
Answers

1 Report

To: The board of DS
From: An Accountant
Date: March 2017
Subject: Strategic performance reporting and reward systems at DS

This report assesses the coherence of the choice of key performance indicators (KPIs) with the mission of DS followed by the assumptions used in their calculation. Other aspects of the presentation of the dashboard report are then evaluated. Finally, an overview of the operation of the building block model and an assessment of two proposed reward schemes are provided.

(i) Linking the mission to the current KPIs

The mission statement can be broken into several parts. The principal aim is maintainable, profitable growth which is supported by three further goals: developing the best talent; providing world-class services; and being efficient.

The KPIs are linked to elements of this statement as follows:

- Operating profit margin shows that the organisation is profitable and also as a margin, it indicates efficiency in cost control.
- Secured revenue indicates the amount of revenue which is contracted and so has greater likelihood of being earned. Contracts give an indication of maintainability though here only in the short term.
- Management retention links to the need for best talent though it does not measure the developing of that talent.
- Order book shows the maintainability into the future of the business though it does not show the average length of the contracts.
- Organic revenue growth shows historic growth and may indicate what the management are capable of into the future.
- ROCE demonstrates the efficiency of profit-generation from the capital base of DS.

None of the measures are external, looking at the competitive environment and so it is not possible to indicate if DS has 'world-class services'.

(ii) Assumptions underlying the current KPI calculations

Every KPI will involve some assumptions in its calculations. The aim of this section is to highlight how each indicator could be manipulated to show a better picture so that the business can avoid this in the future and the subsequent bad image portrayed in the investing community.

Operating profit margin is a standard performance measure and the only area which can be questioned is the categorisation of costs below this line, for example, the movement of operating costs into 'exceptional costs' below this line in order to artificially inflate this indicator. If the \$55m reorganisation cost was included in overall operating profit which was \$91m (=5.9% of \$1,542m) then the business would show an operating margin of 2.3%. The catering business would show a loss of \$39m.

Secured revenue represents long-term recurring revenue streams. A good picture will show a high percentage of secured revenue but will be below 100% so that management can indicate that budget targets are being exceeded. It is worrying that the budget is completed well after the year start as this may indicate such manipulation. If the original budgeted revenue figure is used then the secured revenue for 2016 was 82%.

Management retention only includes retention of employees on full-time contracts which at 65% of all managers excludes a material number. Poor treatment (and thus retention) of part-time managers is therefore ignored. This may be a particular issue for managers with young children who often take advantage of such contracts.

Order book is a 'total 'value' figure but is this the cash or present value figure? By choosing cash value of the contract, this will give a much larger figure than the discounted present value, especially where some revenues will not be received for 10 years.

Organic revenue growth is calculated by using the total revenue figure as reported in the accounts. The main purpose of stating organic is that it is growth from within the organisation as it stands and so acquisitions should be ignored. The current figure would fall from 7.2% overall to a less impressive 3.9%.

Return on capital employed (ROCE). Capital employed is being calculated using the statement of financial position figures which may exclude many intangible assets. As such it may overemphasise the tangible capital base which is not as important in a service business such as DS. The focus on this measure can lead to suboptimal decisions.

(iii) Evaluation of the strategic performance dashboard

The current information used by the board is both financial and non-financial allowing different elements of the mission to be measured. However, none of the measures are external, looking at the competitive environment and so it is not possible to indicate if DS has 'world-class services'. Also, the measures do not focus on shareholder concerns although the mission statement indicates that they are the principal stakeholders. Other measures beyond ROCE might have been expected given that priority, such as EPS or dividend per share. No breakdown of ROCE is provided for each business unit, this may be due to the lack of availability of capital employed figures for the units but it does seem an odd inconsistency since ROCE is the best KPI provided for shareholder use.

No revenue figures are given and as most figures are ratios it is not possible to gauge the absolute scale of the business. It is particularly surprising that an absolute profit measure is not included on the dashboard given the importance of profitable growth to shareholders.

Generally, there is a lack of external figures to allow benchmarking or the assessment of the competitive position of DS.

