IMPLEMENTING A BALANCED SCORECARD: AN IRISH EXAMPLE

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INTRODUCTION

The focus of this paper is the implementation of the Balanced Scorecard (BSC) within an Irish division of a multinational company. The division operates within the semi-conductor industry and, for reasons of confidentiality, is subsequently referred to as "ECD" with the subsidiary and parent companies being referred to as "Elector". The reasons for developing the BSC, together with reasons for adopting and discarding particular measures are presented.

In modern organisations the importance of an holistic performance measurement system has been borne out by various research studies. For example, in the U.S., Lingle and Schiemann (1996) compared business results from companies with balanced measurement systems to companies with financially orientated measurement systems. They found that organisations which are stellar financial performers and adept change leaders, distinguish themselves by the following characteristics:

- Having agreed-upon measures that managers understand
- Balancing financial and non-financial measures
- Linking strategic measures to operational performance
- Clearly communicating measures and progress to all employees.

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The importance to managers of having a "balanced" measurement system has led companies to develop a variety of corporate scorecards (see, for example, Epstein and Birchard, 2000). In addition, recent research reveals that many institutional investors are also basing their decisions, in part, on a review of companies' non-financial performance. For example, (Daly, 1996) argues:

> "Preliminary evidence from field research indicates that analysts who focused on non-financial issues have increased accuracy in their earning estimates and a strong correlation with growth expectations." (p. 65)

To date, little research has been published in Ireland on performance measurement systems in Ireland. Of these, Clarke (1997) discovered that measures relating to, for example, customer satisfaction together with innovation and learning, were not commonly generated by the accounting measurement system. Clarke and Toal (1999) found, in the four companies they studied, that their performance measurement systems were heavily weighted in favour of traditional financial metrics. Non-financial measurements, where they existed, did not appear to be linked to strategy in an explicit manner. Pierce and O'Dea (1998) reported similar findings in relation to the specific use of the *Balanced Scorecard*, although they found use of non-financial measures in general.

This paper is divided into two sections. The following part presents a brief literature review on the *Balanced Scorecard* material in order to place this pilot study in context. This is followed by the empirical section that outlines the processes and activities behind the development of the BSC within the ECD division of an Irish subsidiary of a multinational company.

THE BSC FRAMEWORK

Financial accounting metrics can be described as "lagging" measures of performance. While important in one context, they are also deficient since they do not indicate to managers what must be done to improve performance. Therefore, managers need a range of operational or leading measures in order to drive performance throughout the firm. The integration of both financial and non-financial measures of performance has been proposed in the form of a corporate or balanced scorecard. The *Balanced Scorecard* was developed as a result of a research project in 1990 carried out by Professor Robert Kaplan

from Harvard Business School and David Norton, a management consultant, in conjunction with 12 American businesses that were regarded as being at the leading edge of performance measurement. The actual title, the Balanced Scorecard, was a variation on the title – Corporate Scorecard – that was used within one of the companies studied (Analog Devices). The study was grounded in the belief that existing financial measures were hindering corporations' abilities to create future economic value.

Perspectives of the BSC

The term 'balanced' reflects the balance between financial and non-financial measures, lagging and leading indicators and between external and internal performance measurement perspectives. The BSC focuses on four different perspectives that are linked in a cause and effect relationship. These are referred to as the Financial, Customer, Internal Business and Learning and Growth perspectives. While these represent the scorecard perspectives developed by Kaplan and Norton, companies have since then adapted their scorecards in a variety of ways (see, for example, Epstein and Birchard, 2000). Within each perspective there are a number of goals or objectives and related performance measures or metrics. In turn, targets or standards are developed for each measure. After implementation, measures are monitored for a given time period and subsequently initiatives are rolled-out to bridge the gap between actual and target metrics. It is in this last phase, that the BSC moves from being a pure measurement tool to a management tool.

Financial Perspective

The BSC highlights the financial perspective since financial measures are valuable in summarising the readily measurable economic consequences of actions already taken. Financial performance measures indicate whether a company's strategy, implementation and execution are contributing to bottom-line improvement. Financial objectives typically relate to profitability, or more recently, economic value added (EVA). Further objectives may include sales growth, cost control or cash flow generation.

