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# Answers

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- 1 (a) A PESTEL analysis identifies the main drivers in the external environment which are largely outside the control of the company. The relevance of these factors may depend upon whether Ling decides to enter the light bulb market directly or to enter it by acquiring a Skod-based company. In some instances the driver affects the industry wherever it is based.

**Political**

The government is considering the imposition of import taxes. This would be a threat if Ling decides to enter the market place using the distribution company approach and keep manufacturing in Lindisztan. However, it presents an opportunity if Ling decides to acquire Flick and continue to run it as a Skod-based company.

**Economic**

Although the country of Skod is in recession and consumer disposable income is falling, it seems unlikely that such a low cost commodity product will be greatly affected. This is an industry which is unlikely to be touched by changes in economic prosperity. The only minor issue may be the effect of switching off street lights. This may lengthen the life span of the bulb. However, overall, this is likely to have very little effect on total light bulb demand.

**Sociocultural**

There is a growing nationalist movement in Skod who are keen to keep jobs within the country. There have been instances, in other industries, where imported goods have been boycotted. It seems unlikely that a backlash against foreign goods would affect such an unglamorous product as a light bulb. However, it is possible, and any potential consumer backlash can be avoided by buying a Skod-based company and manufacturing light bulbs in the country.

**Technical**

Ling has so far benefitted from technological innovations which has put it ahead of competitors who have focused on incandescent and halogen bulbs. However, other lighting initiatives, such as the tubular daylighting devices discussed in the *Lighting Tomorrow* article need to be continually monitored. This monitoring is required whether Ling enters the Skod market directly, or acquires a company such as Flick.

**Legal**

The 'efficient lighting' legislation due to become law in Skod in 2017 is an opportunity for Ling to enter the market with its innovative LED products. This is an opportunity whether the company enters the market directly or buys a home-based company such as Flick.

**Environmental**

Businesses and consumers in Skod are increasingly aware of energy issues. This is partly due to increasing energy prices as well as more frequent breaks in the electricity supply (such as the power cuts which affected Lal's hotel). The LED bulbs offered by Ling are greener and more efficient than incandescent and halogen bulbs, which are still widely made in the home industry. In the case of businesses, many are quickly moving to LED light bulbs to reduce running costs and boost their environmental credentials. The environmental attractions of its products is important to Ling but again this is independent of whether they are made by a home-based company or one based abroad.

**(b) Bargaining power of buyers**

In this scenario, the buyers of the industry's products are large supermarket groups, household product superstores and large electrical chains. These buyers, particularly the supermarket groups, purchase a large volume of the industry's products (90%) and so, on the face of it, they can demand favourable prices. However, the products the buyer purchases from the industry represents a relatively insignificant fraction of the buyer's costs or purchases. A recent report suggested that light bulb sales contributed less than 0.1% of a supermarket's revenue. Light bulbs are much less important to supermarket groups than food and drink. When the product sold by the industry is a small fraction of the buyers' total costs, then buyers are less price sensitive. They are more likely to bargain with food suppliers than light bulb suppliers.

Buyers' bargaining power in the light bulb industry is strengthened by the product being undifferentiated, with low customer switching costs. However, the buyers are extremely unlikely to move backwards in the supply chain to manufacture their own light bulbs and so this potentially limits their bargaining power. Again, their focus is likely to be elsewhere.

Some of the factors which concern the buyer also relate to the consumer (end customer) as well. To the end customer, light bulbs are undifferentiated and there are no switching costs. Light bulbs are an insignificant fraction of their total spend and so they are unlikely to shop around to get the lowest price.

**Bargaining power of suppliers**

A supplier group is more powerful if it is dominated by a few companies and is more concentrated than the industry it sells to. This appears to be the case in Skod, where 90% of glass production is accounted for by three companies and metal production is largely concentrated in the hands of one very large company, OmniMetal. The customers (such as Flick) are large but they are more fragmented than the suppliers. Furthermore, the supplier group is, by and large, not obliged to contend with other substitute products for sale to the industry. Light bulbs are largely made of glass and metal and it seems unlikely that this will change in the near future. This lack of substitutes increases the power of the supplier.

