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7.8 Target costing

Active reading. As you read through this section on target costing, note how the target cost is arrived at and note the customer focus. Note also how it is an inclusive process of everyone in the organization, it is not just the design, but all functions that can contribute to achieving the target cost. You will notice the mention of other accounting techniques that supplement the target cost analysis, and when reading the benefits and drawbacks, think of the practical implications of adopting target costing as a regular practice within the organization.



Video link [Target costing](https://www.youtube.com/watch?v=HStm4f0sqpc)

[\[https://www.youtube.com/watch?v=HStm4f0sqpc\]](https://www.youtube.com/watch?v=HStm4f0sqpc)

Target costing is said to have been developed by Toyota in the 1960s. The practice soon spread to the whole of the Japanese automotive industry (Tanaka, 1993), and by the 1990s had been adopted by 80% of Japanese manufacturing organizations (Karoli, 1997). The adoption rate in other countries was much slower. There is evidence that Ford was using the principles of target costing in the early 1990s (Shank and Fisher, 1999) and it has since become more widespread in other organizations and countries (see, for example, Dekker and Smidt, 2003; Helms et al., 2005; Yazdifar and Askarany, 2012).

Target costing is often viewed as a technique for use in manufacturing, rather than service organizations; however, Yazdifar and Askarany (2012) note that service organizations are also finding the technique useful. Target costing uses a market-based approach to pricing to derive an allowable cost for new products, as opposed to calculating the selling price by adding a mark-up on cost. This makes cost an input to the product development process, rather than an output (Cooper and Slagmulder, 1999a).

Hiramoto (1991) suggests that the market-based approach to pricing is highly relevant in a competitive market, and that management accountants can help to motivate a market-driven behavior by working as part of the team to derive an allowable market cost, and to ensure the continued profitability of the organization. Due to its market-based approach, recognition of the

customer perspective, and forward-looking orientation, it is often included among the techniques described as strategic management accounting.

7.8.1 What is target costing?

The target cost is derived by deducting the profit margin from the market selling price, that is, $\text{target cost} = \text{selling price} - \text{expected profit margin}$. Kato (1993: 33) states that “target costing is not a costing system as such; rather it is an activity which is aimed at reducing the life cycle costs of new products while ensuring quality, reliability, and other customer requirements, by examining all ideas for cost reduction at the product planning, research, and development process.”

As the definition suggests, it is the early stages of the new product development process where the technique is said to be the most useful. It should not, however, preclude the principal elements of the technique from being used to reduce costs of existing products, or of the downstream activities of delivery and customer service. Ansari and Bell (1997) place the focus of target costing as being a means of managing the organization’s future profits. It provides a system for integrating strategic variables to plan how to satisfy customers, capture market share, plan, and control costs, and hence, generate future profits.

The main reason why the technique is focused on the early stages of the new product development process is that, in most cases, 80% of the costs are determined at the design stage. It is easier, and cheaper, to manage the costs during the early stages of product development (Ulrich and Eppinger, 2000) than to make changes after the product is introduced, which can often be quite costly (Cokins, 2002).

7.8.2 Where is target costing appropriate?

Target costing is becoming more relevant today due to the shorter product life cycles and increasing product diversity required to satisfy increasingly sophisticated consumer markets (Gagne and Discenza, 1995). Dekker and Smidt (2003) identified in their study of Dutch firms that it was used more by assembling firms, and those organizations that operated within a competitive and unpredictable environment. Hibbets et al. (2003) suggested that it is more likely to be used by firms following a differentiation strategy, where functionality may be more significant, and there is intense rivalry among organizations. The argument here is that an organization following a cost leadership strategy would be trying to reduce costs continuously. Therefore, as the product is only designed to fulfill its primary purpose, rather than being loaded with functionality, the organization is targeting those customers that just require the basic product. It could equally be argued, however, that even the cost leader would find techniques such as value engineering and functional cost analysis useful in helping to reduce costs, making the principles of target costing appropriate for all organizations.

