

THINK BOOKS

IMAGINING THE NEXT CHAPTER IN
BOOK PRINTING AND PUBLISHING

THE UNFINISHED BOOK

EXPLORING THE
TENACITY OF
PRINTED BOOKS
IN A DIGITAL WORLD

THE ROAD TO DYNAMIC PUBLISHING

Flexible new business models
reveal opportunities for print

EDUCATION AND SPECIALITY PUBLISHING

Creating fresh value from books
on demand

BRINGING THE 'SMART BOOK' TO LIFE

Collaboration in the supply
chain to drive new revenue

Canon

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THE UNFINISHED BOOK

Contrary to expectations, the printed book is not dead. It was anticipated that the ebook and digital media would have consigned it to history. In fact, quite the opposite. In recent years sales of ebooks first stalled and then declined, while even young 'digital natives' are starting to turn to print to escape the ceaseless digital 'noise'.

Publishers and the book publishing supply chain have come through the financial crisis of 2007-09, thanks in part to adopting digital printing models to control costs and reduce returns and inventory, on books of all kinds.

As a result, books are the only digital print market where both mono and colour applications are forecast to grow – each by a 15% CAGR until 2022, when the total digital print volume of books will reach 100 billion pages.¹

Optimism is in the air. As Joanna Prior, Managing Director of Penguin General Books, says: "Any suggestion that the physical book is doomed can definitely be refuted."²

Yet challenges remain. Ebooks, social media and other digital entertainment formats are not going away. Audiobooks are gaining audience share, and the self-publishing movement continues to generate thousands of new titles every year.

So although the printed book is still popular, these and other trends result in shorter print runs and thus declining total page volumes. Stability is not progress, cost-control is not a long-term

solution, and simply improving the efficiency of old models may only delay decline. The time is right for digital printing to open a new chapter in the story of book publishing. Technology is now more than a means of stemming the tide of electronic competition; it is ready to turn it completely.

Think Books will help all stakeholders in the physical book supply chain to understand the opportunities, and formulate and implement a strategy to exploit them. In the following pages we explain why, despite the physical book's resilience, volumes of printed pages are declining. We also suggest ways in which publishers and print service providers (PSPs) can meet these challenges by incorporating digital printing in a variety of business models that handle and distribute content in multiple ways, print or digital, offering attractive and substantial added value to their customers.

Finally, Think Books looks to the future and the potential of the 'smart book' and dynamic publishing, and how publisher and PSP, and PSP and manufacturer, can form new partnerships to automate the whole 'order-print-distribute' chain.

¹ Western Europe Production Digital Printing, Market overview report; *Caslon*; 2017

² 'Books are back: Printed book sales rise for first time in four years as ebooks suffer decline'; *Daily Telegraph*; May 2016

DECADES OF CHANGE

Over the last two decades book publishing has been in a state of almost continuous transition, one that has left its mark on all the market players: authors, publishers, print service providers (PSPs), distributors, wholesalers, retailers and readers.

We can date the beginning of the changes to 1994, when Amazon appeared and disrupted existing 'bricks-and-mortar' sales and distribution models.

In 2007 it was Amazon again, challenging the 'ink-on-paper' reading model with the first mass-market e-reader, the Kindle. Self-publishing, another driver of transition, has a much longer history (Benjamin Franklin, Jane Austen and Marcel Proust all self-published), but it was never as easy to get into print as it is today, or to promote and distribute titles through social media.

BIG BUSINESS

Despite these challenges, books — described by *The Economist* as “a powerful, long-lived and adaptable” technology³ — are still big business. At \$151 billion, the global market is three times the size of the music industry and 15% larger than film⁴ — and Europe is a particularly big player. In 2015

European book publishers had total sales of €22.3 billion. They added around 575,000 new titles to the 22 million different titles they held in stock, and the industry employed over 150,000 people — 700,000 if you include associated companies and services.⁵

Physical books have proved much more resilient than the doom-mongers expected. Even online giant Amazon now has ten bricks-and-mortar stores, with more planned. In 2015 year-on-year sales of ebooks, which had initially been expected to replace physical books, began to decline. The five largest publishers in the UK, the country that had most eagerly adopted ebooks, reported a collective decline of 2.4%.⁶ After a similar slowdown in Europe, ebook sales have stabilised at around 6-7% of total book sales, according to the Federation of European Publishers, and there has been a corresponding rise in sales of printed books.⁷

AT \$151 BILLION, THE GLOBAL MARKET IS THREE TIMES THE SIZE OF THE MUSIC INDUSTRY AND 15% LARGER THAN FILM⁴



IN 2015 EUROPEAN BOOK PUBLISHERS HAD TOTAL SALES OF €22.3 BILLION

³ 'From Papyrus to Pixels'; *The Economist*, October 2014

⁴ 'The Changing World of European Book Publishing and Manufacturing'; *IT Strategies*, November 2016

⁵ 'The Book Sector in Europe: Facts & Figures'; *Federation of European Publishers*, March 2017

