



Melco Foundation  
Management Accounting Research  
Discussion Paper Series



The Melco Foundation

# Melco Management Accounting Research Discussion Paper Series

No.MDP2020-004

## Enhancing Organizational Learning by Communicating Accounting Metrics in Strategy Formulation: A Case from a Japanese SME Under Life-Long Employment

November 2020

**Kosuma Shinohara \***

Associate Professor, Faculty of Commerce Department of Business Management

Fukuoka University

8-19-1 Nanakuma, Jonan-ku, Fukuoka-city, 814-0180, Japan

e-mail: shinohara@fukuoka-u.ac.jp

**Hiroshi Adachi**

Associate Professor, Department of Regional Development Department of Management,

Hiroshima Prefectural University

\*Corresponding author

# The Melco Foundation

Nagoya, Japan

---

Discussion Paper Series of the *Melco Management Accounting Research*, in order to promote the study of management accounting, has published this unfinished paper onto the Web. Please obtain the permission of the author when citing this paper.

# **Enhancing Organizational Learning by Communicating Accounting Metrics in Strategy Formulation: A Case from a Japanese SME Under Life-Long Employment**

**Kosuma Shinohara<sup>1</sup>**

Fukuoka University, Japan

**Hiroshi Adachi<sup>2</sup>**

Hiroshima Prefectural University

## **Abstract**

This study aims to show the indirect effect of communicating accounting metrics to each employee, through organizational learning, during the strategy crafting process. We aim to contribute to the literature on strategizing and accounting, employee participation, and the relationship between organizational learning and accounting. We focus on how employees learn to acquire and translate information on “the future” as a further step in the participation process –before the strategy is realized – and clarify how accounting mechanisms contribute to this. To reveal these mechanisms in which people interpret their intentions and words, we consider their rationale and perspectives in detail by investigating a Japanese SME providing IT services. Our data suggest that strategy development requires employee learning, including accounting skills. The case firms established mechanisms to help frontline employees learn to explore the strategic information they needed from external and internal information, so that they could recognize the discrepancy between the planned strategy and their work in the field and turn their attention to strategic initiatives. In this context, the accounting calculations connected the future with the present and the past, encouraging employees to be exploratory.

**Keywords:** strategizing, long range planning, employee participation, temporal work, organizational learning, case study

This paper is based on a presentation at ENROAC and MCA Joint conference 2019.

---

<sup>1</sup> E-mail address: shinohara@fukuoka-u.ac.jp, corresponding author

<sup>2</sup> E-mail address: adachi@pu-hiroshima.ac.jp

## 1. Introduction

This research aims to show the indirect effect of communicating accounting metrics to each employee, through organizational learning, during the strategy crafting process. We aim to contribute to the literature on strategizing and accounting, employee participation, and the relationship between organizational learning and accounting. The role of accounting in strategies has been discussed in the past decade (Ahrens & Chapman, 2005; Jørgensen & Messner, 2010; Nixon & Burns, 2012; Carlsson-Wall et al., 2015). These studies suggest that strategies proceed by combining accounting information and non-accounting information such as strategic objectives. For example, Ahrens and Chapman (2005) discussed that management control information offers a way of gauging the effects of different strategic designs and pursuing different degrees of flexibility enjoyed by restaurants that operate within that overall design (Ahrens & Chapman, 2005; p. 120). Jørgensen and Messner (2009) observed how to use accounting metrics and information from daily activities to analyze the relationship between accounting and strategizing in the process of new product development. They concluded that accounting information “enters the picture as a general understanding that guides actors’ strategizing efforts by reminding them of the ultimate importance of financial numbers” (Jørgensen & Messner, 2010, p. 184). The process of crafting strategy through communication in daily activities using management accounting systems, such as balanced score cards and middle range plans, is gradually revealed by these studies. In a similar discussion, Kaplan and Olikowski (2013) consider “temporal work” – in which data are translated – in the strategic planning process. They explored the process in which “data are interpreted, translated, and reconceived in light of past histories and present concerns as actors reimagine the future.” (Kaplan and Orlikowski, 2013, p. 990) This discussion implies that people’s ability and the way they encapsulate information about the future affect the strategizing process. Management may not only have to install management accounting systems for implementing strategy in the organization, but also enhance organizational and individual learning to effectively use the system, thereby fostering the ability of individuals to obtain information in the future. However, there is scant research on how accounting information functions as members of organizations learn to “predict“ within these mechanisms (Jansen, 2015, p. 46).