Customer Perspective

The customer perspective focuses on how the organisation should look to its customers if it is to succeed. With this perspective, manag-

ers identify the customers and markets in which the business unit will compete and the measures of performance to be used in these targeted segments. Core outcome measures in this perspective include customer satisfaction, customer retention, customer acquisition, customer profitability and market share.

Internal-Business-Process Perspective

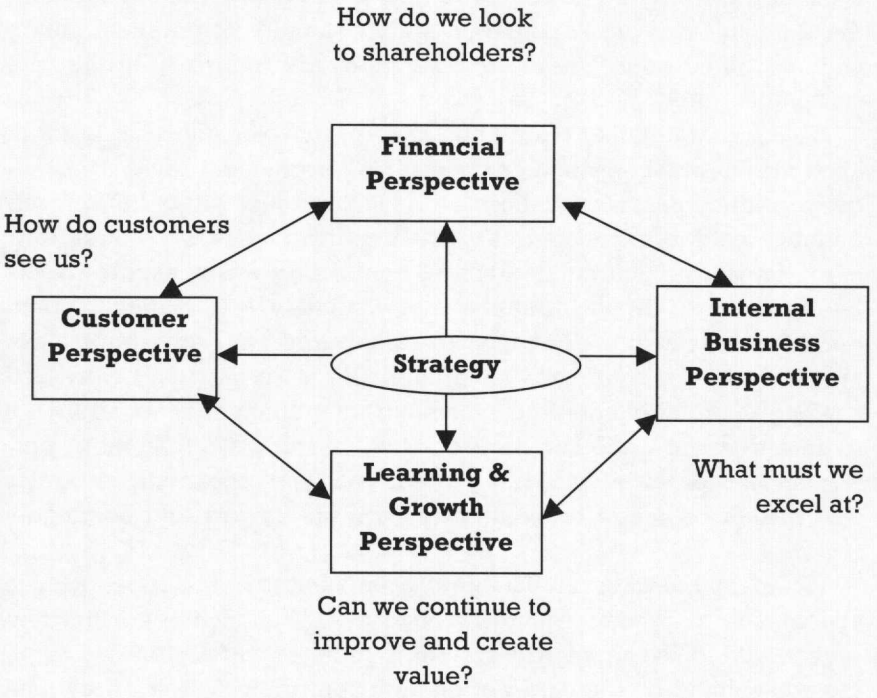
In this perspective, managers identify the internal processes in which the organisation must excel in order to add value to customers and generate financial returns to shareholders. The internal-business-process measures focus on the internal processes that will have the greatest impact on customer satisfaction and achieving an organisation's financial objectives. As Kaplan and Norton (1992) remark

> "A failure to convert operational performance, as measured in the scorecard, into improved financial performance, should send executives back to their drawing boards to rethink the company's strategy or its implementation plans" (p. 78)

Learning and Growth Perspective

The financial, customer and internal-business process perspectives usually reveal large gaps between the existing capabilities of people, systems and procedures and those required to achieve breakthrough performance. To close these gaps, businesses must invest in retraining employees, enhancing IT systems and aligning organisational procedures and routines. Frequently used measures relate to employee satisfaction, employee retention and employee productivity. The traditional Balanced Scorecard is presented in Exhibit 1.

EXHIBIT 1: THE BALANCED SCORECARD (KAPLAN AND NORTON, 1992)



Linking the BSC to mission, strategy and performance measures

The starting point for all BSC implementation efforts should be the company's strategic intent. Johnson and Scholes (1997) define strategy as the broad categories or types of action to achieve objectives. One benefit of the *Balanced Scorecard* is that it translates objectives and resultant strategy into action using performance measures across a balanced set of perspectives. It begins with a purpose for the company and eventually works down to a set of measures that help the company achieve its long-term goals. The BSC is more than a collection of critical indicators and key success factors. The multiple measures on a properly constructed scorecard should be linked in a cause and effect relationship.

