The Ultimate
Guide to
MIS
in the printing industry

optimus

Introduction

Optimus was one of the first companies to develop and supply management information systems for the printing industry; we have continued to push forward the boundaries of MIS technology ever since. With customers in markets such as: commercial sheet-fed and web off-set, direct mail, wide format, labels, packaging, digital and bespoke manufacturing; we've learnt a thing or two about what Print Companies in different sectors require and what the industry as a whole needs moving forward.

In 2002 we published our first "The Ultimate Guide to MIS". Such was the success of this initiative; we have periodically regularly updated this extremely useful tool as our industry has continued to evolve and advance. This very latest version is well suited to anyone looking to invest for the first time or re-invest.

We hope that the following pages will be just as useful as the first Guide has proved to be. If you have not looked during the last six months at what MIS technology now provides, you may be surprised at how much we have moved on and what can actually be achieved. Optimus prides itself on gathering information from existing customers, potential customers, industry experts and other industry suppliers to ensure that the Optimus MIS is always at the forefront of new functionality and technology – that is why we have a minimum of four major releases each year to ensure all of our customers benefit from rapidly evolving technology and increased functionality.

We look forward to hearing your feedback on this updated guide.

Nicola Bisset
Optimus Group Managing Director

What is a Management Information System?

In the 1970's Management Information Systems were introduced into the Printing Industry – software was available by Module and the early MIS systems were used in particular for Estimating and Production Control. The benefits of using an MIS system were well known as many manual tasks were automated to revolutionise the flow of work and dramatically reduce administration time and costs within the Printing Company.

The idea of individual modules to handle specific tasks continues today and allows for a Print Company to buy only those modules which are necessary for their processes and procedures, whilst also giving the comfort of being 'future proof' for the user – if something changes within the Print Company; chances are the good MIS suppliers should be able to expand or add on further modules to assist in the change.

However, the range of modules and functionality has expanded significantly since those early days. Good MIS systems should cover from Customer/Prospect Enquiry to Invoicing, with automation and access to key data being at the forefront of the functionality offered. Web to Print - E commerce and Workflow automation has also developed rapidly since the early days with modules allowing Print Company Customers access to their key data such as: Estimates, proof status, job status and invoices, along with the ability for Print Company Customers to order their print on-line. The significance of the increased functionality offered by the Web to Print - E commerce and Workflow Modules allows for greater automation and less processing costs for the Print Company. This also ensures their Customers are not only loyal, but also are well informed without the need to provide telephone and personal visits answering queries from their Customers when the information is readily available in the MIS.

Of course with the improvements in technologies means an improvement in integration. All good MIS Systems should provide seamless integration between all Modules. Also consider an MIS Company that is happy to provide integration to your existing Solutions e.g. Accounts, CRM, Web to Print or Workflow, is a Company that has ensured their MIS architecture is open and modern. This also demonstrates they have the development skills and forward thinking approach to provide the best overall solution, thus ensuring maximum benefit to your business.

When deciding on your chosen MIS, after all, it is a significant investment; the MIS will become the life blood of your business controlling sales, production and invoicing. This should allow you to use the data to aid your strategic decision making. This is why Optimus has embraced Lean Manufacturing. Optimus has worked closely with Industry experts to ensure that the Key Performance Indicators are readily available for Management to monitor and assess progress of the Print Company. New developments within Optimus have been aimed at ensuring we provide clear, accurate and easy to use tools to our customers to aid and promote the ethos of Lean Manufacturing.

Why are Management Information Systems important to the Graphic Arts Industry?

EFFECTIVE & RELEVANT

"An MIS should be effective across all aspects of a business – financial & business management, sales, customer service and production. Yet for the majority of printers it is still a means of improving the efficiency & speed of administrative processes, rather than a means to drive business improvement & profitability. Take estimating - a critical process to be sure. However, this should not just be a means to generate quotes but also to create all information for job bags, set production & financial targets to provide the basics for subsequent analysis of performance and hence business improvement. The key is to set agreed Key Performance Indicators & monitor trends over time, sharing the data with those responsible in a manner which encourages improvement.

MAKING A REAL DIFFERENCE

"One of the most important points about MIS is to choose the correct system for the work to be handled. If you do this, then an MIS system can play an invaluable role within a printing company. Even relatively small companies can greatly improve their ability to effectively manage their business and be more competitive. I have seen many situations where the implementation has made a real difference.