The industry is not an important customer of the supplier group. Most glass is sold to the construction industry. Most metal is sold to the automobile industry. The light bulb manufacturers use less than 0.5% of the country's glass production and less than 0.1% of its metal production. This lack of importance increases the supplier group's power, because suppliers' fortunes are not closely tied to the industry and they will not need to protect it through reasonable pricing. Another factor increasing suppliers' power is that the products (glass and metal) are a vital part of the buyers' (customers) light bulb business. On the other hand, the supplier group's products are largely undifferentiated and switching costs between suppliers appears to be reasonably low. Finally, it seems unlikely that the supplier group poses a credible threat of forward integration into light bulb manufacture and this will be a factor which reduces supplier bargaining power.

#### **Threat of new entrants**

Ling is considering entering this market and so the barriers to entry and the potential reaction of current suppliers is important to consider here. The main barriers to entry appear to be:

**Economies of scale:** The five large dominant companies in the industry should be enjoying economies of scale which force any potential new entrant to come into the market with large scale production, which carries with it a high risk of failure. This is not an issue for Ling who also currently enjoys economies of scale in its manufacture. However, it will deter many other entrants.

**Capital requirements:** The manufacture of light bulbs requires new entrants to invest large financial resources into production plants. Although capital may be available, the risk associated with large-scale entry may lead to high premiums on borrowed capital.

**Access to distribution channels:** This may be very significant, as the distribution channels are very specific (supermarket groups, large home products superstores and major electrical chains). The new entrant will have to persuade these channels to accept its products, perhaps through offering price discounts. It seems unlikely that the new entrant can create a completely new channel. Selling directly to the consumer seems unlikely in this industry where individual purchases are both infrequent and low value.

The reaction to new entrants of existing firms in the industry is likely to be relatively forceful as they have a history of vigorous retaliation to prospective entrants. The upsurge of nationalism in the country will also give them a powerful card to play in this retaliation.

#### **Threat of substitute products**

Substitute products are products which can perform the same function as the product of the industry under consideration. It is hard to envisage any potential substitute for light bulbs except for candles which, in the long term, are likely to be much more expensive. Another possible substitute is to do without. This is the approach taken by government policy on street lighting. It is turned off from 2300 hrs to 0500 hrs. However, it seems unlikely that many consumers will prefer to sit in the dark instead of using a relatively cheap lighting product. In the short term, the threat of substitute products seems very low. However, in the long term, the tubular daylight lighting initiative described in *Lighting Tomorrow* is a possible substitute product as it aims to reduce the need for electric lighting.

#### **Competitive rivalry in the industry**

**Equally balanced competitors.** When an industry is dominated by a few firms and these firms are relatively well balanced in terms of size, it creates potential instability because they may be prone to fight each other. This appears the case in Skod where five fairly similar sized firms produce 72% (2015) of the light bulbs sold in the country and wage short-term price cutting wars, disrupt competitors' supply lines and react aggressively to potential new entrants.

**Slow industry growth.** Despite the switch to new technologies, there is little market growth. From 2010 to 2015 the market only grew by just over 2%. In such a situation, the only way a firm can increase market share is to take it from one of its competitors. Consequently, slow industry growth increases competitive rivalry.

**Lack of differentiation or switching costs.** Competitive rivalry is increased where the product is perceived as a commodity. In such circumstances the buyer's decision is largely based on price and service and pressures for intense price and service competition result. Light bulbs are definitely a commodity product in Skod.

**High exit barriers.** Exit costs are high because of the investment required in plant and the fact that light bulb factories cannot easily be adapted for other uses. When exit costs are high, companies hang on in the industry often resorting to extreme tactics which weaken the profitability of the industry as a whole.

- (c) One of the elements of **suitability** is a consideration of how well the strategy fits with future trends and changes in the environment. This environment has already been considered in the PESTEL and five forces analysis. Acquiring Flick is particularly appropriate in the context of the government's threat to impose taxes on imported goods. The increasingly nationalistic Skod population can also be acknowledged if the acquisition is carefully handled. Ling can stress that it is investing in Flick to secure its future and to create jobs for the people of Skod. The impending efficient lighting legislation also provides an opportunity for Ling, but this is irrespective of whether the company enters the market directly or acquires Flick. However, it is better placed to quickly meet this demand through acquisition. Direct entry is generally a slower approach to growth, as Man Lal has acknowledged.

Entering the market through acquisition also means that it can use the effective distribution channels which are already in place. There is no guarantee that the established distribution channels would welcome a new entrant into the market and

indeed they may demand price reductions in exchange for distribution access. Acquisition also means that no new capacity is brought to the market. Ling can then focus on increasing market share in a competitive, relatively slow-growing market. Entering directly is likely to prompt a hostile reaction from competitors currently in the market. Acquiring Flick might also invoke a hostile reaction, but it is likely to be more muted because it does not immediately alter the balance of power in the market.