The breakdown of results into business sectors will help in the judgement of performance of the managers of those units but they may not be comparable, for example, comparing building services and security, it seems that building services is growing more rapidly but with weaker margins. Also, it may be that the employment market is different between each sector and so no comparison of management retention figures is sensible. Again, it may be helpful to provide either an external benchmark through industry averages or an internal one through a historic trend for these sector specific indicators.

The report does have good qualities as it is brief and clearly presented. The use of ratios makes for easy understanding.

(iv) The building block model

The model takes the important step of distinguishing within the dimensions of performance between what is the desired outcome (results) and what are the drivers of those results (determinants). It then highlights the need to measure both within the performance reporting systems of an organisation.

The standards are the target level for the specific measures chosen for each dimension appropriate to an employee's performance. Employees must take ownership so they need to be persuaded to accept the target and be motivated by the targets. Targets must be achievable and so challenge the employee without being viewed as impossible to achieve and so be demotivating. For example, they must take account of external market conditions which will be beyond the control of the employee, but this can be managed by benchmarking against an industry average. Targets must be fair, for example, different businesses within DS must be measured against their sector (catering, security, etc).

(v) Assessment of the proposed reward schemes

As the board is already considering using the building block model, it is appropriate to outline the main criteria in the model for reward schemes.

Rewards must be

- clear, that is, understood by the managers;
- motivating, that is, of value to the employee; and
- controllable, that is, related to their area of responsibility.

Scheme 1

The scheme has the benefit that it continues with the successful policy of offering an equity share in DS. It continues to utilise the knowledge of the line manager in performing the appraisal. It attempts to address a problem of the current scheme which is that the breadth of the categories gives the line manager scope to continue to show favouritism to specific employees. This is addressed as the bonus for line management will be affected by their appraisal according to performance on this new scheme and it will be helped practically by giving them an expectation of the distribution of bonus shares. This will also mean that forecasting staff costs will be simpler.

However, this scheme does not address the problem that the appraisal categories are vague and do not reflect the KPIs of DS. It also could create a problem as line managers will give bonuses according to the stated expectation, for example, even where all staff are, in absolute terms, performing brilliantly only 20% will get the maximum. Also, there is no mention of the scale of the scheme bonuses as there is for Scheme 2, where the maximum is stated as 50% of basic salary.

Scheme 2

Scheme 2 loses a key benefit of the current scheme in not rewarding in shares but cash is an acceptable alternative. Cash may well be a preferred option for the managers as it offers a certain value to them. This form of benefit also reduces the desire to manipulate share prices. It sets standards based on the KPIs and so should lead to greater focus by each employee on the goals of DS. Involvement of both strategic and line management in this process should lead to a better set of measures being used.

It is not clear, however, why five targets are being chosen. This seems an arbitrary figure and it may be more sensible to suggest a range from three to six (the number of strategic KPIs) to be decided by the managers in consultation. The size of the maximum reward seems likely to motivate but the equal weighting for each heading may not be effective. It requires that, say, operating profit margin has the same importance as management retention.

2 (a)	2018	2019	2020
Basic selling price	180·0	170·0	160·0
10% uplift for features/packaging	18·0	17·0	16·0
	<hr/>	<hr/>	<hr/>
Estimated selling price	198·0	187·0	176·0
Less: 15% net profit	(29·7)	(28·1)	(26·4)
	<hr/>	<hr/>	<hr/>
Target total cost per unit	168·3	158·9	149·6
Current expected cost:			
Estimated total direct cost per unit	134·0	134·0	134·0
Estimated fixed cost per unit (W1)	44·1	44·1	44·1
Estimated total cost per unit	178·1	178·1	178·1
Cost gap	9·8	19·2	28·5

W1 – Fixed overhead cost per unit

= Total fixed overheads/Number of units sold

= \$10,000,000/227,000 units = \$44·05

(b) Target costing

Pitlane currently operates a traditional cost plus pricing method, where customers pay a fixed mark up on Pitlane's standard cost. This has been appropriate because the components currently produced have been manufactured in the same way for some time and their cost structure is well understood. Actual costs of production are very close to the standard costs. There is little competition in the market for Pitlane's current products, as a long-term contract was recently renewed with its biggest customer.

In contrast, for the proposed Booster product, the market price is only estimated. To compete with similar products, the Booster will need to sell at a price reflecting that of competitors' products, taking into account the different benefits and quality which each product has.