-Peter Vincent – National Technical Advisor, BPIF

"At the very least, printers should take a look at MIS technology and what it can do for them. One of the benefits of Optimus MIS software is that it is from a company that lives and breaths printing manufacturing processes and so understands fully the issues faced by users."

- Brendan Perring - General Manager, IPIA.

"FESPA UK applauds the publication of this Ultimate guide to MIS. As a dedicated association that supports Print and Signage companies, we believe that meaningful and lasting relationships are formed, not by a sales pitch but by offering support, guidance, and knowledge. We have created a community of forward-thinking businesses like Optimus, who are willing to take the time to produce a guide that can help increase sustainable growth and opportunities, along with sharing best practice and their years of industry knowledge . If you would like to learn more about our community, our events and our initiatives visit www.fespauk.com"

- Suzie Ward. Managing Director FESPA UK.

STRATEGIC POSITIONING FOR THE FUTURE

"There is no doubt that MIS technology enables much better management and control of production throughout the factory. It allows printers to have greater efficiency throughout all areas of administration as well as on the shop floor. Management can see more easily what jobs are profitable and which are not and thus position themselves strategically within the market to best suit their capabilities and capacity.

A range of potential problems, such as bottlenecks or low stock, can be spotted quickly, allowing wastage of materials and time to be reduced. MIS technology will also take on greater importance within the industry with the emergence of JDF as a driving force in so many sectors."

Henny Van Esch – Chief Executive Officer - CIP4.

How will a MIS system benefit my business?

Information is King for any business, but this information has to be meaningful and easy to access and understand.

Relevant, accurate and up to date information can be used effectively to make decisions quickly – a necessity in today's business world. Equally customers place increasing demands on businesses to respond in shorter times, whether it is in receiving an estimate or receiving details on the status of their job. In order to maximise customer retention, it is vital to provide customers with the information they need in the time scale that they demand. A good MIS retains information on: Jobs, stock, capacity and sales, whilst also providing the mechanism to display selected key customer information in other 3rd party software applications.

A company operating a wide suite of modules, can quickly see the benefits with the automation of processes such as: Material ordering, stock quantities and the scheduling of work. They will then be able to pinpoint exactly where there is available spare capacity for production.

The MIS should also offer functionality that can assist the Company in monitoring trends within the business. This should cover a wide variety of vital information: Examples of this are:

- Estimate conversion – how many succeeded and failed and the reason why?
- Productive and non productive time booked and the reasons for non productive time?
- Machine utilisation – how much time is the machine actually running 'good' work and what is happening when it is not producing 'good' work?

However, the word of caution is to have procedures in place to ensure data is recorded correctly in the MIS system. A vital part of this is to ensure the MIS provides Data Collection to be available on the shop floor. No manual timesheets should be required, the operator simply logs onto a job at the start of their work and logs off – this records the time and cost of time back onto the job. Thereby ensuring the operator is spending their time on productive work, not on the administrative process of filling in time sheets!

The following are just a few of the benefits gained by using an MIS system:

- Less manual input leading to a reduction in errors
- Elimination of re-keying of data
- Consistency, accuracy and transparency of information for the whole business
- Easy access to real-time production information
- Faster response to customers
- Ability to produce more estimates and analyse the successes
- Ability to analyse most profitable work streams and the most profitable customers
- Faster invoicing and therefore faster cash

What are the financial benefits?

A good MIS system should provide functionality to free up staff to concentrate on producing more, whether these are estimates or printed media.

It will achieve this by removing time consuming manual tasks such as re-keying information or having to walk to the shop floor to check the progress of a job. In addition, details on all aspects of the cost of a job can be checked during each stage of production. This makes it easy to assess which are the most profitable orders and which make the least money.

In addition, the automation of functions such as estimating means that, for the majority of work, estimates can be produced quickly and accurately by less experienced staff. They can also produce more estimates resulting in a chance to win a greater number of orders. The technology also makes it easier for one person to multi task; a big advantage for smaller companies.

It has been widely publicised that retaining customers is more cost effective than winning new customers and should be easier! The MIS system should give functionality enabling faster response times for requests for key information required by the customer. For example, faster estimate turnaround and data regarding on time deliveries – a key customer satisfaction point of which the information should be readily available.

