



## PRINT FOR PROFIT #12

### REVIEW YOUR PRINTING PROCESS

“You need a niche market.”  
“Industrial printing is the way forward.”  
“The graphics market is dead.”

Are all phrases you hear in the industry. Well, if the last phrase is correct there must be a lot of healthy corpses about. The graphics market is changing but it certainly ain't deceased.

One of the things that are tending to happen is that long time users of the process can undervalue it and take it for granted. Those new to screen-printing are often amazed at its versatility and sophistication. Screen-printing is one of those fundamental processes that can give great satisfaction when first experienced and then developed. It was most enlightening to see young people at the recent “Skills Show” in Manchester enthusing over their ability to print T-shirts on a manual carousel. The highly experienced engineer with a PhD in ceramic technology who prints platinum in suspension onto a complex ceramic structure mirrors that enthusiasm. It is so easy to be blasé about what we achieve. Just look at samples of your work from two years ago and see how the quality has improved.

Suppliers are providing chemistries and equipment specifications at an ever-increasing rate. Emulsions are much more forgiving and yet can manage far finer resolutions and can be resistant to both water and solvent based inks. Dryers are more productive and use 30% less energy. Printing machines store details of past jobs and repeat them when required. As users of the process we somewhat grudgingly at times admit that suppliers do a pretty good job for us. Maybe the costs of consumables in this country as compared to Europe and the US will normalise so that we will eventually lose the “Treasure Island” label that has been with us for some time.

“Get more sales, reduce prices, explore other markets, buy new equipment, search for grants. We have got to do something to improve our financial position!”

Hang on; the aim should be to improve the health of your company.

You may remember at the end of last year in a previous article the following statistics were shown.

“The Plimsoll report shows 24% of the graphics screen-printing industry is in the danger zone, which is higher than most other industries. Its headline states, “Too many companies are chasing too little market”.



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An extract from the analysis shows, of the 505 companies surveyed showed the following:

Rating	Companies	Pre-Tax Margin	Debt as a % of sales	Retained Profit
Strong	162	11.4%	5.8%	4.7%
Good	64	3.2%	13.4%	2.4%
Mediocre	63	3.0%	7.7%	2.1%
Caution	83	1.2%	22.4%	0.0%
Danger	133	0.7%	29.2%	-0.5%

In my situation as a consultant and trainer I visit numerous different companies. Many have every right to be positive and optimistic but some are making the most basic errors in operational practice which if continued will bring them down. For many years the high margins and the ignorance of the customer allowed badly run companies to succeed. Those days are over.

43% of screen-printing companies are struggling and only 32% have pre-tax profits greater than if they had put their money in a building society. Yes I know these figures are provided by acc\*\*\*tants but they are for information.

Some companies pursue the path of increased market share, investing in more sophisticated equipment and achieving, if they are fortunate high growth in turnover but their profitability is at a very low level. The opposite scenario is where profitability is maintained or increased but market share reduces. This means that the company may simply fade quietly away. Getting the balance between these two is the key.

Nobody in the industry needs to be told it's tough it is clear to all of us. But what can we do about it? Traditionally if times are slack, machines and walls get painted, car parks are weeded and maybe equipment is serviced. Or "Parkinson's Law" applies and the work expands to fit the time available. If I were a financial expert I would be talking about reducing overheads, cutting back on staffing, rescheduling debt etc. But I am an engineer; my aim is to facilitate improved performance of a company.

Like many situations in life we need to look inwards to achieve the greatest gains. A company is just like other organisms it develops patterns of behaviour some good some bad. With some contemplation of how systems work in your organisation it will be possible to make adjustments that will create real gains in profitability. What is more you don't have to be an acc\*\*\*tant to do it. (I just couldn't get my head round using that word). All you need is eyes, ears, experience, willingness to suspend judgement and the targeted use of a three-letter word "Why" and a long-term mantra of mine "never assume".