Practical Scorecard Implementation

Despite the simplicity of the basic BSC idea one should not overlook the difficulties of implementation and possibility of potential failure within organisations. These considerations are important in the context of this study.

According to Otley (1987) the three basic elements of a performance measurement system are measures, targets and rewards. In order to reduce the risk of failure of the BSC project within ECD, it was initially decided to concentrate only on performance measures. However, there is no guarantee that first-draft scorecard measures are the best indicators of performance, nor that they will maintain open-ended validity in future financial years. It is generally advised to leave measures on the scorecard for a minimum of six months before discarding them. In effect, if no cause-and-effect linkage is found then it is time to choose another performance measure. Once a set of performance measures had been identified and accepted, progress would then be made on setting appropriate targets and contingent rewards.

Ultimately, successful BSC implementation is based on employee acceptance, commitment and involvement. Without the correct employee attitude, a scorecard system is doomed to failure. This sentiment is echoed by a number of the key contributors in this area. Lingle and Schiemann (1998) underscore the need to involve those closest to the action in defining performance measures and setting the related targets. The performance measurement must be tied eventually to compensation.

It should be acknowledged that data collection and processing costs money and managers often suffer from "information overload". Thus it is important to keep the number of measures to about 10 – 20 since, as managers increase the number of measures, they get decreasing marginal returns. The majority of scorecard proponents admit that it does take time for operational improvements to show up on the bottom line.

PROJECT: BSC IMPLEMENTATION

Background to the BSC at Elector and its ECD Division

September 30th 1998 was a dark day at corporate headquarters of Elector. The President reported world-wide year-end net income (after Extraordinary items and taxes) for 1998 of less than 1% on sales – effectively a 50% reduction compared with the previous year. Moreover, overall sales (in monetary terms) had increased by only 10%. The management of Elector had every intention of turning this situation around.

Elector Ireland

Elector has been registered in Ireland for over 50 years and has played an active role in Irish economic development with major projects including construction of many of the ESB's power stations and the supply of overhead line equipment for the DART rail system. More recent significant projects involved major companies such as ESAT Digifone and the ESB. Elector Ltd. is a wholly owned subsidiary of a multinational corporation (Elector). In fiscal year 1998, Elector Ireland had a turnover in excess of £100 million and employed over 600 people. Earlier that year a number of local initiatives intended to bridge the gap between short-range operational decision-making and long-range strategic planning, were introduced. These included the European Foundation for Quality Management (EFQM) Excellence Model (towards the end of 1998). The model although a very good guide to improving business processes, and a useful source of benchmarking data, is not designed to help an organisation implement its strategy. Hence the interest within Elector and its ECD division in the *Balanced Scorecard* in order to provide a link between strategy and the process detail of the EFQM model.

ECD is a division of Elector comprising the three functional areas:

- Customer Service/Logistics
- Commercial
- Sales/Marketing

The division has enjoyed double-digit revenue growth rates over the last three years while growing from 7 to 12 people in the same timeframe. The customer services/logistics function within ECD is in-

volved with the ordering, rescheduling and expediting of component shipments to end-customers from multisite production facilities in Europe, Asia/Pacific and the United States. The commercial function is wholly responsible for all accounts payable, accounts receivable, invoicing (with related debit and credit notes) and financial reporting to business administration groups in Ireland and in some other countries. The sales/marketing function is self-evident.

A two-day offsite brainstorming session facilitated by an outside consultant, identified a number of areas for improvement (AFI's) and consequent initiatives to be followed through by the end of the fiscal year, 31st. September 1999. These initiatives, spanned the above three functional areas and highlighted areas like working capital management, customer diversification, market share growth and cross-selling as key AFI's. The *Balanced Scorecard* was the vehicle subsequently chosen to act as platform for these and further initiatives.

