

A close-up photograph of a young boy with a determined expression, wearing a blue racing helmet with three white stars and black goggles. He is gripping a black steering wheel with both hands. The background is blurred, showing other people in red clothing.

**Canon**

# THE POWER TO MOVE

YOUR JOURNEY TO GROWTH  
WITH PRODUCTION INKJET





# GROWING WITH PRODUCTION INKJET

**Commercial print is nothing if not resilient. In the last two decades, the sector has survived changed processes that have had a strong impact on print production and the use of printed media.**

The explosion of online communication channels, for example, threatened to replace print in key business-to-business and business-to-consumer markets. It didn't happen. While some products, such as directories, did succumb to the digital onslaught, over time print achieved a profitable and happy co-existence with digital media. In fact, research has shown that 65% of marketers incorporate print with digital advertising, and consumers spend 42% more time engaging with print compared to digital.

Since 2020, print has weathered another storm, as print service providers (PSPs) have come to terms with the ongoing consequences of the economic blow and digitisation push caused by the global pandemic. Some of the fallout – supply chain disruptions, materials and labour shortages, for example – remain apparent. But so too are the challenges posed by climate change and the consequent need for industries to reduce their negative impact on the environment.

All these developments have created 'new normals' that have forced PSPs to recalibrate their business expectations to accommodate futures they had not anticipated or had not expected to arrive so quickly. And all are powerful reminders of the importance of 'future-proofing' your business. So, what will your business look like in the future?

**It's time to start asking yourself these key questions:**

- **What will my customer needs and requirements be in future?**
- **What type of work will I be producing?**
- **What new applications could I be producing?**
- **How will customers place orders, and what will service levels look like as a result?**
- **What type of media and production methods will I be using to meet customer demands for improved sustainability?**



**This guide is designed to help commercial PSPs be future-ready, specifically by encouraging the transition from offset to digital technology. This is a logical progression, because all the evidence is that the future of commercial print lies in automated, on-demand manufacturing of value-added, high-margin, data-driven print products. In this guide, we explore why production inkjet is one of the best processes to realise this.**

To understand the logic of the progression, consider how print's co-existence with digital channels came about. It happened for two main reasons. The first was when marketers recognised print's power to stand out from digital media, cutting through the digital 'noise' that consumers were resisting. As a 'haptic' (relating to the perception of objects through touch) medium, print can enchant and surprise, engaging consumers at a deeper level than online channels alone. Print's appeal has been demonstrated in numerous studies in the relatively new discipline of neuromarketing, as has the authority print carries and the quality it conveys.

Another example is book publishing. Market development shows that readers continue to love printed books, but also expect the availability of e-books and audiobooks. Publishers are poised to power cross-media-publishing processes, where content moves seamlessly between print, e-books and audiobooks, while ensuring rapid availability for sales of all formats. In this context, the speed and the achievable automation level of digital book production and print-on-demand processes gain in importance for book publishers to optimise and future-proof their print supply chains. Of course, print's haptic advantages also apply to print produced using offset technology. But without the scope to handle variable data, print's value as a marketing channel is severely limited. Today's marketing campaigns are fuelled by the personal data brands' hold on their customers, and marketers are choosing channels that allow personalised communications. Over time, they have learned how to incorporate print into campaigns at the 'touchpoints' where it is likely to have the most impact. A typical example is sending high-quality direct mail to online shoppers, reminding them of items left unpurchased in their 'baskets'. Production of the mailshot is triggered automatically – a concept Canon calls 'Programmatic Print'.

Growing evidence supports the case for production inkjet. Automated manufacturing using inkjet presses is already firmly established in transactional, direct mail and book printing, and is well on the way in online-only print environments, providing proven examples for commercial PSPs to follow as they plan their own transition.

For further evidence of inkjet's growing adoption, consider these statistics from the Smithers 'The Future of Inkjet Printing to 2027' report, authored by respected digital authority Sean Smyth. The report anticipates that, by 2027, the global inkjet market will be worth \$128.9 billion – a compound annual growth rate (CAGR) of 8.2% since 2022. As for the volume of inkjet prints, this will rise to 1.7 trillion A4 print equivalents in 2027 – equivalent to a CAGR of 10%.

In this guide, we expand on the reasons why transitioning from offset to production inkjet is a strong strategy to future-proof your business. In succeeding chapters we explore the key drivers of change and how they define the structure of print businesses; convey the key steps to incorporating print into a digitised workflow; explain the principal stages of an automated workflow and delve into why it's important to integrate your production with the workflows your customers use to print 'smart' products; and describe, step by step, how, with the right partners, you can integrate inkjet into your business to achieve a more sustainable and future-proofed business.