⁶ 'Ebook sales abate for Big Five'; *The Bookseller*, January 2016

⁷ 'The Book Sector in Europe: Facts & Figures'; *Federation of European Publishers*, March 2017

BOOKS — A NOVELTY IN A DIGITAL WORLD

There are numerous reasons for the decline in popularity of ebooks, including e-readers losing their initial appeal, and the prices rising as publishers seek higher margins. But equally decisive has been consumers' growing preference for tangible, physical books in a world of digital. A 2017 survey by Two Sides found that 72% of people prefer reading printed books and newspapers, and 69% turn to print to 'switch off' from their electronic devices.⁸

Younger people, in particular, are returning to the printed book. Steve Bohm, Research Director at Nielsen Book Research UK, says "we are seeing that books are a respite, particularly for young people who are so busy digitally."⁹ In 2013 youth research agency Voxburner reported that 62% of 16 to 24-year-olds prefer printed books to ebooks, with the most popular reason being "I like to hold the product." For these readers, it appears, the physical, printed book is the new novelty in a digitally dominated world.¹⁰

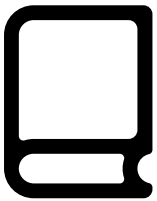
DECLINING PRINT-RUNS — THE BIG CHALLENGE

Yet as newly resurgent as the printed book appears, book publishers and their supply chain partners still face major challenges — the most significant of which is the decline in average print-runs and annual volumes of printed pages. In Europe, page volumes fell sharply during the 2007-09 recession but have since stabilised at around 500 billion, with slight growth over the last two years.¹¹

While the popularity of ebooks prevented the recovery in page volumes, there are other, equally powerful reasons, such as the way social media and other forms of entertainment fight for consumers' attention. But equally significant is the greater competition resulting from an increase of new titles coming to market each year, fuelled in part by self-publishing. The dramatic decline in sales of bestsellers shows this clearly: in the last five years no single title has sold more than 20 million printed copies. By comparison, Dan Brown's *The Da Vinci Code* has sold over 80 million copies since it was published in 2003.¹²

In a crowded marketplace, it is more difficult for any single title to stand out, so much so that by some estimates the 'window of opportunity' for a new title has shrunk to just four to six weeks. If it doesn't take off in that time, the title becomes inventory and any surplus stock is pulped.

62% OF 16-24 YEAR OLDS PREFER PRINTED BOOKS TO EBOOKS AS THEY 'LIKE TO HOLD THEIR PRODUCT'



⁸ 'Print and Paper in a Digital World'; *Two Sides*; October 2017
⁹ 'Ebook sales continue to fall as younger generations drive appetite for print'; *The Guardian*; March 2017
¹⁰ 'Ebook sales continue to fall as younger generations drive appetite for print'; *The Guardian*; March 2017
¹¹ 'NPES 2016 Megatrends Study' by *IT Strategies*; 2016
¹² 'The Changing World of European Book Publishing and Manufacturing'; *IT Strategies*
¹³ Western Europe Production Digital Printing, Market overview report; *Caslon*; 2017

VOLATILE, AD-HOC AND UNPREDICTABLE

Changing sales and distribution channels, ebooks and audiobooks, self-publishing; put all these factors together and we have a market in which book sales and book production volumes are more volatile, ad-hoc and unpredictable. For publishers, this affects everything from the titles they can publish — fewer sales and lower revenues mean less freedom to take risks on new authors — to production planning, which becomes more complex than ever.

The challenges are just as great for other supply chain players, especially book printers:

How should book publishers and PSPs respond?

How do they handle the new need for production flexibility?

Which services do they need today and in the future?

Digital printing provides the answer. Digital production currently accounts for 10% of all printed books in Europe, with a predicted CAGR of 15% in both mono and colour between 2017 and 2022.¹³ Digital's short-run and on-demand capabilities, which already help publishers control costs by reducing waste and inventory, are now poised to power new business models where content moves seamlessly between traditional book printing, on-demand printing and electronic, as well as physical distribution.

Welcome to the world of dynamic — or smart — publishing.

THE ROAD TO DYNAMIC PUBLISHING

In 2011 a story in the internationally-respected Financial Times newspaper announced the “Death of the Guidebook”.

If the decline in sales continued, the paper predicted, the final guidebook in the UK “will be sold in less than seven years’ time”.

Five years on, in 2016, UK sales of guidebooks for overseas destinations were 4.45% higher than in 2015, according to the Nielsen BookScan Travel Publishing Yearbook — a rise mirrored in the US market.

This scenario has played out across other book publishing sectors. The havoc that mobile apps and ebooks were expected to wreak hasn’t materialised. Instead, print and digital have come to an accommodation. Ebooks have not gone away, of course, but with hindsight it was simplistic to regard the choice between ebooks and printed books as an ‘either/or’ decision. After all, as The Economist points out, television did not replace radio; instead, it forced the older medium “to rethink what it could do best”.