Davila and Wouters (2004) suggested that target costing is less useful where technology, time-to-market, or very demanding customers are important to a product's success. However, there is evidence that suggests that using target costing can reduce time-to-market (Afonso et al., 2008) if the concept becomes part of the culture of the organization, and customer demands can be met more profitably via target costing methods, no matter how demanding the customer.

The principles of target costing should be applied to all product developments and increases in functionality as it moves through the product life cycle. Adding new features should be subject to the same process as the initial product. For example, the mobile phone was initially developed to make phone calls, and later to send text messages. As the technology developed and the Smartphone (a new product development) became the norm, additional features were added, such that Smartphones are now marketed and purchased because of the quality of the camera and ease of use, and the functionality of the phone call is now incidental to the product. The look, feel, and ease of use have become key value drivers for the customer. The mobile phone also serves to illustrate the complexity of the markets and interlinkages between product and service elements, as digital coverage, and signal strength provided by competing networks also impacts on the mobile phone market. At each stage of the product development, there is potentially a ceiling where customers view the products as too expensive; therefore, the market price sets the ceiling and, by deducting an expected margin, sets the target cost for the enhancement.

The example in Figure 7.4 illustrates how a target cost involves all functions and not just the manufacturing element.

Table 7.4 Analysis of cost before and after applying target costing

Projected lifetime sales volume	500,000 units
Target selling price	\$750
Target profit margin of 30%	\$225
Target cost	\$525
Current project cost	\$650
Saving required	\$125

Table 7.4 continued

Cost breakdown	Current estimate	After review	Action to reduce cost
	\$	\$	
Manufacturing cost			
Direct materials (components)	350	330	Negotiation with suppliers
Direct labor	100	60	Use of workstation assembly in place of sequential line assembly
Direct machining costs	25	20	Redesign of functionality reduced requirement for machine tool work
Ordering and goods handling costs	15	10	Review of inventory and supply chain management
Quality control	30	15	Improved assembly means can move to statistical sampling
Rework costs	50	10	Assembly process and additional training
Pre-production costs - design and development	15	10	Use of computer-aided design speeded up re-design of product features
	585	455	
Marketing and sales costs	30	25	Review of marketing campaign and marketing communications strategy
Distribution costs	10	8	Review of distribution channels
After-sales service and warranty costs	10	5	Improved quality process should reduce warranty costs
Recycling costs	15	12	Redesigned functionality makes recycling easier to achieve
Total cost	650	505	

7.8.3 The process of target costing

There is no one definitive series of steps to undertake the activity of target costing. There are elements where an iterative approach is appropriate, and aspects can be conducted simultaneously, rather than sequentially. The following steps are indicative of the process.

- (1) Re-orient culture and attitudes towards a market-based approach
- (2) Establish a market-driven target price
- (3) Determine the required profit
- (4) Determine the target cost
- (5) Establish a multidisciplinary team to undertake the exercise

- (6) Establish an initial cost estimate via a product cost model
- (7) First look at ideas to reduce cost – generate ideas and evaluate alternatives
- (8) Use tools to reduce costs such as value engineering and functional cost analysis
- (9) Reduce indirect costs
- (10) Undertake overall net present value analysis over the estimated life of the product or reasonable period
- (11) Ensure a cost management system in place to monitor ongoing costs and take corrective action where necessary.
- (12) Feedback for organizational learning.

1. Re-orient culture and attitudes towards a market-based approach

Target costing requires a market orientation, and this may need a change in the organizational mindset to enable the customer focus to take precedence. Implementing target costing may well entail a shift in culture (Crow, 1999) as employees need to be empowered and motivated to find innovative solutions to reduce costs without losing the required functionality of the product or compromising on quality. Monden (1995) suggests that an objective is not just to reduce costs of a new product, but to motivate all employees to seek ways of managing costs continually, or, as Ansari and Bell (1997) noted, a way of managing future profits. Kato (1993: 43) notes that a characteristic of Japanese management processes is that it “combines a human intelligence for effective thinking and technological innovation to make daily operations efficient.”