Target costing begins with taking the price which the market will pay for the product for a given market share. From that, the required profit margin is deducted to arrive at a target cost. The difference between the estimated cost for the product and the target cost is the cost gap. Where the estimated costs exceed the target cost, steps are taken to reduce the cost gap. The product can then be sold at a price which the market will accept, and which generates an acceptable profit margin.

Determining the market price

Pitlane's marketing department has estimated the average market price of competitors' products and the likely market share over the three years of the scheme. The estimates are based on the success of a similar scheme in Veeland, and the assumptions used could be incorrect. Electricity prices may already be higher in Veeland than in Deeland, meaning consumers there would reduce their energy costs more by installing solar panels. Similarly, consumers in Veeland could save more on energy costs if there is more sunshine there than in Deeland, enabling solar panels to generate more energy. Both factors would, in this case, reduce the take up of subsidies by consumers in Deeland and the amount they would be willing to pay for solar panels.

The domestic solar energy market is new in Deeland, and Pitlane has no experience in estimating market share or price for this type of product. Pitlane's belief that consumers would be willing to pay a 10% premium for highest quality packaging, or for the Booster to communicate with consumers' mobile phones, may be incorrect.

Calculating the target cost using the required profit margin

Pitlane charges a 15% profit margin on its existing projects. The shareholders' financial objective indicates that they require the same profit margin to be earned on Booster.

For its existing products, Pitlane can set a selling price based on its own costs, whereas the Booster's price must reflect external market conditions more closely. Target costing will focus Pitlane on the external environment by considering prices and relative benefits of competitors' products.

Estimating total costs of Booster

The total direct costs of Booster have been estimated at \$134·00. The fixed overhead per unit relating to Booster for the three years of the scheme is \$44·05, making total estimated costs per unit of \$178·05. The cost estimates may be incorrect, especially as Booster is new, and different from Pitlane's existing products. As Booster includes costs which are fixed, estimating sales volumes is also crucial in determining costs per unit.

Pitlane has no recent experience of developing new products or of estimating costs and sales volumes for them. This makes it more likely that the cost estimates for the Booster will be incorrect. Estimating the total costs is needed for the next stage in the target costing process, to identify the cost gap.

Reducing the cost gap

A big advantage for Pitlane of using target costing is that it is often easier to reduce costs of a product at the design stage rather than after it has entered production.

As Boosters are not sold directly to consumers, the buyers of the product, who are professional installers, may not see value in the highest quality packaging. This could be a significant yet unnecessary cost, to be eliminated at the design stage. In deciding what costs to eliminate, Pitlane will have to take into account the effect of these on the quality and perception of the final product.

The features where the Booster can communicate with consumers' smartphones, and the use of highest quality packaging, are believed to enable Pitlane to charge 10% more than competitors' products. The \$3.8m (W1) of estimated additional total revenue from the packaging and smartphone features may not justify the \$2.8m upfront development costs for the smartphone feature alone, especially if the time value of money were to be taken into account. Consumers may not value these two features or be prepared to pay more for them. Eliminating them would therefore have little effect on sales volumes and would enable Pitlane to charge a more competitive price, or obtain higher gross profit margins.

Due to damage of sub-components when assembling the prototype, the estimated assembly labour cost assumes highly skilled labour will be used. This is 30% more expensive than other labour. By providing additional training, lower paid labour could be used to produce the Booster, and hence reduce the cost gap.

Pitlane plans to purchase the four main sub-components in bulk from six different suppliers. Consolidating suppliers, or using suppliers in lower cost countries, could help reduce the cost gap by reducing purchase costs. Moving to a just-in-time production system, rather than buying supplies in bulk, would help reduce costs of holding inventory as suppliers would only deliver sub-components when needed. This may increase other costs such as by requiring investment in information technology. It would also take time to develop the close relationship required with suppliers.

Another source of waste is due to internal transport and handling, which forms over 5% of the total direct cost of the Booster. This will also increase production cycle times, and is an unnecessary process which does not add value. It could be eliminated by changing the layout of the factory, or reorganising production into teams and ensuring all production was done at a single factory, rather than in both of Pitlane's factories.