## GROWING INKJET ADAPTATION

Global inkjet  
market worth

**\$128.9**  
billion in 2027

8.2%  
CAGR



**\$86.8**  
billion in 2022

Inkjet print volumes  
(A4 print equivalents)

**1.7**  
trillion in 2027

10%  
CAGR



**1.0**  
trillion in 2022

Source: The Future of Inkjet Printing to 2027, Smithers



# CHAMPIONS OF CHALLENGES AND CHANGE

## THE DRIVERS THAT MAKE FUTURE-PROOFING IMPORTANT

**Certain challenges are simply facts of life for PSPs serving the commercial print sector. You need to handle a wide variety of work, from a diverse spread of customers, in a range of run-lengths, and usually to ever-shorter deadlines. Producing for the right price is also important in a competitive sector that's not known for customer loyalty.**

Two significant factors that will challenge the printing industry in years to come, are high materials prices and labour shortages. These are especially important to the future-proofing process. Both impact positively on the prospects for digital production and, as you will see, on the choice of production inkjet.

When demand slowed in 2020 as a result of the pandemic, materials manufacturing plants – paper plants especially – cut production. As business activity resumed, this reduced capacity and the rising cost of pulp and energy caused prices to rise, which in turn placed a premium on using print wisely.

A scarcity of labour, skilled and otherwise, is putting further upward pressure on PSPs' input costs. Implementing digital print and finishing workflows can help with labour cost management, because they can reduce manual processes and human touchpoints, as well as make the automation of end-to-end workflows, from order entry to finished product, much more straightforward compared to analogue offset production.

Taking all these drivers into account, we need to start imagining how commercial print businesses will look in five years' time. So what will have changed? Or rather, what will have to change?

All the evidence points to the future-proofed business being, firstly, digital and, secondly, automated. The vast majority of commercial PSPs already run some form of digital printing alongside their offset presses, most likely a toner-based print engine. But, as the next chapter shows, there is growing interest and investment in production inkjet.

Automating production, meanwhile, is critical to printing efficiently and staying competitive, especially in the face of the upward price pressures we have discussed.

**Marco Boer, Vice President at IT Strategies, sums this up well: "One can't reduce the cost of paper, nor ink and plates; the most impactful way to reduce cost and increase profit is to automate and reduce labour requirements."**

We explore the benefits of automated workflows in more detail later in the guide.

At this point it's important to understand that future-proofing your business does not mean abandoning offset production, or replacing toner digital presses with inkjet machines. All three have an important role to play in a future-proofed printing business.



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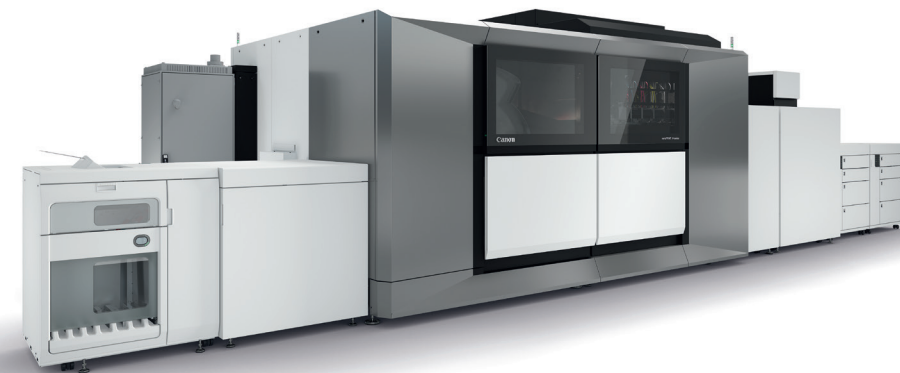


Offset is still part of the picture; it's still the dominant print production technology in volume terms, and is known for its capability to produce high-quality print in long runs.

However, offset presses cannot handle variable data, and in many cases the production process, including finishing, is slower than digital workflows, especially on shorter print runs.

Toner digital production also has an assured future. The process is well established, understood by PSPs, and delivers high-quality print on a wide range of media. The automation infrastructure upstream and downstream of toner engines is also well established and proven, from online web portals for print ordering to automated in-line finishing hardware. And there is also the important fact that the cost of investing in a toner production press is more manageable for small and medium-sized PSPs.

Dependent on the volume and profile of work undertaken multiple toner presses could be the optimal solution providing many of the benefits associated with offset but with additional variable data and print on demand strengths of digital printing. Production inkjet technology is able to fill the gap between digital toner and offset, while opening up new opportunities for offset printers to tap into variable data printing for personalisation and mass customisation. So let's turn our attention to production inkjet now.



Canon varioPRINT iX3200 sheetfed inkjet digital press



**Printmedien Ennetsee AG is an independent, family owned, general commercial printer. Established in 1991 it is based in the Ennetsee region of the Swiss Canton of Zug.**

#### **Applications**

High quality business stationery, mailings, promotional literature, posters and related creative services.

#### **Objective**

To future-proof the business with a focus on versatility and increased efficiency delivering improved competitiveness and enabling more work to be produced in-house.

