Essential, No-Nonsense Advice

How to Help Your Small Manufacturing Business Thrive
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Essential, No-Nonsense Advice

Mark Lynch

“Finally the nation is waking up to the value of manufacturing…”
Find out how Engineers like YOU and businesses like yours can benefit. Make more money by doing what the best do, quickly and cheaply.

www.advice-manufacturing.com
How to Help Your Small Manufacturing Business Thrive: Essential, No-Nonsense Advice

Published by Mark Lynch at Advice Manufacturing

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The information contained in this book is designed to assist you improve yourself and your business. However like all books like this must, it carries a warning and a disclaimer.

Whilst every effort has been made to ensure the relevance and accuracy of the information, there is no guarantee you will produce benefits and results as those described therein. The contents included are solely the opinion of the author. If expert advice is needed, services of a competent professional should be sought.

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However the information contained within this book will provide you with a great probability of success.

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Hello!

Welcome and thanks for requesting this report. It contains powerful proven advice that really works. Whether you are keen to improve your small manufacturing business or an engineer eager to get on in your career (or both), this information will help you to make it happen.

Vast amounts of research, practical experience, knowledge and expertise have gone into this. We’ve boiled it down to the facts that matter, so you don’t have to. I’m confident you will thoroughly enjoy and benefit from it.

It’s very much about taking the mystique out of the concepts, ideas and strategies used by the most successful, profitable manufacturing organizations. When simplified and applied in a straightforward way, it’s possible for you and your business to benefit in a similar fashion. The emphasis is very much on practical hands-on implementation directly in the workplace.

We provide the expertise, empowerment and leadership skills for small manufacturers like you to identify and solve problems, make more money and grow. What’s more, we make suggestions to help you adapt, tailor and apply ideas regardless of your industry sector.

The solution we offer has been developed by firstly identifying what engineers and small manufacturing businesses really want, and actually require. Importantly, this is in the context of rebalancing the economy back towards manufacturing and it’s needs, like improved skills and better, more efficient processes. We’ve extensively researched and investigated. We also spent a considerable amount of time identifying and addressing the shortcomings of traditional solutions like short courses and some expensive in-house consultancy services.

Having said that, boosting your engineering career or making dramatic improvements to your engineering business does require effort. The good news is this report spells out how this is definitely achievable. Real plans, real results and real success.

Enjoy the report and as you do, picture its successful application in your business. Think about how you can personally benefit…

Enjoy!

M. Lynch

Mark Lynch
Advice Manufacturing

“Engineers and Manufacturers are crying out for some common-sense, practical advice to help them cut costs, improve cash-flow, up-skill and so power out of this recession”

“I must do something about my Engineering Career Development. The truth is, I’ve let it slip!...The problem is I’ve been saying that forever! It’s competitive out there and you never know what’s round the corner”

Does any of this resonate with you in any way? If so, please read on for the solutions....
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Making it Happen: Proven Ideas that Work
A Sneak Preview....

At this stage, it’s worth taking a sneak preview of some of the solutions we offer. They’ve been developed specifically to help engineers like you, working in small manufacturing businesses like yours. Although we’ll cover them in more detail later, in a nutshell here’s what we can do for you...

**Advice Manufacturing Website**

Vast amounts of high quality FREE information to help engineers and small manufacturers thrive and grow. Guidance, suggestions and hands-on-help to really make a big difference for employees and for the bottom-line. A relentless focus on keeping it simple and getting things done. It features...

- Production and manufacturing improvement advice
- Assistance to strengthen design engineering expertise
- Info to help combat the skills shortage for Small Manufacturers
- Good practice examples, demos, videos, images and case studies
- Handy hints, tips and suggestions to help tailor solutions to you
- Great advice to boost your employability and career, to earn more
- Blog! Interactive discussion and collaborative problem solving
- Crucial business and industry info for small manufacturers
- Valuable advice for small businesses emerging from recession
- Links to complimentary partners who have lots to offer

**No-Nonsense Manuals**

Delivery-focused information designed to make step-change improvements for you or your business. Proven ideas, used by the best performers together with tips and hints. Available as eBooks covering these 6 themes:

- Lean Manufacturing Essentials
- Product Development Essentials
- CAD Engineering Essentials
- Engineering Jobs
- Career Development and Skills
- Engineering Leadership and Management

**High Impact Programme**

These targeted, themed initiatives are designed to introduce dramatic improvements directly in the workplace. Everything is focussed on making a real difference on the ground, through easy to apply, step-by-step implementation. Specific help and suggestions are provided for tailoring the solutions to your unique circumstances. Some titles are available imminently, with more to follow very soon. Units include:

- How to run a Engineering Cost Reduction Programme?
- Practical Value Analysis & Value Engineering
- 9 Units to follow soon...

Ok, sounds good so far — lets find out some more...
“Design and Manufacturing Improvements… hmm sounds familiar? I’ve seen lots of case studies for the big blue chip companies and their tier 1 suppliers. But what about the small guy – tiers 2, 3 and 4 in the supply chain, short on cash, time and personnel?”

Solving Problems: Typical Questions....

- How do I achieve better productivity and quality with a handful of staff and a tiny budget?
- How do I reduce the cost of my outsourced parts without upsetting my suppliers?
- I’ve heard of Lean Manufacturing: is there a simple way to implement parts of it?
- We desperately need to develop and launch newer, more innovative products—Any ideas how?
- I want to professionalise my technical documentation and fully exploit our CAD software.
- I need a step-by-step plan to knock cost out of our best selling product.
- Tell me a quick, easy way to reorganise and tidy the shop floor, and so drive efficiencies.
- I haven’t got much time — we’re busy, really busy. But I need to set up standard operating procedures, perhaps formalise a few processes, so everyone works to a high quality standard.

- I’m worried about job security — I need to give myself the best chance if the worse happens.
- How do I get my technical professional development back on track with little or no time or cash?
- I want to up-skill my staff on a tiny budget, motivating them to raise their performance.

