

CGMA<sup>®</sup>

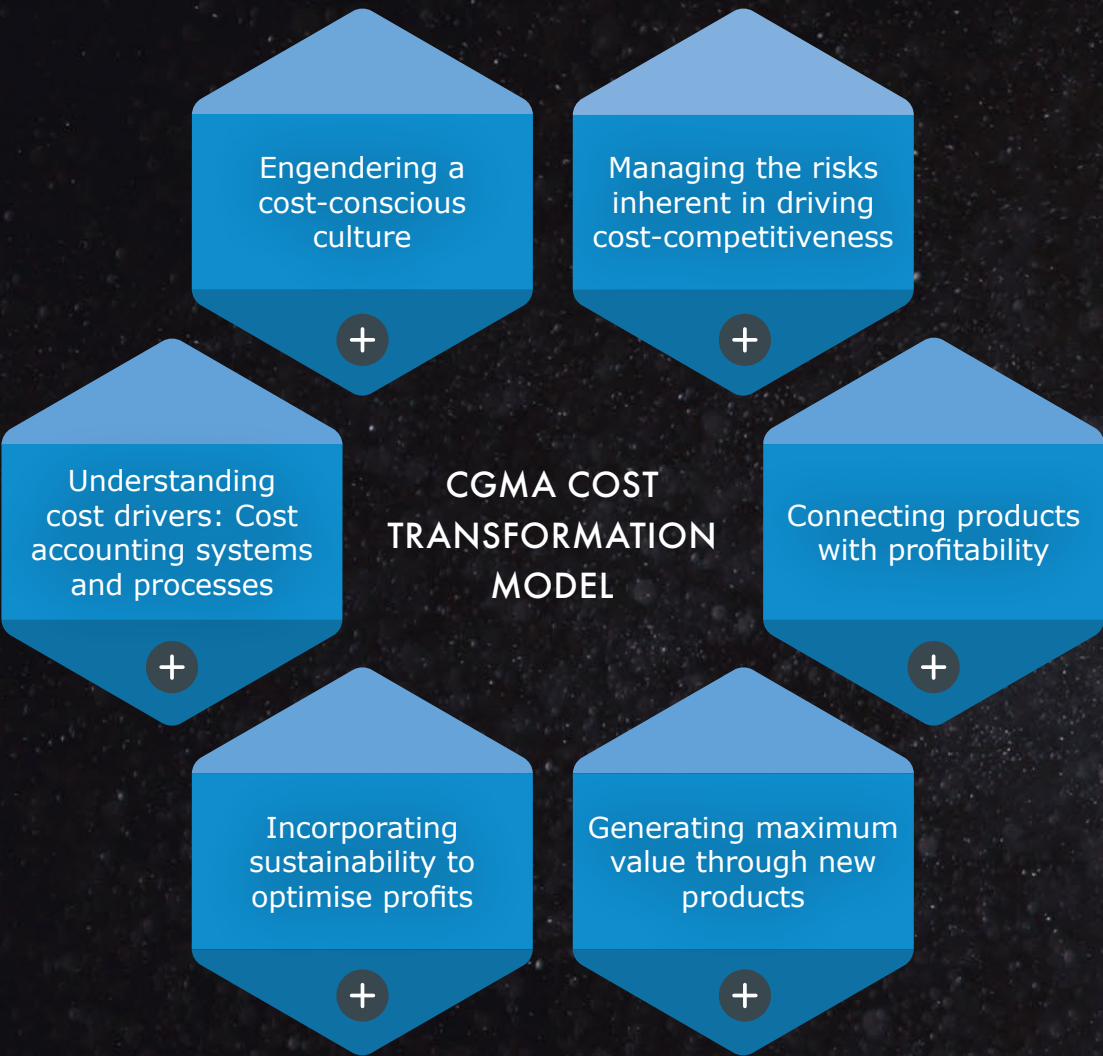
## COST TRANSFORMATION MODEL

---

Create a business that is not just leaner,  
it's more competitive too.



Two of the world’s most prestigious accounting bodies, AICPA and CIMA, have formed a joint venture to establish the Chartered Global Management Accountant (CGMA®) designation to elevate and build recognition of the profession of management accounting. This international designation recognises the most talented and committed management accountants with the discipline and skill to drive strong business performance. CGMA® designation holders are either CPAs with qualifying management accounting experience or associate or fellow members of the Chartered Institute of Management Accountants.



The CGMA Cost Transformation Model is designed to help businesses to achieve and maintain cost-competitiveness. It serves as a practical and logical planning and control framework for transforming and continuously managing a business’s cost competitiveness. The model transcends the finance function, requiring the full participation of and buy-in by all functions and processes.

# CONTENTS

Introduction	2
Engendering a cost-conscious culture	4
Planning ahead: The need for a strategy to transform and manage costs	4
Getting ahead: Creating a platform fit to execute	12
Staying ahead: Continually improving cost competitiveness	19
Managing the risks inherent in driving cost-competitiveness	23
Connecting products with profitability	28
Generating maximum value through new products	31
Incorporating sustainability to optimise profits	36
Understanding cost drivers: Cost accounting systems and processes	41
Master data: Supporting data-driven decisions	41
Systems and processes delivering data that is trusted	42
Transaction information	43
Cost accounting processes	43
Operational cost management	46
Management and budgetary control	58



# INTRODUCTION

A new industrial revolution is challenging traditional businesses models. The combined effects of rapid changes in technology, communications and information are the key forces that threaten to disrupt the ways in which businesses have traditionally operated.

## The competitive advantage

To survive, businesses must become globally cost competitive and carefully scrutinise their business models. Leadership must look for transformative opportunities to improve their cost structures while continuing to generate value for customers and aggressively exploit these opportunities.

Failure to deploy measures to dramatically improve cost-competitiveness risks a business being eclipsed by more nimble competition that can spring out of anywhere and at virtually no notice. In a world where competition is rife, it is vital that businesses release resource to fund growth strategies and innovation and retain competitiveness.

This means that cost management is simply not enough anymore – businesses need to move from being good cost managers to cost leaders.

“After 2008, we were feeling the effects of an economic climate where a strong pound was making imports cheaper than locally produced goods and impacting our sales volumes. The steel industry is fixed cost-intensive and reducing our variable costs would not have a significant enough impact. Our challenge was to find a way to re-structure our fixed costs base and differentiate our sales.”

Claire Osmundsen-Little, ACMA, CGMA, Finance Controller, Packaging, Tata Steel Europe

## Technology eliminating cost

Technology is eliminating cost as a barrier to entry. Fixed costs of production are now becoming less costly. For example:

- Computer aided design (CAD) software has become a commodity, with some basic versions free to download.
- 3D printing is making the printing of components that previously needed costly machining processes.
- Digital technology has made it technically possible to produce a film at a fraction of the fixed cost that used to be needed.

In some disruptive business models variable costs are significantly reducing. An example of this is transport company Uber. After setting up a web based platform (its primary fixed cost) all that remains to grow its business is for operators (individuals or fleet operators) to sign up to the Uber platform at very low marginal cost to Uber.

With rapid and ongoing improvements in communications and logistics competitors can be anywhere. Increasingly, producers are having to change the way they do business to maintain competitiveness. The supply chains of the largest businesses have become global to take advantage of lower cost centres and the ready availability of high calibre people globally. Components of business models retained as core competencies have to be continuously improved to generate value on a sustainable basis.

## The information revolution

The information revolution, epitomised by the internet, makes product price information readily accessible and, therefore, competition on price more pervasive. This is forcing producers to drive down costs to maintain competitiveness. Knowhow is a lot more accessible with the democratisation of knowledge made possible by the internet.

“We all know the saying ‘watch the pennies and the pounds will take care of themselves’, suggesting that micro managing small expenditure paves the way for profits. But I believe that being penny wise can in fact mean being pound foolish. It’s crucial to see the bigger picture of your business costs.”

Kevin Eidelman, ACMA, CGMA, Group Financial Manager, Calgro M3 Holdings Ltd

“When looking to bring down costs, a key area that can benefit from extra scrutiny is your supply chain management. It’s not enough to simply seek out the lowest cost suppliers.”

Bob Cortese, CPA, CGMA, Canadian Controller, CTS Corporation

# 1. ENGENDERING A COST-CONSCIOUS CULTURE

Any business can cut costs on a one-off basis. It takes a great deal more sophistication to drive continuous cost competitiveness while also preserving or enhancing customer value. To ensure cost competitiveness is front of mind, a business's strategy must explicitly focus on cost transformation and management.

However, nothing happens without people. For the effective execution of a cost-transformation and management strategy, people need both to be aligned to the organisation's purpose and to respond in ways that keep the organisation agile in the face of destabilising influences. It's easy for competitors to copy a leading cost-transformation and management strategy, so people must be motivated as part of their everyday responsibilities to continuously improve cost competitiveness.

## Planning ahead: The need for a strategy to transform and manage costs

To plan effectively, a business should analyse and understand the opportunities and risks – particularly the competitive forces at work – that are prevalent in all its markets. Whether its strategic positioning is to be a low-cost leader or to own a unique market position, a business must have strategies to improve and sustain profitability by controlling costs.

Any analysis should therefore include comparisons of the costs and prices of equivalent competitor products and of the business's cost structures with those of competitors.

Only by capitalising on the knowledge gained from this analysis of its competitive landscape will it be in a position to devise strategies to succeed in the face of its competition.

### Two-pronged strategy

Profits are a function of sales and costs, but the drivers of sales are often different to the drivers of costs. Strategy should therefore be two-pronged, comprising strategies to drive or maintain sales and strategies to drive or hold costs down.

The cost strategy should explain how the business will maximise profitability by driving or holding costs down relative to sales. Strategies should explicitly identify their target customer segments, describing the value to them of existing products and presenting their profitability. The strategy should also explain how the profitability of the whole product portfolio will be optimised over time ( $\text{Profit} = \text{Price} - \text{Cost}$ ), which may mean dropping certain products or exiting certain markets.

### Clarifying gaps

The strategy should also clarify gaps (such as unmet customer needs or market opportunities) and decide whether or not the business is fit to fulfil them; if so, it should describe products to exploit the gaps at targeted prices.

The philosophy is that the maximum costs of new products are limited to the prices that can be charged in the face of competition, less the required margin ( $\text{Cost} = \text{Price} - \text{Margin}$ ). Such costs are not just direct product costs but all costs, including capital costs.

The strategy must therefore explain how strategic cost objectives cascade throughout the business into all aspects of the business's cost structure, including: product and product family, process, department and cost centre. In this way, it provides line of sight for employees to link their personal goals with the cost strategy. The strategy should clarify how the business's reward philosophy tangibly encourages a cost-conscious culture that drives continuous improvements in cost-competitiveness.

## Tool: Porter's Five Forces of Competitive Position Analysis

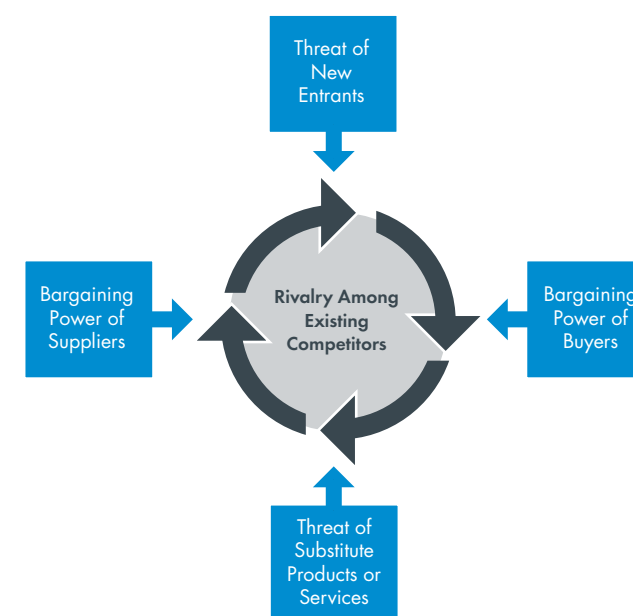
### What is it?

Porter's Five Forces of Competitive Position Analysis was developed in 1979 by Michael E Porter of Harvard Business School. It's a simple framework for assessing and evaluating the competitive strength and position of a business.

It promotes the concept that there are five forces that determine the competitive intensity and attractiveness of a market. Porter's Five Forces helps to identify where power lies in a business situation. This is useful both in understanding how strong an organisation's competitive position is currently, and how it can achieve competitive advantage. According to Porter, a business has competitive advantage if, compared with its rivals, it operates at a lower cost, commands a premium price, or both.

Strategic analysts often use Porter's Five Forces to understand whether new products or services are potentially profitable. By understanding where power lies, the theory can also be used to identify areas of strength, to improve weaknesses and to avoid mistakes.

FIGURE 1: Porter's Five forces of Competitive Position analysis



### The five forces are:

#### 1. Supplier power

An assessment of how easy it is for suppliers to drive up prices. This is determined by: the number of suppliers for each essential element; the uniqueness of their product or service; the relative size and strength of the supplier; and the cost of switching from one supplier to another.

#### 2. Buyer power

An assessment of how easy it is for buyers to drive prices down. This is determined by: the number of buyers in the market; the importance of each individual buyer to the business; and the cost to the buyer of switching from one supplier to another. If a business has just a few powerful buyers, they are often able to dictate terms.

#### 3. Competitive rivalry

The main driver is the number and capability of competitors in the market. If there are many competitors offering undifferentiated products and services, this will reduce market attractiveness.

#### 4. Threat of substitution

Where close substitute products exist in a market, it increases the likelihood of customers switching to alternatives in response to price increases. This reduces both the power of suppliers and the attractiveness of the market.

#### 5. Threat of new entry

Profitable markets attract new entrants, which in turn reduces profitability. Unless incumbents have strong and durable barriers to entry – for example, patents, economies of scale, capital requirements or government policies – then profitability will decline to a competitive rate.

Arguably, the influence of regulation, taxation and trade policies makes government a sixth force for many industries.

### What benefits does Porter's Five Forces analysis provide?

Five Forces analysis helps organisations understand the factors affecting profitability in a specific industry. This can help inform decisions about: whether to enter a specific industry; whether to increase capacity in an industry; and developing competitive strategies.

Implementing Porter’s Five Forces analysis?  
Questions to consider

- Can we define our industry?
- Is our cost structure competitive?
- Does our value chain support a sustainable business model?
- Do we want bigger market share or bigger profits?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Use this model before you devise a strategy; a good strategy is an antidote to competitive rivalry.</li><li>• Review your value chain. Outsource generic or inefficient activities. Retain and refine activities that enhance your competitive advantage.</li><li>• Compare cost structures with competitors. Then focus on cost drivers that are not competitive.</li><li>• Identify and refine activities that enhance the uniqueness of your business’s value proposition. These are activities that enable you to charge higher prices.</li></ul>	<ul style="list-style-type: none"><li>• Don’t compete to be best; strategy is not one-upmanship.</li><li>• Don’t try to serve all customers equally; focus on the most profitable ones.</li></ul>

Related and similar practices to consider	Further resources
<ul style="list-style-type: none"><li>• <a href="#">PEST analysis</a></li><li>• <a href="#">Porter’s Diamond</a></li><li>• Mendelow’s stakeholder mapping matrix</li></ul>	<ul style="list-style-type: none"><li>• <a href="http://www.cgma.org/essentialtools">www.cgma.org/essentialtools</a></li><li>• Understanding Michael Porter – The Essential Guide to Competition and Strategy. Joan Magretta. HBR Press. ISBN: 978-1-4221-6059-6</li></ul>

Tool: The CIMA Strategic Scorecard®

What is it?

The CIMA Strategic Scorecard® was developed in 2004. It was the result of research by CIMA, in collaboration with the Professional Accountants in Business Committee (PAIB) of the International Federation of Accountants (IFAC), into major corporate failures at the time such as Enron and WorldCom. An important finding was that company boards had failed to oversee strategy and risk effectively. The global financial crisis of 2008–09 reinforced these conclusions.

The scorecard aims to help boards of any organisation engage effectively in the strategic process.

It recognises that boards struggle to engage in strategy because of: lack of time and crowded agendas; information overload; lack of robust, board level processes for dealing with strategy; and greater complexity of business.

What benefits does the Scorecard provide?

