

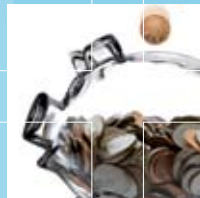
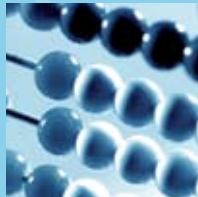
# Lean Accounting Report 08

Part of the Industry Research Programme from *The Manufacturer*

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**THE Manufacturer**  
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# The next step in lean

Welcome to Lean Accounting 2008, produced in association with BDO Stoy Hayward. This guide aims to examine, in depth, the shape of lean accounting within UK manufacturing today.



Becky Done, Editor

With many manufacturers now undergoing a lean transformation, our industry-wide survey this year sought to discover exactly what part lean accounting

has played in the changes made. Surprisingly, many of your answers revealed that your application of lean stops just short of the finance function – which can impact negatively on efforts made throughout the rest of the business. Reasons ranged from a lack of understanding to the barrier of company culture, so we hope this guide will cut through some of the common misconceptions about lean accounting and demonstrate instead the extensive benefits to be realised from its application.

Find out what accountancy experts BDO Stoy Hayward think the results reveal about the use of lean accounting by manufacturers, how lean accounting could transform your business and help you inch ahead of the competition, and why value-based costing really cannot be ignored by those who want to improve capacity and, therefore, profitability.

For real life examples of businesses that have leaned their accounting methods, Malcolm Wheatley talked to some UK manufacturers to find out where the key to successful implementation and integration lies. Read his piece to discover how others in your field are making lean accounting work for them.

We also have comment from lean accounting pioneer Jean Cunningham, who offers insight into her own extensive experience, a comprehensive overview of our survey results and advice for approaching the transformation process. If you're heading to The Manufacturer LIVE conference in October, don't forget to attend Jean's presentation and workshop for further insights on applying lean within your organisation to maximum effect. Find out more at

<http://www.themanufacturer.com/live/>.

So if you've started to make the lean transformation but have stopped short at the challenge of lean accounting – if you don't know how to start, or remain unconvinced that it could work – we hope this report will prove a revealing, informative and inspirational assessment of the best ways to make the change and start reaping the rewards.

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# LEAN BUSINESS *Masterclass*

Lean Accounting masterclasses consist of two seminars. They address the needs of companies at a variety of stages in the lean journey where the financial and accounting functions have not been adapted to the lean environment and effective measurement is impossible. A given individual might select either or both of the seminars depending on the current environment in which they work.

As with lean manufacturing, there is no one right answer or step-by-step instruction manual to address lean accounting, but these seminars will provide the tools to create a culture of total involvement that will revolutionize your accounting team and its ability to impact your company's future success.

This is a rare opportunity to learn first hand from an expert who has successfully accomplished everything that will be presented and has been widely applauded and recognized for it.

## Seminar 1

### Lean Accounting: Focus on the Lean Enterprise

Traditional accounting methodologies and reporting are inadequate and confusing in lean manufacturing and service companies. Executives and department leaders in general and financial executives in particular are realizing the need for accounting to collect and report relevant and appropriate financial data to manufacturing and other parts of the lean enterprise on a weekly, daily, or even hourly basis. The accounting function can also eliminate waste in its processes by the application of lean principles.

#### Topical Agenda

- Hear why accounting must adapt to be relevant and add value in a lean company.
- Participate in a manufacturing simulation demonstrating how the adoption of lean manufacturing dramatically impacts how financial performance needs to be reported and how standard cost accounting statements are no longer useful.
- See the huge gains the application of lean philosophies can have on accounting operations.
- Learn lean terminology that is required to bridge the gulf between manufacturing and accounting as well as other areas of the company.

**Target Audience:** Any CFO, COO, CEO who wants to understand accounting's high impact role in the lean

## Seminar 2

### Lean Accounting Deep Dive: Systems and Measurements

Traditional cost accounting and financial impact measurements are ineffective in a lean environment and cannot be used to realistically report the dramatic gains realized by lean. Operating a lean enterprise calls for replacing traditional methodologies with new ones based on lean principles that have shown to be effective in mature lean enterprise companies.

#### Topical Agenda

- Implement alternatives to standard cost accounting.
- Prepare for successful kaizen events in accounting.
- Develop an overarching lean education program for the finance and accounting function.
- Identify the true financial impact of lean.
- Measure bottom line results that all can understand and work from.
- Identify and replace anti-lean measures.

**Target Audience:** This seminar is for executives and lean leaders who understand lean concepts, have implemented lean manufacturing, and are adopting a lean enterprise strategy.

If you'd like more information about **Lean Business Masterclass**, please contact: The Events Team Tel: +44 (0)1603 671300 or visit

[www.themanufacturer.com/live](http://www.themanufacturer.com/live)



## Dates and times

No	Date	Title	Time
1	October 15	Lean Accounting: Focus on the Lean Enterprise	8:30 am
2	October 16	Lean Accounting Deep Dive: Systems and Measurements	8:30 am

## Lean from the Expert

Jean Cunningham is a highly sought after lean accounting consultant. She is internationally recognized as a pioneer of lean accounting and a dynamic speaker known for her expertise and ability to distill complex concepts down to clear, concise, usable information. All the techniques and methodologies presented in these seminars are proven and in use today and were developed by Jean while the CFO in lean manufacturing companies.

Jean is the co-author of the acclaimed book, *Real Numbers: Management Accounting in a Lean Organization*—an essential text for learning lean accounting. She has also authored the book, *Easier, Simpler, Faster: System Strategy for Lean IT*. The books won Shingo Research Prizes in 2004 and 2008 respectively. Jean's work as CFO for Lantech is also chronicled in the best seller, *Lean Thinking*.

## P/04

### Lean accounting survey 2008

Find out what the results of our survey reveal about lean accounting in manufacturing today



## P/12

### Accounting for change

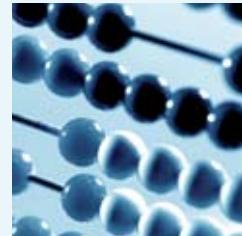
Tom Lawton and Kim Stubbs of BDO Stoy Hayward make the case for lean financials



## P/16

### Leaning the bean counters

Why traditional accounting fails to reflect lean gains – and how lean accounting helps



## P/20

### The basics of lean accounting

Tom Lawton of BDO Stoy Hayward outlines the basic principles of lean accounting



## P/24

### The lean accounting mystery: tell me more

Lean pioneer Jean Cunningham reflects on our survey and offers insight from her experience



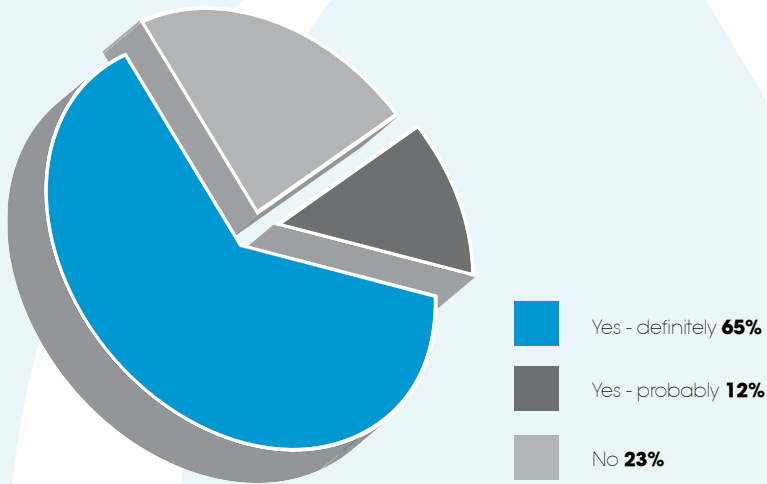
# Lean Accounting Report 08

## The results

Sample: 101 selected executives from subscribers to *The Manufacturer* magazine

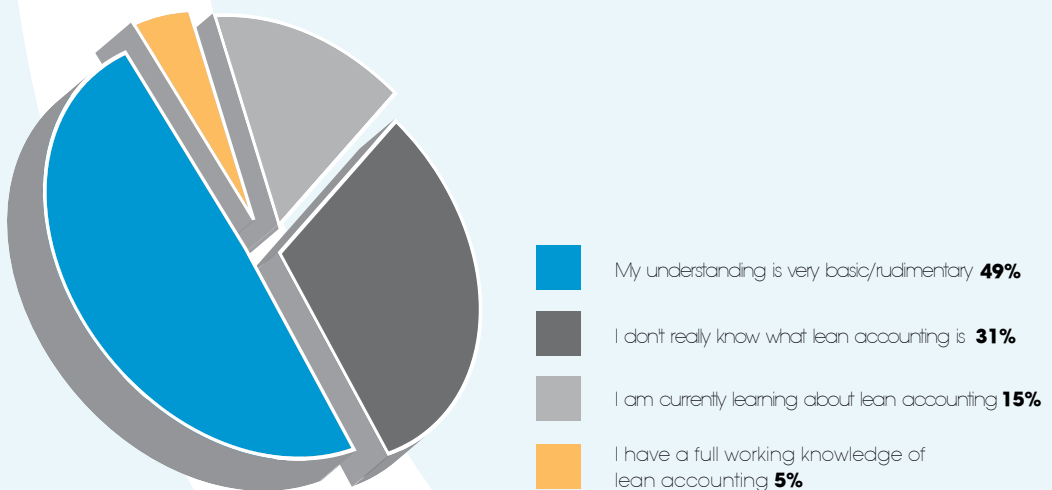
### Q/1

Have you heard of the term lean accounting?