“OK, I recognise the issues, but too often short courses just don’t deliver back in the workplace and as for some management consultants… don’t get me started....”

Traditional Problems: Reasons why you should let us help you grow....

- Are you often disappointed with conventional short courses?
- Have you had poor results from some consultants, as well as finding them disruptive?
- Do reference texts and books often sit on shelves gathering dust?
- Are the solutions offered above often too bureaucratic, academic and unpractical? Consequently are they unlikely to be adopted by you and your colleagues?
- Do your employees’ skill levels, training and career development need a shot in the arm?
- Is it often difficult to find genuinely useful information to assist your design development and production processes, as well as boost staff moral?

Does any of this sound familiar? We thought so. Subsequently we made it our business to address these problems. Here are the considerations that have gone into our solution....

For a number of years extensive research has been undertaken in the following areas....

- Examining the most successful engineering design and manufacturing companies to identifying what they do to achieve great results. Then simplifying it so it is applicable to small businesses.
- Drawing on years of practical experience, in a range of roles, in various industry sectors.
- Extensive research to identify the practices that deliver success in industry. Tracking trends and official reports into the state and needs of manufacturing businesses.
- A continual focus on practical application, simplicity, user-friendliness and straightforward implementation in the workplace. Everything is results orientated.
- Identifying why current lean manufacturing and best practice design training programmes often have only limited success.
We offer a refreshing, innovative and genuinely user-friendly solution. The truth is most small businesses have very limited time and resources. Advice Manufacturing has arisen as a response to small manufacturers requiring high quality advice, for free or at low cost, and which is straightforward to implement. Our aim is to supply you with the knowledge and skills necessary to confidently meet the challenge facing Manufacturing Industry....

The Challenge Facing Manufacturing Industry

Today small businesses operating in manufacturing industry face a real challenge. Anybody who has managed to survive the recession knows how tough it’s been. What’s more, in terms of awareness, for years it was almost as though the sector had been neglected, with other commercial areas perhaps grabbing the limelight. Engineering was rarely on the political radar and to some it suffered from a bit of an image problem. Despite the doom and gloom, those who work in it have always had pride. And so they should. However, the world is now a different place. The public appreciation for manufacturing is on the rise.

There are a number of real success stories in industry. There are lots of businesses where engineers are undertaking genuinely interesting and rewarding work. For many of these, much can be attributed two things. Firstly, hiring great people and raising skill levels of employees. Secondly, increased efficiency (doing what they do well) through the adoption of World Class Design and Manufacturing Techniques. This enables them to develop and build better quality products, at lower cost. What has been lacking is a really simple way of applying this, particularly for small businesses.

"We will only get ourselves out of this economic mess if we trade our way out and sell our goods around the world. That means manufacturing!"

Lord Digby Jones (Former Trade Minister & CBI Chief)

However, don’t just take our word for it. Here’s the evidence to back some of this up.....
The Importance of Manufacturing—What the Experts Say....

"Manufacturers play a vital role in the economy, providing millions of jobs and around half of all export earnings. Sustaining a competitive manufacturing industry in the next few years should be a priority as the economy struggles back to growth.....As the economy begins the long slow recovery from the most serious financial crisis in decades, manufacturing has moved up the agenda"

A Manifesto for Manufacturing, The Policy Exchange

"After a period of enormous economic change within the country and the wider world, manufacturing has never been more important. With economists and politicians of every type agreeing that manufacturing is the key to a balanced and successful economy, the stage is firmly set for deciding how we get there”

Director, Vote Manufacturing Campaign

“What the country needs is an economy with less financial engineering and more real engineering”

Lord Mandelson, Former Secretary of State for Trade and Industry

The Productivity Gap – Why it’s Important to Close it

".....Productivity and profitability go together. To improve productivity, a manufacturing firm must increase the value of the goods it produces per employee....For businesses and those who work in them, narrowing the productivity gap means working more smartly .... Continuously seeking new ways of improving quality, design, innovation and reliability ....[commercial] success depends not just on cutting costs, but on continually creating goods and services that people want to buy, using innovation, investment and good business practice. Achieving high productivity by these means enables a business to attract and retain skilled workers........This is what successful manufacturing businesses are doing. In pharmaceuticals, aerospace, biotech, electronics, automotive and creative industries, the best are world class. Other examples of world-beating companies can be found in nearly every sector. The challenge for manufacturing is for more companies to match the performance of the best.....”

[More competitive and productive companies are more likely to withstand economic downturn and weather poor market conditions. They are also in a much better position to take advantage of any economic upturn]

Engineering Employers Federation

Process Improvement and the Bottom Line

"Relatively few companies in the Science, Engineering, Manufacturing and Technology sectors are using process improvement techniques, particularly SMEs. This has to change over the next five years. It is essential that many more companies in these strategic sectors utilise accredited process improvement tools and techniques to compete in a global economy to survive, grow and sustain their position. Implementation of lean manufacturing processes will enable companies to create quality products, high productivity and excellent customer service. This will directly improve bottom line performance"

Sector Skills Council for Science, Engineering and Manufacturing Technologies

Adopting Best Practice

"....taken as a whole, manufacturers can increase their competitiveness considerably by the adoption of world class practices .....adoption of world class practices implies a culture of continuous improvement..... .....best practice embraces a range of techniques, related to production processes, to products and to their design, and to employment practice. Lean manufacturing techniques for example, cut out waste; mass customisation tailors products to the consumer; good supplier relations improve quality and efficiency; workplace partnerships increase the contributions employees can make....

Despite the potential gains on offer the UK appears to be less prepared to absorb the lessons of best practice. For example the Engineering Employers Federation (EEF) found that US-owned firms use lean manufacturing techniques more widely and intensively than UK-owned firms and that despite the clear productivity benefits, 42% had no plans to implement these techniques. The firms cited resistance to change, lack of understanding and inadequate work force skills for their non adoption......”