#### **Challenges to solve**

- Meeting growing customer demand for faster turnaround of shorter run-lengths whilst maintaining profit margins
- Cost effectively produce output meeting quality as high as offset

#### **Inkjet solution chosen**

Canon varioPRINT iX3200 sheetfed inkjet digital press with SDD booklet finisher

#### **Inkjet benefits**

- Ability to profitably manage smaller, more diverse jobs with personalisation and enhanced customer service levels
- Increased production capacity and streamlined workflows
- Reduced turnaround times

**“ With the varioPRINT iX3200, we have a more modern production process. We are more productive and can adapt to the market more quickly. ”**

Roman Nussbaumer,  
CEO





# THERE'S GREATNESS IN INTEGRATION

## MAXIMISING OPPORTUNITIES WITH INKJET

**So far we have briefly illustrated why production inkjet is critical to the future of commercial print, and so to your business. We have shown why print must combine the production speed and volume production of offset, with digital's flexibility and ability to integrate seamlessly with other digital media.**

The following chapters describe the key steps necessary to achieve this, with the emphasis on, first, integrating inkjet into your existing business, and then integrating your business itself with the wider digital 'ecosystem' occupied by your customers.

But let's start by examining how inkjet has a positive impact on the part of the business most important to successful future-proofing – your profitability.

**The opportunities inkjet provides to maximise profits fall into three broad categories, all of which impact each other:**

- **Overall improvements in efficiency and productivity from a digitised workflow.**
- **How these improvements enable automated production and business processes.**
- **How inkjet opens up new applications, new markets and new customers, and helps you to shift your relationship with customers from commercial to consultative.**

### The advantages of a digitised workflow

Streamlining your production also aligns your business with what your customers want – efficient online ordering of shorter runs with fast delivery times and more targeted and personalised print content.

Looking to the future, the print industry will rely more and more on online specifications, with online ordering of print becoming the standard. Production will be characterised by shorter run-lengths, smaller order placements and more targeted print, with customers expecting quicker turnaround and access to job status reports in real-time. To meet these market demands, PSPs will need workflows that are flexible, agile and automated, featuring management tools that can allocate an increasing number of print jobs to the most appropriate production process – digital toner, inkjet or offset, and the associated finishing.

### A wider variety extends your reach

In a sense, what you print, and in what volumes, is down to the data your customers hold on their customers. In some cases, the print will be uniquely targeted at one individual, while other jobs will be in the hundreds or thousands. Targeted print takes many forms, but your aim is to reach as many of these applications as possible to widen your offering – and production inkjet is just the right technology to give PSPs this capability.





### New applications, new horizons

Because production inkjet is seeing intensive R&D investment in improved printheads, new inks and a steadily expanding range of media options, the future is anything but stagnant – unlike some traditional print processes, this one is truly revolutionary rather than evolutionary.

As a result, there is no sector where inkjet either is not poised to make an impact or has not already disrupted the status quo. Book production and direct mail are two markets that have already tried, tested and are using different workflow solutions and business models, which are also making their way into the online printing sector. As a result, the lessons learned in these sectors are now being applied to other products.

The education market, for example, is fertile ground for dynamic publishing, as concepts such as personalised learning gain ground. Thanks to digital learning apps and tools, more and more data is collected about a student's strengths, needs, skills and interests.

This allows education providers to continuously develop individual learning plans tailored to each individual student. Thanks to digital printing workflows and their capability to deliver personalised content on demand, the what, when and how of printed learning material can now be tailored to meet each individual's needs.

These are just some of the opportunities that are out there to maximise profits with production inkjet integrated into an automated digitised workflow. How you integrate inkjet into your business is the subject of the next chapter.



## CASE STUDY: OTAVA

**Otava is a Helsinki-based book printing subsidiary of major Finnish media house Otava Group. Otava Group covers the whole value chain, incorporating publishing, printing and bookshops.**

### Applications

Produces over 1,000 new titles a year for Otava Publishing and for third-party publishers. Products include soft and hardcover, fiction and non-fiction, and educational materials.

### Objective

To automate upstream order and prepress processes for more efficient book production and improved book life cycle management.

### Challenges to solve

- Overcome offset's inefficiencies on short-run printing.
- Information transfer was dependent on manual interventions.
- Manual order and prepress workflow was prone to errors.

### Inkjet solution chosen

Canon ColorStream and ProStream web-fed inkjet presses, supported by PRISMA software.

### Inkjet benefits

- Digital and offset applications linked for streamlined production.
- Production integrated with a book lifecycle management solution that uses real-time data to trigger reprints when stock is low.
- Print on the same stocks using offset and digital inkjet.
- Handling more jobs error-free and more efficiently with the same number of staff.

**“Not only have we been able to increase the number of jobs produced annually from 2,000 to 3,000 with the same number of staff, but we've even been able to free up the time of some staff to work on other tasks.”**

Marko Silventoinen,  
Managing Director, Otava



# OPTIMISATION AND OPTIMISM

## INTEGRATING INKJET INTO YOUR WORKFLOW

### 'Workflow' in production inkjet

If you have a toner digital press, then you may have elements of a digital workflow in place, but in many cases feeding the faster, more-productive inkjet press requires workflows of another level, up to handling a large volume of single print jobs efficiently.

