AN EXAMINATION, PLANNING AND CONTROL & THE MANAGEMENT PROCESS, TO BETTER PERFORMANCE AND PROFITABILITY

Or

THE MANAGEMENT PROCESS TO IMPROVE PERFORMANCE FOR BETTER PROFITABILITY

by

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carried out in conjunction with

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Abstract

Everest and Blanc (E&B) is at a crossroad. It grew from a 'mom and pop' operation into a small professional firm and plateaued. Thus, there is a desire to bring about operation efficiency, followed by expansion of the company. In order to be successful, a systematic decision making process is necessary to ensure a high probability of success, and able to pinpoint dysfunctions early for improvement. In addition, implementing processes need careful consideration and progress monitoring. This study was founded on these premises using M2 mode research methodology to establish an optimal structural course of action by surveying paradigms of management theories and concepts.

The study began with an exposition on research methodologies and focused on the M2 research mode. It continued on with considering operations topics (micro concerns), extending to general issues (macro concerns) in conjunction with management theories and concepts. Finally a decision making model was shaped and applied to E&B. During the process, several important decisions were made, grounded on the findings on the research, such as relocating the corporate office anticipating expansion. Overall, the changes introduced, the process of change, the decision-making process, and implementation were all effective.

The decision making model, SOMM, Strato Operation Management Model, is an extension of both Ansoff's and Anthony's management models together with the decision-making process. The emphasis is on the relationship of the system structure's characteristics where it is symbolized by a matryoshka representing the three management modules (Strategic Management, Management Control and Planning and Tactical Operation) nesting within each other. Relating to the overall strategic and management control and planning competency, the workhorse is a combination of defensive and offensive approaches together with evaluation methodologies to capture emerging and unintended strategies and to control performance; whereas the tactical operation process is to bring about efficiency and effectiveness.

These are new knowledge and policies cast into members of E&B. It is, therefore, fundamental that careful interventions are necessary to cause changes by motivation and to align goal congruency. Further, the inquiry had specifically focused on the needs of E&B, it did not preclude application to other organizations. For academics, it may be an engaging topic for further empirical studies advancing knowledge in management and operations. With respect to a wider world application, it was also concluded that the findings for E&B are applicable and adaptable to other professional and business concerns as innovative tools to their problems and issues.

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Acknowledgement

I wish to express my indebtedness to Dr G. Southern, my Academic Advisor, who reviewed each of the learning goal papers, in detail, and provided valuable advice and remarks, especially the organization and structure of the paper of Goal 1 (Rev 0), such as *"… little 'streams of consciousness'…"*. This effectively brought my attention to the pitfall of the articulating style, which required enunciation from thought translation to text.

On my visit to the University to meet with Dr Southern and Professor D. Macbeth in the fall of 2005, Dr Southern provided valuable guidance on the remaining learning goals. As a result, knowledge acquired thereafter was more integrated in the context of E&B. Further, the thrust was directed toward the implementation and evaluation processes of the formulated strategies, establishing the cross-functional strategies and performance measures. Further, Dr Southern provided his lucid support, observation, guidance with detailed direction, and subsequent recommendations.

I also benefited from the help of Miss Laura M. C. Chiu, an Industrial Engineer and my daughter, to resolve the IS/IT problems associated with preparation of the draft thesis; she further made comments related to improvement of the draft. I also owe a great debt to my English teacher, Miss Terry Compton, who made substantial improvements to the usage of the language of the thesis. Any error remaining is my responsibility.

Willowdale, Toronto J.C.
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Mar 16, 2009

Introduction

The research inquiry of this thesis was carried out during the transition cycle between "the best of times" and "the worst of times". It was an inopportune moment in time to flourish and emerge with prosperity effortlessly; but at a juncture that required decisive managing until "the spring of hope" arrives. A good decision-making model usually helps in this respect. With a good decision making model, E&B only needs to spawn the appropriate decisions.

This thesis is divided into six chapters.

Chapter 1 is organized as an introduction to provide an outline of the origin, history, background, and competitive environments of E&B. It also establishes the research issues and objectives of the study. Further, a brief account on E&B's challenges is also presented.

Chapter 2 presents the theoretical foundation of the dissertation: literature review findings with respect to social science research methodologies and strategic decision-making in E&B's context and perspectives.

Chapter 3 anchors the M2 mode research methodology employed and rationalizes the benefit and advantage of the choice.

Chapter 4 expands into the conduct of the research inquiry: how the inquiry was carried out and findings reported. It continues by outlining decision process prior to implementation of changes, how these changes were introduced and the methods used to introduce the changes.

Chapter 5 addresses the effectiveness, limitations, and the merits of as well as issues arising out of the changes implemented at E&B.

Chapter 6, the final chapter, recapitulates the findings of the study, concludes with an overall comment and the findings' contributions.

The fundamental thrust of this thesis is a study to capture the essentials of strategic decision making, its application and to propose a viable model of decision-making process that can support management and operation functions at Everest and Blanc; thus surviving in this "season of darkness" and increasing the likelihood of to creating a sustaining and prosperous future. At the same time, perhaps, the findings of the study could contribute insights for a wider audience.

Chapter 1
Background

The ultimate goal of this research study is to find an integrated management process and to apply it to Everest & Blanc Corporation (E&B); thus bringing about improvements to its operations and decision-making process hopefully leading to prosperity. The primary focus is on finding a prescribed workable framework, building on the strategic approach, to form a business decision model and making it possible to gain an edge in the competitive environment and to combat threats. Secondarily, it is to identify whether the significance of this framework is applicable to the "wider world" in general.

This research study brings forward notions and collective wisdom available in literature to shape a relevant tool: a general strategic structural framework in context of E&B. Thus, in addressing the aforementioned objective, a series of learning goals and research questions form the basis of inquiry where the theme of the thesis is the dissertation of the findings that have emerged and leading to the preferred way to carry out decision-making in a strategic manner. This includes the process of making decision, ranging from holistic to reductionistic, on formulation, implementation and evaluation after conducting an examination of research methodologies and concepts and theories.

This chapter outlines the background information of the company and, its underlying competitive environment and defines the research issues. It is organized as follows:

Section 1.1 provides a portrayal of the Company, Everest & Blanc Corporation (E&B). It presents a brief history, organization structure, and internal operations. It further articulates E&B's core quality and intrinsic weaknesses.

Section 1.2 identifies the fundamental objectives of the research inquiry related to the Company, E&B, where the notions established may be valid and significant to extend beyond E&B to serve other business/professional firms.[1] It further summarizes the research aims and introduces the framework of the inquiry.

Section 1.3 deliberates an exposé of the competitive environment E&B faced at the time of the research inquiry. The analysis includes the economy and the residential market together with opportunities and threats with respect to E&B. The analytical information was updated while the thesis was prepared.

Section 1.4 concludes, building on Sections 1.2 and 1.3, with an account of the present management strategies and challenges facing E&B.

[1] Refer to Chapter 6 Section 6.2 for consideration related to this topic

Section 1.5 presents a summary focusing on the overall purpose of the chapter.

1.1 The Company: Everest & Blanc Corporation (E&B)

Everest and Blanc's beginning started with C C & Associates (CCA), a practice of management and consulting accountants specializing in and catering to small businesses. CCA was formed, shortly before the Author and Industrial Advisor's accreditation in 1979. At that time, inflation and interest rate were high, and small businesses were suffering, eventually spelling the end of the fiscal policy as the economic control instrument and marking the beginning of the monetary policy as the economic control mechanism.

With the increasing power of small computers, and a higher level of computing knowledge and skills, CCA had an advantage over other small consulting providers. This advantage was amplified by the housing boom in the early to mid 80s. In addition, a further advantage was gained from the massive business class immigration to Canada from Hong Kong, due to its return to China in 1997. (The CCA (Industrial Advisor and the Author) had the advantage of culture knowledge of the new immigrants.)

CCA expanded into business evaluation and subsequently property management. As the property management arm grew, an opportunity had opened up for expansion into property development. This venture holds added risk; a limited liability status is required for enhanced protection: Everest & Blanc Corporation was formed in 1994. E&B is principally a service-oriented organization, but E&B has a sharing arrangement on some properties and owns certain ones. Moreover, in order to take advantage of the limited partnership's tax legislations, most properties under E&B's management are structured in a limited partnership arrangement.

The two following subsections describe the organization's structure and internal operation together with its decision-making framework as well as E&B's inherent core characteristics (strength and weaknesses).

1.1.1 Organization

E&B is power culture and shamrock based, Handy (1986, 1989) [for detail refer to Chapter 2 Sections 2.8] Organizational culture and Organization Structure. The organization structure is shown in Exhibit I:

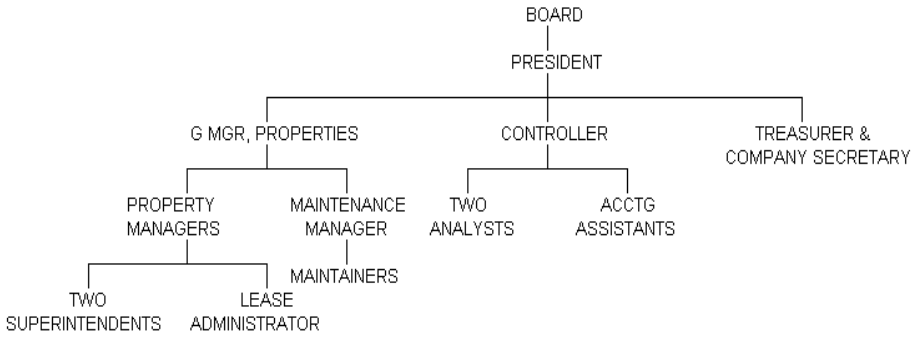


Exhibit I The organization structure of E&B

Typical of a power culture base, E&B's decision-making, control and management are centralized at the head of the corporation, the Board (Industrial Advisor and the Author) and the President (Industrial Advisor), exerting a tight rein on the workers. The core group includes Industrial Advisor (also acting as the general manager and controller), and the Author (secretary and treasurer), two operation managers (property and maintenance), two superintendents, and a lease administrator. The flexible labour force is made up of two analysts and a pool of part-time workers (accounting assistants) and maintainers, mainly university students. Further, the contractual suppliers (not shown in the organization chart), employed on a fixed fee and time basis, are required on demand, including maintenance and repair contractors and professional consultants, whose expertise is required periodically and crucial to running the organization. The design is a functional structure; grounded on "fitness" [for rationale, refer to Chapter 2 Section 2.8 Choice of Structure], with a clear line of responsibility. The two operation managers, in conjunction with the superintendents, the maintainers, and the lease administrator carry out day-to-day tactical operations such as routine decisions of repair and maintenance, and rental administration. The analysts and normally two to three university students (accounting assistants) attend to the back office administration and bookkeeping. Corporate governance, executive functions, finance, security, client/tenant relationships, contractual and banking as well as major decision-making and strategic issues rest with Industrial Advisor and the Author. Also typical of a property or a hotel management entity, there is an added level of relationship when compared to most enterprises. While most enterprises deal only with clients and suppliers a property management organization also needs to deal with tenants/guests. This is an added level of complexity: from a one-dimension rapport to a three-dimension rapport of client to supplier, client to tenant, and tenant to supplier. However, E&B is able to operate in the aforementioned simple functional organization and shamrock framework, with the three groups of workers (the core workers, the flexible labour pool, and the contractual suppliers) to manage and administer the operations. This design is attributed to not being a choice but a requirement since it is economical, easy to manage and flexible to respond to changing situations.

There are about 200 property units scattered around central Toronto, including two standalone principal properties. The two principal properties are apartment buildings located in the centre of town. Place Alexandra was built in the early sixties while St George Manor was built in the fifties. Electronic security entry and CCTV systems were installed in the 1990s at Place Alexandra when E&B was taking over management responsibility.

1.1.2 Internal Operations

Taking advantage of economic conditions and the advent of information technology of the time, E&B evolved from a small professional practice (CCA) into a small typical firm formed by professionals. The real estate market began a downturn (after the housing boom) in the late 80s and early 90s and unemployment started to grow which provided opportunities for CCA to capture some properties and clients as well as two competent staff, willing to learn, improve and grow with the firm together, but with limited experience in the industry. At the time, available functional software was still cost prohibitive; however, application software such as Lotus 1-2-3, dBase III, and WordPerfect were available. Hence, chores of management control as well as administrative obligations were contained, in house, with automation at reasonable cost. Applications models were specifically custom-built in house until it was economically feasible to purchase the more proper software when application software prices came down. Enterprise Resources Planning (ERP) application software is still cost prohibitive. Hence, E&B has the personality of a professional firm with centralized control and important decision-making rests with the founders. In this sense, E&B is very flexible, quick to respond and to take actions with improvement continuously in operations, both strategically and operationally with the flat organizational hierarchy. This is echoed in Handy (1986) where the Power Culture, typical of a family or a small business, is morphed from the Person Culture [for detail, refer to Chapter 2, Section 2.8]. Up to the present [Nov 2007], overall important decisions have been correctly made, anticipated and generally progressing in the proper direction. Although decisions have been made correctly and strategically, operational decisions are made as they arise, at times, they are “fire-fighting” activities using heuristics. There were several near disasters, because of decisions made on the fly without consideration to consequences and planning. Although better and improved decisions are being made with experience, E&B needs an integrated process of decision-making to tie the team effort, especially with growth and expansion anticipated.

E&B is already progressing toward the Role Culture mode of decision-making and could be envisioned moving toward Task Culture later on [for detail, refer to Chapter 2, Section 2.8] and Handy (1986), with growth. E&B could become a centralized organization, decisions are based on conservative values with tight authorization and controlled by procedures; thus the speed of decisions could become slow and difficult to adapt to change quickly. It would be necessary to cultivate the benefit of Task Culture, task/work focus to find a better way of enhancing the decision making process. Task orientation suggests a matrix organization [for

rationale, refer to Chapter 2 Section 2.8], working group with cross-functional team in a project approach. Emphasis is on results, with authority decentralized and flexibility to adapt quickly. This requires knowledge, understanding among all, and established rules in place applied with self-discipline. The intermediate Role Culture is inevitable. Perhaps E&B would progressively drift toward a decision making leadership of a cross breed between Role and Task Cultures with a decision process tightly integrated with the proper tools.

The most critical quality contributing to the overall strength of E&B presently is revenue (rent) collection and eviction processes ensuring no delay of cash inflow. Rent is due on the first day of the month. Tenants use several forms of vehicle to remit their rent: cash, cheques, post dated cheques. Payments can be made at the management office within the building through a slot at the door. The superintendent or the building manager will deliver them to the corporate office or the treasurer/general manager will pick them up. Upon recording in the books or copies made, the proceeds are deposited on the same day. Within 2 days past the due date and/or after verbal reminder, an eviction notice prepared in house will be issued to the offenders who do not offer explanation or promises. Within 15 days, an application to the Tribunal for hearing will be made. Usually within 1 week, a hearing will take place and the consulting paralegal will represent E&B to take the stand. A collection agreement will be made; otherwise, the Sheriff will show up evicting the offender within a week. The last month's rent deposit (advance payment) is used to cover this potential loss. Some diehard offenders, nevertheless, may make agreements and not follow through or fight all the way to Court with all sorts of excuses to buy time. At the same time, there are other issues such as "bounced cheques": insufficient funds in a tenant's bank account. This is the reason for the daily deposit minimizing the time takes to receive notification from the bank with respect to these cheques.

1.1.3 Core Quality and Intrinsic Weaknesses

Thus, the aspects contributing to E&B's present strength are continuing improvement, low cost operation, flexibility in decision-making, quality with value-added for customers, effective collection, and objective to eliminate non-value added traffic.

Apart from the core competence, E&B has two major weaknesses. One is being relatively powerless to combat the competitive forces, one of Porter's five forces (Porter, 1985), and the other is the potential problem exists with respect to vacancies. Other weaknesses are rather structural in nature: lean in staff, the nature of vintage buildings and equipments that require frequent maintenance, resulting in extra cost and adding extra tension for staff.

E&B, a small firm in a highly fragmented market, is almost powerless with reference to direct influence on suppliers' and buyers' powers, threat of new entry and substitutions, and intensity of rivalry; another Porter force, with the exception of perhaps some bargaining power at purchasing time on

small price concessions. Relating to buyers' power, the intrinsic weakness is that E&B has few weapons to combat such vacancy threats, an observation from past experience. E&B had previously experienced such a crisis with loss of income and without recourse resulting from changing external environmental conditions. However, at time of writing [Nov 2007], E&B's properties have no vacancies. Surveying the properties in the city, where vacancy signs are placed outside of the buildings, and advertisements in the two leading newspapers, has shown a decrease of rental vacancies in the downtown core because of immigrants and people flocking to the city. This could result in a false sense of security. Higher occupancy rates could be attributed to three reasons: the demand ease for ownership of houses and condominiums, the possibility of an increase in interest rate on mortgages, and the aforementioned inflow of immigrants. "A number of factors contributed to the tightening in the rental market, … include increased immigration into the Toronto area, contribution of landlord incentives, lower rental unit completions and easing growth in home ownership demand", CMA (2005). However, the easing of condominium and house demand is temporary only. Tenants could migrate over from the rental buildings when the next batch of condominiums comes onto the market. Further, the immigration level to Toronto could change direction and move elsewhere such as Calgary.

At the moment, E&B's staff level could be described as lean. They are multifunctional and always operating at their limit because of pressure of comparatively high fixed cost relative to the revenue volume. This probably creates anxiety. Moreover, the two main properties are from an older era: frequent maintenance and repairs are required to the buildings and equipments that further amplify stress among the staff.

1.2 Research Objectives

As part of the DBA programme, the research process progressed through a sequence of five research-learning goals with a series of four papers (for Goals 1, 2, 3 and 4, and 5) prepared and submitted. The findings are summarized in the sixth research-learning goal: this thesis. The program requires 360 credits distributed among the research-learning goals where each research-learning goal attracts a certain number of credits, and they are outlined as follows:

Learning Goals	**Objectives**
Goal 1	Research Method and Decision Making
Goal 2	Strategic Formulation
Goal 3	Implementation and Evaluation
Goal 4	A Business Application Process Model
Goal 5	Application of Model to E&B
Goal 6	Thesis/Dissertation
Viva	Oral Examination/Thesis Defense

Deducing from the research-learning goals, the research questions are framed as:

Q1 How can a good decision making process, leading to a high probability of prosperity, be devised for E&B?
Q2 What is the decision making process and how can it be applied?
Q3 What are the tools required?
Q4 Would the method and tools established be applicable to a "wider universe"?

The objective of Research-Learning Goal 1 is to find a viable research methodology for this study, at the same time researching to gain the requisite knowledge fostering better decision making and operation effectiveness in general - that is of prime importance to E&B. The inquiry brings about:

1) Knowledge & choice of an effective approach for collection and analysis in research
2) An overall assertion of the decision making process in a pre-emptive and exploratory fashion.
3) The three fundamental components of decision making process
    a) Formulation
    b) Implementation
    c) Evaluation
4) Anchors the holistic and positional strategies to a reductionistic (operational) assessment process of decision making

The objective of Research-Learning Goal 2 is a continual articulation of decision-making, leading from Research-Learning Goal 1, but finer in scope allowing E&B to decipher its capability and plan its business. The focus is on the Planning and Controlling functions based on Ansoff and Anthony's notions, Ansoff (1979, 1988), Anthony (1964, 1988), Anthony et al (1972, 1976), with concentration on activities of alternatives analysis and choice activity of the formulation process including the basis of direction of the process for implementation strategically.

Capitalizing on the previous two goals, the objective of Research-Learning Goal 3 continues onto the implementation and evaluation processes: mechanisms to execute and to control respectively the effectiveness and efficiency of operations. Thus this is leading to a plausible and structural decision process model for E&B in Research-Learning Goals 4 and 5 respectively.

