

**In-Plant
Printer Edition**

RICOH
imagine. change.

Ricoh Software & Services | Ecosystem eBook Series



Produce: Winning The Production Race

Winning The Production Race

Print production is more than getting a job to the printer in the same way that a race is not the starting point for a runner. To be successful, the work and the training, goes in ahead of the event. For the runner, there is strength and endurance training, stretching, and selecting the appropriate shoes for the type of track and distance. For the printer, there is the input process that automates the job onboarding and normalises files, the management process that captures data to be analysed to eliminate bottlenecks, and the preparation steps guided by a production map so that everyone understands how jobs move through production. That brings us here.

Using the relay analogy, the goals for the runner begin with an understanding of their current physical state: controlling their heart rate throughout the race is critical because that is how they optimize their energy output to get to the finish, sprints require different energy management than marathons. Each participant needs to understand how they will expend energy no matter what type of race they run with every race requiring a plan to manage their energy usage and replenishment for success.

Similarly, In-Plant printers must set up their shops for successful print production by building input, management, and preparation elements into the print workflow that promotes efficient use of resources – the energy in the system. Their challenge is that they generally produce more than one type of work. Winning the production race requires a flexible production environment, with as much automation as possible, to support the growing workloads, shorter delivery timeframes, and increasing requirements for cost control.

PRODUCE: Making it Happen

Your jobs are onboarded (INPUT), estimating and output specifications are under control (MANAGE), and your files are ready for production and output (PREPARE).

Now, everything needs to work together to match your customer’s specifications and expectations. But how?

Print production is so much more than putting marks on paper. It’s about document assembly, file optimization, and smart shop floor management enabling current job output and providing long-term flexibility to support the next generation of output. It’s about enabling continuous feed, sheed fed, labels, lighter and heavier substrates, and robotic insertion, to name a few.



Quality comes not from inspection, but improvement of the production process.
W. Edward Deming

The Modern In-Plant Printer

Every In-Plant juggles a diverse set of print jobs. For some, the standard print work may be sheet fed pages with some binding, while others may focus on print and mail that requires inserting and sorting. Others 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.

File optimization becomes essential so that the output arrives at its destination ready for use. With effective queue management and load balancing, optimized files can move from one process to another without manual handling. Here are some considerations for your production map:

Online Delivery Files

Your files have options: print, e-Delivery and archived. Files that are not printed but instead targeted to e-Delivery platforms and archiving systems have different requirements from print files.

Each comes with some potential challenges:

- **Some may carry images at a higher resolution than required for print, making them larger than needed and more complex to process.**
- **Others may contain indexing records and tracking information to alert the sending system when they are viewed or if they are not viewed within a set time.**
- **Still, others may also have expiration dates for archiving. They may originate in and carry information from enterprise systems or network programs that produce a print stream not intended for online delivery, but even some PDF files can be troublesome.**

All of these are important considerations because the file size may not have been a consideration when the system was designed, but it is when files are being transmitted across networks, to mobile phones, and into cloud and on-premise archives.

Optimization for these files should focus on removing or streamlining the characteristics that add to their size. The size of images and graphics is a place to begin, followed by a review of the files for other non-essential elements that can be eliminated.



Pro Tip: Look for fonts with similar names and older font formats that are not as streamlined. Preflighting and file optimization tools are the place to begin creating better production files, but it will be critical to review all upstream processes to set options fitting the intended output channels.

Producing Your Print Jobs

Making it Happen



- **Job processing: hardware alignment, quality controls**
- **Risk management**
- **Automated production minimizing manual intervention**

Warehousing and Distribution



- **Logic-based, automated fulfillment and tracking**
- **System of record for all related materials, labels and box content**
- **Centralized print operations**

Preparing for Output



- **Fulfillment capabilities: courier integration, labels and tracking**
- **Customer service alignment, job and asset archiving**
- **Financial reporting, cash flow management**

Print Delivery Files

The Challenge

Production print files can originate in programs as diverse as enterprise applications and graphic design programs which can create a multitude of issues.