No two workflows are exactly alike, of course; each has its unique characteristics, based on factors such as production equipment, applications and personnel. Hardware and software suppliers recognise the many possible permutations of backgrounds and skill-set levels that PSPs bring to their inkjet experience, and have developed formal, step-by-step approaches to workflow implementation.

### Common workflow steps

Regardless of where you're transitioning from, the production inkjet workflow must accommodate six basic process steps. These are:



**Cost estimation and price quoting:** An agile, fast and simplified quoting process is key to winning orders from customers who increasingly want their jobs delivered as quickly as possible. Real-time pricing and end-to-end estimation that maps out all possible alternative routes for a job through the factory are crucial to a PSPs competitive edge.



**Prepress tools:** This step optimises files for best performance and quality. Colour management marries input and output profiles with media linearisation for best output quality. Other prepress steps include preflighting, proofing, approvals, file integrity checks, colour correction and imposition.



**Post-processing:** Post-press solutions play a key role in automating the production workflow and making optimal use of the digital press. Eliminating single finishing steps with in-line or nearline finishing solutions is one of the great benefits of automating the digital production workflow.



**Data input:** The handling of incoming files from different data streams, including web portals, FTP servers, ERP systems and emails, and the submission of files to the MIS and prepress software, needs to be automated. At a certain stage in this process, batching or grouping jobs with similar attributes reduces manual interventions and enables efficient production of short runs.



**Output management:** This can be straightforward, or complicated, depending on how many output devices and technologies need to be managed. In larger operations, it can involve driving all production devices from a single point of control for load balancing, error recovery, reprints, printer adjustments, job scheduling and colour management, across printer platforms and multiple print locations.



**Production tracking:** The more automated and 'hands-off' the workflow, the more important tracking jobs is as they pass through the factory. Production tracking monitors ongoing production in terms of completeness, accuracy and status. On the one hand, tracking can identify defective products and divert them out of the production workflow, as well as to determine missing documents and trigger reprints automatically. On the other hand, it supports real-time monitoring and communication of the status quo of a print job.



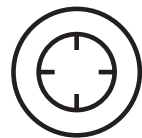
## The implementation plan

So how do you introduce change successfully? The answer is, by executing a thorough implementation plan that defines what you need to do and when, and where issues are likely to arise.

**Expect your inkjet press supplier to work with you to prepare and action the plan, which typically covers the following stages:**



**Assessment and needs analysis:** Start with a thorough investigation of the current workflow – all the data touchpoints between all the departments – to understand who does what and how they impact product and service quality. Then do the same for the future workflow, to identify any support or additional solutions needed.



**Tailored support solutions:** Besides optimising the production of existing print jobs, a key benefit of investing in inkjet is to expand into new applications and services. Along with this possibility, investments might also be made in other software or hardware systems such as finishing equipment.



**Implementation and training:** Key team members need proper training to ensure they understand what the new workflow processes and product offerings are and their roles. A formal 'Plan of Approach' will establish guidelines, task ownership, acceptance criteria and milestones during the installation, to measure progress and ensure expectations are met.



**Integration services:** Here you identify the software tools necessary to optimise the new print platforms with your core business systems, including prepress, back-office platforms, host data streams, and legacy data and print streams. Some tools you already have, others you need to acquire.



**Project management:** Before making any new products available, you need to be confident the system functions are designed and your team is competent in the delivery. Your project manager will help you set schedules, co-ordinate resources, identify and troubleshoot potential roadblocks, and maintain the installation schedule.



**Post-installation support:** Key components of support include regular system performance reviews, plus on-site specialist training to help you build on your existing skills in colour management, workflow and business processes, and understand how to adapt them for the new world of production inkjet.



# PRINT SMARTER NOT HARDER

## PLANNING FOR A DYNAMIC FUTURE

We have seen how integrating production inkjet into your internal workflow creates a seamless, start-to-finish automated process. But to grow your business with inkjet, think about extending the seamless concept beyond your factory threshold, by integrating your production with the 'workflows' your customers use to manage their businesses. Linking with this wider digital infrastructure enables 'smart' print products that exploit new levels of data-driven print supply chain management and personalisation, strengthening print's place in the multi-channel communications world. When you 'print smart', content never sleeps.

The opportunities that this opens up for print, become clearer when you understand the components in your customers' wider digital infrastructure. In the integrated environment that we are describing, print orders are automatically initiated by the client's Enterprise Resource Planning (ERP) software, which manages a host of day-to-day business activities including accounting, procurement, project management and supply chain co-ordination.

A classic scenario that shows how ERP integration optimises the print supply chain management is on-demand manual printing. For example, when a car manufacturer's ERP logs a new order, the system automatically initiates orders for parts with different suppliers, including the PSP that prints the manuals. In this instance, bidirectional communication between the PSPs frontend and the ERP system is critical, so that the latter receives real-time confirmations and status messages.

### **Back-office and front-office automation**

In the scenario just described, the ERP performs a back-office function, but you can go further and integrate your production workflow with clients' front-office processes – the revenue-generating, customer-facing activities of the business. As consumers interact digitally with businesses at each 'touchpoint' they share data that drives the personalised marketing campaigns, including targeted print.

