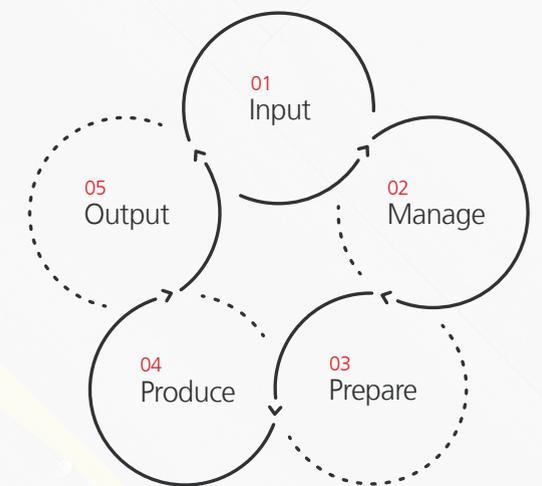


Print Service
Provider Edition

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Ricoh Software & Services | Ecosystem eBook Series

The Print Service Provider's Ecosystem



Introduction

It's complex, and though we can't all agree on the term, we believe in the process and its requirements.

Some reduce the term 'ecosystem' to the print process from concept to delivery. Others describe a convoluted process with many industry buzzwords including end-to-end and optimization.

This is a preface to a 5-part series for print service providers that breaks down every step in a print production software ecosystem in vivid detail to simplify what can become ridiculously complicated.

What do we know?

We know that long gone are the days of long print runs using one process. Print service providers (PSPs) are under pressure to evolve, stay current and serve their customers who continually want custom work in a timely fashion without paying too much more. This push comes from the role printing plays in the communications landscape and continuous technology improvements in the print production process.

Modern commercial printing operations produce hundreds to thousands of print orders using many analog and digital printing technologies each day. Therefore, automation and integration of the value chain are your competitive differentiators.

The new norms are fast turnarounds, sometimes measured in hours, and print quality acceptable to the client. Print buyers and agencies need online tools to submit orders, collaborate on change requests, approve, and monitor the order status. For commercial printers to thrive in this environment, they must connect and flatten the printing value chain. It takes a just-in-time mindset to facilitate rapid ordering and support with their suppliers and vendors. An integrated and automated workflow, driven by data and software, is the fastest route to connect the ecosystem.

Building a resilient ecosystem requires attention to the five critical stages of the workflow: **input, manage, prepare, produce, and output.**

Let's explore the challenges, opportunities, and solutions for each stage of print production.