With the addition of automated streamlined processes, staff can be profitably redeployed. Companies can make a significant financial difference by implementing MIS technology; otherwise the percentage of firms using a MIS would not keep rising each year.

The following outline the main financial advantages that can be obtained:

- Balancing capacity
- Reducing overtime
- Winning a greater number of orders
- Retaining customers
- Reducing wastage
- Removing duplication of effort
- Improving overall productivity

What preparations do I need to undertake before investing in MIS technology?

Like any investment, you need to do your research to avoid potential pitfalls. The first thing is to agree what you do now and what you want to achieve in the future. A good start to this is to prepare a flow chart of the administrative steps and the department involvement for each job – from enquiry to invoice. The MIS Suppliers should then be able to demonstrate how the system would cope with the flow of work. A good MIS Supplier will also make recommendations of changes to procedures if necessary.

When starting the process, try to involve all levels of employees within the company. Employees involved in the decision making process, are more likely to embrace the changes necessary and promote the use of your chosen MIS system.

Appoint a project leader who understands the technology and the implications, if possible create a project team. Unless it is a very small installation, commissioning will take several months which may overlap with holidays – this can cause delays and in particular, work with your chosen MIS supplier to ensure training dates are confirmed around absence disruptions. Also ensure that training is scheduled within the project plan, working back from your agreed 'go live' date to ensure there is no significant time lag between training and go live – otherwise by the time you get to go live, staff may not have retained all of the information they need to operate the system effectively.

Produce a check list of activities along with a schedule of who does what and when – your MIS supplier should be able to help you draw up the list.

The important thing to establish, is that this project needs both you and your MIS supplier working closely together to achieve one common goal – it is a partnership!

- Ensure 'buy in' from DIRECTOR level down
- Assign a project leader and/or team
- Work with your MIS supplier to decide upon key business objectives – short, medium and long term
- Plan, in partnership with your MIS supplier, the period of implementation and go live date
- Decide how you are going to manage your business through the implementation period
- Allocate appropriate resources – in particular ensure staff are free for their designated training courses
- Agree what a successful outcome would look like, specific to your business

What features should an MIS system have?

The first point is to ensure the system you buy, is right for your requirements both now and in the future.

We have talked about a 'good' MIS system, but by this we also mean a suitable one – there are good systems out there but they might not all meet your needs. Make sure you really understand what it is you want to achieve. Any supplier should conduct a fact finding mission and in-depth analysis of your business before presenting their solution to you. Included in the analysis should be your plans for now and the future, what is driving your requirements and how you believe the MIS could benefit your business. From this analysis, the MIS supplier should present their solution to you that 'ticks the boxes' of the issues you have highlighted.

The leading MIS systems are hugely sophisticated but that does not mean they should not be easy to operate – it may require a change of mindset within the Company but MIS systems are designed to be easy to use – the complexity should be going on in the background and not within the User Interface.

You need a system that can be upgraded easily (and generally at no cost) –, you are looking primarily for a scaleable product that will grow with your business without the cost of upgrading to a 'full version'. Indeed make sure the supplier actually sells all the modules you may want and ensure extra modules can be added with the minimum of effort and disruption to you. The system may have an excellent estimating module but lets you down on other modules – ensure the MIS supplier has a flexible and open approach to the supply of modules and you are not tied in to buying 'standard' functionality that may not be relevant to your requirements.

Check out service and maintenance contracts. There is little point in buying a low cost system only to be tied into an expensive service contractor yearly licence renewal charges.

As mentioned before, above all, you need flexibility. Every company has their own requirements and you need to ensure that your chosen MIS makes the information you have identified as key, simple and easy to access.

What questions should I ask?

Do not just ask questions of potential suppliers - ask them of yourself as well. It is no use investing in the technology to 'recreate the chaos' of what has been produced manually or indeed within your existing system. Investing in a MIS system, is the perfect opportunity for you to look at the business processes and make changes to gain efficiencies.

Probably the greatest danger is buying a system that is not suitable for the type of business you run, or installing a system and then not using it correctly, or to its full potential. You do not want to end up with either an expensive calculator (just using estimating) or a sophisticated filing system. Remember that a good MIS system implementation is not just about the initial investment – the system should be the life blood of your business and therefore needs on going care and attention. Therefore ensure you include in your budget, on-going training for new staff and in particular ensure you have the training and tools to be able to care for your MIS – a good example is the maintenance of cost rates. Inputting cost rates at the point of implementation is a must but of course these may change as the business evolves.

