

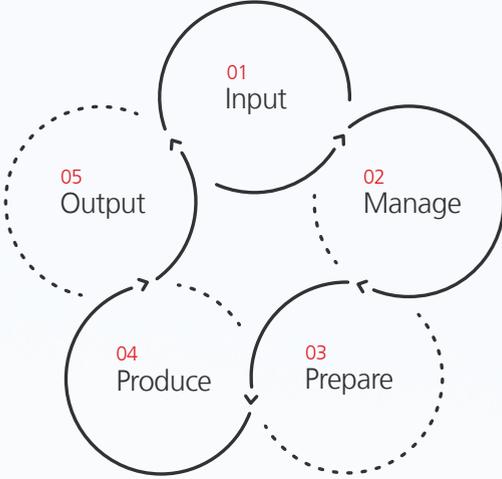


In-Plant Printer
Edition

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Ricoh Software & Services | Ecosystem eBook Series

The In-Plant Printer's Ecosystem



The In-Plant Printer's Ecosystem

Now more than ever, in-plants provide valuable services to an evolving workplace. Remote and hybrid work environments are becoming the norm, along with employee requirements for printed materials. As a result, in-plant print operations must become more flexible and efficient.

Today and going forward, employees need the ability to easily request, procure, and reconcile budgets for their print requests, whether sitting in the office, from the road, or at their homes. The solution is a robust ecosystem and smart workflow processes that keep the in-plant operationally viable while delighting customers.

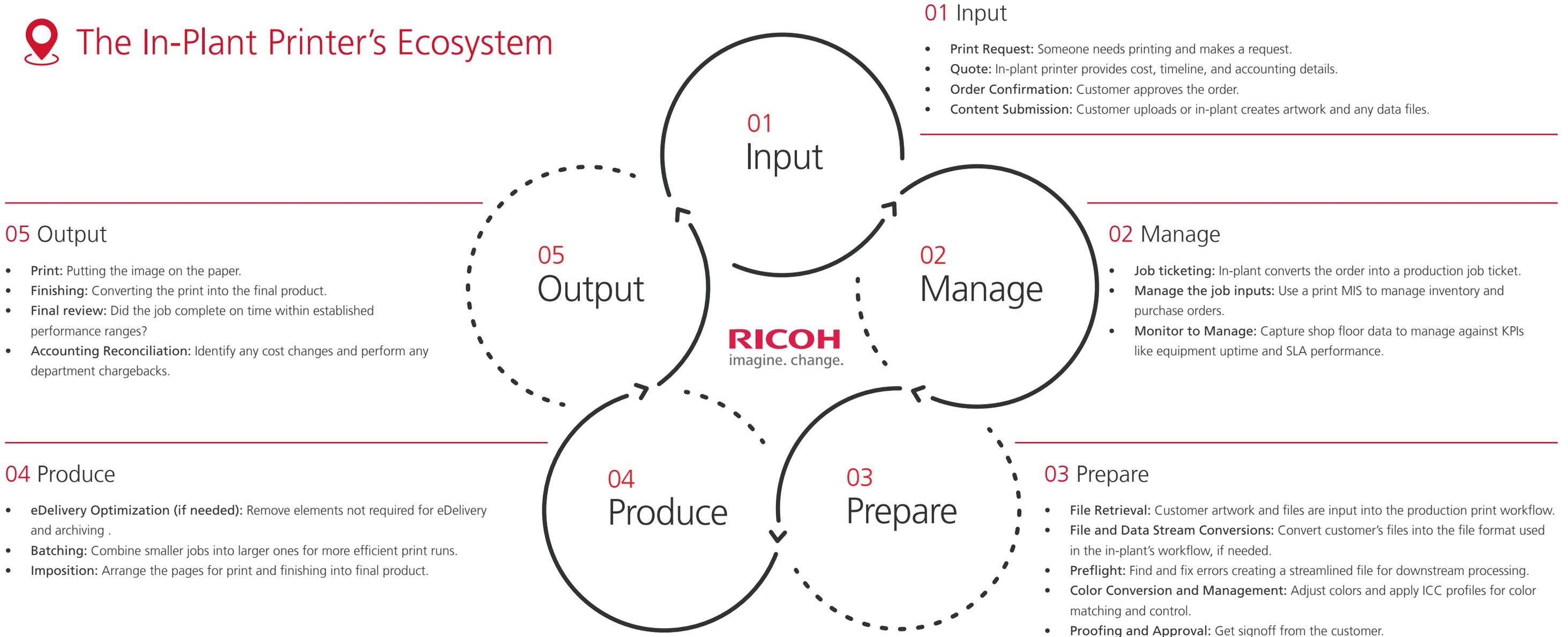
Building that ecosystem requires attention to the five critical stages of the workflow: **input, manage, prepare, produce, and output**. Let's explore the challenges, opportunities, and solutions for each stage of print production.