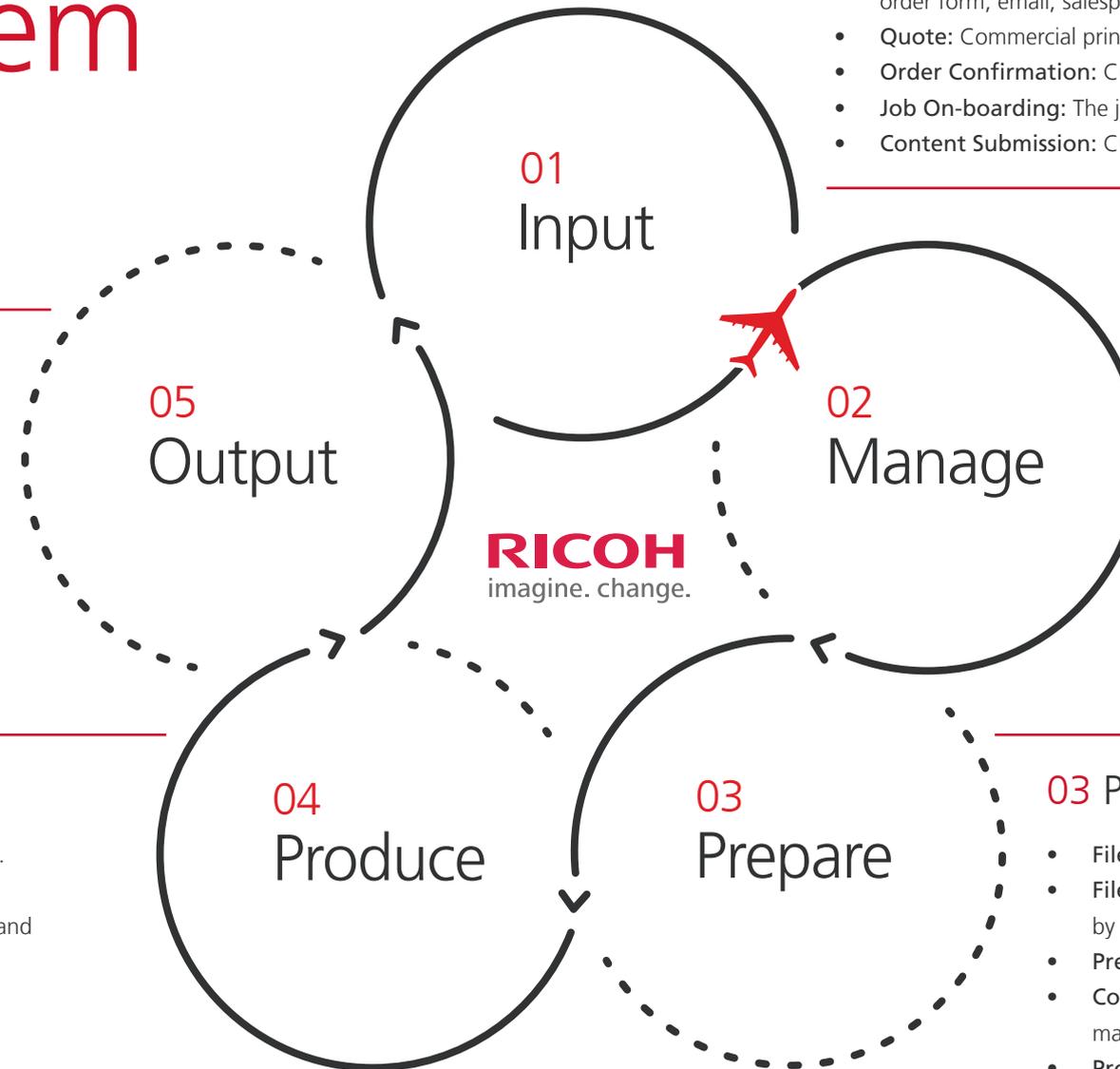
The Ecosystem

05 Output

- **Print:** Putting the image on the paper.
- **Finishing:** Converting the print into the final product.
- **Shipping/Delivery:** Accurate and combined shipments for cost-effective and timely delivery.
- **Billing and Accounts Receivable:** Reconcile production versus estimate for any incremental charges before invoicing.
- **Final review:** Did the job complete on time within established cost and performance ranges?

04 Produce

- **Ganging:** Combine smaller jobs into larger ones for more efficient print runs.
- **Imposition:** Arrange the pages for print and finishing into a final product.
- **Shop floor optimization:** Electronic scheduling, shop floor data collection, and managing of KPIs to meet delivery dates and shop floor resources.



01 Input

- **Order Request:** Customer requests print through several possible channels, including web-to-print, online order form, email, salesperson, or customer support representative.
- **Quote:** Commercial print shop provides a quote to the customer with pricing for approval.
- **Order Confirmation:** Customer approves the order.
- **Job On-boarding:** The job details are standardized and complete before converting to an active job ticket.
- **Content Submission:** Customer uploads artwork and data files or artwork is created in-house.

02 Manage

- **Job Ticketing:** Print shop converts the order into a production job ticket.
- **Manage the job inputs:** Use a print MIS to manage materials, purchase orders, and inventory.
- **Monitor to Manage:** Capture shop floor data to manage against KPIs like equipment uptime and SLA performance.