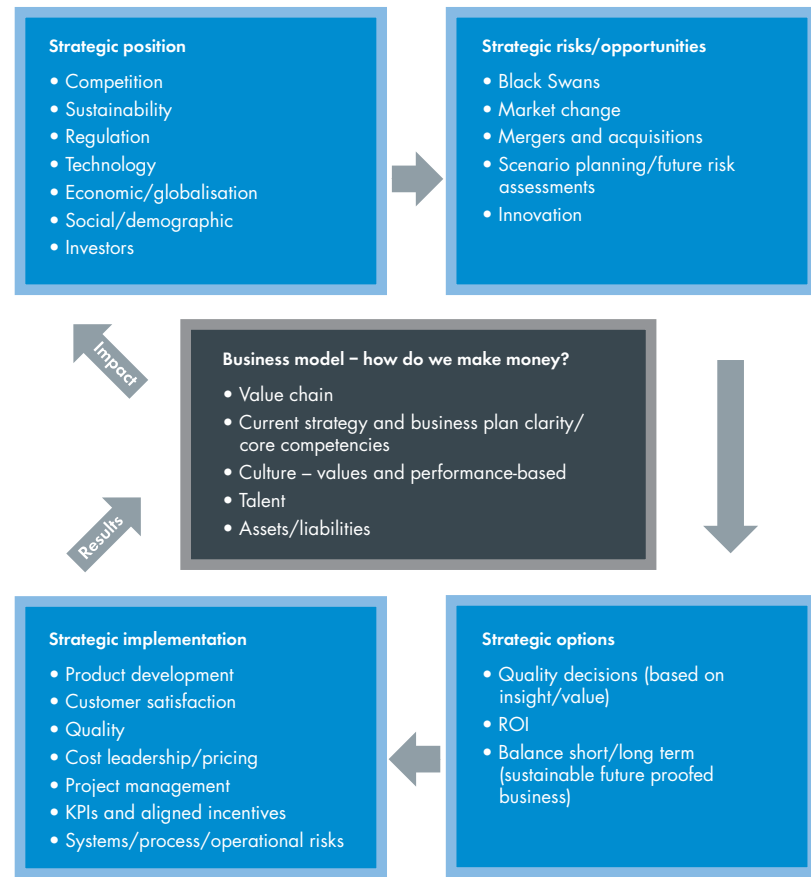
The CIMA Strategic Scorecard® provides a simple, effective process that helps the board to focus on strategic issues and ask the right questions. It is structured around four key dimensions of strategy:

- strategic position
- strategic risks and opportunities
- strategic options
- strategic implementation.

This means that the board can work constructively with management to promote the future success of the organisation. It can help to ensure a high-level perspective on strategy, thus avoiding the ‘comfort zone of detail’.

The discipline of preparing and updating the scorecard also helps management to keep its focus on strategic issues, and facilitates discussion within the executive team so that it can refine proposals prior to exposure to the board. The scorecard can also help to identify gaps in knowledge and analysis, so improving the quality of information presented.

FIGURE 2: The CIMA Strategic Scorecard®



Source: CIMA Executive CPD Academy

The scorecard framework helps boards and the businesses they control to:

- summarise key aspects of the operating environment
- highlight risks and opportunities
- identify major strategic options
- chart and track progress against significant milestones.

The implementation of the scorecard is based on the assumption that the organisation has already determined its broad strategic direction and has a strategic plan in place. The scorecard provides a process for developing and moving this strategy forward in a dynamic way. For boards that need to do more foundational thinking about what the company stands for, a good starting point is to develop a ‘board mandate’.

The format of the scorecard is very flexible and can be adapted to meet the needs of the organisation. For each of the four dimensions, high-level information

is provided in a format that provokes high-quality, constructive and effective strategic discussion. Achieving this in practice is a challenge.

The format of the scorecard has evolved since its initial creation, and CIMA is continuing to undertake further development work to strengthen the ability of the scorecard to support the level of strategic and risk discussion necessary to help boards and their organisations to avoid major problems.

Questions to consider when implementing the CIMA Strategic Scorecard

- How are we going to achieve buy-in from both executive management and the board to introduce the scorecard?
- Do we have a strategic plan in place? If not, this will have to be completed first before attempting a scorecard.
- How are we going to present the information for each of the four scorecard dimensions?

- What information do we have already to support a scorecard?
- When are we going to introduce the scorecard? And would it help to have a facilitator?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Use this model before you devise a strategy; a good strategy is an antidote to competitive rivalry.</li><li>• Review your value chain. Outsource generic or inefficient activities. Retain and refine activities that enhance your competitive advantage.</li></ul>	<ul style="list-style-type: none"><li>• Don't compete to be best; strategy is not one-upmanship.</li><li>• Don't try to serve all customers equally; focus on the most profitable ones.</li></ul>

Actions to take/Dos
<ul style="list-style-type: none"><li>• Compare cost structures with competitors. Then focus on cost drivers that are not competitive.</li><li>• Identify and refine activities that enhance the uniqueness of your business's value proposition. These are activities that enable you to charge higher prices.</li></ul>

Related and similar practices to consider
<ul style="list-style-type: none"><li>• <u>Balanced Scorecard</u></li><li>• Board mandate</li><li>• Boardroom conversations</li></ul>

In practice: Using the CIMA Strategic Scorecard®

CIMA uses the scorecard for Council and Executive Committee meetings. We have found that it has helped to ensure that the key issues we face remain prominent. It has helped the Senior Management Team to ‘force itself’ to include only the really high-level issues.

We trialled the scorecard in collaboration with a housing trust. The trial introduced the scorecard as part of an ongoing process to restore confidence after the housing trust had recovered from major difficulties requiring sweeping change in the executive team and trustee board. Participants used the four dimensions of the scorecard as the agenda items for a strategy away day which ran over two days.

The discussion about strategic options was held just before the end of the first day. This meant that they could continue the conversation informally over dinner. The impetus for introducing the scorecard came from the new chief executive in consultation with the chairman. After the initial away day, the scorecard was presented at board meetings on a quarterly basis.

Other CIMA members have used the scorecard on their own initiative, often modifying the framework and using it in innovative ways to suit their needs. An internal auditor, for example, used it as the basis for auditing the strategic review process in his organisation.

Feedback from the executives involved in its implementation included:

- Board member – ‘We have discussed more strategy than ever before at a board meeting and we have made decisions.’
- Member of the executive team – ‘We have had a great discussion with the board and I feel that they are totally supportive of our strategy. This process has brought us closer together.’
- Chief executive – ‘The process has brought focus to our strategic thinking and enabled our executive team to discuss the strategic options and engage the board.’
- Finance director – ‘It has helped us to focus on the issues that really matter and to avoid the comfort zone of detail.’



# Tool: Balanced Scorecard

## What is it?

The Balanced Scorecard concept, popularised by Robert S Kaplan and David P Norton, is a performance management tool that encompasses the financial measures of an organisation and key non-financial measures relating to customers or clients, internal processes, and organisational learning and growth needs. It places these into a concise ‘scorecard’ that can be used to monitor performance.

Early implementations of the Balanced Scorecard tended to focus on including a balance of measures in the four domains or perspectives rather than on execution of strategy, but over time it has become a widely used strategic management tool. The Balanced Scorecard process attempts to identify important links between financial performance and the underlying customer, internal processes and organisational metrics.

This creates a mechanism for translating the strategic vision into concrete actions necessary to achieve success.

This characteristic of the Balanced Scorecard places strategy at the core of management. When implemented properly, it can be used to align measures, actions and rewards to create a proper focus on the execution of strategic initiatives and achievement of strategic objectives, rather than a sole focus on the annual budget.

The widespread adoption of the Balanced Scorecard is due in part to its flexibility. Many companies have implemented their own variations to suit their strategic purposes. The Tesco ‘Steering Wheel’, for example, includes five perspectives, capturing their commitment to the community in addition to their financial, customer, operations and people aspects.

The Balanced Scorecard has also been successfully adapted for use by not-for-profit and public sector organisations. While the top line financial objectives of for-profit organisations are replaced by mission-related objectives, the process of identifying relevant stakeholder, internal process and resource measures serves much the same purpose.

## What benefits does the Balanced Scorecard provide?

The Balance Scorecard provides a means to clarify, articulate and communicate strategy. It is a shorthand way of putting all key measures into a ‘dashboard’ that can be used to monitor results. By including non-financial measures, it can be used to show how the non-financial aspects of performance, such as customer satisfaction, drive financial performance.

The Balanced Scorecard is a useful tool for motivating employees and focusing their attention on factors that are deemed to be critical to long-term performance rather than simply short-term financial results.

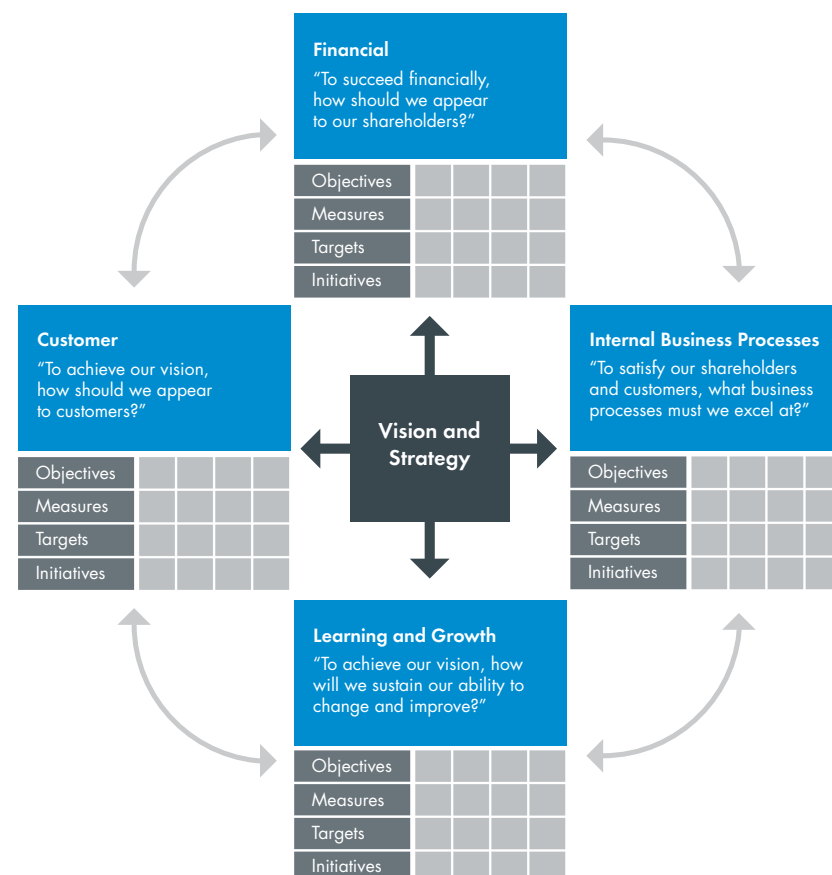
## Questions to consider when implementing a Balanced Scorecard

- Do we have sufficient buy-in from top management?
- Are we willing to engage in a more participatory strategy and performance management process?
- Are we committed to the organisational change effort necessary for successful implementation?
- To what extent will our current management information systems be able to support implementation? What are the costs and benefits of making these changes?
- What are we already doing that we can incorporate into our scorecard? What do we need to modify or stop doing?
- Are we prepared to focus our reporting around the scorecard?

## Related and similar practices to consider

- [Strategy mapping](#)
- [Developing non-financial key performance indicators](#)

FIGURE 3: The Balanced Scorecard



Adapted from Robert S Kaplan and David P Norton, Using the Balanced Scorecard as a strategic management system, Harvard Business Review (January-February 1996)

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Involve a broad senior management team.</li><li>• Engage everyone in the scorecard process.</li><li>• Use the scorecard to set ambitious goals.</li><li>• Use the scorecard to make strategy a continual process.</li><li>• Start with objectives, follow with measures, then initiatives – for example, increase sales by x%, introduce y new products in next 12 months, launch new product development and marketing initiative.</li><li>• Create measures that link to strategic success and long-term performance.</li><li>• Use the scorecard to find the best KPIs.</li><li>• Keep it to four to five KPIs for each perspective.</li><li>• Create a mix of leading, lagging, input and output measures – customer satisfaction is a leading indicator of sales; the number and quality of customer calls handled are output measures of the customer service process.</li><li>• Cascade the scorecard to business unit and functional teams.</li><li>• Each business unit's scorecard should be informed by corporate goals but not dictated by them.</li><li>• Use the scorecard to drive action plans.</li><li>• Link to compensation.</li><li>• Use the scorecard to empower teams and make strategy everyone's job.</li></ul>	<ul style="list-style-type: none"><li>• Do not use the scorecard as another tool of command and control, or annual target setting process.</li><li>• Don't withdraw support for the scorecard at the first sign of missed financial targets.</li><li>• Too many measures can spoil the scorecard – don't go 'KPI crazy'</li><li>• Failing to identify and validate causal links undermines the credibility of measures</li><li>• Failing to cascade the scorecard and create links to compensation undermines success</li><li>• Avoid attempting to create business unit or functional scorecards that can be aggregated upwards.</li></ul>

In practice:  
The Balanced Scorecard

**Implementation of the Balanced Scorecard and an alternative costing system at the Royal Botanic Garden Edinburgh**  
(CIMA case study, 2010)

[Download full case study](#)

The Royal Botanic Garden Edinburgh (RBGE) first adopted the Balanced Scorecard (BSC) in 2004. The Senior Management Group (SMG), which was responsible for strategy development, used the BSC to answer the 'who, what, why, where, when' questions prompted by the four perspectives as they related to the services that the RBGE provides to external stakeholders.

The original BSC created by the RBGE was employed as the basis of strategy and performance reviews. However, the prospect of a strategic review by an international peer group, along with an imperative to demonstrate alignment to the Scottish Government's National Outcomes, prompted a deeper look at the organisation's strategic objectives and underlying perspectives.

The ensuing revisions included improved alignment between the RBGE's 'impact' perspective and its 'activity' perspective. This review also led to the development of an objective costing system linked to an existing performance management system that improved monitoring of performance against strategic objectives.

**Lessons learned**

- The Balanced Scorecard can be adapted to suit an individual organisation
- The effort and commitment required from senior management to transform strategic management processes should not be underestimated
- Resistance to change may result as individuals become more accountable for their actions
- Management accountants are well-placed in the organisation to become very involved in the development of the Balanced Scorecard and implementation process, thereby becoming an important strategic partner in the business.

Getting ahead: Creating a platform fit to execute

A credible strategy for transforming and managing costs, comprehensively communicated within the business, should help to clarify what's needed to succeed in the face of competition – the external market perspective. Internally, the business needs a platform that's fit to execute the cost transformation and management strategy. It's vital for leaders to carefully consider how to support, enable and motivate their people to secure the right capabilities, competencies and capacity to deliver strategic objectives efficiently and effectively.

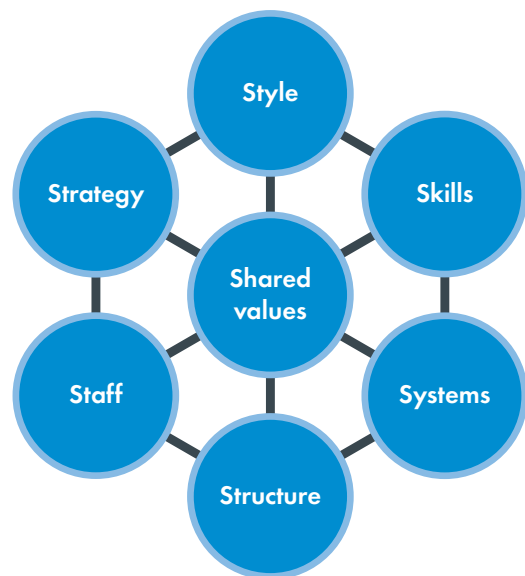


# Tool: McKinsey 7-S Framework

## What is it?

The McKinsey 7-S framework was developed by Tom Peters and Robert Waterman at McKinsey & Company. It argues that organisational effectiveness involves more than simply putting in place the right command and control structure to coordinate the delivery of an organisation's strategy. Instead, the framework maps a constellation of seven interacting factors that are key to helping people function effectively together, in order to achieve a high performance organisation.

FIGURE 4: McKinsey 7-S Framework



## What each element means:

### 1. Style

Also referred to as culture, this represents the way things are done and, particularly, the way the leadership team conducts itself in the organisation. The leadership's style will influence how the rest of the employees behave. Therefore, if the leadership visibly embraces, champions and demonstrates cost transformation and management, then people around the organisation will typically follow.