The objective of Research-Learning Goal 4 is to structure a framework, building on the strategic approach of decision-making formed from the previous research-learning goals, of a decision-making model linking strategy and operations.

The objective of Research-Learning Goal 5, under a strategic decision-making approach, is to apply the developed structural model to E&B.
The objective of the Research-Learning Goal 6, the final goal, is to compile and put together the findings of the Research-Learning Goals 1 to 5 into this thesis.

In summation, this thesis, the 6th Research-Learning Goal, structured as a collection of six chapters where it reports the research inquiry as a thesis/dissertation to support the result of the findings.

1.3 Competitive Environment

This section concentrates on the competitive environment: the economical situation, the residential market condition, and then digresses into the prime opportunities and threats with respect to E&B's rental activities.

1.3.1 The Economy

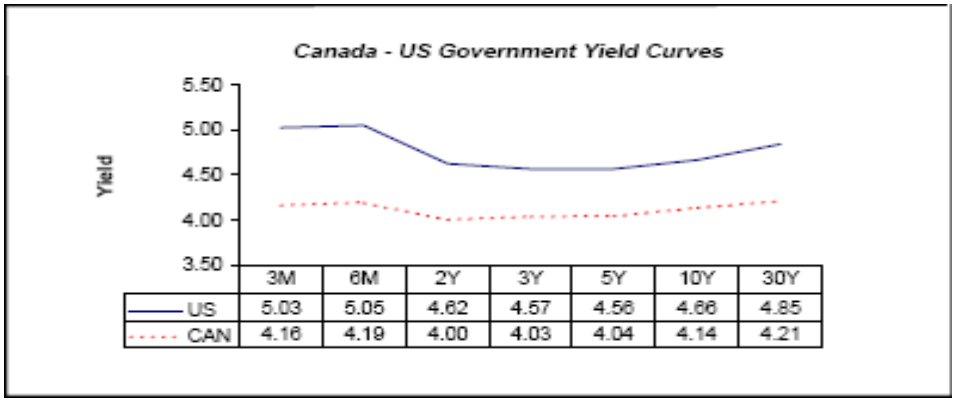
The economy may be close to entering the end of a robust cycle that has low inflation and low interest rate putting a dampening effect on growth and the residential market causing a shift in direction.

1.3.1.1 Inflation & Interest Rate

(The author keeps a log of changes in the economy, i.e. inflation and interest rates, from various transient sources, and much of the following discussion is based on that log.)

At time of writing [Nov 2007], it appears inflation will be inevitable with volatile gasoline prices inching up together with the forecasted indication of interest rate adjustment, and a downturn in manufacturing activities.

The Federal Reserve and the Bank of Canada (BOC) had both put a halt for several sessions [May 2006 to June 2007] on interest rate (Government's intervention monetary policy tool) adjustment; however, the sessions' accompanying verbatim signals were less than optimistic. It is also evidenced by the US long-term bond rate has dipped below the short-term rate (since Oct 2006), an inverted yield curve, and Canada is almost there too, as shown in Exhibit II. Traditionally, for economists, an inverted yield curve is an indication of a forthcoming recession: there is no incentive to borrow now and to finance long-term future projects. This is an early warning of potential problems ahead and signals the economic direction would be less expansionary in the short run or the economy could even become contractionary and leading to a recession. The direction would depend on the government's intervention in the economy, where macroeconomic theories always call for four to six quarters for interest rate to work its magic.



	3M	6M	2Y	3Y	5Y	10Y	30Y
US	5.03	5.05	4.62	4.57	4.56	4.66	4.85
CAN	4.16	4.19	4.00	4.03	4.04	4.14	4.21

Exhibit II Yield Curves, adapted from RBC Capital Market commentary Apr 4, 2007

Further, the rise and fall in interest rate are directly tied to the production run and export of Canadian resources.

The BOC always argues, in principle, that the uncertainties whether the interest rate will subside or increase rests on three important factors, 1) whether production runs capacity continues to slip, 2) inflationary pressure build up and 3) gasoline and energy prices together with other non-energy commodity prices. When production runs are not enough to reach capacity, a rate cut may be required to stimulate the economy. However, the rise or fall of production runs is highly dependent on exports to the US, where Canada has to compete with the global market, especially with the emerging economies. The competition is fierce and continuing to evolve to a bewildered state, as exemplified by the following:

A report in the (UK) Telegraph on Aug 31, 2004 said that British Army's uniform even underwear would be manufactured in China. A further report in the New York Times, May 2, 2001 said that the US Pentagon is reviewing a policy on having military fatigue's berets produced in China.

One consolation is that Canada's foreign exchange continues to be needed in the international market for payment for Canada's resources, a major factor influencing Canada's interest rate. Resources will be required from Canada with the continuing development in Asia, particularly China with its manufacturing growth, where prosperity will continue for at least until infrastructures are ready for the next Olympic by Aug 2008.

The BOC had already increased the overnight rate from 2% in 2002 to 4.25% [May 2006], Exhibit III. It is a substantial increase to curb the inflation pressure and this rise in the interest rate has already led to higher mortgage payments and dampened the housing market, discouraging buyers, increasing the number of renters, and causing contractionary pressure. However, as Canada, is a resource rich country, with the demand for resources in the US and the rest of the world, foreign exchange has grown, reaching 1.10 $Can to $US [May 2007].

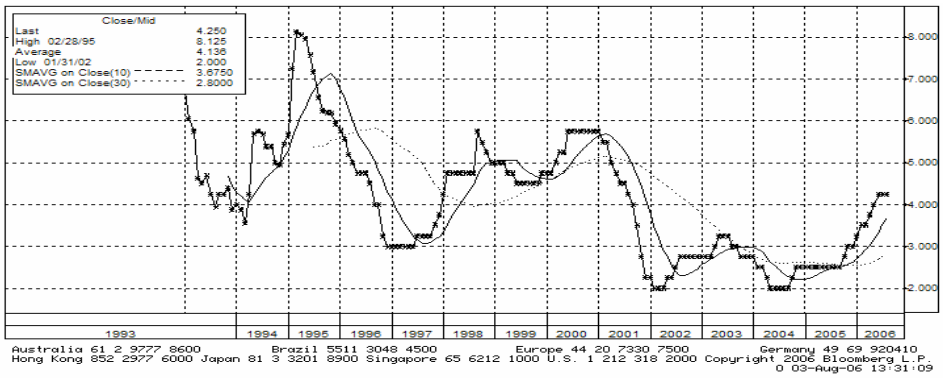


Exhibit III Overnight rate in Canada, Courtesy of CIBC
adopted from Bloomberg

This has provided an opposing force to reduce, compensate for, or even exceed the contractionary pressure in spite of some manufacturing sectors' woes. Thus, economic growth could still continue, translating to prosperity and opportunities may be available to most sectors.

Therefore, perhaps dependent on the Government's economic interventions, recession can be eluded in the short run and instead Canada may experience a slowdown or moderate growth.[2]

1.3.1.2 Growth

Expectations are anticipated that the National and Ontario growth would be stable in 2007 and may slow down with a small leap in 2008. Toronto is the major economic center of Ontario; the outlook is likely to be rosy by 2008 based on economic forecasts. Canada's GDP is expected to grow by 2.7% (actual), 2.5% (forecasted) and 3.0% (forecasted) in 2006, 2007 and 2008 respectively, RBC Economic Forecast (2007), where consumer spending would increase by 3.8% during 2006, CMHC (2007) quoting Statistics Canada. Ontario's GDP grew by 1.3% in 2006 and expected to be 1.6% in 2007, and 2.8% in 2008, Holt and Goldblom (2007) quoting Statistics Canada and Ontario Ministry of Finance

Further, while solid moderate to strong domestic demand in Canada is expected to continue well into 2007 and business investment and consumer spending continue to support this demand, residential investment could settle down, CMHC (2007). Building permits issued have leveled off while the number for the residential sector decreased but increased for the commercial sectors. The manufacturing sector did reach its near capacity consistently, as reported by the BOC, but "manufacturers appear reluctant to increase investment in machinery and equipment". However, this is compensated for by capital spending in electrical generation equipment. Nuclear reactor refurbishments in Ontario and New Brunswick are underway; with possible new built in Ontario has been announced. Other service sectors also expect capital investment to grow ~9% for both 2007 and 2008; employment is also expected to grow at 1.5% each year and

[2] Refer to Chapter 6 Section 6.3 for consideration related to this topic

unemployment is expected to be steady at 6.5% to 7%, Provincial Outlook Summer (2006A). This will lead to increased wage demands with the growing economy in turn fueling the inflationary pressure. If the probability of exceeding the BOC's inflation target is high, it could result in continuing interest rate hikes to control consumer spending and dampen inflation, thus diminishing growth.

Nevertheless, recent economic data published [dating Mar 2007] by the BOC showed that the pace of growth had started to level off, although inflation slightly exceeds the BOC's upper target, indicating short tem interest rate may probably remain static in the near term or increase slightly. Presently [Nov 2007], the market is expecting the economy to slowdown, followed by a resumption in growth thereafter, according to the Canadian Imperial Bank of Commerce (CIBC), HSBC, Scotia Bank, and Royal Bank of Canada's recent daily economic comments. This implies the BOC may further adjust the interest rate in the short term but does not have enough justifications to reduce the interest rate to stimulate the economy or to hike the interest rate to curb inflation immediately.

Overall, this indicates a less than optimistic economy may be forthcoming, but still provides high confidence for consumer spending and a continuing intensified environment for consumers and competitors alike.

1.3.1.3 Market

The residential rental market has been under Government control by three successive pieces of legislation. A Rent Control Regulation Act was enacted in the early seventies. The Tenant Protection Act 1997 replaced the Rent Control Regulation Act in 1997. Then, as of 31 Jan 2007, a Residential Tenancies Act 2007 replaced the Tenant Protection Act 1997. Rent control of the earliest legislation was under a predetermined guideline, the 2007 and 1997 Acts, although under some rent control, are under a market-based policy; partially determined by supply and demand.

1.3.1.3.1 History and Background

Demand for lower and mid range units had been immense owing to influx of immigrants to Ontario during the eighties and nineties coupled with rental control that did not provide any incentive for builders to invest in these types of units. Supply came close to an acute shortage. The 1997 Act changed the scene overnight. Low and mid range units were since available because acceptable return was again in the horizon. It had become a landlord's market for several years until 2003 because of the strong economy, the dotcom bubble, the low interest rate, and the low inflation. Hence, the Toronto real estate market was bullish, market demand for rental apartment units as well as real estate boomed; both rent and real estate prices skyrocketed. Referring to Exhibit IV, rental-building growth has not increased substantially since the rental control act was enacted in the late seventies. The only substantial 'boom', observed in rental start was in 1992, were Government subsidized units, Haider (2004). The mini blips between

1984 and 1990 and 2002 that continues to date [2007] are owing to condominium units and overall boom in housing construction.

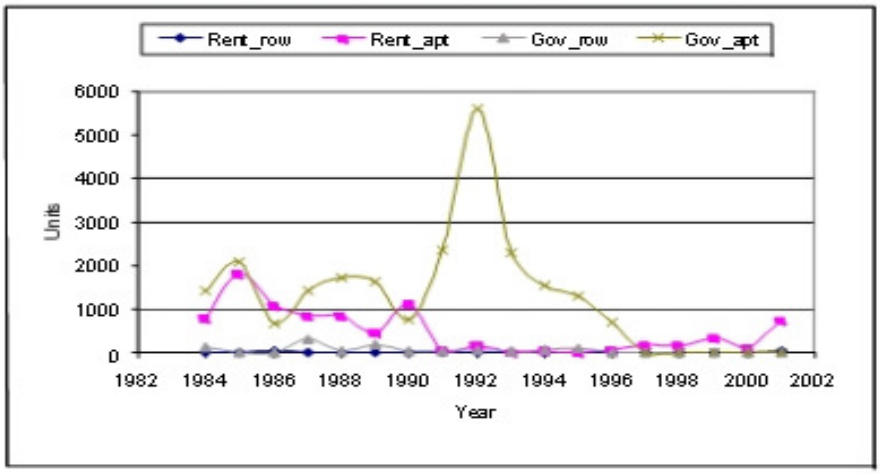


Exhibit IV Rental start in City of Toronto, adapted from Haider (2004),
[Source CMHC and Statistics Canada]

This phenomenon is also shared globally in major cities. Renters and "wanna be landlords" that have savings for the down payments are able to take advantage of the opportunity cycle to become owners, thus eventually causing grief to apartment landlords. Signs of the transition to a tenant's market have become reality in the downtown core. Surrounding areas, outside of the core, also have numerous "For Rent" signs up indicating vacancies. Since many renters become owners, condominium units will continue to come into the market for occupancy, though the number of residential building permits issued has subsided somewhat, Cansim Table 026-001 Statistics Canada. However, the Canada Mortgage and Housing Corporation (CMHC) had reported that the availability of rental condominiums has little effect on the general apartment rental market in Toronto, because these condominium units represent the supply source of the high end of the market, CMHC (2007). This implies demand for apartment units in the Toronto rental market probably would remain unchanged from 2006 to 2007 and persist to 2008 and that the glut is only temporary. Further, with numbers of building permits issued decreasing, the interest rate remains static or slightly increasing and the continuing supply of new condominium units to the market, there are indications that real estate prices would level off somewhat, but competition still abounds and remains unrelenting.

Toronto enjoyed a bullish market for several years until 2003. This, owing to the aforementioned 1997 Act, changed overnight and more low and mid range units became available because acceptable return was on the horizon; but with the easy availability of funds due to the dotcom economy, rent was also rising. Coupled with the low interest rate and a good economy, it was a landlord's market several years ago. Hence, condominium units become a

fashionable way for small investors to become landlords. Since rental revenue is restricted and coupled with high maintenance cost, a great number of sizable property management firms also retreated. The rental market in Toronto, including condominium rentals, is therefore scattered, with many small firms and individual landlords. Thus, the rental market in Toronto has become highly fragmented.

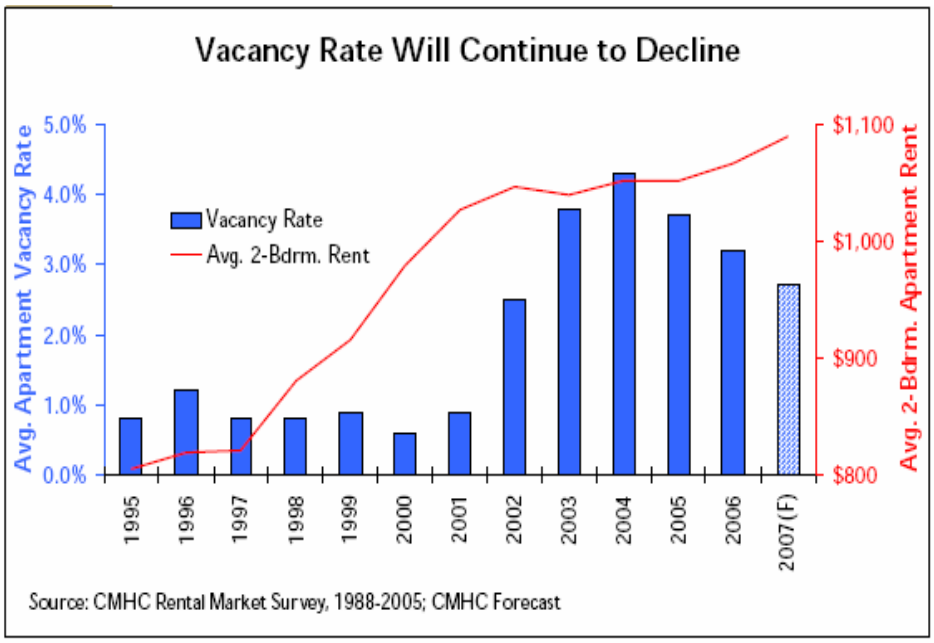


Exhibit V Vacancy rate in Toronto, adapted from CMA (2006A)

Legislations of both the 1997 and 2007 Acts limit rent increase to 1.5% for both 2006 and 2007. This, together with being the tenant's market, does not provide any incentive to reinforce and to increase the supply of larger rental buildings due to high operating overhead by large property management firms. However, this is contrary to what CMHC had reported. CMHC reported that larger rental buildings (>200 units) experienced lower vacancy rates than small buildings (<50 units) and the vacancy rate declined in 2005 and continued to do so to 2007 and beyond, Exhibit V. This is attributed to the larger rental buildings have better cash flow to invest in capital improvement, to offer competitive rent and non-rent incentives to attract potential tenants to keep vacancies low. They are also more efficient distributing overhead costs (economy of scale). However, the direct overhead cost savings from efficiency are not sufficient to compensate for the increased indirect corporate expenditures necessary. This explained why the large property management firms retreated. Instead, individual unit (condominium units) owners tend to be individual investors or small firms. The investors tend not to be speculators but boomers and generation X professionals planning for the future.

1.3.1.3.2 Toronto Market and E&B

From an urbanized development perspective, Toronto has slowly grown cosmopolitan, starting in the late seventies when Quebec was advancing the sovereignty movement. Many Montrealers and many firms' head offices quietly relocated to Toronto. Together with massive immigration from Hong Kong because of the specter of 1997 in the eighties, population in Toronto exploded. With Russia, Eastern Europe, South East Asia, and Mainland China opened, waves of immigrants arrived; the majority chose Toronto, Exhibit VI. Toronto, now, is truly multi-cultured; life comes alive with the varied cultural activities. Immigration trends remain steady but upward.

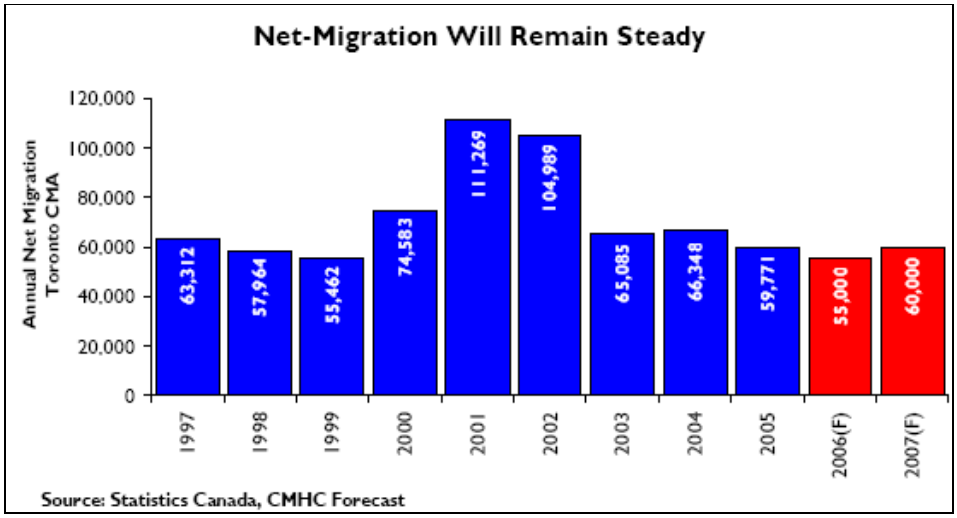


Exhibit VI Immigration Trend Settling in Toronto
adapted from CMA (2006B)

From the Author's personal observation over the past thirty odds years, it is evident that Toronto has transformed from a sleepy rural economy of the fifties and sixties into a metropolis. Not only Chinatown, but also Little Italy, Russia and Greek Towns have emerged in Toronto. Events like the Toronto International Film Festival are held each year. At the same time, restaurants of almost each nation now exist in Toronto and some even offer fusion too. The life-style of its citizens has changed; the city has become an "in" place; singles and young and retired married couples (being without children) prefer to live downtown.

