

An Introduction to Print Management Information Systems

In a high-volume, low margin industry like Print, the technology you use can have a significant impact on efficiency, productivity and revenue.

An Introduction to MIS

For a world that's gone increasingly digital in recent years, the print industry still plays a pivotal role in keeping the world moving. From books and signage to marketing materials and packaging, print is still critical, even as more business is conducted via bits and bytes.

From the outside looking in, the printing industry might give the appearance of an industry steeped in tradition—however, upon closer inspection, it's been able to remain relevant and impactful being on the leading edge of innovation for centuries. The Gutenberg Press, typefaces, 3D printing, and screen printing all owe their existence to the thread of innovation that has run throughout the printing industry.

But in an era where industrial change is happening at a faster pace than ever before, the print industry is focused on finding solutions that will help deliver a better end result to their customers, while at the same time streamlining operations and boosting efficiency to help bolster those already razor-thin [1-3% profit margins](#). You read that right: 1-3%.

In this guide, we'll look at how the print industry has gotten where they are and what they're letting stand in the way of operational success, then propose business applications they can use to drive those ever-important profits up while serving customers better.



An (Extremely) Brief History of the Printing Industry

From the days of cuneiform to hieroglyphics to 3D printing, the ability to commit information to physical form has been a major driving force in the advancement of human civilization.

In ancient civilizations, printed works were mass-produced by literally having armies of people who could read and write manually copy the source material. Scribes, as they were known, were so crucial to these civilizations that, in Egypt, they didn't have to pay taxes and were exempt from hard labor and military conscription. That's not to say that the work they were performing wasn't labor-intensive. Scribes in the Middle Ages took 15 months to produce one edition of the bible. While this may have been considered efficient at the time, 15 months would definitely not stand up as an efficient turnaround time today.

With this in mind, it's no wonder that the invention of the printing press by Johannes Gutenberg was heralded as such a wonder. By using plates of movable type, the first incarnation of the printing press could produce up to 3,600 pages each day (compared to just 40 by hand-printing methods). The printing press democratized knowledge, making it possible, for the first time, for civilizations to churn out tomes on science, religion, and philosophy. The industrial press, rotary press, and Platen press followed suit, increasing output to 3,000 impressions per hour. Scribes who had been holding out hope for a return to the good old days sadly began searching for employment elsewhere.

In the early 1900s, serigraphy (or screen printing) came on the scene, introducing photo-imaged stencils to the printing industry for the first time. Inkjet printing rose to popularity in conjunction with the spread of computers, using a four-color CMYK ink combination to produce colorful, high-quality images that were 100% less aggravating than a dot-matrix print job. In 1973, the first commercial laser printer was released to the market, enabling high-volume print shops to print bulk orders more cost-effectively.

The next great leap forward in the printing industry was 3D printing, which introduced a new dimension to the printing world and allowed print consumers to have 3D models or objects of...anything, really, printed from digital files. While at first 3D printing was cost-prohibitive and only used for prototyping, the cost has dropped to the point where 3D printing is now powering entire production lines.

Throughout it all, the printing industry has been helping businesses, from Fortune 500 companies to small mom-and-pop shops, commit their ideas, words, and designs to print. But as consumer printers have become more ubiquitous and the quality has increased, and as more people have shifted to consuming information digitally, on smartphones and computers, the printing industry has experienced somewhat of a contraction. Note we say somewhat: while the raw output of the printing industry has been steadily declining, the value output—that is, the amount of money being produced by the printing industry—[has been increasing over the same period, and is projected to grow further](#). But that value growth won't just happen on its own—print shops are beset by several challenges, and in a world where an already dramatically low profit margin is dwindling more all the time, it's critical that print businesses use any tools available to them in order to remain profitable.



Pitfalls of Modern Printing

When you're a business operating on a 1-3% profit margin—when you're a business operating on ANY profit margin—big problems can cost you. Of course, every business owner knows this, so we're trained to watch out for those. What's more damaging, and more nefarious, is the death by a thousand cuts that can take place due to common inefficiencies, errors, and misalignment, particularly in a high-volume, low-margin industry. Let's take a look at a few of the most common in the printing industry.