### 2. Skills

Refers to the skills needed to deliver the cost transformation and management strategy. Having the right skills to deliver the strategy is vital and skills gaps can pose a risk to achieving cost competitiveness objectives.

### 3. Systems

These are the activities, processes and procedures that people engage in to do their work. It also includes software systems, which are increasingly automating activities, processes and procedures.

### 4. Structure

The hierarchy of control exercised through delegated responsibility. The structure should be as simple as possible to help people understand who is accountable for specific results.

### 5. Staff

This includes the inherent talents of the organisation's people, the number of staff and the diversity needed in each area to optimise organisational capability and capacity.

### 6. Strategy

Organisations need to compete in volatile, uncertain, complex and ambiguous environments. So, strategy needs to respond to this with agility. Organisations must constantly adapt to strategies to succeed.

### 7. Shared values

These encapsulate the organisation's purpose or its societal mandate. The organisation's purpose tends to remain a fundamental constant over time and this purpose shapes the organisation's values.

Having shared values at the centre of the constellation emphasises that it is the core values of the organisation, aligned to the organisation's purpose, that shape the remaining elements.

## What benefits does McKinsey 7-S provide?

Perhaps strategy is changing and execution requires new delivery platforms. McKinsey's 7-S framework provides a useful approach to organisational design, specifically for:

- Facilitating organisational change
- Aligning the organisation to new strategy
- Aiding the merger or acquisition of organisations
- Improving the performance of a company
- Modelling the likely effects of future changes within a company.

## Implementing McKinsey 7-S? Questions to consider:

- Is there senior support to review the organisation's design?
- Are the seven elements of the framework aligned with each other?
- What is the best organisational design to support the objectives?
- What needs to change to achieve the best organisational design?
- Do you have the necessary resources to bring about the changes identified?

## Actions to take/Dos

- Make the business case. A review of the organisation's design can be unsettling for employees – so it will need the support of senior leaders.
- Document the current organisational design.
- Gain the support of influential people across the organisation.
- Take an iterative approach to implementation.
- Review each iteration to assess whether the desired impacts have been achieved.
- Be prepared to change plans to reflect what has been learned from reviews.

	Shared values	Strategy	Structure	Systems	Style	Staff	Skills
Skills	<ul style="list-style-type: none"> <li>Is it clear how our shared values complement the skills and competencies of our people (e.g. technical, business, people and leadership) that we need to succeed?</li> </ul>	<ul style="list-style-type: none"> <li>Do we have the right skills and competencies to develop and deliver strategy?</li> </ul>	<ul style="list-style-type: none"> <li>Does our structure get the most out of our skills and competencies?</li> <li>Do the skills and competencies of our organisation complement those of our interdependent organisations?</li> </ul>	<ul style="list-style-type: none"> <li>Are our systems and processes complementary to the skills and talents of our people? For example, has increased automation left some business processes with over-qualified people? Or do our systems and processes inadequately plug gaps in our skills and competencies?</li> </ul>	<ul style="list-style-type: none"> <li>Do our people have the right skills and competencies for the way we do things?</li> <li>Are there conflicts between how we do our work and our organisation's culture?</li> </ul>	<ul style="list-style-type: none"> <li>Do our people have the right mix of skills and competencies to optimise our organisation's capabilities?</li> <li>Are we long on some skills and competencies or short on others?</li> </ul>	The skills element refers to the skills needed to deliver the strategy. Having the right skills to deliver the strategy is vital, and skills gaps can pose a risk to the achievement of objectives.
Staff	<ul style="list-style-type: none"> <li>Are the intrinsic talents of our people enhanced by our shared values?</li> <li>Are there instances, anywhere in the organisation, where the talents required for success are in conflict with our shared values? (E.g. if deal closure is a valued talent in the sales force, does this conflict with a shared value of customer-centricity?)</li> </ul>	<ul style="list-style-type: none"> <li>Do we have the right people in the right numbers in the right places to deliver our strategy effectively and efficiently? (E.g. is our salesforce representative of the communities within which it is expected to succeed?)</li> </ul>	<ul style="list-style-type: none"> <li>Is our talent structured to achieve maximum efficiency and effectiveness?</li> <li>Do we have the right diversity of talent in all the right places across our organisation?</li> <li>Are there talent shortages in any parts of our organisation?</li> <li>Is the organisation structured in a way that empowers our employees?</li> </ul>	<ul style="list-style-type: none"> <li>Do we have the right balance between talent and systems and processes? (E.g. do our systems and processes stifle or encourage innovation?)</li> </ul>	<ul style="list-style-type: none"> <li>Given the way we do things, do we have the right diversity of talent?</li> <li>Are there instances where leadership style clashes with the kind of people who work here?</li> <li>Is our style/culture conducive to innovation?</li> <li>Does our culture instil confidence in our employees?</li> </ul>	The staff element comprises the intrinsic talents of the organisation's people, the number of employees and the diversity needed in each area to optimise the organisation's capabilities and capacity.	
Style	<ul style="list-style-type: none"> <li>Do leaders across the organisation exhibit our shared values in their day-to-day behaviours and leadership styles?</li> <li>Is the day-to-day conduct of colleagues compatible with our shared values? (E.g. do customer-facing colleagues behave in a way that is consistent with the value of customer-centricity?)</li> </ul>	<ul style="list-style-type: none"> <li>Does our strategy describe the style of working environment we aspire to?</li> <li>Is the culture in our organisation conducive to the efficient and effective execution of our strategy?</li> </ul>	<ul style="list-style-type: none"> <li>Does our structure support the way we need to work to get things done? (E.g. do we have siloes that hinder collegiate approaches or shared accountability?)</li> <li>Is our culture conducive to an open and friendly environment?</li> <li>Does our structure facilitate collaboration?</li> </ul>	<ul style="list-style-type: none"> <li>Do the systems and processes here support the way we work? (E.g. are systems and processes overly prescriptive, making them likely to stifle creativity?)</li> </ul>	Style (or culture) represents 'the way things are done around here'. In particular, it is reflective of the ways in which leaders conduct themselves around the organisation. The leadership's style will influence how the rest of the organisation's people behave.		
Systems	<ul style="list-style-type: none"> <li>Are our systems and processes designed to facilitate our ability to live our core values? (E.g. do we have customer systems and processes that facilitate customer-centricity or planning systems and processes that facilitate collaboration with colleagues?)</li> </ul>	<ul style="list-style-type: none"> <li>Are our systems and processes focused on the delivery of strategic objectives?</li> </ul>	<ul style="list-style-type: none"> <li>How well do our systems and processes support our structure and accountability for results?</li> </ul>	Systems are the activities, processes and procedures that people engage in to do their work. They also include software systems, which are increasingly automating activities, processes and procedures.			
Structure	<ul style="list-style-type: none"> <li>Are our teams organised to help their members live our shared values for the benefit of our key stakeholders? (For example, are they delivering high standards of customer service and effective collaboration with colleagues?)</li> </ul>	<ul style="list-style-type: none"> <li>Is our structure aligned to our strategic objectives?</li> </ul>	This is the hierarchy of control exercised through delegated responsibility. The structure should be as simple as possible to help people understand who is accountable for what results.				
Strategy	<ul style="list-style-type: none"> <li>How do our shared values deliver for key stakeholders such as customers, suppliers and colleagues?</li> <li>Does our strategy explain how our shared values support our purpose?</li> </ul>	Organisations need to compete in volatile, uncertain, complex, and ambiguous environments. Strategy needs to respond to this agilely and organisations need constantly to adapt strategies to succeed.					
Shared Values	Shared values encapsulate the organisation's purpose or societal mandate. The organisation's purpose tends to remain a fundamental constant over time, which shapes the organisation's values.						

### Template

The example questions on this page aim to illustrate how the elements of the McKinsey '7-S' model's interact with one another. In doing so, they are designed to help you with deploying the 7-S framework.

The framework consists of two main sets of factors: first, the 'hard' elements (strategy, structure and systems) that management can directly control; and second, the soft elements (shared values, style, staff and skills) which managers need to influence indirectly.

The questions included in this template are examples designed to help users better understand the framework. They could also be used as starter questions for their businesses. We encourage you to modify or supplement them to better suit your own situations or, if you prefer, to change them to open-style questions.

Tool: Achieving alignment, shared purpose and agility

What is it?

This tool, developed by the Chartered Institute of Personnel and Development (CIPD), will help you to:

- Put alignment strategies into practice
- Identify what your organisation does well and build on achievements to increase organisational agility
- Plan how else you can utilise your employees to maximise alignment and shared purpose.

Alignment, shared purpose and agility are all drivers of sustainable organisational performance. CIPD research has highlighted the importance of these themes for long-term performance.

1. Alignment

The consistency, integration or link between the organisation’s purpose and the values, behaviours or objectives of internal and external stakeholders.

2. Shared purpose

An organisation’s purpose is what it aims for or strives towards. Shared purpose occurs when this important feature of organisational identity is shared by employees at all levels and, where possible, by external stakeholders.

Although it’s important for an organisation to have clarity of purpose, this will not deliver sustained performance unless members of the organisation “sign up” to it so that the purpose is shared by all.

3. Agility

Agility is the ability to stay open to new directions and be continually proactive. This helps assess the limits or risks of existing approaches, and ensure that leaders and followers have an agile and change-ready mindset to keep moving, changing and adapting.

Nothing happens without people. Management accountants, with their knowledge of this tool and their organisation’s value drivers, plans and strategies, should work with HR professionals to engage employees in organisational objectives.

What benefits does the tool provide?

- Reviewing the extent management behaviours are encouraging alignment, agility and shared purpose

- Identifying key organisation performance issues and where these areas need attention
- Establishing a process for developing organisational agility
- Ensuring clarity about alignment issues that affect organisational performance
- Developing sustainable management practices suitable for both challenging economic circumstances and organisational growth situations
- Establishing clarity on how people connect with the organisation’s purpose
- Developing an appropriately agile mindset amongst employees
- Enabling people to understand organisational priorities and external pressures – and to direct and manage their focus upon these.

Implementing the tool? Questions to consider:

- Does the situation (e.g. a change or new strategy) call for a review of the organisation’s design?
- Can you identify any areas of the organisation that are dysfunctional in terms of current strategy?
- Have you identified an HR professional who you could work with to deploy this tool and improve organisational design?
- Does the HR function share your understanding of the organisation’s current strategy and business model?
- Does the HR function share your assessment of suboptimal organisational design? For example, job roles that are not aligned with the organisational purpose.

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Make sure that people have a clear understanding of the challenges faced by the organisation to improve buy-in.</li><li>• Reflect your appreciation of the previous changes that have impacted employees.</li><li>• Identify and capitalise on areas of strength.</li><li>• Focus on senior leaders’ key priorities.</li></ul>	<ul style="list-style-type: none"><li>• Avoid change for change’s sake.</li></ul>

Further resources
<ul style="list-style-type: none"><li>• <a href="#">Further references detailed in the tool</a></li></ul>

Source of tool: Chartered Institute of Personnel and Development (CIPD)

Staying ahead: continually improving cost competitiveness

Competition is the keen cutting edge of business, always shaving away at costs.

Henry Ford

To be successful in the short, medium and long term, the cost strategy must do more than describe how the whole business will drive or hold costs down on an ongoing basis. It should also clarify how leaders will engender a cost-conscious culture throughout the business (for example through kaizen) and gain the buy-in of all colleagues.

With advances in technology, competition comes increasingly from half a world away. It used to be that change was adopted discretely on a project-by-project basis. To succeed over the short, medium and long term, change must be viewed as a continuous process.

“”

The competitor to be feared is one who never bothers about you at all, but goes on making his own business better all the time.

Henry Ford

The quotes from Henry Ford epitomise the need for continuous improvement in cost-competitiveness. Toyota has long since overtaken Ford and General Motors to become the world’s biggest and most profitable car maker. It has done so by making continuous improvement every employee’s business, every day.

“”



Tool: Kaizen

What is it?

Kaizen is a philosophy of customer-driven improvement. Its aim is to create a culture of continuous quality, cost and delivery (QCD) improvement across the value chain.

Kaizen is based on three areas of improvement: housekeeping; waste elimination; and standardisation. In contrast to top-down approaches to driving improvements, like business process re-engineering, kaizen democratises continuous improvement through the principle that the person performing the operation is most knowledgeable about it and, therefore, best qualified to improve it.

Everyone in the business is expected to be on the lookout for opportunities to eliminate waste in their workplaces and to implement them with their co-workers. Waste includes excessive effort (‘muri’) and excessive process (‘mura’) – for example defects, over-engineering and over-stocking.

A business’s strategy should champion the values and behaviours expected of all employees in relation to kaizen and provide guidance for employees on what is expected of them personally. Leaders across the business should cultivate participation in kaizen activities and be seen themselves to engage in kaizen activities. Individuals and teams should be rewarded for their contributions and results celebrated.

A kaizen activity typically consists of the following steps:

- Standardise an operation or activity
- Measure the operation
- Compare measurements against requirements
- Innovate to meet requirements and increase productivity
- Standardise the new, improved operation
- Repeat on a continuous basis.

What benefits does kaizen provide?

Kaizen’s focus on housekeeping aims to enhance an employee’s workplace (‘gemba’) by continuously improving cleanliness, ergonomics and safety, which in turn should improve morale and motivation.

It eliminates waste by minimising, for example, time wasted retrieving tools; fatigue; injury caused by poor workspace ergonomics; the number of human operations needed to perform a process.

Standardisation provides a standard against which operations can be compared. Deviations from standards highlight the need for remedial action (kaizen) or to revise the standard. Standards are also key to knowledge management: they are a store of best practice, provide learning material for newcomers, and are the basis for performance management and performance improvement.

Implementing kaizen? Questions to consider:

- Does strategy encourage buy-in from all employees and empower them to experiment in their workplace to improve operations?
- What motivating factors need to be implemented to encourage employees’ participation in improvement activities on an ongoing basis?
- What training is needed to ensure all employees understand the company’s approach to continuous improvement?
- What facilitation is needed to ensure improvement is ongoing, e.g. quality circles?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Ensure management is seen to be enacting kaizen in its workspaces.</li><li>• Make kaizen a strategy.</li><li>• Provide a budget for kaizen activity.</li><li>• Measure the effectiveness of kaizens.</li><li>• Celebrate small improvements.</li><li>• Align recognition and award frameworks to the business’s kaizen philosophy.</li><li>• Empower employees to implement kaizens autonomously.</li><li>• Train all employees in the business’s kaizen philosophy.</li><li>• Compile baseline data to enable future comparison.</li></ul>	<ul style="list-style-type: none"><li>• Don’t try to exert management control over kaizen activities.</li><li>• Avoid bureaucracy in kaizen activities.</li><li>• Don’t tie kaizen to short term KPIs.</li></ul>

Related and similar practices to consider	Further resources
<ul style="list-style-type: none"><li>• 5S</li><li>• 7 wastes (muda)</li><li>• Just in Time</li><li>• Mistake proofing (Poka yoke)</li><li>• Single Minute Exchange of Dyes (SMED)</li></ul>	<ul style="list-style-type: none"><li>• <a href="#">Lean</a></li><li>• <a href="#">Quality Management Tools</a></li><li>• <a href="#">Value Chain Analysis (VCA)</a></li><li>• <a href="#">Lean Management Techniques</a></li></ul>

Tool: EFQM

What is it?

The EFQM model is a framework for management systems, developed by the European Foundation for Quality Management. It aims to: assess performance; integrate and align existing tools, procedures and processes; introduce a way of thinking that encourages reflection and stimulates continuous improvement; and identify the key actions that are driving results.

A key feature of the model is a diagnostic framework that allows organisations to grade themselves against nine core criteria. These focus on the cause and effect relationship between what an organisation does and the results it achieves.

What benefits does the framework provide?

- Satisfied and loyal customers
- Successful leaders
- A common sense of purpose throughout the organisation
- Constant, well-managed change
- Engaged and motivated employees and other stakeholders
- An upward flow of ideas
- Efficient and effective use of data
- Efficient and effective operations
- Pride and the desire to drive further improvement
- Minimal fire-fighting/recurring problems
- A culture where innovation is the norm
- Excellent results, including good financial performance.