03 Prepare

- **File Retrieval:** Customer artwork and files are input into the production print workflow.
- **File and data stream conversions:** Convert customers' files into the file format used by the commercial print workflow, if needed.
- **Preflight:** Find and fix errors creating a streamlined file for downstream processing.
- **Color conversion and management:** Adjust colors and apply ICC profiles for color matching and control.
- **Proofing and approval:** Get signoff from the customer through electronic or hard copy proofing.



Input

The Challenge

Commercial printers provide a wide range of print services to diverse customers using many forms of printing technology. The production processes can be unique from job to job as each goes through the shop floor. The method for on-boarding jobs, however, should not be unique. Job on-boarding must be standardized and repeatable to capture the customer requirements needed for print production.

The problem is that email is the defacto way to receive orders in lieu of a web-to-print (W2P) or another submission process for many commercial printers. It might seem like the best route into production, but it has limitations. Someone must open the email and extract information into specifications and job tickets. The manual touchpoints associated with email introduce too much variation and interpretation, leading to costly delays and production errors. Commercial printers should use software to standardize requests for orders which also provides a better customer experience.

70%

of consumers value ecosystem offerings that simplify their purchase journey

The Opportunity

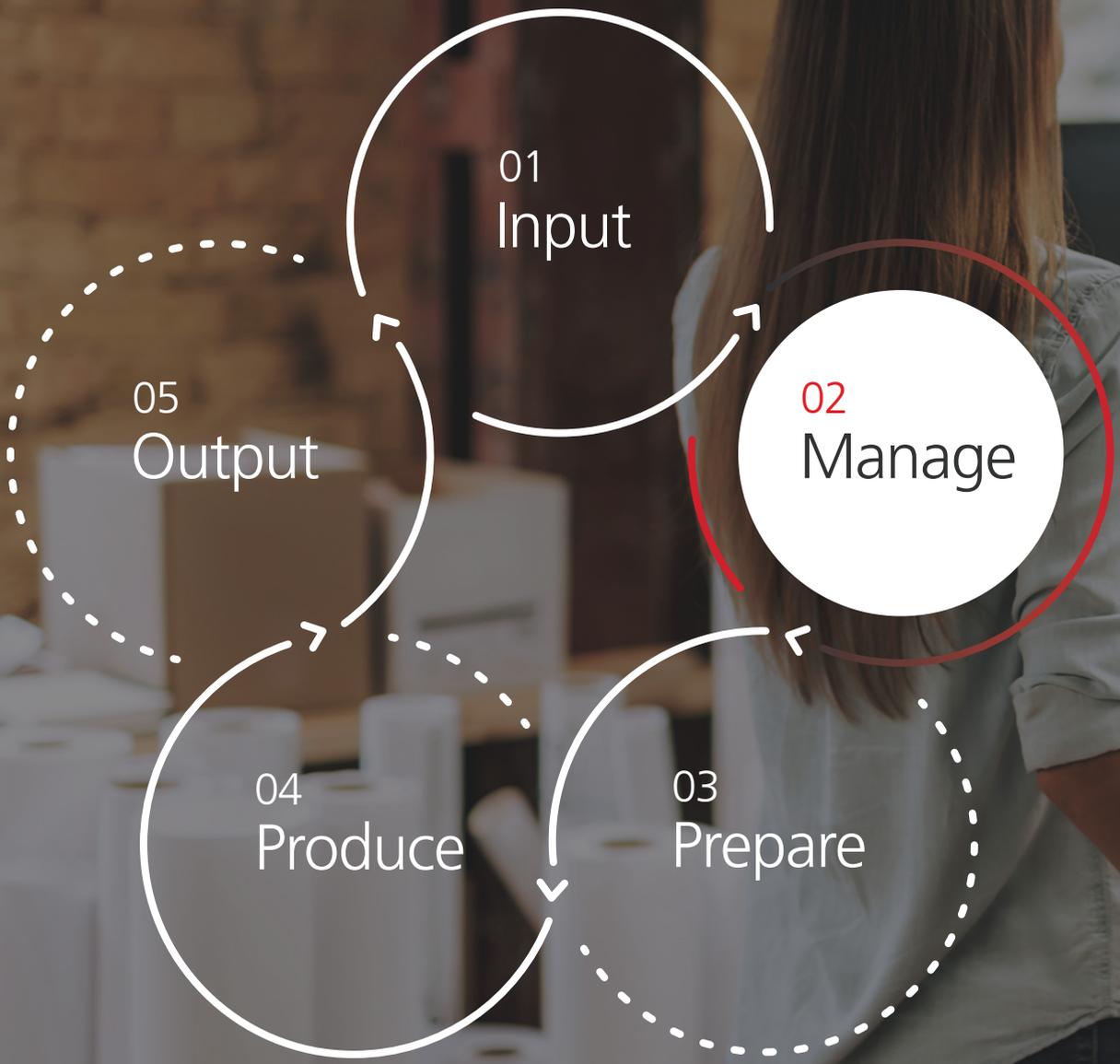
People capturing job specifications creates risk because it's easy to develop a personal shorthand for everything from paper sizes to due dates. That shorthand sets off a chain of emails, chats, phone calls, and conversations that consume time and resources for every job. W2P solutions or integrations with the client's procurement software are ideal for improving the ordering experience for users and job on-boarding into the print shop.