W1 – Additional revenue from smartphone feature and highest quality packaging

2018 – 60,000 units x \$198 = \$11.880m
 2019 – 75,000 units x \$187 = \$14.025m
 2020 – 92,000 units x \$176 = \$16.192m
 Total revenue = \$42.097m
 = \$42,097,000 x 10/110 = \$3,827,000

Tutorial note: *This is a detailed solution and candidates would not be expected to produce an answer of this length.*

(c) Kaizen costing

Unlike target costing, which occurs at the beginning of a product's life, Kaizen costing is a process of long-term continuous improvement by cost reduction throughout the life of the product.

The Booster will be produced only for the three years during which the Deeland government offers subsidies and tax incentives. Generally, Kaizen costing is used over longer periods, and it is likely the full benefits of this approach will not be achieved in such a short timescale. The target cost is the starting point for Kaizen costing. After production begins, each period's target is based on the previous period's reduced costs.

Target costing can achieve large cost reductions at the design stage of the product, e.g. by choosing not to develop the smartphone feature. Kaizen costing, however, reduces costs in much smaller, incremental steps.

The need for continuous improvement

Even though Booster's share of the market rises over the three years of the project, the market price falls, as does the size of the market. Which means that in order to achieve the shareholders' financial targets, the direct costs of the Booster must fall over the three years. Continual incremental improvements using Kaizen costing, and measuring these improvements against targets from the previous period rather than the original estimated cost, could help to achieve this.

Ways to reduce waste using Kaizen costing

Traditional costing methods often see employees as the cause of high costs, whereas Kaizen costing sees the employees as a source of ideas on how to reduce costs. The manufacturing director's comments, that the damage caused by employees to delicate sub-components may mean it may not be possible to produce the Booster, indicates that Pitlane is currently following the traditional approach. Employees are seen as the source of the waste.

To benefit from Kaizen costing, Pitlane must undergo a culture change to encourage employees to suggest ideas, perhaps using quality circles, to reduce costs. That way, improvements could be made in the way sub-components are assembled during production, which would shorten the production cycle and lead to a reduced cost of scrapped items.

3 (a) Manual input

At NJN, at least some of the inputs to the WIS are manual, and that means they are prone to error. This is time consuming and costly.

The packing lists which are received in the shipping containers are input manually. If incorrectly input, the quantities of items in the locations in the WIS will also be incorrect. Incorrect information in the WIS wastes time by needing teams to investigate the discrepancies, reconcile inventory records with those held by the manufacturer, and correct the information held on the WIS.

Furthermore, customers will not receive the items they have ordered, as in 8% of picking notes, items are not in the location they should be, or are in insufficient quantities. This is a high proportion of errors. Staff will waste time looking for items

stored in the wrong locations. This will cause customer dissatisfaction and mean that larger quantities of inventory will need to be held, which is a wasteful use of storage space. Fewer complete orders can be fulfilled per unit of warehouse space, than would otherwise be the case. Both of these are sources of waste.

In the longer term, this means NJN staff must undertake a series of cyclical inventory counts in order to correct the information held in the WIS. This is wasteful activity which does not add value to customers, and should be eliminated.

The provision of accurate inventory information will also be of value to the retailers who can place orders only for items which are available, rather than only finding out about unavailable items by receiving an email from NJN. This would lead to increased customer satisfaction by avoiding having stock outs of particular items by ordering alternatives.

NJN should consider the use of barcodes or radio frequency identifiers (RFIDs) on products, to ensure that accurate data is input into the WIS. Using these devices, the product numbers and quantities of goods entering and leaving the warehouse could be automatically read into the WIS, without any intervention from warehouse staff. This would reduce the time taken to manually input the data and improve its accuracy.

An effective information system may interface directly with the manufacturer's and retail customers' information systems through electronic data interchange (EDI). This would increase service levels by ensuring that all parts of the value chain had access to accurate and timely information.

Time delays

The packing list batches are not available until up to 48 hours after receipt of the goods. The information held in the WIS will therefore be out of date. Items which are required for sales orders may be unavailable for picking. The use of automated input, where possible, will increase the timeliness of the information input into the WIS. This will reduce the labour cost of correcting the system and improve the number, accuracy, and completeness of orders despatched to customers.