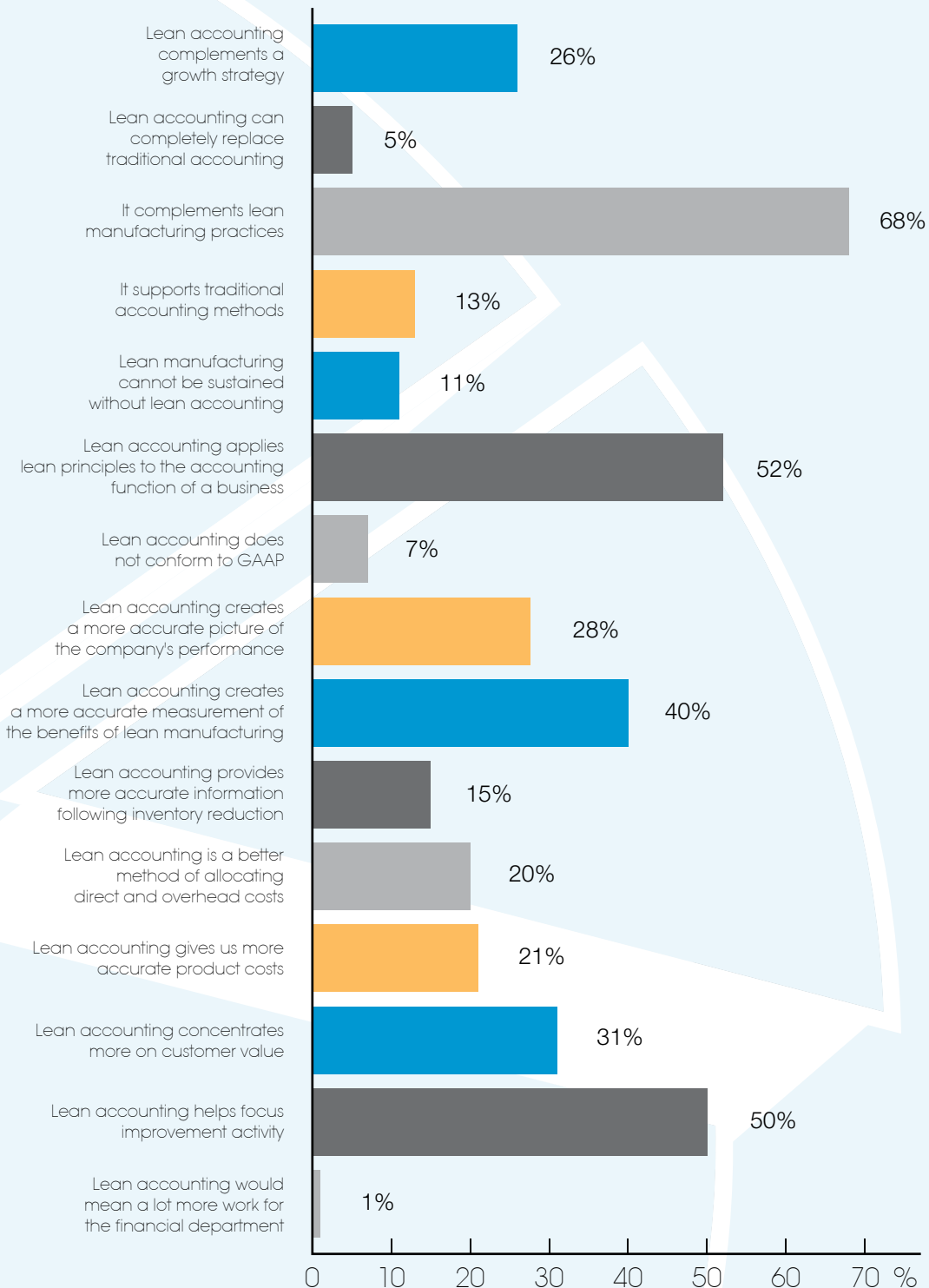
### Q/2

What phrase best describes your understanding of lean accounting?



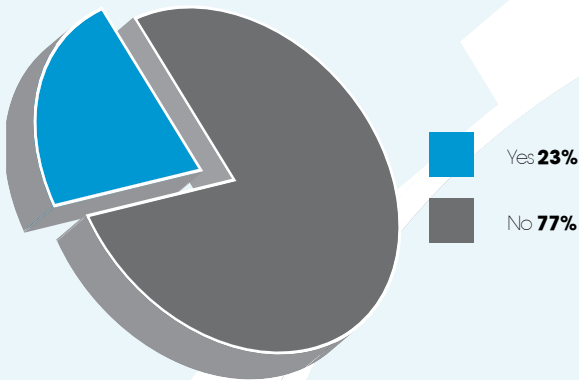
### Q/3

What is your perception of lean accounting?



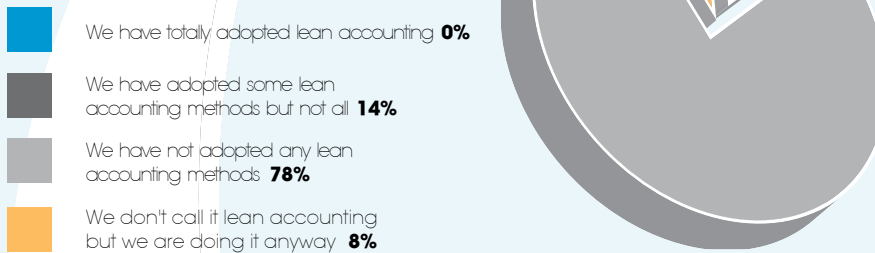
## Q/4

Do you think lean accounting affects some types of manufacturers more than others?



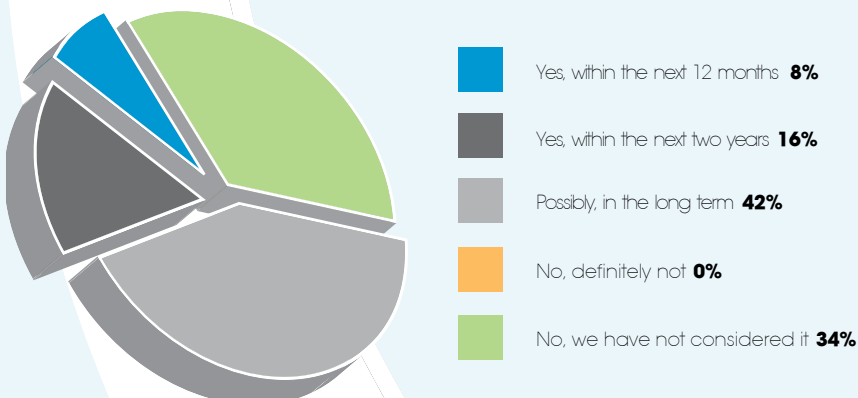
## Q/5

To what extent do you currently use lean accounting methods?