For top clients with higher volumes, digital asset management and marketing asset management software may also be necessary to ensure design asset version control and to provide end-users with a catalog of ready-made templates to order.

Every touchpoint removed and additional services offered strengthens the profitability of the job.

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Manage

The Challenge

Metrics and tracking matter. Operations based on spreadsheets and physical job tickets are at a disadvantage. Using these manual tools creates operational gaps in knowing the available capacity and the shop floor status. There is no opportunity to capture timely data to monitor the efficiency and effectiveness of production. The goal of commercial printers is to create a production process and shop floor that runs on autopilot, not by wasting money through unnecessary errors eroding profits. There are many headwinds to reaching that level of automation but managing the shop floor by leveraging your business systems to monitor key production metrics is critical.

The Opportunity

Most mid and high-volume commercial printers use a print management information system (MIS). The competitive advantage then becomes how effectively the operation uses the print MIS. A print MIS is the brain of the print operation and should be the single record of truth for all customer and production information. It manages every element of the customer and business records covering estimating, quoting, costing, job ticketing, tracking, job costing, scheduling, inventory management, purchasing, and, in some cases, accounting.

As part of the print MIS or as a standalone tool, dashboards provide up-to-date information on overall equipment effectiveness (OEE), capacity, on-time delivery performance, and other critical operational metrics to help manage the business.

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Prepare

The Challenge

The essence of preparation is understanding the job requirements and the metrics that determine successful production and delivery, which may change based on the print application. Although some commercial printers offer creative design services, which gives them control of the files and potentially additional revenue, the main challenge is preparing customer-supplied artwork and data files. All production files need additional preparation to move smoothly into production, which is where preflighting, color management, imposition, and ganging take over.

Preparing files using a repeatable and standardized process minimizes the chance for more costly errors in print and finishing.

The Opportunity

The type of print application and job specifications, determine the processing steps to prepare the files. For instance, direct mail needs data cleansing and postal optimization, in addition to preparing the artwork, while a static brochure requires artwork preparation and proper imposition. Common preparation steps of the print job include file retrieval, file conversions, data stream transformations, preflighting, file optimization, color conversions, color management, proofing and approval, ganging, and imposition.

Each application needs a documented production route identifying the processing steps and required software solutions. An automated workflow management solution can handle most of the preparation tasks and integrate with other specialist solutions for more complex tasks like data stream transformations if needed.