However, in the longer term, the worldwide size of Ling may affect the bargaining power of suppliers and buyers in the Skod market. As a group, it has revenues which exceed the Skod market total, so there may be possibilities for negotiating reductions in raw material costs and the profit margins of suppliers. If these savings are not passed on to the end consumer, then Ling's profitability will inevitably improve. If these savings are passed on, then Ling will begin to dominate a commodity market place.

A further element of suitability is whether the acquisition provides an opportunity to exploit the strategic capability of Ling. In one sense it does, as it provides an opportunity for it to exploit its technical capability in LED lighting, before the domestic industry can gear up its production levels. However, in another sense the strategy is not suitable because Ling does not have strategic capability in acquiring foreign companies. All of its growth has been achieved through setting up wholly owned distribution subsidiaries. Its only production factories are in Lindsiztan.

Acquisition also has to meet the expectations of the stakeholders. In terms of the institutional stakeholders who hold 49% of Ling's shares, the acquisition promises the rapid growth which they are lobbying for. They have been critical of Ling's slow, cautious foreign growth and the maturity of the Lindsiztan market means that there is little opportunity for growth there. The institutional shareholders have also been critical of the high levels of retained earnings and they wish to see a significant portion of it invested back into the company to fuel growth. The size of the retained earnings makes the acquisition financially feasible, although of course there is always the possibility that such funds could be better invested elsewhere.

The acquisition of Flick is also of personal significance to Lal himself. It provides him with an opportunity to show the country where he received his business education that he has succeeded. This tangible proof of his success and ambition is important to him. Acquisition is a speedy approach to growth, but it can raise issues of culture clash. This needs further investigation and will be one of the challenges which Ling faces, because it does not have any previous experience of this method of growth. It seems unlikely that the business culture of Skod and Lindsiztan is exactly the same and so cultural issues can be expected. Perhaps this is contributing to Man Lal's unease about the acquisition policy.

The **acceptability** of the acquisition can also be considered in the light of Flick's financial performance in its market sector.

The profitability of Flick is currently below average for the industry sector. Gross profit margin in 2015 was 21.43% (industry average 30%), net profit margin 15.71% (industry average 24%) and ROCE 4.07% (industry average 5.74%). This may suggest to Ling's shareholders that there are short-term profits to be gained by reducing the cost of sales and overheads to a point where the company at least achieves the average performance of its sector.

In contrast, liquidity is higher than the industry averages. The current ratio is 3.33 (compared with 2.69 for the industry as a whole) and the acid test ratio is 1.83 (1.74 for the industry as a whole). It is possible that the high current ratio reflects a lack of investment in plant and equipment. At Flick, property, plant and equipment accounts for 63.33% of its assets, compared with an industry average of 71.09%. Inventory holding appears unnecessarily high and perhaps shows a lack of good inventory management practice. 15% of the total assets are held in inventory, compared with an industry average of 8.7%. Flick's liquidity is boosted by the amount of money it holds in cash or cash equivalents. This accounts for 11.87% of the asset base, more than double the industry equivalent.

Gearing is relatively low. The gearing ratio is 25.9% (compared with an industry average of 35.9%) and the interest cover ratio is 4.4 (compared to an industry average of 2.4). This points towards a cautious approach to investment and borrowing. It may again suggest that Flick has been reluctant to borrow money to invest in production machines and processes which, in the long term, contribute to more profitable products. It has preferred a lower risk strategy which leads, in turn, to the company making lower profits.

However, one area where Flick appears to excel is in its management of receivables. At an average of 104.3 days this is much lower than the industry norm. Its industry payables is broadly in line with the industry norm (192.5 days compared to 208.6 days).

## **Conclusion**

The acquisition of Flick is, potentially, an excellent way of entering the Skod light bulb market. It appears to be a cautiously run company which has reported lower profitability, perhaps as a result of failing to invest in efficiency initiatives. The threat of import controls makes direct entry very risky and there is sufficient evidence to suggest that Ling's input will improve Flick's position in a very competitive market.

