printer and Canon UVgel technology can eliminate the need to compromise between quality and productivity? Just ask Jeff Burris, CEO of Group Imaging Inc. in Mesa, Arizona, a company focused on creating wide-format wallpaper, murals, and large-scale wall graphics for demanding children's environments in venues such as churches and youth camps nationwide. We did.

Q: JEFF, WHAT WAS KEEPING YOU UP AT NIGHT?

A: Finding the right equipment was challenging. Prior to our acquisition of our Colorado 1640 printer, we had to produce all of our wall graphics and wallpaper on latex printers. The wallcoverings we produced using these devices was inconsistent, and it did not match in quality, color accuracy, or geometric constancy from panel to panel. We had to do a lot of reprints, which incurred additional costs—waste in media, ink, and labor, both on site and at the installation site.

Q: WHAT DID YOU DO ABOUT IT?

A: We started to look around for a UV-curable printer to resolve this issue. The best and most affordable solution was the Colorado 1640 printer from Canon Solutions America. Now all of these prior issues such as color, print quality, and the geometric consistency have gone away—not to mention the added bonuses in productivity and automation that this product brings to the table. Now I can sleep well, very well. This printer has taken that knot out of my stomach!

Q: EXACTLY WHAT KIND OF BONUSES?

A: Let's start with production speed. It's two to three times faster. We're printing production—photo quality on wallpaper—at 430 ft.^{2}/hr., all day. And the media drawer makes it easy and painless to switch between jobs and manage my production. I love the fact that we can have two rolls of different media loaded at the same time. We are able to print a single job, simply cut off that print, and then be ready to send again using either of the two loaded rolls. This makes it very easy for rush prints in our shop between any two of the most popular media. I also am excited that changing any roll of media does not waste any media to speak of at all. Other printers have to be webbed up and have a lot of leader to waste, but not on the Colorado 1640 printer.

Q: WHAT ELSE IMPRESSES YOU?

A: Its durability. Children's environments can be challenging. With output off the Colorado 1640 printer, we no longer need to laminate. For example, I can take acetone, pour it onto the surface, and then wipe the marks off the unlaminated surface without damaging the image! We can't do that with other technologies in our shop. This is a huge advantage for us in both cost and production savings. I don't have to worry about damage from cleaning solvents. I know if customers get permanent marker on the wall, they can wipe it right off.

HEAR MORE FROM JEFF AND OTHER SUCCESS STORIES **WATCH VIDEO**

SEE IT TO BELIEVE IT

The World of Wallcovering Challenge

PREPARE TO BE "WOWED" TOO!

Canon's World of Wallcovering Challenge asked customers around the world to put the color matching capabilities, color consistency, and geometric alignment of the Colorado 1640 printer to the test when printing wallcoverings.

PSPs representing Japan, the U.K., Australia, the U.S., and Canada rose to the WOW Challenge. Each one was given a real-world digital file featuring a solid, saturated color background and a pattern of small logos and graphics that generally would be challenging to print precisely and accurately. Participants also received rolls of the same vinyl wallcovering material and simple instructions to ensure the color management settings were consistent.

Miles apart at each location, the images were printed with the supplied ONYX12 media profile in High Quality mode running at 430 sq. ft.²/hr. Each participant was asked to record the experience, sign their panels, and ship them back to the U.S. to be compared. When the five finished panels were revealed side-by-side during the 2018 Specialty Graphic Imaging Association (SGIA) Expo, the results were astounding. Hundreds of expo attendees examined the panels without being able to discern any differences in color quality or geometric consistency — an outcome that actually elicited exclamations of "Wow!"

