



Print Service
Provider Edition

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Prepare: Putting Your Print Production on Autopilot

Putting Your Print Production on Autopilot

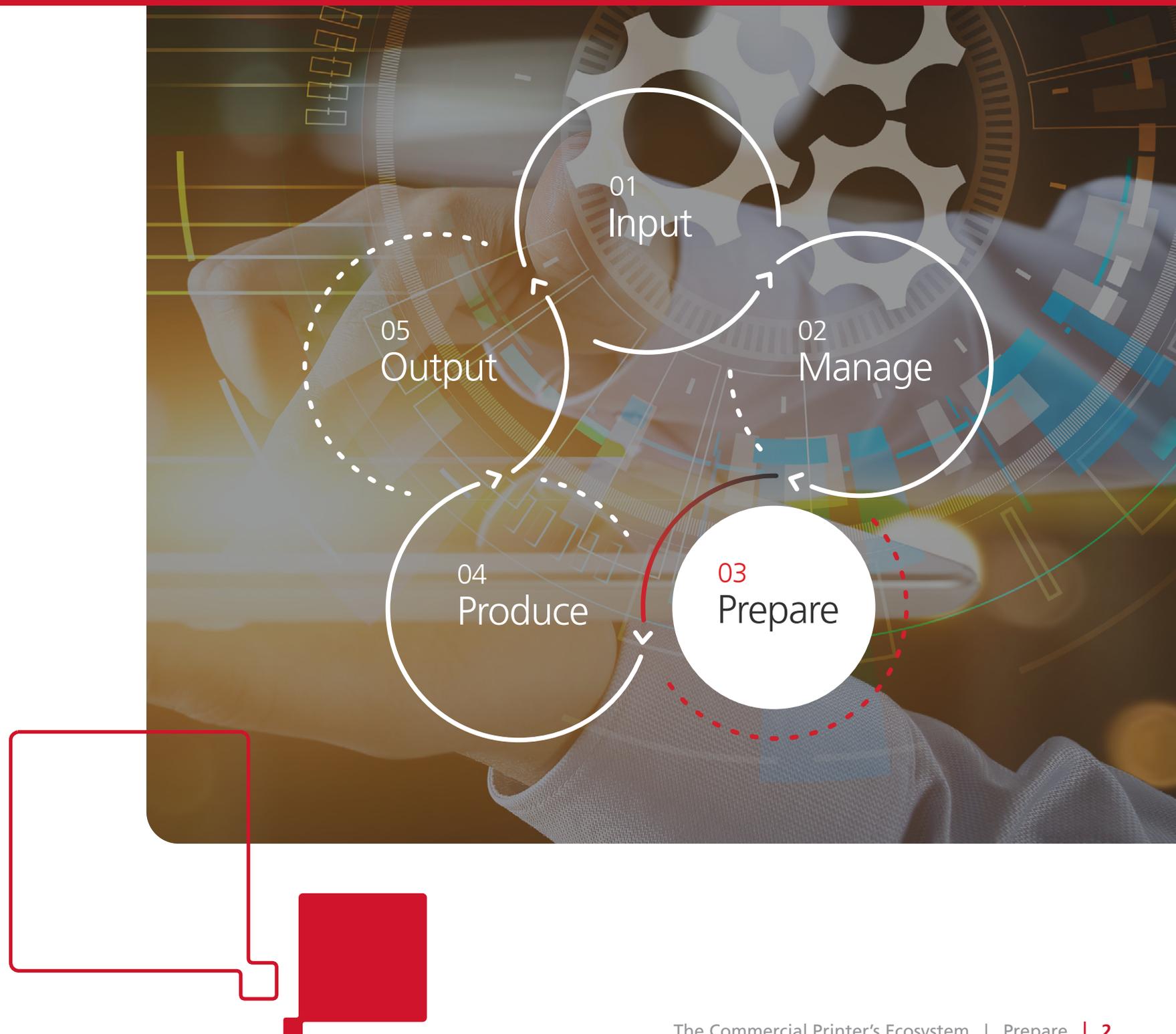
Airline pilots use preflight checklists before every flight. The checklist ensures that no detail is overlooked or missed before flying. Even one omission can result in a serious in-flight problem with potentially dire consequences for the crew and passengers. A single-engine Cessna will have fewer checks than a Boeing 787 commercial jet, but all are checks are critical to the safe operation of the plane. Checklists provide a repeatable and standardized process to follow so that any trained and qualified pilot can safely operate the aircraft.

Preflight checks bring that same standardization to commercial printers and their workflow processes, so each type of application can seamlessly flow through production. Standardizing processes minimizes the potential for errors regardless of who is preparing the jobs.

The essence of preparation is understanding the job requirements and the metrics that determine successful production and delivery to the customer's specifications. Thousands of copies of static forms require preparation different from tens of thousands of targeted or personalized content pieces driven by data — it's application-specific. Finishing requirements also inform the preparation and workflow path each print application will take.

Some print service providers (PSPs) offer design and composition services. They may be responsible for creating the production files, maintaining versions, and storing photo and graphic assets used in their projects. Others may only accept print-ready files from independent designers, design agencies, or clients in specific file formats. These are more commonly Postscript or PDF files compatible with their production workflow. In either of these cases, preparation doesn't end when the file is generated.