2. Establish a market-driven target price

Ascertaining the market price of the product is the responsibility of the marketing department. Target costing is about maximizing profit over the product life cycle (Cokins, 2002). Therefore, factors that need to be considered include the impact on the price of the product concept itself; the characteristics of the target market; the anticipated product life cycle; expected sales volumes, as this will impact on production costs; sales price adjustments as the life cycle progresses; competitor pricing, if similar products already exist; and any dealer incentives. Pricing strategy and objectives also need to be considered throughout the product life cycle, such as, whether an initial profit-maximizing objective is to be employed to skim profit off the market before competitor offerings appear, or a volume maximizing objective, which will lead to a lower price being employed.

If the product is at the forefront of technological design, other theories, such as the diffusion of innovation, may come into play. For example, the electric vehicle, which is in the early stages of the product life cycle, is probably being purchased by the innovators and moving towards early adopters. The theory of diffusion of innovation suggests that the population adopts new technology in a specified pattern – innovators are the first to purchase the product (who represent 2.5% of the market), early adopters (13.5%), next, the early majority purchase (34%), followed by the late majority (34%), and finally laggards (16%).

The volume aspect of the life cycle is significant for manufacturing costs, as these may become lower as the product progresses through the life cycle, due to learning curve effects, or economies of scale, as the volume increases. This may mean that the target cost is only achieved at a given volume, and early sales incur losses, requiring continued additional investments before the product eventually breaks even and begins to enter the profitable stage of the life cycle. There is an obvious risk involved here in that it may take longer than anticipated to reach the required volumes, or that they may never be reached. Plus, if the product grows successfully, competitors will undoubtedly enter the market. Therefore, if the whole of the life cycle is to be considered, it requires a forecast to be made of the pattern of future demand, and the likely response of competitors. Data from existing products and past market information can be used to help forecast the likely pattern of future demand for new products, and building up competitor response profiles will help to anticipate the potential response of competitors.

The marketing department also needs to consider the use of *pricing by function* (Kato, 1993) or *customer value-oriented product pricing* (Bock and Pütz, 2017). It feeds into the functional cost analysis used later in the process to identify where cost reductions can be made without destroying the value to the customer. Data on customer needs can be gathered from a range of sources, such as market research, reviewing competitors' products, specific requests from customers, using a form of idea generation, such as brainstorming sessions, the formation of creative teams, and employee suggestion schemes.

It is essential to realize that establishing demand is more than just identifying what the customer wants, as there is a difference between the customer need (a basic need for social interaction), and the want (such as a mobile phone with a specific functionality). Demand is the want, coupled with the ability to pay. Many people may want, or desire, the prestige of an expensive car, but not everyone can afford to buy one. The skill, therefore, is estimating how many people are likely to buy a product and the pattern of demand over the life of the product – this is where experience counts.

In practice due to the potential complexity of the sales price variations that may occur over a product's life, some of which may not be anticipated at the outset but made as a competitive response in the growth or mature stage of the life cycle, a price is established that represents a competitive price that the product will be sold at during the mature stage of the product's life. It is the price that the product will settle at in a competitive market. It may be that the early price at which the product is introduced may be slightly higher.

The performance of existing and past products can be an important factor in determining a pricing strategy. Hence, organizations need to ensure that they employ data collection systems that are capable of collecting data on sales volumes, pricing and costs over some time, and the ability to integrate the system to determine trends, and what works, and what did not. Target costing is most effective when the organization has access to good data.

3. Determine the required profit

Each product or service that an organization sells contributes to the overall profit achieved. Therefore, it is not just a case of taking a broad approach to setting a profit target of 10% for all products. Not all products necessarily make the same contribution to overall profit. The profit associated with a product must be determined in relation to the overall strategy of the firm. Existing products can provide a reference point for assessing the profit potential of new products. Still, senior managers need to be aware of managing a portfolio of products and a portfolio of customers, so profit targets need to be set by the people in the organization who are aware of the overall strategy.