Some studies have examined the relationship between organizational learning and management accounting. Kloot (1997), who understood the concept of organizational learning as a correspondence process within the environment, examined the situation on the premise of the relationship between the features of management control and components of organizational learning from a recursive standpoint (Simons, 1990, 1995,

1991; Gray, 1990). Kloot (1997) discussed how management control systems are designed to include features that fit four major constructs – knowledge acquisition, information distribution, information interpretation, and organizational memory – thereby promoting organizational learning. Cobb et al. (1995), who understood organizational learning as the organizational response to environmental change, examined the case of a bank. The results indicated that internal factors, in addition to those of the environment, have an impact on changes, and that individuals – acting as change agents – play a major role in coordinating and absorbing changes. Batac and Carassus (2009) observed that cultural and bureaucratic controls, as previous studies have suggested, impede organizational learning and require lateral links in management to avoid it. The control systems that encourage organizational learning are influenced by information that is created using a purely business rationale. However, this is limited to situations where learning takes place based on the nature of administrative, political, and public activities. These prior studies discuss management controls in general and leave room for more detailed analyses of how accounting information is acquired and utilized by members of the organization. A study examining the interaction of organization learning focusing on accounting information by Jansen (2015), focuses on the relationship between participation and accounting and other information that is employed in the learning process, based on the hypothesis that participation by lower level managers and employees influences the learning process. He observed the kinds of effort being made in the field to realize the new vision of “long-lasting relationships with customers” versus “short-termism” (Jansen, 2015, p. 48). He analyzed the level of participation and communication among junior managers and employees, indicating that informal communications supplement accounting information with fine-grained information, providing learning to realize the vision (Jansen, 2015, p. 59), but fails to address how the learning process is integrated into this process. In this study, we focus on how employees learn to acquire and translate information on “the future” as a further step in the participation process before the strategy is realized, and clarify how accounting mechanisms contribute to this.

## 2. Research Framework

In this study, we examine the relationship between the organizational learning process and accounting systems in the formulation of strategy. Consequently, a detailed discussion of the various concepts used in the analysis is provided here. We discuss the concepts of strategizing and organizational learning, followed by how to separate accounting information from other information.

### 2.1 Strategy formulation and accounting metrics

Whittington proposed that research on strategy is investigating the achievements of “highly skilled workers such as senior and middle management strategic planners, organization development experts, management consultants, communications specialists, and even lawyers and investment bankers.” (2003, p. 117) He explores: (1) where and how strategizing and organizing work is done; (2) who does this work; (3) what skills are required for this work and how they are acquired; (4) what tools and techniques are common; (5) how the work itself is organized; and (6) how the products of strategizing and organizing are communicated and consumed.

Following prior studies, our research on accounting has focused on these questions using Simons’ (1994) framework. Specifically, we analyze hierarchical and horizontal communications (Simons, 2005) that occur in managerial meetings – in which strategic plans are formed – and shop floor level meetings in which the planned strategy is shared and further information gathered to test the hypothesis of the plan. We consider strategizing through accounting communication in which organizational members adopt a long-term view even when performing daily activities that are necessary to achieve short-term business objectives. We use a “temporal work” perspective (Kaplan and Orlikowski, 2010) to analyze the relationship between management accounting and time recognition by organizational members. Kaplan & Orlikowski (2010) argued that organizational members interpret, translate, and reconceived data in the light of their past history and present concerns as they imagine the future (Kaplan & Orlikowski, 2010, p. 990).

We consider our data from this perspective and question how accounting practices enhance or impede the long-range view of organizational members; how accounting is used to interpret past information, translate present concerns, and reimagine the future. We also consider how members acquire a long-term perspective through temporal work. More concretely, we analyze sites of communication such as management meetings, workshops in the company, and corporate social network systems where strategic plans and future visions are used. To understand these questions, we should investigate the organizational learning process (Argyris, 1977, 1990). When organizational members assume temporal work, their ability to perform such work affects the outcomes. In this study, we thus investigate individual learning to do “temporal work” and organizational schemes that will enhance individual learning into the future.

## 2.2 Research questions and research design

This study seeks to address the following research questions:

Q1. How does management encourage organizational members to obtain

information from within and outside the company that will affect the strategic planning process?

Q2. How does accounting practice affect the construction of accounting “temporal work” to reinterpret the past, recognize the present, and review the future vision?

Q3. How is the process designed to capture this information?

Q4. What types of learning is designed by organizations to enable individual employees to obtain such information?

