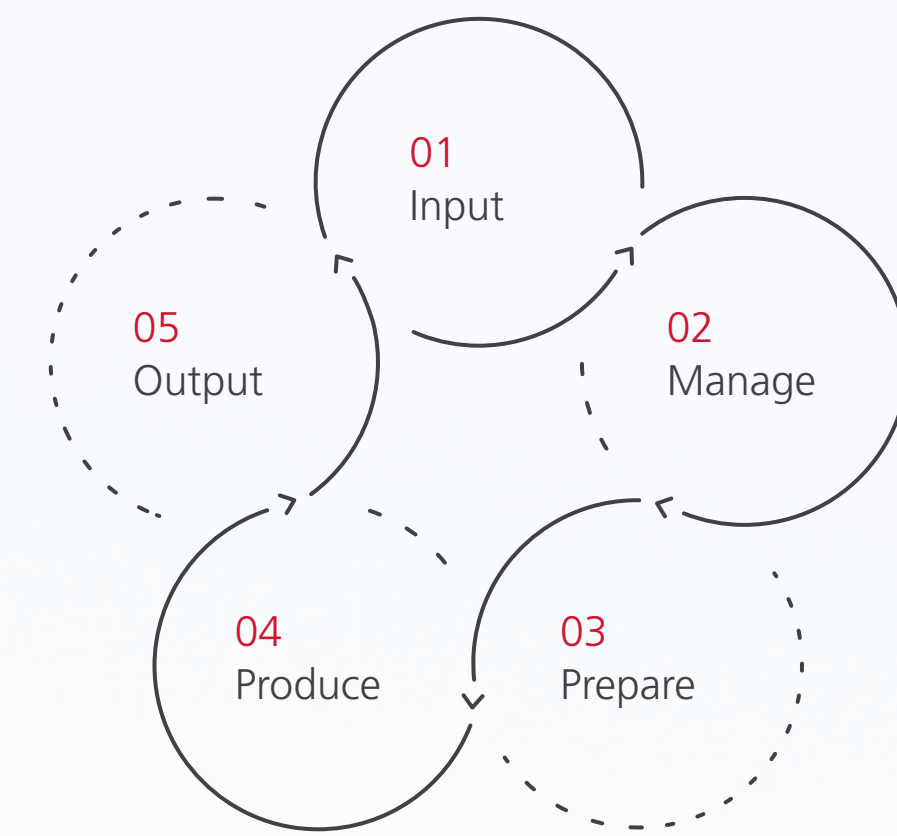In-Plant
Printer Edition

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Ricoh Software & Services | Ecosystem eBook Series

The In-Plant Printer's **Ecosystem**

01 Input
02 Manage
03 Prepare
04 Produce
05 Output

The In-Plant Printer's Ecosystem

The print ecosystem is complex, and though we can't all agree on a simple definition of the term, we can agree that there is a process and specific requirements based on your customers' needs and segments you service. For in-house printing, each department will have their own specifications and job variables, but the print process will also have commonalities.

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-house print operation processes must become more flexible and efficient to prove their worth.

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

Before You Start:

You may be wondering 'why the runners and baton'? As indicated, the print ecosystem is often a difficult process to experience and therefore explain, so we thought of using a metaphor that makes it easy: the teamwork of a relay race.

