
Answers

1 To: The CEO of Achilty Retail (Achilty)
From: An Accountant
Date: Sep 20X5
Subject: Performance reporting and management issues at Achilty

This report evaluates the current performance report used by the board for strategic review. Next, certain proposed performance indicators are evaluated by calculation and for their fitness in measuring the achievement of the company's objectives. Third, given the new information system proposed, the factors driving change in the role of the management accountant are considered. Finally, the opportunities and risks associated with the introduction of a data warehouse system are assessed.

(i) Current performance reporting

The current report has a number of strengths and weaknesses. These will be discussed according to whether the report:

- addresses the objectives of the business;
- contains appropriate information for decision-making; and
- is well-presented.

The mission of Achilty can be broken down into a main aim with supporting objectives. The primary aim is to deliver long-term returns to shareholders through a combination of sustainable growth in earnings per share and payment of cash dividends. This is to be achieved by:

- Improving product ranges;
- Increasing the number of customers and their individual spend;
- Focusing on customer service; and
- Improving profitability by efficient cost control in purchasing and inventory management.

The report does provide much information which is useful to assess the achievement of the company's objectives. However, it is not complete or always clear on all objectives.

1. Information on the primary objective is presented as the growth figures for EPS and dividends. However, the sustainability of these is not clear from the report. A percentage measure of the return on capital for shareholders may give them a simpler and clearer view of the overall performance (see later discussion on return on capital employed and total shareholder return). However, without forecast figures it is difficult to give a view of whether these are 'long term' returns.
2. The first subsidiary objective on improving product ranges can be inferred from revenue growth and other measures relating to the customer perspective such as number of active customer accounts and their average spend. However, these measures are not precise as they are also affected by service levels.
3. The second subsidiary objective is clearly measured under the customer response heading. However, rather than seeking to only increase the number of accounts, it would be more useful to measure the active accounts otherwise resources may be poured into account holders who never purchase.
4. The third subsidiary objective is indirectly measured through revenue growth and the measures noted in point 2. It is specifically addressed in meeting of delivery deadlines. However, there is no indicator for the website experience, for example, relating to its ease of use. As this is the primary contact point with customers, it should receive more attention.
5. The final objective is partially measured through gross margin for purchasing. There are no inventory control indicators offered, such as relating to obsolescence or write-offs.

Other points in meeting best practice in reporting

1. The report is usefully broken into different perspectives similar to the balanced scorecard (financial, customer and internal process). No mention is made of innovation and learning which is unusual for a company dependent on technology but it is not a strategic objective and so this seems reasonable.
2. At present, the financial part of the report breaks the sales into four areas and in light of the creation of teams at Achilty, it should be assessed whether the board requires team performance or this broader view of the performance by product types. Considering profitability in these areas, operating margins should be calculated for each product type if they are considered important enough to warrant separate disclosure.
3. Efficient cost control is measured through operating margins and it may not be possible to allocate other operating costs to specific areas to give margins for each area. However, there appears to be no use made of the detailed operating costs nor are they mentioned in the objectives and so these might all be taken under one summary heading 'other operating costs'. Also, if cost control is of major importance, then variances to budget may assist the board in monitoring and controlling them.
4. The mix of financial and non-financial indicators gives the board a good vantage point to judge customer satisfaction. However, the lack of any external benchmarks such as industry growth and margins might explain why other similar companies are outperforming Achilty.

The current commentary is succinct and in a sensible priority order given the order of Achilty's objectives. However, it does not address all of the objectives and the comments are sometimes vague.

The first point does address the primary objective but the claim that performance is satisfactory when the test is that growth occurs and, currently, performance is static seems questionable.

The second point measures the attractiveness of the product range through the sales growth and this appears a reasonable financial measure.

The third point is indirectly related to customer satisfaction which is notoriously difficult to measure. However, combined with the growing sales, the comment about average spend and growing number of customers appear to indicate satisfaction. However, a better measure might consider the number of active accounts rather than all accounts and, in fact, this number has fallen in the year from about 594,000 to 588,000 but this is covered by the large rise in average spend per purchase. Average spend per customer in the period is a better measure of customer satisfaction than average spend per purchase.