We conducted case-based qualitative research to discuss the “how” and “why” by focusing on the process (Yin, 1994). To reveal these mechanisms in which people interpret their intentions and words, we consider their rationale and perspectives in detail. We investigated a Japanese SME providing IT services (GSCo) with 36 employees. Their business and organizational members are growing. We conducted several participatory observations and interviews with the president and selected managers (see Appendix 1). We recorded the meeting observations and interviews and transcribed the data into Japanese. We supplemented this with data obtained through text messaging with the General Manager of Corporate Planning, including presentation materials. Although the survey is still ongoing, the data used in this study were collected between November 2013 and May 2016.

All employees are employed under comprehensive employment contracts, as is common in Japanese companies, and lifetime employment is an implicit premise. To execute these employment contracts, the company needed to establish a long-term plan to educate employees and prepare their career paths.

### 3. The Case Study

#### 3.1 Introducing GSCo

GSCo was founded in 2005, and its software products are mainly for small constructors. Their business domain is software planning, development, sales, after sales support, and consulting services. GSCo develops and sells crowd software, which is add-on to the general crowd network service for business. This software is used to share daily reports, which include the status of the construction site with administration and is also used to communicate among the constructors, customers, and administrators. The sales of this crowd software constitutes 60% of GSCo total sales.

Constructors, through generating daily site reports, are required to inform administrators whether the construction has progressed as planned and whether the quality of the work meets the required standards. Thus, GSCo recognizes both

constructors and administrators as customers, and sales staff investigate market information from not only the constructors who implement their software, but also from administrators of the construction site.

GSCo compete on the functionality of their software together with the efficiency and smoothness of its implementation and the process of generating reports. GSCo aims to provide business improvement services such as system installations, online help, and maintenance.

### 3.2 Rise of the Strategic plan of GSCo

GSCo began compiling their middle range strategic plan in 2014 to achieve the goal of securing long-term employment and developing human resources that contribute to the local economy. The strategic meeting among the management team, termed the “Dream Meeting”, was held to decide the outline and objectives of the plan. The plan was then detailed in several management meetings, culminating in the “Dream Plan” that was released and shared at the launch meeting to which all the members of GSCo and other stakeholders and observers were invited.

In the first Dream Meeting, the CEO called for ideas about the middle range direction and the scenarios comprising the vision and strategy of management members. The participants of that meeting were the CEO and divisional managers from sales, support, and planning. A draft proposal for further discussion, which was prepared by the divisional planning manager and CEO, was presented at the beginning of the meeting. The draft was used to develop business direction for the next five years, showing the SWOT analysis and forecasted income statement of the business. The CEO first mentioned the objectives of this meeting when introducing this draft.

*In this Dream meeting, we will talk about the dream and what should I do to achieve it. This is the “Dream” Meeting 2014. This material describes us after 5 years. This is my intention. The numbers are decided because nothing will advance if I as a CEO do not decide the numbers. (CEO: 2014.01.25)*

He emphasized that the meeting was for drawing up a “dream”. Before he talked about the detailed meaning of the dream, he presented the numbers and plans to achieve this. He explained to the participants the importance of how to achieve the dream and why understanding accounting is necessary to avoid an unrealistic outcome or fantastical plans. He explained that practically:

*(When we planned before), we only set the profit target without a resource allocation plan and ended up with an unrealizable goal. To make sales and profit, we must invest. We will capture these numbers and calculate the*

*allocation in this meeting. (CEO: 2014.01.25)*

Specifically, sales targets for every future block of 5 years were set by estimating the rate of increase in purchase prices, labor costs, profit rate, productivity<sup>3</sup> per person, operation costs of the back office and company, interest rates, and current profits were described to the members with their intentions and motivations. In particular, the CEO emphasized the need for investment, the increase in labor costs, and productivity, by explaining:

*(The target number of employees is) 50. They are not here yet. The labor cost and productivity that I always stick to will be almost 11 million yen this year. The productivity per person has been increased again, although it was 9.5 million yen last year. I want to continuously raise the productivity per person to 15 million yen over the next 5 years. Thereafter, I want to raise salaries from 5.7 million now up to 7.5 million yen, which, at this level, is in line with company D (which is paying one of the highest salaries in their region). (CEO: 2014.01.25)*

In these conversations, he repeated the word “dream”. This can be interpreted as a long-term target or vision. More importantly, he emphasized accounting perspectives to explain the content of the vision in reference to the proposed salary increases for employees. Thus, he explained that the first target is to raise the labor share rate, which will be driven by gains in productivity. Each employee needs to undertake cost optimization and pursue increased sales. However, he also explains that it is difficult to achieve the plan only in the existing market and with the existing products of GSCo even if GSCo can get a larger share.