Estimating

Estimating has the most direct impact on profits. Print shops require accurate estimates that allow them to walk the line between cutting into profits by underestimating, and losing bids and business due to overestimating. Despite the importance of estimating print jobs accurately (and incorporating overhead costs into estimates), the majority of print businesses rely on fixed pricing matrixes. In fact, in a [study](#) surveying commercial digital printing businesses, only 46% of them could say precisely how much each digital print job contributed to general and administrative overhead. For estimates to hit the sweet spot between remaining competitive and remaining financially viable, they must be accurate and factor in administrative costs.

Inventory Management

Material usage and wastage rates can have a dramatic effect on print business overhead. Getting a firm grasp on your inventory can help reduce wastage rates or unnecessary rush orders from vendors when you overcommit stock to customers. Inventory management doesn't only focus on raw print materials, but also on logistics and shipping materials. and remaining financially viable, they must be accurate and factor in administrative costs.

Production Scheduling

Print shops are chaotic at best, frequently with hundreds or even thousands of jobs being processed simultaneously. Yet when it comes to scheduling jobs, many print shops still rely on manual scheduling processes (spreadsheets) or a first-come-first-serve workflow. This can cause internal confusion, frustration, and missed delivery dates for customers. To optimize operations, jobs should be scheduled by dependencies, to ensure efficiency, or to maximize inventory by saving on ink and paper. Can a spreadsheet do that?

Invoicing and Accounting

Collecting payment and ensuring cash flow can become problematic when it requires laborious admin time to manually generate invoices, ensure accuracy, and send to clients—never mind tracking whether payments have been received and managing deposits. Mismanaging invoices and funds can not only erode client trust, but it can also directly contribute to the failure of your business.



Enter the Print Management Information System

Reading this, you might not be surprised to learn that the print industry exists at the perfect confluence of low profit margins and high volume that makes efficient management absolutely critical to survival. The race to the bottom in the printing industry is only compounding these problems, making a solution to manage all aspects of print production even more necessary for businesses that not only want to survive but grow.

A Print Management Information System (or Print MIS) brings the day-to-day management of a print business under one umbrella, giving full visibility into end-to-end operations (including print processes, warehousing, and invoicing) and letting business leaders identify where opportunities exist and where profits are being lost.

Print MIS systems encompass many features and can either be cloud-based (giving you access to your print operations from anywhere with an internet connection) or on-premise, and offers the following benefits:



Estimating and Quoting

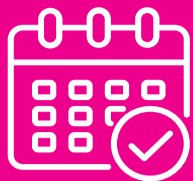
- Print MIS software makes it easy for users to estimate jobs using various building-blocks, including templates, customized to your specific needs. Quote requests that require multiple options are easily made with a few clicks.
- Using configurators in your print business quoting assigns fixed costs, mark-ups, and variable costs to a database, allowing you to make estimations very quickly and automatically, and with consistency – providing a better experience to your customers and ensuring nothing is overlooked. Configurators can automatically capture tech specs from your customers and make sure that pricing is
- Quoting errors can damage your company’s bottom line. A Print MIS solution reduces errors by leading an estimator through all the relevant factors that go into pricing a job correctly, including the dependencies.
- Print MIS estimation modules give you all the key figures you need upfront, providing a complete overview of the economic aspects of a job, such as direct cost, total cost, overhead, mark-up, and ultimate sales price, making sure nothing eats into your profit margins.



Case Management

In a Print MIS, Case Management is the daily tool of administration—essentially, the “home base” for all employees involved with the orders. It grants a full view of cases with detailed information on deadlines, delivery dates, customer information, job history, and offers a hub for all employees to collaborate on ensuring orders are fulfilled efficiently.

Case Management offers control over the flow of jobs throughout your company, with a full overview of outstanding quotes, confirmed orders, and jobs in progress.



Planning and Scheduling

When planning or scheduling several print jobs, it's important to capture time, capacity, and use. A Print MIS solution can automatically generate these figures during the estimation phase when a new order is made. The system makes suggestions for optimal production efficiency – or you can choose to plan everything manually. Graphical estimation makes it easy to see where there is open machine capacity, available man-hours, and planned production.

Planning in a Print MIS can be based on milestones, or it can be configured based on order or delivery dates, times, and production speeds. It's up to you. Most Print MIS solutions offer robust customizations.