One reservation might be the lack of experience the company has in acquiring and managing foreign companies. Thus a comprehensive due diligence process to purchasing the company and a non-intervention approach to managing Flick when it is acquired is recommended, particularly while Ling gets to grip with the cultural differences which are bound to exist. Such an approach is also likely to partly appease any nationalist critics. Even in the short term, there appears to be improvements which can be made to Flick and profitability will improve by just bringing company performance into line with the national average. Although it is expected that Ling will supply most of the funding for expansion and equipping the factory to produce LED bulbs, liquidity and gearing data suggest that Flick itself has unlocked financing potential which could be used to help finance growth.

- (d) There are many documented cases where acquisitions have been unsuccessful and so the caution of Ling's financial director is understandable. Strategic alliances appear to offer a less risky way of entering a market place.

A strategic partnership is where two or more organisations share resources and activities to pursue a strategy. The basis for an alliance between Ling and Flick would be co-specialisation, allowing each partner to focus on their core capabilities. Johnson, Scholes and Whittington suggest that 'alliances are used to enter new geographical markets where an organisation needs local knowledge and expertise in distribution, marketing and customer support'. This is exactly the situation Ling finds itself in. In such an alliance it could exploit a new market, retain all production in its own country and save itself the costs of acquisition and due diligence. In return, Flick would gain new energy-efficient products for its home market which would allow it to fulfil the requirements of impending legislation. Crucially, however, the profit of the alliance would have to be split, on some agreed basis, between the two companies.

There are different types of strategic partnership. In a *joint venture* a new organisation is created which is jointly owned by the parents. The parent companies remain independent trading companies. This is unlikely to be attractive in the Ling/Flick situation. It seems more likely that Flick would wish to sell the product as its own and not confuse the market place with an offering from a related company. A joint venture is probably more appropriate where the participating companies are entering into a different market place. For example, Ling and Flick combining their expertise to enter the energy management consultancy business. At the other end of the spectrum, a network of firms might collaborate without too much formality. For example, Flick could agree to brand and distribute Ling's products, paying a fraction of the sales price (or profit margin) back to Ling. This is in effect a licensing agreement, and this might eventually stretch to the company making the LED bulbs in Skod under licence, after testing the market first through branding and distributing them.

Different levels of formality of the alliance lead to different characteristics. For example, if speed to market is important, then an opportunistic alliance would be preferred to a joint venture. Indeed a joint venture might easily take longer to agree and legally establish than to complete an acquisition.

The form of the strategic alliance can be shaped to take into account the environmental factors which affect the industry and the different capabilities of the participants. It can also be made responsive to cultural differences. However, in the Ling/Flick situation, it is difficult to see how a strategic alliance will address the needs of the institutional stakeholders for growth and Lal's personal desire for acknowledged success and prestige. Furthermore, there may be concerns about the long-term viability of any such alliance. Trust is probably the most important ingredient of any alliance and it seems likely that Ling will be reluctant to licence a product which could be easily imitated by the licensee. Furthermore, just as Ling has limited expertise in acquisitions, it also has no experience of strategic alliances at all. Success requires expertise in setting up and monitoring clear goals, governance, financial arrangements and other organisational issues. There is no evidence in the scenario that Ling has this expertise.

- 2 (a) The Balogun and Hope Hailey model is used to explore the contextual features of change which need to be considered if that change is to be successful. Five of those contextual features were explored in this question.

**Time** – This looks at how quickly change is needed. There does not appear to be an immediate need for change as the business is doing well, but is looking at how to successfully compete in the future. Therefore there should be sufficient time to adequately plan the change, leading to a greater chance of success. Indeed, the actions leading towards the change are likely to be incremental, at least internally. However, the CEO has suggested that the entire switchover to the new strategy needs to take place in a single event. From an external perspective, this may be viewed as a 'Big Bang' change, which may lead to greater resistance from those external stakeholders affected by the change. However, if the marketing campaign is well-planned, then change may appear incremental, as customers will have time to get used to the changes which will be implemented.

**Scope** – This refers to the degree of change required. This may be considered a realignment of existing processes, or a transformational strategic change. Webfilms is planning to move from being a focused differentiator to a hybrid company operating with a broader customer base and a greater focus on cost efficiencies. This is a leap in strategy which needs to be very well planned in order for it to be successful. It is not impossible for a company to move around the strategy clock, but it may take time to gain acceptance from its customers. The continuing focus on quality, which may also be considered under preservation, should help with the success of the strategic change.

Scope also considers the type of business being carried out. This is being expanded to include services which have not previously been offered (e.g. broadband provision). The way in which business is to be carried out (boundary-less working) is also changing. These are areas unfamiliar to Webfilms and may influence the success of the change unless appropriate expertise is acquired.