Forward-looking publishers, such as market-leading guidebook publisher Lonely Planet, picked up on the changing market and adapted. According to the Financial Times, Lonely Planet has “abandoned its ‘book first’ model in favour of creating content which is then used across both digital and paper platforms. Even within print, the company has expanded its range, producing multiple guides to the same destination that vary in size and style. The four Lonely Planet guidebooks to New York, for example, now range from the traditional 450-page guide to a 40-page, photo-led ‘Make My Day’ book, designed as an impulse purchase in gift shops.”¹⁴

¹⁴ “Travel guide books come back from the brink”; *FT.com*; February 2016

IN 2016 UK SALES OF GUIDEBOOKS OVERSEAS WERE 4.45% HIGHER THAN IN 2015

NEW BUSINESS MODELS

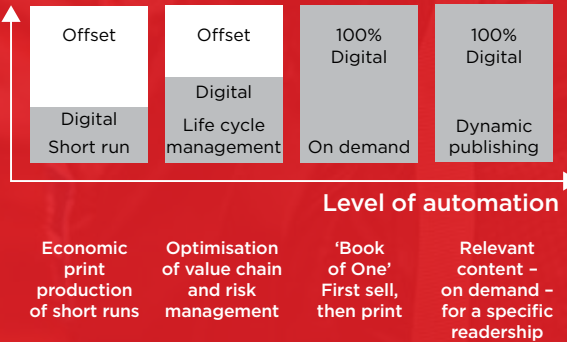
Such variety depends on collaboration between all players in the supply chain, especially between publisher and PSP, and on new business models that can accommodate a more fluid range of products. So far, four such models are evolving, all of which incorporate digital print to some degree (and two of which are 100% digital):

SHORT-RUN PRINTING

The goal of the short-run model is to optimise an existing (offset) production process, switching to digital those applications which lie below cost-breakeven between offset and digital, while maintaining longer runs in offset. Digital eliminates the non-productive steps in offset workflows, such as platemaking, folding, interim storage and gathering, and so particularly optimises books with high page counts, especially when they are in colour.

The benefits for publishers include enhanced order flexibility (shorter delivery times for short-runs), faster time-to-market, and cost-savings in warehousing and distribution. The model doesn’t usually change publishers’ established order system/delivery, so is the easiest to implement, but it has the lowest impact for optimisation of the book value chain.

Share of digital print



BOOK LIFE CYCLE MANAGEMENT

In a market where book sales are unpredictable, the **book life cycle management model** offers publishers the possibility of matching order and print production to actual demand for single titles. This new way of managing the supply chain helps to take the gamble out of publishing unpredictable new titles because it reduces the risk of overstocking while ensuring availability of titles, employing digital print to handle more frequent, smaller orders. Because placing more orders can lead to rising costs for re-orders and transactions for publisher and PSP, an automated stock replenishment (ASR) system is necessary in connecting them to each other. An ASR system issues re-orders automatically when a pre-defined minimum stock level is reached. The definition of the minimum stock level and the size of the re-orders are based on released quantities from the warehouse or, ideally, on sales data from retailers.

More orders also mean more daily print jobs, with different trim sizes, different stocks, and short print-runs, so it is important to minimise the cost of job management and maximise utilisation of print and finishing equipment. Standardisation of print jobs (paper types, trim-sizes) is therefore an important step both publishers and PSPs need to take to use this model, but automation of order and production processes is even more important for successful implementation. Latest workflow solutions offer the reduction and elimination of manual steps in order and stock management, print job management, printing, finishing and distribution.

ON-DEMAND PRODUCTION

With the **on-demand production** model the process is 100% digital, marrying the internet and digital print to 'first sell, then print', eliminating stock and minimising capital tied up in unsold books. 'Out-of-print' becomes a thing of the past, niche titles and the 'long tail' become a steady source of revenue.

Book producers have to print and deliver single copies in a very short window, so they need a digital workflow capable of handling several thousand single orders and print jobs a day. To do this, all process steps need to be automated — order management, data and colour management, print job management, tracking and tracing, material flow, printing, finishing and distribution, as well as reporting and invoicing.

**DYNAMIC — OR SMART — PUBLISHING**

The goal of **dynamic — or smart — publishing** is to deliver highly relevant variable content to target groups or even individual consumers. Based on templates hosted on online platforms, users can combine content from various sources, including their own images and text. Successful implementation depends on PSPs having an efficient on-demand printing workflow in place and both publishers and PSPs having the IT expertise to handle data and database-driven production. The benefits for publishers include opening up new revenue streams with high-margin personalised products and services, often based on re-utilisation of existing assets.

Established models such as photobooks and vanity publishing services come into this category, but there is considerable excitement at the potential of dynamic publishing in the educational, travel and speciality book sectors. We look at these markets in more detail on the following pages.

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THE FLEXIBILITY OF ON-DEMAND MEANS WE CAN GUARANTEE TO A PUBLISHER THAT A BOOK IS ALWAYS AVAILABLE

DAVE VAN'T WOUT, PRODUCTION MANAGER

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CB**SINGLE BOOKS TO BESTSELLERS ON DEMAND**

Founded in 1871 CB, originally Centraal Boekhuis, is the leading distributor of books in The Netherlands and Belgium, managing deliveries of over 54 million books each year to large and small retailers, schools and The Netherlands' largest online bookstore, Bol.com.