“.....In order to help companies adopt best manufacturing practices, they require an easily accessible and affordable source of information and advice on a range of manufacturing technologies, processes and methods.....”

Engineering Employers Federation

Dept. of Trade & Industry/Dept. for Business Innovation & Skills
The Skills Shortage in Manufacturing is Now Critical...

“As a host of engineering organisations and manufacturing companies have made clear of late, the skills shortage in manufacturing is now critical....”

Engineering Apprentice/Engineering Careers

“Skills gaps are considered to be one of the most severe obstacles to growth for individual businesses....”

EngineeringUK Annual Report

The Impact of the Skills Shortage

“The main impacts of recruitment difficulties cited by Engineering establishments were loss of business/orders, restriction to business development activities, increased work-in-progress, missed deadlines, loss of quality of products and increased running costs. All of these impacts will influence bottom line profitability of establishments. .... These results show that hard-to-fill vacancies have a real and significant impact on the profitability and success of engineering businesses”

“The main reasons cited for hard-to-fill vacancies in both the Engineering and Science Industries were a lack of applicants with required qualifications and skills and a lack of applicants with required work experience”

“Employers are in sometimes fierce competition with employers from their own sectors and from other sectors in the economy, for the talent of those with good science, technology, engineering or mathematics knowledge and skills”

“70% of engineering establishments that reported skills gaps have technical skills gaps, mainly among their core technical workforce (professional engineers, technicians, craftspersons and operatives). The skills gaps in these technical roles have the most significant impact on the business..... Specific Leadership and Management training is considered to be the foundation of good management practice required for any company to build a more robust and competitive business”

Sector Skills Council for Science, Engineering and Manufacturing Technologies

“61% of the directors surveyed thought that not being able to hire the right people had impeded the growth of their business, and 80% thought that skills weaknesses in current staff could mean that their organization would not be able capitalize on economic recovery. When you look at the skills that are lacking it’s not hard to understand why. The most difficult skills to obtain in new staff were technical or practical skills, while in existing employees, management and leadership skills were identified as those most often missing”

Institute of Directors

“We need more entrepreneur. We need more innovators. We need more scientists, engineers and designers who can turn ideas into working products”

James Dyson, Inventor and Entrepreneur

The Official Line.....

“There's a recognition that, coming out of an economic crisis, the only way the nation can succeed is as a high-tech, high-skill economy,”

John Hayes MP, former Minister of State for Further Education, Skills and Lifelong Learning

Barriers to Training

The main factors limiting or presenting a barrier to training are the same in both the Engineering sector and the Science Industries: the ‘cost of training’ and that employers are ‘too busy/availability of time’ and ‘cannot afford staff to have time off for training’.... The most common steps identified were all linked to limiting the cost of training, these being, ‘to provide cheaper training courses’

Sector Skills Council for Science, Engineering and Manufacturing Technologies

The Training Plan—Mapping out Skills Development

"Only a third of companies represented by Semta started last year with a training plan or budget. It is essential for companies to map out how they will develop the skills of their people to achieve their business objectives,"

Chief Executive, SEMTA
Answers to the Issues: Real Hands-on Help....

OK, so the problems are well documented and verified with studies and quotes from various reputable sources. In response, there are a range of training organisations and government backed initiatives offering help. No doubt you or your colleagues have been on short courses targeted at your industry sector. Unfortunately many only deliver limited results primarily because of one reason ....

**Not enough emphasis has been placed on making the solution as easy as possible to implement back in the workplace....**

It is crucial to address this, if all these solutions are to yield any significant benefits. This is the fundamental reason why many in industry claim “it sounds good but it would never work at our place”. Not surprisingly many have grown sceptical about the potential traditional solutions on offer. In addition to this, two other critical points have been demonstrated by our research:

**For Small Manufacturing businesses every penny counts; Any money spent on training or improvement must yield maximum value for money....**

For many cash flow is tight, there are no spare staff, there’s very limited time to try new initiatives and most effort is concentrated on core business. Because of this:

**Small Manufacturers urgently need to see results quickly....**

What’s more, improvement ideas are far more likely to be relevant, take root and be sustained if they are driven internally by staff. After all they know the business the best, understand it’s needs and have a collective vested interest in success. Indeed, to verify this a recent report by the Dept. for Business Innovation & Skills concluded “we need to focus on encouraging SMEs to develop their internal capability to use knowledge and resources effectively in order to successfully navigate the path to growth...”

In response to this, we have developed a solution tailored to the needs of engineering design, technology and manufacturing companies, particularly small-to-medium sized enterprises (SMEs). We have focused on straightforward implementation in the workplace, directly meeting the challenges set out in reputable official reports, as well as addressing the shortfalls of current solutions in the market place (short courses, in-house consultants and reference texts).

“Short Courses, some Consultants and Reference Texts - all offer so much! The problem is they often fail to transfer benefits directly back into the workplace...“
Advice Manufacturing Website

Vast amounts of high quality FREE information to help Engineers and Small Manufacturers thrive and grow

The Advice Manufacturing website brings together a number of themes crucial for helping engineers and small manufacturers be the best they can be. It draws on the proven practices and ideas deployed by the best performing businesses. Most information is freely available, keeping in line with what hard-pressed manufacturers and engineers need. Convenient application in the workplace is a central theme. We provide guidance, suggestions and hands-on help to really make a big difference for employees and for the bottom-line. Key features of the website include:

The Need for Better Skills: Practical Help for You right Now!

**How to be the Best Engineer you can be... and earn more**
- Outstanding advice to empower you to take control of your job security and career progression. Build you skills in a structured way, then match them to what manufacturers specifically want.
- Powerful information geared to getting you that ideal job.
- Targeted material for effective CVs, covering letters and interviews - designed specifically for engineers and technicians.
- We also provide a comprehensive career development plan. It is quick and easy to complete and customise, for real progress.
- Massive amounts of tips, hints and guidance on vocational training options, technical qualifications and engineering media.