Check that the software will run on your hardware and if not whether the MIS supplier is able to provide what is required. Not all software companies sell hardware; you should also check whether the full MIS software runs on a PC as well as a MAC if this is what you require.

Find out how open the system is – can the system link to other software you are running, for example, Web to Print – E Commerce or your Accounts system? Do you want your MIS supplier to supply all of your requirements such as E-commerce and Accounts – many do offer a 'one stop shop' including third party applications tightly integrated into their offering, giving you the benefit of support from one provider. Ask if the MIS supplier has written links to other software solutions and who they are – this is a good indication of how open and flexible the MIS supplier is.

Ensure you know how much training will be required and that it is included in the purchase price – most good MIS suppliers will supply you with a training matrix to calculate the number of training days required.

Agree an implementation timescale and ensure it is realistic for you and your staff. There should be a structured programme of: Installation, training, commissioning and after sales support. It is vital that the MIS supplier provides a well staffed help desk and an on-line support system, in particular new users queries can generally be answered quickly by these methods. Ask for response statistics and problem resolution times as this will give a good understanding of the quality of after sales support offered.

It is not unreasonable to delve into the stability of the supplier you are talking to. The investment in MIS is a significant project and you want to ensure you do not have to repeat the process a short way down the road. Look at the development history of the product to give a good indication of on going development and of course check out their web-site to see what else is offered to you as a customer – for example, help videos, release notes. A supplier who is open and transparent with this information is proud of their product!

What features should an MIS system have?

It is no secret that JDF has had significant impact on the Printing Industry. There has been an enormous amount of written and spoken word on the subject, and of course the benefits are well known – greater efficiencies with little manual intervention in the production workflow leading to fewer errors, less wastage and faster make readies.

The side benefit of JDF has been the ability to link systems together that were not previously possible; the CIP4 organisation has very successfully established how systems should be 'talking' to each other.

The key MIS suppliers are members of CIP4, and in particular, the MIS working group (Optimus Director, Henny van Esch is C.E.O. of the working group). They are driving the technology forward from the MIS point of view, whilst collaborating closely with pre-press, press and post press vendors to integrate their equipment to ensure a sustainable industry standard can be adopted and maintained.

That said if you are considering investing in JDF technology and have the vision of a fully automated workflow, there are two key considerations and choices that we would draw reference to.

Firstly, by the very nature of what is trying to be achieved with a pure JDF workflow, (which is a defined standard that must not change), the estimate must precisely match the exact same production method to be used, they cannot be different. The job must be correctly specified from the start of the JDF output process, as accurate information is what drives the workflow, therefore consider the impact on your internal processes and indeed on the roles of staff within the business as these will need to change! If changes are required to the job whilst in production, a new estimate must be re-committed with the revised data to drive the workflow forwards.

Secondly, Optimus understand that not all equipment can be JDF enabled (due to age or technology) this is why Optimus speaks of 'Connectivity' as we have developed other ways to send or receive data. With this in mind, the creativity of our industry has meant that many companies whilst embracing the JDF standard, have looked to adapt and evolve its best principles, into more malleable configurable building blocks of code. This can be either, but not exclusively: XML, JSON, instructions or an API plug in often harnessing a dedicated Web-service which can then act as an intermediary between two separate systems.

This popular trend has been extensively used in the arena of pre-press / workflow integration, and it is this along with most companies now having an open API policy, that has really sped up the pace of development and enabled greater choice within the industry. A good MIS provider we therefore believe, will a) be able to work within the JDF standard as well as b) adapt modern day configurable building blocks of coded instruction, to drive automation and change.

Why is E Commerce important?

There is no doubt that buying habits have changed – the internet has made sure of this!

A growing number of printers' customers want to be able to do business online and there are huge advantages in this for all parties. The printers customer is buying a 'product' not a 'printed sheet' and the move with B2B and B2C solutions to provide pre-defined products online has been very popular, not least because the customer has more reason to continue to order print from a website that can be designed to look like the customers; this is also relevant to the products the customer wants to order. These systems can also give the customer brand control and analysis of what has been ordered and by whom.