Agreeing Strategic Intent and the Customer Survey

Hermanson & Hermanson (1997) propose a stepped-approach to BSC development tracing through a company's vision, strategy, critical success factors and performance measures. To ensure alignment with the company's mission statements, ECD's vision and long-term strategy was discussed with senior management and reduced to three simple, yet complementary statements of strategic intent, as follows:

1. Increase customer base

Adding new accounts to ECD's portfolio will allow the division to diversify away a portion of revenue and earnings volatility

2. Increase market share

Seek increased aggregate market share by aiming for a greater share of existing customers' wallets; this will satisfy ECD's revenue and earnings growth expectations while improving the profile of the three component groups as seen from HQ

3. Increase cross-selling

Leverage of weaker product lines into existing accounts.

Customer Survey

The entire customer contact database was trawled for a list of representative companies, both actual and potential customers, to survey. A total of 109 addressees were selected, representing about 90% (in volume) of the customer base. Preliminary discussions began with customer service people to shortlist selection criteria to be considered for inclusion in a customer survey to be sent to key engineering and procurement contacts in a sizeable, representative cross-section of existing customers and targeted potential customers. In total, twenty-two dimensions were shortlisted and, after discussion and review, were condensed to the following 15 items:

1. Product value for money
2. Product quality – Defective Parts Per Million
3. Product lead-times
4. On-time delivery
5. Request for Quotation turnaround time
6. Product sample support
7. Customer visit frequency
8. Trade/press advertising
9. Product mail shots
10. Accessibility
11. Emergency reaction time
12. Technical presentations
13. Technical support
14. Order confirmation time
15. Senior management interaction

The next stage was to survey customers and ask them to rank these criteria in terms of overall importance to their own firms and also to indicate their perception of ECD's performance in those areas. To increase the profile and likely success of the customer survey, two approaches were pursued, as follows:

(i) A preliminary letter was sent to all 109 addressees, advising them of the impending customer survey approximately 1 week before the actual survey was forwarded

(ii) A prize of a cordless phone was offered to stimulate the response rate to the survey.

The overall return rate (62%) turned out to be well above expected levels. The results of all returned correspondence were analysed to uncover emergent patterns among feedback groups and areas of critical importance for them, juxtaposed with Elector's own ranking against these same criteria. Each item was ranked on a scale of 1 to 5 (with 5 being most important). The gaps between the absolute importance of criteria as assessed by customers of Elector' and their assessment of ECD's performance are highlighted in Exhibit 2. This gap analysis represents the key areas for measurement and subsequent action where significant deviations were visible. Thus, the most obvious gap relates to on-time delivery ranked as very important (4.92) by customers who then ranked ECD's own performance at a much lower level (3.91).

EXHIBIT 2: CUSTOMER SERVICE CRITERIA AND RANKINGS

Various dimensions of assumed importance by customers	**Absolute importance**	**ECD's performance**
Product value for money	4.62	3.74
Product quality – Defective Parts Per Million	4.95	4.55
Product lead-times	4.81	3.36
On-time delivery	4.92	3.91
Request for Quotation turnaround time	4.66	3.81
Product sample support	4.23	4.00
Customer visit frequency	3.54	3.23
Trade/press advertising	2.44	3.38
Product mail shots	2.72	3.08
Accessibility	4.50	4.05
Emergency reaction time	4.78	3.58
Technical presentations	3.61	3.58
Technical support	4.43	4.06
Order confirmation turnaround time	4.19	3.87
Senior management interaction	3.57	3.41

Brainstorming for Objectives and Measures

It was decided, after initial information sessions were held and agreement was reached on the appropriateness of the BSC, that brainstorming sessions would be held with a view towards reaching consensus on and ownership of performance drivers and resultant metrics for inclusion in the various sections of the BSC. Sessions were conducted over the course of one week, with a total of some 49 man-hours going into discussion of objectives, shortlisting measures and refinement of metrics before proceeding to implement within the BSC framework. In turn, performance measures for each of the three functional areas within ECD were established as follows:

Customer Service

The customer service function within ECD is primarily concerned with order receipt, placement and product delivery. Customer service activities included in the customer survey were:

- Accessibility (primarily the responsibility of Customer Service but also applies to Commercial and Sales/Marketing functions);
- On-time deliveries
- Product lead-times
- Order confirmation turnaround time
- Emergency reaction time