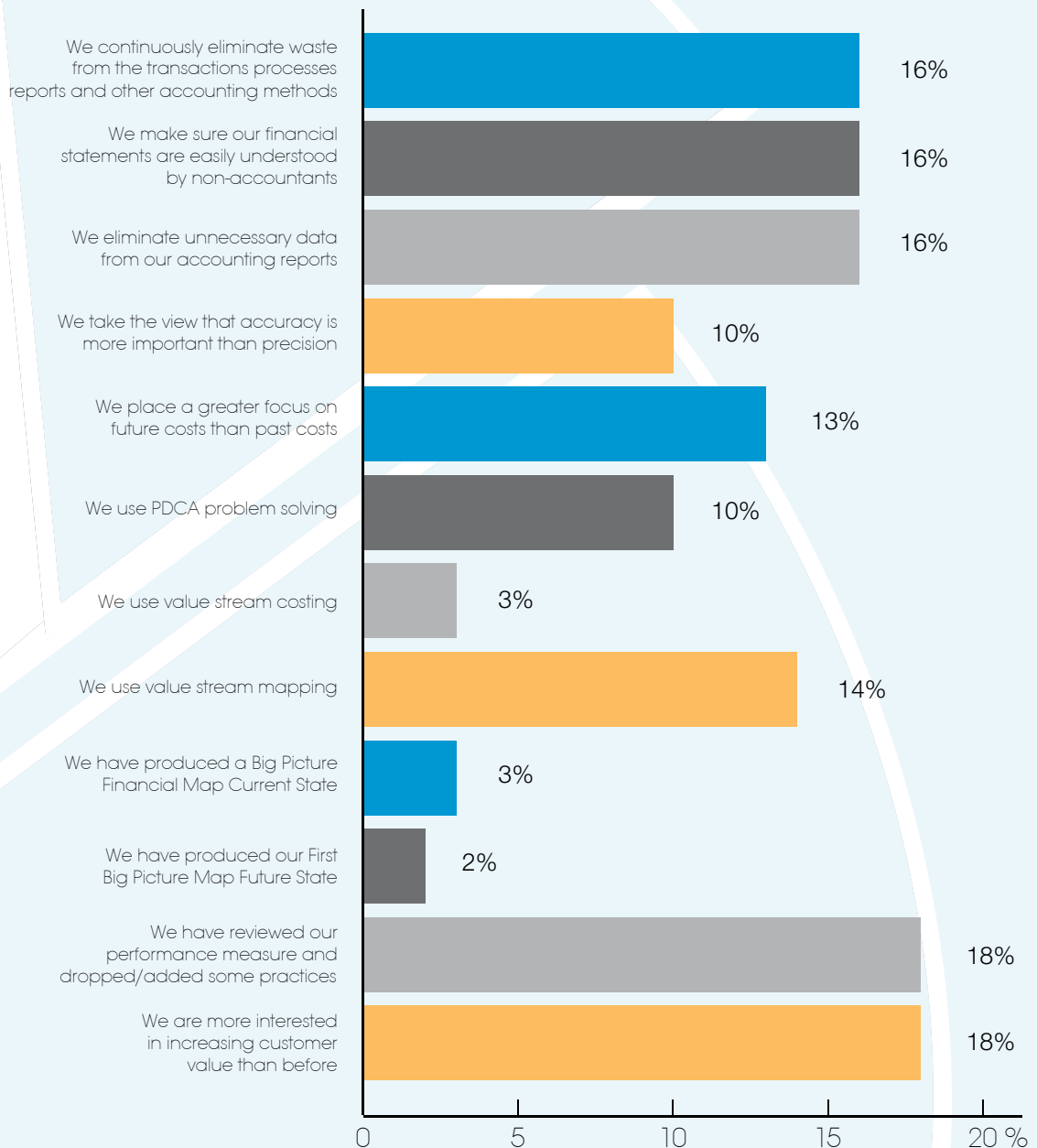
## Q/6

If you have not implemented lean accounting principles, do you plan to in the future?



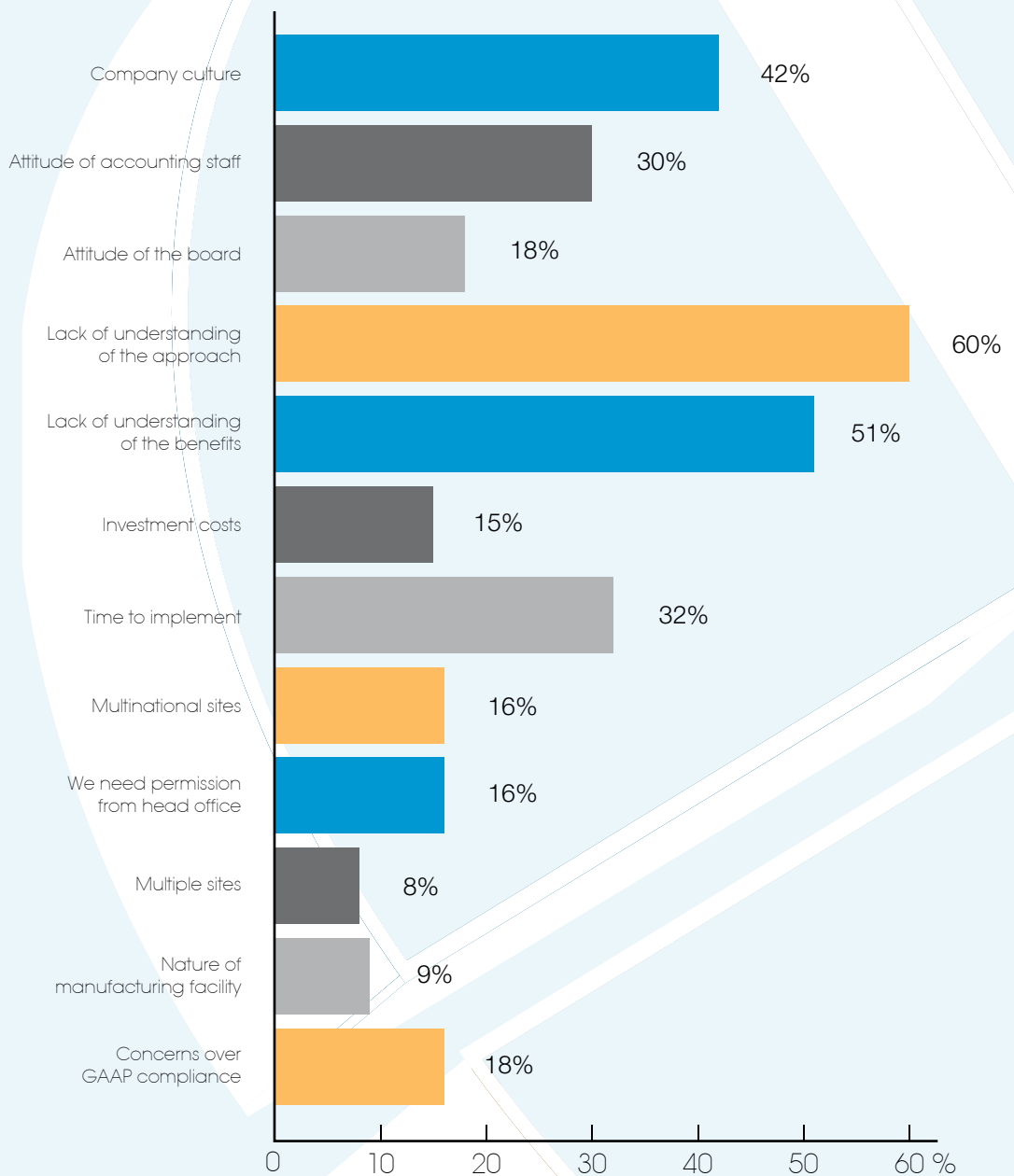
## Q/7

If you are implementing lean accounting practices, which aspects have you adopted?



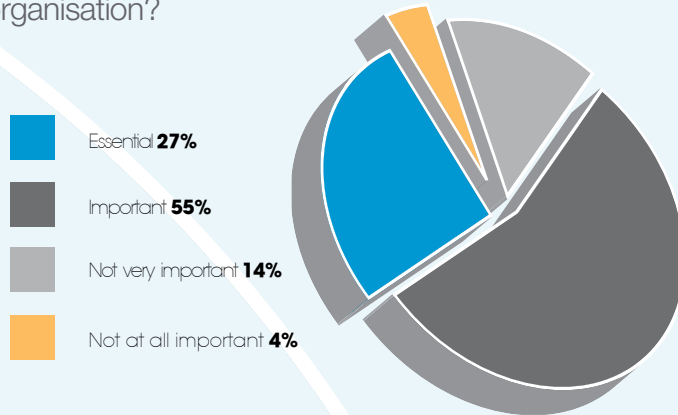
## Q/8

What barriers might prevent or delay the application of lean accounting principles?



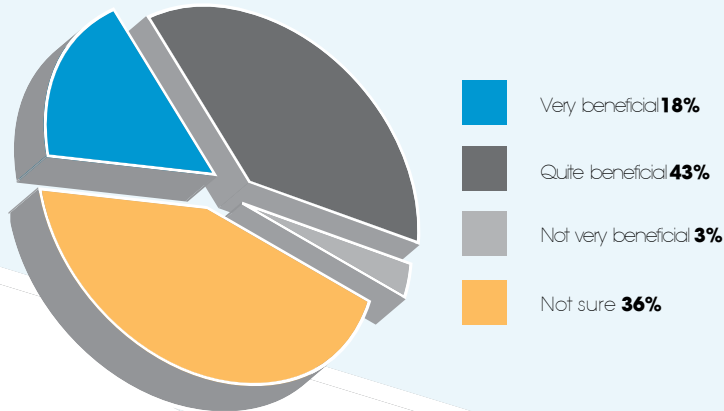
### Q/9

How important is the practice of lean manufacturing to the prosperity of your organisation?



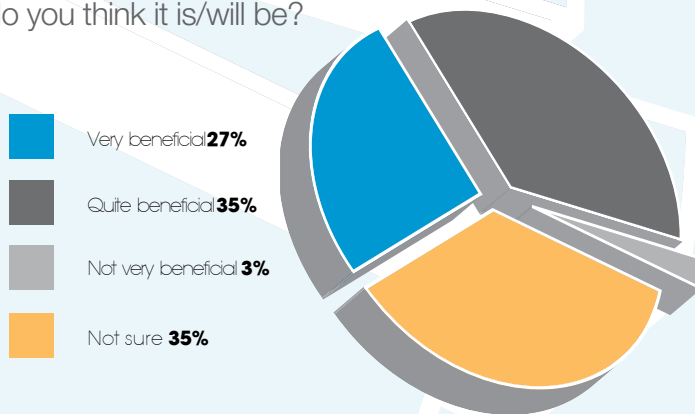
### Q/10

If you haven't already implemented lean accounting, how beneficial would it be to your company?