Equally demand for modules which allow for on-line requesting of quotations has grown, as not only does the customer receive their quotation 'instantly' but it also cuts down on the administration required by the print company in raising an estimate and sending information back to the customer.

Many of these systems provide PDF proofs which are approved by the customer, therefore when the MIS receives the job it is already with an approved proof and the job can go straight into production, again saving administration costs for the printer.

The popularity and leaps in technology has meant that many of the good MIS suppliers have recognised that they should focus on what they are good at i.e. the MIS system and link to the many excellent systems on the market who have focussed their attention on this area of functionality.

Good MIS suppliers should have completed the research for you and should be able to provide you with recommendations to E commerce solution providers; they then will be able to demonstrate tight integration with these applications. They may even be able to provide this solution to you themselves. Optimus has always looked to link to 'best of breed 3rd part applications' to ensure that our customers benefit from the best solutions available in the market for each aspect of the functionality required.

- Faster turnaround of work
- Less manual intervention
- Quicker response to customer requests
- Fewer errors
- Better customer retention
- Increased throughput of work
- Reduced costs
- Delivery of files straight to press from the creation of the website order. (Only selected vendors)

Why is flexibility important?

Every print company is unique in some way! This could be working practices, type of work produced or processes in place. That is why it is essential that the chosen MIS supplier is able to adapt their offering to suit your company. Optimus, with a process led approach can configure any product or service in any sector in one system.

Although an off-the- shelf package meets most requirements, there may be small areas that need to be altered within the system to suit you. Beware of systems that can only deal with one method of manufacture, you can end up with expensive unwelcome work arounds.

It is important that your chosen supplier has the ability and the vision to develop the alterations required. This may just be in changing the layout of a document or your job ticket, so tailoring a package does not have to be expensive. The important thing is to have the option to make amendments.

The MIS system should have a strong 'core' so that you can benefit from the standard upgrades without incurring major rewrites each time you receive an upgrade. Before you look at the MIS market it is vital that you understand what it is you want to achieve for the business, and what is therefore required of the MIS modules. Be clear what is essential and what is simply 'nice to have'.

Many good MIS suppliers will add functionality to their products based on customer feedback, requests for alterations from a number of customers, feedback from prospective customers and also by constantly researching the market.

Therefore it is essential to ensure that your chosen supplier is listening to all of these areas and improving and updating their product.

Therefore the questions to ask are:

- Can the MIS adapt to suit my requirements?
- How many major releases are issued each year?
- How is the additional functionality decided for each release?

What will happen in the future with Management Information Systems?

MIS continues to evolve at a pace that harnesses both new technology and connectivity in equal measure. MIS suppliers increasingly now direct their focus on being part of a wider eco system with other software solutions; the focus is on delivering sustainable end user value, whilst future proofing your business.

The Print Industry has embraced the Lean Manufacturing ethos; this is an area that Optimus will continue to focus on and look develop further within the MIS.

With the diversification of the print and graphic arts industry, driven by demand for personalisation and online ordering, many MIS systems have or will need to adapt to reflect the requirements of these trends. For the modern-day print service provider, this often means producing and selling finished products and services as part of a dedicated project, which can encompass a very broad array of substrates.

The emphasis must now be on faster job turnaround which is a fundamental difference for some MIS systems; new functionality will have to be written to reflect these changes in processes that most printers have to respond to. Technology continues to leap ahead and with the popularity of hand held devices like mobile phones and tablets, there are huge possibilities for MIS systems integrating with these devices.

At Optimus we believe the key to good development, is a progressive company ethos that incorporates continuous research and close cooperation with our customer base and partners. With an open-minded approach to the wider manufacturing community, we seek to obtain valued feedback from all parts of the industry, which we look to harness and deliver in our software solutions.

We close there with our brief MIS Guide, and we hope you found it useful.

If you need any clarification on any part of the information provided within this guide, please do not hesitate to contact us. We wish you well on your MIS journey.

optimus

United Kingdom (Head Office)
+44 (0) 1483 740 233

Spain
+34 917 242 670

France
+33 6 19 71 02 54

Estonia
+372 501 5478

Germany
+31 33 456 9477

The Netherlands
+31 33 456 9477

Australia
+61 (0) 422 210 876

Or email us
sales@optimusmis.com

Italy
+39 05166 34901

South Africa
+27 (0)83 252 00779

Poland
+48 22 350 79 75

www.optimusmis.com