Implementing EFQM? Questions to consider:

- Do you clearly understand the EFQM excellence model (concepts, criteria and RADAR)?
- Do you understand how the model relates to your organisation?
- Is there top-level buy-in to use the model for driving continuous improvement?
- Is it clear how the EFQM model will work with other management models used within the organisation, e.g. Six Sigma or Kaizen?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Complete a simple self-assessment of your organisation to establish a baseline.</li><li>• Agree an improvement plan.</li><li>• Visit a comparable organisation to see the model in action.</li><li>• Form a core leadership team to manage the deployment of the model.</li><li>• Train key people on the EFQM model.</li><li>• Use the model to explain how the organisation works to create value for customers.</li></ul>	<ul style="list-style-type: none"><li>• Avoid bureaucracy that obscures the benefits of deploying the model. For example, form-filling, routine meetings and meaningless measures.</li><li>• Avoid the model being viewed as an additional layer of control.</li><li>• Avoid it being used merely to assess periodical improvements in the ways the organisation works.</li></ul>

Further resources
<ul style="list-style-type: none"><li>• <a href="#">EFQM model</a></li></ul>

2. MANAGING THE RISKS INHERENT IN DRIVING COST-COMPETITIVENESS

Risk management focuses on what could stop the business achieving its cost transformation and management objectives. While businesses will invariably face risks that are unique to their market or organisation, certain risks to cost competitiveness may be more prevalent.

Globalisation

Developments in communications and logistics have helped to make competition global. Globalisation also provides opportunities for the supply chain – businesses can often source inputs like components and skills at lower cost in other parts of the world. But while it may pay a business to move elements of its business model offshore, this could have implications for its agility.

Technology improvements and breakthroughs

Such advancements present opportunities and risks to business models. While new technologies can enable a business to reduce its cost base, they might have implications for its cost structure. Technologies are also often readily accessible to competitors, meaning that businesses are sometimes faced with stark “adopt-or-die” scenarios to remain cost-competitive. Rapidly evolving technology can also force a business to write off older technology earlier than planned, which could be disruptive to cost models.

Commodity costs

These typically fluctuate with supply and demand, and mitigating this risk is fraught with uncertainty. For example, a business may assume that the cost of a key commodity will increase and hedge against this scenario. However, if the commodity drops below the hedged cost, the business is left with a cost disadvantage relative to competitors.

Financial strength is a factor in determining a business’s ability to withstand such possible risk events, and management must consider its tolerance (or willingness) to expose the business to the possible risks inherent in its cost strategies.

When planning to exploit opportunities, management accountants must consider the risks inherent in doing so. This should not be an ad-hoc exercise; rather, risk should be managed formally using purpose-designed tools. The risk management framework should raise levels of staff awareness of the possible impact that perceived risks could have on factors including the ability of the business to:

- Achieve its strategic goals
- Assign ownership for risk accountability to individuals whose role it is to neutralise a risk event, reduce its impact or lessen the likelihood of occurrence
- Report to management risk events and the effectiveness of countermeasures.

Tool: How to evaluate enterprise risk management maturity

Increasingly, boards of directors and senior executive teams are exploring the concept of enterprise risk management (ERM) to better connect their risk oversight practices with the execution of their strategic plan. ERM has become an important emerging business discipline that has attracted the attention of regulators, financial markets, and rating agencies as they examine firms within their areas of responsibility and interest. The recent financial crisis, emerging political unrest in nations around the globe, and the impact of significant natural disasters are placing even more emphasis on the importance of robust and strategic risk management practices in organisations of all types and sizes.

In spite of this increased focus on ERM, organisations still find it difficult to understand how ERM differs from traditional risk management, and what an effective ERM process looks like.

How Tool is Organised:

- 1. Risk Culture
- 2. Risk Identification
- 3. Risk Assessment
- 4. Articulation of Risk Appetite
- 5. Risk Response
- 6. Risk Reporting
- 7. Integration with Strategic Planning
- 8. Assessment of ERM Effectiveness

In each of the eight focus areas, the tool includes brief descriptors of key elements of an ERM process that are important to the strength of that focus area. The evaluator considers whether each of the key elements is currently present at the organisation at the time of the evaluation.

Percentage scores for each of the eight focus areas will help provide the organisation some direction about specific aspects of ERM that may require the most immediate attention.

Download

Please note CGMA login required to access resource.

Tool: Risk

What is it?

Framework

A risk heat map is a tool used to present the results of a risk assessment process visually and in a meaningful and concise way.

Whether conducted as part of a broad-based enterprise risk management process or more narrowly focused internal control process, risk assessment is a critical step in risk management. It involves evaluating the likelihood and potential impact of identified risks.

Heat maps are a way of representing the resulting qualitative and quantitative evaluations of the probability of risk occurrence and the impact on the organisation in the event that a particular risk is experienced.

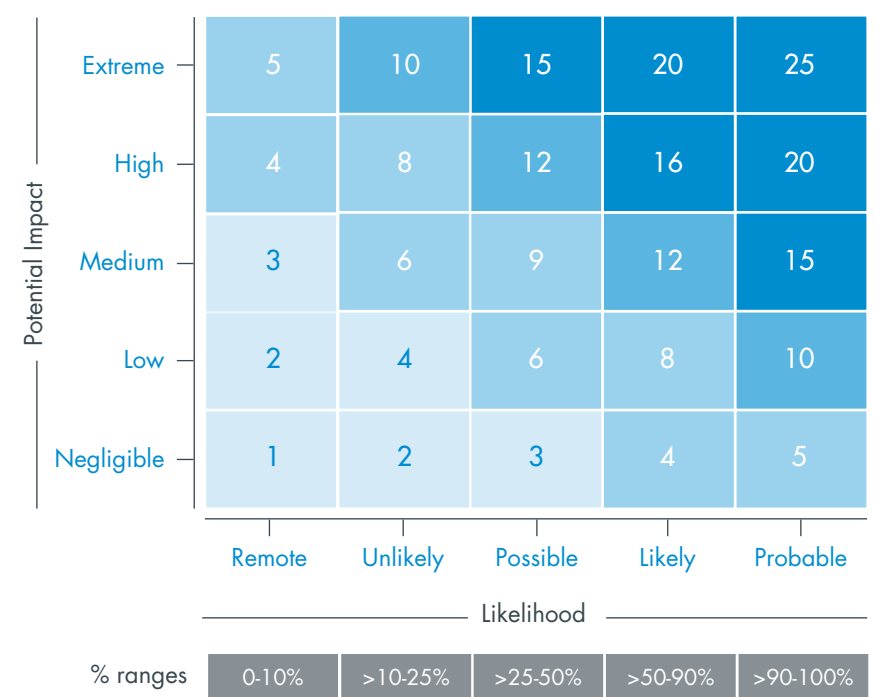
The development of an effective heat map has several critical elements – a common understanding of the risk appetite of the company, the level of impact that would be material to the company, and

a common language for assigning probabilities and potential impacts.

The 5x5 heat map diagram below provides an illustration of how organisations can map probability ranges to common qualitative characterisations of risk event likelihood, and a ranking scheme for potential impacts. They can also rank impacts on the basis of what is material in financial terms, or in relation to the achievement of strategic objectives. In this example, risks are prioritised using a simple multiplication formula.

Organisations generally map risks on a heat map using a ‘residual risk’ basis that considers the extent to which risks are mitigated or reduced by internal controls or other risk response strategies.

FIGURE 5: Risk assessment for mid-sized companies



Source: Risk assessment for mid-sized companies: tools for developing a tailored approach to risk management. Scott McKay, AICPA, 2011



What benefits do Risk Heat Maps provide?

- A visual, big picture, holistic view to share while making strategic decisions
- Improved management of risks and governance of the risk management process
- Increased focus on the risk appetite and risk tolerance of the company
- More precision in the risk assessment process
- Identification of gaps in the risk management and control process
- Greater integration of risk management across the enterprise and embedding of risk management in operations.

Questions to consider when implementing a Risk Heat Map

- How much risk are we willing to accept?
- What constitutes a material risk to our company?
- What is the range of acceptable variance from our key performance and operating metrics?
- How will we define our terms to evaluate the likelihood of risk events and the impact that they might have on our business, so that we can map our potential risk events to our heat map?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Use risk self-assessment workshops to take advantage of the insights of managers.</li><li>• Prepare an initial 'straw-man' risk library to use as a starting point.</li><li>• Get consensus on risk tolerances – acceptable levels of missing targets.</li><li>• Clarify terms used to establish probability estimates.</li><li>• Establish participants' understanding of the effectiveness of controls and other risk responses used in the organisation.</li></ul>	<ul style="list-style-type: none"><li>• Don't rely on surveys to capture initial thoughts about risks.</li><li>• Avoid getting stuck in root cause analysis.</li><li>• Don't forget to quantify risks in terms of potential financial impact on the organisation in terms of cash, earnings etc.</li><li>• Don't forget to consider the state of controls and other risk management practices in place in the organisation.</li></ul>

In practice:  
Risk Heat Maps

Communicating risk using a heat map

[Download the full tool and case study](#)

In the CGMA tool How to Communicate Risks Using a Heat Map, Figure 5 shows a sample heat map for a select set of risks for a hypothetical company. The sample groups these risks together according to their interrelated nature and effect on operations. See the link in Further resources to access the full case study.

The company used its earnings per share sensitivity to establish a range of impacts from trivial (<\$25k in earnings) to very material (>\$75m in earnings). Risks that were evaluated and grouped for presentation in the example include the following:

- Obsolescence risk
- Customer concentration or distribution risk
- Manufacturing risk
- New product introduction risk
- Supply chain risk
- Safety risk
- Physical asset risk

By mapping these risks, it was clear that the likelihood and the impact of physical asset risk were relatively low in relation to the risks associated with new product introduction, customer concentration and supply chain. Each of those was considered to be both more likely and to have greater impact.

Lessons learned

A more accurate sales forecasting function was a recurring theme thought to be a key risk indicator associated with several of these interrelated risks.

The perception of supply chain risk increased with the vertical supply chain as viewed by downstream business units.

The likelihood and the potential impact of risk events appeared highest with the new product introduction (NPI) process, indicating that opportunities may exist in how the company is structured and manages NPI.

### 3. CONNECTING PRODUCTS WITH PROFITABILITY

The word “profitability” is usually associated with a business’s financial bottom line, representing the net value generated over a defined period of time. Commercial businesses seek to maximise profitability to generate maximum value for owners, while others such as charities exist to make only as much profit as they need to sustain their reserves. Charities strive to maximise the value they generate for beneficiaries, so any profits over the amount required to sustain reserves represents value not delivered to beneficiaries.

Whatever the type of business, the value its products generate for its customers must be analysed and understood. If a beneficiary segment targeted by a charity does not value its product offerings, then demand will drop and donors will no longer be inclined to contribute. Turnover will fall and the charity could face a threat to its existence. Similarly, if the targeted customers of a commercial business do not value its products, they will either pay a lower price or transfer their custom elsewhere.

#### Segment-specific strategies

Management accountants therefore must analyse product profitability and devise strategies to maximise product profitability by customer segment.

Since 80% of a product’s direct costs are generally locked in at the design stage, not much can be done post-development to reduce its direct costs. However, it is possible to improve profitability by driving or holding down product or customer service costs. To do so, the management accountant must have a deep understanding of the full product cost structure – not just direct costs.

This insight is typically achieved through a product hierarchy that might start at the top level with product category and end with a bill of material. Each product category should be associated with a customer need; variants within the category might be associated with variations of the top-level need. This will help the business understand the unique customer (or segment) value proposition for each product within a hierarchy.

#### Understanding cost drivers

It costs more to serve some customers than others. In some cases this increased cost might be justified by the importance of the customer segment to volume or profitability. In others, the business may actually be losing money, meaning that a clear understanding of cost drivers is vital to turning loss-making customer segments into profitable ones.

A clear understanding of the cost drivers for existing products and customers should also inform new product and business development.

### Tool: Kotler’s Five Product Level Model

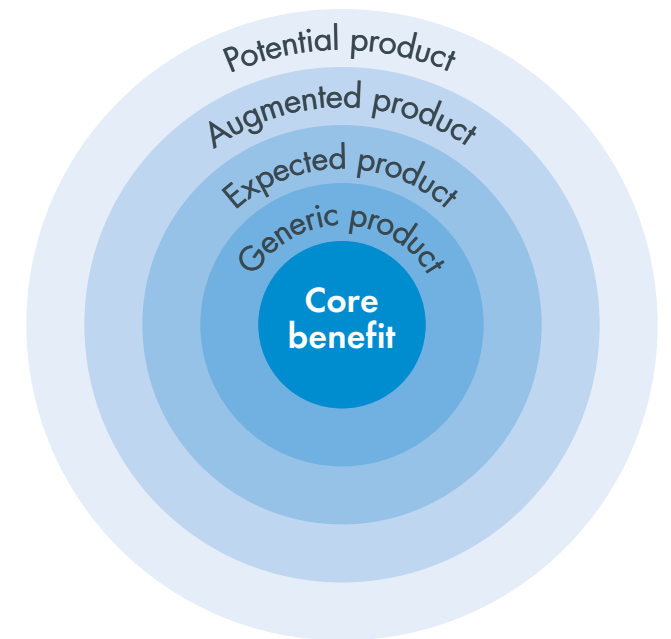
#### What is it?

No matter how well costs are driven or held down, no product can be profitable unless it sells. Therefore all products must satisfy customer needs and wants. As all customers are different and seek different benefits from products, businesses would ideally tailor their products to satisfy each customer’s wants and needs. However, for many businesses this is not achievable, so they need a way of classifying products in a structure aligned to customer segments, as defined by their needs and wants. The more flexibility a business has to configure products to different customer segments at minimal cost, the more segments they can target with the core product. Which is why it is vital to develop new products with flexibility as a key feature. Philip Kotler, an economist, devised a model that recognises customers have five levels of need, ranging from functional or core needs to emotional needs. The model also recognises that products are merely a means to satisfy customers’ varying needs or wants. He distinguished three drivers of how customers attach value to a product:

- **Need:** a lack of a basic requirement
- **Want:** a specific requirement of products to satisfy a need
- **Demand:** a set of wants plus the desire and ability to pay for the product.

Customers will choose a product based on their perceived value of it. Satisfaction is the degree to which the actual use of a product matches the perceived value at the time of the purchase. A customer is satisfied only if the actual value is the same or exceeds the perceived value. Kotler attributed five levels to products:

FIGURE 6: Kotler’s Five Product Level Model



#### The five product levels are:

##### 1. Core benefit

The fundamental need or want that consumers satisfy by consuming the product or service. For example, the need to process digital images.

##### 2. Generic product

A version of the product containing only those attributes or characteristics absolutely necessary for it to function. For example, the need to process digital images could be satisfied by a generic, low-end, personal computer using free image processing software or a processing laboratory.

##### 3. Expected product

The set of attributes or characteristics that buyers normally expect and agree to when they purchase a product. For example, the computer is specified to deliver fast image processing and has a high-resolution, accurate colour screen.

4. Augmented product

The inclusion of additional features, benefits, attributes or related services that serve to differentiate the product from its competitors. For example, the computer comes pre-loaded with a high-end image processing software for no extra cost or at a deeply discounted, incremental cost.

5. Potential product

This includes all the augmentations and transformations a product might undergo in the future. To ensure future customer loyalty, a business must aim to surprise and delight customers in the future by continuing to augment products. For example, the customer receives ongoing image processing software upgrades with new and useful features.

What benefits does the model provide?

Kotler’s Five Product Level model provides businesses with a proven method for structuring their product portfolio to target various customer segments. This enables them to analyse product and customer profitability (sales and costs) in a structured way. By organising products according to this model, a business’s sales processes can be aligned to its customer needs and help focus other operational processes around its customers – such as design and engineering, procurement, production planning, costing and pricing, logistics, and sales and marketing.

Grouping products into product families that align with customer segments helps modelling and planning sales, as well as production and new product planning.

Implementing Porter’s Five Forces analysis? Questions to consider

- How do our customers view our products?
- How will they shop for our products?
- Can we structure our products into families that align with how our customers value our products?
- How can the product structure be optimised along common components to make cost and price structures logical and accessible?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Start with customers.</li><li>• Analyse and segment customers by their needs and wants.</li><li>• Align products into families that align to customer segments.</li><li>• Optimise product hierarchies along component and production process commonalities to help with cost and price structure management.</li><li>• Strategically assess the profitability of products, product families and customer segments.</li><li>• Report gaps and opportunities identified by the product hierarchy.</li></ul>	<ul style="list-style-type: none"><li>• Don't attempt to shoehorn customer segments into existing products and structures.</li><li>• Avoid too many customer segments, leading to overly complex product and cost/price structures.</li></ul>

Related and similar practices to consider

- [Product Family Master Planning](#)

4. GENERATING MAXIMUM VALUE THROUGH NEW PRODUCTS

New products should be designed to be flexible enough to allow the addition or elimination of features to suit as many markets as possible without sacrificing margin.