Considered objectives, possible measures, metric owners (where appropriate) and barriers to implementation ('issues') were agreed with "ownership" of each section being assigned to responsible individuals, indicated in Exhibit 3 below:

EXHIBIT 3: CUSTOMER SERVICE ACTIVITY AFI'S

OBJECTIVES	SUGGESTED MEASURES
Increase On-Time Deliveries	1. Requested v. actual delivery dates 2. Confirmed v. actual delivery dates
Increase Customer Satisfaction	Customer satisfaction index (CSI), based on performance of criteria in Exhibit 2

Commercial

The main financial indicators historically used within ECD are sales, new and open orders, gross profit and net operating profit before tax. These are reviewed monthly within the division, and quarterly at senior management level against annual plans and quarterly revised plans. In order to determine appropriate financial measures the EVA driver tree (similar to the DuPont pyramid of financial ratios) was used. A subset of these financial measures was chosen for inclusion in the BSC and are indicated in Exhibit 4 below:

EXHIBIT 4: COMMERCIAL ACTIVITY AFI'S

OBJECTIVES	SUGGESTED MEASURES
Increase Economic Value Added (EVA)	EVA Year-To-Date (YTD) & Month-on-Month (MOM): Actual Vs. Plan
Increase Sales	Sales growth YTD and MOM: Actual Vs. Plan
Maintain healthy order book	Ratio of order value unfilled to invoiced sales
Decrease Credit allowed to customers	Debtor days
Increase Share of Customers' Wallet	1. Sales by customer Vs. Total Available Market (TAM) 2. Sales by customer Vs. Servable Market (SM)
Increase Cross-Selling across 3 Component Groups	1. Differences between ECD's share of TAM for individual component groups' for YTD and MOM sales by customer 2. Differences between ECD's share of SM for individual component groups' for YTD and MOM sales by customer

Sales/Marketing

Sales activities included in the customer survey were:

- Customer visit frequency
- Request for quotation turnaround time

- Product mailshots
- Trade/press advertising
- Emergency reaction time
- Product sample support
- Technical support
- Technical presentations

Considered objectives, possible measures and metric owners were agreed and "ownership" of metrics was assigned to responsible individuals as indicated in Exhibit 5. A number of measures for assessing customer loyalty were discussed. It was decided to use as an indicator of customer loyalty the number of line items purchased by customers, measured by the number of line items on backlog orders.

EXHIBIT 5: SALES/MARKETING ACTIVITY AFI'S

OBJECTIVES	POSSIBLE MEASURES (ISSUES)
Increase Customer Visit Frequency	Number of visits for YTD and MOM
Increase Market/Customer Research Activity	Number of SM/TAM updates for YTD and MOM
Increase Design & Sample Submission Activity	1. No. of designs YTD and number still live 2. Hit Rate on designs YTD 3. No. of samples submitted YTD (aligned with project) 4. Hit Rate on samples YTD
Increase Quote Hit Rate	1. Number of Quotes YTD and number still open 2. Hit Rate on projects that converted YTD
Increase Customer Loyalty (i.e. no. of line items purchased)	MOM comparison of all line items to be delivered i.e. back log orders
Decrease Stock Levels	Stock Turnover

Financial Perspective

Rearranging the output of the brainstorming sessions and choosing those areas where the division has a strong locus of control, yielded the following metrics which were agreed upon for inclusion in the pilot BSC, under the financial perspective:

- Economic Value Added (EVA)
- Sales growth
- State of order book
- Debtor days
- Stock turnover

Customer Perspective

In an attempt to focus on key activities where there is an assumed logical causality with overall customer satisfaction and hence financial figures, the following metrics were chosen:

- On-Time Deliveries
- Customer Satisfaction Index, based on customer ranking on criteria outlined in exhibit 2.
- Share of customers' wallet (Customers £ spend with ECD expressed as a % of their total component spend)
- Number of customer visits
- Customer loyalty i.e. no. of line items purchased

Internal Business Process Perspective

Key internal business processes should be focused more on the sales and marketing function than the customer service roles. The main reason for this is the strong locus of control sales and marketing can exert locally, in contrast with the inherent dependency of the customer service team on HQ for closing the loop on the order placement and progress side of the business.