Rental accommodation in Toronto "… is a function of the diversity of amenities…include access to all major modes of public transportation, proximity to a wide array of cultural and recreational opportunities, a broad array of consumer and social services, and numerous employment opportunities across many sectors of the economy", CMHC (2005). "The Toronto CMA experiences a net gain in population growth over the past year [2005]. Immigration was the major driver of this growth, … Well established ethnic network and a more diverse array job opportunities … continued to attract international migrants.", CMHC (2006A). However, with growth, security may become a concern.

E&B has full occupancy at time of writing [Nov 2007], a contrast to the 3% average vacancy rate in May through Nov 2005, and 6%, Feb to May 2005. One of the reasons is E&B aims at a niche market for university students, both regular and co-op students; who command an impressive wage during their work term, Application of Defense and Offence Strategies, Porter (1985), [for detail, refer to Chapter 2 Section 2.8]. They are considered to be at a higher risk by competitors because they lack sustainable sources of income, prefer short-term rentals, and are usually liberal souls who could be rowdy with little concern for responsibilities. Apart from students, being in the downtown core, E&B could have all sorts of potential tenants. They range from white-collar workers who are not interested in fighting traffic each day to sex workers (e.g. strippers, table dancers), masquerading as entertainers/actors/actresses and waiters/waitresses. Disturbances and security related issues are inevitable with a mixture of culturally diverse residents. However, E&B will not tolerate disturbances; security and privacy are top priority. Any infractions will result in warnings and/or leading to evictions under the Residential Tenancies Act 2007 or other applicable legislation. A notable example is security; parking rule is strictly enforced within the properties' perimeter. E&B has the ability to tag/tow any parking infractions, authorized by the Toronto Police Service under the Provincial Police Act. While the fines collected go to the Toronto Police's coffer, these added services do provide a high level of comfort, privacy, and security to the tenants.

1.3.2.1 The Mission and Objectives Tree

Profitability is the outcome of interaction between Revenue and Cost. Growth of profitability is a result of increase in Revenue and/or decrease to Cost, where this economic/accounting equation ties directly with Kaplan and Norton's notion that profitability leads from Revenue and Growth strategy & Productivity strategy, Kaplan et al (2000).

The mission of E&B can be stated as:
To sustain profitability and to maintain a continuous inflow of cash for the stakeholders together with capital growth.

However, to uphold such a mission secondary objectives necessitate that E&B:

A) Maintain a productivity strategy
   1) Efficient and effective operations
      - Maintain liquidity
      - Minimize cost
   2) Continuous improvement to quality performance
      - A good supply chain
      - Maintain quality resources (Manpower and Assets)
      - Maintain assets in excellent conditions (within reason)

B) Maintain a revenue & growth strategy
   3) Growth and Expansion
   4) Increase revenue by sales volume and/or price

5) Advertise to attract potential, customers maximizing sales volume

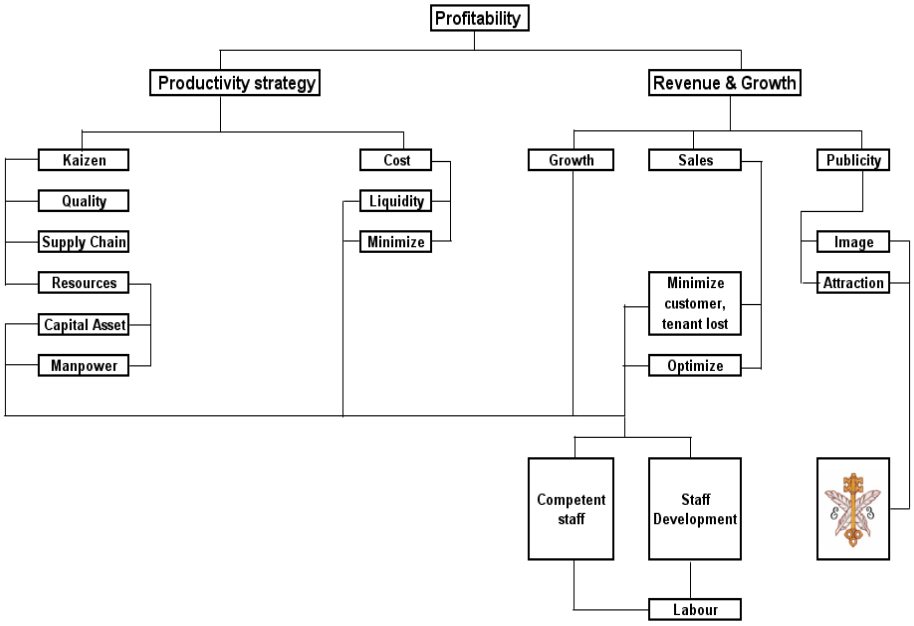


Exhibit VII E&B's Objective Tree

The premise of E&B's objectives tree is grounded on the economic/accounting equation (Profit = Revenue less Cost) and Kaplan and Norton's balanced scorecard perspectives where the process is guided by Dr G. Southern's draft BBC TV Objectives Tree, Southern (2006).

It starts, top to bottom, from profitability (the mission), and branches to the main strategies (Productivity Strategies and Revenue & Growth), secondary/third/fourth strategies to be achieved, as shown in Exhibit VII, and ends with Labour (competent staff with development) and Branding (Image and Attraction). There are many immediate branches (but not shown) detailing the levels of operating objectives before reaching the end (Labour and Branding). The intention is to introduce the conceptual notion of E&B's objectives tree. It is to be considered in detail later on.[3]

1.3.3 Opportunities & Threats

One of the contributors to growth is overall spending in the economy, hence creating opportunities in supply and demand. Thus, rental properties in Toronto would have continued to be a highly scarce commodity, without the massive construction of condominiums, as the preferred major landing center for immigrants and business center. The niche market of students has given E&B a continuous supply of potential renters, together with economic

[3] Refer to Chapter 4 Section 4.4.1.1.2 where the E&B's Objectives tree is considered in-depth.

growth; rise in interest and foreign exchange rates have also given E&B a competitive advantage in opportunities.

With the massive volume of condominium units' entry into the market, being a direct substitution, demand for rental units declined resulting in an increase in vacancies, notwithstanding the aforementioned CMHC's implication that it is only temporary. In turn, with excess supply, rental prices dropped. Without exception, E&B has dropped the rental rate and started to offer free parking, lockers, and sometimes a month's free rent to entice potential renters. Although E&B has full occupancy, at time of writing [Nov 2007], the threat has not been alleviated. It is only temporary owing to the influx of immigrants and students supporting the demand. Expectation of immigration to Toronto is anticipated to be in an upward trend in the next several years, but Toronto could be replaced by Calgary, the present oil boom capital of Canada. Thus, the threat remains high.

The next batch of condominiums is expected to enter the market by Fall/Winter 2007. Without exception, owners are members of the final batch of the baby boomers and members of the generation X. A majority of these acquisitions is for investment purposes; assurance of a steady inflow of retirement income for the future. Others are simply owner-occupied. Hence, the increasing supply is a threat to the rental industry as well as E&B.

Thus, the prime threat to E&B can be identified as increase of substitution by the supply of condominium units increased and it will create price competition. This competition will not relent in the next several years, but will continue as more units come onto the market with baby boomers and Generation X putting investment for the future.

1.4 Present Management Strategies and Challenges facing E&B

E&B is currently cash rich, having recently disposed of one of the properties located in the west end, as well as a decent cash inflow from operations; a substantial amount of surplus cash is waiting to be re-invested for expansion. This decent profitability is partly owing to good fortune and partly because of the Industrial Advisor and the Author's background and experience together with centralized decision-making. However, decision-making is not always systematic and at times it is based on heuristics and intuition; somehow "muddling through".

An example of the decisions E&B faces is a major upgrade coming due at St George: window and balcony refurbishment as well as installation of a security system.

Window and balcony replacement are extensive operations other than an impediment to cash flow. Applications for building permits and inspections by city officials at each of the steps are required; without mentioning disturbances to tenants and extra work to the staff, though consulting structural engineers and contractors will conduct the work. In house staff

had been making repairs to the windows and balconies at minimal cost, delaying the major cash outlay by 4 years. E&B's philosophy (since both the Industrial Advisor and the Author are accountants) is basically to spend with restraint, as practicality allows without damaging reputation and appearance.

Concurrently, the supplier of the electronic security entry system at Place Alexandra has received notification that the present system will soon be obsolete. The manufacturer will discontinue supplying the tags. The choice for E&B is either stockpiling the tags or switching to an up-to-date system.

It has been recognized that in order to secure a higher probability of success in growth and expansion, an approach is required to improve efficiency of operations and effectiveness in performance. Perhaps from findings of this research inquiry and managing risk properly, a practical methodology and scientific approach can pin point dysfunctions and opportunities for improvement. Nonetheless, success cannot be guaranteed, even with a good design. Solutions and remedies could be implemented through lessons learned rather than just "muddling through".

Apart from better decision-making with respect to performance improvement, even with enhanced and stringent control solely based on financial information (cash flow status and monthly P/L statements) would be inadequate. A better monitoring and control mechanism is in order.

E&B is currently providing opportunity and resources to support this research study whose aims and objectives are expected to benefit E&B as soon as possible. The ultimate objective is having a continuous increase in return on investment derived from support and involvement of this research undertaking. All owners have great confidence in E&B's management, partially because the Industrial Advisor and the Author (the directors and officers of E&B) are part owners with an intrinsic interest in efficient operations, and cash inflow is healthy. Further, properties' operation continues to be profitable, with sizable cash inflow and market price appreciation.

Consideration to become full time workers is taken very seriously by the Industrial Advisor and the Author, through being the main core workers; both are part time workers at E&B. However, as operations are at full capacity that expansion would entail immediate extra overhead, and with the cycle of rise and fall of the real estate market, the move would be a rather hazardous undertaking.

1.5 Chapter Summary

This chapter laid the foundation and established the purpose of the inquiry of this thesis:

1) The Company, E&B, and its core quality, intrinsic weaknesses & competitive environment
2) Objectives of the research
3) Research issues

The history and background information of E&B were portrayed; indicating E&B is sitting on a rather comfortable internal environment: cash rich and possessing core quality but having some operational and structural weaknesses to overcome. Further, the chapter delineated the purpose of the study. It is to bring about process changes for improvement of performance and secondarily it is to establish a viable decision making process to support E&B's growth & expansion.

Thus, this propels the inquiry's objectives formulation with defined research goals. It also further depicts the research issues with an account of the present management strategies and concludes with the challenges confronting E&B.

Chapter 2
Theoretical Foundation and Perspectives

This chapter puts forward the pertinent literature review findings with respect to social science research methodologies and strategic decision-making. The findings include a description of the background of social science research methodologies together with topics of research methodologies and decision-making relevant to this research study. Observations and conclusion derived from findings on research methodology and decision-making are presented in Sections 2.1 and 2.8 respectively.

The layout of the chapter is as follows:

Section 2.0 relates a brief account of the origin of sociology research methodologies, then steers though the research approaches relevant to this research study. It closes with a rendering of the relevant research process tools and a generalized research model.

Section 2.1 contains the summary and concluding remark of findings of social science research methodologies (Section 2.0).

Sections 2.2 to 2.7 feature the decision-making and its processes, tools and models of a strategic framework:

> Section 2.2 begins with an account of the perspectives of decision making which provides a glimpse into the history and insights of decision-making.
>
> Section 2.3 defines the three models of decision-making and then develops the generalized decision process model.
>
> Section 2.4 further elaborates on decision making with respect to business organizations.
>
> Section 2.5 elucidates the critical influencing factors with respect to the decision making process.
>
> Section 2.6 introduces three relevant logic tools that facilitate the decision-making processes.
>
> Section 2.7 presents the relevant making decision and management models in connection with the strategic decision making framework.

Section 2.8 is the summary depicting the overall findings and observations of the literature review on decision making (Sections 2.2 to 2.7) leading to formulation of the Strato-Operation Management Model (SOMM).

2.0 Social Science Research Methodologies

The severance between science and metaphysics occurred during the Age of Reason and Enlightenment, around 1650 to 1750, Kondeatis (1992). The scientific method was established. It was founded on the two concepts prior to the Age of Reason, developed by Roger Bacon and Frances Bacon. Roger Bacon subscribed to a recurring procedure in observing, hypothesizing, and experimenting as a process to collect evidence for verification, while Francis Bacon articulated causation. The scientific method notion, after Enlightenment, also emerged in sociology or social science. Auguste Comte (1798-1857) is considered to have coined the words sociologie and positivism, Hughes and Sharrock (1997). The method of investigation is positivism (positivist social science approach in research methodology): the school of thought applying principles of scientific method to social science.

Emile Durkheim, Max Weber, and Karl Marx are known as the Trinity of Sociology, Hughes and Sharrock (1997). Durkheim continued to support positivism; however, he extended Comte's positivism to include indirect measurements by concepts and constructs, still under the umbrella of positivism. Weber, considered the father of sociology, broke away from the confine of positivism and redefined sociology. This provided the framework of sociology's interpretative approach, as oppose to Comte and Durkheim's positive social science. While positivism does not have a social agenda and interpretative social science approach concentrates entirely on research subjects, ignoring passions of causes arising from the research results' due diligence, it was Marx further extended this notion of the interpretative social science approach to the critical social science approach. This approach is action and decision oriented, Neuman (2000). These three approaches together form the three branches of social science research.

2.0.1 The Three Branches of Social Science Research Approach

The fundamental research process in social science is classified under three general approaches, Neuman (2000):

- Positivist social science
- Interpretative social science
- Critical social science

In terms of ontology, the approaches of positivistic social science and interpretative social science lie at the two polar ends of the social science approach continuum, while the process of critical social science grew with noteworthy significance and evolved from the interpretative social science and separated into a class of its own.

2.0.1.1 Positivist Social Science (Positivism) and August Comte

Auguste Comte's idea of sociology is a three-stage positive philosophy that governs the human and social order, Comte, Thompson, ed (1976):

- The theological stage dominated the world to the 15th Century. Events were explained as acts of God in accordance with His will; the power of kings and notions of their divine rights were a corollary of this idea.
- The metaphysical stage followed. It started in the 16th century. Metaphysics, religions and natural science were separated in the 18th century. Metaphysics included social collectives, people's rights, and other phenomena that were explained by philosophical concepts.
- The positive stage science evolved and severed from religion and metaphysics in the 19th Century. It was knowledge based and relied on observations via the 5 senses instead of faith. The central theme is society should be studied and understood as the schemes in natural sciences. Social sciences were separating from philosophy and religion similar to natural sciences did in the 18th Century.

It was in the 3rd stage, the quantitative empirical concept, that social science's positivist notion took shape. The notion was grounded on factual science paralleling scientific method in natural sciences.

2.0.1.2 Interpretative Social Science Approach

Weber's interpretative social science, a post positivism qualitative concept, opined that the study of human being using positive approach was inadequate, Neuman (2000). A human being is a more complex character than objects of study in natural sciences. The study method thus needs to utilize interpretation of the actions/results, causality and rationality to learn about the research subject's perspective as social phenomenon and not just be based on observations to describe quantitatively. The inductive approach (basic tool of the scientific method) is not sufficient; it has to couple with conceptualisation - the main doctrine of his theory of Verstehen (Interpretation). Sociology is therefore defined as "a science which attempts the interpretive understanding of social action in order to arrive at a causal explanation of its cause and effect", Weber, Heydebrand ed (1993)

2.0.1.3 Critical Social Science Approach

Marx further extended the interpretative social science approach to what is known as the critical social science approach, which is qualitative, action and decision orientated, Neuman (2000). This approach refers to actions and attempts to confront the injustice of societal relationship (mostly inequality and conflict) seeking social reform after the result of some research studies are known.

The goal is giving endorsements to the under privileged seeking fairness and equality. "The central notion is to embrace empowerment and action trying to correct the injustice after understanding of the situation of the research study has been completed", Neuman (2000). Critical social science, the forerunner of Action Research, is considered distinct from the interpretative approach; it helps to see pretense, reveal deception and cater to reform society. A famous example of this approach is the researcher, who, based on results of a population study in the inner city, mobilizes the under privileged

renters, ill-treated, to fight against the greedy landlords by demonstrations and to petition the government to provide low cost housing.

2.0.1.3.1 Action research (AR)

Action research (AR) can be considered as the offspring of critical social science research, focusing on the issues of results identified from a research study, to which it is the purpose of the underlining research, an application oriented methodology. Lewin (K. Lewin, Action Research and Minority Problems; Journal of social Issues Vol 2 1946 pp34-34) defined the term "Action Research" in 1946 denoting an approach to research combining theory building with research on practical problems. He emphasised the collaborative relationship between a researcher and the participants. This relationship affects the direction of the research as it implies that both the researcher and participants are jointly involved in the research. K. Lewin was being credited as the founder of AR, Cunningham (1993), Stringer (1999) because of his most famous "tripe study", during WWII, commissioned by the US Government. The purpose of the "tripe study" was associated with the food allocation in the event of food shortage.

There are many variations on the theme of action research, e.g. Action Learning and Action Science, Cunningham (1993); Inquires, community work, Argyris (1985); Evaluation, reflective practice, Stringer (1999), but the basic principle is the same with minor adjustment. Stringer's view is a much elegant and more simplified notion by referring AR as the processes of Look, Think and Act, Stringer (1999); an act of decision making. This translates to using data collections to build a scenario (a case), to explore and analyse to arrive at an explanation, and to formulate a plan to be implemented that evaluation follows. He further articulated the difference between action research and other social research is an extra step of action included in Action Research, after the research representation has been reported in "written accounts".

A case study, based on R. E. Stake, H. Simons, and R. K. Yin, invariably involves the following six steps in particular, Tellis (1994):

1) Determine and define the research questions
2) Select the cases and determine data gathering and analysis techniques
3) Prepare to collect the data
4) Collect data in the field
5) Evaluate and analyze the data
6) Prepare the report

Additional step, applying the findings from Steps 1) to 6), if the case is action related:

7) Further action by others or the researcher (if it were AR case study)

Hence, the implication is that an AR case study is an applied research methodology.

2.0.1.3.2 Mode 1 (M1) and Mode 2 (M2) Knowledge Production

M1 and M2 research methodologies, Gibbon et al (1994), euphemisms, signify respectively being pure and applied research methodologies.
The distinction between M1 and M2 is best articulated by Tranfield (2002):

- In M1, problem is being set and solved by the academic community
- M1 uses a disciplinary staff base patrolled by elite academic gate keepers: professors
- M1 is based in institutionalised research organizations such as universities
- In M1 dissemination is dislocated from knowledge production activities and usually occurs downstream
- M2 is characterized as the production of knowledge from application, Huff (2000). The producer of knowledge can be academic as well as practitioners. Validation is not by peer acknowledgement but by application. Gibbons et al (1994) argued that M2 method of knowledge production is an "outgrowth" from M1 and M1 may have its limitation and could be enhanced by M2

In essence, M1 and M2 are situated at the two polar ends of the continuum of pure research and application research. M1 is the theoretical research methodology producing "knowledge for knowledge's sake", Huff (2000), pursuing scientific truth by scientists, highly positivistic. It includes many epistemic traditions such as subject discipline and is knowledge based. The content of research is highly controlled by the academic elites, Whitley (1984), and dominated by academics, Huff (2000), where practical application of the theoretical knowledge is of no concern of the M1 knowledge producers. The knowledge produced is validated by peer review and the objective is for solely the purpose of knowledge production, not for application. In the event that it is applied, if it is applied at all, others and not the original knowledge producer usually carry out the application. Since M2 is related to knowledge application, it is application oriented and hence grounded on theory developed and integrated concurrently. M2 knowledge producers can be the academic elites or practitioners at corporations (Bell Lab), government agencies (NASA), consulting firms (BCG), and individuals with their own practices (Nobel). The implication is M2 necessitates to be transdisciplinary (cross subject discipline) where application and theoretical development are intermingled, unlike M1 being linear from theory to application, if applied at all.