The purpose of creating value for customers is to enable higher prices to be charged, stimulating what economists call “willingness to pay.” It is vital as early as possible in the conceptualisation of new products to engage relevant stakeholders (such as the sales and marketing, engineering, production, logistics and management accounting functions) to agree variants serving each targeted customer segment.

Sales and marketing, for example, might request multiple variants. This can be achieved most efficiently and effectively if the creative, development and production functions are represented, since due consideration can be given to achieving commonality of components and modules.

Consider price and margin before production

Since 80% of a product’s direct cost is determined at the design stage, it’s vital that product design takes account of the marketable price and required margin. Decisions made after the product moves into production typically account for only 10-15% of costs. The management accountant must work alongside colleagues at the development stage to drive down costs, drive up customer value and gain buy-in to the logic and structures behind costing and pricing decisions.

When a company faces a profitability problem and undertakes a cost-reduction programme, it will typically reduce R&D spend and focus on post-development activities such as production, sales and general/administrative expenditures. This is often too little too late. It is fundamental that new products are:

- Introduced at a targeted price
- Designed to offer value to specific customer segments at the target prices
- Designed to fulfil a quantified demand at each target price
- Developed to provide features of value to diverse customer segments.

Sustainability is good for profits too. Costs that are avoided by design not only improve cost competitiveness, they can also reduce consumption of resources, thereby contributing to the sustainability of operations. Avoiding such costs has a direct positive impact on the bottom line.



Tool: Target costing

Target costing estimates product cost by subtracting a desired profit margin from a competitive market price. As the target cost makes reference to the competitive market, it is fundamentally customer-focused and an important concept for new product development.

What is it?

Target costing is part of a product development process. It starts with understanding the wants and needs of customer segments across targeted competitive markets, and the prices they're willing to pay for the product and its variants. The business must specify the margin it needs to get the maximum tenable cost for the product and its variants. The margin needs to be sustainable across the product's full expected lifecycle.

Because target costing encompasses a business's full costs, it applies to its full value chain. So, at one end of the value chain, customer value must be expressed in terms of the value the product and its variants generate for customers. At the other end of the value chain, it incorporates how the business will collaborate with its suppliers to generate this value. As target costing has an all-encompassing role, it is multidisciplinary, multifunctional and integral to the business model that generates value for customers. It's as much a change of culture as a change in process. The role of the management accountant is to partner with all the disciplines involved and to understand the impact of decisions on customers. So, it's not just about minimising product costs, but doing so while maintaining or enhancing quality for the customer.

Competitive markets are full of uncertainty. Since the process applies to the product's full lifecycle in competitive markets, businesses will need to continually revise a product's value proposition and price. This is bound to affect the product's target cost over time. So, target costing is an ongoing process that needs continuous improvement effort.

What benefits does the process provide?

- Assures that profitability targets for a product portfolio are achievable
- Improves sales prospects, since product development is focused on customer needs and wants
- Improves profitability of product variants
- Reduces the cost and effort of managing a profitable product lifecycle
- Reduces reliance on costly post-production product revisions to meet customer needs and wants
- Market and customer-led, rather than business capability-led
- Extends customer centricity beyond sales to all functions in the business.

Implementing target costing? Questions to consider

- Have we segmented our prospect and customer base by their wants and needs?
- Have we aligned existing products with customer segments?
- Have we made the case for adopting target costing in our strategy?
- Do our leaders champion the target costing cause?
- Have we put in place the resources to facilitate implementation?
- Are key people inspired to embrace target costing or is there resistance to change?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Communicate the need for target costing.</li><li>• Lead the change – leaders must champion the need.</li><li>• Provide target costing training to key functional people.</li><li>• Recruit functional target-costing champions to form a multidisciplinary target costing centre of excellence.</li><li>• Ensure all new product development projects are controlled by the target costing centre of excellence.</li><li>• Ensure all existing product variant development projects are controlled by the target costing centre of excellence.</li><li>• Provide the resources needed for success by the centre of excellence.</li><li>• Product developers must own costs – not just product quality and speed to market. Incentives must reflect this.</li><li>• Sales and marketing must accept the inevitability of trade-offs; endless variant development to satisfy customers' every need diminishes returns.</li></ul>	<ul style="list-style-type: none"><li>• Don't make it the sole preserve of the management accountant.</li><li>• Avoid the project mindset – target costing is a process.</li><li>• Avoid cost being the only target. Target costing is about quality (from the customer's perspective), speed to market and cost – not just cost.</li><li>• Don't be subjective. Quality and value is what the customer says it is.</li></ul>

Tool: Product family master planning (PFMP)

Planning new products using PFMP aims to increase variety for customers while reducing the capitals required to develop, produce and market the products. This is mainly achieved by sharing the capitals between product variants at the design stage. ‘Capitals’ are the resources included in the integrated reporting framework, for example financial, manufactured, intellectual, human, social and relationship, and natural.

The key reason to adopt this approach is cost minimisation. The more that capitals can be shared by design, the lower product costs will typically be. This approach may also positively impact their sustainability. From the start of the process, the management accountant should proactively support all functions involved in developing new product families.

What is it?

Typically the elements needed to bring a new product to market include:

- **Components**  
These are the individual parts that make up the end product. They’re usually manufactured or natural, and itemised in bills of material (BOM). Product variants’ design should maximise the commonality of parts between variants. It should also optimise module design so fewer modules are needed to produce the range of variants.  
Carefully structuring components in the design stage reduces the risk of later having to reconsider the structure to meet customer needs. It also improves costing logic transparency, and increases buy-in of the cost structure for functions involved in the product’s development. Involving management accounting in setting the product family’s structure also provides an opportunity to hone costs.

- **Processes**  
This includes all the processes needed to bring a new product to market. For example – R&D, sales and marketing, procurement, engineering, testing, production, assembly and, possibly, end of life processes.  
Management accountants should factor all costs into the product – not just the direct costs. While it’s easy to see how planning a product family focused on market segments might be helpful to sales and marketing, all functions should be considered. For example, a market-focused product family structure could increase complexity and costs of production. Management accountants need to minimise overall product costs.
- **Knowledge or know-how**  
This includes a business’s intellectual capital – such as patents, applications, technology and operating models – that provides it with a competitive edge. Nurturing and protecting this know-how comes at a cost and the management accountant should reflect this as a component of the product’s overall cost.  
This has the additional benefit of bringing focus to knowledge management, which is important for sustaining a business’s competitive edge.
- **People and relationships**  
This includes employees and all stakeholders of a business. The customer is the most obvious stakeholder, but the supply chain is also significant. Less obvious are the societies that the business operates within, which can exert significant influence on a business’s ability to succeed over time.  
Developing a product family structure should take account of all identified stakeholders, even just to rule some out as immaterial to decision making. Accounting for the influences and needs of stakeholders is likely to come at a cost. The management accountant should ensure that these costs are managed and accounted for in the product’s cost structure.

What benefits does the process provide?

- It engages all the relevant faculties of a business so as to improve the chances of success and reduce costs.
- It recognises the factors needed to bring a product to market early on, so businesses can make early and robust decisions during the product’s development – i.e. before it’s too late to have an effect on outcomes.
- It explicitly recognises the influences of all stakeholders on possible future outcomes, which helps with cost identification and proactive cost management.
- It optimises product structure, taking account of markets and the business’s operating model.
- It provides an opportunity to make the product’s costing logical and understandable – improving buy-in to the cost structures.
- Cost drivers are identified early, as the product development process progresses. This provides mechanisms for proactively managing go-to-market costs as well as costs throughout the product’s lifecycle.

Implementing PFMP? Questions to consider

- For new product proposals, is there an opportunity to serve multiple markets from a common platform?
- Looking across all existing products and new product proposals, are there opportunities to rationalise by sharing common components or modules?
- Looking across all existing products and new product proposals, are there ways of structuring products into families that more efficiently serve our market segments or business model?
- Are cost structures aligned to product families?

Actions to take/Dos	Actions to avoid/Don’ts
<ul style="list-style-type: none"><li>• Be aware of opportunities to rationalise product families with every new product proposal.</li><li>• Do challenge production or engineering-led product initiatives.</li><li>• Work with sales and marketing to segment markets so as to identify over-served and under-served segments.</li></ul>	<ul style="list-style-type: none"><li>• Avoid getting involved in product development late, as earlier decisions may be difficult to reverse.</li></ul>

Related and similar practices to consider
<ul style="list-style-type: none"><li>• <a href="#">Kotler’s Five Product Level model</a></li><li>• <a href="#">Activity-based costing</a></li><li>• <a href="#">Porter’s Five Forces model</a></li></ul>

## 5. INCORPORATING SUSTAINABILITY TO OPTIMISE PROFITS

Reducing the detrimental impact of a business's activities on the natural capital upon which we all depend offers important commercial advantages. It enhances a brand's image (and therefore sales), improves profitability (by reducing long-run costs) and helps safeguard the future availability of natural capital.

“

In stark financial terms, all the evidence demonstrates a simple fact: we are failing to run the global bank that we call our planet in a competent manner. We no longer just take a dividend each year; instead, for some time, we have been digging deep into our capital reserves. And, after the near collapse of our entire financial system, we all know that such excessive risk-taking can cause immense havoc. The ultimate bank on which we all depend – the bank of natural capital – is in the red; the debt is getting ever bigger and that is reducing Nature's resilience and considerably impeding her ability to re-stock. It leaves us dangerously exposed.

HRH The Prince of Wales

Adopting sustainable approaches throughout the business model (in research and development, manufacturing, packaging, logistics and marketing for example) helps to optimise the use of resources across the value chain. Product cost structures should reflect the costs of the natural capital consumed or those of replenishing this consumption. A business's strategy should specify its sustainability objectives, including corporate social responsibility, and describe the general approaches, measures and targets for achieving them.

### Accounting for the costs of sustainability

Practices, processes and activities across the value chain should continuously advance the sustainability of the business model. The costs of sustainability initiatives, practices and processes should be accounted for in product costs, including full lifecycle costs where these are applicable.

Many organisations have developed approaches to help organisations manage their sustainability, including Global Reporting Initiative (GRI), Natural Capital Coalition, Sustainability Accounting Standards Board (SASB) and Accounting for Sustainability (A4S). However, there are few practical tools and solutions to help businesses account for and manage their sustainability. Management accounting can help to improve awareness of the issues by considering the following aspects:

- **Strategy**  
Showing how natural capital relates the organisation's business model and strategy, and how operations harmonise with wider society. For example, a soft-drinks bottling plant that depends on ground water as a vital natural resource may need to introduce initiatives to overcome concerns of the local farming community, which also depends on ground water.
- **Risk**  
Expressing the risks to future performance associated with the scarcity or depletion of natural capital.
- **Integrated thinking**  
Integrating sustainability information with performance-management information across the business model and driving continuous improvement in all processes and activities.
- **People engagement**  
Modelling future scenarios that engage people across the business in dialogue about sustainability.
- **Supply chain engagement**  
Engaging with supply chain partners to identify risks to sustainability and develop mitigating strategies.

## Tool: Lifecycle costing

Lifecycle costing is the maintenance of physical asset cost records over entire asset lives. This means decisions around the acquisition, use or disposal of assets can be made in a way that achieves the optimum asset usage at the lowest possible cost to the entity.

Lifecycle costing can also be applied to profiling cost over a product's life, including the pre-production stage (terotechnology), and to both company and industry lifecycles.

### What it is?

#### Product lifecycle costing

Product lifecycle costing is the accumulation of a product's costs over its whole life, from inception to abandonment.

The typical stages of a product's whole life are:

- Introduction
- Growth
- Maturity
- Decline.

When considering the profitability of the product portfolio and also planning a new product, the management accountant should assess the profitability of products over their whole lives. A product will typically accrue costs from a variety of activities:

- Research and development
- Design
- Manufacturing
- Marketing
- Distribution.

As well as the above activities, some products accumulate costs for the producer at the end of their lives, such as safe disposal, storage, dismantling, specialist logistics and recycling. Three factors should be optimised to maximise a product's profitability over its whole life. These are to:

1. Design costs out of the product
2. Minimise the time to market
3. Maximise the length of the lifecycle.

### Designing costs out of the product

Development activity is the most important from a sustainability perspective. Since 80% of a product's costs are locked in at the design stage, it's vital that waste is minimised by design. Choices made at the design stage should account for all stages of a product's life, including end of life costs, which could involve handling or storing hazardous material, and polluting activities, such as land fill or incineration.

The reduction of waste by design is usually good for profitability and also the sustainable consumption of scarce capitals. While it may be tempting to specify cheap materials in the design of products, consider the environmental impact and end of life requirements.

Even though some financial or environmental costs accumulated in the lifecycle of a product are not producer costs, the producer should still consider these costs carefully. Aware consumers will often factor such costs into their purchase decisions, and thus even if the producer ignores these factors, the consumer may calculate the total cost of ownership of the product, not just the initial acquisition cost. Known as asset lifestyle costing, this is the other side of the coin to product lifecycle costing.

A great example is the aero engine market. The balance of power has radically shifted from producers to operators in recent years, to the extent that producers must now guarantee operating performance across a range of factors. They must also agree to pay operators for costs of under-performance over an engine's whole life.

Producers are taking note of consumers' increasing environmental awareness. As a result, they're considering the price and financial cost of their products. However, they're also designing products to have a lower environmental impact and using 'environmental friendliness' as a selling point to enhance product appeal. More and more producers are adopting triple bottom line, or PPP (people, planet, profit) principles in practice.

### Minimising time to market

Competitors watch each other to discover new products coming to market, and they seek to develop products to keep ahead of each other. When competition is



minimal, the growth phase of a product’s life provides producers the chance to charge premium prices and invest heavily in awareness activities.

The longer a producer has before a rival product hits the market, the longer they’re able to command a price premium and entrench their product in the consumer’s buying habits. The management accountant should be aware of the competitive market for new products to improve accuracy of whole-life profitability.

Maximising the lifecycle

Getting to market quickly will lengthen a product’s life. However, there are other ways of increasing a product’s life and, ideally, consideration should be given to this at the design stage. Examples include:

- Designing the product in a modular way and conceptualising future modules to aid introducing variants after the initial launch
- Designing the product to satisfy as many markets as possible, even if this requires post-launch modification
- Staggering the launch in different markets to reduce costs and prolong demand.

The management accountant should try to encourage teams involved in product conceptualisation to consider as many of these factors as possible at the design phase. This improves estimation of whole-life profitability.

Asset lifecycle costing

For the user of an asset, the initial purchase price may only be part of the ownership cost. Other costs of operating the asset over its life may even dwarf the initial purchase price. These could include: maintenance; repair; downtime; energy consumption; consumables consumption; and environmental costs – such as emissions treatment, or compliant or safe material storage or disposal.

The management accountant should ensure they are aware of all the costs associated with safe and compliant acquisition, operation, asset disposal and associated processes – and incorporate these factors into the buying decision-making. Since ownership costs can vary between rival products at different stages of asset lives, the total ownership costs should be compared on a discounted cash flow basis.

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Involve people from all relevant functions in product development decision making.</li><li>• Encourage a whole-life product profitability mindset among multidisciplinary teams.</li><li>• Take the customer perspective – minimise the total cost of ownership, not just the acquisition cost.</li><li>• Consider the consumption and transformation of natural capital in creating products and managing product portfolios – not just the financial costs.</li><li>• Think about the societal impact of product development and management, and asset acquisition, operation and disposal.</li></ul>	<ul style="list-style-type: none"><li>• Avoid rushing development to be fast to market – 80% of costs are locked in at the design phase.</li><li>• Avoid treating natural capital as costless.</li></ul>

Tool: Environmental management accounting

Environmental management accounting (EMA) is the identification, collection, analysis and use of two types of information for internal decision making. The first is physical information on the use, flows and rates of energy, water and materials (including wastes). The second is monetary information on environment-related costs, earnings and savings.

What is it?

EMA addresses the management information needs of managers for corporate activities that affect the environment, as well as environment-related impacts on the corporation. Depending on the type of organisation, environmental impacts could include production effluent, recycling, water and power consumption, and carbon footprint.