HEAR FROM THE PRINTERS
WHO WOWED THE WORLD
WATCH VIDEO

Colorado 1640 printer

Colorado 1650 printer

PRINTING	Colorado 1640 printer	Colorado 1650 printer
Printing method	UVgel piezoelectric inkjet	UVgel piezoelectric inkjet
Printing modes	Banner High Speed mode: 1,710 ft.^{2}/hr. (159 m^2/hr.) Banner Production mode: 1,230 ft.^{2}/hr. (114 m^2/hr.) Production mode: 610 ft.^{2}/hr. (57 m^2/hr.) High Quality mode: 430 ft.^{2}/hr. (40 m^2/hr.) Specialty mode: 215 ft.^{2}/hr. (20 m^2/hr.)	Banner/Max speed mode: 1,710 ft.^{2}/hr. (159 m^2/hr.) Banner Production/High Speed mode: 1,230 ft.^{2}/hr. (114 m^2/hr.) Production mode: 610 ft.^{2}/hr. (57 m^2/hr.) High Quality mode: 430 ft.^{2}/hr. (40 m^2/hr.) Specialty mode: 215 ft.^{2}/hr. (20 m^2/hr.) Matte mode: Up to 495 ft.^{2}/hr. (46 m^2/hr.)[*]
Print resolution	Up to 1,800 dpi	Up to 1,800 dpi
Ink types	UVgel 356B ink, CMYK (1-liter bottles)	UVgel 460 ink, CMYK (1-liter bottles)
Ink color	CMYK	CMYK
Ink packaging	2 x 1-liter ink bottles; Ink reservoir can accommodate up to 2.5 liters per ink color	2 x 1-liter ink bottle; Ink reservoir can accommodate up to 2.5 liters per ink color
Printheads	UVgel 415 printheads (two per color)	UVgel 415 printheads (two per color)
Automatic maintenance	PAINT constantly monitors and compensates for nozzle failures that can occur, during printing; automatic maintenance performed in seconds, daily; refill ink while printing	PAINT constantly monitors and compensates for nozzle failures that can occur, during printing; automatic maintenance performed in seconds, daily; refill ink while printing
Curing	UV LED, instant dry, low temperature	UV LED with FLXfinish, instant dry, low temperature
MEDIA		
Roll width	Up to 64" (1,625 mm)	Up to 64" (1,625 mm)
Print margin	0.21" (5.3 mm)[**]	0.21" (5.3 mm)[**]
Roll weight	Up to 110 lb. (50 kg)	Up to 110 lb. (50 kg)
Roll diameter	Up to 8.7" (220 mm)	Up to 8.7" (220 mm)
Media thickness	Up to 0.03" (0.8 mm)	Up to 0.03" (0.8 mm)
Number of input rolls	2 rolls; Automatic roll feeding and switching	2 rolls in PSO mode (Print Side Out) / 1 roll in PSI mode (Print Side In); Automatic roll feeding and switching
Media take up system	Wound out, loosely or tightly[***]	Wound out, loosely or tightly
Colorado series printer media requirements	3" core, PSO Width: 11" to 64" / Outer Diameter: 8.5" Weight: 110 lb.	3" core, PSO, PSI Width: 11" to 64" / Outer Diameter: 8.5" Weight: 110 lb.
SOFTWARE		
Supported RIPs	ONYX® Thrive™ 12 or higher, Caldera, and API for third-party RIP vendors	ONYX® Thrive™ 19 or higher, Caldera, and API for third-party RIP vendors

[*]See Colorado 1650 printer brochure for additional matte mode speeds.
[**]Margin 0.43" when yellow markers are used (recommended for print modes up to 430 ft.^{2}/hr. for optimized output quality).
[***]Except when the second media requires tight winding, then operator interaction is required.

CANON SOLUTIONS AMERICA IMAGING SUPPLIES WALLCOVERINGS*	
DIGISTCKR	Neenah DigiScape Stick-R PVC free with PSA
TC1010/TC1013	Novelio Textured Spun Glass Covering
DSSUE20	DreamScape 20 oz Embossed Wall Vinyl
WCVCA	Wall vinyl 20 oz embossed canvas with ultra removable or permanent adhesive
WC2ST	Neenah DigiScape II Smooth or Textured PVC Free Type II Wall Covering
WP10T or S	Neenah EnviroScape Mural Wallpaper 10 pt, Textured or Smooth with prepasted back
WC6VYN	Wall vinyl 6 mil with removable adhesive
PHTX	Phototex repositionable fabric
SUPPORTED VENDOR PRODUCTS	
DreamScapes	dreamscapewalls.com
Mactac	mactac.com/canon
Neenah	neenahpaper.com/wide-format/decorative-graphics
Novelio	eu.adfors.com/brands/novelio/easypaint
DryTac	drytac.com
Korographics	korographics.com

*See the full range of supported media from all brands. https://csa.canon.com/internet/portal/us/csa/support/supplies/free-media-guides

WHY CANON SOLUTIONS AMERICA.

Canon Solutions America recommends forward-thinking strategies to help achieve the highest levels of information management efficiency for your unique business needs. Using superior technology and innovative services, we then design, implement, and track solutions that help improve information flow throughout your organization while considering the environment, helping to result in greater productivity and reduced costs.

There are many reasons why you should choose Canon Solutions America as your provider for document management solutions. Benefits include:

- A Canon U.S.A. Company
- Business Services
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- Certified Training and Support
- Flexible Finance Options
- Single-Source Solutions Provider

- Managed Document Services
- Nationwide Coverage
- Customized Industry Solutions
- Genuine Canon and Parts and Supplies
- Diverse Range of Input-to-Output Technology

But that's not all. As a company that is dedicated to your needs, we support our solutions with highly skilled professionals and advanced diagnostic systems to maintain peak performance. And with ongoing consultation, we can further your document management capabilities to help ensure the highest level of satisfaction and productivity.

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