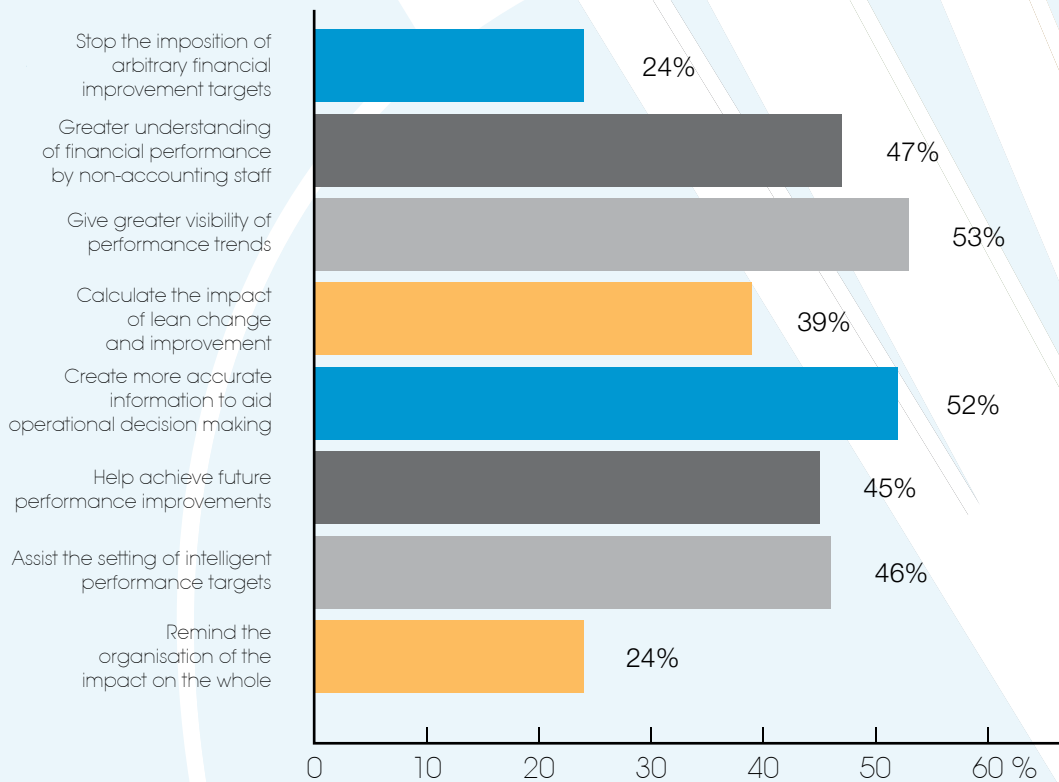
### Q/11

If you have already implemented lean accounting to some degree, how beneficial do you think it is/will be?



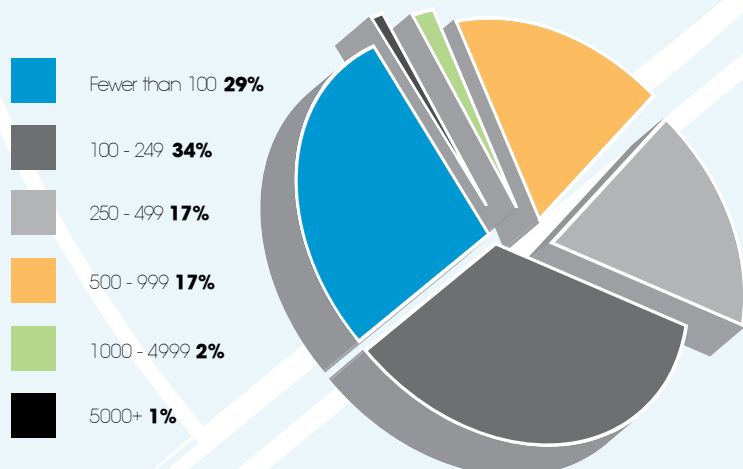
## Q/12

What benefits would you expect to achieve from applying lean accounting?



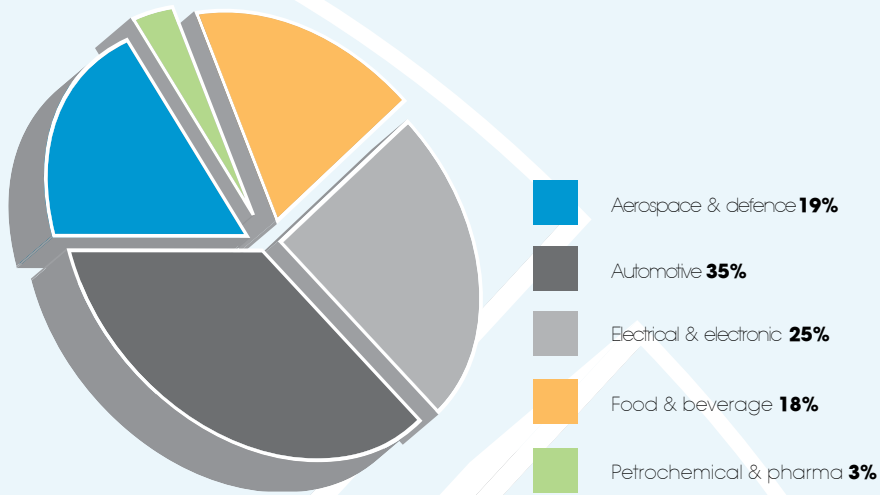
## Q/13

Approximately how many employees does your company have at this location?



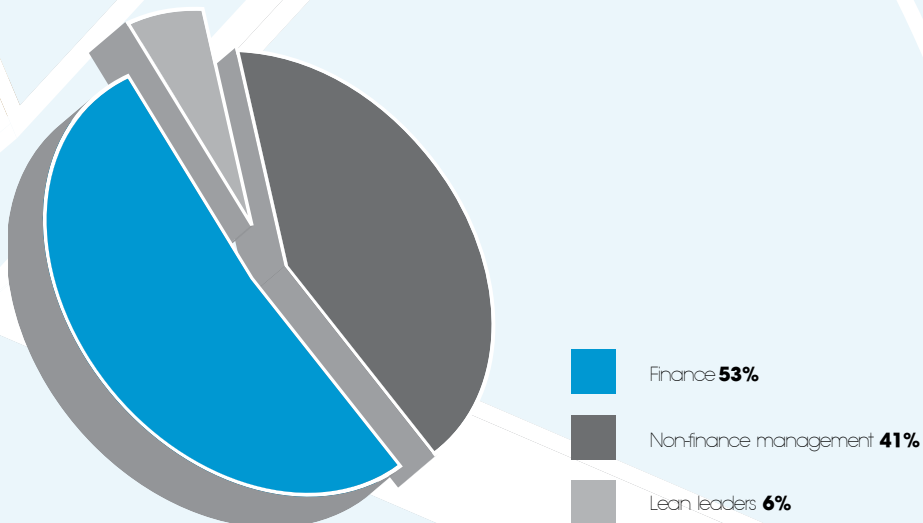
### Q/14

In which industry sector does your company operate?



### Q/15

Job title?





## Accounting for change

Our 2008 industry survey revealed that introducing lean accounting may still be something of a leap of faith for many manufacturers. Becky Done talked to Tom Lawton and Kim Stubbs, partners at accountancy firm and survey sponsor BDO Stoy Hayward, to find out what they think the survey results reveal about the use of lean accounting by manufacturers

Sixty-five per cent of respondents to this year's survey have heard of the term lean accounting, yet the majority can only claim a very basic knowledge of its principles or benefits. Perhaps more tellingly, over three-quarters of survey respondents have yet to adopt any lean accounting methods – but shouldn't lean accounting be a natural progression from lean manufacturing, given that it operates around the same principles and is therefore aligned so closely to it?

"Many UK companies have adopted some but not all of the principles of lean manufacturing, and as manufacturers start to push into those final areas of improvement, lean accounting should start to become more visible and important," suggested Tom Lawton. "People forget that lean accounting can be used as a methodology for reporting the results of lean manufacturing in a more effective and user-friendly way."

Kim Stubbs agreed on the importance of the link between lean manufacturing and lean accounting: “It’s an absolute pre-cursor of measuring lean manufacturing success to have a different policy towards accounting that matches it. Clearly, the two go hand in hand,” he said.