Management information could include:

- Identifying and estimating the costs of environment-related activities
- Identifying and monitoring the use and cost of resources such as water, electricity and fuel, so costs can be reduced
- Making sure environmental considerations form part of capital investment decisions
- Assessing the likelihood and impact of environmental risks
- Including environment-related indicators as part of routine performance monitoring
- Benchmarking activities against environmental best practice.

Environmental costs can be categorised as follows:

- **Prevention costs**  
Costs associated with preventing adverse environmental impacts
- **Appraisal costs**  
Costs of assessing compliance with environmental policies
- **Internal failure costs**  
Costs of eliminating environmental impacts that have been created by the organisation

- **External failure costs**  
Costs incurred after environmental damage has been caused outside the organisation.

What benefits does the practice provide?

- **Improving sales or reducing sales erosion**  
Consumer awareness of products and services’ environmental impact is increasingly influencing their preferences and buying behaviours.
- **Reducing costs**  
Reducing wasteful consumption of input resources has a direct positive impact on reducing costs. Also, improvements to processes can bear down on costs.
- **Reducing the cost of failure**  
Investing in processes that reduce the likelihood and cost impact of failure, such as the need to process waste or clean up environmental impacts.
- **Improving the image of the organisation**  
This can enable it to attract better talent, reduce talent attrition and charge higher prices.

Implementing EMA? Questions to consider

Continuous improvement is a fundamental premise of EMA and relies heavily on across-the-board engagement of EMA initiatives and processes.

- Is there a demand for an environmental protection agency (EPA) at the top of the organisation? If the need to implement EMA isn’t driven from top management, buy-in from the rest of the organisation will be doubtful.
- Have areas for improvement been identified and does the scope for improvement make a strong business case?
- Have measures of success been agreed for all the areas for improvement?
- Have base case results been established from which improvements can be assessed?
- Have targets been set, initiatives identified and resourced, and responsible individuals identified?
- Are systems and processes configurable so as to deploy and maintain EMA?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Identify the environmental impact, opportunities for improvement and related financial impacts.</li><li>• Assign ownership for improvements to individuals.</li><li>• Agree measures and targets.</li><li>• Design systems and processes for recording, analysing and reporting on environmental performance.</li></ul>	<ul style="list-style-type: none"><li>• Do not undertake implementation without a sound business case endorsed by senior management.</li></ul>

Related and similar practices to consider	Further resources
<ul style="list-style-type: none"><li>• Total quality management (TQM)</li></ul>	<ul style="list-style-type: none"><li>• <a href="#">Redressing the balance: How management accountants drive sustainable corporate strategies</a></li><li>• <a href="#">Accounting for natural capital</a></li><li>• <a href="#">Sustainable business: Shared value in practice</a></li><li>• <a href="#">How to drive value from sustainability performance management and the CFO's role</a></li><li>• <a href="#">Ten key elements to sustainable business practices in SMEs</a></li></ul>

## 6. UNDERSTANDING COST DRIVERS: COST ACCOUNTING SYSTEMS AND PROCESSES

The right information is vital to driving and holding costs down while preserving or enhancing customer value on an ongoing basis. While some scenarios may be intuitive, taking decisions based on intuition alone is likely sometimes to result in some value being destroyed. Even when intuitive decisions are taken, it can be hard to assess their impact without appropriately comprehensive records, reporting systems and processes.

Not every organisation requires all the components of robust cost-accounting systems and processes, but all organisations should critically evaluate their systems and processes from time to time to ensure they can continue to support effective decision making. Management accountants, with their knowledge of the business model and future plans and strategies, should plan for the future decision support needs of decision makers.

### Master data: supporting data-driven decisions

Having the right data, both financial and non-financial, is a start. The business model describes how a business generates value for stakeholders. The model should link the capitals consumed with their transformation into capitals produced, all within in the context of the business’s competitive environments.

Since decisions will need to be made on the basis of the model, decision makers should have access to relevant data upon which to base their decisions. This might also include data about the organisation’s competitive markets. Businesses often rely on suppliers and partnerships to deliver parts of their value chain, therefore the data should support decisions across the business’s entire, extended value chain.

The management accountant should therefore work with the business to identify the objects in the business model that represent all the key value-adding components about which decisions will need to be made. These will include customers, competitors, suppliers and products as well as activities such as sales, account management, procurement, logistics, manufacturing and engineering.

### Modelling connections

Management accountants should also model how the objects in the business model are connected to ensure that the impact of decisions on related objects is understood. This will clarify the high-level cost structure. In addition, they should include all costs in the high-level cost structure model, from overheads down to the lowest level of costs (such as bills of material items).

Once the resulting “master data” have been agreed, their scope should also be agreed to ensure their consistent application across all units, systems and markets. In addition, master data should be labelled, defined and described to aid the understanding and consistency of application and interpretation across the business. Finally, ownership and relevant measures of success should be agreed for each master data object.

The Global Management Accounting Principles® Data Planning component is useful in ensuring that decision-makers are supported with decision-relevant information.

Data should be structured to incorporate all elements of the business model – input, activities, outputs and outcomes. Data should be:

- **Explicitly linked to organisational objectives** – focused on and accepted by users. As decision makers, users should be able to explain clearly why specific data is required to measure strategy execution. Information must then be stored securely and presented in a meaningful way.
- **Rigorously prepared** – data must be sourced, cleansed and assembled; data presentations should be agreed by users early enough to allow performance to be evaluated as planned initiatives are implemented.

- **Supportive of decision making** – comprising the measures defined and accepted by users at the time of planning to enable them to evaluate execution and make decisions.
- **Readily accessible and intelligible to users** – users should be able to access the data easily to evaluate performance and future options.
- **Secure** – sensitive information must not be leaked.
- **Comprehensive** – the lowest level of granularity must be easily accessible (by the user) from the highest levels of aggregation to support the different required levels of activity and review.
- **Consistently defined and labelled** – “one version of the truth”. Data labels should be in plain language, without jargon or obscure database field descriptors. Measures must be defined and described consistently across the organisation. A measure dictionary is a useful means for consistent interpretation across the company.
- **Resilient to change and adaptable** – the business model will inevitably be refined over time to track change in the external environment.
- **Efficient** – there may be occasions when the cost of sourcing, assembling, refining and presenting data for a measure outweighs the benefits. In such cases, decision makers should:
  - explicitly agree not to measure execution using data, or
  - break down the measure into lower-level measures that provide partial information, or
  - agree a proxy measure (one that is closely enough related to the ideal measure to derive a performance assessment).

## Systems and processes delivering data that is trusted

Once documentation of relevant master data objects is complete, systems and processes should be conformed (or designed and developed) to assemble the financial and non-financial data of each of the master data objects. All systems and processes in the record-to-report process should be geared around the master data objects, since it is this data that internal users have agreed will be needed to make decisions.

The management accountant should be available to follow up with the owners of data objects to provide support with decision making.

This might be through:

- Producing reports and providing insights based on the data
- Proactively engaging with decision makers to encourage thinking about how performance could be improved
- Reporting findings to senior management and estimating future performance.

The financial and non-financial values of master data objects will often be compiled from lower-order data, mostly arising from transactions that take place throughout the business model.

The size of modern, competitive companies means a high degree of automation is required to keep on top of transaction volumes. It would be easier to design systems to capture transactions at a reduced level of granularity, so reducing the burden on systems and processes. However, doing so may adversely affect the ability of management accountants to provide the insight that supports decision making and drives continuous improvement. Management accountants should:

- Maintain master data at the level of granularity required to provide comprehensive insight into product and customer costs
- Plan, design, implement and maintain systems and processes to support efficient and comprehensive data capture, analysis and presentation
- Drive standardisation and simplification of systems and processes across the value chain and business model
- Continuously improve the automation and integration of transacting across the value chain
- Conduct value chain analysis.

In many businesses, the challenges of designing processes that enable decision makers to trust and act on cost information are significant. They demand a high level of technical expertise to design, and require strong competencies to gain the trust and buy-in of leaders.

## Transaction information

Cost sources and drivers, including material, labour and overhead costs, underpin all master data objects. It's a fundamental component of data planning that there should be a direct link between the higher-level values (financial and non-financial) and the lowest transactional level of the master data objects.

This provides a comprehensive picture of all the factors contributing to the value of master data objects. It facilitates proactive and effective cost management, for example through “make-or-buy” and pricing decisions, configuration and quote management, supplier negotiations, capacity management, what-if scenario modelling and root cause analysis.

Moreover, it's vital that financial transactions are linked to the driving activities carried out and the materials involved in the value-generation process. Financial information alone, with no understanding of the driving activity or flow of capitals, will severely impede sound decision making.

## Cost-accounting processes

The cost-accounting processes that a business deploys maintain the integrity of its decision-support structures. They do this by codifying the allocation of cost transactions to the master data objects.

Processes must maintain the logic of the cost structures agreed by decision makers to engender their trust and ensure buy-in to results. Most importantly, the processes deployed should draw attention to opportunities to continuously improve cost-competitiveness; they should also be applicable to all the business's activities and its supply chain.

In addition, processes must be able to discretely record the cost impact of improvement initiatives; that way, they can report the return on investment that's delivered.



Tool: Activity-based costing (ABC)

What is it?

Practice

CIMA Official Terminology describes activity-based costing as an approach to the costing and monitoring of activities, which involves tracing resource consumption and costing final outputs. Resources are assigned to activities and activities to cost objects. The latter use cost drivers to attach activity costs to outputs.

ABC was first defined in the late 1980s by Kaplan and Bruns. It can be considered as the modern alternative to absorption costing, allowing managers to better understand product and customer net profitability. This provides the business with better information to make value-based and therefore more effective decisions.

ABC focuses attention on cost drivers, the activities that cause costs to increase. Traditional absorption costing tends to focus on volume-related drivers, such as labour hours, while activity-based costing also uses transaction-based drivers, such as number of orders received. In this way, long-term variable overheads, traditionally considered fixed costs, can be traced to products.

What benefits does ABC provide?

Activity-based costing provides a more accurate method of product/service costing, leading to more accurate pricing decisions. It increases understanding of overheads and cost drivers; and makes costly and non-value adding activities more visible, allowing managers to reduce or eliminate them. ABC enables effective challenge of operating costs to find better ways of allocating and eliminating overheads. It also enables improved product and customer profitability analysis. It supports performance management techniques such as continuous improvement and scorecards.

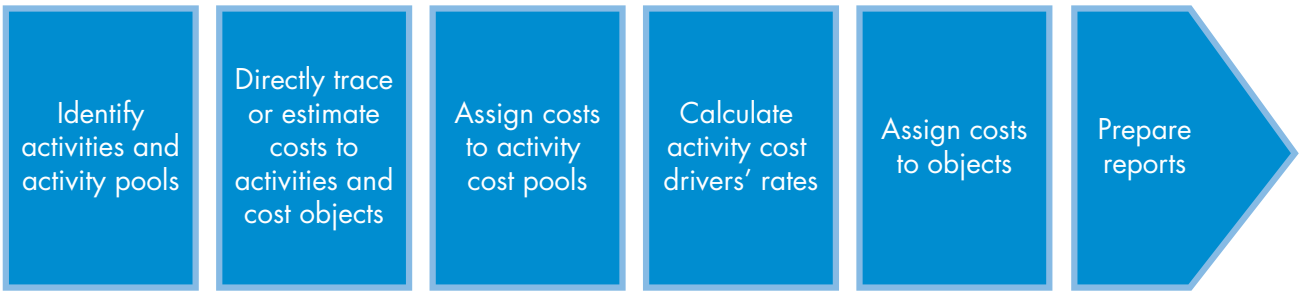
Questions to consider when implementing ABC

- Do we fully understand the resource implications of implementing, running and managing ABC?
- Do we have the resources to implement ABC?
- Will the costs outweigh the benefits?
- Can we easily identify all of our activities and costs?
- Do we have sufficient stakeholder buy-in? What will it take to achieve this?
- Will the additional information ABC provides result in action that will increase overall profitability?

Related and similar practices to consider

- Time-driven activity-based costing
- Activity-based budgeting (ABB)
- Activity-based management (ABM)

FIGURE 7: The activity-based costing process



Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Get buy-in from the rest of the business. ABC provides business managers, as well as the finance function, with the information needed to make value-based decisions.</li><li>• Use ABC for pricing and product prioritisation decisions.</li><li>• ABC should be implemented by management accountants as they are best placed to manage the process and to ensure benefits realisation.</li></ul>	<ul style="list-style-type: none"><li>• Do not get caught up in too much attention to detail and control. It can obscure the bigger picture or make the firm lose sight of strategic objectives in a quest for small savings.</li><li>• It is important not to fall into the trap of thinking ABC costs are relevant for all decisions. Not all costs will disappear if a product is discontinued, an example being building occupancy costs.</li></ul>

In practice: Activity-based costing

How Xu Ji achieved standardisation in working practices and processes (CIMA case study, 2011)

The Chinese electricity company Xu Ji used ABC to capture direct costs and variable overheads, which were lacking in the state-owned enterprise's (SOE) traditional costing systems. The ABC experience has successfully induced standardisation in their working practices and processes. Standardisation was not a common notion in Chinese culture or in place in many Chinese companies. ABC also acts as a catalyst to Xu Ji's IT developments – first accounting and office computerisation, then ERP implementation. Prior to the ABC introduction in 2001, Xu Ji operated a traditional Chinese state-enterprise accounting system. A large amount of manual bookkeeping work was involved. Accounting was driven predominantly by external financial

reporting purposes, and inaccuracy of product costs became inevitable. At this time, Xu Ji underwent a series of flotations following China's introduction of free market competition.

The inaccuracy of the traditional costing information seriously impeded Xu Ji's ability to compete on pricing. The two main tasks for the ABC system were to: trace direct labour costs directly to product and client contracts; and allocate manufacturing overheads on the basis of up-to-date direct labour hours to contracts.

Lessons learned

The common 'top-down' management style and organisational culture among SOEs worked well when instigating innovative ideas and inducing corporate-wide learning. Top management's commitment to trying out new management ideas and investing in new technology has been the unique feature.

## Operational cost management

All deployed cost-accounting processes should clearly maintain the integrity of the master data, bring focus to opportunities for improvement and engender decision makers' trust in results. Operational cost-management approaches will also be needed to add insight into where and how cost improvements can be implemented.

For example, a robust ABC process could make the costs of input material trustworthy and draw attention to deviations. Without a supporting cost-management approach for input materials, however (such as ABC inventory management) it may be difficult to understand how to drive costs down. This is where operational cost management comes in.

Producers broadly add value and incur costs across a value chain consisting of inbound logistics, production and outbound logistics. Each stage can be further broken down to include a host of activities and processes, some of which will be executed by the business and others by partners.

### Increasing cost competitiveness

While producers can increase cost competitiveness by improving their own internal processes, ultimately the ability to do business effectively depends on the efficient functioning of the entire supply chain. This encompasses all processes and information flows necessary for the transformation of goods from raw material to the point when the end product is finally consumed or discarded.

The management accountant should therefore consider how the business should interact with all supply chain participants to drive and hold down costs on a sustainable basis. For example, retailers commonly provide suppliers with access to their logistics and store systems so they can take accountability for product availability. Supplier, producer and retailer systems are increasingly being integrated to streamline transaction processing between organisations.

Producers are becoming increasingly specialised and focused on the parts of the value chain where they are best suited to add value. As a result, they are outsourcing a growing proportion of the value chain to suppliers and partners. Recently, producers have started extending supply chain management ever further into their customer base; for example, some businesses facilitate "mass customisation", where each customer is able to specify products to suit their individual needs.

## Managing supply chain costs

Whilst it's important to manage the cost-competitiveness of processes within the producer business, it's also becoming increasingly important to manage costs across the supply chain. This tends to be easier where input materials can be sourced from a choice of suppliers. But where competition in the market for a producer's input materials is weak, suppliers hold the balance of power. To manage input costs a producer has a number of options – these include:

- Engendering competition between suppliers
- Starting production of certain input materials themselves (going into competition with suppliers)
- Acquiring suppliers
- Developing strategic partnerships with suppliers to share the risks and the benefits the market offers

These are strategic options. Management accountants should support the strategic planning process by modelling the value added and costs incurred by all activities and processes across the supply chain that contribute to the master-data values across the business model. This provides insight into both tactical and strategic decision-making.

### Streamlining procurement

Efficient procurement processes contribute to margins and reduce working capital. Buyers should work with design and engineering teams to increase standardisation and simplification. Reducing the number of lines helps consolidate the supplier base, increase on-contract buying and leverage economies of scale.