Recognising its customers' growing demand for next-day delivery, CB looked for a solution to ship books more quickly and reduce inventory volumes. In 2011, this resulted in a joint venture with Printforce, the largest digital book printer in The Netherlands. CB then acquired 50% of the shares of Printforce in 2018 to be able to produce books in-house and now turns around 10,000 books a day, a staggering four million books a year and has a second location in the UK.

CB's success has been fuelled by an on-demand production model using a range of sheetfed and continuous feed inkjet printers from Canon, helping to maximise production efficiency and benefitting the entire publishing supply chain. "The flexibility of on-demand means we can guarantee to a publisher that a book is always available," says Dave Van't Wout Production Manager.

The digital print line-up includes three Océ VarioPrint 6000 TITAN cutsheet monochrome printers; three Océ ColorStream inkjet web presses for short run production with consistent colour quality; two Océ ImageStream digital colour inkjet web presses for high quality printing on standard offset papers; two Océ VarioPrint i300 sheetfed inkjet presses for the production of premium quality books on a range of media; and two imagePRESS C10000VP toner presses for book covers. CB also invested in four PRISMAproduction systems that provide a complete end-to-end workflow for automated batching.

The transition to on-demand digital print means the company now has the flexibility to produce and deliver a single copy or up to 1,500 copies within 24 hours from receiving an order. CB has also built its own online end-to-end automated ordering portal, available to over 2,500 booksellers. Once an order is received, it automatically syncs with the printers to initiate book production. And thanks to the Canon technology, not only can CB print black and white books with colour covers, but also image-intensive books for specialist categories, such as cookbooks.

With digital print solutions from Canon, CB has achieved its mission to help book shops offer a more efficient service to their customers and has the agility to evolve its offering for an even brighter commercial future.

A NEW CHAPTER FOR EDUCATION

The world of education is changing — for children, students and throughout life.

As a result, the educational publishing market is fertile ground for dynamic publishing as ideas of modular and collaborative learning gain currency.

Students are drawn to different subjects and learn in their own ways, at different speeds. The more personal the course content, the better they learn. Using the 'print-run of one' capability of digital printing, teachers can combine their ongoing assessment of individual students with publisher-supplied assets to personalise text books and tailor course material to the particular needs of each person. Students too can use templates and online platforms to combine content from various recommended sources to create their own course material, enhanced by individual, relevant, up-to-date content.

This concept appeals to a wide range of stakeholders in the education sector as a means of enhancing learning while reducing risk, waste and transport costs. Advanced implementations are already under way in markets as diverse as Switzerland and Turkey (see Meteksan & Teknolist case study opposite).

Take this a step further and consider the possibilities of dynamic publishing. You can bring together 'big data' about every student, every teacher, and every lesson, to share learning and best practices, and improve the education of all age groups. It could identify where additional time or resources are needed, as well as making the learning experience more personal, relevant and fun. Add links to multiple platforms, for example to online summaries and quizzes on a mobile phone to check learning progress, or to video tutorials or live webinars online which bring to life specific topics from global experts. These could then become online communities, study groups, students learning from each other, maybe even meeting physically in a local coffee shop.

The opportunities are endless, and go far beyond the education market as we usually think of it. The 'lifelong learning' movement brings 'How to' books of all kinds within reach: digital printing, cookbooks and personalised content are the perfect recipe, although this is close to crossing the frontier into the lucrative world of speciality publishing, which is the next avenue to explore...

METEKSAN & TEKNOLIST

Joining forces for educational innovation

In Turkey, two digital print pioneers have joined forces to serve the booming education sector, which makes up nearly half of all official printing in the country.

Founded in 1969, Meteksan is a pioneer of digital printing in Turkey and has more than 35 years of experience in the domain of education printing. The company's first major success was the future-proof digital examination application, producing more than 600,000 million A4 pages of exams annually through a secure digital exam solution.

Teknolist AS, founded in 2001, is a leader in the domain of educational printing and software at elementary school level, producing various exams and tests to support students' personal and educational growth. Now both companies are taking smart publishing to the next level, through a new print-on-demand workflow that delivers tailored educational material printed for classrooms.

Both parties started with a clear vision of what they wanted to achieve — namely, to extend the capabilities of their respective technologies beyond the examination market into customised textbooks. They agreed to separate the development of the solution into phases to adapt quickly to the

current market needs and remain flexible for future requirements. The first phase, the switch from offset to digital, enabled them to print personalised booklets for the end users or students in more flexible short-runs.

The next phase completely redefined the way the data processing is performed. This means that instead of Meteksan simply printing a PDF supplied from the customer, they have access to separated data components contained in the customer database, as well as different PDF elements. Utilising these various elements, they digitally print personalised books for schools, classrooms or subjects. The production process is completely automated across the two companies, making it highly efficient by obliterating any communication redundancies.

A key feature of the workflow is the way it involves teachers in shaping the books. Using web-based tools and mobile cloud-based tools provided by Teknolist, teachers can evaluate pupils very quickly. In the future the tools will be extended to allow them to analyse student progress and areas of improvement. With that information, the system will automatically select and customise content enabling teachers to support students according to their very individual learning needs.