Information systems play a key role in setting profit targets, as profits are affected by indirect manufacturing and general overhead costs, as well as direct product costs. Therefore, costing systems that are capable of allocating costs to products on a reasonable and fair basis, such as activity-based costing, can significantly assist the process of target costing. Tani et al. (1994) found that over 80% of firms in their survey indicated that overheads and depreciation on new investments were included within the target costs. Cooper and Slagmulder (1997) also suggest that final target costs should include indirect manufacturing costs.

A few authors have suggested that it should also take account of financing costs. Indeed Kee (2010) provides a numerical example where target costing that ignores the finance cost can lead an organization into making an incorrect decision about the long-term viability of a new product. Kee demonstrates that undertaking a net present value calculation can indicate that the product is not viable, even if the target cost is achieved. The examples, however, do depend on the level of investment required to produce new products. It is, therefore, important that the level at which profit targets are set is fully understood as this will impact on the costs that are included in the analysis. For example, is it a target profit expressed as a contribution, or a target return on investment? In practice, the profit expected is after deducting all costs incurred up to the point when the product is ready for sale.

4. Determine the target cost

The target cost equals the selling price, minus the required profit margin. This calculation provides the allowable, or target cost. Cooper and Slagmulder (1999) determined a cardinal rule that the target cost should never be exceeded. In theory, if the target cost cannot be achieved, then the product should not be approved. However, the target cost can be broken down into setting allowable cost targets at the component level. Therefore, if this rule is applied throughout the process, it ensures that making changes to smaller component elements of the overall design does not create a situation where the total target cost is exceeded.

The marketing research conducted around the product concept, functionality, and price acceptable to the consumer indicates the market cost drivers. This provides information about the importance of various functionality and hence identifies sensitive areas where the balance between functionality and cost needs to be carefully managed. They are referred to as market cost drivers as it defines the functionality required by the market.

The use of functional cost analysis can then be used to identify the target or allowable costs for functions, and the components required to provide that function. Where bought-in components are used, it is essential to involve suppliers as early as possible (Ellram, 2000), and to develop a close working relationship, as achieving cost savings in this area requires their cooperation. A challenge of working with suppliers and outsourcing elements of the production process is determining the exact specification and expectations of performance from the suppliers. This has links to the concept of total quality management and ensuring that there are systems in place to monitor suppliers, not just in terms of cost, but also in terms of performance (Natovich, 2003; Quélin and Duhamel, 2003).

5. Establish a multidisciplinary team to undertake the exercise

Target costing, and particularly functional cost analysis, which is part of the process of achieving the target cost, should ideally involve a group of employees drawn from different departments such as marketing, design, production engineering, purchasing, and accounting (Gagne and Discenza, 1995). The members of the team should work together to understand the interplay and trade-offs between costs and functionality, and consequently, while a broad background of experience is desirable, there may be some training involved to make the team operate effectively. In large organizations, this is often a permanent team within the organization; indeed, there could be several teams working on different product developments at the same time. In smaller organizations, it may be a team pulled together for specific projects, but the critical factor is having the right mix of skills, and their ability to make decisions. This team approach needs to feed into a process of organizational learning so that future projects benefit from the experience gained and lessons learned from previous successes and failures.

6. Establish an initial cost estimate via a product cost model

The initial product cost is established by creating a detailed breakdown of the manufacturing cost, including materials, labor, and manufacturing overheads. It is useful to include within the model the anticipated volumes and demand forecast profile over the life cycle of the product, or at least over an extended period. This forecast enables the analysis to account for factors such as a reduction in manufacturing cost due to learning curve effects, economies of scale, and any anticipated changes in costs.

The model should include all costs that can be managed in respect of the product. Techniques such as activity-based costing can be used to help ascertain the indirect costs. Inventory related costs and distribution costs should be included as these costs can be managed to reach the desired profit level. If new investment is required, and a time profile is prepared, the cost of financing can be included by developing the model into a net present value calculation. A proper costing system is required so that the cost estimates can be made as accurately as possible, bearing in mind that the accounting policies, such as the method of calculating depreciation rates, and the availability of information, can impact on the costs when assigned to products.