Think of the parallels: every runner has their own specific role, and nobody wins without all people working seamlessly together, passing off their section to their teammate, and ensuring they are ready to run or 'operate' at peak performance.
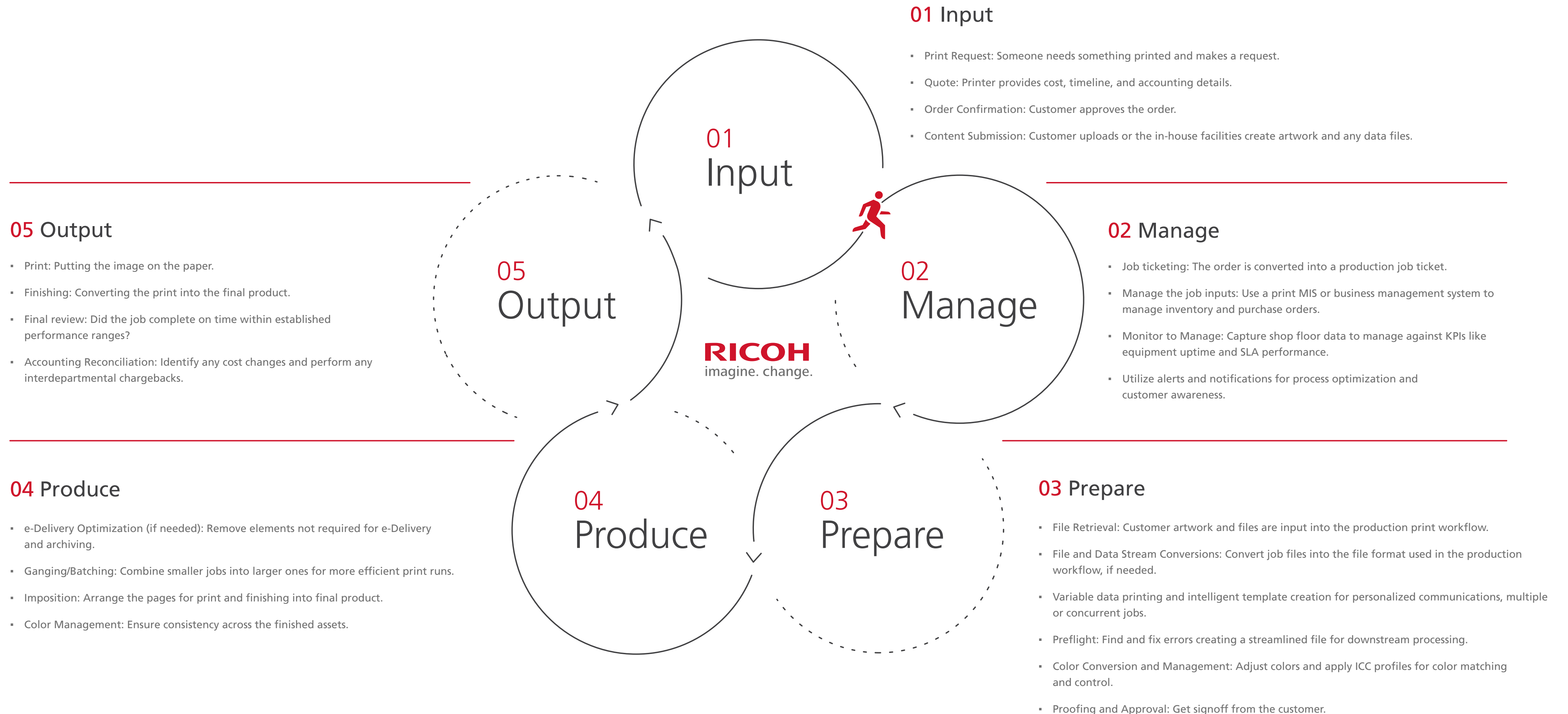
Now, let's apply that to the print ecosystem.

66%

of all companies are adopting a hybrid working model

The Ecosystem

01 Input

- Print Request: Someone needs something printed and makes a request.
- Quote: Printer provides cost, timeline, and accounting details.
- Order Confirmation: Customer approves the order.
- Content Submission: Customer uploads or the in-house facilities create artwork and any data files.

01 Input

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 interdepartmental chargebacks.

05 Output

02 Manage

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02 Manage

- Job ticketing: The order is converted into a production job ticket.
- Manage the job inputs: Use a print MIS or business management system to manage inventory and purchase orders.
- Monitor to Manage: Capture shop floor data to manage against KPIs like equipment uptime and SLA performance.
- Utilize alerts and notifications for process optimization and customer awareness.

04 Produce

- e-Delivery Optimization (if needed): Remove elements not required for e-Delivery and archiving.
- Ganging/Batching: Combine smaller jobs into larger ones for more efficient print runs.
- Imposition: Arrange the pages for print and finishing into final product.
- Color Management: Ensure consistency across the finished assets.

04 Produce

03 Prepare

03 Prepare

- File Retrieval: Customer artwork and files are input into the production print workflow.
- File and Data Stream Conversions: Convert job files into the file format used in the production workflow, if needed.
- Variable data printing and intelligent template creation for personalized communications, multiple or concurrent jobs.
- 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.