**How Your Business can beat the skills shortage**
- Skills shortages have been identified as perhaps the biggest barrier to growth and profitability for small manufacturers. We provide must-have material and links for the best help available.
- A smart method of identifying skills gaps in teams and linking them directly to personal development plans or recruitment.
- Tools to combat redundancy, fear of job loss and stalled careers.
- Options to help small manufacturers beat the skills shortage.
- How to retain your best technical people.

Business & Industry Advice: Clearly Set-out Available Help

**Get what you want by being better informed**
Don’t get left behind, instead stay aware and be sure not to miss out on potential opportunities and benefits, by accessing everything in one place. Stay informed and find out what the shapers and formers of industry have to say. No more searching around – that’s all been done for you! All the best info in one place. Topics covered include:

- Business, industry and current affairs
- Finance and funding for your business
- Opportunities, advice and trends for your job and industry
- Valuable sources of help and support—clarity and crucial links
Advice Manufacturing Website Continued...

Vast amounts of high quality FREE information to help Engineers and Small Manufacturers thrive and grow

Delivering What Small Manufacturers’ Really Want:

Boost Your Manufacturing Efficiency and Productivity
- Understand the core principles behind ‘lean’ manufacturing
- Simple explanation, benefits and examples without the jargon
- Clear description of the most effective tools and techniques
- Hands-on, practical guidance for straightforward application
- Tips, hints and help used by the best performing firms
- Examples, demos and videos to make an impact from day 1
- How to involve and empower employees to maintain enthusiasm
- Links to specialists who can help, plus automation options

Master the Black Art of Product Development
- Understand why product development is a crucial activity for the future of the business and needs backing by senior management
- Learn how to align it to business objectives and minimise risks
- Organise a multi-disciplined team to drive development tasks
- Step-by-step advice to work through the development stages
- Extra emphasis on design for manufacture and engineering
- Top tips for moving at pace, intellectual property and R&D

Unleash the Full Potential of 3D CAD-based Technologies
- Appreciate the step-change benefits 3D CAD-based technologies can deliver, including improved quality, speed and collaboration
- Comprehend how 3D CAD can benefit manufacturers through CNC, handling of digital data orders and quick jig/fixture design
- Professionalise and control CAD models and technical drawings
- 3D CAD Software evaluation, selection and implementation plan
- Make the 2D-3D leap or roll out more seats. Step-by-step plan
- Forget 3D Printing hype. See what it can really do for you

More Great Features to make a dramatic difference for Small Manufacturers

- Emerging from Recession? Guidance to assist your recovery, plus position yourself to take advantage of opportunities
- Engineering Leadership and Management: Make sure you and your people are equipped to inspire, lead and motivate
- Manufacturing Renaissance & Rebalancing the Economy: Play your part, get recognised and make it work for you
- Answers for cynics: So you think you’ve been here before?
- News for the Supply Chain—Info for Tier 2, 3 and 4 Suppliers

- No-Nonsense Manuals...
- High Impact Programme...

“The aim is to drive engineering and manufacturing excellence in smaller businesses”
No-Nonsense Manuals

Take the information directly to where it’s needed...
Use our practical help to make a difference on the ground, in the workplace

Supplied as eBooks: Paper’s Good or try Mobile Digital data

Lean Manufacturing Essentials
- Clear, concise explanation of ‘Lean’, setting out the principles and their application. Strip out the buzzwords and keep it simple
- The benefits of Lean, from a small manufacturer’s perspective
- All the main techniques clearly explained, with emphasis on how they can be applied in the workplace to make a big difference
- Tools include 7 Wastes, 5S, Kaizen—continuous improvement, 5 Why problem solving, minimising inventory, 6 big losses, Lean layout and visibility, 6 Sigma and Total Productive Maintenance
- Other guidance and help inc. setting up standard operating procedures, VSM, PDCA, embedding and sustaining lean thinking
- Lean Leadership Culture: Getting the best from your people by empowering them and encouraging the right behaviours
- How Automation can dramatically improve production for you
- Links to expert sources used by the best performing firms
- Making it Happen: Step-by-step implementation plan

Product Development Essentials
- Clearly understand what product development is all about and why it is both relevant and crucial to manufacturers
- Appreciate product development business considerations like senior mgt. backing, justification & alignment to core objectives
- Discover the product development process key stages and how to put together a multi-disciplined team to drive progress
- Learn how to draft an effective specification, get the best product ideas and undertake detail design using best practices
- Gear up for production with VA/VE, DFMA & engineering tasks
- Do what the best manufacturers do: practical tips, keep things moving at pace, helpful hints and keeping your people engaged
- Costing Considerations: Budgets, reductions and business
- Big benefits a professional ‘Designer’ can generate for you
- Intellectual property, R&D and innovation for manufacturers
- Making it Happen: Step-by-step implementation plan

3D CAD Engineering Essentials
- Fully appreciate the step-change benefits 3D CAD-based technologies can deliver for small manufacturers
- Genuine competitive advantage—through business benefits like faster development cycles, better productivity and quality
- Specific benefits include improvements in concept and detail design, analysis, simulation, production engineering & marketing
- Discover how 3D CAD can help manufacturing businesses with CAM, jig and fixture design, and supply chain collaboration
- Making the 2D-3D switch, expanding or want more functionality?
No-Nonsense Manuals Continued...

3D CAD Engineering Essentials Continued...
- How to make the case—CAD Investment Justification: Step-by-step guidance to tailor the plan to your business objectives
- 3D CAD software evaluation, selection and implementation plan
- 3D Printing for Small Manufacturers: All you need to know
- Making it Happen: Step-by-step implementation plan

Engineering Jobs
- Whether you’re job hunting, worried about redundancy or going for promotion, get that great job you deserve with this vital info
- All details are tailored to the needs of engineers and technicians
- It works because it’s based on matching your skills specifically to what employers want
- How to search for the right job for you — not any old job
- Structured job searching — the best sources and where to look
- The Professional CV: Beat the competition and secure interviews
- Covering Letters: What employers want to read
- Interview tips and techniques for engineers and technicians
- Let’s go find that job here and now!