### **Important front-office components and their functions are as follows:**

#### **Customer Relations Management (CRM):**

Gartner defines CRM as "a business strategy that optimises revenue and profitability while promoting customer satisfaction and loyalty. CRM technologies enable strategy, and identify and manage customer relationships. CRM software provides functionality to companies in four segments: sales, marketing, customer service and digital commerce."

**Customer Data Platform (CDP):** The role of the CDP software is to take customer data – personal attributes, browsing history, previous transactions – and create a unified, centralised database of customer profiles for other marketing systems to access.

#### **Marketing Automation Platform (MAP):**

The MAP enriches each customer's profile with information based on their behaviour, and sets up automated campaign processes to generate individual, targeted communications. This helps to increase the number of potential, qualified new customers. The MAP has an arsenal of communications channels, including print. In the latter, print files can be created automatically and transmitted to the PSP, in much the same way as the car manual application described – a process that Canon calls 'Programmatic Print'.



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## Print goes programmatic

Marketers have rediscovered their enthusiasm for print's unique tactile, 'haptic' qualities. Despite this, there are still some misconceptions that it takes a long time to print and distribute a printed product. Marketers worry that this might lose the momentum that brought the consumer to the digital channel in the first place. But what if direct marketing campaigns could combine 'pixels and print' in real-time, or as close to real-time as possible?

Programmatic Print does this by adopting the 'programmatic' approach (something that happens or is done according to plan or using a particular method). It is based on the concept of 'Programmatic Advertising', which is well established in online media buying. This automates the process and transactions involved in purchasing, and dynamically places targeted advertisements on websites and within apps in less than a second. This allows a brand to deliver a specific message to the right person, at the right time and in the right context.

Programmatic Print uses the same approach by integrating personalised print into automated customer journeys within the Marketing Automation Platform. This allows marketers to automatically trigger, create, print and distribute personalised printed communications within, at most, 48 hours, and often within 24 hours. With Programmatic Print in a campaign, instead of the usual email, video or popup, a consumer's behaviour at a particular touchpoint triggers a targeted piece of high-quality print – mailshots, brochures, catalogues, 'magalogues', customer magazines, brand books, customer newsletters, and so on.



Alex Joos,  
Owner, Group Joos, Belgium

**Group Joos is a family-owned business based in Turnhout, Belgium. It evolved from offset document production into a full-service PSP providing print to fulfilment.**

### Applications

Direct mail and marketing, security print, logistic print, business forms and labels.

### Objective

To implement a complete end-to-end solution providing greater flexibility to offer brand marketing customers one-to-one communication on demand.

### Challenges to solve

- Achieve cost-effective personalisation and versioning for small-scale jobs.
- Transition to the right technology to meet customers' need for fast-turnaround, high-quality, personalised print-on-demand.
- Retain the high print quality and media flexibility of offset and toner technology.

### Inkjet solution chosen

Two Canon ColorStream and one ProStream web-fed inkjet systems, driven by PRISMA.

### Inkjet benefits

- Produce customers' one-to-one marketing without compromising on quality and substrate flexibility.
- Seamless end-to-end workflow for efficient short-run production – down to runs as low as a single copy.
- Improved timeline management for marketing clients due to industrial-scale productivity and outstanding uptime.

“ It's not just about using different data to personalise communications; it's also about using different images and graphics to maximise impact and engagement. The ProStream gives us the flexibility to print an extensive range of different applications. Whereas the previous quality of digital inkjet technology would have allowed for certain applications, today there's no issue with the quality, across an even broader range of stocks. ”

Alex Joos  
Owner, Group Joos



# EXCEPTIONAL QUALITY WITH NO LIMITS

## A KEY FACTOR FOR FUTURE-PROOFING

When digital printing first appeared in the mid-1990s, the quality was often described as 'good enough colour', implying that digital printing was OK for certain jobs but not for the really high-quality work.

However, the superb quality now possible with inkjet matches and in some applications even surpasses offset, and is the result of many innovations. As commentator Sean Smyth observed, "The investment in inkjet heads, print engines and inks dwarfs that of other processes." There are too many to cover in detail here, so we will concentrate on advances in the areas that have the greatest impact on quality: colour reproduction, papers and inks.

### Colour reproduction and consistency

Independent certification of your press and your workflow is important if you're selling inkjet to customers used to offset. The not-for-profit independent organisation Fogra is the acknowledged authority, and Fogra certification is an important tool in giving customers total confidence in the consistency, predictability and quality of digital output – from the very first to the very last print. The Canon varioPRINT iX-series, ColorStream series and ProStream series have all received the Fogra PSD PrintCheck certification, proof that the engines meet the highest levels of colour fidelity, consistency, uniformity, print resolution, detail sharpness and print stability.

In addition, the ProStream was the world's first digital production printer with the FOGRA59/eciCMYK v2 exchange colour space, which enables a consistent colour appearance along all production steps. The wide colour gamut of the ProStream generates the opportunity to use the large process colour gamut for spot colour reproduction, extending PANTONE® colour coverage to 93% with only four process colours (2182 of the 2334 PANTONE® colours) – something that in the past was achievable only with a multi-colour press.