*If we increase the sales by 30% per year, they will reach 866 million yen which is 3.7 times the current sales. Sales manager will commit to 233 million, and the Crowbous (the product name) for the Ministry of Land, Infrastructure and Transport will be 130 million. If we add the sales for A prefecture, B prefecture, and C prefecture, we cannot reach that number. It is just a dream. If we sell existing products to existing customers, there are no gains. This will only double sales in 5 years. It is hard. We, of course, must initiate something new. (CEO: 2014.01.25)*

To achieve these estimated numbers, they considered three alternatives: existing technologies to new customers; new products to existing customers; and new

---

<sup>3</sup> Productivity is calculated as sales - purchases in GSCo. It is also called gross profit. GSCo's productivity is higher than the average top 25% of companies in the industry.



technologies to new customers. They also discussed the approach need to achieve these, basing the discussion on customer strategy maps.

### 3.3 Strategic discussion on customer strategy maps

In the process of embodying the vision with accounting metrics, the team had to redefine the business domains. GSCo created strategy maps of their customers to redefine their existing businesses. Understanding their customers helped their vision-making process. Figure 1 shows the strategy map of their customers, with the three center ellipses expressing GSCo's new business domain with other possible services that GSCo may provide for the customers' four perspectives (financial, customer, internal business processes, and learning and growth).

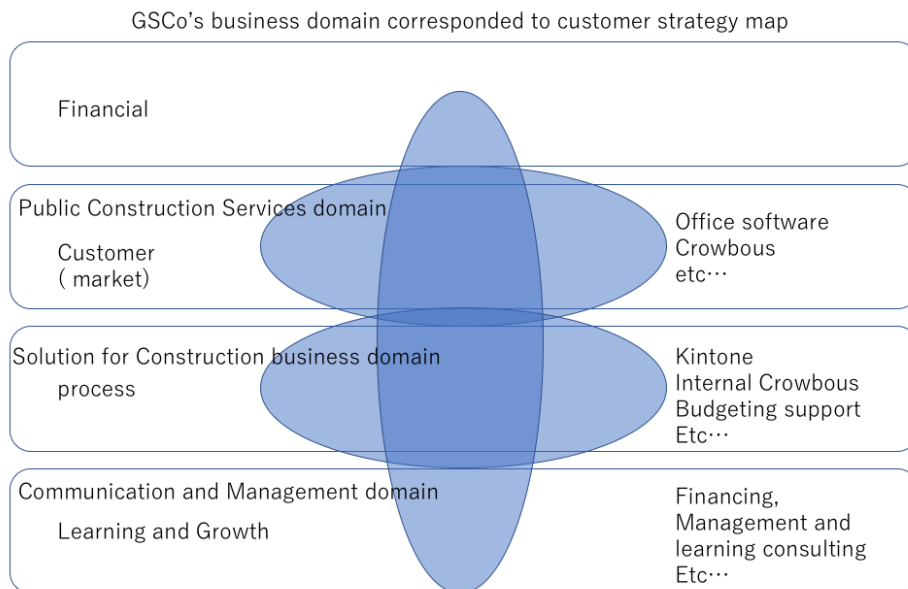


Figure 1. Customers' strategy map

The ellipse on the customer perspective defines public construction services where GSCo provides services to support their customers in their interaction with markets. It is aimed at supporting effective communication between constructors and administrators. The ellipse on the process perspective defines a solution for the construction business which aims to provide wider support to improve customers' business processes. The vertical ellipse shows GSCo's ultimate target, which is defined as a communication and management business that supports customers' learning and growth. This domain has yet to be commercialized, but has been in the research and business development stage. The names on the right side are the targeted customers that were suggested and discussed for commercialization. For example, they had conversations, as shown below.

*CEO: We have been providing some horizontal market development even now.*

We are developing existing customers to provide new services. We have prepared to develop A prefecture, B prefecture, and part of C prefecture. We could do that type of development.

Planning Manager: Yes, we have done horizontal development and started to provide KINTONE services (which are optional services for existing products).

CEO: To sum up (those new services), our sales might gain approximately 40 to 50 million yen. (2014.01.25 from meeting)

Horizontal market development involves transferring specific successful sales models from the current areas, where new products had been sold to existing customers, to other areas. The meeting discussed the allocation of human resources with reference to the estimation of sales of horizontal market development. Figure 2 shows an overall picture of GSCo's future business domains arising from this discussion.