7. First look at ideas to reduce cost – generate ideas and evaluate alternatives

If the initial cost exceeds the allowable cost, then ideas are generated to reduce the cost. The cost should include all costs associated with the product. In attempting to reduce costs, the basic concept of target costing should not be forgotten, that is, the customer view of functionality and quality of the product is paramount, so any reduction in costs should not impact on the customer perception of the product. The objective is to make reductions in cost without changing the value of the product in the eyes of the customer.

8. Use tools to reduce costs such as value engineering and functional cost analysis

Value engineering

The basic concept of value engineering (VE) involves designing a product at a lower cost by reviewing the functions needed by customers. Park (1999) suggests that VE includes the following main tasks:

- 1) Identifying the relevant function of the product or service
- 2) Establishing a monetary value for identified functions
- 3) Providing the required functions at the lowest cost

There are several aspects to value. For example, *cost value* is, as the name suggests, the cost of the function or product. *Exchange value* is how much the customer is prepared to pay for the product. *Use value* is the purpose the product fulfills, that is, when the product can be, and is, used for the purpose for which it was intended, for example, a chair has use value in that you can sit on it. A customer that merely wants something to sit on may not be looking for high quality, handmade leather chair. *Esteem value* is related to the prestige that the customer places on the ownership of the product. For example, a customer may be looking for high-quality furniture, not just because it serves a use, but also because it has a prestige value of owning high quality, luxury, and, therefore, possibly expensive furniture. These different aspects of value highlight the significance of determining the target market before undertaking value analysis, as different consumers will place a different value on elements of a product depending on how they view it.

Value engineering can be broken into stages. Ibusuki and Kaminski (2007) highlight three levels that focus on the product concept, the design phase, and the production phase. The product concept phase involves a *zero look*. A zero look considers new concepts and new functionalities that do not currently exist. *First look* is concerned with the product design stages and primarily seeks to develop new products from existing concepts. The first look identifies the main areas to target for a reduction of costs. It can include using existing products as a reference point to look for improvements. *Second look* picks up at the later design stages, detailed component design, and

moves into the production stage. Teardown analysis can also be used to facilitate the understanding of functionality and costs if competitor products exit. The teardown is a process of taking a competitor's product to pieces to understand how it is designed and manufactured and is part of competitor analysis.

Value engineering techniques often include the use of checklists of functionalities along with their associated costs. It is not, however, a process of merely choosing functions from a list and deleting those that save money. The functionality required by the customer needs to be considered, as well as the knock-on effects of one function on another within the overall design, and the potential impact on quality.

Functional cost analysis

Functional cost analysis, as the name suggests, is the process of mapping the functions of the product broken down into components and assigning the cost to each element. The function is described in terms of verbs, that is, what activity or function is it that the product or the component needs to perform? This is then linked to the actual physical elements of the product. For example, in a household water tap, the basic function is to allow the free flow of water as and when desired. Several components make up the tap. Each element performs a specific role within the design and has a cost attached to it. This could be materials and labor. If components are bought-in, the suppliers also need to be involved in the process. The parts are then assembled, packaged, stored, delivered, marketed, and sold to customers.

A table can be used that identifies the following elements: the functions, the parts, and the costs (materials, labor, and indirect costs that can be assigned using a technique such as activity-based costing). This breakdown forms the basis of a cost table that can be prepared with the help of the accountants. The marketing department will also have some input as certain elements will provide much more value to the customer than others. For example, those parts that are purely functional, that is, they have to be there to make the product work, may not be seen as a key selling point to the customer, but what customers value is the look, style, and finish of the product. Therefore, the handle design may have much more significance for the customer than the tap spindle, but the tap will not work without a spindle. This does not necessarily mean that the components can be made from lower quality and hence less costly material, as this may affect the reliability of the product, which may be a factor valued by the customer.