If manufacturers do not appear to be making the natural progression from lean manufacturing to lean accounting, this could be partly attributed to a slightly hazy definition of the term; indeed, the widely varied perception of what lean accounting aims to do was clear from the survey results. Lawton explained: “With lean manufacturing you can actually see what’s happening and what’s different as the results start to impact, but lean accounting probably tends to be a bit less visible and less tangible in terms of how it works and what its benefits are. In addition, the survey results show that there is still a basic misunderstanding of the key driver of lean accounting in focusing on capacity.”

“The survey results show that there is still a basic misunderstanding of the key driver of lean accounting in focusing on capacity”

Many accounting teams are well accustomed to making changes in response to ongoing information technology developments. Not to respond in the same way to the concept of lean accounting is to fail to recognise the pivotal role it could, and should, play in every lean manufacturer’s enterprise. “Lean accounting should be two things,” explained Stubbs. “It should incentivise those who are performing lean manufacturing activities to continuous improvement, and it should be about having a lean accounting function. This is especially crucial during this blip in the economic cycle – you have to challenge every part of your cost base and it is absolutely right that the accounting and administrative functions are as lean as the manufacturing functions have become.”

Of course, making the switch isn’t simply a case of starting where lean manufacturing leaves off. There are fundamental differences between the thinking behind traditional accounting methods and lean accounting, as Tom Lawton explained: “The traditional method of accounting was developed to support the ‘manufacture and hold in stock’ system of high-volume batch production. In this method, the standard cost of a product is calculated as the direct costs incurred (materials, labour and others)

and then by absorbing more general overheads on the basis of machine or labour hours in production. In this way, standard or absorption costing effectively holds labour and overhead costs within stock, so – particularly at year-end if you have a lot of stock on hand – you’ve effectively deferred some of your variable and fixed cost base for next year for when you actually sell that stock. With lean accounting, one of the core ideas is that you manage your production efforts on the basis of customer demand – and this reduces the level of stocks held. Sometimes in a period of transition from traditional to lean accounting, that means higher costs are recorded, as more overheads and labour costs are absorbed in that transition period as they are

no longer held for carry-forward within stocks. This can mean that the first year of implementation can actually create a negative impact on the accounts.”

It is at this point of implementation where misconceptions about lean accounting commonly arise. The survey responses showed that the lack of immediate bottom-line benefits is often misinterpreted. “Although you’re doing some excellent things from the lean manufacturing perspective, there might actually be a negative impact on the accounting because of this full absorption of costs,” explained Stubbs. “This does mean that the finance team needs to be clear on the underlying benefits of lean manufacturing and lean accounting. And in addition, one of the strong arguments for using a lean accounting model in the reporting process to support lean manufacturing is that you format the results in a slightly different way, and you can actually see the improvements more clearly.”

Much of lean manufacturing and lean accounting focuses on available capacity, without necessarily looking to reduce costs. Lean accounting in particular seeks to create the capacity for increasing turnover and, therefore, profitability.

➤ Again, misunderstandings about this core aim can sometimes result in unfair assessment of the benefits to be gained. “There might not be a clear understanding that lean accounting isn’t about an instant, dramatic improvement to your results,” Lawton explained. “People expect early and dramatic improvements in terms of costs than is ever available, and fail to understand that you benefit in future years as you start to use the resource availability that you have focused on and freed up.”

Even if dramatic improvements are not achieved instantly, some immediate benefits of lean accounting should still be apparent. “There’s always what I call ‘low-hanging fruit’ – whenever you start a process of change there are always some quick wins that you can make that will actually make quite a sizeable difference,” Lawton said. “For people starting to think about lean accounting, even just in terms of organising the accounting function to make it more effective, efficient and visible to the rest of the company, quite significant changes could be brought through in a relatively short timeframe.”

“There might not be a clear understanding that lean accounting isn’t about an instant, dramatic improvement to your results”

How long before a business will typically see tangible gains? “You probably need six months to really bed down the start of the change process and collate the information, work through the reporting process and make sure everything’s working,” suggested Stubbs. “Thereafter, there’s probably more work as you refine it and add more value streams to the initial project – so you’re probably looking at six to 12 months before it really starts working effectively and efficiently within the manufacturing function, producing reports that people are comfortable with and use for decision-making.”

Accompanied by a realistic expectation of short-term gains, the shift to lean accounting must be a collaborative effort underpinned by all functions within the business. “If the business is failing operationally to tackle the issues and make the improvements

required, then the finance function will say: ‘We produced all this improved information but we’re not seeing the returns on it,’” Stubbs explained. “Looking at the quality of the information that should come out of lean accounting is one thing, but the ability to act on it is the bigger issue. If the change hasn’t come through, manufacturers will of course question the value and the benefit of lean accounting.”

Quality information is the key to ensuring lean accounting works and aligns with other areas of the business. Surprisingly, the survey revealed that the vast majority of those respondents who do employ lean accounting methods are not using value stream costing, which lies at the very heart of its principles. “Without a focus on value stream costing, your next decisions become much harder,” explained Lawton. “One of the powerful aspects of value-based costing is to identify the revenue and costs of the value stream to derive a value stream profit which helps take away the focus on product costings and batch production. This may then support different thinking on decisions impacting the value stream – such as taking on new work. One of the major impacts of lean manufacturing is creating capacity to generate more income, so if you’re not reporting on available capacity (within a value stream) and it’s not visible to people, it’s really hard to manage and understand where the value drivers are.”

Another accounting mistake which lean seeks to eliminate is the careful mapping of overheads onto an essentially flawed business model. “The finance function of the business will commonly be very careful about allocating overheads accurately to each station in the manufacturing process,” Stubbs explained. “However, if you’re allocating overheads accurately to something that’s inefficient, it doesn’t really matter where your overheads go.” Lawton agreed: “Very often you find that an awful lot of effort has gone into calculating something that probably isn’t that important, in the grand scheme of things.”

Once the benefits of lean accounting can be identified and the business case to adopt them recognised, then the business must be sufficiently prepared to tackle the change required for implementation. Company culture and attitude were cited as the two most significant factors – after a lack of technical understanding – contributing towards a resistance to change. Since the key to success in any business is the ability to adapt and respond effectively to change, these are concerning statistics.

“The hardest thing to do in any organisation is to actually start a change programme, because that’s when you have to cut through company cultures and attitudes,” explained Lawton.

“Although UK manufacturers have done a lot to become leaner they will need to focus and develop further in this area as it’s incredibly important. Lean manufacturing will be very important for UK manufacturing as it deals with what is looking increasingly likely to be a prolonged downturn in activity and continuing competition from the global marketplace. Lean accounting should help manufacturers maintain their focus on lean manufacturing and, more importantly, drive maximum benefits from available resources.”

When seeking to improve upon a key business area such as finance, it is perhaps understandable that the accounting profession is cautious in adopting new methodology – and this may go some way towards explaining a level of scepticism towards lean accounting. “Accounting tends to be quite conservative in terms of its outlook,” suggested Stubbs. “Standard and absorption costing models have probably been around for a very long time and, in many respects, have stood the test of time.”

Conversely, the effect of limitations imposed by old methods may hinder the move to improve, and may also go some way towards explaining why less than a quarter of survey respondents are committed to implementing lean within the next two years: “Many finance departments are struggling through both process and systems to get the right level of information using traditional accounting techniques,” explained Stubbs. “So I would imagine they would be absolutely exasperated at the thought of a new IT system or learning new ways of measuring material. The appetite for implementing something new – despite the fact that it might be beneficial – just isn’t there.”

In such cases, strong leadership and a clear commitment to the principles of lean are required to drive change through. “There has to be a good driver at CFO level,” Stubbs said, “reiterating that the information is needed in order to measure how the business is doing.”

A determination to succeed is especially important when implementing methodologies such as lean accounting where immediate, high-visibility benefits are not always instantly forthcoming. “I think it

is about leadership – understanding what lean manufacturing and lean accounting can do, and really being determined to make it happen,” said Lawton.

In the absence of a wealth of evidence supporting the implementation of lean accounting methodology in the UK, manufacturers may find it useful to turn to the US for strong lean accounting success stories. There, the concept appears to enjoy higher visibility and plays an inspirational role in helping other businesses on the road to greater efficiency. “There is a higher level of visibility in the US,” said Lawton, “mainly because the companies that went lean and then adopted lean accounting really publicised it. The environment in the US is very much about sharing what you’ve just done; in addition, the culture there is incredibly supportive of change.”

Quality information is the key to ensuring lean accounting works and aligns with other areas of the business

“The US does tend to be more creative and, perhaps, more open to new ideas than the UK,” agreed Stubbs.