ENABLING INDIVIDUALITY

A kind of tyranny prevailed in the days when publishing business models were built on long print-runs — for a book to be published, demand needed to be highly likely, if not guaranteed.

Digital printing is bringing greater freedom. Inventory concerns are less of an issue, and the ability to print any book anywhere creates a 'long tail' of demand in which every hobby or passion is a niche market that publishers can serve.

At the most basic level, personalising a book makes it special, and is probably what most people think of first when they hear the term 'speciality publishing' (a Google search on 'personalised books' yields over 29 million results). But the description encompasses many products and markets. What they have in common is their appeal outside the mainstream markets. In some cases, the appeal is based on a book's rarity: it may be out of print, for example, or so old that no artwork exists. Digital print can bring these books back to life — in the latter case, simply by scanning surviving copies.

BUSINESSES CAN CREATE HIGHLY TAILORED PUBLICATIONS USING DIGITAL PRINTING THANKS TO ITS ABILITY TO PRINT ONLY WHAT IS REQUIRED – EVEN ALLOWING PERSONALISATION ON EVERY SINGLE PRINT

For example, it can be cost-effective to publish books in minority languages, as the joint project between Goloseo Verlag and Room to Read does, with all the consequent cultural benefits, due to the fact that print volumes are no longer a major factor in the decision to publish. Similarly, institutions or other smaller businesses can create highly tailored

publications using digital printing thanks to its ability to print only what is required — even allowing personalisation on every single print.

By applying the concept of distributed printing using digital printing publishers can print minority-interest titles at the point of sale. Such demand-driven production saves on storage costs and logistics — releasing resources to invest in translation and increasing the potential ROI from serving foreign markets.

In the ephemeral world of digital media, books have a physical appeal that makes them the perfect gift, especially when personalised. John Whalen, founder of US publisher Cider Mill Press, described the phenomenon as follows: "A gift book is a 'book object' that you cannot re-create digitally. With our gift books, we pay just as much attention to the tactile element — the cover embellishments, paper quality, and additional special touches like foil and ribbons — as we do to the editorial content."

Speciality books appeal to publishers and PSPs too, because profit margins are greater. They are not 'commodity print'; often the purchasing decision involves an element of passion, and passionate people will pay more. This is also a sector where new funding models are possible, which further reduce the publisher's risk: books may be sold by subscription through specialist channels, or crowd-sourced, or even co-created by enthusiasts.

GOLOSEO

Enriching children's lives

For Munich-based publisher Goloseo, publishing really is a labour of love. Founder and CEO, Stephanie Fehr, started the business as a young mother, inspired by a desire to pass to her child — and all children — the magic that a great children's book holds. According to the Goloseo website she "made it her goal that no author's or illustrator's heart and soul should be wasted by not enriching children's lives."

Goloseo specialises in reviving treasured children's literature in both printed and digital formats. The company has an established partnership with Room to Read, a non-profit organisation that transforms primary schools into child-friendly learning environments in which children can develop the skills and habit of reading and become life-long, independent readers. Room to Read's Literacy Program ensures the school has a library with books in the children's local language, as well as teachers and librarians who are trained in the best practices of reading and writing.

During drupa 2016, Canon showcased an integrated print-on-demand workflow demonstrating how digital print technology, combined with a highly flexible automated book

finishing solution, makes ultra-short book runs a reality. This is ideally suited to the revival of out-of-print books and to the production of books in minority languages, which would be uneconomical in an analogue publishing model requiring minimum production volumes. For the joint project between Goloseo and Room to Read, Canon produced a variety of children's books in local languages and delivered these to Room to Read libraries in Africa. Canon continues to support the Room to Read initiative utilising demand-driven digital book printing for targeted educational purposes.

Goloseo's company name derives from a medieval Venetian dialect: 'un golosin' translates to 'hedonist', a person interested in the good sides of life. "The children's books that we publish are basically literary treats. Moreover, we see a little Goloseo in every kid. Because being a Goloseo means seeing the world with eyes wide open and jumping head first into the enchanted world which a wonderful, tenderly fashioned children's book offers," said Stephanie Fehr. "It's about the magic of those told stories and about believing that anything is possible if you allow your imagination full bent."



SMART PUBLISHING—TURNING VISION INTO REALITY

So digital printing is helping publishers and book producers not only meet the challenges of shorter print-runs and declining page volumes, but also — through on-demand models — develop new types of books while understanding how to maximise revenue from past inventory.

The industry appears stable, with manageable competition from ebooks and other competitive forms of entertainment.

CONTENT NEVER SLEEPS

But if print service providers (PSPs) have learned one lesson over the last 30 years it is that digital content never sleeps, that the current status quo will not prevail, and that publishers and their supply chain must always have one eye on the future. This means understanding how content as a whole is consumed.