Input
ALWAYS
Equals

Input

02
Manage

04
Produce

03
Prepare

Input

The Challenge

Receiving, responding to, and onboarding requests for prints from across the organization is a daunting task. The in-plant staff works with diverse departments, each with a unique set of print requirements to support their line 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 onboarding.
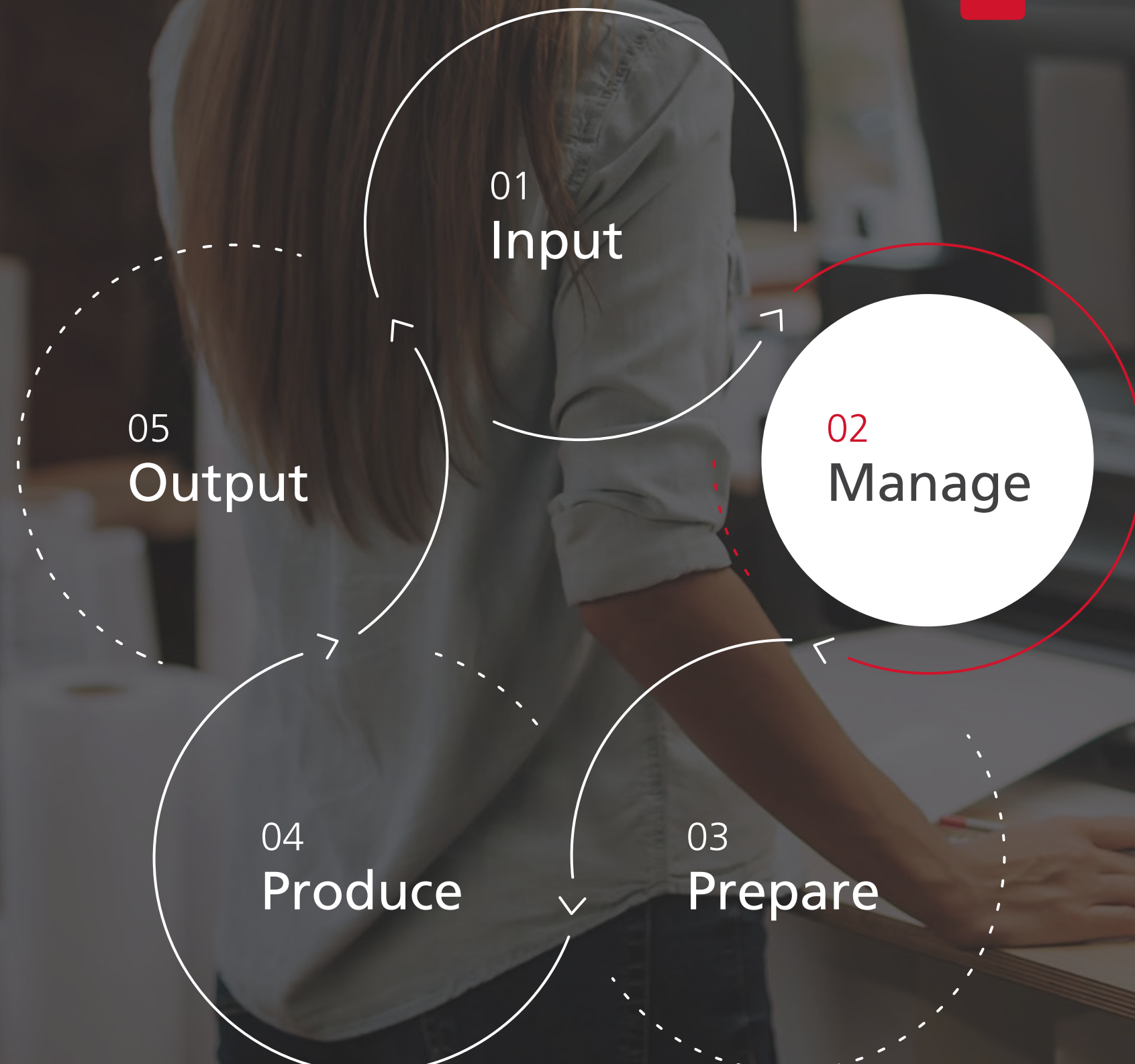
Digital asset management software offers personalization and collaboration, and ensures the right assets and versions are available. Coupled with marketing asset management, printers can provide a catalog of ready-made templates to order and can complement job onboarding depending on the organization's needs.

In-house print facilities should use input software and processes to standardize requests for orders and reorders which would certainly reduce the processing time down to hours and also provide a better customer experience.

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Without data, you're just another person with an opinion

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Manage

The Challenge

Creating a robust operation involves managing the flow of work through the operation 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 production floor, and timely data to monitor the efficiency and effectiveness of production.

The Opportunity

Managing your operation to a higher level of accuracy and detail requires a commitment to implement and use a business management solution, along with a data analytics tool, to manage operations. Print operations should have a single record of truth for all customer and production information. It manages every element of customer and business records covering estimating, quoting, job ticketing, tracking, job costing, scheduling, inventory management, purchasing, and, in some cases, accounting. Data analysis through operational dashboards customized for managers and operators relies on data analytics tools or, in some cases, an additional business intelligent module of a 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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Your brand is your identity and reputation.
Why leave consistency to chance with a subpar toolkit?

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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 facilities 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 impositioning. Common preparation steps include file retrieval, file conversions, data stream transformations, preflighting, file optimization, color conversions, color management, proofing and approval, batching, and imposition.

Preparing files using a repeatable and standardized process minimizes the chance for more costly errors in print and finishing. Having processes that streamline makeready files streamlines often complex prepress steps, saving time to put more jobs on press and remove the cost of unnecessary manual errors. Consistency in layout, colors, fonts and image quality are the backbone of any good print job.

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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Quality in a service or product is not what you put into it but **what the client gets out of it**

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Produce

The Challenge

Today's in-house print 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 sheetfed 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 sheetfed 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.

Ganging, or batching, 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 sheetfed environments, it might be the finishing.

Software allows the organization 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 resources.

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Output

The Challenge

Conditions on the production 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 production 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.

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?

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 onboarded 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 overall operation and unlocks value for the organization.

It's all in a smooth handoff. If you're ready to start simplifying and optimizing your ecosystem*, contact us for more information.

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*Check with your local representatives to see what products and services are available in your region.

70%
of consumers value ecosystem offerings that simplify their purchase journey

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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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