The final point on delivery times could also be considered part of the customer satisfaction measurement. This means that the final objective relating to efficiency is not commented upon.

(ii) Other proposed performance indicators

Calculations:

	20X5	20X4
ROCE (operating profit/(total assets – current liabilities))	39.3%	40.5%
Inventory days ((inventory/cost of sales) x 365)	31	34
Receivables days ((receivables/revenue) x 365)	2.7	2.8

Return on capital employed is a measure used by businesses to identify the return provided to the capital providers overall. At Achilty, the primary objective relates specifically to shareholder returns and so return on equity may be a better alternative. The result requires comparison with other similar companies in order to be understood but appears to represent a strong return compared to likely costs of capital. However, this may not be a particularly useful measure for a company such as Achilty which depends heavily on intangible assets.

Total shareholder return (TSR) would fit very well with the primary objective as a good summary for the principal stakeholders. However, it is not possible to calculate TSR as no share price has been supplied in order to gauge the capital gain/loss nor the dividend yield, which are needed for TSR.

Inventory days measures the amount of stock carried and so relate to the final subsidiary objective of efficient inventory control since a lower inventory requires lower working capital to support it. It is likely that this measure varies widely during the year as clothing is a seasonal business.

Receivables days estimates the length of time it takes to collect revenue from sales. As Achilty is a website business, it will have no cash sales and the time it takes to receive funds will be dictated by the customers' credit card firms or banks. It is unlikely that Achilty can change this situation and so it may not be a relevant measure.

(iii) Changing role of the management accountant

Burns and Scapens studied how the role of the management accountant would change. They noted that the management accountant has become more of an internal consultant advising different managers rather than working as a specialist within the finance department. They described this new role as being a hybrid accountant, where the focus is primarily on business support and financial control. This is contrasted with the traditional view where accountants were independent from operational managers in order to allow them to objectively judge and report their accounting information to senior management.

The three drivers of this change identified by Burns and Scapens are technology, management structure and competition. However, it has also been commented that many accountants believe that the need for change in the management accountant's role may only be a passing fashion although it has appeared to have persisted.

Taking the drivers for change in turn and beginning with technology, a significant change has occurred in the quality and quantity of information technology. In the past, the management accountant working in the finance department would be one of the few people in the organisation who had access across all the IT systems in the different functions of Achilty. The information which was generated would often be used to prepare financial reports for management. Now, however, systems, such as the new ERPS, allow users across the organisation to input data and run reports giving the type of analysis once only available within the finance function. As a result, the management accountant now acts as another user of the system. It will be critical to the success of the ERPS that the hybrid accountant successfully assists the managers in getting the right information from the large volume which will be available from the ERPS and data warehouse.

Second, changes in management structure can mean that the role of the management accountant needs to change. For example at Achilty, responsibility for decision-making has often moved from functional department heads to the cross-functional team leaders. These leaders will be making budgeting decisions and producing pricing and profit forecasts with the assistance of the hybrid accountant. The hybrid accountant will link the teams with strategic decision-making helping to ensure that there is effective, autonomous team management which is aligned with the strategic objectives of the whole business.

Finally, Burns and Scapens identify that the competitive environment also drives change in the role of the management accountant. The need to catch up with competitors is one of the main objectives of the IT changes. The more traditional accountant's focus had often been short term but this is changing with the use of more long-term measures of performance. This is certainly the case at Achilty, where a principal aim is the long-term growth for the company. This will entail the accountant understanding the needs of the particular manager and then working with them to extract valuable reports from

the ERPS. This may require the development of different performance measures beyond the traditional measure of profit. For example, it may be important to build customer loyalty initially before building profitability and so understanding the point at which a customer can be moved from initial loss-leader offers on to more profitable sales will be key to Achilty's success. Eventually, it will be this knowledge which will become amongst the valuable commercial secrets for Achilty.

(iv) Data warehouse

The proposed new information system will collect data from customers' website visits and store it for data mining purposes in a data warehouse. The capital required will be significant at \$50m and there will also be considerable annual running costs. However, the benefits could be significant although measuring them will be difficult as they depend on influencing customer behaviour and so are not simply cutting costs.

