Answers

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To:	The Board of MS
From:	A Accountant
Date:	June 2015
Subject:	Performance management at Merkland Sportswear (MS)

This report addresses a variety of performance management issues at MS. The existing choice of performance metrics in the dashboard is assessed in the light of the strategy and SWOT analysis. The impact of the child labour scandal for MS is addressed. Specifically, the impact the proposed new factory will have on the metrics is considered. Finally, suggestions are made for the use of the value chain analysis in management of this factory.

(i) Existing performance dashboard

In assessing the choice of metrics in the dashboard, it would be best to begin with a clear picture of the aims and broad strategy of MS. The main aims appear financial and this is appropriately reflected in the main heading of the dashboard and the fact that this heading has three metrics not just the two in the other areas. The first aim is growth, which is reflected in the change on previous year data given in the dashboard and most specifically in the revenue data given. The trend can be seen with three years of data reflecting the growing activities of MS. The second aim is to maximise shareholder wealth. This is measured indirectly through return on capital employed (ROCE). However, as ROCE does not take account of a number of issues (e.g. tax or financing costs), it does not directly measure shareholder wealth. It would be worth considering replacing ROCE with a value-based measure such as economic value-added which over the long term should more accurately reflect shareholder wealth.

The other elements contained in the broad strategy are seeking competitive advantage in two ways:

- 1. to create innovative products which reduce injuries and improve performance.
- 2. to be the leading marketing operation in Ceeland.

The current dashboard reflects these strategies in the design and brand headings. However, the metrics used in each seem to lack important aspects of the stated strategies.

The number of design awards won indirectly measures the quality of the products but it does not measure innovation. The number of new products or features on our products would more accurately do this. The design heading does not specifically address the key advantages mentioned of injury reduction and sporting performance. It will be difficult to provide two metrics which will cover all of these areas. However, if the criteria of the awards are injury reduction and performance and if a metric of number of new products launched is added, then the strategy is broadly covered by two measures.

The strategy of being a leading marketer is partially covered by the existing metrics of brand awareness, although without a comparator it is difficult to gauge whether this is a market leading figure. A more appropriate measure in the context of competitive advantage would be market share and in fact, looking at the data on footwear, we have 32% (= 2m/6·25m) of this important market which is 55% of our revenues (= \$150m/\$273m). Also, brand awareness is only measuring the recognition of the brand, not whether there are positive sentiments towards the brand. Market share, however, gives a clearer picture of this as it reflects the purchasing choices of consumers.

The SWOT analysis suggests further possible areas for measurement such as supply chain management, but the board has ruled out new headings on the dashboard. This would have to be indirectly measured through the financial heading by using a metric such as gross or operating margin. Indeed, it may be worth replacing the absolute operating profit figure with the margin figure for this purpose.

The SWOT analysis also identifies two issues in marketing:

- 1. There is a linked pair of points weak IT expertise and the threat of change in marketing channels. This would affect MS' marketing operations as they may lack the skill to exploit these new marketing opportunities. This issue falls under the brand heading and if it is felt that market share covers brand awareness, as previously mentioned, then the second measure under this heading should address MS' management of the changes in marketing channels by looking at the number of followers of MS on social media who either read or more actively respond to our social media messages.
- 2. The loss of a brand ambassador which, as the business has only got 10 of these, may be significant. In addition, the fact that the loss is tied to an injury which should not happen with MS' products is particularly problematic. This suggests measures under the brand heading of 'number of ambassadors' or else requires an injury reduction metric under the design heading although we already have two metrics proposed under this heading (awards won and new products).

The board will need to prioritise between these issues to decide on a second metric within the brand heading.

(ii) Impact of response 1

Change in operating profit due to response 1

	\$m
Increased cost of sales 10% x 2m units at \$21 =	4.2
Audit costs	0.2
Marketing campaign	0.8
Loss of operating profit	5.5
New contribution per unit =	51.9
Number of units to cover lost operating profit =	105,973

Quantitative impact:

The main stakeholders affected financially are the shareholders. The increased compliance costs, both variable and fixed, lead to a loss of operating profit of \$5.5m and would need to be covered by additional sales of 106,000 pairs of shoes. If MS can be seen to respond rapidly and decisively to the problems, it will gain a reputational advantage which may generate those extra sales.