The production file typically needs additional preparation to move smoothly into production. This is where preflighting, color management, imposition, and batching may be performed by independent tools or a suite of products. Still, the best practice is to create an automated, unified flow where jobs can move unimpeded through production. The goal is to standardize on tools that integrate, increasing efficiency.





Where to Start? Know the Production Plan.

A critical item on the preflight checklist for pilots is to review the flight plan. The flight plan includes the departure and arrival points, routing, estimated flight time, and other critical details. To visualize and execute the printing processes, you need a production plan identifying the primary touchpoints for all jobs before the point of printing.

File Retrieval and Preparation

Depending on the number of sales processes and job onboarding methods, the files associated with an order can arrive from multiple sources. Online portals and web-to-print solutions can push files uploaded by the customer into the workflow management software for further processing. Print businesses integrated with their client's file transfer systems may also be able to automate file retrieval and routing, while most other methods require staff to retrieve and move the file to a central file server.

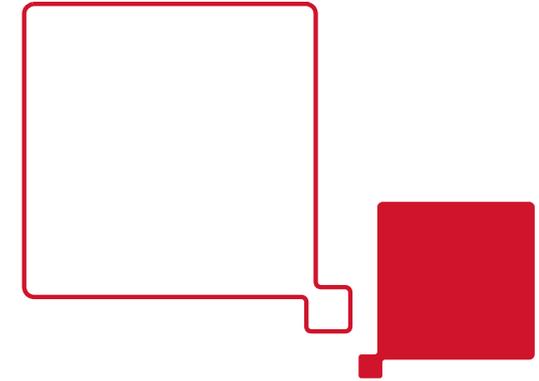
Pro tip: This is where inbound filenames should be standardized and put into a specific file hierarchy on the server or asset management system.

There are six primary file preparation waypoints where the job can proceed, take another path, or loop back for further preparation.

File Retrieval and Preparation

- 1. File conversions or data stream transforms.** Most commercial printers do not restrict customers to a specific file type but generally focus on one file format for print output, such as Postscript EPS or PDF. Customers may also supply files as TIFF or in native source formats such as Adobe InDesign or Illustrator, or Quark. These files must be converted, often to a PDF, before taking the next workflow steps. The same is true for direct mail applications where the data format may differ from what the printer's workflow or digital front end (DFE) can accept.
- 2. Preflighting and file optimization.** All files should be inspected to catch any structural or other elements that could impact printing. Most workflow management systems offer preflight capabilities to check for common issues such as font embedding, color space conversions (e.g., RGB to CMYK), and low-resolution images. Some issues can be corrected automatically, while the exceptions require manual processing and must sometimes be returned to the customer to correct. A related process is file optimization, where structural elements of the file that are not required to achieve quality print output are streamlined or removed. The optimization process, such as eliminating duplicate elements, often reduces the file size and improves RIP performance at the DFE.
- 3. Color conversions and management.** Since artwork files are often supplied by customers and created in various design tools, the color may need to be converted and managed. Color conversion from an index color or RGB to CMYK can typically be automated as part of the preflight process but may require manual intervention. More commonly, color management solutions are applied to convert the reference and embedded ICC color profile to a target suitable for the intended print device. Based on the client's color matching requirements, device link ICC profiles may also be used later in the workflow to map the input color space to the output device's color space, as is typical with the G7 and FOGRA specifications.
- 4. Proofing and approval.** Part of the workflow process is to get customer approval that the processed file matches their intent and expectations. Proofing can happen at several stages within the overall workflow, be electronic or hard copy, and be used to approve content, color, and formatting. Web-to-print and workflow management solutions typically have electronic proofing and approval processes for customers to sign off on the content. These solutions automate and accelerate the approval cycle with the customer and provide a better experience than multiple rounds of emails with attached files or pointers to a collaborative file system. While less common today, some work may be considered color-critical and require a hard copy contract proof that accurately represents the final print output. Regardless of how you support the job approval processes, this preparation point needs attention in your workflow plan to minimize customer delays that can cause further production bottlenecks.
- 5. Ganging print runs.** Combining multiple jobs into a single print run can increase the shop efficiency and potentially save material costs. Rules can be created in the MIS and imposition software to set the parameters for how and when to combine jobs based on materials, colors, size, and due dates. Ganging often coordinates with imposition, but production costs are split and allocated by the print MIS.
- 6. Imposition.** One of the last actions in preparing print jobs is imposition. Although files can be imposed in design applications like Adobe InDesign or composition tools like Quadient, a dedicated software solution is preferred. Imposition software speeds preparation while also increasing accuracy. Templates with standard page orientations and folding patterns can be created and reused as part of an automated workflow for all common job types. Increasingly, imposition software uses built-in intelligence to suggest the best combination of productivity and cost based on your current equipment mix and capabilities.

Every check point is important to prevent delays, ensure overall efficiency and to be able to deliver each job in a streamlined, profitable manner.



The Bottom Line

The key to success is creating and utilizing well-defined workflow plans, with distinct processing steps for each application, complete with preflight checks. Not all jobs will take the same path, some jobs will be outliers, but many will use the same six core preparation steps. The key to a successful workflow is to minimize the number of paths and processing steps required for common tasks by creating a dynamic and documented plan of the preparation and processing tasks, which will free staff to handle the exceptions.

If you're ready to optimize your file preparation, [contact us](#) for more information and how a workflow assessment may help determine your workflow needs.

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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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