## Paper and inks

You have seen how the expanding range of inkjet-compatible substrates is opening new opportunities for eye-catching, high-impact print. To make the most of these opportunities, you need to appreciate how certain characteristics of high-speed production inkjet imaging place a premium on the relationship between papers and inks, and explain why this area is the subject of considerable R&D investment. Paper, after all, is the foundation of everything and the canvas on which the designer works.

Thanks to the latest advances in inkjet technologies, PSPs can now handle more varied paper types. So for those operating a hybrid environment with both offset and inkjet, they can use offset-coated papers on both presses, meaning it's easier for them to integrate inkjet into their existing production set-up and to transfer more jobs over to inkjet.

### Today's inkjet solutions can handle the following four paper types:



**Uncoated papers** are more absorbent, allowing ink to penetrate the surface. Images are duller, and colour gamut more narrow, suiting them to applications such as transactional documents and documents conveying a more natural look and feel.



**Inkjet-treated papers** are specially formulated for aqueous ink. Surface treatments contain fixatives to separate colourants from the carrier, enabling more colourant to stay near the paper surface, while allowing carrier to migrate into the body of the paper and evaporate.



**Inkjet-coated paper** is available in a variety of surface finishes that can be very shiny (high gloss) or have a low shine (matt). They incorporate a coating chemistry designed for the fast drying of aqueous inks, and have a superfast drying surface that results in a broader colour gamut than either uncoated or inkjet-treated papers.



**Offset-coated papers** do not contain any of the special chemistry needed to help inkjet colourant stay on the surface or to dry quickly. In fact, many offset-grade papers are manufactured to repel water – which doesn't make for a very friendly surface for aqueous inkjet.

Inkjet press manufacturers are working closely with paper manufacturers to bring a wider range within reach of inkjet, and taking a variety of approaches. Canon's ColorGrip priming fluid used in both the web-fed (ProStream) and sheetfed (varioPRINT iX-series) presses, for example, enables high-quality output on non-inkjet-treated papers, making uncoated and offset-coated stocks suitable for applications such as direct mail, books, manuals and educational publications.



Canon ProStream 2000 series



**Sergio Nobile,**  
CEO, Edubook, Switzerland

**Edubook is an industrial digital print service provider focused on the fast, cost-effective and personalised, on-demand production of a range of printed products.**

### Applications

Catalogues, books, brochures, price lists, instruction manuals and binder content.

### Objective

To provide a cost-effective and sustainable solution for the increased demand for single-copy and short print runs, as well as higher media flexibility and print quality.

### Challenges to solve

- Cost-effective production of printed products in short runs, even down to a single copy.
- Integrating all solutions within an automated workflow.
- Managing an increasing number of orders of shorter print runs.
- Achieving print quality and media flexibility as good as offset and toner printing.

### Inkjet solution chosen

A varioPRINT iX3200 alongside a C.P. Bourg book binder and a ColorStream 6900 Chroma integrated with a Tecna Libra 800.

### Inkjet benefits

- Increased production capacity.
- Sustainable production of printed products from single-copy runs.
- Expansion of the paper range to include offset-coated materials.
- Increased print quality.
- 75-80% of print jobs run fully automated, from receipt of data to delivery.

**“We have integrated all our printers and finishing equipment into a company-wide workflow. Our staff can see on a dashboard what stage an order is at or what capacities still exist, achieving a level of automation of around 75-80% for our company.”**

Sergio Nobile, CEO, Edubook



# A SUSTAINABLE FUTURE

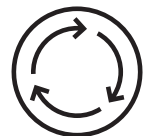
## STEPS TOWARDS A MORE ENVIRONMENTALLY FRIENDLY PRINT BUSINESS

As we all know, living more sustainably and operating a more environmentally responsible business are both a key focus as we look to the future. The pressures on resources we described earlier in this guide have only sharpened the focus on sustainable production.

**In fact, in a recent survey, consumers' top six most important environmentally sustainable or ethical practices are:**



**Producing products that are durable and repairable**



**Reducing carbon footprint**



**Producing sustainable packaging and products**



**Reducing waste in manufacturing processes**



**Respect for human rights**



**Committing to ethical working practices**

**Whether toner or inkjet-based, digital printing is vital to future-proofing your business, because digital printing is inherently a more sustainable choice, for four key reasons:**

- It uses no printing plates or chemicals.
- On-demand production of shorter runs mean you print only what's needed, saving materials and inventory, and minimising the risk of overproduction and avoiding obsolescent content.
- Targeted content using models such as Programmatic Print makes marketing budgets go further. A hyper-targeted, data-led campaign can help to increase the relevance of your messaging to achieve the best ROI, while minimising the environmental impact, by sending out fewer, more targeted and effective messages.
- And last but by no means least, digital printing enables the development of highly automated end-to-end workflows – reducing manual interventions, errors and waste.

Consistent with our Kyosei philosophy, Canon's strategy is to enhance these inherent sustainability advantages with a variety of unique features across our range of sheet and web-fed inkjet technologies.