2.0.1.3.3 The Research Process - Tools

Research tools, Neuman (2000), can be classified from the process point of view, and generally include:

A) Qualitative (Leaning towards Interpretative Approach)
   i. Comparison
   ii. Contrast
   iii. Profiling

B) Quantitative (Leaning towards Positivistic Approach)
   i. Experiment
   ii. Survey

C) Content research/analysis (Literature Review)

The qualitative and quantitative approaches are at opposite ends of a continuum parallel to the Interpretative and Positivistic continuum. The qualitative approach employs techniques such as aims, questions, strategies, evidence collection, and analysis. At the other end of the continuum, whereas the quantitative approach uses techniques such as measurements, source of invalidity, statistics and its description with validation by inference, tests, correlation and regression. Despite these divergences, their constituents are not mutually exclusive. Present day research methods employed, at best, are leaning towards the two polar ends by degree.

A) Qualitative Analysis Tools

Application of comparison and contrast is to identify common denominators, patterns, and disparities, variations respectively. John S. Mills developed these methods of agreement and difference in the 19th Century as a logical way to perform analysis, Neuman (2000). Combined with the process of elimination, these two methods are the most powerful analytic tools. Profiling can be traced to Weber's ideal type, Neuman (2000), which is a process to build a model with the most optimal and probable possibility to the circumstances offered. This model serves as a standard (a benchmark) to compare and contrast against the situations under study. Together with modus operandi of due diligence, profiling (comparison and contrast to a standard) provides a complement to the methods of agreement and difference.

B) Quantitative Analysis Tools

Concepts of variables and deduction are devices central to quantitative research. It is the positivism approach; using measures of the direct measurable or using concepts measuring the concepts as variables. An experiment is an act of an empirical nature to capture knowledge by observation, whether to disprove or confirm some known paradigms or to discover or establish some previous unknown paradigms. Survey is a non-experimental study to examine an issue or some characteristics systematically to produce an opinion after analysis, notably in conjunction with statistical measures to provide credibility, a cornerstone of the modern day research analysis.

C) Content research/analysis (Literature review)

A literature review is defined as information and evidence gathering from prior debates and researches; permitting value-added knowledge to be recognized.

The purpose of content research is to identify current research and theory related to the content of the proposed study. It draws information from prior

peer knowledge and to determine the direction of the research at hand and revealing the remaining issues; gaps left unresolved waiting to be addressed, Cooper (1984). It is a pre-requisite of any research program to ascertain that the research undertaking is not a duplicate of others. Further, it also serves as a source highlighting data collected from experiments allowing quasi-empirical evidence as a base for support of a research topic. As such, it deals with arguments and premises, interpreting the cause and effects by drawing together results from assessing the source data, and hopefully concluding with valuable deliberations.

2.0.1.3.4 The Research Process - A Generalized Research Model

Knowledge acquisition is wedged between reasoning and observation, a somewhat decision-making process. A typical process can be classified into seven phases, Frankfort-Nachmias (1996), in the overall architecture of a pure research mode (M1):

1) Problem identification
2) Making hypothesis
3) Designing research method to collect data and measurement
4) Measurement collection
5) Data (whether qualitative or quantitative) collection
6) Data analysis
7) Generalization (construction of a theory)

An additional phase would place the research in an applied mode (Critical Social Science/Action Research mode)

8) Action Taking

The eighth phase, Action Taking, is based on the result of the findings and takes action to deal with the issues collectively. This is crucial and particular to Action Research.

2.1 Summary & Concluding Remarks of Research Methodology

The architecture of a research process is fundamentally common to all research studies. Regardless of what method is used, the same general procedure is evident; deviations are mainly relating to the progression (whether qualitative or quantitative) in data collection, measurement, and actions' presentation differentiating between the different methods. Further, the nature of the M2 research method (recurring set of Steps 1 to 8 in Section 2.0.1.3.4) is implicit in the generalized research model.

A cyclic nature always exist in research, as anomalies may be observed from the generalization created in the current state of the theory (measured by way of literature review) and this current theory is not sufficient to support an explanation of the anomalies. Subsequent research continues and may create a new theory/finding. The cycle will repeat in this fashion and continue to contribute to the progress of all sciences, both natural and social - a temperament of paradigm shifts and kaizen.

2.2 Decision making

Around 1900, business schools emerged and started teaching strategic change and new product development, Mintzberg (2003).

However, organization decision-making is not an invention of the 20th Century. History indicates that business and organization decision-making only flourished after the Industrial Revolution. Prior to that, power and liberty were not in the hands of the mass; aristocrats and the Church controlled the 'major decisions universe', whether military or organizational, Comte, Thompson, ed (1976). It was not until the rise of middle class, in the Romantic and Revolution Periods (Freedom, Liberty, and Fraternity), that freedom of choice (decision-making) changed the life of 'peasants'.

Most interestingly, decision-making only became a formal study after WWII with the invention of operational research, and it truly became a complete recognizable entity with the emergence of strategic decision-making (management) in the sixties.

2.2.1 The Historical & Management Perspectives

Decision-making was simple and straight forward during the time when the market was stable, with unchanging demand for products and services. The decision was either to determine what or how many to produce and deciding who to serve first. This universe, in general, was in existence for hundreds of years because demand had always out paced supply even after the Industrial Revolution - with the introduction of machinery and the factory system. Production moved from cottage industry to the factory and contributed to the advent of the middle class and professionals; the class of workers required to manage the specialized workers. This new class of workers known as management was emerging and the size of a company was proportional to the number of these workers. They did not directly contribute to output, with them on payroll, overhead increased. They added cost and placed a burden on profit. Hence, it was necessary to justify their existence by improving performance and to cover for the extra cost amongst other reasons such as further improving profit and increasing supply to the inherent demand. It was a time of "strategic turbulence", Ansoff (1988), efforts were made to modernize, beginning in the Renaissance, new production and organizational technologies: this constituted a strategic change.

It was not until the turn of the 20th century that work processes were de-specialized with mass production, the fruit of the strategic effort on industrial structure created during the Industrial Revolution, Ansoff (1988). Applications of Taylor's scientific management and Ford's mass production process in operations management are the two most influential management decisions in history.

Taylor's operations strategy revolutionized the manufacturing process. This mass production mechanism contributed to a decrease in unit cost of

production (economy of scale) allowing affordability. It began with Ford's Model T production; the application of the scientific management approach, a concept of process re-engineering of the time. Although Adam Smith in his work, The Wealth of Nations, 1776, already had advocated segregation of duties and mass production, but it was carried out by skilled workers and continued to use the existing processing method. The scientific management process included tools such as time and motion studies, training, organization, and job designs, but most importantly, unskilled workers are being considered merely extensions of machines, which was revolutionary. Workers were presumed to be solely motivated by economic factors. This was a paradigm shift and caused the first organizational culture (practice) change in American factories with organizational development coupled with system intervention and business process reengineering.

Owing to standardization, segregation of duties, and repetition of task, riding high on the learning curve, there was a tremendous increase in productivity. With increased productivity, as a consequence, goods and resources available to consumers also increased at affordable prices. It was a winning business idea: offering excellent utilities at an attractive price for consumers while delivering decent profits, echoed in Kim and Mauborgne (2000).

Concurrently, management control was also evolving. H. Fayol and C. I. Barnard advocated the management control hierarchy and the bureaucracy system complementing Taylor's operation scheme. Fayol, in his monograph, Industrial and General Administration, 1916, provided an analytical framework for management and dealt with the definition of administration, Hodgetts (1982). Further, C. I. Barnard, using logical analysis of organizational structure and applying sociological concepts to management, in his book, The Function of Executive, 1938, theorized and contributed to the development of the higher level of management theory: the forerunner to strategic management. The executive should maintain a network of co-operative hierarchies via 3 executive functions, Hodgetts (1982):

1) To establish and maintain a communication system
2) To promote and acquire effort from employees
3) To formulate of the purpose and objectives of the organization

These laid the monumental foundation for strategic decision-making in management, although the scheme has been in use for thousands of years in ancient empires and governments as well as military organization.

Prior to the development of railroads in the mid 19th Century, business enterprises had remained small and firms were not able to influence the market. Classical microeconomic: supply and demand concepts operate under a basic assumption that firms are not powerful and dominant enough to influence the market. Vertically integrated multi-divisional corporations only came into existence in the beginning of the 20th century. These firms

acquired the capability to “alter the competitive environment within their industries and even across industries”, Ghemawat (2002). In particular, it was GM that started development of multi-divisional firms exploiting economy of scale and mass production. Firms started to have some influences in the market-place, marking the beginning of the strategic management movement, Ghemawat (2002). Ghemawat (2000) further articulated that Alfred Sloan (GM's CEO from 1923 to 1946) formulated strategies based on Ford's strength and weakness. Sloan gave the world color and model change while Henry Ford's Model T strategy allowed the customer to have any color as long as it was black, Drucker (1990). It is clear that firms wishing to gain competitive advantage and influence the market need to come up with certain innovations and make decisions on what and how to innovate and change (continuous improvement) in order to adapt to the environment.

Although mechanization and mass production methods improved efficiency and productivity, supply of goods was still not able to out pace demand. The main decision and strategy continued to be how many to produce. When demand could have been satisfied somewhat due to progress, it was interrupted by World Wars.

In the rebuilding effort after the Second War, production was required across the world. Free trade and business were promoted among nations leading eventually to globalisation of business and competition. Massive reconstruction took place in Europe and Asia. Firms expanded to meet demand. The world saw the formation of International Monetary Fund IMF) and General Agreement on Tariffs and Trade (GATT), as well as, the International Bank of Reconstruction and Development (IBRD) or the World Bank. Cheap labour was abundant in those depressed economies after WWII as well as financing was generously available from the World Bank and IMF. Hence, these organizations facilitated world trade and the reduction of trade barriers, Hutton (1988).

Basic demand started to reach saturation by the mid 50s and with the advent of manufacturing technology, current industrial methods became obsolete, Ansoff (1988). Consumers had not always been satisfied with the products available, but tolerated them, because there were no alternatives. Coincidentally, by the 1960s, demand became stabilized with major reconstruction and development completed. “In Japan, companies rebuilding from the shambles of WWII were beginning to create an entirely different approach to production”, Hays et al (2004). As a result, growth was phenomenal in Japan and the Far East. They learnt from outsourcing assignments, and acquired and adapted the accessible manufacturing knowledge and innovations. This adaptation was inevitable; partly owing to the need for survival and partly owing to their inherent national value and culture, learning ability, and existing theoretical and technological know how.

Foreign industries gained prowess with superior, advanced manufacturing and engineering capabilities, Hayes et al (2005), thus mounting an attack on Anglo-Saxon markets. With “better quality, better reliability and lower life time cost, better value for money and greater responsiveness to customer's demand for greater product variety”, Hays et al (2005), consumers choose the imported goods. In such an environment, there was a threat of becoming extinct; it was necessary for the industrial leaders of the Anglo-Saxon cultures to devise plans and strategies to compete for survival.

The Anglo-Saxon cultures were forced to increase planning scope and insight with consideration of a more macro outlook, Ghemawat (2002). Strategic management as a decision-making weaponry re-surfaced in the 1960s as a tool in the business circles combating competitions.
At the time, the human relation approach was still prevalent in Anglo-Saxon cultures and it was employed together with the scientific management approach. However, the organizational decision-making theory made its debut, Hax and Majluf (1981), where socio-technological, contingency and other approaches like TQM were already making their mark in the Far East. “Change based on TQM philosophy was pioneered in Japan by W. Edwards Deming and Joseph M Juran, after WWII, as part of General MacArthur's rebuilding program”, Schneider et al (1996).

By the 1970s, Japan and other Asian countries as well as Germany were able to export quality goods to the Anglo-Saxon markets at competitive prices while other industrialized nations were still using dated production decision-making methodology without realizing it. The management tools, based mainly on assumptions of continuous demand, remained unchanged. Financial control methods and management thinking were also inadequate, Ansoff (1979), that is, management was still under the impression of being in a near monopoly position. “In the early 1980s, US industry had just begun to accept that it might be vulnerable to foreign competitors”, Hays et al (2005); the industry leaders of [Anglo-Saxon societies, Choi (1995)], realized that their goods were too expensive, with high defective rates, and higher tolerance, lengthy delivery times and lack of design innovation; echoed in Hayes et al (2005). In addition, there was built in obsolescence.

TQM, finally received attention in North America in the 1980s, Schneider et al (1996), focused on customers and required every facet of the organization to be involved including top management. Individual elements of TQM management tools such as JIT, continuous improvement, and supply chain management received special notice in North America. This led to a paradigm shift and invention of notions of lean thinking, corporate culture (practice) and managing change.

The whole misfortune in the Anglo-Saxon culture was attributed to a lack of unawareness that the environment had changed from a supplier oriented market changed to a customer demand oriented market and an inability to respond timely and accordingly.

2.2.2 The Academic and Economic Perspective

In the academic world, Harvard has offered a course call "Business Policy" since 1912, Ghemawat (2002), which was later renamed "Strategic Management". This course was designed to integrate functional disciplines like accounting, operations, finance, and marketing to present a broad perspective in business on strategic undertakings. Contributions from G. A. Smith Jr., C. R. Christensen, and Kenneth Andrews in the 1950s led to the framework of the strategic formulation process known as the Harvard Policy Model: the SWOT concept. While modern concepts of strategic management are directly descended from business policy works of Henri Fayol (in General and Industrial Management), Peter Drucker (in Practice of Management) and Alfred Chandler (in Structure and Strategy); it was Ansoff who formulated the formal notions of strategies in corporate organizations, Wren (1994). Ansoff's notion (the Planning School) and the Harvard policy (The Design School) grew around the same time, Mintzberg et al (1998). Ansoff's school used terms like long term planning, strategic planning, operation plan, and specifically defining goals and objectives. It appears to be a natural process: extension of the Harvard Model structure. However, it was Dan Schendel and Charles Hofer who are credited with renaming the process from Policy to Strategy, Wren (1994), Schendel (1994). While the academics were developing this higher order of decision making process, "a unifying theme that gives coherence and direction to the actions and decision of an individual or organization", Grant (2000), the business world still continued using planning techniques such as operations research that prospered after WWII. Industry leaders concentrated on operations because they refused to believe in and/or lacked awareness of the change in the environment.

Prior to the 19th Century, trading seldom extended beyond nation states but was restricted to the nations' colonies, Hutton (1988). It was not until the end of the 19th Century that world trade really began to prosper. Although mercantilism as a doctrine died in the late 1700, the policy lived on. Raw materials and semi-finished goods or goods from outsourcing assignments were exported from the underdeveloped and war torn economies while finished goods were imported and sold at much inflated prices, a situation similar to ruling nations trading with their colonies. At the same time consumer goods were imported to these countries and supplied the equipments and industrial infrastructure to rebuild and develop their economies. Almost everything was in shortage after the end of WWII; demand exceeded supply. Rudimentary processes were used mainly in the area of budgetary planning and control in operations and capital budgeting coupled with corporate planning on future growth, Grant (2000). The main decision was to decide on how many to produce rather than innovate on how to produce. The *Big Bad Wolf* was already knocking at the door when it was realized that the environment had shifted, coupled with the oil crisis in early 1970s, a new control tool in decision making, strategic management process (developed by Ansoff and the Harvard group) became fashionable and has remained the buzzword. This paradigm change was mainly because focus is needed to re-align from a static environment to one that is dynamic and

better to position and influence the market as related to competition. It is analogous to better defending one's territories and invading enemies' territories [for rationale, refer to Section 2.7.3 (B)]. The weaponry (process) has been the Harvard Policy Approach: SWOT Analysis.

Decoding of the secret of the East was needed. It is mass production together with stringent quality control and lean manufacturing based on activities and common sense principles. These principles led to tools like Just In Time (JIT), Total Quality Management (TQM), Design for Manufacturing (DFM), Quality Function Deployment (QED), Quick Process Development (QPD), Computer Integrated Manufacturing (CIM), Supply Chain Management, resulting to Continuous Improvement (Kaizen) and process re-engineering, both in business and manufacturing processes. By 1990, the competition situation had greatly improved production quality and productivity was near the Japanese level in the West, Hays et al (2005). US companies formed strategic alliances with Japanese firms, "to develop Keiretsu (Corporate groups help to subsidize each other in time of difficulties, avoiding divestiture, even to those foreign firms that have been taken over) like relationship…", Choi (1995), in order to learn from the Japanese. Consequently, the US developed a strong dependency on Japanese Corporations, Choi (1995) as well as other countries in the East.

The competition started in the 1960s and 1970s continues, but more fiercely with the help of IT and ease in communications. The world saw liberation of trade, business deregulation, globalization of business, an euphemism for massive outsourcing, increased terrorism, (Sept 11, on the soil of North America, first time), and massive ethics problems with business leaders (WorldCom, Tyco, Enron, Lord Black), just to name a few. Owing to the availability of massive cheap labour and the advent of IT technology, outsourcing to underdeveloped economies has crossed over to white-collar work. Services are outsourced, such as, call centers and high tech services: engineering consultation, software design and development, and medical/hospital ancillary services (interpretations of X-rays and NMR imaging). Resulting from these trading/industries; the Far East holds ~50% of the world's foreign reserves of US dollars and Euro combined in 2004 [still holds truth at time of writing Nov 2007]; the largest US Treasury bill holder is China, in effect, China has been financing US prosperity, Duisenberg (2004). A majority of the manufacturing facilities, taking advantage of the low cost of living in China, are producing goods for US consumption. While China becomes industrialized, physical infrastructure requires resources, being a resource-based nation, Canada enjoys a tremendous trading advantage. The first interest rate hike in China, in Nov 2004, signaled a desire to slow down growth to avoid high inflation and a cautious move in preparation for the US to deal with its deficit; which required immediate attention, Duisenberg (2004). Together with foreign exchange revaluation, though symbolic, it has measurable strategic influence on the economies of the rest of the world.

The implication of outsourcing, the problem of increased terrorism, and issues in ethics will cause havoc and new challenges. Protectionism will probably soon be in fashion again, although the productivity concept promotes outsourcing, Porter (1990) [for rationale, refer to Section 2.7.3 (A)], due to job losses to underdeveloped economies as well as because, in the interest of national security because, control of national borders will hamper global businesses. In turn, the world economy could be in turmoil. Government would lay down regulations focusing on business practices, and dampen the world economy via banking regulation (flows of money). Decision-making in such a new environment will call for new dynamics and new measures in strategy management; potentially another paradigm leapfrog from what has been known from 1970/1980 to date. It is paramount to adapt to this new environment that calls for strategies to deal with uncertainties (risk management); decisions on the magnitude of continued outsourcing, efficiency and effectiveness with responsibilities in corporate governance; in the face of Governments' heavy handed intervention in addition to European Information and Consultation Directives, Sarbanes-Oxley and Anti-money Laundering Acts.

Hence, decision-making becomes a critical concern where it is a process to choose amongst alternatives to acquire the best utility or some other predetermined criteria and conditions, especially risk management in conjunction with adapting to the environment.

2.3 Models of Decision-making

Various research studies and models exist in decision-making, but they all point to 3 classes of decision-making models, Hellriegel and Slocum (1974), and an overall generalized model:

- Normative or Prescriptive (what ought to be) Decision Model
- Psychological or Descriptive (what actually is happening) Decision Model
- Composite Decision Model (Organization Decision-making Theory)

The overall decision-making process,

- The Generalized Decision Process Model

2.3.1 Normative or Prescriptive (what ought to be) Decision Model

Normative decision model (theory) is concerned with finding the best solution with perfect information to decide on an optimal decision. It is related to a fully rational and prefect decision-making process; hence it is: what ought to be. This model, developed by economists, is related to utility theory for optimisation. Solutions involve economic factors; tools to improve the effectiveness of managerial decisions. Decisions are made based on the planned action where outcome is compared. Examples of models facilitating planning are SWOT analysis, breakeven analysis, payoff matrix and decision tree. For complicated solutions and decisions, more sophisticated tools, generally known as operational research tools, are used

to simulate reality, with econometric studies, e.g. sets of complex equations are used to determine whether to use monetary policy or fiscal policy to stimulate the economy.