**Readiness** – This examines how ready the workforce is for change. Webfilms has successfully undergone transformational change in the past and so its workforce may be well prepared for it to happen again. However, it appears there is resistance from a key player in this strategy. The creative director and his team are important to the success of the change and their resistance could jeopardise the strategy. The CEO will need to bring them on board for it to be successful.

**Preservation** – This looks at the organisational resources and characteristics which will be maintained throughout the change. The main business of the company will stay the same: offering programmes through the internet. This should ensure that the existing customer base remains, as long as it is still done successfully. However, the failure to preserve the advertisement-free approach may alienate existing customers.

**Power** – This looks at the power the change leader has to impose the change on the organisation. The CEO is the person driving the change and has the power to do so by virtue of her position in the organisation. She also has the experience, as she transformed the company from a postal-based to internet-based provider. However, it appears she plans to do this using force rather than consensus ('this is going to happen. It's up to you whether you want to be involved...'). This use of power may initially deter resistance, but it may have the opposite effect in the long term, demotivating the critically important creative development team.

There seems little doubt that the CEO is again suggesting transformational change as the company reinvents itself. Whether it is incremental or big bang depends on perspective. As mentioned before, internally it could be perceived as incremental and so the change would be classified as evolution. However, to external stakeholders it might appear as big bang, and hence represents revolutionary change.

- (b) Boundary-less organisation structures increase flexibility of organisations in dynamic environments and require collaboration with external parties to work. The lack of traditional structures and use of external relationships is becoming common in organisation, particularly those in a hi-tech environment. Boundary-less organisations are frequently dispersed over geographical borders and so require good communications technology and integrated systems to succeed.

Three forms of boundary-less working are mentioned in the scenario, as options for change in Webfilms.

**Hollow organisation structure** – where non-core processes are outsourced to external providers. This does not seem to be far-reaching enough for Webfilms. It would assist with cost efficiencies but would probably prevent them from being able to implement the full new strategy as it lacks the resources to achieve this. However, if it considers some of the new services to be incremental and non-core, such as the online gaming service, then these could be outsourced to a company with expertise in this area. Similarly, advertising might be defined as non-core and sub-contracted to an organisation which has experience in this area. There may also be administrative services within the company, such as information technology, payroll, accounts, which could be outsourced.

**Modular organisation structure** – a hollow organisation which further outsources some elements of the production process. This would assist Webfilms in carrying out their new strategy. It could outsource some of the production processes for programmes, making use of external expertise to deliver those programmes with which it has little or no experience, such as documentaries and current affairs programmes. It could also outsource the translation of programmes into different languages. This would allow Webfilms' own creative staff to continue to provide programmes which they are familiar with and might allay some of the fears and concerns of the creative director.

**Virtual organisation structure** – an organisation with no formal geographical structure, but operates through a series of linked IT systems, partnerships and collaborative agreements. This appears to be most appropriate to Webfilms. It would incorporate the modular structure described above but further extend this to incorporate a range of agreements with external parties together with a more flexible approach to internal working. For example, agreements would be needed with providers of previously screened programmes, with advertisers and with local technical support services for broadband provision. Relationships may have to be developed with competitors and Webfilms may need to be willing to make compromises, for example, by offering competitors access to original Webfilms programmes and films. Internally, Webfilms could operate flexibly over geographical boundaries, allowing them to have local personnel in place to better understand the viewing preferences of the different geographical locations which it serves.

Overall, it seems that boundary-less working is necessary if the new strategy is to be successful. It will not only increase the flexibility of operations, but will also contribute towards cost efficiencies.

- 3 (a) Time series analysis uses a moving average to define a trend. In Figure 1, the moving average is upwards in a year-on-year basis, with each quarterly result being greater than the equivalent quarter in the previous year. However, that trend does fluctuate on a seasonal basis within each year, with Q1 and Q4 showing positive seasonal fluctuations and Q2 and Q3 showing negative seasonal fluctuations. Given the seasonal nature of the business, it would seem appropriate to use this as a method of forecasting sales.