The logically assumed causality between market knowledge, design and tender follow-up with increased success in the other BSC perspectives, led us to select the following metrics:

- Cross-selling efficiency between three component groups
- Market research activity
- Design & sample activity
- Quote hit rate

It is interesting to note, here, that Clarke (1997) found that "tender success rate" was not given much emphasis in Irish manufacturing firms. He suggested that "Irish management need to embrace a greater orientation towards innovation and learning" (p. 26).

Learning and Growth Perspective

As Elector (Ireland) is neither engaged in research nor development nor utilises of advanced manufacturing technologies, areas for improvement in learning and growth are particularly people-orientated. The small size of the group and working proximity facilitates ongoing interaction and feedback on various matters. It was mutually agreed, both with the ECD employees and senior management, that specific measurement of typical employee learning and growth metrics could yield a negative impact on the *esprit de corps* of the division. It would in effect, be seen as a move towards "impersonalising" a heretofore, people-friendly division. This could ultimately lead to the failure of the BSC initiative within ECD. Areas considered for measurement and management are highlighted in Exhibit 6 below:

EXHIBIT 6: EMPLOYEE LEARNING & GROWTH AFI'S

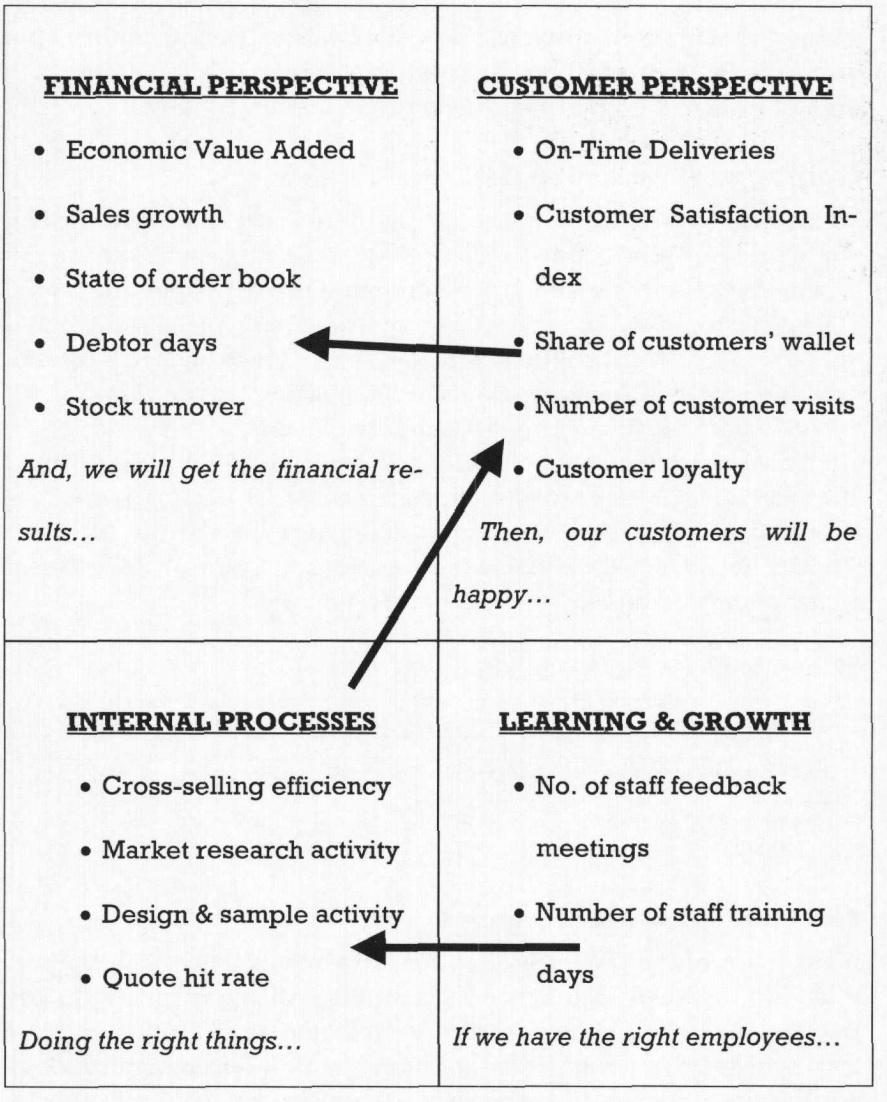
OBJECTIVES	POSSIBLE MEASURES (ISSUES)
Increase Staff Dialogue	Number of staff feedback meetings YTD
Increase Staff Training	Number of Training Days per Employee YTD