Currently, all picking notes are printed in the warehouse office, which may be some distance from the area where items are picked. This also implies the existence of a bottleneck in the provision of information to the staff picking the items and wastes staff time moving to and from the warehouse office to pick up the reports. An improvement would be to ensure that information is available when and where it is needed, using terminals in the warehouse, or portable devices such as tablets. This would reduce time spent collecting picking information.

Similarly, in order to investigate discrepancies, staff have to obtain special reports which the warehouse manager extracts from the WIS. Again, this is a bottleneck which could delay staff getting the correct information, and may mean that the reports are inconsistent depending on the parameters set to run them. An effective system would eliminate these problems by providing standardised reports when requested, and in an optimal location.

Complex presentation of information

Effective systems add value to information when they organise and present the information in a clear way, without excessive detail. This allows the users to easily and quickly identify the information they need. It prevents wasting time obtaining the information in the first place, and correcting errors caused by interpreting it incorrectly.

The picking sheets show the 12-digit product codes which can easily be misread and increases the likelihood of errors. A better system would present the information in a more accessible way and prevent information overload, for example, showing product descriptions, or product codes, only for the items to be picked.

- (b)** There are two main types of waste at NJN which can be identified using lean principles: waste which does not add value to the customer and waste which occurs due to variations in demand and demands on staff.

Reorganising the warehouse to place high volume items near to the despatch area will help reduce the type of waste where the movement of staff to pick goods is more than should be required. Less movement, which means less staff time and cost, will be required by staff to pick these items and bring them to where they are to be despatched. It may be, however, that large and bulky items should be placed nearer to the despatch area instead, to save on the time spent transporting them to the despatch area. This may also address the increased seasonal demand for certain types of product as products which are popular for that specific period could be stored more closely to the despatch area.

The cost of absenteeism is a waste caused by demanding too much of staff at busy times to compensate for inefficient organisation in the warehouse and errors in the WIS. The cost of searching for items which have been put in the wrong physical location at busy times is a waste due to variation in activity levels.

Another type of waste which does not add value to the customer is holding excessive inventory, for example, the additional warehouse space which NJN has rented. By not making efficient use of the warehouse space it has, NJN is reducing its level of output, and revenue, relative to the resources available to it. In addition, the extra warehouse space means more time spent by staff moving through the warehouses trying to locate goods.

The cyclical inventory counts which the management consultant has suggested do not add value to the customer and are also more demanding for staff. This is a wasteful activity, correcting the errors which have occurred in the WIS. NJN should instead concentrate on ensuring that errors do not occur in the first place, which will cost less than correcting them.

- (c)** The 5Ss in the adoption of lean principles during the warehouse reorganisation are Structurise, Systemise, Sanitise, Standardise and Self-discipline.

Structurise

This involves introducing order where possible, for example, by ensuring that items in the warehouse are arranged so that they are easy to find. This would also include segregating damaged or obsolete inventory, or discarding it from the warehouse.

The management consultant has suggested the measure of the proportion of inventory not stored in order of its alphabetical description, with 'A' nearest the despatch area and 'Z' furthest away. This may measure how easy to find each product is, but would not necessarily make best use of all available space or make the picking process more efficient. It may also be subjective and prone to errors caused by the interpretation of the product description, for example, in deciding if cricket balls be measured under 'C' or 'B'.

Systemise

This principle involves organising items so that they are easy to use. At NJN, this means being able to accurately pick the correct items in the shortest possible time. It could also cover access to other resources, such as having computer terminals close to where they are needed.

The measure relating to the storing of goods alphabetically seems to conflict with the consultant's recommendation to place the high volume lines close to the despatch area. Whereas storing goods alphabetically may make items easy to find, it does not necessarily make them easy to use (pick). By storing the high volume items near to the despatch area, the average time taken to pick orders would be reduced.

Sanitise

This principle means to be tidy and avoid clutter. This helps make things easy to find, allows easy access of staff around the warehouse, and helps make a safe working environment. The warehouse manager's daily assessment of tidiness is a suitable measure of this principle, which is a subjective assessment.

There is the possibility that the assessment will be biased, especially if the warehouse manager who is undertaking the assessment is also having his performance evaluated on the tidiness of the warehouse. The characteristics of what constitutes a tidy warehouse, compared to an untidy one, will need to be defined. There is the possibility of inconsistent measurement if someone other than the warehouse manager does the assessment, or the assessment is done at different times of the day.