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The aim is to look at the small modifications in the systems; conditions and methods of working that will add up to single figure improvements in efficiency which will in turn translate into increased profits. If your pre-tax margin is 5% and you reduce rejects and down time by 1% that is equivalent to a 20% increase in turnover. The higher your pre-tax margin the lower the multiple. So when things are tough you have to look at the detail.

First book a day off. You are not available. Switch off your mobile phone and give instructions to the switchboard that you are not to be contacted. Then go into work. If you normally wear a suit or some other smart attire put on an overall or jeans and tee shirt or vice versa. If possible change your working hours.

Then walk the floor. Start in dispatch and go right through production to goods inwards. Include all departments except the commercial sections of sales and administration. They will be left to another day. What I am asking you to do is see the process in reverse. You are less likely to be caught up in the flow of assumptions that you make daily. If you don't have a very good memory you will need to make notes, because you will be looking, questioning and listening. Your aim is discover the leakage within the facility, not burst pipes but where unnecessary costs are incurred and margins reduced. Initially simply walk through the facility just look and absorb what you are seeing. Imagine you are your most picky customer seeing the facility for the first time. Don't forget to smile and exchange pleasantries because your people will save you a great deal of money by the end of the day. During the first circuit tell the supervisors or line managers that you will be coming round again and will be talking to them and their staff. Make notes of impressions that you gain during this preparatory viewing.

First impressions are very useful. Is the area well lit and is it clean?  
Is it organised?  
Are the ergonomics of the work areas satisfactory?  
Are people talking to each other?

Remember the simple fact of you being there will alter behaviour and you will have to take account of this in your findings.

Having gained an impression and identified areas that need particular attention start again. This time talk to the people doing the work. Are the work instructions what they actually do, if not why not? Could they be improved? What stops them doing the job efficiently? Simple things like the tape dispenser not working. The knife not being sharp enough. It's too cold. My seat is knackered. If we put shelves up there I could store all my consumables and keep stock. Can we not simplify or automate the paperwork? Etc Simple things which if addressed will make people more efficient and reduce costs.

Screen-printing is a clean process. If it is dirty you are hemorrhaging profits. Dirty substrate, pinholes in the stencil, pinholes in the print, contaminated inks, UV curing units with dirty reflectors, excessive use of solvents, increased waste disposal costs, Health and Safety issues, escalating levels of rejects, increased machine down time etc.



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In a company recently I heard a production supervisor say to despatch. "Its ok you can pack them I have sorted out the rejects." I asked how many? "Only a dozen" was the reply this was on a batch of 500. 2.4%. That has screwed their profit! The frightening word was ONLY it was the norm. Probably there was a contingency in the costing for this regular level of wastage called "overs." Lack of "overs" will contribute to your profits. We are in the era of zero defects and that should be every printing company's aim. Don't kid yourself it is acceptable because it used to be worse, those were the days of wine and roses. When you consider rejects the concept of a return from a customer is unthinkable. In house rejects is where the focus should be.

Machine downtime is another killer. Look at the machine production times apply the production rates ideally the figure should tally with your output. It is likely that there will be a significant difference. When you purchased the machine you were quoted 600 per hour your output figures show 300 per hour. Is there a big black hole? Yes its made up of, ink drying in, cleaning the stencil, changing the squeegee, dressing the squeegee, running in, movement of substrate, drifting registration, ink adjustment, variation in density, varying dot gain. An apparently endless list of reasons for the disparity in the figures. All these conditions create rejects.

Before you even consider buying new equipment deal with these issues. The vast majority are not equipment based they are failures in technique or simple organisational issues. Simply better housekeeping will have a major impact on efficiencies. If your production facility is not cleaner than the boardroom you are destroying your profitability. This exercise is not easy but it is much better than having an acc\*\*\*tant sort it out.

If you don't think you haven't got time to do this employ an external process expert. If you don't think the exercise is worth while take up basket weaving, because you will have plenty of time to practice it much sooner than you think.