The Pilot Balanced Scorecard

A summary of the pilot BSC due for implementation in ECD is presented in Exhibit 6 and is modelled on the Halifax format (Olve, Roy and Wetter, 1999, p. 212). Halifax (the UK Building society) found that employees had a tendency to consider the different perspectives of the *Balanced Scorecard* separately. Therefore, at the beginning of 1997 Halifax introduced what they called "Theory Z". The message of "Theory Z" was that all four perspectives of the scorecard were important all of the time and the format was designed to make it easier

for staff to understand the nature of the cause and effect relationship. The format begins at the bottom right hand corner and the initial BSC template is presented in Exhibit 7 below:

EXHIBIT 7: ECD'S PILOT BALANCED SCORECARD



Implementation

Full-scale implementation of the pilot BSC began on 1st. October, 1999 – the start of the new fiscal year. Target setting for each performance measure was scheduled for December 1999. This two-phase process facilitated the transition of the BSC from an enhanced measurement tool to a comprehensive management tool. As with any management initiative, the BSC met with its share of cynicism. As time passed and the initiative gathered momentum, doubts about its longevity began to subside. Ongoing updates on preliminary investigation and readings, voiced at weekly divisional meetings, kept the framework to the fore in people's minds. Once activity on the scorecard became more intense in early June, people were ready to take the concept on board.

The subsequent process of ongoing progress reporting, brainstorming from AFI's to consequent metrics and sharing metric ownership has had a profoundly positive effect on the ECD team. As with any performance measurement system, the BSC has yet to take hold for employees to discover its strengths and areas of weakness. We cannot begin to validate the cause and effect relationships leading to the choice of metrics on the BSC at this early stage. Cause and effect linkages are at best, logical assumptions. It would be beneficial to return to this site after some time to further investigate the progress of the *Balanced Scorecard*. Specific issues to be examined include the adaptation and refinement of measures used, the setting of standards and their link to the reward and incentive scheme. In this context, the implementation of the *Balanced Scorecard* within ECD is currently an initiative in progress.

CONCLUSION

This paper began by outlining the literature associated with the *Balanced Scorecard* since its 1992 publication and closed with a detailed overview of the activities and consequent scorecard that was (provisionally) implemented at local level by the ECD division of Elector (Ireland). While every performance measurement system is open to some level of distortion via dysfunctional behaviour, the *Balanced Scorecard*, if properly implemented is arguably less prone to manipulation than traditional financially orientated systems.

What we can be sure of, is that employees of the ECD division have taken to the concept of the *Balanced Scorecard*, reached consensus on the long-term strategic objectives and identified a set of met-

rics out of a customer survey in line with divisional goals. This team has made the *Balanced Score*card their own; they own the metrics, understand the complimentarity in the mix and are enthused with checking progress on a monthly basis, with the ultimate goal of improving the company's and their own bottom-line goals for the future.

Due to the experimental nature of the BSC initiative outlined in this study, its implementation within the ECD division cannot be proclaimed a success at this early stage. For example, Kaplan & Norton (1996) suggest typical testing periods run between 3 and 6 months depending on business complexity and group size. A more complete study would involve revisiting the BSC early-2000 to check for success in its environment, including examining how performance targets have been set and how contingent rewards have been communicated and administered.

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