Being a decision theory, a decision can be considered as the relationship between the elements: Actions (A), States (S), Events (E), Utilities (U), and Probabilities (P) expressed as:

$$D = f (A, S, E, U, P)$$

Using whether to accept the offer from Business School, University of Glasgow, to transfer from the DBA programme to the PhD programme as an example for illustration:

Actions	- DBA programme or Ph D programme
States	- The sets of demands, knowledge, satisfaction, etc. (to consider a few, but it could be numerous) arose from the degrees
Events	- A respectable doctoral degree vs. a more respectable degree
Utilities	- How satisfied if the choice is the Ph D programme and it turned out to be less respectable than the DBA? Or alternatively, if the choice is DBA and Ph D turned out to be more respectable. Which programme requires less expense, time, effort, etc? This is an opportunity and marginal cost consideration.
Probabilities	- The risks and uncertainties of each of the events and utilities

The decision can be based on these elements using the payoff table or decision tree to formulate a problem to arrive at an optimised solution with maximum benefit. In order to arrive at a rational decision the calculation could be very complex and combinations are numerous, depending on the number of factors. Tools like linear programming or other operational research schemes with super computer power are required. This type of decision-making is a typical design of mathematicians and economists to achieve optimal solution. Even with advancements in IT, only simple models can be processed. However, psychologists study behaviour, noticing decisions are made using a process similar to problem solving, but it is more context dependent.

> *"Decision makers can satisfice by finding optimum solution for the simplified world, or by finding satisfactory solutions for a more realistic world"- Simon (1978)*

2.3.2 Psychological or Descriptive (what actually is happening) Decision Model

Motivation and behavior studies try to explain and describe human decision processes in organizations. Models provide the mechanism to determine and to comprehend the underlying reason why decisions are made, whether irrational, illogical, inconsistent or rational. Descriptive decision theory is related to what is actually happening in decision-making. It is impossible to consider all alternatives (under the numerous States, Events); in this model, developed by psychologists, the decision-maker merely needs sufficient information to make the decision. The following are examples of approaches of this class:

Adaptation approach

Individuals modify their goals resulting from their perceived experience, e.g. a student's marks may change over time because of the grades he actually received over the year.

Inequity approach

When an individual perceives a condition of inequity, the individual would be motivated to reduce the inequity by improvement to raise himself above the equity reference or to try to lower the equity mark by diminishing others.

Heuristic Problem solving approach

It is a short cut based on earlier experience to circumvent the formal structured decision making process. A technique of rule of thumb used to reduce searching for a solution quickly and conveniently offering insight into the issues. Heuristics illuminate and expose promising paths to solutions, e.g. if in doubt, punt, Shull et al (1970).

H. A. Simon had postulated a behavioural theory to describe how decision-making is processed. He coined the term “bounded rationality”. Decisions are made based on rules of thumb, heuristics, in spite of optimal and maximized choices, satisficing is acceptable, i.e. setting a benchmark or an aspiration level, if level was achieved, then it is fine. Otherwise, either the benchmark or the decision is adjusted.

Applying this notion to the question regarding DBA and Ph D Programmes, there are preamble constraints, like time, hardship in adaptation to the environment and finances. The requirement of physical presence annually in Glasgow: 2 to 3 times each year, jet lag, extra cost, indifference in marginal utilities, and opportunity cost between the two degrees in qualifications are some of the major contributing factors. With these bounded rationales, without going through the long computations, a decision is easy to make.

2.3.3 Composite Decision Model (Organization Decision-making Theory)

This is the class of models that organizational decision making uses. It is a result of combining the above 2 models, providing tools with the strategy of

decision making within different situations in the environment. Decision requires an integrative process of all disciplines of learning contingent on the circumstances. Simon realized and proposed this as an organizational Decision-Making Theory where elements of a set constitute the set, i.e. divvying the decisions into smaller decision-making tasks and assigning them among many specialists, a reductionistic approach. Communication is used to integrate the decision together with some sort of hierarchy or authority infrastructure.

As an illustration, an organization needs to decide whether to accept an agreement to undertake a project. The undertaking is differentiated and decentralized by functional discipline; then integrated as collective for the final decision; i.e. the contract specialist to draft the agreement, the legal specialist (lawyer) to examine the terms, the financial specialist (accountant) to review the financial implications, and the technical specialists (engineering or production staff) to review the feasibility. They all use the appropriate decision making models and communicate their findings. Upon completion, and having been communicated, decision becomes undemanding for the chief decision maker.

Further, using the foregoing example of DBA/Ph D decision to illustrate this method:

The original equation is re written into

A = f (a1, a2); 2 choices to the actions
D (S) = f (s1, s2, s3,……..sx)
D (E) = f (e1, e2, e3,…….ex)
D (U) = f (u1, u2,u3,……ux)
D (P) = f (p1, p2, p3,……px)

The overall decision is based on

D (A) = g {A, D (S), D (E), D (U), D (P)}

This application to the DBA/PhD choice is similar to the 1st example of the organizational decision on the agreement acceptance by a stratification process, where appropriate selection of factors is made on S, E, U, and P. Upon completion, the decision, D (A) would be based on these selected factors.

2.3.4 The Generalized Decision Process Model

The generalized decision making model is founded on processes. Inductive and deductive processes are used in decision-making. The method starts by observation to identify a certain pattern, making assumptions and guesses based on the results of these observations to arrive at a conclusion and then to formulate a decision based on these results of observation and conclusion.

Continue to use the DBA or Ph D program as an example for further demonstration, the steps of this process:

1) Observe to see what prior knowledge is applicable
   Collecting facts about the 2 programs, what do they offer and make comparisons; such as economic resources; time, travel, and examination requirements
2) Choose the supporting prior knowledge (a profile) to fit
   Choosing one of the alternatives between the 2 programs and fitting the observations and requirement of the prior knowledge or profile
3) Justify the observation by the chosen prior knowledge or profile
   Justifying the choice by the properties of the choice
4) Conclusion
   Determining the validity of the justification of the choice to the profile
5) Decision
   Deciding on the program of choice based on the findings from 1) to 4).

Once a choice is made, the process continues to the execution stage, where specific performance takes place; application is made to the choice and, upon acceptance, the research programme is initiated. The process ends only when evaluation (appraisal) is completed, whether the choice is sound or otherwise. Hence, for a complete generalized decision model, two extra steps are in order:

6) Implementation of decision
7) Evaluation of the performance based on result of the implementation

2.4 Decision Making in Business Organizations

An immensely powerful and colossal production machine of the West ended up learning from the Far East. GM, armed with new knowledge from the Far East, created Saturn from ground up and this new brand is not burdened by acute union problems or pension contributions. It is still unsuccessful. Levi's, inventor of jeans, lost ground to Guess. New Coke did not seem to flourish as expected and lost ground to Pepsi; but immediately Classic Coke returned and recovered.

GM probably saw the problem but was unwilling to deal with it because short term profitability had been abundant from SUV (Suburban Utility Vehicles): huge passenger cars sitting on a truck platform. While Levi's was still producing in the US, Guess had already begun producing globally. Coca Cola was able to swiftly reverse the wrong decision and produce the original Coke again after scanning the environment.

The conceptual short answer to these phenomena - it is because of organizational culture/practice, management, and leadership issues. However, the underlying strategic reason is decisions that have not been "muddled through" correctly, Lindblom (1959). A prescriptive oriented approach, "Markets, technologies, products and business processes must be analyzed on a solid theoretical basis to be capable of understanding successful strategies that are based on valuable resources", Royer (2003), could still lead to incorrect decisions owing to faulty emphasis on choices of critical decision factors. It is because most decisions have to be made under ambiguous conditions, where "… decision makers [need] to act when vital information is still either insufficient or unreliable", even through effort are underway to "… search for, developed and utilized available data to influence decision makers as well as plan and control….", Mayer-Sommer (1988).

2.4.1 Framework of Decision Making

Typically, decision-making processes, intertwined with segregation of duties, are refined in a formal three levelled hierarchy structure, Anthony (1964), as follows (to be dealt with in depth in Section 2.7.1):

(1) Strategy Management
(2) Management Control and Planning
(3) Operation Management (or Tactical Operations).

This is not a near modern invention. Historically, the structure of military and empires governing structure have already provided the fundamentals of hierarchy of within the basic decision-making model. At the highest level, a head of state or military and advising council sets goals and give orders; at the middle level, mid- and low-ranking ministers and officers plan, set objectives, and organize, while civil servants and foot solders execute the decisions.

Characteristically, decision-making in business is inherently a process to determine and to resolve how to execute and manage in order to maximize sales/revenue and minimize costs. Regardless of size of the firm, the ultimate objective is profit taking, whether short- or long-term; other goals, visions and missions, and customer orientation, etc. are schemes to attract business volume. However, volume is not the only factor; cost too, echoed in Kaplan and Norton (2004, 2004a) needs to be minimized. This business decision-making process, at each of the hierarchy levels, starts from the realization of issues and constraining factors and leads to problem definitions. It is followed by consideration of the alternatives, using bounded rationality and heuristics, together with measurement of risk and uncertainties. A decision is made based on the balance assessment of alternatives and comparative judgments with an acceptable degree of risk in each of the hierarchy level. "Decision makers need to consider subjective factors … to cope with high levels of uncertainty, incomplete understanding …", Olson (2001). The environment and the decision maker's own subjectivity, such as goals and objectives, culture, value, Spear and Bowen

(1999), social political and economic background, Kast and Rosenzweig (1970), Farlani (2002), influence the alternatives ranking to arrive at a decision. “Such ability is the product of experience, education, intelligence, boldness, perception and character”, US Navy (1995), in conjunction with intuition, Hunt et al (1989), where decision making is as essential a skill as rational thinking, Simon (1987), Burke and Mille (1999).

Only a larger firm could afford such an elaborate process. In contrast, a small firm may not have this hierarchical formal decision structure, the knowledge and the resources to execute rigorously the requisite analyses and considerations before decisions are made. However, small firms do have an informal structure with their practical approach to circumvent formal analyses to better decision-making - a comparatively more “mudding through” approach. It is the tendency to manage risk by embracing and controlling the resulting outcomes, and to “frame their problem spaces with personal values and assume greater responsibility for the outcome”, Sarasvathy et al (1998).

The strategic decisions made by a small firm to sustain competitive and profitable operation, Cunningham and Hornby (1993), demand special attention to the value dear to the customer, acquiring customer loyalty, in tone with its market segment, maintaining personal relationship with local customers, ignoring competition but embracing a position in a niche market, and avoiding direct confrontation with competition as a control over pricing that customers are willing to pay. In other words, small firms do not have the might to combat Porter's 5 industry competitors, but instead using either a cost leadership or differentiation strategy to focus on certain niche market segments, in order to sustain performance and existence. They have limited and restricted resources, hence “many classical [management] theories become irrelevant where theories give way to intuitive decision-making”, Tibbits (1979). In particular, this is exemplified in the property management industry, which is composed primarily of small firms and where the strategy is even more limited in scope. The precise and specific strategy, Stoyan (2008), is ensuring availability and preserving capital. This is maintained by upkeep relationship with the lender and carefully watching the market and the firm’s cash flow.

Furthermore, in examining the operation modes of larger and smaller firms, giants like Wal-mart, Home Depot, and Sears, have revealed that they started using a small store business model, Metter et al (2000). This is in contrast to (the previous assumption that small entrepreneurs would become obsolete and corporate giants would be the only ones to prosper, Bhidd (2000). This is an adaptation to consumer demand; a competitive market can adapt and make decisions quickly.

2.4.2 Aspects Facilitating Decision Making

Leadership, experience, loyalty and incentive are important criteria in decision making and running a successful organization.

In “Half the decisions in organizations fail”, Nutt (1999), the Euro Disney flop and the Firestone tire recall are two examples, where the culprits were, Nutt (1999, 2001, 2003):

1) Rush to judgement to faulty decision
2) Misuse of resources
3) Application of failure-prone tactics to make decisions arriving at premature commitment

Nutt further suggested (1999) that the main reason for failures was that managers did not follow the proper decision making practice/process, though aware of its importance, and “…take too much time and demand excessive cash outlays”, Nutt (2003).

Hamel stated (2000) that the major cause of failures is generally “… large firms with layers and layers of bureaucracies causing delay in decision-making”. Managers are usually careful not to be responsible for committing blunders aiming for “…what is pragmatically possible, or institutionally acceptable, with the constraints of business risk considerations”, French (2001). This implies that managers in North America, even armed with knowledge, make faulty decisions, hence, need decision making training in general.

There is no argument that leadership can improve via academic training, but this quality is highly grounded on culture and value, demands loyalty, intuition and strategic thinking: the ability to see the big picture. It is best exemplified by decision-making in Japanese firms. Decision making is centred in work groups and middle management, not top management, Spear and Bowen (1999). The former are able to use tacit knowledge acquired (experience) to solve those “wicked problems” and to “muddle through”. This notion also supported, in the US and Canada, by the example of IBM, which was successful in the Internet provider market, in this respect, only because of its competitors’ slow adaptation of innovations and its middle management’s organizational culture in knowledge management; not because of its quick top-level strategic decision in response to the environment, Hamel (2000). The Internet and WWW technology was still in its infancy in the mid-eighties, when IBM, as a global firm, already had an international network and distribution channels in place, allowing it to form the first Global Network for Internet connections. A subscriber was provided with a local number for every major city and town in the world to connect with the Internet. Six years later, it was sold to AT&T [*Note: The Author’s provider had been IBM Global Network, and later it became the AT&T Global Networ*k].

In Japan, continuous tenured employment promotes loyalty. “The hierarchical structure is relevant in Japan because most of the directors have been promoted from within the same company”, Ichiro (1978). Further, employment stability and equitable profit sharing, Ichiro (1978), are common. The concept of incentive is not new, Mayo et al: the Human

Relation approach had already advocated and echoed this. The difference lies in the application and goal congruence, where decision management is separated from decision control and performance-related incentives motivate performance, Evans (1995), Harrell (1984).

2.5 Critical Influencing Factors Affecting Decision-making

Decision models and tools are paramount in assisting a decision maker to perform analysis and to provide possible options to decisions. However, it cannot replace creativity in the judgment process to choose alternatives. This creativity is often affected and influenced by critical influencing factors. Those significant to E&B are value and need (analyst's culture), process, practice, and experience (background); decision of selection (orientation); problem structure (objectives and attributes).

2.5.1 Influencing Factors Considered to be Critical

The relevant influencing factors are arranged under 4 groups; namely:

Value and need (Culture)
- A) National Culture and Value
- B) Mills versus Kant
- C) Hierarchy of Needs related to Concepts of Priority and Money
- D) Organizational/Corporate culture and its analysis

Process, practice, experience (Background)
- E) Risk Management
- F) Bounded Rationality, Muddling through, and Incrementalism
- G) Groupthink

Decision of selection (Orientation)
- H) Yin Yang

Problem structure (Objective and attributes)
- I) Wicked Problems

A) National Culture and Value

"Culture … is the collective programming of the mind which distinguishes one group or category of people from others", Hofstede (1993).

Culture is values and beliefs held dear collectively by a group of people whether it is a family, a tribe, a nation, or a kingdom. Values can be viewed as the group's fundamental beliefs and ideologies codified, communicated, and diffused in education, learning, and tradition. Other than beliefs and values, the secondary constituents are artifacts such as art, technology, symbols, and myths.

The concept of beliefs and values, the main elements of culture, can best be illustrated by considering differences among various nationals. It is reflected in the preferred ways of behaviour and practice. Hofstede illustrated (1993) the profiling and the difference; e.g. German and Oversea Chinese (defined

by Hofstede, as distinct from those from Mainland China). Germans, responsible and skillful, do not require American style motivation; however, a hierarchy of expert knowledge is expected up the line. As a result, highly technical and precision competence is expected; typically, BMW and Mercedes come to mind. By contrast, the Oversea Chinese, being family oriented (strategic team), are network minded and are guided by Confucian virtues: thrift and persistence. They are excellent traders and skillful in business management. The Chinese orientation is typical of an 'old' tradition where ruling authorities could change quickly and only family members could be trusted.

"Cultural differences between nations can be, to some extent, described using five bipolar dimensions", Hofstede (1993). These five bipolar dimensions provide a structural characteristics' framework, based on values, as a starting point to analyze culture and its transformations. They are known as Hofstede's Dimensions:

1) Power Distance
2) Individualism/Collectivism
3) Masculinity/Femininity
4) Uncertainty avoidance
5) Acceptance Long term v Short term orientation of different cultures or Confucian Dynamism, Hofstede and Bond (1988)

B) Mills versus Kant

J. S Mills is a utilitarian. Mills' theory is an ethical utility theory that states that the proper way to behave in society is to bring the most beneficial gain to the greatest number of individuals, maximize utility among all, 'all' does not prevent any inclusion of 'only', it simply limits inclusion of the members of a collective: the privileged.

In contrast, E. Kant postulated that an act in society has to obey morality, without exceptions, where morality is related to being righteous and obeying the natural laws. Therefore, it is wrong to kill under any circumstances according to Kant, and it is hence wrong to shoot down a baby suicide bomber who is running into a crowd of adults.

In contrast, Mill's principle is otherwise.

C) Hierarchy of Needs related to Concepts of Priority and Money

A. H. Maslow postulated that humans have lower order needs and higher order needs. It is only when the lower needs are relatively satisfied that one can begin to move up the higher needs ladder. The application of Maslow's Theory is directed to motivation and satisfaction of behaviour in organizations. The elements of needs are, in ascending order: 1) Physiological, 2) Security and Safety, 3) Belonging and Social, 4) Esteem and Status, and 5) Self Actualization and Fulfillments. 1) and 2) are lower order needs and the remainder is higher order needs.

Lower order needs are primarily satisfied via economic behavior while higher order needs are motivated by symbolic behaviour of social content. They are influenced, conditioned, Davis (1977), and dictated by the environment and situations.

Money cannot buy happiness

Money is an intermediary that one can exchange for needs: needs toward satisfaction. Money could provide happiness for the satisfaction of lower needs or even social needs, like companionship. Money can provide shelter at The Connaught or St James Club, dining at La Tour D'argent, hiring a Shaolin monk or even Jackie Chan as one's bodyguard. Money is the resource to wine and dine one's friends and to shower one's loved ones with gifts and offerings. They will most definitely return and bestow one with affection. However, the prerequisite is the appropriate degree of feeling, warmth, and good attitude. The satisfaction of the higher needs also requires resources, exemplified by acquiring a doctoral title such as a DBA which calls for 5000 GPB/year, without mentioning the hard work. Money can also buy youth and beauty; one can acquire cosmetic surgeries for implant enhancement, liposuction, and facelift. These are, however, materialistic and worldly; spiritually, money can be donated to charities, the poor, or the Church for good use.

If money cannot buy happiness, money can go a long way to helping

D) Organizational/Corporate culture and its analysis

Cultures reveal themselves from superficial (Hollywood) to serious (literature), in symbols (The Mountbatten-Windsor Family, IBM logo), heroes (Napoleon, Bill Gates), rituals (festivities, organization anniversaries), myths (Zeus and the Gods), and values (morality). Values play a major role in national culture where the other constituent: artifacts, (symbols, heroes, myths and rituals) play a secondary part. Organizational cultures differ, artifacts are of prime importance, and values play second fiddle.