Although there is no single agreed method of extrapolating the trend, it could be suggested that it appears to be growing at about \$2m per quarter over the last few quarters. If this were to continue, estimates for 2016 Q4 and 2017 Q1 would be as follows:

2016 quarter 4:  $134.0$  (2015 quarter 4 figure) +  $8$  (growth over the year) +  $14.60$  (seasonal adjustment) = **\$156.60m**

2017 quarter 1:  $136.0$  (2016 quarter 1 figure) +  $8$  (growth over the year) +  $25.02$  (seasonal adjustment) = **\$169.02m**

The relatively low residuals would suggest that the method of forecasting is reasonably accurate and that residual factors have little effect.

Although this method seems appropriate when accounting for the seasonal nature in forecasting, it does not take into account *where* the sales are growing. It is mentioned that business growth is through both expansion of existing stores and through the introduction of new stores. It would be worthwhile understanding which is having the greater effect. The analysis also does not take into account external trends such as overall industry growth as the data used is completely internal to the company.

The least squares regression has more varying results. Because of the highly seasonal nature of the data, the correlation between time and revenue does not seem particularly useful. For example, if the formula were to be used to predict 2016 Q4 revenue, it would suggest \$138.08m ( $\$110.93\text{m} + (\$1.81\text{m} \times 15)$ ) which is much lower than time series would suggest, which takes seasonal factors into account. The 2017 Q1 revenue would be predicted to be \$139.89m using this method, again much lower than that predicted using the time series.

The correlation coefficient 'r', with a value of 0.33, suggests that the two variables are weakly connected. The coefficient of determination ( $r^2$ ) suggests that 11% of the variation in sales (y) is due to the passage of time (x). This would indicate a weak non-linear relationship, as suggested by the seasonal variations.

Therefore, this approach would not be considered an appropriate method of forecasting.

The least squares regression considering number of stores and revenue is more closely correlated. With a correlation coefficient of 0.94, there is a strongly positive relationship. Indeed, the coefficient of determination suggests that 88% of the variation in sales (y) is due to the variation in store numbers (x). This would seem to add further insight into the information provided in the time series analysis, suggesting the increase in store numbers is the greater driver for growth.

Using this method, the analyst could forecast average quarterly sales for 2017 and 2018 as \$143.5m ( $69.50 + 0.02 \times 3,700$ ) and \$149.5m ( $69.5 + 0.02 \times 4,000$ ) respectively, given the increase in store numbers predicted. However, this approach makes no attempt to take into account seasonal variations. Additionally, this method is using a very small data set, which does not provide trustworthy results.

Overall, therefore, given the seasonality of the industry, it would appear that time series would be the most appropriate approach for forecasting future sales. However, it may be that a combination of methods is used to extrapolate the general trend so as to maintain relevance for future periods.

There also remains the issue that the data presented for all three figures is somewhat limited in that it allows only a summary forecast of revenue for the entire organisation, rather than incorporating segmentation or external data, for example. Additionally, only limited, historical data has been used to determine relationships.

These may be partially resolved by the use of big data.

- (b)** Big data is a generic term used to describe the exponential growth of data, provided from numerous sources, available to organisations. The data is not useful in itself, it is the analysis of such data which provides valuable insights to an organisation. The finance director is right to be interested in this, as it can lead to an in-depth insight into trends and the driving forces behind those trends.

The three Vs of big data, volume, velocity and variety, can be examined to determine their contribution towards strategic development.

Volume can enhance the understanding of customer requirements and behaviour. The more data available, the greater the reliability of the trends and relationships discovered. In the analysis provided, there was a limited volume of data, spanning less than three years and incorporating only two variables. The use of big data would allow multivariate analysis over a greater time period or a greater number of shorter time periods to understand purchasing patterns better. This could help RW to create better strategies to capitalise on discovered trends.

Velocity refers to the speed of use of real-time data. As the majority of business transactions are now carried out using technology, these transactions can be captured and processed in real time if sufficient processing capacity is available. This ensures that strategies can be continually updated, in order to deliver competitive advantage. For example, as a new product is trending on social media, RW may then ensure they stock this product and aggressively market it in order to capture greater market share. Similarly, when customers are shopping online, RW could analyse their transactions in real time and use current and historic customer information to make recommendations for further purchases.

Variety refers to the different sources from which data is provided. As sources take different forms and include those not in RW's control, this is a challenging aspect of big data. However, if managed correctly, the variety provides the most detailed understanding of the market place, segmentation and individual customers. This could include competitor and industry information, sourced through key words online, to hashtags on social media and discussion forums.