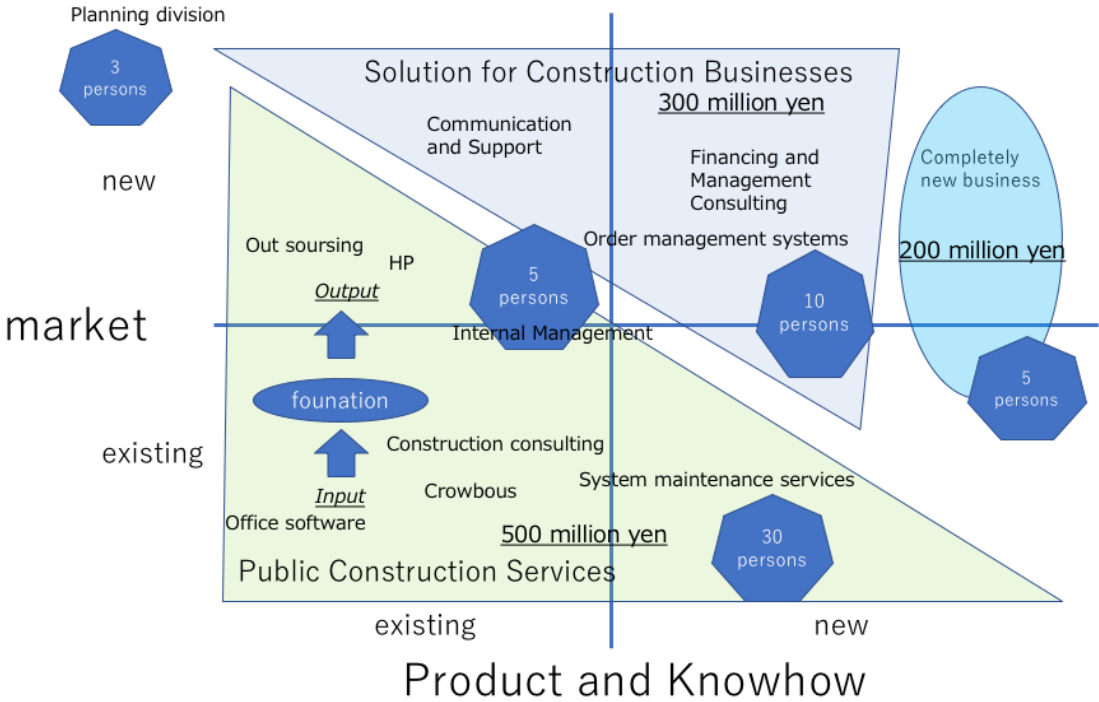


Figure 2. Future business domain map of GSCo

The horizontal line indicates the products and know-how. The vertical line indicates the markets. They are both divided into existing and new categories. All business domains were located whether each domain was new or existing. The existing main products for the construction site are defined as the social construction solution domain, which aims to achieve 500 million yen per year in five 5 years. The construction business solution domain is defined as a domain that requires expansion of existing knowledge and

products to fit the new market. The communication and management domain is defined as an area that requires all new know-how and target settings. It is noteworthy that the employee numbers and target fiscal sales amount expected over the next 5 years are indicated with each business domain.

As labor cost constitute most of the expenses of GSCo, employee numbers are indicators of future investment. To align their image of the future with the present situation, they discussed the possible market size of the business domain and shared it. They estimated the allocation of staff to new domains by raising the complement of employees. This process translated the vision into a concrete plan assisting participants in understanding the need to redefine their business. Based on the customer strategy map, accounting perspectives encapsulated the vision as a strategic plan. However, as a goal, their business ideas remained abstract. The participants discussed and recognized the gaps between these targets and the present reality by applying these accounting metrics. From this discussion they agreed a five-year planned income statement, definite allocations of human resources, and strategic issues to be addressed.

#### 3.4 Strategic formalization process

Based on the strategic plan that was composed in the Dream Meeting, each division formulated their objectives and plans, which included on-site information. These plans were compiled as an annual action plan for distribution to all employees, consisting of both financial and qualitative reviews of the previous fiscal period, the plan for the current period, the strategy map (Figure 3), the vision of business domain development in the next five years (Figure 2), a commentary sheet on strategic intent, corporate policies, and the budget plan. Figure 3 shows the strategy map of GSCo. Each box expresses a strategic purpose, which is also guided and clarified by the commentary sheet, which emphasizes the importance and practical descriptions of each strategic purpose, identifies the person in charge, and sets tangible targets.

