A Distributed Book Printing Network: the next step for sustainable publishing

Byline: *Hans Schmidbauer, EMEA Director, Marketing & Innovation, Commercial Printing, Canon Europe*

Teaser text: *The Publishing 2030 Accelerator sets out to build awareness of the opportunity to optimise the book supply chain and drive sustainable change. In this article, Canon Europe's Hans Schmidbauer highlights the initiative and explores the second workstream, the Distributed Book Printing Network.*

Body copy:

Year after year, the demand for printed books has proven that, even in the digital era, books have not lost their value. However, the publishing industry faces the key challenge of reducing its environmental impact, which has the potential to negatively influence its future due to the many outdated processes that are still used across the industry. Publishers and their supply chains are therefore under scrutiny.

Books are generally printed in long runs, stored centrally, shipped across the globe and, if not sold, returned and then pulped. The result? High carbon emissions and a lot of wasted material. To illustrate the extent of this issue, recent research from RISE Bookselling, a project led by the European and International Booksellers Federations (EIBF), showed that a return rate of between 5% and 6% in The Netherlands, for example, equated to around two million books per year being pulped. And, in Spain, 60% of new books published don't sell any copies and the average return rate is 30 - 35%.

For publishing to prove its future as a sustainable industry, change is essential and we need to re-evaluate book production processes and distribution methods across the entire supply chain. Collaboration across the supply chain is a key factor for success too.

Canon is dedicated to driving positive change in the publishing industry. Through our annual Future Book Forum event platform, for example, our key objective is to facilitate industry collaboration to drive a successful future for publishing. We bring together leading publishers, book printers, solution providers and other key stakeholders in the

publishing industry to discuss key challenges and explore ways to become more agile, connected, and responsive to rapidly changing markets and evolving audience needs.

For the past ten years since we launched the event, we've responded to changing customer needs in the wake of the introduction of e-books and the 'smartbook' and the emergence of niche communities that form - based on interests such as cooking or cycling, for example. We've witnessed the migration of retail from physical stores to online and debated how we can bridge the gap between physical and digital. We've explored how to innovate in crises such as the COVID-19 pandemic. And, alongside this, we've worked together on how, as an industry, we can improve our sustainability impact.

Importantly, we have seen that businesses across the entire publishing supply chain are committed to making positive changes and are expressing their interest and dedication to improving their own practices. And, while we know such changes will not happen overnight, the positive intent, growing collaboration and forward momentum indicate that we're heading in the right direction.

The Publishing 2030 Accelerator – a positive force behind sustainable change
With a focus on accelerating the industry's progress towards a more sustainable future, the Publishing 2030 Accelerator was launched at Future Book Forum 2022. The initiative brings together contributing stakeholders from the publishing industry supply chain, who have committed to a five-point manifesto that sets out to build awareness among book publishers and producers - offering the opportunity to optimise the book supply chain and, ultimately, drive systemic change.

The initiative has been split into three distinct workstreams:

- **The carbon footprint of a printed book**
  This workstream focuses on how to calculate and communicate the carbon impact of a printed book. The main objective is to test the industry's ability to collect and calculate carbon data and better understand the role of carbon labels in communicating the sustainability attributes of a book. The workstream has delivered two outputs – an initial industry-agreed methodology and a carbon label prototype.

- **A Distributed Book Printing Network**

  The second workstream is exploring how to build an internationally accessible network of digital print-on-demand facilities. This will allow print files to be shared globally so that books can be produced locally to their point of sale - to minimise transportation and the environmental impact of shipping books.

- **The re-evaluation of costs and emissions**

  The final workstream is looking at how to shift cost analysis away from cost per unit and instead take full consideration of the book's total lifecycle cost.

Workstream two: A Distributed Book Printing Network

Canon supports the development of the industry; our approach is not to work on proprietary solutions but rather to work with wider industry stakeholders to create solutions that are open and manufacturer independent. We are convinced that this strengthens trust in the solution, increases market acceptance among everyone involved and, as a result, accelerates the introduction of new processes. That's why we're pleased to actively participate in the 'Distributed Book Printing Network' workstream, and my colleagues Tino Wägelein and Jörg Engelstädter have been key contributors to the exploration of the concept and outcome generation.

As highlighted in the above section, the proposed Distributed Book Printing Network explores the concept of creating an international network of digital print-on-demand facilities whereby print files can be shared to geographically dispersed locations. Then, in contrast to the standard practice of printing long runs and shipping globally, print service providers (PSPs) can produce books locally for retailers or even consumers.