Career Development and Skills
- Time to take charge and give your career the boost it needs
- Also an innovative system for identifying your firm’s skills gaps, then aligning staff training plans and recruitment accordingly
- How to stop drifting, get organised and get on... and earn more
- Useful tips, hints and tools to help you reflect and set direction
- 100% tailorable to your circumstances
- Practical, crystal clear information to help you compare and size-up options on vocational training and technical qualifications
- Useful explanations about the benefits of engineering institutions, professional registration and engineering media
- Quick and simple to complete, yet powerful Career Planner

Essential Leadership and Management Skills
- Perhaps you and your small manufacturing business are very good technically at what you do? OK, so how are you going to take things to the next level? How are you going to be as productive, successful and profitable as you can possibly be?
- Answer— By deploying your resources and motivating you people in the best way you can, by reinvigorating Leadership and Management skills throughout the business.
- Leadership: What great manufacturing leadership looks like
- People Management: How to get the very best from people
- Networking: Simply the most effective way to get on and win
- Public Speaking: How to master this powerful useful skill
- Project Management: Practical, structured means to get the job done.
High Impact Programme

A series of themed Units; targeted initiatives for step-by-step problem solving and rapid implementation

World Class Design and Manufacturing Techniques...Without the Hassle!
Straightforward Application - Significant Benefits

The High Impact Programme has been developed as a series of standalone units, designed to drive improvements directly in your place of work. Powerful information is presented in a simple to understand format, for your convenience. We remove the hassle and provide practical, common sense guidance with each programme unit to make implementation as straightforward as possible.

The focus is on getting the job done, with step-by-step guidance that can be tailored to your situation. Broad themes include methods of cutting costs and waste, improving design and production processes, as well as boosting productivity and quality; proven solutions that work and deliver real improvements to your bottom line.

The series has arisen as a response to small manufacturers needing high quality, low cost advice to solve problems quickly. Straightforward implementation is key and rapid results are crucial. Most small businesses simply haven't got the time to mess about – time, staff and resources are all scarce.

A range of effective Lean Manufacturing, Product Development and CAD Engineering-related topics are covered. You can either implement specific parts of each programme relevant to your project, or alternatively solve a wider problem you may be grappling with. Additionally a comprehensive implementation plan is provided for all the information towards the end of each unit.

High Impact Programme Units available imminently and in the near future include....

ENGINEERING COST REDUCTION

How do I plan, structure and run an internal cost reduction programme? ...Available Imminently!


PRACTICAL VALUE ANALYSIS & VALUE ENGINEERING

How do I reduce the costs of my existing products and increase their value to customers? ...Available Imminently!

Value Analysis & Engineering (VA/VE) - Why it makes commercial sense and is relevant now more than ever. Knocking cost out of existing products. Putting together a cross-functional team. Getting Management support and staff buy-in. How to do VA/VE — a planned approach. Cost reduction and happy suppliers. Modular design benefits. Assigning assembly functions and costs. Design for Assembly & Manufacture (DFMA) for quick results.
CAD & TECHNICAL DATA TO ASSIST PRODUCTION
How do I use CAD and technical data to make big improvements on the shop floor?
Use technical information and CAD to bring step-change improvements to production. Profit from fewer defects, reduced training times and better standardisation. Use CAD to aid fixture design, CAM, inspection and check tool paths. Rapidly access 3D assemblies and parts, 2D drawings and BOMs to assist product kitting, fitting, assembly and inspection. Quickly integrate CAD into procedures, instructions and manuals. Tips for setting up production cells and assembly work stations. CAD assembly exploded views and animation for training and maintenance.

PRODUCTION PROBLEM SOLVING & CONTINUOUS IMPROVEMENT
How do I introduce and sustain a problem solving culture on the shop floor?

LEAN MANUFACTURING TOOLS FOR PRACTICAL APPLICATION
I need a to-the-point explanation of the tools, plus a step-by-step ‘how to use’ guide
Lean Manufacturing core principles. 7 Waste identification and elimination. Standardising processes and clear instructions. VSM to eliminate waste and add customer value. 5 Why root cause analysis. Lead time reduction. 6 big losses in productivity. Practical 5 S workplace implementation. Selecting and working towards KPI’s aligned to business goals. Applied JIT and reducing inventory. Continuous flow & other quality tools. How to get buy-in.

LEAN MANUFACTURING TECHNIQUES FOR SUCCESSFUL IMPLEMENTATION
How do I introduce Lean Manufacturing rapidly, and so start benefitting quickly?

INNOVATION FOR SMALL MANUFACTURERS: A PRACTICAL GUIDE
Everybody seems to be banding the word around – so how can ‘Innovation’ help me?

SUPPLIER PARTNERSHIPS
How do I improve my supplier relationships, yet make big cost reductions?

"The Units deliver targeted information in the most straightforward way"

© Real Hands-on Help for You and Your Manufacturing Business - To get started or find out more please get in contact at www.advice-manufacturing.com or email info@advice-manufacturing.com
High Impact Programme

Clearly Defined Themed Units:
Designed for Step-By-Step Problem Solving

DIGITAL PRODUCT DEVELOPMENT

**How Small Manufacturers and Engineers can get the most from 3D CAD Technologies**

Practical benefits of Computer Aided Design and Engineering for small manufacturers. Benefits throughout the product lifecycle: from marketing, design, simulation and production through to field maintenance and suppliers. Moving from 2D to 3D CAD: Full implementation guide including making the case to management. CAD software evaluation, selection & implementation. 3D Printing for manufacturers. Introduction to FEA, CFD, CAM and PLM.