Qualitative impact:

There are three stakeholder groups (customers, regulator and employees) who will be affected by the scandal and MS' response. All three will be disappointed that the company may be involved with an unethical practice. The company must first establish if this is in fact the case. If it is, then the damage may occur through fines imposed by the regulator and lost sales due to the impact on MS' reputation. For the employees, the damage may be a loss of motivation and trust as the organisation would have broken its own code of ethics. For all three groups, the key solution is a rapid and public addressing of the problem and both responses 1 and 2 appear to do this. A key tactic in dealing with such issues is to be first into the public domain by owning up to any breaches of the MS code alongside the announcement of solutions.

(iii) Expected profit from new factory

	Bad	Medium	Good
Probability	30%	60%	10%
Units manufactured ('000s) (\$'000s)	1,800	2,000	2,200
Variable costs	37,800	44,000	50,600
Fixed costs	2,500	2,500	2,500
Revenue	135,000	150,000	165,000
Profit before interest and tax	94,700	103,500	111,900
Expected profit before interest and tax $=$	101,700		

The expected profit before interest and tax is 101.7m. This is calculated as an expected value which is dependent on debatable probability estimates. The benefit of using expected values is that it simplifies the various possibilities into one number. However, the underlying problem with this method is that the expected profit only makes sense if the project will be done a number of times, as then the use of probabilities makes sense as in the long run the expected return will be achieved. The probabilities are for the market's possible reactions to the change in sourcing policy but as MS is shifting all footwear production, this will be a one-off event. So, the outcome will be one of 94.7m, 103.5m or 111.9m – not 101.7m, though the variation among these is not fundamental in the context of an annual operating profit for MS of 71m.

(iv) Impact of new factory on performance dashboard

MS performance dashboard

Report for the year to March 2015

	Current	With new fac	tory Change %
Financial Revenue (\$m)	273	273	0.00%
ROCE	41.7%	30.4%	-27·15%
Design Design awards won	2	2	0.00%
Brand Awareness	64%	64%	0.00%
Workings:			
Operating profit: Third-party manufacturing cost Revenue Existing operating profit Assumed operating profit of new factory Loss of operating profit	\$ 21 75 108,000,000 103,000,000 5,000,000	per unit per unit on 2,000,000 sales	

ROCE:	\$m
Current capital employed	170.3
New factory	47
New capital employed	217.3
New ROCE	30.4%

The impact is to reduce the operating profit as the factory in Ceeland is more expensive to run being in a higher cost environment. The basic variable cost per unit is about the same as the cost of purchasing from a third-party supplier, however, there are the additional fixed costs of the factory to be incurred as well. Consequently, the operating gearing of MS will increase.

As MS is a product development and marketing operation, it has little fixed capital. This results in a high ROCE. This is also a feature of operations which spend heavily to establish a brand in order to give them the pricing power to charge high margins.

The impact of setting up the factory is to reduce operating profit and increase capital employed. However, this might be offset by avoided costs such as regulators' fines and lost sales due to damaged reputation.

The introduction of a significant manufacturing operation introduces problems which the existing dashboard does not reflect. Financially, there is no mention of how the factory will be funded. If it involves debt, then this may increase the financial risk of the business and there is no measure of such risk (e.g. by gearing on the dashboard). Non-financially, product quality will now be a direct management concern for MS rather than something which procurement can handle through the supply chain. As this is a new area, it may be wise to introduce a metric for this until the organisational knowledge of the factory operation has been gained.

(v) Value chain

Generally, the value chain is a model of business integration showing the way that business activities are organised. This model is based around activities rather than traditional functional departments (such as finance). A key idea is that it is activities which create value and incur costs. The activities are split into two groups: primary ones which the customer interacts with directly and can 'see' the value being created and secondary ones which are necessary to support the primary activities. By identifying how value is created, the organisation can then focus on improving those activities through its performance measurement system (the dashboard at MS).