We've introduced technologies which enable our customers to develop and implement sustainable business models for their clients (print buyers). In the case of commercial printing, Canon designed a range of production inkjet presses that PSPs can confidently integrate sustainably in their customer services and production processes.

Our sustainability efforts start at the development stage, where the objective is to create cutting-edge, energy-efficient products that exceed customers' needs, and use a greater amount of sustainable and/or recycled materials.





Beyond design, we employ energy-efficient manufacturing processes and eliminate hazardous substances from our products wherever possible.

The result is a range of production inkjet presses on which PSPs can confidently build the sustainable workflows expected by print purchasers today and tomorrow.

**The most important features include:**



**Inkjet technology that's built to last**

The industrial-scale design of Canon inkjet presses means PSPs benefit from 24/7 operation with minimum downtime. Preventive maintenance solutions maximise uptime and productivity, and to further extend the economic life of our presses we pursue a policy of refurbishing machines as much as possible, either locally or at our Canon Production Printing hubs in Venlo (the Netherlands) and Poing (Germany).



**Long-lasting print-head technology**

The piezo drop-on-demand print heads in Canon presses have a life of thousands of hours and so need to be replaced only rarely. Routine maintenance is minimised too, because our Canon-developed inks are specifically designed to work with the Kyocera print-head technology.



**Upgradability and system lifetime**

A key design principle is our commitment to enabling customers to upgrade, to take advantage of added features and increased speeds within a press series. This is why many Canon web-fed presses are in the market for over ten years.



**Spotless ink credentials**

We develop and manufacture production printing inkjet inks for our narrow-format printers in Europe, following stringent internal policies regarding ingredients. The inks are water-based, generate no ozone, emit low odours and carry no SVHCs (substances of very high concern). Air extraction systems and the use of high boiling point co-solvents ensure no significant exposure in the workplace. Because all sheetfed and web-fed inks manufactured by Canon Production Printing contain no dyes as colourants, they have excellent de-inking properties according to INGEDE method 11, when combined with the appropriate substrates.



**Low energy consumption**

High-speed, high-quality, inkjet print doesn't mean high energy bills. Canon inkjet presses feature a low consumption-per-printed-page that meets the demanding Nordic Swan requirements, enabling many customers to achieve the Nordic Swan Ecolabel 041 certification.



# COLLABORATE CREATE CURATE

## INTO THE FUTURE WITH CANON

At the beginning of this guide, we encouraged you to ask questions about what your business would look like in the future. We hope we have provided answers and, in particular, persuaded you that having a production inkjet capacity is a crucial contributor to a secure future for the business.

We have shown, too, that the transition to a more sustainable and future-proofed business is about more than exchanging one technology for another; it involves re-imagining the business and re-engineering processes and workflows. Such a business transformation requires significant changes and can appear daunting. But when, for example, we look at the promotional print market, you can keep in mind that inkjet opens up huge opportunities for PSPs.

At various times in this guide we have recommended your inkjet press supplier as a source of advice and guidance, so it is important to choose the right equipment partner. When you work with Canon you work with the market leader in the EMEA region in both the web-fed (68% of press placements) and sheetfed (40%) Inkjet Heavy Production Printing market segments.

Many of our customers have been with us from the moment they took their first steps into digital printing, because we are in the business of building long-term partnerships. It's one of the reasons for, and a benefit of, the range of digital technologies we offer. Wherever a customer is on their digital journey, we have a solution for them, whether they want more productivity, greater flexibility, or to move into new markets.

Our market leadership is due to a number of factors. We take a customised approach to system design, because no two PSPs are exactly the same, and nor are your customers. Unlike other suppliers, we focus on integration, designing and implementing customer-centric solutions. To do this we invest a lot in consultancy. Our specialists support customers in their whole buying and implementation journey in a structured and well-established approach – the Canon Solution Delivery Process. The goals of this process are to support you to make the right investment decision for your individual needs, and to ensure that you get the best out of this investment in your operation.

The Solution Delivery Process starts with analysing your current business and understanding your needs and your vision for the future. It continues with helping you to prepare your investment decision by providing the necessary information about the basics of inkjet technology, media handling, colour management, output management and workflow tools, as well as available third-party solutions such as finishing or software. An in-house professional service team not only ensures compatibility with Canon printing presses and software, but also manages the integration of the various solution components. The whole process leads to an individually designed solution in a project definition, and is rounded off by our professional project management team to seamlessly implement it into your environment until the solution and your team are up and running.



# PARTNERING FOR THE FUTURE: TECHNOLOGY, MARKET KNOWLEDGE, SUPPORT

Our range of presses (detailed on the next page) is the widest in the industry, embracing toner, inkjet and wide format. They are manufactured to the highest standards, inherently reliable, and backed by a global service support network of over 4,000 expert technicians.