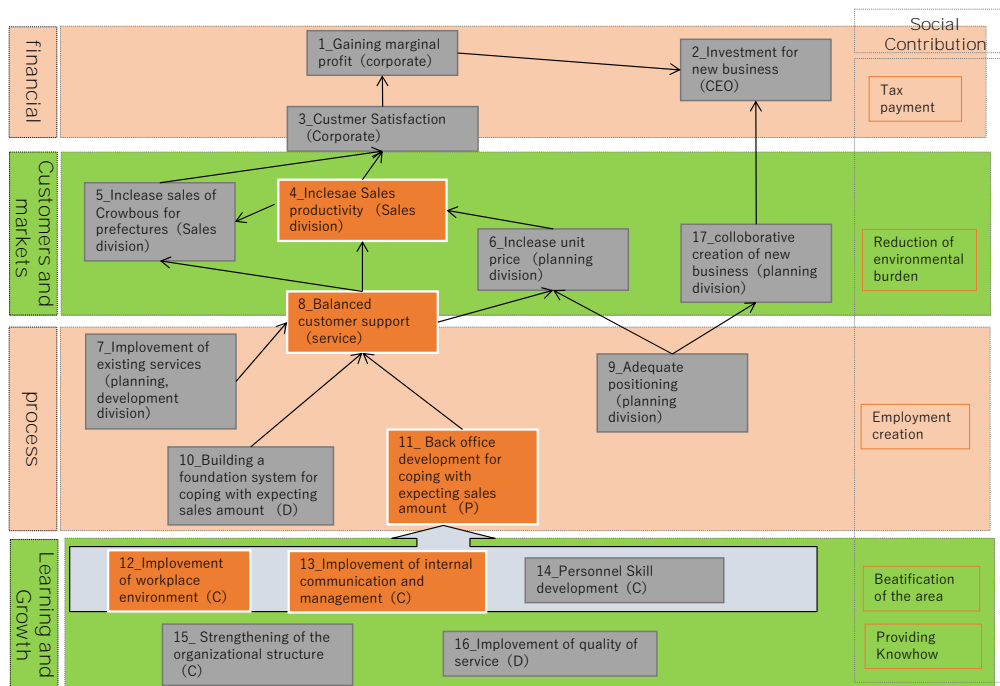


Figure 3. Strategy map of GSCo (2014)

Some strategic planning meetings were held to make the strategy more concrete. Through a process of reflection on information that the frontline staff provided, the strategic understandings and agreement of organization members were fostered. Strategic review meetings are open to every organization member, and the CEO invites participation at every opportunity. All members participating in the meeting can give their opinions on the strategy. The planning manager describes the meetings as “the primary purpose of the strategic review meetings is to reach agreement on the planned strategy through the process of strategic formulation in which everyone participates.” GSCo seeks to enhance employee participation by gathering ideas from employees and adopting these where appropriate.

As a base to share strategic information with every organization member, GSCo also uses an internal information system. This is a discussion board on an intranet where every organization member can post and browse. The CEO can also give directions to members, who in turn can provide feedback by posting individual activity reports. As every member has an obligation to post about the findings of daily work processes as part of the management by objectives system, information that is far from daily activities can also be shared. When the discussion board was first introduced, it was seldom used, however, its increased practical use gradually encouraged everyone to post daily activity

updates, resulting in the sharing of a significant volume of information. The CEO and the planning manager checked this information board for several hours every day, thus investing heavily to capture this strategic information.

However, according to the planning manager, the information from front line staff was primarily about the situations around them, such as “I want a system for my customer’s site because of difficulties like... The CEO of my customer said such a thing... The staff did not reach the level to collect the information to formulate strategy.” Thus, the CEO and the planning manager sometimes provided the frontline staff with an exact theme for the collection of strategic information. GSCo was trying to obtain information from the front line and deliver daily communications on strategic thinking so that they can formulate a real-time strategy. More importantly, managers enhanced members’ accounting knowledge and their ability to obtain information on the future by helping them understand the strategic direction using accounting rationale (Jørgensen and Messner, 2010). In summary, the degree of employee participation in the planning process of GSCo was high<sup>4</sup> (Dachler and Wilpert, 1978), and they used the planning process not only to capture strategic information but also to enhance the participation and strategic thinking capabilities of front-line staff.

### 3.5 Organizational Learning Workshops for members

GSCo conducts an annual corporate presentation to share their strategic plan with their stakeholders, such as organizational members, cooperation companies, and the presidents of companies from the same regional. In this meeting the CEO and the planning manager present a review of the preceding fiscal year and strategic plans for the next five years. They conduct workshops in which all members are divided into groups of four, regardless of their affiliation, to discuss the relationship among their strategic objectives, daily activities, and budgetary targets. During this workshop, each employee consolidates a strategy map and a strategy goal sheet (Figure 4) as determined by each department. Participants interpret past information from daily activities, and based on this, announce to group members what actions they will take to achieve each strategic objective. Participants are provided with an opportunity to interrogate the plans of other departments in the group to clarify the actions needed to achieve these, including any related work processes. This process enhances participants’ knowledge and information

---

<sup>4</sup> After making the middle range plan, GSCo's situation of strategic sharing seems to be improving from the perspectives of the organizational capability about collecting information and willingness of organization members to participate in strategic review meetings which have shown a participation rate of more than 60%.

to achieve the vision of the future.