The majority of survey respondents were from small and medium enterprises – but both Lawton and Stubbs agree that when considering lean accounting, the size of the company should be no object. “I think bigger firms have more resources,” Lawton acknowledged, “but equally, smaller firms can probably see more tangible results more quickly because the projects are more self-contained.” Stubbs agreed: “For a small business unit in a big multi-national in control of its own input and output, lean accounting may be easier to do; but similarly, with a small corporate, you can really see the pragmatic advantages.” ■

*Tom Lawton is national head of manufacturing services and Kim Stubbs is an operational improvement performance partner at BDO Stoy Hayward, the award-winning UK member firm of BDO International, the world’s fifth largest accountancy network.*



# Leaning the bean counters

The lean drive can progress well and yet appear to deliver nothing to the bottom line. That doesn't mean it's a failure. Malcolm Wheatley explains why traditional accounting fails to reveal lean gains, and demonstrates what lean accounting can show

When electronics contract manufacturer Exception EMS adopted lean manufacturing almost a year ago, there was a nasty sting in the tail. "We hadn't foreseen it, but there was a negative impact on the bottom line," says Richard Brighton, managing director of the Calne, Wiltshire-based business. "Our profits took a hit."

It was an outcome that was troubling. For work-in-progress was falling – by as much as £¼ million in the case of one particular line. And with leaner processes and better efficiencies, capacity had undoubtedly increased: undeniably, reports Brighton, the business could manufacture more boards per week than it had been able to do before going lean. In space terms, too, the

manufacturing operation was more compact, with a footprint just two-thirds of what it had formerly been.

What, in short, was going on? Why did a business that was undoubtedly more efficient seem – in accounting terms – to be less so?

The answer, says Tom Lawton, head of manufacturing at accountants BDO Stoy Hayward, is one that is depressingly familiar. In accounting terms, any time that a manufacturing business shrinks lead times and work-in-progress, standard costing systems report an under-recovery of the overhead charged to each unit of production that is loaded onto the factory floor. And with

its overheads under-recovered, the business consequently sees profits ‘fall’.

So, businesses need steely nerves. Many a lean implementation has been cancelled or held back, says Ross Maynard, a senior consultant with specialist consulting firm BMA Europe, because businesses’ cost accounting systems seem to show that labour and overhead costs are rising, not falling, as the switch to lean proceeds.

And the contrast with Japan – where lean began – is instructive, observes Dr Matthias Holweg, director of the Centre for Process Excellence and Innovation at Cambridge University’s Judge Business School.

“The western approach is for senior management to use financial accounting to drive the business,” he points out. “From an operational perspective, cutting back on over-production is very sensible – but because inventory is seen as an asset, whether you can sell it or not, this leads to an under-recovery of overhead and a reduction in profit. Japanese companies typically take a much longer-term view, focusing on the intrinsic benefits of the operational improvements themselves, whereas western manufacturers want quick results – and expect to see them reflected in the financial metrics they are accustomed to using.”

What’s more, adds BMA Europe’s Maynard, these traditional accounting-based performance measures, running alongside lean

implementations, can actually encourage people to behave in non-lean ways. “Look closely, and you’ll see ‘cherry-picking’ of production jobs in order to maximise earned hours, or batches being combined – at the expense of due-date performance – in order to create apparently more efficient production runs,” he warns. “If you operate in a lean environment, then lean accounting is essential.”

And, like lean itself, lean accounting turns out to be something of an unending journey. Ultimately, accounting standards enshrined in law impose the way in which certain aspects of lean – such as inventory reduction – will be reflected. The trick, it seems, is to develop accounting systems that

are in themselves as lean and non-wasteful as possible, and which work in sympathy with lean, rather than actively against it.

For many manufacturers, the starting point is developing accounting systems that reflect lean manufacturing’s operational realities. At the Reading-headquartered Magal Engineering group of automotive component suppliers, for instance, lean manufacturing is steeped in the culture, explains group IT manager Martin Blackburn. ▢



For many manufacturers, the starting point is developing accounting systems that reflect lean manufacturing’s operational realities.



So, at the interface with suppliers, lean is very much the order of the day – with the focus being on ways of working that are lean and efficient, and which don't encourage anti-lean attitudes to purchase order sizes. Suppliers, notes Blackburn, ship to Magal companies in quantities that make sense to them: operating kanbans over the Atlantic, for instance, is simply unrealistic, he stresses.

But, as Magal consumes the supplied goods in the form of its own kanban quantities, it notifies the supplier, with the company's group-wide kanban-aware ERP system SSL WinMan handling the accounting and payment processing – in effect, self-billing. "People often expect us to have more sophisticated systems than we do – but we prefer to keep things brutally simple," says Blackburn.

"If the authority to supply is the kanban, not a purchase order, then the objective is to get away from exchanging paper-based accounting transactions between trading partners," adds Jonathan Davies, sales director at SSL WinMan – a number of whose manufacturing customers operate in just this way. "You still need an invoice for taxation purposes, but the idea is to file it, not process it."

Financial reports should be harnessed and adapted so that they serve both accounting and operational needs

Such techniques only go so far, though: inevitably, manufacturers will want to see the impact of lean operational changes in hard pounds and pence. Here, the challenge is trickier.

"People think that when you re-layout a line, there will be a big saving," says Tom Wedgwood, a director of Great Malvern, Worcestershire-based Newton Industrial Consultants. "And if you eliminate a forklift truck driver or two, then yes, you can see the impact of this in the accounts. But other savings achieved through lean are more intangible – and often, you have to dig quite deeply into the accounting systems to see how they handle particular transactions and movements."



One solution is to do that digging ahead of time – and to get the accountants on your side, helping with the task. At Telford-based Alcoa Fastening Systems, for example, where lean manufacturing goes back 10 years, the accounting implications of every proposed lean improvement are carefully scrutinised beforehand, explains continuous improvement manager Jonathan Griffiths.

Whether it's something as simple as reduced forklift truck movements, or a major scrap reduction project, Griffiths' continuous improvement role calls for him to sit down with finance and jointly ask: How will we measure this? "There's a targeted financial impact for every targeted lean improvement, and if we fall short of achieving the targeted saving, we have to explain why," he says. "The accounting function acts as 'score keeper', and is charged with making sure that the operational improvements we make actually get through to the bottom line."

It's a view shared by Jim Byrne, financial controller at adhesives manufacturer Henkel's Dublin plant. As another business with a solid lean transformation in place, Henkel's view is that financial reports should be harnessed and adapted so that they serve both accounting and operational needs, says Byrne.

"Look at the factory floor, and you'll see prominence given to usage KPIs, yield KPIs and scrap KPIs," he explains. "These are actually how we manage the business – yet they all roll up into the variance reports that go towards creating the monthly P&L (profit and loss) figure." That said, adds Byrne, certain financial measures have either been abandoned or restricted to senior management – a labour productivity measure, for instance, has been transformed instead into a focus on OEE. "We don't want people making the wrong decisions about scheduling small orders," he explains. "On a monthly basis, we aim to recover overheads to generate our required profit, but the decisions about product mix and plant scheduling that directly impact this are taken at a senior level – to avoid sending out the wrong signals."

But is there a way to move to lean accounting without such contortions? "I've heard a lot said about lean accounting, but seen far fewer

examples of it working properly in practice," notes Mark Knowlton, Cliftonville, Kent-based partner manager at MAS South East. The news is mixed, but promising.

For green shoots are appearing: Judge Business School's Matthias Holweg, for instance, points to techniques like throughput accounting – around since the 1980s – and activity-based costing being adapted for lean environments. In particular, he notes, value stream accounting shows especial promise.

"Lean is about doing more with what you have, rather than doing the same with fewer resources"

That's certainly the view of BMA Europe which, together with its parent organisation BMA Inc, has implemented value stream accounting-based projects at big name manufacturers such as Boeing, Textron, Schlumberger, and Siemens. By eliminating the distortions of standard costing, value stream accounting helps businesses "reach very different decisions about costs, profitability, and spare capacity," notes BMA's Maynard. And while accounts drawn up on a value stream basis still need adapting for the purposes of external reporting, it's 'adapting' and not 'duplicating', he stresses: "It's not a question of companies having to have two sets of accounts."

Yet in the end, lean accounting may be more an attitude of mind than a set of books. "Often, lean is about doing more with what you have, rather than doing the same with fewer resources," observes BDO Stoy Hayward's Lawton. "The profit comes from producing more from the same cost base, rather than producing the same from a lower cost base."

That has certainly been the case at Liverpool-based printed circuit board manufacturer Brainboxes, adds managing director Stephen Evans. "Going lean, we've doubled the number of boards we can make – using the same core team of employees." ■



## The basics of lean accounting

It is clear from the survey results that lean accounting is not well understood and implemented by UK manufacturing companies. Tom Lawton of BDO Stoy Hayward looks at the basic principles of lean accounting

A lean manufacturer will seek to produce goods at the rate of demand from the customer, to the required quality and at the best possible price. Typically, lean manufacturing incorporates some form of cell based system and looks to eliminate waste at all stages of the production process. Lean manufacturing results in a significant reduction in inventory held as manufacturers move to a customer demand production cycle, rather than a resources led production cycle.

The move to lean manufacturing has caused many accountants to question the validity of the traditional standard / absorption costing methodologies of accounting. Standard costing tends to allocate overhead cost on the basis of labour or production hours, which may no longer be the key drivers of the production process. Standard costing can support the carrying of high levels of inventories, as costs can be deferred by being held in year-end stocks. Finally, standard costing is not well suited to consider value stream or total costs of production.