Data mining involves seeking relationships, for example, geographical preferences for products; links between price offers and volumes sold; products which are often bought together; seasonality of product purchases.

Opportunities

These relationships can then be used to create opportunities to address the objectives of Achilty:

- Improving product ranges by knowing customer preferences. A problem in most retail businesses is the large size of the product portfolio since more products (and potentially more suppliers) require more effort to manage. The new system may allow a Pareto-style analysis where the least profitable non-essential products are identified and can be cut from the product range;
- Increasing the number of profitable customers and their individual spend by linking lower margin offers to high margin purchases and, also, identifying the most profitable customers;
- Focusing on customer service by identifying the design factors in the website which generate most sales; and
- Improving profitability by efficient cost control in purchasing and inventory management by forecasting more accurately and quickly demand changes so that excess inventory is not purchased or held. Also, there will be cost savings by more efficient advertising. The data on each individual customer can be searched to profile customers and identify their individual preferences. Marketing can then be targeted to groups of customers using products which they commonly buy.

Risks

As can be seen from the \$50m cost, systems which can handle the volumes of data being produced are expensive. In fact, this level of expenditure would almost double the existing non-current asset base of Achilty. Although costs in this area are falling, the volumes of data available are rising and, also, Achilty's competitors will be spending to achieve advantage in this area too. This project will require a large initial spend and then constant on-going spending to maintain a position in the competitive environment.

The storage of personal information (e.g. about customers, especially their payment details) is an active area of new laws and regulation. Breaking these rules can be punished in the legal sense and by loss of reputation. In particular, theft or loss of personal data can lead to civil legal action and bad publicity.

The data obtained from qualitative sources (such as social media) can be imprecise or inaccurate and lead to inaccurate conclusions. Some data collected may be incorrect. This is sometimes referred to as the veracity problem. Also, in large volumes of data, some data may become out-of-date quickly and so constant monitoring of the database will be required to avoid this.

2 (a) Selection of appropriate measures and targets

Value drivers create long-term value. Totaig is facing competition from overseas businesses, which will soon be able to produce at a similar unit cost to Totaig and produce items of comparable quality. The unit cost of production and product quality would be value drivers for Totaig and targets should be set for these two measures.

Targets should be both financial and non-financial. This will ensure that there is not too much emphasis on financial targets, which tend to be backwards looking, rather than relating to the present value of future cash flows, which is the focus of value-based management (VBM).

The existing targets of return on investment (ROI) and operating margin are backwards looking. They will also discourage managers to make investments, for example, in product development, which might be detrimental to Totaig's long-term performance. This is because investments in new products will reduce both of these measures in the short term.

Having targets related to product quality would ensure that the business does not focus too much on cutting the unit cost of production, for example, by using cheaper, lower quality materials. It appears that to create long-term value, Totaig must be competitive on both unit cost of production and product quality.

Timescales to which the targets should relate

Totaig must set short-term and long-term targets, which should be linked together, for key value drivers. Competitors will be able to produce at a similar unit cost to Totaig within a year. A suitable short-term target would therefore be to reduce unit production costs within that timescale. As VBM is concerned with long-term value, Totaig should set longer term targets relating to quality in anticipation of the new competitors' ability to improve on this aspect within three to five years.

The possible need to invest heavily in product development and make acquisitions will probably require longer term targets to be set.

Levels in the business to which the targets should relate

Value can be created at all levels in the company and targets should be set according to the different layers of management. Targets relating to unit cost of production and product quality are under the control of operational managers and these would be suitable for this level of management.

Targets relating to possible future acquisitions are under the control of the directors, who are the strategic decision makers.

Difficulties in measuring and managing performance using VBM

Totaig will require good information to implement VBM. It may be difficult to identify value drivers and reporting systems need to be able to provide the information which is required. Currently, IT systems are basic and outdated for a business of its complexity. This may mean that it is difficult to identify value drivers for the setting of targets. The implementation of VBM may require significant investment in IT systems to measure performance against targets and take up management time. The costs of implementing VBM may exceed the benefits.