66%

of all companies
are adopting a hybrid
working model



The In-Plant Printer's Ecosystem



01 Input

- **Print Request:** Someone needs printing and makes a request.
- **Quote:** In-plant printer provides cost, timeline, and accounting details.
- **Order Confirmation:** Customer approves the order.
- **Content Submission:** Customer uploads or in-plant creates artwork and any data files.

02 Manage

- **Job ticketing:** In-plant converts the order into a production job ticket.
- **Manage the job inputs:** Use a print MIS to manage inventory and purchase orders.
- **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 customer's files into the file format used in the in-plant's 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.

04 Produce

05 Output

- **Print:** Putting the image on the paper.
- **Finishing:** Converting the print into the final product.
- **Final review:** Did the job complete on time within established performance ranges?
- **Accounting Reconciliation:** Identify any cost changes and perform any department chargebacks.

- **eDelivery Optimization (if needed):** Remove elements not required for eDelivery and archiving .
- **Batching:** Combine smaller jobs into larger ones for more efficient print runs.
- **Imposition:** Arrange the pages for print and finishing into final product.



Input

The Challenge

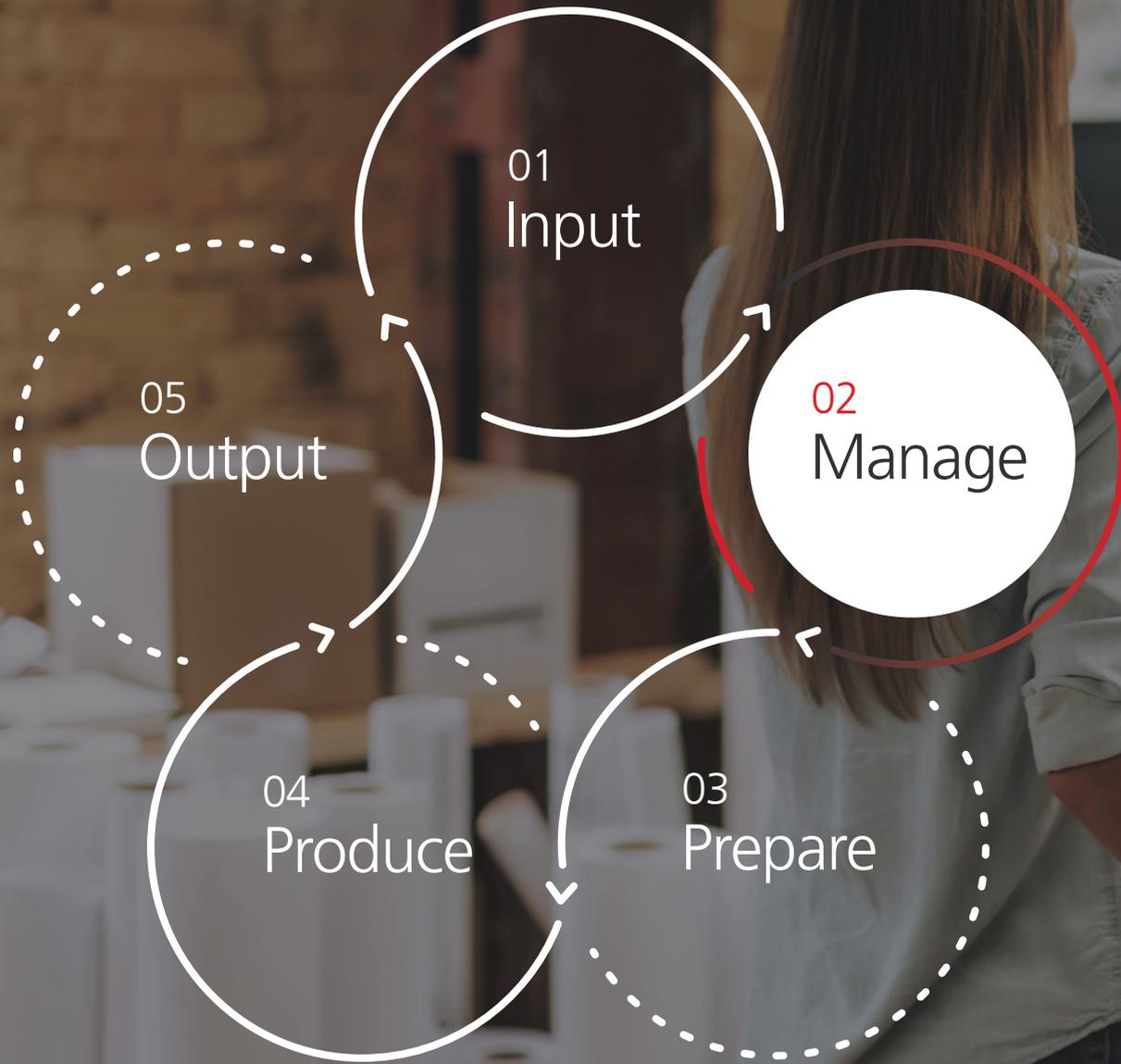
Receiving, responding to, and on-boarding requests for prints from across the organization is a daunting task. In-plants work with diverse departments, each with a unique set of print requirements to support their lines of business. Yet, this stage is the most important for automation and standardization since it provides the basis for all other print processes. The input stage should focus on minimizing the effort for users to request print while also capturing the specifications required to produce the job.