**MANAGING ENGINEERING DESIGN CHANGES**

**Rapid product improvements in a structured way: How to better control Engineering Changes**

Why Engineering Change Orders (ECOs) are commercially important. Avoid mistakes, wrong orders, defects and waste. Implementing a structured ECO system. Using versions and revisions to control drawings and technical docs. Encouraging a culture of good ideas and innovative improvements: feeding changes back from production, inspection, servicing, maintenance and marketing. Communicating changes to production, suppliers and others.

**PRODUCT DEVELOPMENT STRATEGY**

**How to develop new products or improve existing ones in a structured way?**

Implementing a process for structured product development, for both new products and redesigns. A plan to identify and work through all key stages like specs, concepts, detail, production etc. Gain buy-in from staff and managers. Aligning the process with business strategy, derive it from customer needs and drive it with a cross-functional team. Focus on engineering costs and budgets. Benefit from shorter development times. Design in quality and value. Advantages professional designers can bring. Top tips the best performing manufacturers use.

...and a whole lot more!

**Customise the Content:**

3 Handy features which tailor the information to provide personalised help, specific to your unique business

The Programme Units have been developed with user-friendliness as a central theme. In addition to this, included within the Units are two features that take user-assistance to the next level. These have been developed to really deliver great ideas directly into your place of work. We recognise it’s not enough to be informed about key topics and the way they work - the 'What'. To really deliver and make a difference you need to know the 'How'. How do you customise the information? How do you come up with the imaginative ideas unique to your business? How do you go about applying the advice and implementing the expertise, before reaping the benefits? Here’s how...

**1 Programme ‘Practical Tips’**

This feature is included after a technical or theoretical idea has been explained. Detailed explanations are succinctly summarised and simple instructions are provided. Practical tips suggest straightforward ways of applying the same idea within your organisation. These easy to apply solutions are recommended to save you time and give you guidance. Practical tips also minimise the amount of organisation and decision-making for you – hence hassle-free implementation. Practical Tips reflect much of the industry-based research undertaken for the Units.

**2 Programme ‘Innovation Advice’**

This feature enables you to really adapt and customise the knowledge being presented to your unique situation. Innovation advice helps you suggest improvements and solutions, by doing things differently. After a technical or theoretical idea is explained, recommendations to assist...
High Impact Programme

Clearly Defined Themed Units:
Designed for Step-By-Step Problem Solving

... innovative thinking are suggested. This often includes examples. Encouraging creative, lateral and imaginative thinking by you the user, coupled with knowledge in the units, helps deliver practical solutions to solve problems in your workplace. Innovation Advice reflects the broad range of practical improvements identified in different industries during our research.

3 Quick & Simple Customisation

All the information supplied to you can be rapidly customised - in fact we actively recommend it! All the data provided is simple to adapt, enabling you to add specific project or business details and notes to our core technical material. Anybody familiar with the Microsoft Office suite of software should be able to add to and adapt the material. As well as text, we recommend adding graphic and CAD images specific to your business. Customisation enables ideas and knowledge to be understood more easily by all, by applying them to company examples everybody is familiar with. Remember all material has been developed with user-friendliness in mind. Our aim is for your unique company information to complement our delivery-focussed expertise, through quick and simple customisation.

Additionally, High Impact Programme Units include a particularly useful feature to embed best practices and importantly obtain commitment from your employees...

Need to Know Info: Inform Your People

Presentation slides to transfer essential information directly to where it’s needed in your business - beat the sceptics and get employee buy-in.

"Need to Know info: The ideal way of delivering essential knowledge to where it’s most needed, by those who know the business the best - you and your people"

‘Need to Know Info’ is the quick and easy way of spreading the knowledge contained in each High Impact Programme Unit to people and teams in your business. Ready-made slides enable all the key points from the Unit to be presented in the form of an in-house presentation, which is delivered by your own senior staff to other colleagues. Use convenient opportunities like scheduled production meetings to present to your people. The Microsoft PowerPoint training presentations can be delivered by projector, monitor, laptop or tablet. Alternatively print them out as A2 or A3 sheets and display them with the aid of a flipchart or by using printed A4 sheets, handed out among a group. The choice is yours. Importantly the information remains the same. Features of ‘Need to Know Info’ include:

Information Derived from Units - 1st Class Technical Knowledge. Choose what to present, based on training needs, time available etc.

No Disruption - Training is managed and presented in-house on your terms. Schedule it to suit you, perhaps at routine meetings
Advice Manufacturing!
Hands-on Help for Small Manufacturers and Smart Technical People

High Impact Programme

Clearly Defined Themed Units:
Designed for Step-By-Step Problem Solving

Very Easily Customised - Simply add your own specific technical work details, branding etc to our core knowledge.

Choose Your Format - Present the information digitally, with the aid of a flip chart or as A4 hand-outs to a group

Tips on Improving Your Presentation Style - Advice for delivering effective presentations. Ooze professionalism and really get your message across.

Communicate and Manage Project Reporting Easily - The ideal tool for presenting project management progress to senior managers, colleagues, other departments and customers.

Easily Add Illustrations and Graphics - Simply copy and paste graphic images from other software. Examples include technical drawings, 3D models, bills of materials, graphs and charts, digital images, scanned photographs etc. MS PowerPoint handles nearly all graphic file formats.

Incorporate ‘Need to Know Info’ into Career Development - Link the training presentations into developing your employees. Build confidence and get staff comfortable with presenting technical data. Include informal presentations and discussions to colleagues as a development goal.

"Need to Know Info - The ideal way of delivering essential knowledge to where it’s most needed, by those who know the business the best - your staff”

High Impact Programme Units—Summary

They really are the ideal method of injecting specialised knowledge used by high performing manufacturers into the processes, operations and systems of your business. They are geared to make a real difference, fast. We will start rolling these out imminently and more will be available soon. They offer great value for money and come highly recommended.

What the Programme Offers ....