The operational managers are unlikely to have any experience of VBM since most of them joined Totaig, which itself has never used VBM, when the business first started. They will require training on VBM if they are to understand the targets set. For example, new value-based performance measures, such as EVA™, will be needed, which will be unfamiliar to directors and managers in the business.

Using VBM to manage performance at Totaig will require a culture change amongst all employees, who will need to work towards creating shareholder value. The directors will need to demonstrate commitment to the use of VBM in order to motivate operational managers to accept the change. Currently, some directors at Totaig seem not to be convinced of the usefulness of the approach.

It may be difficult to measure economic depreciation, for example, or to determine whether and for when the anticipated heavy investment in product development will create value. These difficulties will affect the reliability of performance measures for value, such as EVA™, in managing performance.

(b) Calculation of EVA™

	\$'000
Profit after tax	6,630
Advertising costs expenses	450
Decrease in allowance for doubtful debts	(200)
Interest net of tax (1,500 x 78%)	1,170
NOPAT	<u>8,050</u>
	\$'000
Opening capital employed	88,944
Opening allowance for doubtful debt	500
Adjusted opening capital employed	<u>89,444</u>
	\$'000
NOPAT	8,050
After-tax WACC x adjusted capital employed (9% x 89,444)	<u>(8,050)</u>
EVA™	<u>0</u>

As EVA™ is zero, Totaig has neither created nor destroyed value.

Difficulties of using EVA™ as a performance indicator

The cost of capital can be difficult to measure reliably and can change over time. Totaig's current WACC is 9%, but due to the existence of floating rate loans and changes in the market value of debt, the WACC will not remain constant. The cost of equity may also change over time if shareholders require different levels of return to reflect changing business or financial risks, for example.

It is assumed, that at Totaig, economic depreciation and accounting depreciation are the same. A difficulty in using EVA™ is that it is hard to estimate economic depreciation. Also, as the directors are considering changing the depreciation policy for the year ended 30 June 20X6, this may distort comparisons of EVA™ between different years.

The calculation of EVA™ can be complex and poorly understood by managers. If managers do not understand the measure, they are less likely to be able to achieve targets for EVA™ as they will not know how. There may be a large number of adjustments to make in calculating EVA™. Currently at Totaig, only a few adjustments are required. If the business starts to make acquisitions and invest heavily in product development, there may be more adjustments to be made in future calculations.

As EVA™ is an absolute figure rather than a percentage, it is difficult to compare with businesses of different sizes, for example, if Totaig was to undertake financial benchmarking against its competitors.

EVA™ uses historical data which may not be relevant to future performance. It may be hard to determine if and when advertising expenditure is value adding, for example.

- 3 (a) Just-in-time (JIT) is defined as a system which has the objective of producing or procuring products as they are required and not for inventory purposes. Coruisk is being asked to produce to JIT principles, the basis of which is where production is driven by demand for the finished product. Each part of the production process is therefore determined only by what is required for the next stage of production.

Currently, it is clear that Coruisk is not ready to produce to the JIT principles which Ericht is requesting and that Coruisk needs to make fundamental changes to its operations to be able to do so. These changes address the following areas:

Purchasing

Coruisk has too many suppliers at present. Adhering to JIT production principles involves reducing suppliers to a minimum and establishing strong relationships with them, based on flexibility and understanding of each other's needs. Coruisk's four main suppliers are too many to develop this type of close relationship with, especially since these suppliers operate to different working practices. The effect of this, from a JIT production perspective, would be that Coruisk would require to undertake discussions with each supplier about the fundamental changes which would be required for the supply of goods in a JIT production environment. Coruisk would not have the time to do this with all four suppliers nor would the supply of goods from four companies be desirable. Coruisk should choose two of the companies it feels it has the strongest relationship with and initiate discussions with them around its needs when producing to JIT principles.

When producing to JIT principles, suppliers will effectively be an extension of Coruisk's own business. As such, Coruisk must be aware of and must understand how changes in suppliers' operations will affect Coruisk's own operations. It is clear that Coruisk does not currently have this level of relationship. The supplier who is seeking to optimise the cost of its delivery vehicles, for example, is undertaking practices which are very much opposed to the type of practices which Coruisk will need when it is producing to JIT principles. JIT only produces goods when needed by the next stage in the process (the 'kanban' principle) and Coruisk would need its supplier to understand this and be willing to supply it with goods accordingly. This would clearly be impossible for a supplying company which is insistent on supplying full-load quantities only.