Strategic objectives	Rate of importance	Person in Charge	Commentary
04_improving sales productivity	Important	Sales dep.	We will review our systems, operations, and sales strategies in order to increase productivity (gross profit) per sales person while maintaining customer satisfaction. we will focus on activities that enable sales to directly contribute to higher gross profits.
05_expansion of Crowbous municipalities	important	Sales dep.	Growth in gross profit in fiscal 10 depended on increased sales of Crowbous by local governments. We will focus on this.
06_increasing sales per site	Normal	Planning dep.	We aim to increase gross profits with the same number of sales hours by raising the unit price of each site at Kraboos. In addition to developing optional services and selling products from other companies with a sense of speed, we also revise our services (increase the speed of the shipment and get a fee for the service). It is also possible to provide services outside the field within the same sales man-hours such as field marketing agency and support agency.
07_Organize and power up existing services	Normal	Planning dep. Development dep.	We will concentrate. Existing products with low added value provided by customers (Have a small gross margin) will be sorted out, and the corresponding costs will be invested in Crowbous, which currently has high added value, in order to further increase the value. Existing products that do not have the capacity to invest on an ongoing basis are subject to consolidation.
08_Aggressive and defensive	Important	Support dep.	Create a strategic customer management scheme that will improve sales productivity and retain existing customers. This is the GS version of CRM. Concretely, by interfacing with the standard business system, customer

Figure 4. Extract of consolidated strategy sheet

GSCo also holds daily training workshops in which organizational members learn about the organization’s philosophy and accounting approach. Participation is not mandatory, but members can receive a bonus if certain participation levels are achieved. During this workshop, they read through the yearly action plan book and give each other specific updates about their action, while discussing the relationship between daily actions and monthly budgets. In this workshop, the organization gather current information from each employee, who in turn gain knowledge on translating daily activities into accounting terminology.

## 4. Discussion and Conclusion

### 4.1 Inseparability of strategy and strategic plans

The mid-term management planning process for GSCo was presented, but what is apparent is that the strategy and the strategic plan, including the numerical plan, were developed simultaneously. The long-term vision, which the CEO described as a dream, was restated using an accounting sales target calculated using contributions from the workforce, and conveyed to top and middle management. A strategy and strategic plan were developed.

The strategy was to select the opportunities for value creation using the strategy map of the customer in order to include the sales calculated using sales targets, including how to grow the product, know-how, and market. Replacing this vision with accounting metrics and using these figures to develop strategies from the interactions between the

market and internal resources is consistent with the strategic sharing effects of the budget and strategic plan linkage. The head of the planning group stated that the purpose of the strategy review meeting was to raise the awareness of all employees to work together on strategic issues. It is important that an accounting perspective was provided in order for employees to gain an understanding of the vision. The strategy developed based on the vision, the strategy map of the customer used as a supplementary measure, and the review of the future business domain are all linked by accounting metrics. In GSCo's strategic planning process, these are inseparable and consequently shared.

#### 4.2 Participation in strategy formulation and form strategies as a learning package

One of the criticisms of Mintzberg (1994) was that the separation of strategy and strategic plan resulted in “Lack of strategy <Activity>“ (Mintzberg, 1994, p. 277). By integrating these inseparable planning processes, GSCo aims to integrate the daily operations with the strategic planning process of top management. In other words, the basis for the vision and management's strategic plan, which are the premise of the strategy, are informed by accounting information, enabling the strategy to be reexamined and formulated.

The business also incorporates a strategy-sharing mechanism in its day-to-day operations, and the immediate exchange of information is a prerequisite for consideration by the Management Committee. Without such information sharing, strategic planning in an organization can be difficult. If information sharing and the assessment of strategy are limited to management, a long time is spent on onerous amounts of management information. To avoid this, effective strategy formation is achieved by synchronizing the perceptions of members on the current status through immediate information sharing in combination with strategic examination being undertaken by understanding the market and internal resources from an accounting perspective.