Procurement will then be in a stronger position to negotiate favourable pricing and terms, contributing to margin performance and helping to reduce working capital. The more important the business is to the supplier, the more the supplier will be prepared to do to retain its custom.

Procurement may be able to increase the proportion of inventory on consignment or increase the number and value of lines on Just in Time (JIT) arrangements. Suppliers may also be prepared to invest in data exchange and systems and process interfacing or integration, enabling them to assume more responsibility for the efficient and effective supply of input capitals.

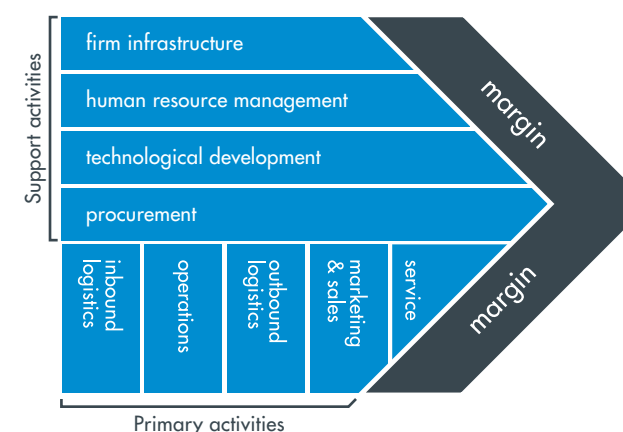
## Tool: Value Chain Analysis

### What is it?

#### Practice

According to CIMA Official Terminology, the value chain is a sequence of business activities by which, in the perspective of the end-user, value is added to (or costs incurred by) the products or services produced by an entity.

FIGURE 8: Example of Value Chain Analysis process



Value chain analysis is based on the principle that organisations exist to create value for their customers. In the analysis, the organisation's activities are divided into separate sets of activities that add value.

The organisation can more effectively evaluate its internal capabilities by identifying and examining each of these activities. Each value-adding activity is considered to be a potential source of competitive advantage.

The three steps for conducting a value chain analysis are:

#### 1. Separate the organisation's operations into primary and support activities

Primary activities are those that physically create a product, as well as market the product, deliver the product to the customer and provide after-sales support. Support activities are those that facilitate the primary activities, for example, HR.

#### 2. Allocate cost to each activity

Activity cost information provides managers with valuable insight into the internal capabilities of an organisation.

#### 3. Identify the activities critical to customer satisfaction and market success

There are three important considerations in evaluating the role of each activity in the value chain:

- Company mission, influencing the choice of activities undertaken
- Industry type, which influences the relative importance of activities. The value chain for a service industry, for example, will look very different from that of a manufacturing industry
- Value system, including the value chains of an organisation's upstream and downstream partners in providing products to end-customers.

### What benefits does Value Chain Analysis provide?

Value chain analysis can help organisations to gain better understanding of key capabilities and identify areas for improvement. It can help them to understand how competitors create value; and help organisations to decide whether to extend or outsource particular activities.

### Questions to consider when implementing Value Chain Analysis

- Can we identify our areas of activity easily?
- Can we identify the costs and benefits of each activity easily?
- How will we turn this analysis into competitive advantage?

Actions to take/Dos	Actions to avoid/Don'ts	Related and similar practices to consider
<ul style="list-style-type: none"><li>• Benchmark your activity processes against those of your competitors to identify how they create value.</li><li>• Focus on the links between each element of the value chain to better understand how value is created along the chain.</li></ul>	<ul style="list-style-type: none"><li>• Value chain analysis focuses on the internal activities of the business – but don't forget the external view. What do your customers think?</li></ul>	<ul style="list-style-type: none"><li>• Supply chain analysis</li><li>• Enterprise resource planning (ERP)</li><li>• <u>Activity-based costing (ABC)</u></li><li>• <u>Benchmarking</u></li></ul>

In practice:  
Value Chain Analysis

The Nestlé Cocoa Plan  
(Nestlé 2013)

As part of their Creating Shared Value initiative Nestlé carried out a value chain analysis to identify the areas of greatest potential for joint value optimisation with society. These activities (Nutrition, Water and Rural Development) are seen as core to business strategy and operations, and vital to the welfare of the people in the countries where they operate.

In October 2009 the £67m 'Cocoa Plan' was launched in the Côte d'Ivoire, with planned investment of £67m over a 10-year period. The initiative aims to help cocoa farmers to run profitable farms and improve quality of life for their families, while ensuring a sustainable and high quality supply of cocoa in the long term. A focus on training, buying from co-operatives, eliminating child labour and working with the Fairtrade programme creates value, both for Nestlé and the farmers who supply them.

Tool: ABC Inventory Management

What is it?

ABC analysis is an approach for classifying inventory items based on the items' consumption values. Consumption value is the total value of an item consumed over a specified time period, for example a year. The approach is based on the Pareto principle to help manage what matters and is applied in this context:

- A items are goods where annual consumption value is the highest. Applying the Pareto principle (also referred to as the 80/20 rule where 80 percent of the output is determined by 20 percent of the input), they comprise a relatively small number of items but have a relatively high consumption value. So it's logical that analysis and control of this class is relatively intense, since there is the greatest potential to reduce costs or losses.
- B items are interclass items. Their consumption values are lower than A items but higher than C items. A key point of having this interclass group is to watch items close to A item and C item classes that would alter their stock management policies if they drift closer to class A or class C. Stock management is itself a cost. So there needs to be a balance between controls to protect the asset class and the value at risk

of loss, or the cost of analysis and the potential value returned by reducing class costs. So, the scope of this class and the inventory management policies are determined by the estimated cost-benefit of class cost reduction, and loss control systems and processes.

- C items have the lowest consumption value. This class has a relatively high proportion of the total number of lines but with relatively low consumption values. Logically, it's not usually cost-effective to deploy tight inventory controls, as the value at risk of significant loss is relatively low and the cost of analysis would typically yield relatively low returns.

Since businesses are not all the same, the thresholds that define the upper and lower limits of each class are not definable. Nor will they necessarily be fixed over time or across all locations. A business may have different risk appetites between different locations. For example, a location in a high-crime area may have a higher proportion of A items or, where a facility is less secure, more items may be classed as A. The management accountant should carry out risk and stock management cost-benefit analyses by location to deliver the optimal overall cost-benefit balance and to set the ABC ranges.



To illustrate the concept, a business may set the following class limits:

Class	Items	Cumulative	Consumption value	Cumulative
• A	• 20%	• 20%	• 70%	• 70%
• B	• 30%	• 50%	• 20%	• 90%
• C	• 50%	• 100%	• 10%	• 100%

What benefits does the approach provide?

- Better control over high-value inventory improves availability, and reduces losses and costs.
- More efficient use of stock management resources. For example, during stock count more resources are dedicated to A class than B or C class holdings, or fewer counts are made of B or C class holdings – which saves time and money.
- Relatively low value of B or C class holdings can allow a business to hold bigger buffer stocks to reduce stock outs.
- Fewer stock outs resulting in improved production efficiency.
- Fewer stock outs and improved production efficiency resulting in more reliable cycle time and, therefore, improved customer satisfaction.

Implementing ABC inventory management? Questions to consider

- Is there reliable and accessible cost and demand information by item?
- Will your inventory management systems and processes facilitate efficient and effective implementation and operation of the ABC approach?
- Have the costs and benefits of implementing and operating ABC been quantified and is the business case compelling?
- Has the impact of the change to ABC on capability been assessed and planned for?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Check to ensure that systems and processes can be adapted to ABC before embarking on the change.</li><li>• Base the business case on reliable data.</li><li>• Be realistic about the resource and time demands required to implement ABC.</li><li>• Create a robust business case with a compelling cost-benefit analysis and SMART targets.</li><li>• Plan for measurement of and reporting on the cost-benefit.</li></ul>	<ul style="list-style-type: none"><li>• Whilst cost and demand are key factors, don't ignore other material aspects of stock management that ABC doesn't address.</li><li>• Avoid assumptions that could derail the project.</li></ul>

Related and similar practices to consider
<ul style="list-style-type: none"><li>• XYZ, FSN and VED analysis</li></ul>

Tool: XYZ Inventory Management

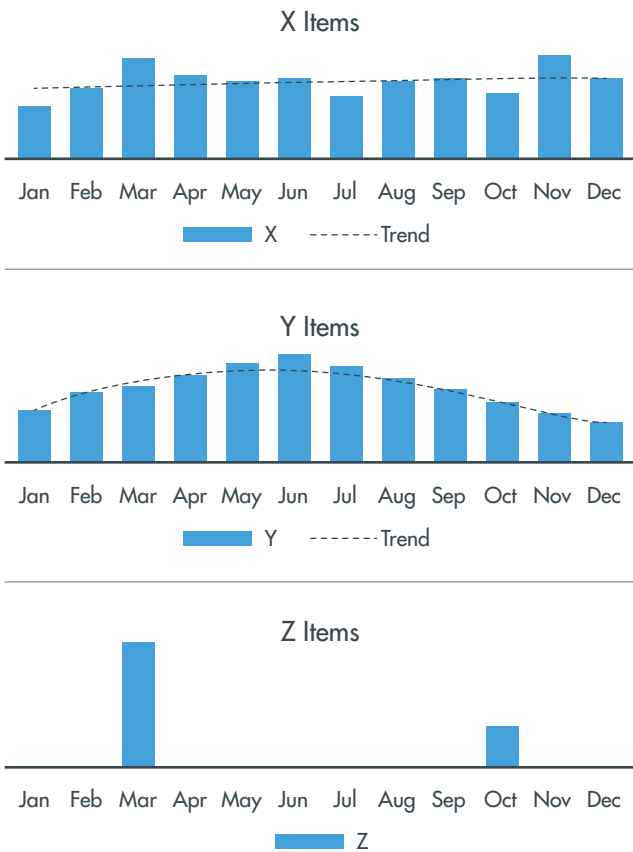
What is it?

The XYZ analysis is a way to classify inventory items according to variability of their demand.

- **X** – Very little variation: X items are characterised by steady turnover over time. Future demand can be reliably forecast.
- **Y** – Some variation: Although demand for Y items is not steady, variability in demand can be predicted to an extent. This is usually because demand fluctuations are caused by known factors, such as seasonality, product lifecycles, competitor action or economic factors. It's more difficult to forecast demand accurately.
- **Z** – The most variation: Demand for Z items can fluctuate strongly or occur sporadically. There is no trend or predictable causal factors, making reliable demand forecasting impossible.

The following charts illustrate the characteristics of the three classes.

FIGURE 8: XYZ Inventory management class characteristics



The classes have significant implications for stock management. Due to low demand volatility, A class inventory management can usually be fully automated. And due to the predictability of demand, a low buffer inventory can be held either by the organisation itself or, in a Just In Time (JIT) arrangement, by the supplier – reducing holding costs.

For B class items, buffer stocks may need to be higher, or more manual intervention of an otherwise automated stock management process may be required. JIT supplier arrangements may be more difficult to negotiate for B class inventory as the suppliers may not have the expertise for predicting demand that the organisation itself would have.

Since it is virtually impossible to predict demand for C class inventory items, the policy may be to replenish-to-order.

The variability of demand for an inventory item can be expressed as a variation coefficient. The steps for classifying items by degree of demand volatility are:

1. Determine the items to be included in the analysis
2. Calculate the variation coefficient for each item
3. Sort the items by increasing variation coefficient and accumulate
4. Agree and set the boundaries between cumulative variation coefficients.

For XYZ analysis to work, it's vital to understand and apply an appropriate time span for assessing demand volatility. For example, if demand for items is seasonal, computing volatility over a month may not be appropriate. Alternatively, where product lifecycles are short, computing the volatility of items with sporadic demand could mean stocked items become obsolete.

The cost of items could also influence inventory management policy. For example, some A class items could be high cost and the organisation may not wish to rely on full automated replenishment. At the other extreme, some C class items may be very low cost. So it may be more cost effective (and improve customer service) to manually set buffers and automate replenishment to maintain the buffers,

rather than to replenish-to-order. Combining the ABC with XYZ approaches is a useful way of thinking about inventory management policy.

What benefits does the approach provide?

- Improves accuracy of forecasting
- Reduces stock-outs, which:
  - Improves production stability and efficiency
  - Improves customer satisfaction
- Increases stock churn
- Reduces stock obsolescence
- Clarifies service levels for items with volatile demand.

Implementing XYZ inventory management? Questions to consider

- Is there reliable and accessible cost and demand information by item?
- Will your inventory management systems and processes facilitate efficient and effective implementation and operation of the XYZ approach?
- Have the costs and benefits of implementing and operating XYZ been quantified and is the business case compelling?
- Has the impact of the change to XYZ on capability been assessed and planned for?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Define the scope – which items will and won't be included?</li><li>• Define the relevant time period over which to calculate demand volatility.</li></ul>	<ul style="list-style-type: none"><li>• Don't try to classify new items unless demand volatility can be predicted with certainty.</li></ul>

Related and similar practices to consider
<ul style="list-style-type: none"><li>• XYZ, FSN and VED analysis</li><li>• Perpetual inventory control</li><li>• Just in Time (JIT)</li></ul>

Tool: ABC/XYZ inventory management

What is it?

ABC analysis helps set inventory management systems and processes based on the consumption value of stocked items. However, it takes no account of consumption volatility. So two items with similarly high consumption values but very different patterns of demand may be subject to the same inventory management policies and process, which may not be appropriate. For example:

- Item 1001 costs \$10,000 and demand is reliable at two per month throughout the year
- Item 1002 costs \$1,000 and demand is sporadic but typically 240 are drawn off each year.

Using ABC analysis, their consumption values would be identical (\$240,000) and may be classed as A items. It may be that item 1002 is typically drawn off twice per year, but it is impossible to predict when during the year they will be drawn down.

The policies for A items in the company may be as follows:

Policy	Implication item 1001	Implication item 1002
Automatically order annual demand / 12 each month	Low or negligible buffer	Stock levels will build up during periods of no demand, tying up working capital
	Take off equals reorder quantity	Item condition may deteriorate while languishing in inventory
	Facility costs low (low buffer)	High facility costs (buffer level varies)
Perpetual stock count	Cost-benefit makes perpetual count worthwhile	Perpetual counting of stock that's not needed is wasteful

On the other hand, applying XYZ analysis alone ignores consumption value, which in this example is identical. Item 1001 may be classified as an X item and item 1002 may be classified as a Z item. Policy may be that X item replenishment is fully automated and Z items are manually replenished only on customer order.

Policy	Implication item 1001	Implication item 1002
Perpetual stock count	The cost-benefit makes perpetual count worthwhile	Policy is pointless since there won't be any stock for most of the year
Goods receiving	Receipted to inventory	Receipted to production or logistics
Facilities/security	Located in inventory	Transient. So the facilities cost implication is negligible
	Security limits losses	Value not considered. So opportunity for losses are greater

By combining ABC with XYZ approaches, stock management policies, systems and procedures can be better tailored by taking into account both demand volatility and consumption value.

	A	B	C
X	AX Class	BX Class	CX Class
	High consumption value	Medium consumption value	Low consumption value
	Even demand	Even demand	Even demand
Y	AY Class	BY Class	CY Class
	High consumption value	Medium consumption value	Low consumption value
	Predictably variable demand	Predictably variable demand	Predictably variable demand
Z	AZ Class	BZ Class	CZ Class
	High consumption value	Medium consumption value	Low consumption value
	Sporadic, variable demand	Sporadic, variable demand	Sporadic, variable demand
	Forecasting unreliable or impossible	Forecasting unreliable or impossible	Forecasting unreliable or impossible

Accurate forecasts are of great potential benefit to a business. At one extreme, a company could “play it safe” with its forecast demand by maintaining high inventory buffer levels to eliminate stock outs. The costs avoided, or benefits reaped are:

- Eliminating the need for emergency replenishment. Emergency stock replenishment is usually costly due to, for example, not buying the economic order quantity, off-contract buying, rush penalties and additional transportation costs.
- Avoiding production disruption, which leads to lower capacity use, increased standby time and disruption to shifts – driving overtime costs up.
- Avoiding loss of customer loyalty due to missed delivery commitments or longer lead times.
- Avoiding reputation impairment, leading to erosion of market share.

On the other hand, holding costs will go up as:

- More storage space will be needed to carry the higher buffer levels
- More people will be required to manage the stock
- More equipment will be needed to maintain, move, count and secure the stock
- Insurance costs could be higher as the value at risk of loss is higher
- There is a cost of capital tied up in unproductive working capital.