This example illustrates that some of the functionality required by the customer is subjective. For example, mobile phones include a camera. Still, the ease of use and handling the device when taking selfies are just as significant as the physical attributes and functions of the camera. Techniques such as functional cost analysis and value engineering enable a better understanding and consideration of the trade-off between product function and cost (Iranmanesh and Thomson, 2008). For example, the question would be, can the product be made from different materials that provide the desired reliability and quality?

The relative importance of various functions and attributes to the customer can be assigned based on a value 1 – 10 with 1 being not required, to 10 being of extreme importance. Or more loosely, it could be based on a simple scale of not needed, nice to have, or essential.

The difficulty of understanding how components add value and contribute to the whole cannot be underestimated. Imagine how many parts there are in an Airbus A380. There are several thousand engineers involved in the design, so it can be a significant project undertaking and requires appropriate project management skills and leadership as well as the technical skills and knowledge. Pronin et al. (2004) highlighted how engineers often overestimate the importance of their component or overdesign it to demonstrate their competence in design (Siemsen, 2008).

Overdesign can also occur through risk aversion or believing that the component must perform under extreme situations. This emphasizes the need to engender a team approach to value engineering and functional cost analysis, and to include review and critique sessions to guard against overdesign, but also to ensure that cost savings do not impact on the required functionality, reliability and quality of the product.

9. Reduce indirect costs

There may be scope to reduce the indirect costs that help to achieve the target cost. Techniques such as just-in-time management of inventory, production patterns, and improving the efficiency and effectiveness of activities such as machine set-up, maintenance, and so on, can provide cost savings. Nor should we ignore the concept of continuous improvement (Ellram, 2000), which can provide significant benefits in achieving the target cost through the life cycle as well as increasing the cost accountability of all those involved.

10. Undertake overall net present value analysis over the estimated life of the product or reasonable period

Where a significant investment is required to produce the new product or further investments to meet capacity requirements as the product grows, it is useful to undertake a net present value (NPV) calculation feeding in the cost estimates and demand profile. This financial evaluation then takes account of the cost of capital and provides additional comfort that the product is viable in the long term. It is always worth remembering that the NPV calculation will include estimates, and sensitivity analysis should be undertaken to establish acceptable levels of error in the forecasts for the future years.

11. Ensure a cost management system in place to monitor ongoing costs and take corrective action where necessary.

Target costing requires a sound cost management system for monitoring the costs and taking corrective action in the future. The database of costs can be developed and improved over time as experience is gained from using the technique. This stage should also include supplier evaluation

and the continuous monitoring of supplier performance to ensure that costs are managed throughout the whole value system.

12. Feedback for organizational learning.

Not all new product launches are successful, and not all estimates will be accurate. The experience of target costing exercises needs to be fed back into future products so that the process can be continuously improved.

7.8.4 Benefits of target costing

The increasing competitiveness of many markets today means that customers are always demanding new products, with better quality and functionality, without an increase in price (Roy et al., 2005); therefore, a program of new product development is becoming a vital requirement of a successful manufacturing organization.

Target costing means that an organization needs to take a proactive approach to cost management and to understand the cost drivers. It helps to understand the trade-off between the cost and functionality of a product (Iranmanesh and Thomson, 2008).

The organization becomes much more customer-focused as, rather than developing products in an internal vacuum, the customer needs are considered, and a product designed to satisfy those needs at a price and cost acceptable to the consumer and organization. Indeed, it could be said to be acceptable to all stakeholders, as suppliers will earn a satisfactory profit, employees will be motivated with job security assured, and the shareholders receive an adequate return.

Target costing ensures the needs of the supply chain are considered. Helms et al. (2005) note that the days of squeezing suppliers for immediate cost savings are losing credibility and is not a good way to foster successful working relationships. The whole supply chain needs to be involved (Cooper and Slagmulder, 1999b). However, the issue of supplier power and buyer power may come into play and the relative negotiating positions of the parties involved.