In the previous pages, we have described how online and offline content platforms not only co-exist but also vie for consumers' attention simultaneously, and how consumers have become adept at viewing content on multiple devices at the same time. As author, Peter Fisk, has expressed at Canon's Future Book Forum, "Consumption has changed — in media and format, time and place, in sequence and spontaneity, in duration and perceived value." He added, however, that consumers nevertheless want more, not less, information — "the challenge is to do so in the right way, physically as well as digitally."

To do this, the industry should think more holistically, understanding the different mind-sets of consumers and working to bring content to life across different platforms, giving people a more joined-up, personal experience.

For publishers and PSPs, the first step in this is to recognise that today's fragmented multi-platform world is not going to change. It may make processing and understanding information more difficult, but it is the environment in which the physical book has to perform.

MEET 'THE SMART BOOK'

Consumers are accustomed to viewing dynamic content today, whether watching videos on YouTube or exploring properties in 360° 'walkthroughs' on a real estate agent's website. They also expect to access such content almost instantaneously, and for it to be customised to their preferences.

While on-demand digital printing can deliver customised products quickly, as things stand the physical book remains a static medium. True, there is demand for an immersive experience that gives consumers a welcome respite from digital 'noise'. But sticking to that path alone will not provide publishers and PSPs with the growth they need. For this, they need to grasp the opportunities to combine the immersive, tangible, browsable, and treasurable characteristics of the physical book with the capabilities of digital formats, including being instant, customisable, efficient and updateable.

For a glimpse of what the smart book will look like, return to the travel guide example described earlier (pages 8-9), in which Lonely Planet re-engineered their content into four distinct products tailored to the needs of different audiences. Now take this concept further to include the digital content that we know consumers seek out when they travel, always bearing in mind that different travellers have different needs at different times. The thinking might go something like this....

Travel guides are full of detail about where to go and what to see, but travel is also emotional and visual. So can we

capture the sights and sounds of an African safari, or a Caribbean beach, by connecting to videos or even using virtual reality? Once the decision to travel has been made, why not link to booking sites for flights and hotels, and to peer-review sites like TripAdvisor?

The book itself is bulky, so why not let readers bookmark the most important pages and transfer them to a mobile app? During the journey, bring the book alive by linking stops on the route to photographs, then share this on social media. Back at home, create a beautiful personalised souvenir book of the trip, enhanced with historical details of the places visited, sourced from the guidebook.

The industry is some way from creating such holistic products, but the logic behind them is irrefutable: physical and digital, static and dynamic, will work together; content will work harder; and profits will grow.

Digital print workflows are critical to exploiting the opportunities that exist, but only if publishers and PSPs realise two things; first, that digital offers more than efficiency improvements and, second, that they need to work even more closely together to reveal more opportunities in print.



COLLABORATION FOR TRANSFORMATION

THE FUTURE

The 'smart book' concept just described may currently be more of an idea than a reality, but it is not a figment of the publishing industry's imagination — it is a logical extension of the four publishing business models that digital printing makes possible.

As previously described, those models are important because their successive implementation — from short-run, through life cycle management and on-demand, to dynamic publishing — provides a clear development path that transforms the businesses of both publisher and print service provider (PSP).

The transformation process won't start of its own accord, of course. In day-to-day business, it is easy for publishers and PSPs to simply focus on reducing the costs of sustaining old mind-sets rather than explore how they can grow, physically and digitally, through new approaches to a fast-changing world. How can we change the way we think?

Collaboration between publishers and PSPs is very important. It has already demonstrated this in delivering what we can call the supply-side benefits of digital — namely, cost reduction and increased efficiency. Shorter-runs and on-demand printing can reduce waste through lower returns; maximise revenues out of existing inventory; and bring new books to market faster, enabling publishers to respond to topics and trends as they emerge.

Now is the time to take that collaboration a step further, and for publishers and PSPs to assess the new demand-side opportunities to drive new revenues by addressing changing consumer needs. To do this, an investment of time and money will be needed on both sides. As noted previously, the short-run business model is the simplest to implement because the decision to print digitally is based on a break-even calculation. With the other models, increasing levels of infrastructure are necessary to link publisher and PSP. Book life cycle management, for example, depends on an automated production workflow, with a seamless interface between publisher/warehouse and PSP, which in turn calls for qualified IT know-how. Taking the further step into the dynamic publishing market requires that both publishers and PSPs have professional-level IT and database management skills. Digiforce (see case study opposite), for example, regards itself as an IT company, not a book printer.

With each successive investment, a PSP is moving towards becoming a TSP, or 'total service provider', and the service being provided is becoming more complex. The actual printing of a book is just one operation in a sophisticated logistical operation that involves the entire supply chain. For it to work efficiently there needs to be a fundamental realignment in the relationship between publisher and PSP.

DIGIFORCE

More than book printing

"Digiforce is not a book company, but an IT company," says Roeland Lamme, Managing Partner of the Vianen-based Dutch book printer. "If a customer has a problem, we build them the solution," he continues. In fact, five out of the company's 25 employees are focused on developing IT-led solutions for a customer base that ranges from academic and educational publishers through to schools and universities.