Another feature of the value chain is the idea of a chain. This is the thought that value is built by linking activities and so there must be a flow of information between the different activities and across departmental boundaries. In performance management terms, this will affect:

- information systems which will have to ensure good communication across functional boundaries and
- job descriptions and reporting hierarchies as these will have to reflect activities.

The chain does not stop at the organisation's boundaries. This is likely to be obvious to MS given the importance of supply chain management but the value chain will allow the organisation to focus on those relationships on which value most depends.

Specifically for MS, the value chain would emphasise the importance of supplier management and lead times for new product development within inbound logistics, showing how this fed through to the launch of new products and relationships with distributors in outbound logistics.

The sales and marketing activity of MS is clearly one of its primary areas of value enhancement and its relationship with outbound logistics and the distributors of the products should be notable.

Although the chain shows procurement and technology development as secondary activities, they will be vital for MS. As MS does not currently manufacture their own goods, control of the price/quality balance of supplier relationships will be important and linked to the importance of management of the supply chain noted for inbound logistics. As for sales and marketing, product (technology) development is one of the strategic areas of profit generation for MS and so should be treated as a key area for management activity and thus for performance measurement.

[**Tutor note:** *This answer is lengthy as it tries to cover a large number of acceptable points which can be made in answering this part of the question.*]

2 (a) Enterprise Resource Planning Systems (ERPS) are software systems designed to support and automate the business processes of large enterprises. ERPS help in identifying and planning the use of resources across the organisation in all activities. As a unified database of corporate information, ERPS will aid the flow of information between all functions both within Forion and also with key outside stakeholders (e.g. suppliers such as BAS).

ERPS handle many aspects of operations including manufacturing, inventory, distribution, invoicing and accounting. They also cover support functions such as human resource management and marketing. These all seem appropriate for Forion.

ERPS can also contain SCM (supply chain management) and CRM (customer relationship management) software. Automated systems would seem appropriate at Forion given the number of customer and supplier relationships which Forion has to manage.

An ERPS also addresses the common issue of poor communication between departments. It will help across the three problems mentioned.

The inefficiencies arising from ordering the wrong volume of subcomponents would occur because purchasing and manufacturing are not using a common database so that purchasing may be using erroneous or out-of-date information. This will lead to extra costs in inventory handling and storing.

The stock-outs will result in poor customer service as goods are not available for immediate shipment. The obsolescence problems will result in direct financial losses as inventory is written off. Both of these problems will be the result of poor integration of the manufacturing schedule with the expected level of orders. ERPS will be welcomed as it will make use of the expertise of the marketing department in forecasting and making this available to manufacturing managers when setting their production plans.

The lack of vehicles available to meet delivery deadlines could be aided by the manufacturing schedule linking in to the delivery schedule so that optimal use can be made of the delivery fleet. This would also allow the delivery managers to plan for use of subcontractors to do delivery if there is not internal transport available and so avoid customer disappointment.

(b) Considering the points raised overall, it is surprising that they seem to be addressing the strengths of BAS. BAS will have been chosen as an ally because it is a good company. However, it may be worth considering if there are weaknesses and if measures should be put in place in the agreement to guard against these. The points seem reasonable given the critical nature of the screen in the production process of a smartphone and the setting of penalties is wise.

Taking each point in turn:

Manufacturing quality would be expected to be high given BAS' reputation; however, it will be a critical part of the assembly process and faults will lead to either delayed delivery (if spotted in internal inspection) or else lead to customer dissatisfaction and rework costs to repair faulty items.

The time of delivery will dictate the volume of screen inventory which Forion has to hold and so impact on any attempt to run a just-in-time system of manufacturing. It may be necessary to give BAS access to Forion's production scheduling system (via the new ERPS possibly) in order to achieve such a close working relationship.

Unlike the other two issues, the point on the provision of technical upgrades does not provide a metric for measuring this. It will be difficult to set a minimum performance level as such upgrades will be difficult to predict and it would be reasonable for BAS to reject (or ignore) a vaguely worded clause which would not be enforceable.

The size of the penalties would need to be commensurate with damage to the reputation of the product from BAS' failure. Mobile phone customers are notable for having rapidly dropped previous market leaders when their products fail to deliver (e.g. Nokia, Blackberry). Therefore, it would be reasonable for potentially large penalties to be payable. Forion should note that these will only be claimable if they hold to their side of the agreement and so must carefully attend to the information and resources which need to be provided to BAS.