Schein postulated (1992) that organizational culture could be portrayed in three layers:

1) Artifacts and Creations
2) Values
3) Basic Assumptions

The term organizational or corporate culture became fashionable in the 1980s; prior to that, it was always referred to as climate, the process of leadership, and motivation practices. Organizational culture, a term generally credited to E. H. Schein, is the personality of an organization. Similar to national culture, it influences how individuals act, perform, view their jobs and deal with co-workers as well as decipher the future within an organization or corporation. “Organizational cultures are shaped by

management practices and not by cultural values", Hofstede (1999). Hofstede argued it is shared "practices" that shape an organization's culture; and not the shared "values" that shape the culture. In contrast, Peters and Waterman suggested the organizational culture promote success, quote, "shared values represent the core of a corporate culture"; that is strategic changes and the right organizational structure should be preceded by changes in culture. However, Hofstede further clarified that values of the organization's leader shape the practice of the organization. "The values of founder and key leaders undoubtedly shape organizational cultures, but the way these cultures affect ordinary members is through shared practices", Hofstede (1999). Further, it is important, as a vehicle, that education and learning, in addition to tradition, exert changes in organizations, echoed in Parnell et al (2003). These play a vital role in culture as they modify values and outlook.

Handy also advocated (1989) that organizational structure is of prime importance to meet a requisite organization while Handy has postulated (1986) a structure framing organizational culture in 4 ways:

1) Power
2) Role
3) Task
4) Person

Sathe advocated (1983), based on observation and gathering information, a process model: Observe, Read, Ask, and Feel and related them to the "Four manifestations of culture"; Objects, Talk, Behaviour and Emotions, which infer and deduce the important shared understandings (culture).

Closely connected with organizational culture is the organizational change when the culture (or rather the practice) is no longer appropriate due to changes in the environment. Organizational change is the process of adjusting the organization to changes in the environment, Michael (1982), Godstein and Burke (1991). An organization's performance relates closely with its internal operations as well as its external environment. When these are not aligned, changes are required; otherwise, deteriorations will eventually lead to failure.

A methodology analyzing organizational culture is necessary to comprehend the underlying issues before embarking on any changes. A workable framework would be collection of data using Sathe's process framework in conjunction with Schein's 3 basic organization culture assumptions and Handy's nomenclature to determine the type of organization category. If the organization were multicultural, Hofstede's Dimensions, [for detail refer to Section 2.5.1 (A)], an added feature can be used to identify the underlying issues. Once issues are delineated, a decision on application of changes can then be determined.

Changes in an organization [deal with in depth later on in Section 2.7.4 (A)] can use two types of strategies, Goodstein and Butz (1998):

1) System Intervention (SI)
2) Organizational Development (OD)

System intervention focuses on certain parts of the structure of the organization and identifies the necessary changes, e.g. the management control system as a whole or just the processing portion, job classification, and information technology, and the policy and procedures, in other words, the visible part of the organization. The change is usually evolutionary. Organizational culture needs to be managed by change agents, but it occurs only under unconscious conditions, Ogbonna and Harris (1998), by the organizational development approach.

Organizational development is a much bigger change than system intervention. The former seeks to overcome the culture problem or to adjust the culture within the organization by directing it to the desired state before implementation of certain revolutionary large-scale change such as applying Total Quality Improvement to change the culture before applying Business Process Reengineering. Organizational development focuses on the gap between the existing and the desired organizational states and uses a change agent to process the change. "…a planned change process, managed from the top, taking into account both the technical and human sides of the organization…", Schein (1992).

E) Risk Management

A layman equates risk management to insurance because insurance is traditionally used to reduce monetary risk exposure, yet insurance is just one of the tools used to mitigate risk, while risk management is the act of examining alternatives and deciding whether to acquire the insurance. Risk pertaining to natural causes, human errors, and accidents is known as insurable risk because the compensation is monetary. It can be transferred to third parties through some contracts called insurance.

Risks are classified as financial and operational risks. Risk management refers to the act of identifying, measuring, weighing alternative options including insurance, hedging, and managing events that can adversely affect one's decision. It is commonly known as uncertainty reduction related to a decision. An even more general definition of risk management is the act of managing anything that is short of one's objective, as illustrated in Exhibit VIII, a schematic continuum.

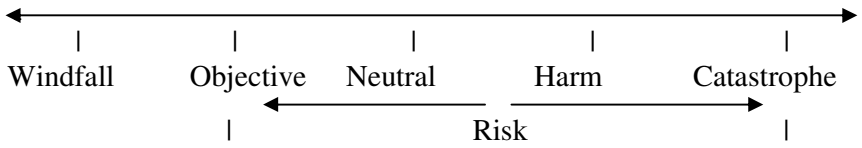


Exhibit VIII Risk Continuum, Adapted from Card (2003)

One method of managing risk of a certain objective, the holistic approach, Card (2003), is by reconciling and addressing differences, reasons for anticipated risks, and what can be done to avoid those risks associated with that certain objective. This is known as Risk Deconstruction and Response (RDR) methodology.

Using research funding as an example to illustrate RDR:

1) Ask the question
   Why does research funding dwindle?
2) Identify causes of the reasons.
3) Postulate a possible solution
   How to avoid these causes?
4) Compare, match, and address 2) and 3) to arrive at a scheme to mitigate the risk.

The expected result would be proposing research topics related to using Tranfield's Mode 2 methodology.

F) Bounded Rationality, Muddling through, Incrementalism

H. A. Simon, in 1957, proposed the notion of bounded rationality, a descriptive decision making concept. The concept is grounded in the view that a decision making agent faces a multitude of choices, such as uncertainty of future events with high probability of risk, and a high cost of securing all necessary information; if it is at all possible. In addition, the decision-making agent has limited resources to make a full rational decision. Therefore, he will need to establish a limit or a benchmark in order to make a rational decision bounded within a domain. Simon articulated that decision-making agents relent not to maximize utility, but make decisions by satisficing. As long as the benchmark has been reached, it is acceptable. If the benchmark were not reached, the decision or the benchmark would be adjusted to compensate. A decision based on bounded rationality is therefore a decision characterized by a simplified perspective of the real world and maximizing occurs only up to a pre-defined benchmark or the bound, "…organization atypically engages in value maximization. Organizations seek stable states of existence with well defined parameters prefer simplified and highly structured environment", Cimbala (1999).

Lindblom advocated (1959) practitioners/administrators manage decision-making by engaging a systematic method. The method combines traces of prescriptive (by root) and descriptive approach (by branch, which is by bounded rationality), known as "muddling through". "Theorists often ask the administrators to go the long way to the solution of his problem, in effect ask him to follow the best canons of the scientific method [the prescriptive approach], when the administration … theory will work less well than more modest **incremental** comparison. Theorists do not realize that the administrator is often, in fact, practising a systematic method … pursuing neither a theoretical approach nor successive comparisons, nor any other systematic method.", Lindblom (1959). Lindblom further articulated

(1959) "they [Administrators] sometimes practice it effectively and sometimes may not explain the extremes of opinion on 'muddling through' which is both praised as a highly sophisticated form of problem solving and denounced as no method at all. For I suspect that in so far as there is a system in what is known as 'muddling through', this method is it". The action of "muddling through" is referred to as incrementalism: by applying action that differed marginally from past practice, a successive limited comparisons model (by branch), in contrast to the ideal of the rational-comprehensive model of policy planning (by root), Lindblom (1959).

Lindblom is credited as the initiator of the concept of incrementalism, and "disjointed incrementalism", while J. B. Quinn coined the term "logical incrementalism", Rajagopalan and Rasheed (1995). Disjointed incrementalism is associated with "muddling through somehow", while logical incrementalism is associated with "muddling with a purpose", quoted from C. E. Summer's Strategic Behaviour in Business and Government, Rajagopalan and Rasheed (1995). However, Quinn argued (1978) that "Logical incrementalism" is not 'muddling through'. It is conscious, purposeful, proactive, good management. Properly managed…".

G) Groupthink

I. Janis coined the term, Groupthink, to refer to irrational decision-making by a group whose members are individually trying to "kowtow" to the perceived collective consensus. "A mode of thinking that people engage in when they are deeply involved in a cohesive group, when the members' strivings for unanimity override their motivation to realistically appraise alternative courses of action", Janis (1978). The result of Groupthink is being blamed for famous bad decisions such as the Bay of Pigs Invasion, Space Shuttle Challenger, and Columbia Disasters. It was postulated that each member of the decision-making teams would have considered otherwise individually, but for one reason or another, felt pressured to reach consensus. However, The Cuban Missile Crisis in 1962 was not considered to be influenced by Groupthink because it was a success: Russia decided to back down as it was considered an excellent strategic decision, Chan and Kornbluh (1998), Harrison (1975).

H) Yin Yang

The central notion is the teaching about the importance of acquiring a balance between conflicts (rich/poor, mechanistic/organistic, protein/starch, work/play) in order to sustain a good life. It is referred to as "The principle of moderation: *Seeking a Middle Way*", Hofstede (1999). Buddha, Confucius, and Socrates independently advocated this thinking in their teachings, Hofstede (1999).

The term Yin Yang originated from the I Ching, the Book of Change, written 5000 BC by legend and edited by various Chinese philosophers over the years including Confucius. The I Ching is a book of oracle providing philosophical insights to situations and problems.

Translation (the Author's) of the passage, from I Ching (Chinese version), Sung, ed (2001), defining Yin Yang:

The ultimate beyond measurement (Tai Chi), the Universe, morphs into 2 demureness (Yin Yang, represented by – – and — respectively); the 2 opposing polarities or states of conditions symbolizing equilibrium, harmony and opposite principles in nature. The Yin Yang morphs into 4 symbols, the primal cosmic inertia/momentums/forces (Sei Jeung, represented by metal, wood, water, fire or the 4 seasons), symbolizing balance of nature via these 4 cosmic entities (2^2), physically formed from Yin Yang (2)….

I) Wicked Problems

Pacanowsky credited (1995) Horst Rittel with coining the term in Rittel and Webber (1973), where the "tamed" or "benign" and "wicked" problems are differentiated. Tamed problems are associated with definable and separable problems, mostly related to natural sciences; they are mathematical or related to finding the structure of a chemical compound while wicked problems are related to sociologically typed or societal issues, Rittel and Webber (1973). In essence, a wicked problem is the type of problem that has numerous interrelated elements of factors for consideration and representations by mathematical equations or rational-comprehensive (by root) measures are extremely difficult. Hence, successive-limited comparisons (by branch) or "muddling through" would be a more practical approach.

Rittel and Webber identified (1973) ten characteristics of a wicked problem:

- There is no definitive formulation of a wicked problem
- Wicked problems have no stopping rule
- Solution to wicked problems are not true-or false, but good-or bad
- There is no immediate and no ultimate test of a solution to a wicked problem
- Every solution to a wicked problem is a "one-shot operation", because there is no opportunity to learn by trial-and-error and each attempt counts significantly
- Wicked problems do not have an enumerable set of potential solutions, nor is there a well-described set of permissible operations that may be incorporated into a plan
- Every wicked problem is essentially unique
- Every wicked problem can be considered to be a symptom of another problem
- The existence of a discrepancy representing a wicked problem can be explained in numerous ways. The choice determines the nature of the problem's resolution
- The planner has no right to be wrong

To solve a wicked problem, therefore, one needs to use "an iterative process that moves between problem definitions, potential solutions, actions, and

outcomes, that the values of information become known", Pacanowsky (1995), in other words, the process uses the concept of incrementalism or "muddling through", and teamwork. Pacanowsky further identified (1995) three simple techniques to tackle wicked problems:

- Question brainstorming
- "Colour" questioning (Using colour to represent the brainstorming types of questions, e.g. green for possibilities of imagination and ingenuity, red for description of fact, and blue for judgment, opinions and need: for what if, what is and what should etc.)
- TQR (Thinker-Questioner-Reflector), also known as paired reasoning.

2.6 Some relevant Logic Tools that facilitate Decision-making

Decision-making requires logic tools, most often as explorative analytical devices, to appraise the validity of the alternatives before selecting the formulated choice.

The relevant tools are SWOT analysis, SMART, and the portfolio technique. They are described below.

2.6.1 SWOT Analysis

SWOT is the acronym stands for Strength, Weakness, Opportunity, and Threat. It is referred to as the Harvard policy model because Kenneth Andrew coined it in his Business Policy course at Harvard in the 1960s. SWOT is the heartland of strategic management, perhaps, more appropriately the decision making process. Strategic management is required to tackle the competition and to try to influence market. Decision making tools in operations research are not adequate in this respect because strategic management decisions are choices on what to do and how to tackle competition, both basic and macro in nature; i.e. a policy determination process. Its decision-making process (holistic in nature) takes precedence over decision-making that uses tools such as breakeven analysis, linear programming (reductionistic in nature, specific, operational). The required tool needs to empower self-examination of internal qualities (strengths and weaknesses) and to scrutinize the external environment for prospects (opportunities and threats).

A standard structural ranking method is always used in tandem as part of SWOT analysis. The principle of the ranking is essentially the composite sum of expected values of each of the SWOT attributes with reference to the importance and rating of the issues.

2.6.2 SMART

W. Edward developed SMART (Simple Multi-Attribute Rating Technique) in 1971, Goodwin and Wright (2004). The foundation is a reductionistic approach, in which the issues are divided into smaller issues that can be rated objectively for each alternative. Ratings of each alternative are

combined to arrive at certain weighted averages for comparison. The rating attributes can take the form of values or utilities.

The main stages of this technique are as follows:

1) Identify the alternatives
2) Identify the attributes which are relevant to the decision
3) Assign a value to each attribute to measure the performance of the alternatives, where a graph is plotted for each attribute against the value, and then locate the mid value
4) Determine a weight of importance for each attribute
5) For each alternative, take a weighted average of the values assigned to that alternative by using the mid value and the weight normalized to calculate the weighted average.
6) Make a provisional decision
7) Perform sensitivity analysis

2.6.3 The Portfolio Technique

A business unit (division) of a corporation that specializes in a segment of a business, in general, is called a SBU (Strategic Business Unit). From the corporate management point of view, a SBU is analogous to an investor's portfolio, a collection of diversified investment instruments, hence the term portfolio technique. In order to manage each business like an instrument of an investment portfolio, portfolio analysis or portfolio planning models emerged and they are called, categorically, the portfolio technique.

The portfolio technique is an integration of a three-phase configuration model, Abell and Hammond (1979), Glueck and Jauch (1984), David (2005). This three-phase model is a structural decision-making process for formulating and evaluating choices objectively and holistically. They are:

1) Input Phase (Observation and collect data)
   Acquiring the information needed for strategy formulation,
   a) External and Internal Evaluation (EFE-IFE) Matrices
   b) Competitive Profile (CP) Matrix
2) Matching/Exploring Phase (Alternatives generation)
   Generating alternative strategies based on 1),
   c) SWOT Matrix
   d) Strategic Position and Action Evaluation (SPACE) Matrix
   e) Boston Consulting Group (BCG) Matrix
   f) Internal-External (IE) Matrix
   g) Grand Strategy (GS) Matrix
3) Decision Phase (Making Choices from alternatives)
   Utilizing information derived from 1) to objectively evaluating the strategies generated from 2) and then to prioritize and choose alternatives,
   h) Quantitative Strategic Planning (QSP) Matrix

The most renowned of the matrices is the BCG, created by Bruce Henderson of Boston Consulting Group (BCG) in the sixties. In the early seventies, the IE matrix was developed for GE to study restructuring of its SBUs by McKinsey and Company, with more refinement to show market attractiveness and competitive strength.

2.7 Making Decision and Management Models

This section presents a framework of structural concepts and methodologies facilitating the strategic decision making process.

Section 2.7.1 identifies the elements of planning and control functions in an organization based on Ansoff and Anthony's notions and the decision making process

Section 2.7.2 identifies the dimensions and processes of the strategic decision making

Section 2.7.3 presents the concepts and techniques related to formulation:

A) Porter's Trinity of Competitive Concepts
B) Defense and Offence Strategy
C) Cost Raising Strategy and Barrier
D) The Boyd's Cycle
E) Red and Blue Oceans Strategies
F) Core Competence
G) Resources Based View (RBV)
H) Mintzberg's 10 Schools of Thought of Strategic Management

Section 2.7.4 presents the concepts and techniques related to implementation and evaluation:

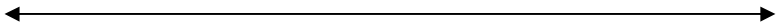
A) Change Management
B) Knowledge Management (KM) and Learning Organization
C) Systems Theory
D) System Intervention (SI) Approach
E) Organization Development (OD) Intervention Approach
F) Organization Structure
G) Work Breakdown Structure (WBS)
H) Concept of Lean
I) Business Process Re-engineering/Re-design (BPR)
J) Total Quality Management (TQM)
K) Lewin's Field Theory, Force Field Analysis, Unfreeze, Change, Refreeze
L) Four Levers of Control
M) Covey's 7 Habits of Highly Effective People
N) The Balanced-Scorecard Concept

Section 2.7.5 puts forward several examples to illustrate on issues of decision making

2.7.1 Planning and Control Functions of an Organization

As aforementioned, the decision-making process is a process in selecting alternatives to acquire the best utility on predetermined criteria and conditions such as risk with regard to any successful achievements. The first step is problem definition, followed by building a model of circumstances and critical factors to determine the alternatives. These alternatives are analysed by appraising the critical factors to predict the effects and the results to determine the ranking of choices. A choice is then made based on the predicted results.

A choice between two alternatives is the lowest order of decision-making where at the opposite extreme, the highest order, options are numerous, in theory, infinite. These two situations lie at the two polar ends of the decision-making continuum as shown in Exhibit IX. The medium order (M) would lie in the middle of the continuum by default:



The Continuum

H	M	L
Highest Order	Medium Order	Lowest Order

Exhibit IX The decision-making continuum

Reasoning from intuition and applying the continuum to the general hierarchy of an organization (top, mid, and first level management), indicates that the high (H), mid (M), and low (L) orders of decision-making would be macro or holistic (Strategic), direction and administration setting (Control and Planning), and micro or performing the production (Tactical) respectively. Since it is a continuum, the number of levels is not restricted to three; the number could be infinite. This model is applicable to manage all affairs: a state, firm, department of an organization, family, or individual plans his dealings. Perhaps Anthony built on this axiomatic principle and put forward the three levels of management model.

Anthony divides the planning and control functions of an organization into three activities, namely strategic planning, management control, and operation or task control, Anthony (1964, 1965/1988). Each is supported by an integrated administrative information system, Anthony et al (1972). The planning and control functions can be viewed as a responsibility tree, where strategic planning is the top branch and spans out to management control activities and management control further branching out to operation/task control activities.

Ansoff regarded (1988) planning and control as two distinct functions: strategic and operating activities but with a supplementary support of administrative functions. The nomenclature is akin to Anthony's, where it is

implicit that Ansoff's operating activities stream encompasses Anthony's management control and task control functions where the supplementary support of administrative functions are encompassed in Anthony's notions of planning and control functions.

A) Strategic Planning

Planning refers to rule setting and these rules are normative/prescriptive, establishing what ought to be happening although in reality it is descriptive in nature. They are the constraints, goals, and objectives of an organization. Strategic planning is the process by which to decide the rules of an organization and establish the policies and guiding principles for attaining these goals, Anthony (1988). It establishes the yardsticks to measure performance in global terms whereas the quality and quantity of these yardsticks are known as objectives and goals respectively, Ansoff (1988). These activities are usually carried out by top management; with information input from the management information systems of the organization. Strategic planning sets out the boundary and provides guidelines (goals and objectives) for the operation activities which middle management carrying out as courses of action.

B) Operating Activities

Strategic activities cascade from conceptual to the discrete management control activities under Anthony's hierarchy approach. Ansoff, on the other hand, favors the notion that the environment as the determining factor contingent upon whether to focus on strategic or operating activities. He advocates a parallel approach. When the business environment becomes turbulent, ever changing or demands start to approach saturation; focus on the strategic activities of the firm is vital. However, if the market environment were growing, technology is relatively stable, and innovation is non-dynamic, priority should be given to the firm's operating activities.