Lean accounting was developed to provide a more suitable method of accounting for a lean manufacturing environment.

## The broad concepts

The broad concepts of lean accounting are not complex and include four key principles:

1. **The continuing reduction of waste in the accounting and other support functions**
2. **Providing accurate and timely information to key users to support lean**
3. **The focus on the costs connected to the value stream, not the department or the product**
4. **Supporting the decision making process**

## Reduction of waste


Lean accounting is not just about changing the accounting methods and reporting to support the lean manufacturing process. It is also about changing the working practices of the accounting

and other support functions to ensure that they are lean as well. This lean approach can have a significant impact on costs and procedures through the accounts and support functions and can be monitored and improved through kaizen. While it is important that the proper control systems and arrangements are maintained, it is also acceptable to challenge the accepted ways of working and improve. Lean accounting can help drive questions, such as: How many documents really need to be prepared and sent for approval? How often are the current management reports really used by the business? Can the system for approvals, authorisations and checking be simplified? How can we improve the time through the system?

## Providing accurate and timely information

Standard / absorption costing assumes a normal level of production in the manufacturing process and absorbs overheads into costs at the rate of that normal level of production. It then measures variances from the standard in terms of volume and measurement. The reports prepared from standard costing can be quite confusing to a non-accountant.

Under standard / absorption costing, the move to lean manufacturing can have negative impacts on results in the period of implementation. This is because deferred overhead and labour costs previously held within inventories (and therefore not included in the results as a cost) are recorded as costs as inventories are reduced. In addition, as the lean manufacturer focuses on inventories that are needed to provide value to the customer, it may find it has more surplus inventories than realised under the previous accounting methods. Provisions against inventories may need to be increased in the first period of lean accounting, resulting in a charge to profits.

Lean manufacturing is driven by the provision of information to all employees to support the continuous improvement process – so information that is confusing and hard to understand is not helpful. Lean accounting focuses on sales achieved and costs incurred by the value stream to create a relatively simple financial record that is easy to understand. Lean accounting enables the real impacts of lean manufacturing to be measured and communicated. 

The example below shows the differences in the method of reporting under standard / absorption and lean accounting. The accounting can be adopted for a single value stream or as part of the consolidated financial information prepared for the company. Costs that cannot be controlled by the value stream are carried as central costs and recorded as such on the consolidated results. This helps focus on both value stream and central costs, as both should be subject to ongoing review and improvement. The focus in lean is very much on the costs actually incurred.

### Example accounting formats

Standard / absorption accounting	This year	Last year
<b>Sales</b>	200,000	180,000
<b>Cost of sales</b>		
standard cost	100,000	95,000
purchase price variance	10,000	-4,000
material usage variance	5,000	8,000
labour efficiency variance	-5,000	-4,000
labour rate variance	-10,000	-4,000
overhead spending variance	10,000	12,000
overhead efficiency variance	5,000	-4,000
<b>Total cost of sales</b>	115,000	99,000
<b>Gross profit</b>	85,000	81,000
<b>Gross margin</b>	0	0
Lean accounting	This year	Last year
<b>Sales</b>	200,000	180,000
<b>Total material costs</b>	45,000	43,000
factory wages and salaries	25,000	20,000
employee benefits	3,000	2,000
machine depreciation	3,000	2,800
other	5,000	4,200
<b>Total processing costs</b>	36,000	29,000
building rental	20,000	18,000
building services	3,000	2,500
other	2,000	1,500
<b>Total premises costs</b>	25,000	22,000
<b>Total manufacturing costs</b>	106,000	94,000
<b>Inventory movement</b>	9,000	5,000
<b>Total cost of sales</b>	115,000	99,000
<b>Gross profit</b>	85,000	81,000
<b>Gross margin</b>	42.5%	45.0%

## Focus on value stream

Lean accounting seeks to consider the costs connected to the production of goods for the customer, including all connected and related costs but excluding costs that cannot be controlled by the value stream. Costs might include human resources and sales departments if fully connected and supporting of the value stream and can be controlled by the value stream. Indirect costs are captured as costs that the consolidated value streams must support.

The difficult part of this process is being able to identify the components of the value stream. Value stream mapping is a useful device in providing a picture of what processes and costs go into the production of value for the customer. It is relatively easy for final adjustments to be made to the value stream revenue and for castings to contain final adjustments that ensure the accounts comply with

Lean manufacturing is driven by the provision of information to all employees to support the continuous improvement process – so information that is confusing and hard to understand is not helpful

accepted accounting principles. The advantage of accounting by value stream is that it enables decisions to be made that support the concepts of lean manufacturing and focus on best utilisation of capacity to generate real margin improvements from the value stream.

The example shows how the 'box score' system can be used to focus on the key metrics of a value stream: operational, capacity and financial. This can be used for an individual value stream or developed as a consolidated box score for the company. One of the key drivers of lean is achieving more with the same resources and the box scorecard helps this focus. The scorecard

shows the focus on quality, first time delivery and better utilisation of resources.

### Example box score format

Operational	This year	Last year
Units per person	2,000	1,875
On time shipments	98%	98%
Days in production	6	5
First time production	80%	85%
Average cost per unit	13.3	12.5
Capacity	This year	Last year
Not available	15%	14%
Productive	35%	38%
Support	15%	16%
Available	35%	32%
Financial	This year	Last year
Revenue	200,000	180,000
Material costs	45,000	43,000
Process costs	36,000	29,000
Premises costs	25,000	22,000
Inventory movement	9,000	5,000
Gross profit	85,000	81,000
Gross margin	42.5%	45.0%

## Supporting the decision making process

One of the ideas behind lean accounting is that it helps support better decision making. As noted above, the box score system provides a focus on key metrics that can be readily understood by all members of the team. This facilitates ideas for improvement from all members of the team and supports the kaizen process. In addition, the box score should assist in the consideration of wider decisions: Why are certain scores declining or improving? Why are certain scores lower or higher in this value stream than another value stream? Why is the unit cost changing?

In addition, the box score enables a focus on available resource capacity, which is one of the key factors in a lean improvement process. In simple terms, if the resources currently available are made more available to produce more of the goods that the customer wants, then sales can be increased with no rise in labour or fixed costs, and therefore become very profitable. Thus a decision as to

whether to accept a contract at a certain price might derive different answers under standard / absorption and lean accounting principles. Lean would focus on the incremental profit to the value stream, whereas standard costs would tend to focus on the revenue and cost per unit.

If the resources currently available are made more available to produce more of the goods that the customer wants, then sales can be increased with no rise in labour or fixed costs

Lean accounting should also enable more clarity in working through a target cost process to derive a price that is acceptable to the customer in the market. Standard / absorption costing tends to start from the basis of the costs in the process (materials, labour and overheads) that need to be absorbed to derive a price to the customer, which is often based on producing large quantities to reduce per unit cost. The problem is that the customer may not want these quantities. Lean accounting tends to consider the volume required by the customer and the price that the customer wants to pay for the product, to design costs and processes around those fundamentals. This clearly puts the customer requirements first and then looks at how this can be delivered in the most cost effective way.

## Final remarks

It is clear from the results of the survey that although the possible benefits of lean accounting seem to be understood, very few companies have adopted lean accounting in practice. However, lean manufacturing continues to be adopted and refined by UK manufacturers with excellent results. It will be interesting to see if this provides a pressure for more use of lean accounting in the short-term. ■

*Tom Lawton is national head of manufacturing services at BDO Stoy Hayward, the award-winning UK member firm of BDO International, the world's fifth largest accountancy network.*

# Lean Accounting Report 08

The lean accounting  
mystery: [tell me more](#)



## Jean Cunningham gives her thoughts on the results of the Lean Accounting Survey 2008

Every company has some type of approach for improving operations, selling more products, and making more money to stay in business. Many manufacturing companies and an ever-increasing number of healthcare and other service-related firms have been studying and emulating the principles, methods and culture of the Toyota Production System (TPS). The application of TPS has evolved to be labelled 'lean manufacturing' worldwide, and when these same principles are applied more broadly beyond the manufacturing floor, it is called 'lean enterprise'. Companies who are adopting lean often say they are in a 'transformation', because they have realised this lean effort requires not just small incremental improvements within their existing organisational or functional structure, but a complete remaking of how they do business.


One key element of every business is the 'scorecard', also known as the financial statements, the metrics, and/or the measurements. These are the means of feedback on how the company is performing in key areas. Often, scorecard results are then used as part of the compensation programmes with an expectation that they will drive the 'right' behaviour and lead to the best possible performance. In lean companies that are transforming – which is all of them – the scorecard is often still built around the operating methods of the prior company strategies, or perhaps around historical measures, or even 'what we learned in school'.

As the CFO of a company undergoing a lean transformation, I found that our historical reporting and scorecard did not align well with our new lean culture. The financial statements were too difficult to understand by everyone. The information was way too old or late for a lean time-based organisation. And, worst of all, it rewarded the production of products that our customers did not want, or for which they were not ready.