Manufacturers of products must have the needs of the retailers in mind when designing new products. For example, shelf space occupied, ease of handling and so on, can all impact on a retailer's willingness to stock the product, and as such, adopting target costing enables an organization to consider not just the needs of the end consumer, but also the needs of the whole supply chain. The increasing awareness of sustainability issues has emphasized the need for organizations to work together through the development of new materials, packaging designs, and recycling systems, as well as new products.

Target costing fosters cooperation between internal functions of the organization, as well as between members of the supply chain (Monden and Hamada, 1991). Its introduction can enhance collaboration and awareness of the need to work together both internally and externally.

When considering the value of different functionality, and the need for such functionality, it enhances the understanding of the non-value adding elements of a product. Some of them may be

essential even though they do not add any value in the eyes of the customer. This understanding can provide an insight into the areas where cost savings might be more productive, for example, reducing the non-value adding functionality or activities in the manufacture of the product. Careful monitoring and quality control of the component design can also help reduce costs in manufacture. For example, McKinsey (2000) estimated that overdesign of components in the assembly and electronics industries averaged at least 24%.

The need to reduce the new product development time (Gupta et al., 1992) and the effectiveness of the new product launches (Poolton and Barclay, 1998) help to highlight the importance of the target costing concept process in today's competitive market. If target costing is embraced as the way all products are developed within an organization, that is, it becomes part of the normal culture, it can reduce the time to market for new products and improve the success rate for new product launches.

7.8.5 Considerations of implementing target costing

Target costing requires the development and maintenance of detailed cost data. It is not just a one-off exercise to determine the initial cost but entails monitoring of costs throughout the product life cycle. Only then can experience be gained of how costs behave, and hence the learning fed into future cost estimates on other new products. If activity-based costing is used to help establish costs, it requires the maintenance of the ABC system, which involves the collection of a range of nonfinancial data.

It can be difficult to establish the value of functionality to the customer and its associated cost. It is also difficult to estimate the pricing impact and costs over the life cycle of the product, hence forecasts may be wildly adrift of the actual outturn. If managers view target costing as a way of setting the budget, it can have a demotivating impact if targets are not met. Instead, target costing should be providing the impetus for continuous improvement of operations and cost savings. Many products are launched that have not reached their target cost. Still, a program of continuously seeking to drive costs down without losing functionality, reliability, or quality can be put in place to strive to ensure a contribution is made over the life of the product. Reducing overhead costs and downstream costs, which are difficult to attribute to individual product lines, can also contribute to overall profitability.

Implementation requires a willingness to cooperate within the organization and with external partners. The design team is not always the same as those that have to live with the decisions and the options selected (Yazdifar and Askarany, 2012). Therefore, it is essential to ensure that a wide range of views is represented in the team and that all employees are employed and motivated to reduce costs in line with the principles of target costing, that is, lowering costs without a reduction in functionality, reliability, or quality.

Target costing requires the ability of the organization to capture consumers' views, and those of the members of the supply chain, and to interpret these into product designs. Therefore,

excellence in marketing research, as well as product innovation, is a key capability required within the organization.

Target costing is undoubtedly more complex to undertake than cost-plus pricing, and there is a danger that it can be viewed as another accounting buzz word, mainly due to the inclusion of the word 'cost'. As we have seen, it should be an inclusive process if it is to be implemented effectively. Resources will need to be invested in the process, and it should be seen as a long-term project to implement the concept, as experience can be fed back into the process so that it contributes to organizational learning. The process becomes more valuable as experience grows. It, therefore, requires the full commitment and support of senior managers within the organization.

Learning activity. The process of target costing described is quite detailed. Imagine you are a small business with limited resources. Do you think that the concept of target costing is still useful?

Go back through the steps and think of how you could simplify the process so that it was manageable. It will help you appreciate the concept of target costing. Think about how target costing fits with adding value to a product? If you have a brand-new product concept, would target costing still be appropriate? As an extreme example, think about whether target costing is applicable for space tourism offered by organizations such as Virgin Galactic, Blue Origin, and SpaceX.