A case in point is the miscalculation that Anglo-Saxon cultures made in the sixties: unawareness or underestimation of the magnitude of the environmental conditions progressed into such a dynamic state that a turbulent situation was imminent. Consequently, this miscalculation [for detail, refer to Section 2.2] caused many market sectors to deteriorate; while some recovered, a number of sectors never improved.

C) Management Control

Anthony defines management control as the process through which managers influence members of an organization to implement the goals and objectives of the organization's formulated strategies. The focus is on plan and budget compared to the performance by programmes in a matrix environment of projects and organization units (responsibility centers or functions). A cybernetic process is used to measure performance, which is evaluation by exceptions. The variance between the set goal (benchmark, profile) and the performance is appraised and investigated. Hofstede defined (1978) a cybernetic process as "a process which uses the negative feedback loop represented by: setting goals, measuring achievement, comparing

achievement to goals, feed back information about unwanted variances into the process to be controlled and correcting the process". It is, in effect, management by exceptions.

D) Operation or Task Control

Anthony's concept is the process of ensuring that specific tasks are carried out effectively and efficiently. The control focus is primarily on execution within the confine of standards and/or estimates. If there were a significant variance between the actual performance and standard or estimates, an exception occurred, cybernetic corrective action, Hofstede (1978), is immediate. The focus is on a specific project and deliverable or work package of a work break down structure within a project management system [for detail, refer to Section 2.7.4 (G)].

2.7.2 Strategic Decision Management Structure

"Strategy is the pattern of objectives, purposes or goals and the major policies and plans for achieving these goals, …define what business the company [organization] is in …", Andrews (1987, 1980, 1971). The notion is execution or processes carried out to acquire results via actions, not just for the present; but also for the future. This includes how to get there with consideration to risk and uncertainties, as well as, adaptation to change, Bracker (1980). "The tool is analysis of internal and external environment [SWOT Analysis] to maximize utilization of resources in relation to objective", Bracker (1980).

A) Structure of Decision-making Dimensions

The decision making process in a holistic mode with strategic capability is determined by the organization's quality and breadth in technology as well as management's logistics and competencies. Ansoff and Anthony's concepts have the connotation of establishing strategic management's formulation and implementation. However, adapting to the ongoing changes in an environment and managing such changes were not stressed, specifically, the incremental and emerging strategies of The Learning School Strategies, Mintzberg and Waters (1985).

In a practical approach, Pettigrew and Whipp advocated (1991) that such changes fall under three fundamental strategic dimensions, (**implicitly it is applicable to all decision-making)**, crucial to organization changes and performance, Ketchen et al (1996), Pettigrew and Whipp (1991), and they are, where their relation is shown under Exhibit X:

- Process
- Content
- Context

The strategy process is the route by which strategies are formed and formulated. The strategy process is concerned with the when, how, and who: when is the strategy used, how is it being made, and who is involved? "…process search has examined 'how' strategy is formed", Ketchen et al

(1996). The strategy process gives rise to the strategy content and provides a structure relating to the question 'what': what is this strategy about and any interconnections with others. "Content research focuses on the subject of a strategic decision [i.e. 'what' is decided]…", Ketchen et al (1996). The third dimension strategy context is the basis and circumstance that the process and content stand on. It is concerned with the question where: under what condition and situation the process and content are built on as well as where to locate the method and structure of the strategy. Pettigrew and Whipp further defined (1991) the notion of context being outer and inner. The former relates to the competitive performance in economic, business, political, and societal climates; the latter refers to the internal structure of an organization such as culture, resources, capabilities, and politics when dealing with changes.

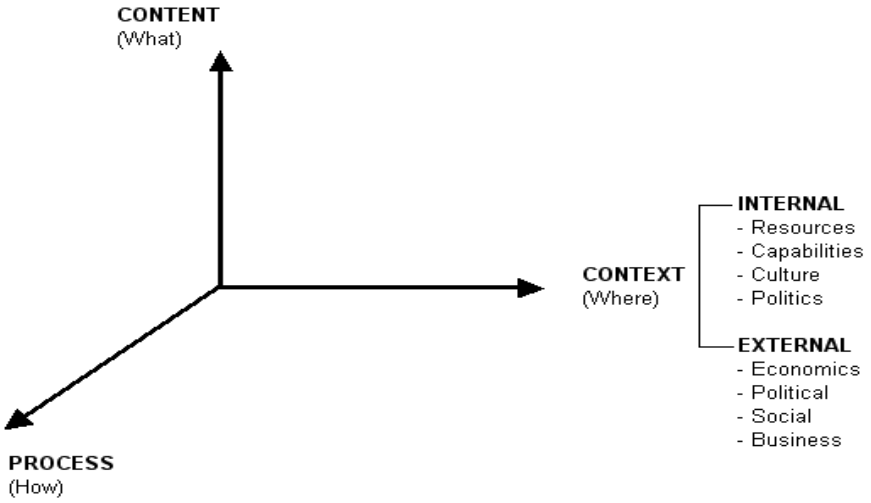


Exhibit X The decision-making Framework
Adapted from Pettigrew and Whipp (1991)

These building blocks are the framework of strategy making and planning (decision making on a holistic or macro level) where the structure (content) is erected to whichever method re planning, carrying out, and judging (process) is used to build on, with a certain foundation and perspective (context). The strategic management model is based on the environment and its foundation (context) where input is required to carry out (process) its affairs for formulation, implementation, and evaluation whether for the corporate/company, business and operational (content). The implication is application valid for the macro level of decision-making; it is also applicable to the micro level of decision-making. Decision-making levels are only measured in relative terms. A notion helped shaping SOMM [for detail, refer to Section 2.8.7].

B) Application of Making Decision (Strategic)
Application of the strategic decision-making process involves Formulation, Implementation, and Evaluation for a business organization in a holistic mode.

- ***Formulation***

  Mission and vision statements are created, followed by assessment of the internal and external environments, to establish objectives and policies, thereby generating alternative strategies for selection. Mission and vision statements may need to be revised after the formulation exercise because of refinement or anticipated change. Parallel to this pattern, priorities may change adopting incremental and emerging strategies, Mintzberg and Waters (1985), in response to the environments' fluctuations throughout the whole decision process. Further, the descriptive strategic process is not a linear sequential process, but a 'muddling through', the formulation, implementation, and evaluation process. This creates complexities of a 'wicked problem', but this can be compensated somewhat by the methodology put forward in Pacanowsky (1995) [for detail, refer to Section 2.5.1 (I)].

- ***Implementation***

  Once top management has strategized, the strategic choices are passed on to middle management to effect the change where "… top managers consciously construct interpretation schemes in order to anticipate the future… The way middle managers participate in strategy change is different…they do not share the same level of consciousness …they have to 'put out fire' during implementation of change, much of their action calls on their practical consciousness…", Rouleau (2005). This practical consciousness is the individual's core competency to effect the applicable formulation and implement change while carrying out the operations, echoed in "I demonstrated how middle managers used their stock of shared-knowledge…and influence people at the beginning of a change", Rouleau (2005). In other words, the middle managers need to effect their own strategy formulation before deciding on how to implement; another notion giving support to shape SOMM [for detail refer to Section 2.8.7].

  In terms of accountability, performance measures/benchmarks are identified with the allocation of resources to carry out objectives in the business operation. The processes of management planning and control, and tactical operations (in Anthony's terms) are then established with this limitation to the actual performance reported.

- ***Evaluation***

  Actual performance is measured against the established benchmark. In case of dysfunctions, feedback is made to management for improvement.

In a prescriptive sense, the structure of strategy management tends to follow the hierarchy of an organization. Objectives are decided holistically and defined in the highest level of the organization where the behavior to achieve these objectives is carried out and cascaded to the operating levels**.**

It is a corporate function to determine what (Mission) and where (Vision) the company is going, defined direction for the present and the intended future. Allocation of resources and action the strategies is a business function. Performing and achieving goals and objectives are operational functions. Hence, a strategy can be defined as the methods taken to achieve some certain distinct objectives and goals, Craig and Grant (1993).

2.7.3 Formulation Process: Concepts & Techniques

The process of formulation is the foundation of decision-making process. Notably it is usually classified in three hierarchical levels. This hierarchy flows from the corporate strategy, the business strategy to the functional strategy.

Andrews advocated (1987) "an organization of any size or diversity, corporate strategy usually applies to the whole enterprise, while business strategy, less comprehensive, defines the choice of product or service and market of individual businesses within the firm".

While Fayol, Drucker, and Chandler contributed ideas and notions of modern strategy management, the concept of corporate strategic management framework is directly attributed to Ansoff, Wren (1994). This framework, Ansoff (1988), corresponds to the hierarchy structure of a diversified multidivisional firm whereas corporate management cascades to the various divisions: Strategic Business Units (SBU). A SBU is a profit responsibility center and is comprised of functional discipline areas.

Under this regime, corporate management dictates the objectives and mission of the organization, as well as, the businesses (in Anthony's terms, known as Programs), the general direction of the venture and undertaking, the corporate strategy. Andrew defines (1980) it as "objectives, purposes or goals produces the principal policies and plans for achieving the goals and define the range of business the company to pursue, the kind of economic and human organization it is intended to be… usually apply to the whole enterprise…". Corporate strategy, therefore, allocates the scarce resources to the SBU of the firm. As such, a SBU is responsible for the business strategy and it "defines the choice of product or service and market of individual businesses within the firm", Andrew (1980). The business strategy employs the allocated resources to focus, compete and do battle in the market pursuing economic gains. In order to carry out the battle in the market-place, it requires teamwork where functional strategy is required for each discipline of the organization: finance, marketing, and operations strategies.

A number of formulation concepts and tools have been resolved and are relevant to E&B's formulation process. They are presented as follows:

A) Porter's Trinity of Competitive Concepts

Porter, based on industrial economic theories, postulated three models on competitions

1) Competitive Strategies
2) Competitive Advantage
3) Competitive Advantage of Nations

1) Porter's Competitive Strategies

The competitive strategy is a structural generic model made up of two concepts:

The generalized framework of analysis
The three generic competitive strategies

The generalized framework of analysis

The generalized framework, for analyzing the industry structure relating to competition pressures and processes, is known as Porter's Five Competitive forces. This concept encompasses the common denominators and generalizes the characteristics into a 'rule of thumb'. It is used to assess and diagnose the competitive pressures, set a position and background, for decisions and whether to employ offensive and/or defensive weaponries to engage competition. This applies to analyzing the competitive position of an industry among others to determine the industry's profitability, because "the first fundamental determinant of a firm's profitability is industry attractiveness", Porter (1985). However, this analytical framework can be extended to examine the competitive strength of an organization within an industry thus determining the competitive position of the organization within that industry. It is under this frame of reference, relevant to E&B, that the five forces are portrayed.

The Five Forces are:

- Rivalry among competitors
- Potential entry to the market
- Substitutes by other products
- Power of buyers in bargaining and leverage
- Power of supplier in bargaining and leverage

Porter argues that performing the Five Competitive forces analysis reveals the conditions of the market place that impact competition and that the result will give insight to determine the course of action. It is conceivable that the magnitude of the competitive forces varies inversely with profitability. The greater the pressure to an industry or a firm, the lower will be the expected profitability and vice versa.

Rivalry among competitors

The ultimate position is to out-smart the competition and to improve the firm's opportunity to gain a larger portion of the market segment whether at the competition's expense, Red Ocean strategy, or growth via extending and/or expansion, Blue Ocean strategy [for detail, refer to Section 2.7.3 (E)]. Dynamic sources identified in this driving force are concentration of competitors, speed of industry growth, magnitude of fixed cost and value added features, **differentiation of product, switching cost,** capacity,

diversity of competitors, **brand identity,** corporate policy, together with exit and entry barriers.

When rivals are taking steps to compete in the market, such as increasing volume (supplying more available units), decreasing prices (offering rent reduction) or offering better services (by differentiation: improved amenities, etc); it can be a result of uncontrolled environmental factors, trying to capture a larger segment of the market, or gaining a better competitive advantage over others. Better pricing is the prime weaponry to match competition in the market together with feature differentiation to provide an enhanced benefit. A strong position can be fortified by using one's internal strength such as minimizing overhead to gain sufficient cost advantage over rivals and improving operations. "… Relative market dominance is not necessary for survival and prosperity…", McNeilly (1996). A firm (e.g. E&B) can compete by pricing and improvement to ancillary services and features.

Potential entry to the market

The main concern is the threat of entries in this driving force and in turn: "… depends on the barriers to entry … coupled with the reaction from existing competitors that the entrant can expect", Porter (1980). The entry-deterring price is the main factor for the potential entrant to consider. When the current price is above this threshold price, potential entries may take place. The differential between the two prices is the reward to overcome the barrier and retaliation. The dynamic sources in this driving force are simply barriers, such as economy of scale, **product differentiation**, capital requirement, **switching costs**, access to distribution channel, cost advantage: learning curve, **price and access to necessary input**, product design, government policy, and expected retaliation.

Substitutes by other products

Competition is not just amongst the product or firms of the same industry, but also replacement products or substitutes. Ultimately, every product or firm is competing for consumers' attention and cash, the scarce resources. The dynamic source factors in this driving force are price performance of the substitutes, **switching costs**; and buyers' propensity to choose the substitutes.

Power of buyers in bargaining and leverage

Buyers are the customers that a firm needs to cater to, intrinsically, they need to be satisfied, and they know they hold the bargaining power by leveraging whether using threats of substitution or volume purchase to influence the asking price. The dynamic sources in this driving force are two-fold:

- Bargaining Leverage
  Buyers' concentration v a firm's concentration, volume purchases, product information, **switching cost, substitution, and threat of product integration**

- Pricing Sensitivity
  Pricing**, product differentiation, brand**, impact of quality/performance, buyers' profit, decision makers' incentive

Power of supplier in bargaining and leverage

In contrast to the power of buyers, powerful suppliers who have control of market supplies can influence the profit of the industry/firm via the products or services supplied. However, the effect is much less drastic than the power of buyers because suppliers are usually more abundant than buyers. The dynamic sources in this driving force are **product differentiation, switching costs, substitution**, volume of purchases, **price of input**, and **threat of integration.**

Therefore, in order to sustain superior performance, under Porter's notion, one needs to compete with rivals whether present or potential, suppliers and clients, and this is echoed in Ghoshal (2005), "… five forces' framework … companies must compete not only with their competitors but also with their suppliers, customers, employees, and regulators".

The three generic competitive strategies

The three generic competitive strategies to combat the competitive forces are:

- Cost Leadership
- Differentiation
- Focus

These three strategies are the foundation of Porter's structural concepts of competitive advantage, thus "creating and sustaining superior performance", Porter (1985), for a firm in the business arena.

Cost Leadership

Cost Leadership is the strategy that a firm adopts to have the lowest cost and offers products and services to a broad market at the lowest sales price.

Differentiation

Differentiation is trying to offer unique products and services and target certain particular market segments with cherished values, enabling a firm to charge a premium.

Focus

The focus strategy is aiming at a niche market to take available opportunities and to apply them to either cost leadership or differentiation strategies. If a firm is unfocused or operating in a mixed mode between the other two generic strategies, it will present a confusing image to the targeted market segment resulting in only a modest market share and low returns. Porter refers this firm as being "stuck in the middle".

It is interesting to see that Toyota and Honda had found a niche between the affluent and the affluent "wanna be" by promoting Lexus and Acura; at the same time BMW and Mercedes respond with dressed down versions of Series 1 and A-Class respectively capitalizing on exclusive branding to capture the vanity of the less affluent. It remains to be seen whether the BMW and Mercedes' strategies will be successful. According to Porter's concept of competitive strategy, these new product lines' strategies are bordering on being "stuck in the middle".

Referring to Exhibit XI, it is grounded on observation, common general knowledge and applying the Porter's Curve or Strategic Group Mapping to the auto industry. Audi and Volvo have been "stuck in the middle" position for years although Audi always operate closer to the elite market and Volvo closer to the mass market. Mercedes, BMW, and Hyundai, however, differentiate themselves and focus on the Differentiation Strategy while GM et al focus on the Cost Leadership Strategy. Members of Ultra elite class focused and differentiated, and therefore they were successful. However, they became weak, without economy of scale owing to lack of resources for modernization and refusal to change; as a result, they became targets for take-over. Audi finally changed its direction and probably will be a success; its image changed, and it appears doing quite well in Canada now, while Volvo is under Ford's leadership and it future remains to be seen.

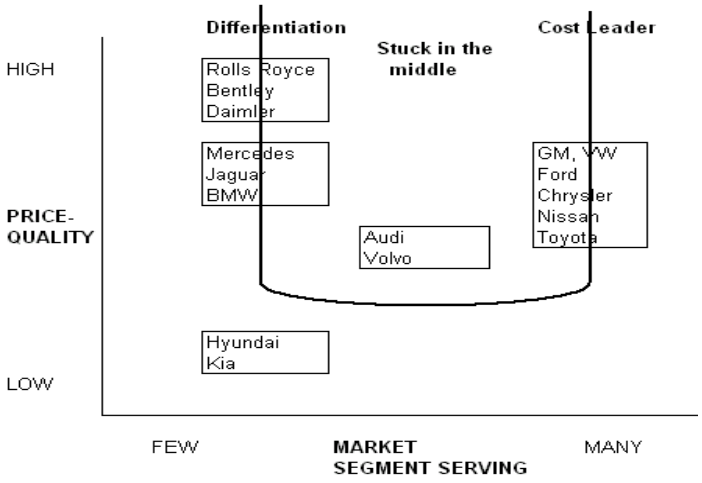


Exhibit XI Porter's Curve

However, Porter's Generic Strategies has attracted criticism because his view calls for either focusing on Cost Leadership with low price strategy or Differentiation and charge premium then it will be successful. He further asserts if the strategy were a mixture, then it would remain mediocre or a failure. Nevertheless, he corrected this rigid statement in his seminal work "Competitive Advantage of Nations". Common sense also tells us that if the product is excellent and priced lower, sales will be abundant. The reverse will also be true as Porter predicted.

2) Porter's Competitive Advantage Concept

In order to determine and analyze the competitive advantage positions, Porter shaped another generic tool to diagnose the direction of action that would "create and sustain superior performance", Porter (1985), known as the Value Chain Analysis. The starting point is the Five Forces Analysis leading to the strategy to be focused on (whether cost leadership, differentiation). A Value Chain Analysis follows which provides surveys and inquiries before implementation of the strategy's actions: defensive and/or offensive.

"The value chain is a collection of activities that are performed to design, produce, market, deliver and support its products", Porter (1985), Exhibit XII, where these activities (of an organization) are defined as Primary Activities Another class of defined activities, Support Activities, supports the Primary Activities, making value creation possible. Support Activities contribute to margin in an indirect way and are often viewed as overhead and discretionary activities.