But market share and a high number of press installations are only one part of the story. Just as important is the range of Canon customers, because this gives us an unrivalled knowledge of what's happening in the market and what PSPs are producing for their customers. Our dedicated Business Development team is continuously monitoring market development, future trends, changing print-buyer demands, emerging innovative business models, and developing an in-depth understanding of how print buyers and PSPs need to work together to create a future-proof print business. So when you choose Canon as your partner you also get access to these market insights (by events or individual consultancy).

Canon also actively develops the digital print market, by bringing print buyers and PSPs together to identify and exploit new and innovative business opportunities based on digital printing solutions. We call this approach the Triangle of Expertise. PSPs and their clients/customers are two corners, and Canon and our partners are the third. Our aim is to help you look beyond the applications, to the thinking behind them: to what's happening around the print engine – the data analytics, workflow and software solutions that enable the applications.

**“Canon has taken the time to get to know our business and has been working closely with us to help us achieve our business aspirations. I'm confident that our solid relationship with Canon will continue and I look forward to working with them in the future.”**

Richard Kampert, Managing Director,  
Kampert-Nauta, the Netherlands

**“Since we've been working together, Canon has definitely proved to be a true 'partner' and the team continues to work closely with us to find solutions to our business challenges. It's important to choose a partner you can rely on, and in Canon we know we have chosen one we can trust.”**

Alex Joos, Owner,  
Group Joos, Belgium

**“The press fully meets our requirement to fulfil fast and cost-effectively the increased demand for printed products with perfect register, and that success reflects our relationship with Canon, which goes far beyond that of a mere supplier now. Working together over so many years has forged real trust.”**











Sergio Nobile, CEO,  
Edubook, Switzerland



THE RIGHT SOLUTION FOR YOUR BUSINESS

We can deliver tailored solutions for every type of production print provider, from in-house print departments to commercial print service providers of all sizes. Our production print solutions range from very light to very high volume, from narrow to wide format, from roll-to-roll to sheetfed and flatbed.

With the widest range of technology solutions in the production print market today, we'll guide you to the technology choices that will serve the needs of your business today, and also give you scope to grow, respond to changing market conditions and evolve your offering to customers over time.

	PRODUCTION					GRAPHIC ARTS / POS		GRAPHIC ARTS / POS / CAD / GIS	CAD / GIS / POS	CAD / GIS
Printer name	ImagePRESS V series 	varioPRINT 6000 TITAN 	varioPRINT iX3200 	ColorStream 	ProStream 	Arizona 	Colorado 	imagePROGRAF 	ColorWave 	PlotWave 
Colour capability	Colour	Black & White	Colour	Colour and mono	Colour	Colour	Colour	Colour	Colour and Black & White	Black & White
Type	Sheetfed	Sheetfed	Sheetfed	Web-fed	Web-fed	Flatbed	Roll-to-roll	Roll and sheetfed	Roll	Roll and sheetfed
Technology	Toner	Toner	Inkjet	Inkjet	Inkjet	Inkjet	UVgel (Inkjet)	Inkjet	Crystalpoint	Toner
Print volumes (monthly)	350K – 2.4 million A4	300K – 10 million A4	1 – 10 million A4	5 - 80 million A4	8 – 70 million A4	250 – 2500 m2	250 – 8500 m2		250 – 1700 m2	250 – 6200 m2
Media capability	52-500 gsm	45 – 300 gsm	60 – 350 gsm *	40 – 160 gsm *	28 – 300 gsm *	Rigid and rolls, up to 2.5 x 3.0 8 rigid, rolls up to 2190mm wide	Roll-to-roll, 1625mm wide	Up to 2 rolls, up to 917mm wide	Up to 6 rolls, up to 1067mm wide	up to 914mm wide
Ink colour capability	CMYK	B/W	CMYK + ColorGrip	CMYK and security inks	CMYK + ColorGrip	CMYK W	CMYK W	Up to 5 colours	CMYK	B/W
Applications	Direct mail	Direct mail	Direct mail	Direct mail	Direct mail	Signage	Signage	CAD drawings	Colour and B&W technical drawings	Technical drawings
	POS	Business communications	Business communications	Business communications	Business communications	POS	POS	POS	Maps, unfolded and folded	Maps, unfolded and folded
	Card holder with Membership card	Books	Books	Books	Books	Product design	Wallpaper	Photo/Fine art	POP/POS posters	POP/POS posters
	Posters	MICR	Greeting cards	Lightweight applications	Posters	Retail graphics	Posters	Posters	Other Graphic Arts applications	
	Banners	Manuals and user instructions	Manuals and user instructions	Manuals	Manuals	Displays	Displays	Proofing	Wallpapers	
	Collaterals	Collaterals	Collaterals	Selfmailer	Collaterals	Wallpaper	Interior decor		Banners	
	Packaging		Catalogues	Catalogues	Catalogues	Packaging	Packaging		Wrapping paper	
	Business cards		Postcards	Pharma	Postcards	Interior decor	Magnets		Fine art	
	Design proofs			Security applications	Magazines					
	Banner- sized leaflet with parallel folding				Calendars					
PRISMA workflow compatible	X	X	X	X	X	X	X	X	X	X

\* Refer to product information for details.





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