Based on my observations and with the concurrence of the executive team, we completely changed how we kept score at our company, while at the same time adhering to all the required accounting principles and rules set externally through FASB, GAAP, and the taxing authorities. This was very interesting to other people, and led to my co-authoring *Real Numbers: Management Accounting for a Lean Organization*. *Real Numbers* describes the journey to finding a better way of reporting and doing accounting operations. It won the Shingo Prize for Research in 2004, which is awarded to written works that significantly enhance the aggregate lean knowledge base. In turn, this change has become an important element of the lean transformation and has become known as lean accounting.

With *Real Numbers* and word of mouth as a catalyst, my co-author, Orest Fiume, the retired CFO of Wiremold Corporation, and I have ongoing opportunities to give speeches, lead workshops, facilitate kaizen events, and provide strategic consulting on lean accounting worldwide. Today, innovative thought leaders and corporate executives are eager to learn from people who have lived through the transformation of their accounting and finance organisations as part of their company's journey to the lean enterprise.

In June 2008, *The Manufacturer* magazine undertook a research survey to determine the current state of knowledge for lean accounting. The survey was emailed to selected executives from *The Manufacturer's* comprehensive database of subscribers. Within the sample, the respondents are from a variety of positions within the companies. Just over half are from within the accounting function, 40 per cent are from more generalist C-level positions, and the majority of the remainder have a specific responsibility for lean initiatives within their organisations. Participants hailed from a diverse range of industry sectors including automotive, aerospace and defence, electric and electronics and food and beverage. The majority were members of companies with 100 to 500 employees.

The overarching result of the survey is that there is a vast need for increasing the basic 

understanding of what lean accounting actually is and what benefits can be achieved. Almost one quarter of the respondents have no knowledge of the term 'lean accounting'. Twelve per cent feel they might have heard of it, and the remainder have heard the term. But, even among those that have heard the term, only five per cent feel they have a working knowledge; 15 per cent are learning; 49 per cent feel their knowledge is basic or rudimentary; and the remaining 31 per cent have no knowledge.

Starting with this information alone, we can guess that it would be extremely difficult to take action until that knowledge gap is filled. But it is interesting that despite this lack of knowledge, the perception of lean accounting is quite on point. For instance, 52 per cent know that

There is a vast need for increasing the basic understanding of what lean accounting actually is and what benefits can be achieved

lean accounting applies lean principles to the accounting function of a business and that lean accounting can help focus improvement activity. They also correctly perceive that lean accounting creates a more accurate measurement of the benefits of lean, and thereby complements lean manufacturing practices.

However, a few significant misconceptions exist. Seven per cent think lean accounting does not conform to GAAP, which would be an insurmountable barrier for the financial professional to even consider lean accounting. The good news, however, is that lean accounting does conform to GAAP. It was also surprising that only 15 per cent recognise that lean accounting provides more accurate information following inventory reduction. In addition, only 21 per cent know that lean accounting provides more accurate product costs. On the other hand, most of the participants acknowledge a need for more lean accounting education.

Lean manufacturing can be a benefit to all companies. The participants certainly realise this, as 82 per cent feel that the practice of lean manufacturing is essential or important to the prosperity of their organisation. Similarly, lean accounting can be a benefit to all companies and does not affect some types of manufacturing more than others. Nearly all companies do begin their lean journey in manufacturing, which is followed by focusing on customer service and then the supply chain. However, once those areas are launched on the journey, it is imperative for finance and accounting to get in the game to increase the relevance of accounting data throughout the lean organisation.

Even though 78 per cent of respondents indicate they have not adopted any lean accounting methods, they have quite a good expectation of what benefits they would see. They expect to see greater understanding of financial performance by non-accounting staff – which in lean accounting is called 'plain English financials'. This was a key driver for my company. Via lean manufacturing, we were already telling all employees how critical they were to our journey, and we continuously used the Toyota phrase: "continuous improvement through respect for people". But our scorecards were in a language they could not easily understand. In retrospect, other than the accounting team, no one in the company really understood the implications of our scorecards. Imagine trying to read a newspaper that is in a different language – it would be hard to know what is going on. In fact, you might think the newspaper wasn't intended for you. Implementing plain English financials was a revelation, from the executive suite to the manufacturing floor.

Creating more accurate information to aid operational decision making is cited as a key benefit by 80 per cent of the survey participants who are lean leaders, but only 40 per cent of management participants. This means that management also needs education to perceive how their current scorecard is probably not giving them an accurate picture; especially when inventory is reducing. Numbers can lie, even when it is unintentional. This is one of the most common misunderstandings to which lean accounting can


bring clarity. The traditional measures support maximising production, rather than matching customer demand. Not building to customer demand is the biggest, most expensive waste of all – and yet typical traditional accounting methods hide this waste entirely.

One tricky benefit that many hope to achieve from lean accounting is to find the answer to “how much in terms of savings will my lean activities provide?” These individuals and companies want to measure kaizen improvement events by the financial return from each event. This will never work and will result in failure; and no accounting method will give you the answer. A company can get directional information from accounting to show the opportunity that their lean efforts provide. Almost one quarter of respondents recognise that lean accounting will remind the organisation of the impact on the whole.

So if the benefits are well understood, but only 22 per cent have adopted some lean accounting methods, what does the future look like? Our survey says there is no-one who has considered lean accounting and decided ‘definitely not’. But 76 per cent either have not considered it, or see it as only a possibility in the long-term.

What are the main reasons for this? Company culture, attitude of the accounting staff, and attitude of the board are mentioned frequently, but the main reason is that there is a lack of understanding of the approach, and a lack of understanding of the benefits. We cannot reasonably expect the accounting function to change to lean if they do not understand it or the benefits.

In spite of the low penetration of lean accounting to date, there would appear to be a great future for its adoption. The 22 per cent of respondents who have adopted lean accounting report that results are quite beneficial or very beneficial. And, of those who have not adopted any lean accounting methods, over half expect it to have a beneficial impact. Most of the rest of the respondents just aren’t sure, again highlighting the need for additional education.

What means are available to get more information on lean accounting? First, attend lean accounting 



Not building to customer demand is the biggest, most expensive waste of all – and yet typical traditional accounting methods hide this waste entirely

workshops. The best way to really make the most of the workshop is to have three or four thought leaders from your company attend together. Make this a blend of executive, operational, accountancy and lean leaders. This will result in building some momentum and conversation after the workshop with a corresponding likelihood of taking action. At The Manufacturer Live conference this October there will be a lean accounting workshop you can attend to maximise your opportunity to gain benefit from the conference: <http://www.themanufacturer.com/live/>.

Many companies have created reading groups to select lean books and then read and discuss them weekly during a lunch period

Or, without meaning to be self-serving, select a sensei – a knowledgeable coach – to provide an in house workshop to coach your company through some of the issues, or to provide an evaluation of how lean your existing accounting efforts are. The workshop I provide includes not only an understanding of lean accounting but also a great hands-on simulation of why the lean manufacturing transformation is a mandate for lean accounting. And there's lots of practical advice on how to get started.

Many companies have created reading groups to select lean books and then read and discuss them weekly during a lunch period. *Real Numbers* is a great source, as well as Solomon and Fullerton's book, *Accounting for World Class Operations*, which shares the story of implementing lean accounting in a company with a large machine shop and long assembly times.

This survey is a mandate for change. The perceived benefit is there and the barriers are low in terms of money and time. It is up to people to make the commitment to lean and then take action. Welcome to a fuller and highly beneficial lean enterprise world! ■

**Jean Cunningham**, founder of Jean Cunningham Consulting (JCC), is internationally recognised as a pioneer in the lean accounting field. In addition to an extensive speaking schedule, Jean also currently serves as CFO of the Association of Manufacturing Excellence, as well as being CFO for Stiles Associates, an executive retain search firm focusing on lean and six sigma.

Jean is the co-author of the acclaimed book, *Real Numbers: Management Accounting in a Lean Organization*, an essential text for learning lean accounting. She has also recently co-authored another book, *Easier, Simpler, Faster* – a book about lean and information systems. Both books have been awarded the Shingo Prize, which *Newsweek* magazine referred to as the “Nobel Prize of Manufacturing”.

Jean was previously the former chief financial officer and vice president of Company Services at Lantech LLC and Marshfield Door Systems. It was during these tenures that Jean launched her lean career, driving lean from the manufacturing floor into the back office functions to include finance, information systems, human resources and telecommunications. Prior to joining Lantech LLC, Jean was a finance professional with Digital Equipment Corporation and Westinghouse Electric, holding a number of senior controllership and treasury positions.

Jean has a BS in Accounting from Indiana University and an MBA from Northeastern University's Executive Program. She and her family reside in the Chicago area.

Jean welcomes your comments and interest in discussing this survey or the topic of lean accounting. Please contact her at: [jeanecu@comcast.net](mailto:jeanecu@comcast.net) or visit her company website at: [www.jeancunninghamconsulting.com](http://www.jeancunninghamconsulting.com).

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