Accounting rationale is emphasized in the explanation of strategy. The strategy is then developed from an accounting perspective to ensure the understanding and commitment of each employee, through a process of translating information on the future of the corporation to each person. This is an important element of the learning package, which also includes an individual learning process within the company-wide sharing process in developing management plans. At the workplace level, it was used to help link daily work with company-wide plans, serving as a motivation to improve work as an extension of current efforts. Finally, GSCo designs organizational learning into daily work to generate practical ideas for the development of new markets and new businesses. This information acquisition is directed by superiors (behavior control), and motivation for new work outside of regular work is fostered. This is the reinterpretation of future

plans based on accounting metrics.

The two contributions of this paper are: first, it described the basic, detailed process of how management plans are constructed. As a result, we were able to provide an example of what kind of information top management values when making medium- to long-term plans and what their motivation and intentions are in making such plans.

Next, by integrating strategic information with accounting metrics, it is possible to combine the process of strategic planning with learning, whereby the process of strategy sharing constitutes learning, and inevitably there are aspects that encourage the emergence of strategy. The company's vision for the future is linked to and interpreted by the understanding of the individual. Individuals who are satisfied with their vision of the future translate past and present information according to the shared vocabulary of the management plan and explore new approaches to daily activities. Information on the future, which was not connected with present efforts, had to, at times, be actively encouraged by management.

Certain challenges remain. First, although strategy formulation deals with detailed processes, it has only been evaluated by top management. It has not been possible to consider how frontline employees relate to the efforts described, which is important for a deeper understanding of the emergent processes in strategy formation.

## References

- Argyris, C. (1977). Double Loop Learning in organizations. *Harvard Business Review*, September-October, 115–124.
- Ahrens, T. and Chapman, C. S. (2005). Management control systems and the crafting of strategy: a practice-based view, in Chapman, C. S. ed., *Controlling Strategy: Management, Accounting, and Performance Measurement*, Oxford University Press.
- Batac, J., and Carassus, D. (2009). Interactions between control and organizational learning in the case of a municipality A comparative study with Kloot (1997). *Management Accounting Research*, 20, 102–116.
- Carlsson-Wall, M., Kraus, K., and Lind, J. (2015). Strategic management accounting in close inter-organisational relationships. *Accounting and Business Research*, 45(1), 27–54.
- Cobb, I., Helliard, C., and Innes, J. (1995). Management accounting change in a bank. *Management Accounting Research*, 6(2), 155–175.
- Dachler, H. P. and Wilpert, B. (1978). Conceptual Dimensions and Boundaries of Participation in Organizations: A Critical Evaluation. *Administrative Science Quarterly*, 23(1), 1–39



- Groen, B. A. C., Wouters, M. J. F., and Wilderom, C. P. M. (2017). Employee participation, performance metrics, and job performance: A survey study based on self-determination theory. *Management Accounting Research*, 36, 51–66. <https://doi.org/10.1016/j.mar.2016.10.001>
- Jansen, E. P. (2015). Participation, accounting and learning how to implement a new vision. *Management Accounting Research*, 29, 45–60. <https://doi.org/10.1016/j.mar.2015.07.003>
- Jørgensen, B. and Messner, M. (2010). Accounting and strategising: A case study from new product development. *Accounting, Organizations and Society*, 35(2), 184–204.
- Kaplan, S. and Orlikowski, W. J. (2013). Temporal Work in Strategy Making. *Organization Science*, 24(4), 965–995.
- Kloot, L. (1997). Organizational learning and management control systems : responding to environmental change *Management Accounting Research*, 8(1), 47–73. <https://doi.org/10.1006/mare.1996.0033>
- Mintzberg, H. (1994). *The Rise and Fall of Strategic Planning*. Prentice Hall.
- Nixon, B. and Burns, J. (2012). The paradox of strategic management accounting. *Management Accounting Research*, 23(4), 229–244
- Simons, R. (1994). How New Top Managers Use Control. *Strategic Management Journal*, 15(3), 169–189.
- Whittington, R. (2003). The work of strategizing and organizing: for a practice perspective. *Strategic Organization*, 1(2), 117–125.

### Appendix 1. List of interviews and observations

No	Date	Object	H	Method
1	2013.11.6	Operations and Planning Group Managers	2.1	Interview
2	2013.11.15	Executive Committee	2.5	Observation
3	2014.1.10	Executive Committee	2	Observation
4	2014.1.25	Executive Committee	3	Observation
5	2014.2.28	Executive Committee	4	Observation
6	2014.6.28	Management plan presentation and workshop	7	Observation
7	2014.6.28	Companywide Social Meeting	2	Observation
8	2014.8.26	CEO	2	Interview
9	2015.7.2	Planning Group Manager	3	Interview
10	2016.5.19	CEO, Sales manager, planning group manager	2.5	Interview