The key is to have, and to integrate, the right mix of tools for the highest possible level of streamlined efficiencies, eliminating islands of automation and ensuring accuracy in production.

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Produce

The Challenge

Today's commercial printers produce multiple types of print applications across analog and digital printing technologies. For some, the standard print work may be cut-sheet pages with some binding, while others may focus on print and mail that requires inserting and sorting. Still, others can use a range of wide-format devices for sign and label applications in addition to their production cut-sheet and continuous feed presses.

The variety of output types strains production and makes the preceding input, manage, and prepare stages critical to smooth shop floor operation. Having the right tools and processes, automated and integrated, optimizes the files for production.

The Opportunity

File optimization techniques ensure the content is normalized for its intended output channel, whether intended for print, mailing, or digital delivery. Optimization can reduce image resolutions, consolidate fonts, and remove objects not essential for the output type. These optimizations often reduce the file size and speed up the processing at the digital front end (DFE).

Ganging, sometimes called batching, provides another optimization level for print files where files are combined based on shared characteristics. For sheet-fed environments, color and finishing can be the criteria used for ganging. For continuous feed environments, it might be paper.

Options in the print MIS or specialized imposition software allow the print shop to set rules for when and how jobs are combined. The resulting larger print jobs minimize material usage and equipment setup, allowing more efficient use of resources.

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ProcessDirector™



Output

The Challenge

Conditions on the shop floor vary at any given moment, so flexibility is critical for any last-minute production changes. For example, equipment may go offline for emergency maintenance or repair. Jobs may need to shift to another device and format size. Workflow solutions to help manage the schedule, shift work as required, and balance the workload are helpful to reach the finish line and meet customer deadlines.

The job doesn't finish when it comes off of the press. There are still critical steps to confirm the job was delivered on time, ran efficiently through the production floor without bottlenecks or delay, and was invoiced correctly. These steps must be completed to finalize delivery and ensure that it met the customer's intent.

The Opportunity

The print workflow must excel in the face of uncertain schedules and tight turnarounds. Output management solutions keep print operations moving by intelligently splitting jobs to multiple printers (for example, black and white versus color). These solutions shift work to the most efficient and available printing device, by managing multiple printers and queues from a single view, having a point of control to maximize productivity and be able to add more jobs on press.

Print MIS and data analytics tools ensure the print shop meets or exceeds performance metrics. Supervisors can also spot and take corrective action for any bottlenecks or recurring issues affecting individual jobs or the production schedule due to issues with equipment, departments, or staff.

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Are You Ready?

Commercial printers are small-batch, custom manufacturers of printed products. Many variables must be controlled and managed across the production floor at any given time to optimize interactions across the value chain to control costs and profitability.

When jobs are on-boarded efficiently, the costs of on-boarding go down. When systems are integrated with suppliers to update stock availability and costs, estimators understand their options and price appropriately. When the job specifications are known, files can be prepared to minimize material usage and production times.

The right devices to handle output are important. The effective use of software across every function and process to integrate the print value chain makes your employees better at their jobs, improves operations, and unlocks value for your commercial print company.

If you're ready to optimize your ecosystem and be ready for a smooth on-boarding and take off, continue to the Input stage of the ecosystem in the first of a five-part series to drive your efficiencies and streamline your output. [Contact us](#) for more information.

Get The Next eBook: Input



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About Ricoh

Ricoh is empowering digital workplaces using innovative technologies and services enabling individuals to work smarter. For more than 80 years, Ricoh has been driving innovation and is a leading provider of document management solutions, IT services, communication services, commercial and industrial printing, digital cameras, and industrial systems.

Headquartered in Tokyo, Ricoh Group operates in approximately 200 countries and regions. In the financial year ended March 2019, Ricoh Group had worldwide sales of 2,013 billion yen (approx. 18.1 billion USD).

For further information visit www.ricohsoftware.com

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