Coruisk must also ensure that the raw material it receives is defect free, unlike the goods which are received currently from one supplier. Having the wrong quantity of material or material which is sub-standard, is unacceptable if Coruisk is producing to JIT principles as such problems will mean an inevitable delay in supplying goods to Ericht. Coruisk will therefore need to spend time in defining and agreeing requirements with suppliers to clarify requirements in terms of both quality and quantity and may need to also develop improvement teams with their suppliers to ensure that the raw material it receives is reliable.

Coruisk will most likely need to undertake official supplier assessments as part of this as such assessments and on-going reviews are a vital part of ensuring the quality of the raw material in a JIT production system.

Production

The manner in which Coruisk produces its goods will need to change significantly. Efficiency can no longer be measured by volume of output. Ericht will seek supply of goods as and when required in order to avoid obsolete inventory and Coruisk must adapt to this. The concept of producing as much as possible is one which Coruisk may struggle to abolish. It is clearly embedded in the culture of the organisation with its importance confirmed by the awarding of a bonus based on the quantity of goods produced. Presumably this bonus has been awarded without taking account of any goods which have been rejected and it is possible that the current system is encouraging production to be undertaken quickly with rejected goods seen as an acceptable part of the production process.

Producing to JIT principles would demand a fundamental rethink at Coruisk in terms of the way production runs are determined. Of most significance, initially, is that such runs would be shorter as all parts of the production process should match the rate at which Ericht is demanding the final product. For example, Coruisk can no longer focus on producing large runs of one dress. Necessary changes here may involve the development of machine cells. Such cells are composed of groups of team members to facilitate operations by eliminating setup and unneeded costs between operations. Cells might be designed for a specific process or part of a product. In Coruisk's case, this may mean workers being grouped together by the dress they are producing at that time rather than as part of a long production run. Enhancing worker flexibility, and developing their skillset in several areas of the operation, may be the best way to react to this new environment where demand is much more unpredictable. This may also involve changing the layout of the factory to try to ensure production is as flexible as possible.

Coruisk cannot supply faulty goods to Ericht and the previous belief that a 5% rejection rate was acceptable practice must be replaced by an understanding of the zero defects philosophy. This will require more fundamental change as quality of the finished good will need to be assured throughout the production process and not simply inspected at the end. This will most likely involve an initial discussion with Ericht as to the quality level it is seeking and, potentially, a redesign of the current processes and systems to which Coruisk is operating. For example, prevention and appraisal costs would be expected to increase as Coruisk would have to establish both goods inwards testing procedures and testing procedures for work in progress. There would also be a need for Coruisk to develop a culture where workers are flexible in terms of their capabilities and trained much more in identifying defective products (and ensuring they do not progress further on the production line) than in ensuring the maximum quantity of output is produced.

(b) Cost of quality report

	\$'000	\$'000	% of revenue (\$4.5m)
Costs of conformance:			
Prevention costs:			
Preventative maintenance	8		
Total		8	0.18%
Appraisal costs:			
Quality control supervisor	35		
Quality audit	2		
Total		37	0.82%
Costs of non-conformance:			
Internal failure costs:			
Rework cost	72		
Machine downtime	38		
Scrap	58		
Total		168	3.73%
External failure costs:			
Cost of complaints from Ericht	135		
Foregone contribution from lost sales	85		
Product recalls and cost of good returned	180		
Total		400	8.89%
Overall total	613		13.62%

The results of the cost of quality report are representative of a company which undertakes quality control as opposed to quality assurance in that the majority of the costs relate to failure, either of an internal or external nature. Additionally, since the costs have been amassed for the first time for this task, it is possible that they are inaccurate and probably understated as some costs are likely to have been omitted.