Standardise

This principle involves finding the best way of undertaking a process or task, and applying it consistently. The suggestion of the number of accidents caused by goods which have not been stored or picked in the correct way would measure this. As NJN should aim to have no accidents, this should be a performance measure with a target level of zero.

Self-discipline

This principle relates to sustaining the other Ss by motivating employees. Motivation is subjective, and hard to measure. None of the performance measures the management consultant has suggested directly measure this principle. The consistency in which specific tasks or processes are performed could be a measure of how well they are being sustained.

- 4 (a)** A key characteristic of divisional performance measurement is that divisional managers, and the divisions themselves, should only be appraised on performance that they control. For example, costs which are not controlled by divisional managers, such as JLN's apportioned head office costs, should be added back to profit when appraising manager's performance.

Similarly, as Export division is a profit centre, divisional managers are not able to make capital investment decisions and so depreciation is out of their control and should be added back to profit for their appraisals. Domestic division is an investment centre, so managers there can make investment decisions, and depreciation is a cost which they can control.

On 30 June 2015, the \$KL weakened by 15% against the £SL. This meant Export division benefited from an increase in revenue which was not under the control of the divisional manager. This amount must be deducted from revenue when calculating the controllable net profit for Export division.

The net profit arrived at after items which are not under managers' control are added back is known as the 'controllable profit'. This is what divisional managers should be appraised on. This is because it is unfair to appraise them on factors outside their control, and may mean they become demotivated or give up trying to improve performance, which is not in the interests of JLN as a whole.

Divisional performance should be evaluated on all the items which relate directly to the division which is its 'traceable profit'. Allocated head office costs do not directly reflect the activity of the division and should be excluded when calculating the traceable profit.

The traceable net profit for Export division, after adjusting for allocated head office costs, was \$KL905,000 (W1), and the traceable net profit margin was 11%.

A difficulty with calculating controllable and traceable profits in this way may be that it is difficult to determine which items are controllable or not. For example, though the new machine purchased for Export division by head office did lead to improvements in productivity, the extent of this increase must be attributed to good management, or otherwise, by the divisional managers. This increase in productivity is therefore due partly to controllable factors, and partly to uncontrollable.

W1 – Traceable net profit

	\$KL'000
Reported net profit	545
Add back: Allocated head office costs	360
Traceable net profit	905
Traceable net profit margin: (905/8,000)	11%

(b) Conclusion on payment of Export division manager's bonus

The controllable net profit is arrived at after items which are not under the manager's control are added back. The net profit margin controllable by the manager of Export division is 10%. Given that it is difficult to assess the effect of the increased productivity on controllable net profit, the manager should be awarded her bonus for the year. This is because the controllable net profit margin of 10% exceeds the target of 8%.

W1 – Controllable net profit margin for Export division year ended 31 December 2016

Controllable net profit	\$KL'000
Reported net profit	545
Add back non controllable items:	
Depreciation	395
Allocated head office costs	360
Deduct currency gain (W2)	(522)
Controllable net profit	778

Controllable revenue	\$KL'000
Reported revenue	8,000
Deduct currency gain (W2)	(522)
Controllable revenue	7,478
Controllable net profit margin: (778/7,478)	10%

W2 – Currency gain

Six months revenue from 1 July 2016 was increased by 15% due to currency gain.

Six months revenue before currency gain $4,000/1.15 = 3,478$

Therefore non-controllable currency gain is $4,000 - 3,478 = 522$

As the exact increase in productivity resulting for the new machinery on Export division is unclear, it is difficult to accurately adjust the controllable net profit margin to reflect this. It would seem the divisional manager is benefitting from productivity improvements which are not entirely under her control. To reduce the controllable net profit margin to 8%, the threshold at which the manager is awarded her bonus, the net profit would have to fall by approximately \$KL179,760 ($778,000 - (7,478,000 \times 8\%)$). This is equivalent to 3.7% of cost of sales ($179,760k/4,800,000$). It is difficult to conclude, therefore, whether the 'significant' improvement in productivity would make the difference between the manager of Export division receiving her bonus or not.