(c) Financial and non-financial data

Financial data has the advantage of being heavily checked and policed as part of the annual audit regime operating in most organisations. Financial data also has the advantages of being quantitative and so objective, whereas it can be difficult to judge the relative value of, for example, two customer complaints.

For the accountant, the collection and interpretation of financial data is thus straightforward and an everyday activity. Qualitative, non-financial data will often require to be transformed into quantitative data by applying 1–5 scales but it will never escape from the problem of being judgemental and subjective. Not all non-financial data is qualitative; however, the planning and scheduling data will be quantitative.

Internal and external sources

Forion will have greater control over the accuracy of internal data within its own ERPS than the external data, such as might be supplied by suppliers for their deliveries. External sources of data such as for the SLA will obviously be highly contentious if there is the possibility of penalty payments resulting from breaches of the agreement. Therefore, Forion may want to put in place its own inspection regime in order to confirm such data. Unreconciled differences between information systems are often a source of dispute in alliances such as the one with BAS.

- **3** (a) The success factors in the customer perspective will drive improved customer satisfaction. This should improve the customer perception of our service and so drive revenue growth. The increase in revenue could come through two routes:
 - 1. winning customers from the competition and thus increasing volume or
 - 2. increased selling prices as we may be perceived to offer a premium service.

Increased selling prices will immediately improve the profit margin of the service.

Increased volumes may indirectly improve our margins as we can spread the increased activity over our existing fixed cost base, for example, by increasing capacity utilisation (having more packages on each lorry).

As these improvements to operating profit occur without additional capital expenditure, they may feed through to an increased return on capital employed.

(b) Ability to meet customers' transport needs

This is a measure of the flexibility of the business and would be measured by the percentage of customer requests which Victoria can actually undertake:

Total number of packages transported	_	548,000	_	80.8%
Total number of customer transport requests	sts	610,000	_	09.0 /0

Ability to deliver packages quickly

The difficulty of this measure is that different packages may travel different distances and so take longer. Therefore, a measure based on time taken per kilometre which a package travels is appropriate:

Total minutes spent in transit by each package	_	131,520,000		2.0
Total package kilometres travelled	_	65,760,000	—	20

Ability to deliver packages on time

This is measured by the number of packages delivered within the time window given to the customer:

Deliveries within window	_ (548,000 – 21,920) _	06%
Total number of packages transported	548,000	90 /0

Ability to deliver packages safely

This is measured by the number of undamaged packages delivered within the time window given to the customer:

Deliveries of undamaged packages	_ (548,000 - 8,220)	_	98.5%
Total number of packages transported	548,000	_	50 570

Problems with measurement using customer complaints

There are two dangers with measuring performance through customer complaints. The first is under-reporting where the customer does not bother to report a problem although it negatively impacts on their perception of Victoria. The customer simply walks away from Victoria's service. This could be alleviated by automatically discounting the invoice of any late delivery as Victoria should be recording its own delivery performance and not only relying on customers to provide data nor delay the process by waiting for their complaint.

The second is reporting of unjustified complaints to obtain compensation payments/credits. As the measures stand, they record all customer complaints whether reasonable or not. This could be addressed by using the number of customer credits issued for the fault rather than the number of complaints.

(c) The senior management rewards system appears open to manipulation as the board is effectively setting their own rewards. There is the danger that targets are set to be easily achieved and so the profits of the business are siphoned off to the managers rather than the shareholders. The introduction of the BSC should assist in creating coherence between the objectives of the senior management and those of the shareholders. However, it appears that the major, financial measures suggested in the BSC do not directly address shareholder wealth although return on capital will be related. Finally, in a market where competition is fierce, the ability of management to grow revenue will be heavily constrained and there appear to be important factors in profit which are outside of the control of senior managers (fuel costs).