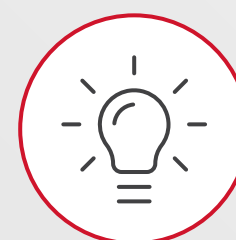
Many print files begin in a design program and are passed through other processes when there are variable data or image elements. That path to becoming a print file can add redundant features that add complexity to downstream processing (e.g., the digital front end) or, at worst, cause processing errors or artifacts when printed.

In-Plants commonly find that they have many smaller files in addition to larger production runs. Multiple small print jobs add a processing and management burden, as well as cost. In addition to the preflighting and optimization that should be part of every workflow, a great approach is to look at options for batching similar types of files to combine many small runs into more efficient longer runs.

Batching brings together jobs that share characteristics. For continuous feed environments, a common paper can be the driver. For sheet-fed environments, it might be the finishing. But there is more to consider. The goal is to look at the type of file to group graphically rich work separately from work that is mainly text. Training manuals with limited graphic elements can pair with runs of letters and invoices, but not with image-rich brochures. A best practice is to group files based on the color profiles they use in addition to the paper type.

The Solution

Using batching techniques creates a relay for your print by automatically moving from job to job through the file until the work is complete. It is an excellent path to faster throughput, reducing costs, and increasing capacity. The cost reductions come from reducing the waste generated by starting and ending smaller jobs as well as the faster production time, bringing more capacity to the production floor.