- Common sense, realistic ways of cutting costs and making tangible improvements in design, production and productivity. Hands-on, practical solutions for real bottom-line improvements.
- Information is set out in a no-waffle, easy to digest style. Step-by-step instructions present the quickest method of implementation and how to get results fast. Practical tips to embed the info
- Inbuilt flexibility enables the material to be quickly adapted to the specifics of your company. Quickly customise the info to maximise the relevance to you.
- Embed and sustain improvements with our innovative method of in-house training. Simple to present and use. Get staff and teams enthused and empowered.
- Do what the best do, and see it really works. Everything is results orientated, derived from the experiences and best practices of the most successful performing manufacturing businesses.

- High Quality, affordable advice—yet simple, straightforward 1-off payment.
- Significantly lower cost than short courses and in-house consultants—and far less disruptive! Ideal for smaller manufacturers where every penny counts.
OK, so now you’ve got a flavour...

As you can see, Advice Manufacturing offers stacks of assistance. It’s a lot to take in. The free information on the website, together with the No-Nonsense Manuals and the High Impact Programme Units offer a vast selection of targeted help. In summary small manufacturers and smart technical people can benefit from...

- Affordable and convenient access to high quality targeted advice, that really works.
- A flow of proven ideas used by the best performing manufacturers, yet tailorable to you.
- Nuts and bolts, practical help to radically improve your production activities.
- Faster development times and reduced costs for both new and redesigned products.
- Advice to boost productivity and efficiency, and to ultimately improve profitability.

- Practical solutions that can be implemented with minimum disruption. Phase in improvements at your convenience. Fit them around hard commitments and build into them into your routines.
- Suggestions for improving the rate of problem detection and resolution by employees.
- Methods of raising moral among employees, empowering them to make improvements.

- Clear, concise explanation of the support schemes, programmes and organisations available to assist small manufacturing businesses, with links for further explanation.

- Training programmes and technical qualifications to improve internal skills.
- Aligning personal development and training with skill gaps of the team and the wider business.
- Structured career development to improve employability, with the potential to earn more.
- Job and recruitment expert advice.

And much, much more.....

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Sounds like a wish list? Sounds too good to be true? Well here are some reasons why you should let us help you thrive....

Familiar Frustrations with Traditional Solutions...

Are you often disappointed with conventional short courses?

- These can be very expensive for small companies where funds for development are scarce (particularly if a whole department requires training).
- For small manufacturers it can be massively disruptive and inconvenient for key employees to take time out training. The cost of drops in productivity and interruption quickly start adding up.
- Typically the material gets forgotten about and not implemented on the return to work. How many times have course notes simply been left on a shelf once staff return to the day job?
- The benefits and value for money are often questionable (Be honest, was it worth it? Not really)
- Too often much of the information you are paying for isn’t relevant, the trainer dwells on less applicable material or they simply are uninspiring.
Familiar Frustrations with Traditional Solutions...

Have you had poor results from some consultants?

- Do some of them leave you feeling they are not worth the money they charge? Some consultants fees can be very expensive, particularly for small businesses. Value for money can be questionable.
- Do they leave you feeling underwhelmed? Poorly performing consultants have been accused of sometimes stating the obvious.
- They often recommend cuts in staff to reduce overall costs, with the result being business disruption and plummeting staff morale.
- Do disreputable consultants offer similar solutions, reports and plans, to different clients who actually expect custom solutions unique to their situation?
- Are some consultants guilty of not making crystal clear what you can expect at the end—what they will deliver and what you will achieve as a result?

- Sometimes the disruption caused by consultant suggestions can have a significant detrimental impact on productivity. Sadly, some do not stay with the company and help them actually implement the recommendations. So after the report is delivered, you’re on your own.
- Some consultants pitch their message at the wrong level. Corporate jargon, buzzwords and management fads can quickly lose an audience who are looking for straightforward, practical solutions in plain English.
- Too often they talk, without listening enough; eager to put in place stock solutions and move on, rather than take the time to work through details.
- Poor consultants can encourage change at the wrong pace for the host company, not adequately taking into account the need to undertake day-to-day business and so pay the bills, as well as resources required for the recommended change.

Do you struggle to find comprehensive yet practical job, careers and skills advice specific to engineers?

- Whilst there is plenty of generalist job and career advice out there, would you ideally benefit from targeted engineering-specific guidance, and so gear your next move to what manufacturers actually need ... and as a result, earn more?
- Considering recent economic events, not surprisingly many people are worried about job security. Bearing this in mind, why not give yourself the best possible options by staying informed and targeting the technical skills that are in demand?
- We’ve all heard of the Skills Shortage in manufacturing—but do you find the sheer range of training bodies and options confusing? Aren’t engineers just crying out for clarity?
- As a small manufacturer, could you benefit from a practical, easy to follow structured plan to plug your known skills gaps either by targeted employee training or recruitment that delivers?
- Do you find it hard to recruit and then retain the best people with the right skills?
- Would a structured, no-nonsense and easy to follow approach to career development be beneficial, both to you and your colleagues where you work?
- Could you benefit from practical technical recruitment and interview advice, to make you more employable, provide a better professional impression and therefore help you to earn more?
- The recession has demonstrated nobody can rest easy with regard to job security

"Combat the Skills Shortage by recruiting the best—then retain them. Plus, boost you competitiveness, with structured Career Development"
Familiar Frustrations with Traditional Solutions...

Do reference texts and books often sit on shelves gathering dust?

- Specialist reference texts are often very expensive to buy, especially for small firms.
- Too often they don’t get referred to. Instead they sit on shelves gathering dust—but looking good!
- The language used in them is often not easy to digest and concepts are not explained in a clear way. Too much academic theory and jargon and not enough hands-on implementation.
- They are sometimes perceived as OK in theory, but weak in practical application.
- How often have you thought ‘that’s all well and good but it would never work here!’
- Traditional books are far from the ideal medium for exploiting digital data and mobile media. In addition they can not be rapidly updating with user feedback and innovative good ideas.

Is it often difficult to find genuinely useful information to assist your Design Development and Production processes?