The operational managers should have their measures of performance set through a cascade down from the strategic measures in the BSC. These measures will often come from the customer and process perspectives. In this way, the reward system should be consistent with the overall objectives of the business. The suggestion that operational managers should be involved in setting their own targets should be treated carefully as it may present problems. This suggestion often arises from a confusion of the idea of explaining the target setting process to the manager with the idea of actually setting the target. The setting of the target should be done by a higher level of management so that the target is achievable with above normal effort. The target should not be set to be unreachable as this can cause demotivation. The target set should then be explained to the employee involved so that they understand what they have to do in order to earn this additional reward. It would be advisable for operational management, where most improvements are incremental, that the target is one where the bonus increases as the performance improves rather than a simple one of obtaining a given level of performance.

[**Tutor note:** The building block model headings of fair, achievable, owned standards and clear, motivational and controllable rewards are relevant to this answer but the answer needs to distinguish between the standards used and the targets set.]

4 (a) Economic value added (EVATM) as a divisional performance measure

The main benefit to EVATM is its link to the overall corporate objective of adding shareholder value. It is an appropriate measure to use if the company is applying value-based management. Therefore, by using it as a divisional performance measure, divisional managers should also be motivated to work in the best interest of the company as a whole and this ought to be one of the main objectives of a divisional performance measure.

The other advantages of EVATM are that:

- It gives an absolute measure so showing the overall contribution to the company.
- The basic test of performance is simple since if EVATM is positive, then the division is generating a return above that required by the providers of finance. (ROI requires a target level to be set usually based on benchmarking to the industry sector.)
- The adjustments within the calculation of EVATM mean that the measure is closer to cash flows than accounting profits and so is less subject to choices in accounting policies.
- EVATM encourages investment for the future (for example, in advertising and development) by removing such costs from the performance period and treating them like capital expenditure. This will reduce the dysfunctional temptation for management to engage in some short-term decision-making, which can be a problem with the capital employed figure from the financial statements which is used in ROI and RI. This is likely to be particularly appropriate at Beach, where R&D is significant.

However, EVATM does have disadvantages, some of which are common to the two suggested alternative measures and some which are specific.

All three measures are dependent on historical data and so are only of limited use in forecasting future performance.

The specific criticism of EVATM that it is complicated is reasonable as the full version requires more than 100 adjustments to the information in the normal financial statements. RI and ROI are derived from headline information in the financial statements which would be more familiar to the board.

EVATM (like RI) uses a charge for the capital employed in the division. EVATM uses the weighted-average cost of capital for the company as a whole and may not reflect the risks of the division. However, RI uses a notional cost of capital based on the risk of the division, which will be subject to an element of judgement and estimate. Also, as an unlisted business, the estimation of WACC is difficult.

Unlike ROI, EVATM would not help to judge relative divisional managerial performance at Beach if the divisions are not of similar size.

It is sensible to avoid consideration of the R&D division in this discussion as it is not a revenue-generating division.

(b) Workings:

Baby division

Revenue	2015 \$m 220	
Divisional operating costs	121	
Controllable profit R&D costs recharged	99 11	
Profit after R&D costs Apportioned head office management fees	88 28	
Divisional profit before tax	60	
	ROI	RI \$m
Based on controllable profit	23%	52·4
Based on profit after R&D	21%	41.4
Based on divisional profit	14%	13.4

The key assumption in the calculation of both metrics is which profit figure to use. Controllable profit relates to those revenues and costs under direct control of the divisional manager but this does not reflect the R&D costs, although it takes account of the revenues which new products are generating. It would be more appropriate to include these costs in an assessment of the divisional managers' performance, especially if the product development was at the request of the divisional management and the transfer price was widely agreed. The assessment of the division itself should include all relevant operating costs and so the divisional profit would be the appropriate figure to use.

The RI and EVATM give the same assessment that the division is performing well (both figures are positive). It is not possible to do a simple comparison between RI and EVATM as there are different tax and R&D cost treatments to take into account. The ROI figure should be compared to the comparator; however, this is not possible as the profit used in calculation of the comparator is not specified.