There are many potential benefits which could be obtained through the analysis of big data. RW could use the results to determine where to locate their new stores. By accessing customers' shopping habits from credit and debit card records, they could determine which competing stores are used, and in which locations. This could help in the strategic planning of store locations, especially as RW is intending to continue to grow store numbers, at least over the next two years. This could help maximise the additional revenue to be gained from new stores.

RW are clearly trying to identify trends and maximise the use of them. The use of big data will provide more reliable and robust trend analysis and could lead to the discovery of previously unsuspected trends, allowing RW to capitalise on these before its industry competitors have even recognised the trend.

Further revenue streams are also available through the selling of data. Given the industry RW is in, there will be a number of branded items on offer to customers. Manufacturers of these brands are keen to carry out their own analysis and will pay for information to help with this. RW could capitalise on this new revenue stream.

Overall therefore, it would seem that the finance director is right to consider the use of big data. Indeed, RW may well find itself at a competitive disadvantage if it fails to do so. However, as with all decisions, the cost-benefit implications would need to be considered before implementation.

- 4 (a) Currently, Maratec is using a traditional model of marketing, which is not fully supporting the needs of the company as it strives for growth. By adopting e-marketing, further growth would be made possible and the issues identified would be addressed.

**Price** – Maratec uses cost plus pricing, which may cause some lost sales, as the cost is unknown at the time of agreement with the customer. The use of the external procurement company and the procurement of small orders of specific materials is likely to increase the costs and therefore lead to higher prices. Whilst high prices are not necessarily a problem, the inability to set the price when negotiating with the customer is not ideal.

The use of e-marketing will require Maratec to be more specific with regards to pricing. Although it may display a 'contact us for price' instruction online, it would need to be able to provide a price within a reasonable time. Should it introduce e-procurement (see part b), then price links could be introduced to make this quicker.

E-marketing could be used to offer special discounts on large orders, or on pricing for a subsequent item of furniture, following a previous order.

**Promotion** – Maratec's current promotion model may work for a small company, but if the company wants to grow, then this is a crucial area for change. The current method of promotion is limited. The use of expensive brochures means that all potential customers see the same products, and the company only produces a new brochure very year. E-marketing allows individualisation, or personalised marketing. The website could record visitors' click patterns and use targeted promotion based on the patterns detected. For example, if a potential customer browses tables and chairs, then Maratec could send them an email focused on these products.

The reach of promotion is also limited, either to those who have an acquaintance with an owner of a Maratec piece of furniture, or those who attend certain exhibitions. Whilst Maratec has a focused differentiation strategy, this may be appropriate. However, Maratec is looking to increase its sales, including an expansion of segments, to reach corporate clients. Online promotion may be a good way to make initial contact with these potential customers.

**Place** – As Maratec produces bespoke furniture, it does not make sense to have many showrooms as each piece of furniture displayed only exhibits the style of Maratec and is not for sale. To open further stores would lead to high additional costs. However, by using e-marketing, the market reach is as wide as Maratec choose to make it; global clients could purchase products, on the condition that Maratec will support transactions from that country and will provide shipping to that destination.

**Processes** – Many of the processes, excluding the actual production of the furniture, could benefit from the use of e-marketing techniques. The clients' designs could be uploaded and progress shown when the client logs in to their own account. This would make the update process much smoother and overcome the difficulties of a client visiting the manufacturing plant. Maratec could post videos of the production process if required.

Details of the materials sourced and the expected date of completion could be stored and updated as appropriate. Corporate clients could have access to re-order screens, allowing them to place orders for duplicates of its previously produced products.

**Physical evidence** – This is critical to Maratec's success. As items are bespoke, there is no finished product to view before purchase. Therefore evidence of previous successes is important. Images of items may be placed on the website. This will help with visualisation for clients, as more images can be uploaded than in a traditional brochure. Maratec could also post evidence of the quality, in the form of quality standards awarded, and supplier quality statuses. Additionally, the word-of-mouth promotion may be extended through physical evidence, with customer reviews posted on the site.

If Maratec uses advanced manufacturing techniques such as computer aided design and manufacturing, the clients' designs could be transformed into 3-D images, which again would assist with visualisation and ensure that enquiries are converted into actual orders.

- (b) Procurement involves the sourcing of suppliers and forming of agreements with them, enabling purchasing of the right quality materials, whilst ensuring that the time and price are right for the company. This is not currently carried out by Maratec, who chooses to use a specialist procurement company instead.

#### **Principles of e-procurement**

E-procurement makes use of electronic forms of communication to simplify the entire production process. It relies upon connections between suppliers' and purchasers' systems, enabling automated transactions.