Costs of conformance

Coruisk will need to invest more in quality audits and, possibly, in testing equipment to ensure that the product is being produced to the right standard as it progresses through the production process. Whereas there may still be a requirement for final inspection, it should not be someone's full-time occupation and the supervisor may be more meaningfully deployed elsewhere for at least part of his/her role. These practices should reduce both the internal and external failure costs, particularly those of scrap and rework, which both appear very high currently. Machine downtime is perhaps due to the very little amount currently spent on preventative maintenance and the cost of internal failure should also fall with enhanced maintenance.

Costs of non-conformance

The significant external failure cost is of most concern. To operate to the JIT principles which Ericht is seeking, Coruisk has to ensure that these costs are as close to zero as possible. It is concerning, for example, that 3% (\$135,000) of the revenue figure is taken up by dealing with complaints from Ericht. Some of this may be due to misunderstandings between the companies which could be rectified by the closer working relationship that JIT production principles demand. Nevertheless, it is clear that Coruisk must ensure that it addresses these costs as it is completely reliant upon Ericht for its business.

The amount of money attributed to product recalls and cost of goods returned (4% of the revenue figure) is concerning as this suggests that defective products have not been detected in Coruisk's current quality control system. This may be due to the bonus system currently in place and the desire to produce quantity, quickly, and not quality. A change to the production process should address this but it could be met with hostility if the workers' bonus is under threat and Coruisk may need to introduce an alternative bonus scheme based on a quality-related metric which specifies, for example, the percentage of defects detected.

The forgone contribution from lost sales is also concerning as it indicates that Ericht has alternative supplier(s). It is possible, given the cost detailed of dealing with complaints from Ericht, that this figure is considerably higher than Coruisk is estimating.

The balance of the costs must change so that the majority of Coruisk's costs are prevention and appraisal (costs of conformance) and not costs of internal/external failure (costs of non-conformance). Coruisk must ensure that it is producing to the standard which Ericht requests at the first time of asking and therefore Coruisk must ensure that it provides more training for staff, more preventative machine maintenance, more supplier appraisal and vetting as mentioned previously and moves to encourage a culture of zero defects with no faulty goods moving forward in the production process.

- 1 (i) 1 mark per point – must be based on scenario information
Assessment of whether report meets mission – up to 8 marks
e.g. Clear statement of inadequacy for mission, addressing each of the elements of the mission, information for relevant decision-making by board
Other points – up to 5 marks
e.g. Answering where growth is coming from (if not already discussed), lack of information on capital (for return on capital for shareholders), data overload, general presentation
Commentary – up to 5 marks
Maximum 15 marks
- (ii) Comments on each new indicator – up to 2 marks each
– Return on capital employed
– Total shareholder return, which comes from share price change and dividends received
– Inventory days
– Receivables days
e.g. Calculation where possible (1 mark each), reason for not calculating TSR, link to a specific objective of Achilty
Maximum 8 marks
- (iii) General commentary on Burns and Scapens' work – up to 3 marks
Up to 4 marks for each heading (with suitable links to Achilty's situation):
– Technology
– Management structure and
– Competition
Maximum 12 marks
- (iv) 1 mark per point on the following:
General description and definitions of data warehousing and mining – up to 2 marks
Opportunities and risks – up to 11 marks
Maximum 11 marks

Professional marks – 4

Total 50 marks

- 2 (a) 1 mark per point (under the four headings):
– Selection of measures and targets
– Timescales
– Management levels
– Difficulties
Maximum 15 marks
- (b) Calculation of NOPAT:
Advertising cost – 1 mark
Decrease in allowance – 1 mark
Interest – 1 mark
Calculation of adjusted capital employed – 1 mark
Calculation of EVA™ – 1 mark
Conclusion – 1 mark
Difficulties of EVA™ – 1 mark per point, up to 5 marks
Maximum 10 marks

Total 25 marks

- 3 (a)** Definition of JIT – up to 2 marks
Purchasing and production – 1 mark per point up to 13 marks
Maximum 13 marks
- (b)** Calculations:
Prevention costs – 1 mark
Appraisal costs – 1 mark
Internal failure costs – 1 mark
External failure costs – 1 mark
% of sales – 1 mark (OFR)
Comments – up to 7 marks
Maximum 12 marks

Total 25 marks