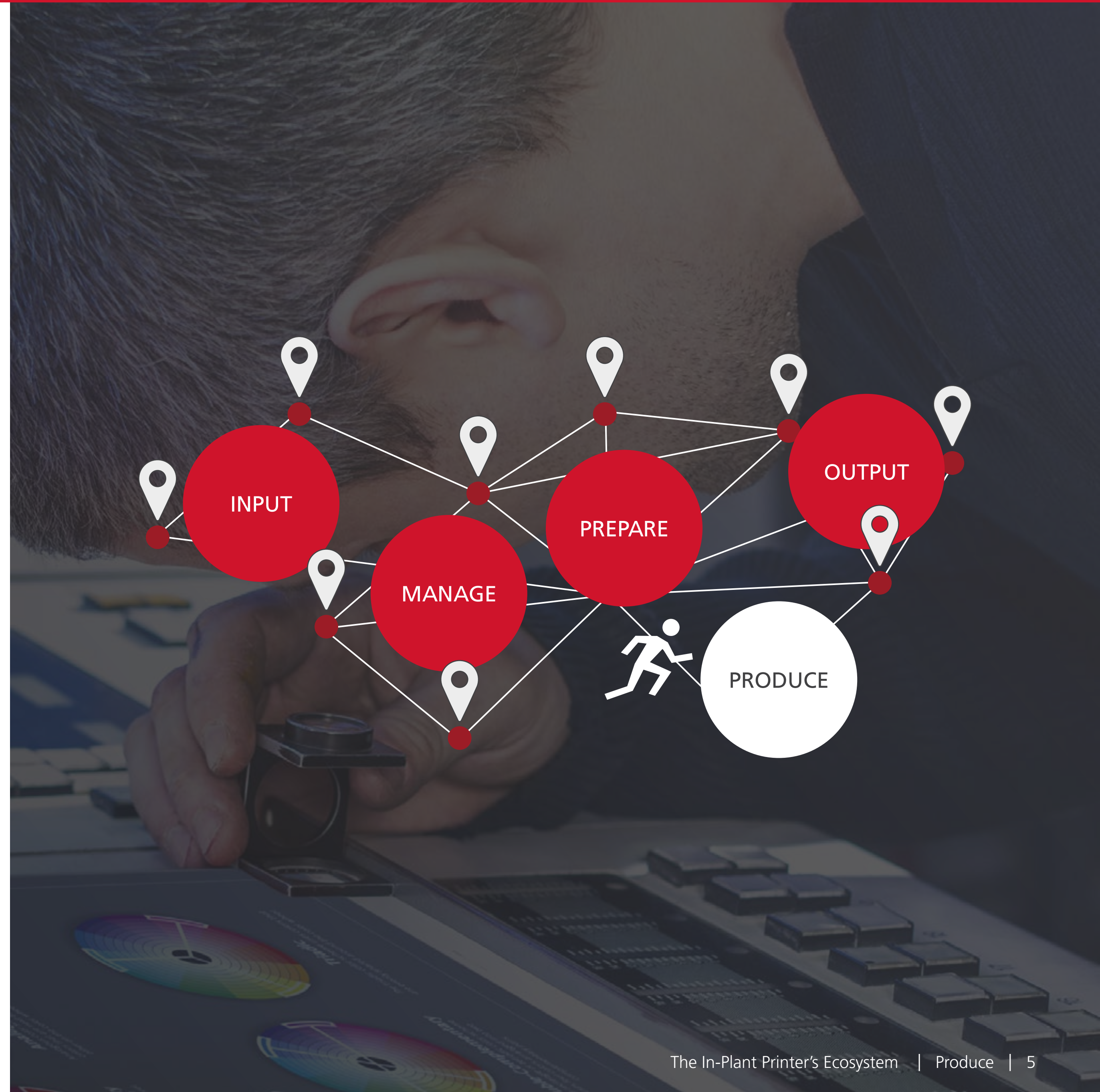
Pro Tip: Always be ready for change

Specifications and resources can change or be modified without reasonable notice to create and apply a new plan. Logic, data and measurable alternatives are required for a smooth, positive finish.

What Does Produce Stage of Your Workflow Really Look Like?

Before you start, check the following:

- Do you understand the kind of a job it is and its overall fulfillment requirements? (ex. barcodes, mailing, postal optimization, etc).
- How does your shop handle device utilization to maximize production output and quality control?
- Are your distribution processes integrated into your overall operations?
- Is there an automated checks and balance system to track issues and mitigate costly errors?



With a robust PRODUCE Workflow

Produce

Making it happen.
Software and hardware
working together for
quality output.

Document management

Shipping and fulfillment

Job tracking

Archiving assets

Smart shop floor data collection

Barcodes

File optimization

Centralized job management

Omnichannel delivery

System of record

Postal optimization

Analytics

Without a robust PRODUCE workflow

Produce

Making it happen.
Software and hardware
working together for
quality output.

Mismanaged assets, costly errors

Tracking and delivery inaccuracies

Incorrect job finishing and diminished
output efficiencies

Job audit and re-order issues

Lack of real time data
for course correction

Piece level tracking
and fulfillment issues

Inefficient process management

Lack of visibility across the operation

Fulfillment inaccuracies

Disparate or incomplete job
and financial data

Execution errors, costly mailing

Poor business decision making

ROI: PRODUCE Use Case

Without a robust PRODUCE System

- Currently processing and distributing hundreds of thousands of orders/month
- Invested in separate robotics and automation plus a new warehouse management system providing complete automation but lacking a knowledge of print
- Requires the printing to automated picking lines, including shipping labels, packing slips, planograms etc.
- Lack of a customer portal to enhance customer services activities and the customer experience

With a robust PRODUCE System:

RICOH ProcessDirector™, Cross Media Professional Services Practice, Managed Services, Customer Communications Management (CCM)

- Provided and maintained quality output of jobs between and on various inkjet systems
- Converted individual files to PDF for output, providing long-term flexibility to future output methods for continuous feed, cut sheet, labels, robotic insertions and more
- Bridged the gap between traditional hand-pick distribution and modern machine automated distribution with output logic
- Provided a system of record for all print related output, archiving all shipping labels and box content
- Centralized all print operations for their central operations as well as distributed materials



ROI SAVINGS:
Up to \$1M in Annual Cost Savings



The Bottom Line

Mapping the workflow elements into a solid automated workflow enables production from multiple input channels to multiple output channels without creating bottlenecks that cost time and money. The key to successful production is a deep understanding of the print produced in the plant, along with any additional production channels like e-Delivery and archive systems, and the differences in the requirements for each file type.

Automatically routing each optimized job through an appropriate channel should be the goal of every In-Plant operation. It brings value to the internal clients by averting issues during preflight and optimization so that deadlines will be met and also takes the tension out of the production process by staging work in the most efficient manner possible.

If you're ready to start producing quality output that ensures peak production performance, [contact us](#) for more information and how a workflow assessment may help determine your workflow needs.

Get The Next eBook: Output

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

RICOH
imagine. change.