(c) EVA™ as a performance measure for Export and Domestic divisions

EVA™ makes adjustments to the financial profit to calculate the economic value generated by each division, and then makes a deduction for the cost of the capital invested in the division. A positive EVA™ indicates a division is creating value above that required by those who finance the business. It is therefore consistent with JLW's objective to maximise shareholder wealth. Appraisal of divisional performance on this basis would therefore align the interests of managers with those of JLW's shareholders.

EVA™ involves making many adjustments to operating profit and capital employed. These may be time consuming, and be poorly understood by managers. The manager of Export division has already commented that she finds the bonus calculations difficult to understand. Failure of managers to understand the EVA™ calculations would make it difficult for them to work towards targets set for the division.

EVA™ avoids distortion from estimates and financial policies

EVA™ avoids the financial results from being distorted by accounting policies and estimates made by divisional managers, for example, the \$KL75,000 bad debt provision made in Domestic division, as increases in provisions are added back to operating profit in the EVA™ calculation. Whilst this provides a consistent basis to evaluate performance of divisions within JLW, EVA™ is not suitable for comparing divisional performance as it is an absolute measure and does not make allowance for their relative sizes.

EVA™ encourages managers to take a long-term view

The advertising costs for the new range of paints would be capitalised as these generate future value. The use of EVA™ would encourage managers to incur costs, such as these, which will benefit the business in the long term.

However, the calculation of EVA™ is backwards looking, and based on historical financial information, whereas shareholders need information about future performance on which to base their decisions.

EVA™ takes into account the cost of capital

The current performance measure of net profit margin is a poor measure as it takes into account neither the absolute net profit achieved, the capital employed in the division, nor the cost of capital. By making a deduction for the cost of capital employed in the division, the EVA™ calculation makes managers consider both the capital employed and the cost of capital in their divisions.

Export division is a profit centre and managers do not have control of investment decisions and hence it is not a suitable measure for the evaluation of the performance on Export division because there is no controllable capital employed. Domestic division is able to control investment decisions, and does have controllable capital employed, so EVA™ would be a suitable measure for evaluating Domestic division's performance.

However, to use the weighted average cost of capital (WACC) in the EVA™ calculation requires a number of assumptions and estimates to be made, for example, in calculating the cost of equity or market value of debt. The WACC is normally based on historic data, which may not reflect circumstances in the future, and may not be accurate.

- 1** (i) Breakdown the mission statement – up to 2 marks
1 mark per point
Maximum 8 marks
- (ii) Up to 3 marks for comments on each indicator
Operating profit margin
Secured revenue
Management retention
Order book
Organic revenue growth
ROCE
Maximum 12 marks
- (iii) 1 mark per point
Maximum 8 marks
- (iv) Results and determinants
Standards: ownership, achievable targets, fair
Maximum 6 marks
- (v) 1 mark per point
Up to 2 marks for general discussion of assessment of reward schemes
6 marks per scheme
Maximum 12 marks

Professional 4 marks

Total 50 marks

- 2** (a) Estimated unit selling price – 1 mark
Less: 15% net profit – 1 mark
Target total cost per unit – 1 mark
Less: Fixed cost per unit – 1 mark
Target direct cost per unit – 1 mark
Cost gap – 1 mark
Maximum 6 marks
- (b) General description of target costing – up to 2 marks
Advice on target costing for Pitlane – 1 mark per point
Additional revenue generated from features – 2 marks
Maximum 12 marks
- (c) General description of Kaizen costing – up to 2 marks
Application of Kaizen costing to Pitlane – 1 mark per point
Maximum 7 marks

Total 25 marks

- 3 (a)** Each valid point 1 mark
Maximum 10 marks
- (b)** Each valid point 1 mark
Maximum 6 marks
- (c)** Each S discussed Up to 3 marks
Maximum 9 marks

Total 25 marks

- 4 (a)** Evaluation of manager's comments – 1 mark per point
Traceable net profit calculation – 2 marks
Maximum 7 marks
- (b)** Depreciation and allocated head office costs – 2 marks
Currency gain – 2 marks
Controllable revenue – 2 marks
Controllable profit margin – 1 mark
Conclusion – 1 mark
Maximum 8 marks
- (c)** Evaluation of EVATM – 1 mark per point
Maximum 10 marks

Total 25 marks