So, the management accountant needs to balance the costs associated with stock outs with the costs of holding higher levels of stock. The sales manager will push for plentiful stocks to maximise customer satisfaction and loyalty, and to beat competitors on lead times. The production manager will want to minimise production disruption caused by stock outs. The CFO will want to reduce working capital and associated holding costs. There’s also the cost of replenishment to consider – the more frequently replenishment occurs, the higher the costs of replenishment. Replenishment costs include:

- The procurement function: the more orders that need to be placed, the more people are needed to do the ordering.
- The goods receiving function: people, facilities and equipment are required to receive deliveries of goods. The higher the number of orders, the more frequent goods deliveries will be – requiring more people, facilities and equipment.
- Transportation: transportation costs for frequent small deliveries usually exceed those for larger, less frequent deliveries.

In having an appreciation of all these factors, the management accountant can then work with key stakeholders (CFO, production management, inventory management, logistics, procurement) to agree inventory management policies and to develop systems and processes to implement them. Policies may include, for example:

- Degree of automation of replenishment processes
- Buffer stocks
- Inventory control.

To illustrate by way of example:

	A	B	C
X	AX Class	BX Class	CX Class
	Automated replenishment	Automated replenishment	Automated replenishment
	Low buffer – JIT or consignment transfers the responsibility for security of supply	Low buffer – safety first	Low buffer – safety first
Y	AY Class	BY Class	CY Class
	Perpetual inventory	Periodic count; medium security	Free stock or periodic estimation by inspection or weighing; low security
	Automated with manual intervention	Automated with manual intervention	Automated replenishment
Z	AZ Class	BZ Class	CZ Class
	Low buffer – accept stock out risk	Manually adjust buffer for seasonality	High buffer – safety first
	Perpetual inventory	Periodic count; medium security	Free stock or periodic estimation by inspection or weighing; low security
Z	AZ Class	BZ Class	CZ Class
	Buy to order	Buy to order	Automated replenishment
	No buffer – customer understands lead times	No buffer – customer understands lead times	High buffer – safety first
	Not stocked	Not stocked	Free stock or periodic estimation by inspection or weighing; low security



What benefits does the approach provide?

- Provides a scientific and transparent framework for developing and refining stock management policies
- Optimises tensions between the costs, risks and benefits of stock holding
- Stakeholder focused – the needs of all key stakeholders can be factored into policy.

Implementing ABC/XYZ inventory management? Questions to consider

- Is there reliable and accessible cost and demand information by item?
- Will your inventory management systems and processes facilitate efficient and effective implementation and operation of the ABC/XYZ approach?
- Have the costs and benefits of implementing and operating ABC/XYZ been quantified and is the business case compelling?
- Has the impact of the change to ABC/XYZ on capability been assessed and planned for?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Define the scope – which items will and won't be included?</li><li>• Define the relevant time period in which to calculate demand volatility.</li><li>• Check to ensure that systems and processes can be adapted to ABC/XYZ before embarking on the change.</li><li>• Base the business case on data that's reliable.</li><li>• Be realistic about the resource and time demands required for implementation.</li><li>• Create a robust business case with a compelling cost-benefit analysis and SMART targets.</li><li>• Plan for measuring and reporting on the cost-benefit.</li></ul>	<ul style="list-style-type: none"><li>• Don't try to classify new items unless demand volatility can be accurately predicted.</li></ul>

Related and similar practices to consider
<ul style="list-style-type: none"><li>• XYZ, FSN and VED analysis</li><li>• Perpetual inventory control</li><li>• Just-in-time (JIT)</li><li>• Economic order quantity (EOQ)</li></ul>

Production, which involves making or acquiring goods and services that the business sells, accretes costs of the directly attributable materials and processes needed in the production process. As well as these direct costs, the rest of the business's costs (indirect costs like depreciation and administration) need to be recovered in product and service prices for it to be profitable.

Production is an essential, if not the most essential, part of the value generation processes. The nature of competitive markets is that businesses try to increase prices, but competition compels them to be competitive on prices. This is relevant because a business's suppliers will tend to exert upward pressure on prices but the producer will be under pressure to compete on the prices of its products. However, the producer will strive to charge their customers the highest possible prices to increase profitability, perhaps by generating unique value for their customers. So the management accountant must collaborate across the business's supply chain (from suppliers, through production, to customers) to generate maximum value. Fundamentally, this means driving and holding costs down across the supply chain and selecting initiatives that contribute best to maximising price.

Tool: Lean Production

What is it?

Lean production is a production methodology focused on eliminating waste, where waste is defined as anything that does not add value for the customer. Although Lean's heritage is manufacturing, it is applicable to all types of organisation and all an organisation's processes. While the origins of Lean principles are not clear, Toyota has been instrumental in the development and application of

Lean, and many tools are derived from the Toyota Production System (TPS). The tools are rooted in "The Toyota Way," which is focused on improving the flow or smoothness of production by eliminating unevenness in the production process. Lean methodology is not concerned with workarounds but with getting to grips with the root causes of waste. Lean defines seven types of waste, called the "Seven Deadly Wastes." These are:

Waste	What is it?	Lean tool
Overproduction	Production ahead of demand.	<b>Kanban:</b> "Pull" system of logistical control
		<b>SMED:</b> Single Minute Exchange of Die. Quicker setup enables shorter runs
		<b>Takt:</b> Matching the rate of production with the rate of demand
Defects	The cost of defect production and the effort required to monitor for defects.	<b>Poka Yoke:</b> Mistake-proofing. Any intervention that prevents mistakes happening in the first place
		<b>Jidoka:</b> Automation with a human touch, or "autonomation". Line stops when a defect is detected
		<b>Kaizen:</b> An opportunity to improve something. "Having no problem is the biggest problem of all." – Taiichi Ohno
Waiting	Production interruptions or time spent waiting for the next step of the production process.	<b>Heijunka:</b> Production levelling Standardised work
Motion	When people must move more than necessary for their part of the production process. For example, moving pieces between a remote bin and machine.	<b>5S:</b> Optimise the ergonomics of the place of work ("gemba")
Inventory	Stocks of finished goods or work in progress not being processed.	Just-in-time (JIT) logistics
		<b>Heijunka:</b> Production levelling
Transport	Excessive movement of materials, work in progress or finished goods.	Value stream mapping
		Ergonomic design of production line
Over processing	Processing to compensate for poor design or production processes.	<b>Kaizen:</b> Customer-driven improvements

What benefits does the process provide?

- Improved on-time delivery
- Improved quality
- Improved customer service and satisfaction
- Simpler production process and, therefore, simpler production management
- Reduced defects
- Reduced resource consumption
- Increased efficiency.

Implementing lean production?

Questions to consider

- Is the current production system fully documented?
- Has the proposed production system been documented?
- Have senior leaders accepted the business case for change?
- Is the business case based on the wastes identified in the current process?
- Does the business case ascertain the Lean tools appropriate for the identified wastes?
- Have senior leaders and key implementation personnel been trained in applicable Lean techniques?
- Has implementation been fully planned and resources approved?
- Have the measures of success and targets been agreed?
- Are incentives in place to encourage buy-in to kaizen?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Be realistic about what's achievable.</li><li>• Lean depends on people – so educate all personnel.</li><li>• Empower people in the work place – they know best.</li><li>• Embrace kaizen principles and philosophies. No innovation is too small.</li></ul>	<ul style="list-style-type: none"><li>• Don't try to be too ambitious.</li></ul>

Related and similar practices to consider	Further resources
<ul style="list-style-type: none"><li>• 5S</li><li>• 7 wastes (muda)</li><li>• Just-in-time (JIT)</li><li>• Mistake proofing (Poka yoke)</li><li>• Single Minute Exchange of Die (SMED)</li></ul>	<ul style="list-style-type: none"><li>• <a href="#">Lean Management Techniques</a></li></ul>

Management and budgetary control

Management and budgetary control is the system of proactively controlling performance against predetermined targets at all levels of the organisation, which may include projects, people, activities, processes, sales volumes and revenues, resource quantities, operating costs and expenses, assets, liabilities and cash flows, as well as other non-financial measures.

Having great cost-accounting systems and processes in place provides a solid foundation for driving and holding costs down. As part of this, systems of management and budgetary control help organisations evaluate performance against targets and take improvement actions. They provide a means for accountability and control to be decentralised, so that performance can be proactively managed by those managers closest to the execution of planned activity.

Whether a business uses budgetary control, beyond budgeting techniques or some other system, the fundamental objective is always the same: to manage performance against targets agreed.

Tool: Activity-Based Budgeting (ABB)

What is it?

Practice

CIMA Official Terminology describes activity-based budgeting (ABB) as a method of budgeting based on an activity framework, using cost driver data in the budget setting and variance feedback processes.

The most basic form of ABB uses cost drivers (identified through activity-based costing, ABC) to help derive budgets. As its name suggests, ABB focuses on activities rather than functions.

In simple terms, ABB follows three stages:

1. Identify activities and their cost drivers
2. Forecast the number of units of cost driver for the required activity level
3. Calculate the cost driver rate (cost per unit of activity).

The following simple example uses a sales office scenario, where the cost driver is number of sales orders.

- Calculate the forecast cost of processing a single sales order using ABC, adjusting for inflation if necessary (\$5)
- Forecast the number of sales orders for the budget period (40,000)
- Finally, calculate the total sales office budget (40,000 x \$5 = \$200,000)

This example assumes that costs incurred by the sales office are mostly variable – in practice, they would also include elements of fixed and semi-fixed costs, such as accommodation, heating and salaries. Further analysis would be required to determine how much staff time is spent processing sales orders.

What benefits does ABB provide?

Like activity-based costing, activity-based budgeting draws attention to overhead activities and their associated costs. It emphasises that activity costs may be controllable if activity volume is controlled. Where traditional budgeting tends to focus on input costs, ABB takes an outputs-based approach, recognising that activities drive costs. ABB views the business as

a collection of activities, a perspective that links well with organisational strategy.

Questions to consider when implementing ABB

- Like ABC, ABB requires significant time to implement. Do we have the required support and time?
- Do we have the required resources and software?
- Like ABC, ABB is expensive to implement. Will the costs of implementation outweigh the benefits?
- Can we easily identify all of our activities and costs?
- Can we get buy-in from operational managers?

Actions to take/Dos	Actions to avoid/Don'ts
<ul style="list-style-type: none"><li>• Consider using ABB if overhead costs are a significant proportion of total operating costs.</li><li>• ABB is particularly useful in a Total Quality Management (TQM) environment, to help identify the cost-effectiveness of activities.</li></ul>	<ul style="list-style-type: none"><li>• Don't try and implement ABB unless you are using activity-based costing (ABC) as it is only suited to organisations that are also using ABC.</li><li>• Do not ignore the need to engage with operational managers, or they may struggle with the concept of ABB, making the process more time-consuming.</li></ul>

In practice:  
Activity-based budgeting

Calculating the purchases budget at GS

GS has budgeted sales for the next two years of 24,000 units a year spread evenly throughout both years. The estimated opening inventory of finished goods at the start of the next year is 500 units but GS now wants to maintain inventory of finished goods equivalent to one month's sales.

Each unit uses 2kg of material. The estimated opening raw material inventory at the start of the next year is 300 kg but GS now wants to hold sufficient raw material inventory at the end of each month to cover the following month's production.

The change in the policy for inventory holding for both raw materials and finished goods will take effect in the first month of next year and will apply for the next two years. The budgeted material cost is \$12 per kg.

GS uses the following approach to calculate the material purchases budget:

Budgeted sales	24,000 units	
Plus closing inventory	2,000 units	
Less opening inventory	-500 units	
Budgeted production	25,500 units	
Raw material required	25,500 units x 2kg	= 51,000kg
Plus closing inventory	2,000 units x 2kg	= 4,000kg
Less opening inventory		(300)kg
Raw material purchases		= 54,700kg
Raw material purchases budget	54,700 kg x \$12	= \$656,400

Related and similar practices to consider

- Activity-based costing (ABC)
- Activity-based management (ABM)

Tool: Beyond budgeting

What is it?

Beyond budgeting is the principle whereby companies need to move beyond budgeting because of the inherent flaws in budgeting, especially when used to set contracts. It proposes that a range of techniques, such as rolling forecasts and market-related targets, can take the place of traditional budgeting.

What benefits does the framework provide?

- It's a faster and more adaptive process than traditional budgeting
- It's a decentralised process, unlike traditional budgeting where leaders plan and control organisations centrally.

Implementing beyond budgeting? Questions to consider

- Is there a clear case for change, with the benefits fully explained?
- Have managers carefully considered the degree of decentralisation possible within their organisation?
- Is there a governance framework with clear priorities and boundaries?
- Is there a high-performance ethos based on visible and relative success at all levels?
- Do front line teams have the freedom to take decisions within agreed parameters?
- Is there trust and openness at all levels of the organisation?

Actions to take/Dos

- Define the case for change and provide an outline vision
- Be prepared to convince the Board
- Get started
- Design and implement new processes
- Train and educate
- Rethink the role of finance
- Change behaviour – new processes, not management orders
- Evaluate the benefits
- Consolidate the gains



---

© 2016, Chartered Institute of Management Accountants. All rights reserved.

This material may be shared and reproduced for non-commercial purposes in online format only, subject to provision of proper attribution to the copyright owner listed above. For information about obtaining permission to use this material in any other manner, please email **copyright@cgma.org**

All other rights are hereby expressly reserved. The information provided in this publication is general and may not apply in a specific situation. Legal advice should always be sought before taking any legal action based on the information provided. Although the information provided is believed to be correct as of the publication date, be advised that this is a developing area. The AICPA or CIMA cannot accept responsibility for the consequences of its use for other purposes or other contexts.

The information and any opinions expressed in this material do not represent official pronouncements of or on behalf of AICPA, CIMA, the CGMA® designation or the Association of International Certified Professional Accountants. This material is offered with the understanding that it does not constitute legal, accounting, or other professional services or advice. If legal advice or other expert assistance is required, the services of a competent professional should be sought. The information contained herein is provided to assist the reader in developing a general understanding of the topics discussed but no attempt has been made to cover the subjects or issues exhaustively. While every attempt to verify the timeliness and accuracy of the information herein as of the date of issuance has been made, no guarantee is or can be given regarding the applicability of the information found within to any given set of facts and circumstances.

#### American Institute of CPAs

1211 Avenue of the Americas  
New York, NY 10036-8775  
T. +1 212 596 6200  
F. +1 212 596 6213

#### Chartered Institute of Management Accountants

The Helicon  
One South Place  
London EC2M 2RB  
United Kingdom  
T. +44 (0)20 7663 5441  
F. +44 (0)20 7663 5442

---

#### CIMA REGIONAL OFFICES:

##### Africa

4th floor, 54 Melrose Boulevard  
Melrose Arch  
Melrose North  
Johannesburg, South Africa  
T: +27 (0)11 788 8723  
F: +27 (0)11 788 8724  
johannesburg@cimaglobal.com

##### Europe

The Helicon  
One South Place  
London EC2M 2RB  
United Kingdom  
T: +44 (0)20 8849 2251  
F: +44 (0)20 8849 2250  
cima.contact@cimaglobal.com

##### Middle East, South Asia and North Africa

356 Elvitigala Mawatha  
Colombo 5  
Sri Lanka  
T: +94 (0)11 250 3880  
F: +94 (0)11 250 3881  
colombo@cimaglobal.com

##### North Asia

1508A, 15th floor, AZIA Center  
1233 Lujiazui Ring Road  
Pudong Shanghai, 200120  
China  
T: +86 (0)21 6160 1558  
F: +86 (0)21 6160 1568  
infochina@cimaglobal.com

##### South East Asia and Australasia

Level 1, Lot 1.05  
KPMG Tower, 8 First Avenue  
Bandar Utama  
47800 Petaling Jaya  
Selangor Darul Ehsan  
Malaysia  
T: +60 (0) 3 77 230 230/232  
F: +60 (0) 3 77 230 231  
seasia@cimaglobal.com

#### CIMA also has offices in the following locations:

Australia, Bangladesh, Botswana,  
China, Ghana, Hong Kong SAR, India,  
Ireland, Malaysia, Nigeria, Pakistan,  
Poland, Russia, Singapore, South  
Africa, Sri Lanka, UAE, UK, Zambia  
and Zimbabwe.

[cgma.org](http://cgma.org)

February 2016

© The Chartered Institute of Management Accountants 2016