These solutions entail the development of bespoke application programming interfaces (APIs) to link Digiforce's customers' websites and online ordering platforms directly to its proprietary workflow software, with orders then sent directly to print. Not only that, but as an order is printed and dispatched, the information is fed back to the customer so that they can tell when any order has been printed, dispatched and delivered.

It's an extremely successful model, with Digiforce producing between 500,000 and 600,000 books annually for customers across The Netherlands, as well as in neighbouring countries including Belgium and Germany. Overall, this generated a turnover that amounted to €3.2 million in 2016 and is expected to grow.

What is particularly remarkable is that every book printed by Digiforce is printed as a single copy, even when printed as part of a run of 200 or 300 books. This short-run printing model is why all of Digiforce's output is printed digitally, as well as why the company's workflow is highly automated to maximise efficiency. According to Lamme: "No-one touches a book until it comes off the printer."

THE SUPPLY CHAIN PARTNERSHIP:

THE
'TRIANGLE OF
EXPERTISE'

All of those involved in the publishing industry — publishers, print service providers (PSPs), paper manufacturers, technology solution providers, even authors — have witnessed the fundamental disruption caused by new technologies.

When once people simply read books, today they consume content in many formats and via various media platforms.

The challenge is to respond to change and harness technology advantageously to innovate the production, formats and purpose of the printed book. By understanding the end user, and how life can be made better for them, the publishing supply chain can work together to imagine a better future, and make it happen.

In Think Books we have shown how all parties can contribute to this future directly, through a new generation of digital printing technologies that transform the logistics and economics of production, in particular through printing books on demand. This creates new opportunities to innovate how books are bought and consumed, as well as produced.

Taking these opportunities will call for new partnerships involving not only publishers and PSPs, but digital technology solutions providers as well. New concepts such as the fully-automated 'order-print-distribute' supply chain and 'smart' books take digital print's role far beyond cost-reduction, and their success depends on publishers and PSPs changing how they work together.

BY UNDERSTANDING THE END USER, AND HOW LIFE CAN BE MADE BETTER FOR THEM, THE PUBLISHING SUPPLY CHAIN CAN WORK TOGETHER TO IMAGINE A BETTER FUTURE, AND MAKE IT HAPPEN



Publishers have the final decision on adopting a new business model, but the right decision depends on understanding exactly what the model involves.

Over the last decade many publishers disposed of their in-house printing operations, and in some cases, the unfortunate consequence has been an undue focus on unit pricing in their negotiations with PSPs, rather than taking a more holistic view that acknowledges all the other components in the value chain — pre-financing, inventory, returns, logistics, and so on.

In the previous section, we described how collaboration between publishers and PSPs is so important to the adoption of new business models that undoubtedly have great potential but are new territory for both parties. Take book life cycle management as an example: for publishers, this is about more than increasing the efficiency of procurement and purchasing — it is a strategic decision to minimise sales risk and maximise sales opportunities, and to do so in new markets, with new products that promise fresh revenue streams.

Before starting down the path, publishers need to ask questions such as: How will this change how I judge the economics of a prospective book title? If price-per-unit is not the basis for deciding, what other factors do I have to take into account? By collaborating with PSPs, who can help publishers to understand how the supply chain for printed books can be improved with digital book printing solutions, new ideas and answers to such challenges can be reached. Working together, publisher and PSP are able to manage the transition, in the process balancing the economics of analogue production, which still works for long-run titles, with the investment needed to create the new digital business.

Publishers and PSPs do not need to do this alone. By partnering with Canon, they can expect to create a 'Triangle of Expertise' – a strategic three-way partnership between publisher, PSP and technology solutions provider. Having such a partnership in place enables strategies to be built based on solid business models and driven by future-proof digital solutions.

THE 'TRIANGLE OF EXPERTISE' IS A STRATEGIC THREE-WAY PARTNERSHIP BETWEEN PUBLISHER, PSP AND TECHNOLOGY SOLUTION PROVIDER TO BUILD PUBLISHING STRATEGIES BASED ON SOLID BUSINESS MODELS AND DRIVEN BY FUTURE-PROOF DIGITAL SOLUTIONS



> MOVING FORWARD

THE PUBLISHING SUPPLY CHAIN: 5 STEPS TO COLLABORATIVE WORKING

No one corner of the 'Triangle of Expertise' — publisher, PSP or solution provider — has all the answers, or knows all the questions to ask. But if they join forces, the resulting whole will be greater than the sum of the parts. Here are five steps to consider to ensure successful collaboration:

1. Be willing to challenge

Because change is an inevitable part of transformation, all parties should be ready to challenge existing processes and business models — including their own.

2. Understand the impacts

Everyone involved should do their best to understand how the new ways of working affect all their partners in the supply chain — the benefits and the challenges.

3. Think strategically

Before making final decisions on business models or technical solutions, consider the strategic implications. As an example, take the fundamental question, what role will print have in the future business plans of both PSP and publisher? Once you have answered that, go further and ask, how will we organise and manage the processes that will earn revenues from print?

4. Listen to the voice of experience

The business model you decide on will determine the resources and expertise you need. Executing the strategy successfully calls for experience and a professionally-structured approach.