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. Online ordering systems, whether web-to-print or enterprise procurement solutions are ideal for improving the ordering experience for users and job on-boarding for the in-plant. Digital asset management software that ensures the right assets and versions are available, along with marketing asset management that can provide a catalog of ready-made templates to order, can complement job on-boarding depending on the organization's needs.

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Manage

The Challenge

Creating a robust in-plant involves managing the flow of work through the print shop while controlling costs and meeting service level agreements (SLAs) for timely delivery. Operations based on spreadsheets and physical job tickets are at a disadvantage. Using these manual tools creates operational gaps in knowing the available capacity, the status of the shop floor, and timely data to monitor the efficiency and effectiveness of production.

The Opportunity

Managing your in-plant operation to a higher level of accuracy and detail requires a commitment to implement and use a print MIS solution, along with a data analytics tool, to manage operations. 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 customer and business records covering estimating, quoting, costing, job ticketing, tracking, job costing, scheduling, inventory management, purchasing, and, in some cases, accounting. Data analysis through operational dashboards customized for managers and operators rely on data analytics tools or, in some cases, an additional business intelligent module of the print MIS.

Having dashboards that provide up-to-date information on capacity, SLA performance, and other critical operational metrics to help manage the overall business and course-correct where required to manage resources most efficiently.

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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 changes based on the print application. Some in-plants offer design and composition services and may be responsible for creating the production files, cataloging versions, and maintaining photo and graphic assets used in their projects. The challenge is often in 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 batching solutions are critical.

The Opportunity

The type of print application, along with the job specifications, determines the processing steps required to prepare the files. Direct mail needs data cleansing and postal optimization, in addition to preparing the artwork. A static brochure, however, needs artwork preparation and proper imposition. Common preparation steps include file retrieval, file conversions, data stream transformations, preflighting, file optimization, color conversions, color management, proofing and approval, batching, and imposition.

Each application needs a documented workflow map 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 transformation and batching if needed.

The key is to have, and to integrate, the right tools for the highest level of automation possible.

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Produce

The Challenge

Today's in-plant operations often produce multiple types of print applications across multiple printing technologies, in addition to offering mailing and electronic delivery. 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 may use a range of wide-format devices for sign and label applications in addition to their production cut-sheet and continuous feed presses. The print production channels are often augmented by e-delivery channels and requirements for archiving, which may have specific file structure requirements.

The multiple types of output strain production and make the preceding input, manage, and prepare stages critical to a smooth shop floor operation.

The Opportunity

File optimization techniques ensure the content is normalized for its intended output channel, whether in print or digital format. Files for e-delivery and archiving contain elements that add unnecessary size and complexity, resulting in more storage and bandwidth requirements. Optimization can reduce image resolutions, consolidate fonts, and remove objects not essential to digital delivery. Many of the same techniques can also be applied to files destined for printing.

Batching, sometimes called concatenation, provides another level of optimization for print files where files are combined based on shared characteristics. For continuous feed environments, a common paper can be the driver. For sheet-fed environments, it might be the finishing. Software allows the in-plant 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 the in-plant resources.

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Output

The Challenge

Conditions on the shop floor vary at any given moment, so flexibility is critical for any last-minute production changes. 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 SLAs.

There are still critical steps to confirm the job was delivered on time, ran efficiently through the in-plant without bottlenecks or delay, and is accounted for financially. These steps must be completed to finalize delivery.

The Opportunity

The print shop floor workflow must excel in the face of uncertain schedules and tight turnarounds. Output management solutions keep print operations moving by smart splitting of jobs to multiple printers (for example, black and white versus color), shifting work to the most efficient and available printing device, and management of multiple printers and queues from a single view and point of control.

Print MIS and data analytics tools ensure the print shop is meeting or exceeding SLA performance. Supervisors can also spot and take corrective action for any bottlenecks or recurring issues that affect operational metrics like equipment uptime.

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Are You Ready?

Today's in-plants have more customers to serve from more locations, with each asking for a more diverse set of print and communication solutions. Dated, manually intensive processes are hurdles to fulfilling the needs of users and the organization. Efficiency and automation are powerful allies for success.

When jobs are on-boarded efficiently, the costs go down. When job specifications are captured in templates, people are no longer needed to chase them. When systems are integrated to update stock availability and costs, estimators understand their options and price appropriately.

Across every function and process, effective use of software solutions makes your employees better at their jobs, improves the in-plant operation and unlocks value for the organization.

It's all in a smooth handoff. If you're ready to start simplifying and optimizing your in-plant ecosystem, [contact us](#) for more information.

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70%

of consumers
value ecosystem
offerings that simplify
their purchase journey

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).

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