(c) Baby division

As the star of the Beach portfolio and with new products launching, it would appear sensible that Baby was an investment division with the autonomy to continue to develop its business successfully. However, it is unclear where the decision to commit to a new product rests as the R&D division actually does the development work. In that case, it may be appropriate

to make Baby a profit centre and manage it according to its profit generating ability. The business is rapidly growing and so a budget-constrained style would be inappropriate as it would stifle the creativity necessary for such a division. Alternatively, a non-accounting style where criteria other than profit such as revenue growth and new product development may be appropriate. Once the market sector has matured further then given a strong market share, the focus of the division will move to optimising profit.

Chocolate division

As the cash cow of the Beach portfolio, Chocolate should be run for the profit which it generates. It could be classified as a profit centre since its sector is mature and there are unlikely to be plans to make new investment. Alternatively, it could be classified as an investment centre so it does not have to wait for approval of *limited* capital expenditure such as happened with the production line upgrade. The management style should be budget-constrained with special emphasis placed on the ability of the division to generate cash not just profit.

R&D division

The R&D division has no source of revenue other than internal recharge of its services and so it should be a cost centre. However, the value of the division will only be appreciated if the overall profit generated from these new products can be demonstrated. This may be the cause of the problem with the Baby division managers. They only see the recharge cost appearing in their performance reports without the revenue which these new products are generating being specifically disclosed. It may be helpful to have a profit calculated for each product over its lifecycle to demonstrate the value of the division which is seen by Beach as vital.

A budget-constrained style of management would be appropriate where the budget is set separately for each new product development project. However, it would be important not to constrain the division within a fixed overall budget if there is a number of good product development ideas. The generation of ideas may be helped by using a non-accounting style, giving priority to more than just budget numbers (e.g. number of new product ideas/favourable press comments on new product launches).

A specific approach will therefore need to take account of all these factors in order to arrive at a style of management which meets the needs of the company as a whole.

Professional Level – Options Module, Paper P5 Advanced Performance Management

1

(i)	Up to 2 marks for breaking down and identifying the aims and broad strategies	
	Evaluating the dashboard for each aim and strategy in turn Growth Shareholder wealth Innovation Marketing	1 2 3 3
	Other comments from SWOT: Supply chain management Social media and IT expertise Brand ambassadors Showing sensitivity to constraint on number of metrics on dashboard	2 3 3 1
	Maximum 16 marks	
(ii)	Calculation: Increased CoS Lost operating profit New contribution per unit Required sales	1 1 1 1
	Comments: Up to 4 marks	
	Maximum 8 marks	
(iii)	Calculation: Variable costs Revenue Profit Expected profit	1 1 1 1
	Comments: Expected value method	2
	Maximum 6 marks	
(iv)	Calculation: Operating profit under 3rd party manufacturing Loss of operating profit New capital employed New ROCE No change to other metrics	1 1 1 1 1
	Comments: Up to 5 marks	
	Maximum 10 marks	
(v)	1 mark per point	
	Maximum 6 marks	
Prof	essional presentation: up to 4 marks	

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Total 50 marks

- (a) 1 mark per point up to 5 marks for description of ERPS and how it integrates information up to 6 marks for ERPS impact on problems at Forion Total 10 marks
 - (b) 1 mark per point In order to score highly, all three issues must be addressed Total 8 marks
 - (c) 1 mark per point In order to score highly, both issues financial/non-financial and internal/external must be addressed Maximum 7 marks

Total 25 marks

2

- 3 (a) 1 mark per point To score 5, must discuss all three financial metrics Maximum 5 marks
 - (b) For each success factor, 1 mark for justification and 1 mark for calculation of suitable metric Up to 4 marks for problems identified

Maximum 11 marks

(c) Up to 5 marks on senior management rewards Up to 5 marks on operational management Maximum 9 marks

Total 25 marks

4 (a) 1 mark per point

Maximum 8 marks

(b) Calculations:

RI – method 1 mark ROI – method 1 mark Correct calculation of both RI and ROI for more than one profit figure – 1 mark per profit figure used Max 4 marks

Comments: 1 mark per point up to a max of 4 marks

Maximum 7 marks

- (c) Up to 4 marks for any one division
 - all recommendations must be justified within the answer to gain credit
 - high marks within the answer for any one division can only be scored by discussing both the type of centre and management style

Maximum 10 marks

Total 25 marks