5. Continue to evolve

As we noted earlier, content never sleeps, and neither can publishers and PSPs. Future evolution depends on ongoing support, innovation and investment.

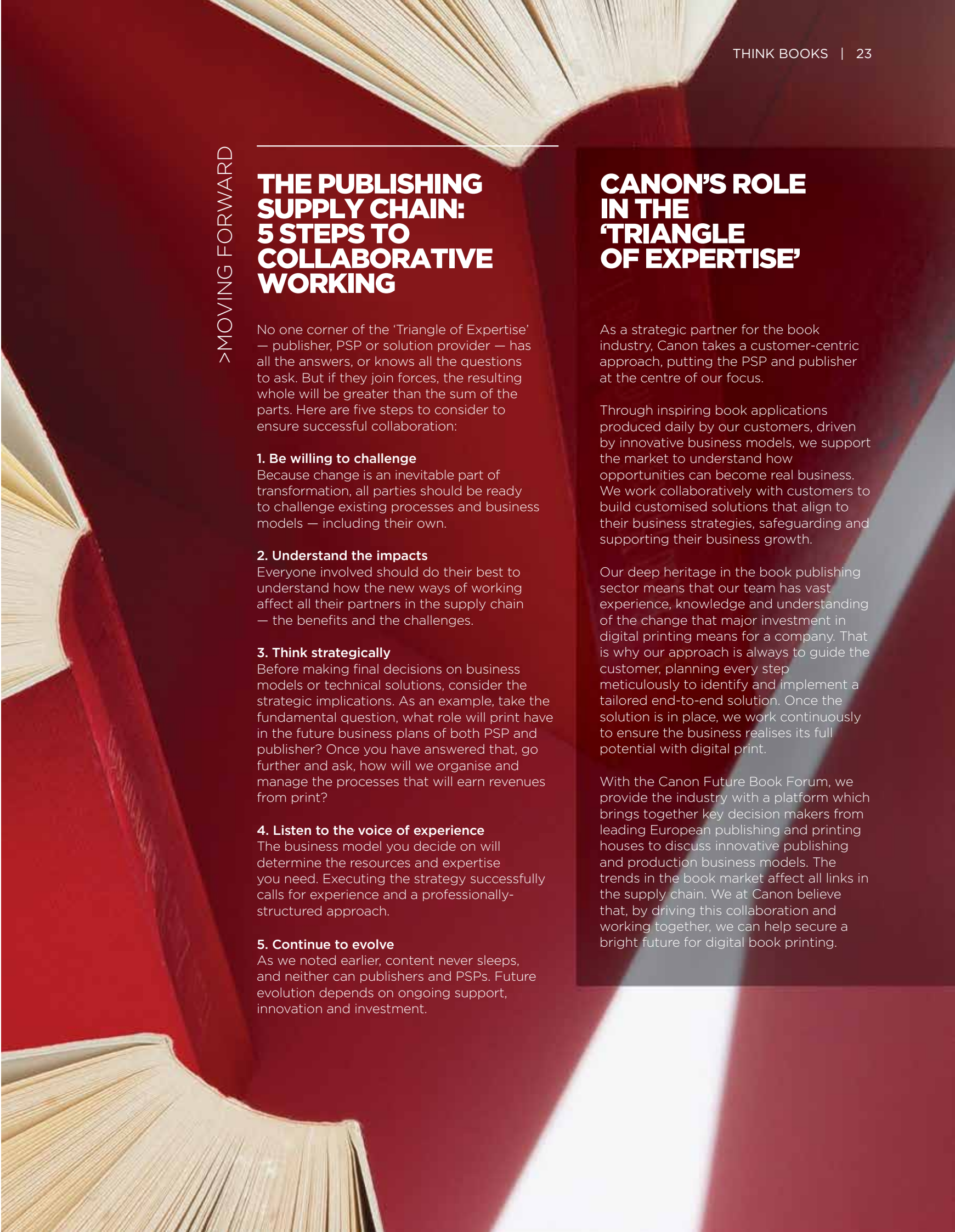
CANON'S ROLE IN THE 'TRIANGLE OF EXPERTISE'

As a strategic partner for the book industry, Canon takes a customer-centric approach, putting the PSP and publisher at the centre of our focus.

Through inspiring book applications produced daily by our customers, driven by innovative business models, we support the market to understand how opportunities can become real business. We work collaboratively with customers to build customised solutions that align to their business strategies, safeguarding and supporting their business growth.

Our deep heritage in the book publishing sector means that our team has vast experience, knowledge and understanding of the change that major investment in digital printing means for a company. That is why our approach is always to guide the customer, planning every step meticulously to identify and implement a tailored end-to-end solution. Once the solution is in place, we work continuously to ensure the business realises its full potential with digital print.

With the Canon Future Book Forum, we provide the industry with a platform which brings together key decision makers from leading European publishing and printing houses to discuss innovative publishing and production business models. The trends in the book market affect all links in the supply chain. We at Canon believe that, by driving this collaboration and working together, we can help secure a bright future for digital book printing.



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Canon