The model incorporates a change from print-to-stock to a print-to-order model, which covers the production of short, ultra-short and single-copy print runs and is made possible with digital on-demand print solutions. This approach looks to reduce and, in some cases, eliminate medium- to long-distance shipping, while also enabling publishers to reduce time-to-market, increase reach and create a more agile and resilient supply chain.

Until now, the potential of decentralised production has been explored but not fully exploited. However, we believe that a Distributed Printing Network is essential for a more sustainable future for the industry, enabling small and medium-sized publishers, without

large printing quantities, and with low purchasing power, to optimise their supply chains and distribution processes. It's also important to highlight that a Distributed Book Printing Network should not be a purely commercial concept, but rather a collaboration between the various market participants, with the common goal of achieving a more environmental book distribution method.

How a Distributed Printing Network positively impacts the publishing industry
Following the creation of this concept, the members of the workstream have identified both the opportunities it opens for publishing and the challenges that it could address.

The key opportunities identified are as follows:

- **Reduced emissions:** As highlighted, by printing books locally to the point of sale, shipping is minimised and therefore emissions are lowered. In addition, on-demand book production has the potential to decrease carbon emissions in the manufacturing process.

- **Less inventory:** The shift from print-to-stock to print-to-order eliminates the need to store high quantities of books which historically has been a high cost on publishers' balance sheets. With consumer demand being unpredictable and resulting sales volumes therefore volatile, publishers can instruct production based on actual demand rather than inaccurate forecasts.

- **Better global availability:** Due to challenges such as rising energy and material costs and labour shortages, global supply chains are more complex and fragile, making it difficult to guarantee product supply. With decentralised production, supply chains can be regionalised, which opens access to a broader network of qualified suppliers. Additionally, using local PSPs enables publishers to improve global availability, even in developing markets, to expand their reach and diversify their portfolio.

- **Improved time-to-market:** Access to a broad global network of flexible production partners enables publishers to run a demand-driven business, which reduces time-to-market and ensures they're hitting book launch deadlines and maximising sales windows.

In addition, the members of the workstream assessed the business-critical needs of publishers and how the Distributed Book Printing Network would address these, as:

- **Selecting a dependable print partner**: Publishers have multiple considerations to take into account when selecting a PSP, whether it's their technical capabilities or reliability. The proposed network would reduce this resource-intensive selection process by giving publishers access to pre-selected PSPs that have been independently validated. This would include a review of their book printing skills, print-on-demand fulfillment capabilities, packaging and logistics, environmental performance, social responsibility and business ethics.

- **A smooth user experience:** Having an accessible online ordering platform is crucial to providing publishers and PSPs with a smooth experience when submitting and receiving jobs. This is particularly important in a global network that includes people from different countries with different languages and cultures. Therefore, the reliability, availability, accountability, transparency and security of the user interface would be determined at the formation stage of the network. This includes steps such as standardising all invoices processed across the network, fully automating payment processes, conducting financial reporting in near time and managing data in the cloud.

- **Manufacturing costs**: Factors including run length, page count, paper types and binding requirements, impact the manufacturing price for a book and therefore has a direct influence on the publishers' profits. The network would provide established regional benchmarks for fair pricing and support secure payments.

- **High admin cost**: In addition to manufacturing costs, publishers must consider additional expenditure linked to initiation, processing, monitoring and billing. The network would feature necessary processes such as easy and safe ordering, intuitive dashboards for managing orders, and secure file transfer.

What's next?

At this stage, the results and findings of the working group aren't complete but form a basis for future discussion and exploration of the concept. The next steps identified include further exploring the technologies that would support such a network and

surveying key industry stakeholders to better understand their needs and usage requirements within a network.

Summarising the findings of the workstream to date, a full whitepaper has been produced and can be downloaded from the International Publishers Association's website here: https://sdg.internationalpublishers.org/cop26-accelerator/. As the initiative evolves further, the whitepaper will be developed to focus on topics including logistics and distribution, and the environmental credibility of the network. These results will be shared with the whole publishing community.

If you would like to find out more about the progress of the initiative, you can also speak to Tino Wägelein and Jörg Engelstädter – members of the Publishing 2030 Accelerator group – on Canon's stand (Hall 8a / B41-1 – B41-8) at drupa 2024.