The focus is on getting the entire procurement process right: materials are delivered in the right quantity and quality, at the right price, from the right seller and at the right time.

Most e-procurement systems require registration and login so that both supplier and buyer details are stored and both administrative (address, etc) and historical data are available.

E-procurement can be approached in a number of different ways. For example, in a B2B marketplace, suppliers and buyers trade through a third party site. The relationship, and contractual relationship, is with the third party, although buyers and suppliers may enter into regular trades. The third party sites usually focus on one industry, e.g. providing materials for the furniture trade. This would give Maratec access to many suppliers as needed for the growth of its business. This would be the closest to their current model, with the third party taking some of the procurement responsibility by providing appropriate suppliers in the marketplace.



An alternative approach suitable for Maratec could be buyer centric. Using this model, Maratec would have relationships with a number of individual suppliers. Systems would be integrated, and a procurement management system managed by Maratec allowing the selection of the best supplier for each requirement. This would also simplify management reporting, as the system would integrate with internal transactional systems, e.g. production control and accounting as well as internal reporting systems.

**Benefits** – There are many benefits of e-procurement, although not all would be applicable to Maratec. This would certainly pass the control of the procurement process to Maratec, who currently relies on a third party service. As Maratec uses specific materials for their products, it is important to have access to a wide choice of suppliers, as a specific piece may be difficult to find. Simultaneously, however, Maratec may build a relationship with a certain supplier, who may suggest certain raw materials as they become available.

There should be obvious cost reductions, as this would cut out the middle-man and enable Maratec to shop around for the best price, regardless of location. It should also speed up the process as there will be no need for communication with the procurement company, and Maratec could select suppliers who are able to deliver within a specified date range, or who are pre-approved on the system as they meet quality and reliability standards.

**Risks** – It is suggested that a procurement manager will only be recruited should the decision to use e-procurement go ahead. This may be risky as the e-procurement decision could be made without expert advice of a procurement manager. The model and method of implementation may be flawed and the system unusable for Maratec's purposes.

It is not known what agreement Maratec has with the procurement company currently being used. There may be a need to compensate the company for the cessation of the contract.

If implementation is successful, there are still risks. Maratec's strategy requires quality materials in order to succeed. There is a danger that quality may be compromised if purchases can be made from any source, anywhere in the world. There is also the danger that deliveries may not be made on time. These two risks alone could eradicate all the benefits of e-procurement.

E-procurement should reduce the administrative burden of purchasing, but cannot replace the strategic requirements such as sourcing and negotiating with appropriate suppliers, to help meet Maratec's strategic objectives.

Maratec will also need to consider data security. By making transactions online, it is possible that competitors may obtain access to their data, providing information about their strategy, products and customers.

- 1** (a) Up to 1 mark for each relevant point up to a maximum of 7 marks.
- (b) Up to 1 mark for each relevant point up to a maximum of 13 marks.
- (c) Up to 1 mark for each relevant point up to a maximum of 18 marks.  
This will include marks for the accurate calculation of financial ratios and for correctly interpreting their implications.
- (d) Up to 1 mark for each relevant point up to a maximum of 8 marks.  
Up to 4 professional marks for the structure, coherence, style and clarity of the answer.
- 2** (a) Up to 1 mark for each relevant point up to a maximum of 3 marks for each contextual factor. Five contextual factors giving a maximum of 15 marks plus 1 mark in classifying the change as per the Balogun and Hope Hailey model. Total of 16 marks.
- (b) Up to 1 mark for each relevant point up to a maximum of 3 marks for each configuration. Three configurations giving a maximum of 9 marks.
- 3** (a) Up to 1 mark for each relevant point up to a maximum of 15 marks.  
This may include marks for the accurate calculation of:
- Extrapolated values for the time series analysis (up to 2 marks)
  - Predicted values for regression 1 (Figure 2) (up to 2 marks)
  - Predicted values for regression 2 (Figure 3) (up to 2 marks)
  - Coefficient of determination (regression 1 and regression 2) (up to 2 marks)
- (b) Up to 1 mark for each relevant point up to a maximum of 10 marks.
- 4** (a) Up to 1 mark for each relevant point up to a maximum of 3 marks for each aspect of the marketing mix. Five aspects required giving a maximum of 15 marks.
- (b) Up to 1 mark for each relevant point up to a maximum of 10 marks.