- Do you find that searches on the internet are never specific enough?
- Is information you find seldom conveniently formatted, ready to be applied immediately to where it’s needed?
- Do you actually need a targeted solution to a specific problem, something you can dip into quickly to solve a problem before moving on, rather than a full blown consultancy service?
- Would you appreciate a single location to find essential related key information?
- Have Web searches typically taken lots of time and been relatively unfruitful?

Do any of the above sound familiar?

It’s time to do things differently, to achieve the success you deserve....
It’s to time be INSPIRED........

"Advice Manufacturing gives you that inspiration...”
With Advice Manufacturing You Get....

- A website packed with huge amounts of FREE high quality expert information developed to help manufacturers and engineers thrive and grow.
- We also take into account many small manufacturers have limited time, resources and people. As so, any improvement activity needs to deliver results quickly.

- Boost your manufacturing efficiency and productivity
- Master the black art of product development
- Unleash the full potential of 3D CAD-based technologies

- How to be the best engineer you can be... and earn more

- How your business can beat the skills shortage

- Essential business and industry info to keep you informed. Plus crystal clear and concise explanation of the range of initiatives out there to support your business

Plus expert hands-on help in the form of...
With Advice Manufacturing You Get...

**No-Nonsense Manuals:** Delivery-focused information designed to make step-change improvements for you and your business. Proven ideas, used by the best performing businesses.

**Lean Manufacturing Essentials**  ...Buy Now!
- Clear, concise explanation of ‘Lean’
- The benefits, plus Tools and techniques, made simple
- Embedding a Lean Leadership culture
- Links to expert sources, plus how Automation can help
- Guidance and help. Step-by-step implementation plan

**Product Development Essentials**  ...Buy Now!
- Why it is both relevant and crucial to manufacturers
- Key stages and a multi-disciplined team to drive progress
- Costing considerations: Budgets, reductions and business
- Big benefits a professional ‘Designer’ can deliver for you
- Intellectual property, R&D and innovation for manufacturers
- Making it Happen: Step-by-step implementation plan

**CAD Engineering Essentials**  ...Buy Now!
- Step-change benefits in quality, lead-times and productivity
- 3D Benefits for design, analysis, production and marketing
- Advantages with CAM, jigs, tooling and supplier collaboration
- Making the switch from 2D-3D CAD: Business justification
- CAD Software evaluation, selection and implementation plan
- 3D Printing for Small Manufacturers: All you need to know

**Engineering Jobs**  ...Buy Now!
- Tailored to the needs of engineers and technicians
- Matching your skills specifically to what employers want
- How to search for the right job for you—not any old job
- Structured job searching, including proven places to look
- The Professional CV, covering letters and interview tips
- Go find that Job! - Direct Links

**Career Development and Skills**  ...Buy Now!
- How to stop drifting, get organised and get on... and earn more
- Time to take charge: Practical Career Planner
- Innovative system for aligning training with business skill needs
- 100% tailorable to your circumstances
- Vocational training and technical qualifications options
- Engineering institutions and professional registration

**Essential Leadership & Management Skills**  ...Buy Now!
- Being the Best: Getting the most from your people and resources
- Leadership: What great manufacturing leadership looks like
- People Management: How to get the very best from people
- Networking: Simply the most effective way to get on and win
- Public Speaking: How to master this powerful useful skill
- Project Management: Practical, structured means to get the job done
With Advice Manufacturing You Get....

High Impact Programme

A series of themed standalone units; targeted initiatives to drive improvements directly in your place of work. We remove the hassle and provide practical, common sense guidance with each programme unit, to make implementation as straightforward as possible. The focus is on getting the job done, with step-by-step guidance which can be tailored to your unique situation.

ENGINEERING COST REDUCTION

How do I plan, structure and run an internal cost reduction programme?


PRACTICAL VALUE ANALYSIS & VALUE ENGINEERING

How do I reduce the costs of my existing products and increase their value to customers?

Value Analysis & Engineering (VA/VE) - Why it makes commercial sense and is relevant now more than ever. Knocking cost out of existing products. Putting together a cross-functional team. Getting Management support and staff buy-in. How to do VA/VE — a planned approach. Cost reduction and happy suppliers. Modular design benefits. Assigning assembly functions and costs. Design for Assembly & Manufacture (DFMA) for quick results.

In addition, these great units are coming soon...

- CAD & TECHNICAL DATA TO ASSIST PRODUCTION
- PRODUCTION PROBLEM SOLVING & CONTINUOUS IMPROVEMENT
- LEAN MANUFACTURING: TOOLS FOR PRACTICAL APPLICATION
- LEAN MANUFACTURING: TECHNIQUES FOR SUCCESSFUL IMPLEMENTATION
- INNOVATION FOR SMALL MANUFACTURERS: A PRACTICAL GUIDE
- SUPPLIER PARTNERSHIPS
- DIGITAL PRODUCT DEVELOPMENT
- MANAGING ENGINEERING DESIGN CHANGES
- PRODUCT DEVELOPMENT STRATEGY

High Impact Programme Units are the ideal way to drive improvements and get the job done, in your business.

Advice Manufacturing has been developed especially with the needs of engineers and small manufacturers in mind, where time, people and resources are really limited—We get it! That's why everything we offer is results-orientated, with convenient implementation, to deliver real benefits.

Does anything in the report resonate with you - we hope so? Why not take the opportunity to improve? Go on... you've nothing to lose!
You’ve reached the end of the Advice Manufacturing Report. Thank you for reading. If you found this guide useful, please share it with a friend or colleague!

Manufacturing Advice to help Engineers thrive...
Practical, No-Nonsense Application

Expert guidance to help your technical business flourish, and help you be the best engineer you can be.

If you want to benefit by applying the secrets of the best performing manufacturers and engineers, act now and get in contact:

Website:  www.advice-manufacturing.com
Email: info@advice-manufacturing.com
Facebook: https://www.facebook.com/AdviceManufacturing
Twitter: https://twitter.com/Smart_Technical
LinkedIn: http://www.linkedin.com/pub/mark-lynch/2/119/b11