Inventory and Purchasing

The ability to accurately forecast inventory needs is critical in a business that regularly walks the line between running out of inventory and delaying customer orders or meeting cash flow stagnation with too much stock on hand. Print MIS software helps businesses walk this tightrope flawlessly, granting a full overview of your purchase needs for goods and services based on individual job planning. Reliable inventory forecasting helps to keep supplies at optimal levels and saves company capital. Additional inventory management features lead to increased efficiency in the usage of paper, helping you to reduce scrap, and make the best use of inventory already in stock.

Print MIS software allows you to use centralized purchasing, individual purchasing per job coordinator, or a combination of the two. It also grants full control over which items are to be managed by automated purchase suggestions in the system.



Invoicing

Print MIS software can remove the manual busywork from billing and invoicing in high-volume print shops, allowing staff to automatically generate invoices directly from the original quote, the final price, automatically tracked consumption, or additional overtime or product quantity used. Because invoices are generated from a fully integrated system that captures job and inventory management, invoices are always accurate, making sure every dollar is accounted for—without risking human error.



Financial Management and Reporting

Effective business leaders know their numbers, and Print MIS software makes it easy to track. With custom reporting, staff can easily generate custom reports, user-specific menus, or add automated business rules—for example, payment terms and discounts for individual customers and vendors. Print MIS software can handle the full range of legal requirements and currency issues inherent in international trade, including euro business.

Businesses can analyze by a variety of criteria such as profit, cost centers, departments, regions, product lines, or any other reporting unit. Use a range of pre-defined reports or your own customized company-specific reports. Present report results on web-based dashboards, or distribute by e-mail, so managers and employees, network partners, and investors can stay informed about your company's activities. You can even drill down into each case, comparing the original quotation with the actual consumption on the job—helping your business to optimize future quotes, with a deeper knowledge of your costs and other factors that impact your bottom line.

Why Integration Matters: Putting MIS at the Center of Your Print Process

While fully integrated solutions like Print MIS systems can cover the scope of most of the business being done under your roof, there are still further considerations, particularly in a technology-enabled industry like print. What other technologies do you use in your business suite?

For Microsoft-enabled businesses, a core business application like PrintVis makes perfect sense—built on Microsoft Dynamics 365 Business Central, it seamlessly integrates with other Microsoft solutions like Office, Outlook, and business intelligence solutions like Power BI. With a combined ERP and MIS system, your entire print operation can be run on one platform. Imagine the power of leveraging a centralized system to manage your entire print business.

With the rise of web-to-print interfaces, Print MIS needs to integrate, helping to automate job creation and invoicing for web intake customers. Lastly, it needs to support the Job Description Format (or the JDF), to communicate effectively with other systems and machinery in the printing industry.

Sidebar: The importance of JDF Support

For integrated software in the printing industry, JDF (or Job Description Format) has become the de facto standard, recognized globally. While other formats are possible, relying on JDF yields the most significant results: providing a 277% return on investment, and over 6900 labor hours a year saved by printers that utilize it.

Using the JDF integration enables print shops to bridge data from administration and production, simultaneously eliminating manual data entry, providing machine presets, and capturing workflow feedback regarding job status and job costing situation. This helps companies improve their internal workflows and read data from external jobs, creating jobs in the internal system as well as farming out to subcontractors and partner companies when necessary.

The Case for MIS

With so many factors impacting the print industry, modern print shops need to do everything they can to ensure they're delivering seamless customer experiences, guaranteeing cost assurance, and keeping tabs on how they're spending their capital, whether that be money, inventory, or labor. Implementing an MIS system not only provides these benefits, but it also allows print shops to automate existing processes—freeing leaders up to invest their time where it's most needed—growing the business.



Working with Wye Print

Wye is changing the game in the print industry by deploying modern business applications that connect all parts of the printing plant together from sales and estimating through the management of subcontractors and shipping, and providing the kind of training and support you need to truly leverage the value of your technology.

Unlike our competitors that focus on point solutions, we create core business applications in an easy to consume subscription model at a fraction of the investment and provide ongoing, contextual learning that allows your people to not only adapt to change but excel through it. You can build a team of print masters who not only perform a job but become incredibly adept at all aspects of it. You dramatically improve the lives of those working in your print shop by lessening stress and empowering them to succeed, which helps drive both top and bottom-line performance.

Put the power back into the hands of your staff, allowing them to hone their craft and emerge as print masters. With the right training and context, Wye can make a software implementation project into a business changing experience, right from the start.

Seeing is believing – your personalized demo of the Wye way is only a click away!

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