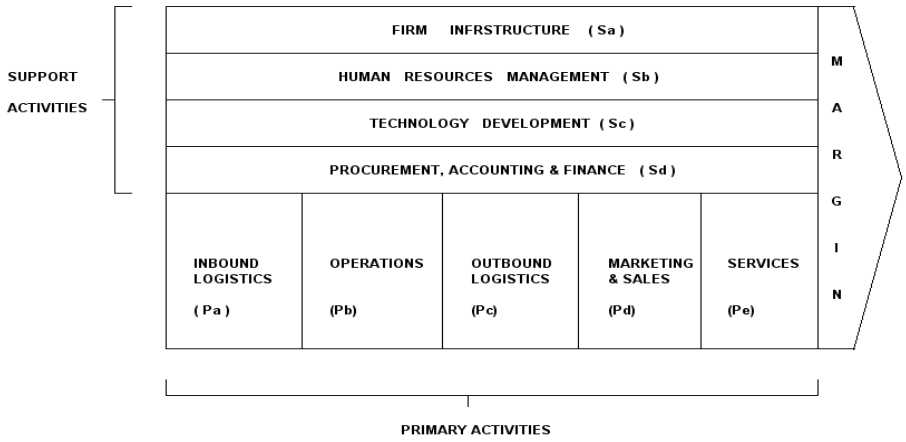


EXHIBIT XII A generic Value Chain, adapted from Porter (1985)

An organization's aim is to deliver products and services exceeding, distinctive to, and distinguishable from those of its competitors, even at a higher cost to the customer, (a differentiation advantage), or alternatively, able to deliver the same or exceeding benefits at a lower cost (a cost advantage) than the competitors. The Primary Activities, if optimized, provide value-added benefits to the customers and performance excellence for the firm, whether focusing on differentiation, cost leadership, or a combination of both, would result to gaining a competitive advantage over others. Thereby, the choice of structures could "create and sustain superior performance", Porter (1985), for the customers and excellent profit for itself, Kim and Mauborgne (2000). The Support Activities' cost is discretionary; to be efficient and effective it must be kept to a minimum. To achieve this, better ways to process work, such as concepts of lean and BPR

as mechanisms [for detail, refer to Sections 2.7.4 (H) (I) below] must be found to provide better performance.

3) Porter's Concept of Competitive Advantage of Nations

The Competitive Advantage of Nations paradigm grew from the concepts of Competitive Strategy and Advantage and the analytical framework of clusters and the diamond.

Classical economic theories stated that in order to gain prosperity "with trade, each individual, region, or nation … concentrate on producing things in which it has an advantage while trading to obtain things that it could not produce efficiently itself", Lipsey et al (1973). Porter argued that (1990, 1990a) it is not just owing to factors of production as advocated by concepts of absolute advantage (Adam Smith) and/or comparative advantage (David Ricardo). Firms compete successfully, gaining competitive advantage over others among world leaders, mainly because of pressures and challenges at home. The driving forces are **improvement, innovation, technology,** and most importantly **productivity**. Productivity is defined as the output per unit resources (labour and capital), a result of core competence and capability [for detail, refer to Section 2.7.3 (F)]. The principle aim of the government of a nation, in general, is to facilitate a better standard of living for its citizens, Porter (1990, 1990a). Nations that concentrate on products and services that command relative productivity over others will produce a better standard of living for their citizens.

A cluster is a group of organizations (product manufacturers, service providers, and associated institutions) specializing in industries of a particular field that are concentrated in a nation or a region. These clusters are responsible for the increased productivity; stimulating new business as innovation drivers because of the competition within the clusters of a particular field. Examples are numerous, footwear in Italy, fax machines in Japan, computers (IT) in Silicon Valley, haute couture in Paris, and bespoke suits in Savile Row.

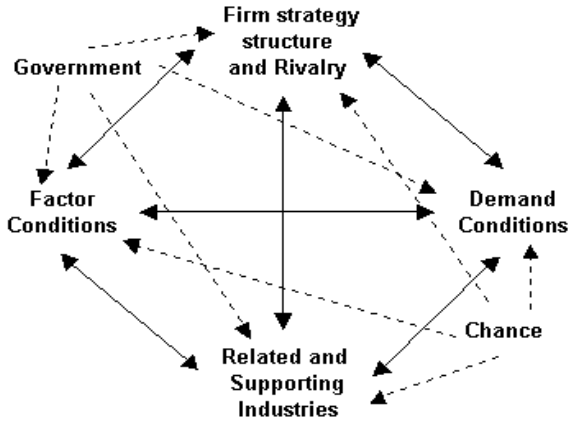


Exhibit XIII Porter's Diamond

The Diamond refers to the critical factors responsible for the success of a nation or a region to compete and gain advantages - nationally or internationally. These critical factors are organized as interdependent parameters (four determinants/attributes and two conditions) in the shape of a diamond as shown in Exhibit XIII, where the two conditions are at the polar ends from left to right.

Factor conditions (determinant)

A good position in factors of production is where labour, resources, and infrastructures, such as capital and knowledge, are abundant. The most important conditions, which need to be created within a nation, are advanced and specialized technological knowledge (skilled labour and technology); a notion of core competency and resource based view respectively. An important corollary, when there is a shortage of certain factor of production, it often leads to an innovation development to combat the situation. This change could lead to a comparative advantage in a competitive sense, as exemplified by the auto industry in America. Being a vast continent and having a shortage of public transportation, it leads to innovation development of the huge auto industry.

Demand conditions (determinant)

A home market demand for a particular new product could spread the demand globally. When the demand for a particular product is stronger in the home market, it provides "a clearer and/or earlier picture of emerging buyer needs", Porter (1990a), and the local firms would have a competitive advantage in that particular product over foreign firms in their own market. The fax machine in Japan and the PC in America are two examples.

Related and supporting industries (determinant)

Related industries are those firms sharing the same value chain, including those competing, both integrating and complementing their products. "Competitive advantage in supplier [or related] industries, and internationally competitive industries in a nation create advantages in downstream industries in several ways; a) Via efficient early rapid and sometimes preferential access to the most effective inputs, b) On going co-ordination by home base suppliers with process of innovation and upgrading knowledge integration between supplier and producers", Porter (1990). The rationale is that firms enjoy efficient and effective cost, as well as, innovative co-operation sharing: a common front. Further, this is an outgrowth from the Five Forces: local rivalry exerts pressure on innovation and improvement, resulting in global success.

Firm strategy, structure, and rivalry (determinant)

The inherent individual strategy and structure in each region or nation help to determine the proper mix and conditions that allow firms to prosper, whether at home or globally. An example would be comparing Louis Vuitton of the LVMH Group (Moet, Hennessey, Louis Vuitton) and Hermes Internal S. A. They are direct rivalries of Luxury Houses from France; both successful, but using contrasting management strategies and company structures. LVMH is a conglomerate whereas Louis Vuitton is both a brand

and a division within LVMH, while Hermes is a brand, as well as, a stand-alone independent family owned business for generations. In Germany, Mercedes, BMW, and Porsche share some similarities with the French examples. "Competitiveness in a specific industry results from convergence of the management practices and organizational modes favored in the country and the sources of competitive advantage in the industry", Porter (1990a). The Luxury Houses' common grounds are that they operate in a niche market, customization, artisanship, and quality products with rapid change and flexibility to the dynamic change of the fashion world based on the "honour", code of ethics, Hofstede (1993). Hermes, a small and family run company, stresses on branding, craftsmanship, and quality whereas LVMH, being a public company, operates along the line of mass-produced luxuries. The German auto firms, however, are specialized in engineering, craftsmanship, and technical know how, based on "the elements of the mediaeval guild system", Hofstede (1993), with a highly disciplined and hierarchical mode of operation.

Role of government (condition)

Governments play an important role; but the most important one is foresight to enhance and stimulate industry policies. Primarily motivating early demand, they focus on the creation of necessary factor conditions; such as early education, teacher training, and university policies. "Government real role in the national competitive advantage is in influencing the four determinants", Porter (1990).

Role of chance (condition)

Determinants 1 to 4 are technical (predicting future trends based on observations of the environment and intuition to extrapolate whether events following the trends would take place) and barometric (common sense and economic theories have indicated that certain economic variables are directly or remotely inter-related nature) in nature. However, reality rarely follows a straight path and "God does not play dice …", Einstein. "… Occurrences that have little to do with circumstances in a nation and largely outside the power of a firm to influence…", Porter (1990). Inventions, obsolete technologies, Sept 11, and the Tsunami in South East Asia during Dec 2004 are a few of the examples.

Porter made recurring mention of several elements of dynamic sources [for detail, refer to Section 2.7.3 (A) (1) above], they are bolded in the five forces structural portion of his model. They are product differentiation, switching cost, substitution, brand name, threat of integration, price, and access, which are the most vital factors in arriving at a decision.

B) Defense and Offence Strategy

"An effective competitive strategy takes offensive or defensive action in order to create a defendable position against the five competitive forces", Porter (1980).

Sun Tzu said, "The good fighters of old first put themselves beyond the possibility of defeat, and then waited for an opportunity of defeating the

enemy, … thus the good fighter is able to secure himself against defeat, but cannot make certain of defeating the enemy…", Giles: Sun Tzu Chap IV Tactical Dispositions (500BCE, 1944).

"Security against defeat implies defensive tactics; ability to defeat the enemy means taking the offensive", Giles: Sun Tzu Chap IV Tactical Dispositions (500BCE, 1944).

It has been proven in military conflicts that combinations of both offensive and defensive strategies are most effective, Thompson (1995), Clausewitz (1812, 1942), Sun Tzu (500 BCE). Porter applied these strategies to business. His generalized actions include positioning (a defense strategy), influencing the balance (an offense strategy), exploiting changes (an offense strategy), and diversification (both offense and defense strategies), Porter (1985). Using specific strategies, tactics and techniques such as barriers could provide a defense from attacks and impeding potential entries of competitors to the market. Potential entrants may be deterred by the high cost of the specific cost raising strategy.

C) Cost raising strategy and Barrier

A firm, after determination of the threats (using the structure based on Porter's Five Forces), could embark on analyzing its internal weaknesses and strengths, and followed by identifying any possible opportunities. Armed with the diagnosis, the firm is able to establish an offensive strategy to compete, do battle in the market place, and/or invoke a defense strategy to protect the firm from attack and failure, e.g. barriers as an action.

An implication from one of the five forces, potential entry to the market, is the magnitude of the potential to entry to the market or expansion depends on two factors:

- Barrier to entry
- The expected reaction of the existing firms

The decision of entry or consideration of expansion requires detailed rational evaluation and analysis to determine feasibility before action is taken. The ultimate uncertainty and obstacles deterring entry or expansion is usually the economy of the business that put entry or expansion at a cost disadvantage relative to the existing firms. These barriers can be one or any combination of the following, Porter (1980):

1) Economy of scale
2) Inability to gain access to technological know how
3) The time required to learn the trade and to gain the experience
4) Brand preference of the customer (Brand loyalty)
5) Capital requirement
6) The cost disadvantage owing to intangible resources
7) Access to distribution channel
8) Government regulatory policy

9) Tariff and trade restriction

The “cost-raising” strategy can be construed in the form of or a combination of the nine sources of barriers. Capital requirement in economy of scale and R&D investment are closely related. Extensive capital expenditure is required for large-scale operation, where the associated risk and level of investment could deter potential entrants. By taking the calculated risk with entry to market, the entrant may cause overcapacity. The existing members could decide to take defensive and/or offensive moves by retaliation in cost cutting and/or changing the marketing strategy to act aggressively in advertising and promotion. Skill and capital are also required in R&D to be on the cutting edge of technology. Any potential entrant lacking the technological know how needs to think twice. Increased expenditures in advertising to promote brand loyalty and lobbying sanctions to regulate policies and tariff are also factors for consideration.

Porter also argued (1985) that increase scale economies, increase capital requirement, invest in protecting proprietary know how, and raise competitors’ input costs as defensive barriers are effective tactics in deterring entry. For example, increased spending rate on advertising and technology development, with the extra expenses allocated over the firm's larger sales base, would enhance sales and product development. This forces the challenger to increase spending in order to remain competitive; however, the allocation is over a smaller sales base, resulting in lower profitability.

However, these are only difficulties and obstacles that any potential entry or expansion faces. If the market were lucrative enough and the right opportunities existed in the environment, it is only a matter of time until the entry or expansion occurs. The attraction is based on cost and benefit, risk, and time that any potential competitor willing to venture.

A typical example is the demise of the North American automobile industry. It traditionally had a strong hold on the North America market based on luxury for the masses and the affluence of the North American population after WWII (Opportunities) in comparison to other parts of the World. This affluence was fuelled by its global management of production faculty, marketing and sales abilities, resources and technological know how (strengths and barriers) together with the lack thereof in other countries (weaknesses) until the mid seventies, [for detail, refer to Sections 2.2 and 2.7.4 (H)]. However, VW identified a potential gap, and the “Beetle”, a niche, gained popularity in North America in the mid-sixties. The same scenario was repeated with the Honda Civic. When the oil crisis followed (threats), small cars became a necessity (threats fuelled by the environment) and later the general affluence standard started to falter (opportunities and strengths declined) in comparison to the rest of the world. Others also gained knowledge, resources and know how with the passage of time, thereby making in-roads to improvement at a faster rate. As a result, a great portion of the market sector has not only never recovered but also continues to shrink.

Another example, BMW, Mercedes, and Jaguar (although Jaguar has always have reported technical problems) in the luxury market, other than historical marques, these brands have spent a great deal of resources (as a cost raising barrier) on research, quality, advertising and marketing and the race track to ensure their products are among the top sellers. Additionally, performance and quality standards (precision and tolerance) for BMW and the others are so stringent that they could continue to run properly for 15 to 20 years. Market re-sale value also holds well. However, Lexus (of Toyota) has gained a massive position in this market sector, being very lucrative. Further, one rarely hears of Honda or Toyota participating in races such as Le Mans or the Grand Prix. Toyota entered a Formula race in 2006 in US Grand Prix, TIME (2006), a move to raid the "Cost Raising Barrier", and ready to be No 1.

D) The Boyd's Cycle

The Boyd's Cycle refers to the recursive use of Observation, Orientation, Decision, and Action (OODA) loops to take advantage of any situation, Thompson (1995). The central notion of OODA is that while adversaries pose a succession of threats to each other; the one unable to keep up will be overpowered.

John R. Boyd was a Captain and later Colonel in the US Air Force. He analyzed the performance of the MIG16 and F86 Saber during the Korean Conflict. The MIG16 could climb, accelerate, and turn more quickly than the F86 Saber. However, the F86 Saber had full and better hydraulic controls, whereas the MIG16 only had mechanical controls. This gave a Saber pilot the ability to maneuver and respond more rapidly than his antagonist, Munroe and Pasagian (1999).

"… It is not possible to formulate them before hand" General Tao: Sun Tzu, Chapter 1 Estimate (500BCE, 1993), echoed this OODA concept.

In order to gain competitive advantage, capitalizing on strength and circumventing weaknesses may not be sufficient. The environment is always changing; thus, constant scanning is necessary to determine appropriate actions. Those who cannot keep pace will not prosper. In other words, adjusting to circumstances, exploiting opportunities, surviving, muddling through, and incrementalism are all crucial.

E) Red and Blue Oceans Strategies

The "Blue Ocean Strategy" is a strategy for operating to create in a market space whether with new products or evolved products. The "Red Ocean" strategy is the strategy for competing in an existing market, which usually requires a niche, and symbolizes a bloody battle at sea, Kim & Mauborgne (2004). Competition is considered irrelevant in the "Blue Ocean strategy" as the operation is devoted to a new industry where no competition exist or in an "uncontested market". Kim and Mauborgne advocated (2004) that operating in an uncharted market space, the "Blue Ocean", represents future

industries which will create demand leading to prosperity. Competing in the "Red Ocean" will not sustain superior return because competitors are already in an established business and needs to "steal" customers whether by cost cutting or by differentiation. Highly competitive moves are required to dismantle the benchmark because significant barriers already exist.

The "Blue Ocean" product can be evolutionary, but followed by a revolutionary process. A pure revolutionary product, however, involves greater risks, because it moves into completely new and uncharted territory. Historically, the automobile is an extension of the horse carriage; the calculator is an extension of the abacus, and microcomputer is an extension of mainframe where the mainframe, itself an extension of the calculator. Each stage of the product development competed in a "Red Ocean" until a revolutionary scheme arose, creating a new demand and a new market, as echoed in Kim and Mauborgne (2004).

F) Core Competence

The concept of core competence states that outperforming others in the long term and gaining competitive advantage require resources and capability; meaning it is important for an organization to become a learning organization and manage its knowledge. "Core competencies are the collective learning in the organization…", Prahalad and Hamel (1990). To detect core competence, Prahalad and Hamal (1990), one could identify properties of 1) the ability to provide potential access to a significant variety of market, 2) the ability to make a significant contribution to the perceived customer benefits of the end product and 3) difficulty of being imitated. A firm, therefore, could cultivate these basic prerequisites, gaining competitive advantage, to position itself in the market place.

One way to survive and to succeed in the business arena is to be able to create a new market and enter a competitive emerging market or exploit - "dramatically shifting patterns of customers choice in established markets", Prahalad and Hamel (1990). If the capability to carry out these acts is present, it is only a matter of applying the resources. If resources are present but capability is not, the capability must be developed. However, if both resources and capacity are absent, then it is necessary to acquire the requisite knowledge and develop both before taking action.

G) Resources Based View (RBV)

B. Wernerfelt coined the term; however, J. Barney is considered the originator. The central theme of the concept is that only superior resources within the organization and prevention of imitation or prevention of losing these resources allow the organization to earn higher than normal return; implying a monopoly is the source of competitive advantage connotation. Therefore, in order to acquire and sustain maximum return potential, firms should identify and develop internal resources instead of concentrating on cornering the market place. Of primary concern is internal strength as rather than external opportunity.

Barney identified (1991) the characteristics of the resources that allow a firm to sustain competitive advantage as Valuable, Rare, Imperfectly Imitable, and Non-Substitutable (VRIN). Examples are patents, properties, proprietary technologies, relationship between contacts such as trust, and intangible resources such as the secret formulas to Coca Cola and Kentucky Fried Chicken recipes.

H) Mintzberg's 10 Schools of thoughts of Strategic Management

Mintzberg et al put forward (1998) the ten schools of thought of strategic management. They are organized in three groups as follows:

a) Prescriptive Group
b) Descriptive Group
c) Configuration Group

a) Prescriptive Grouping

This group is concerned with how strategies are ideally formulated; a normative/prescriptive process approach [for detail, refer to Section 2.3.1]. They are the schools that establish the foundation of strategy management, as well as catering to the decision making process of large modern organizations.

The Design School
The Planning School
The Positional School

Schools of the Prescriptive Group are the cornerstones of strategic management or even all decision making, analogous to Newton's three Laws of Motions to Classical Mechanics.

b) Descriptive Grouping

It is also a process approach, but these schools are moving toward a more content-based framework, "specific aspects of the process of strategy formation", describing how strategies are made in reality:

The Entrepreneurial School
The Cognitive School
The Learning School
The Power School
The Cultural School
The Environmental School

c) Configuration Grouping

This approach integrates and transforms all elements as defined in the above nine schools of thoughts into the strategy formations process.

The Configuration School

"Structure follows strategy"

> The thrust of this school is concerned with the structural arrangement of an organization: the configuration, and the changes in an organization, the transformation. The configuration of organizations' behaviors and activities can range from a stable to a dynamic form and structure. Each school conforms to a form and structure at a certain time and circumstance in a complementary way. When conditions and circumstances change, an organization needs to make a "quantum leap" to another school acquiring a different strategic direction to allow the organization to function effectively.

The "Centre of Universe" of Mintzberg's 10 Schools of Thought in Strategy Management is the Cognitive (ability to know) School; refer to Exhibit XIV, where Position, Learning, Power, Environment, and Cultural Schools converge. In turn, it leads to the Planning and Design Schools and concludes with the Entrepreneurial School. The ability to acquire a discipline of knowledge is contingent on one's background, culture, education, and exertion of the learning process to acquire knowledge within the environment. In the case of strategic management (decision-making in holistic mode), gaining competitive advantage under a certain framework and exercising power are paramount to the ability to be an entrepreneur. Using Mintzberg's elephant story as an analogy, the Entrepreneur is the brain of the elephant, where Positional, Environment, Cultural, Learning, and Power are metaphors for other parts of the body supporting the brain. However, the combination of all the parts including the brain consolidates as the whole animal or the Configuration, which is the complete elephant.

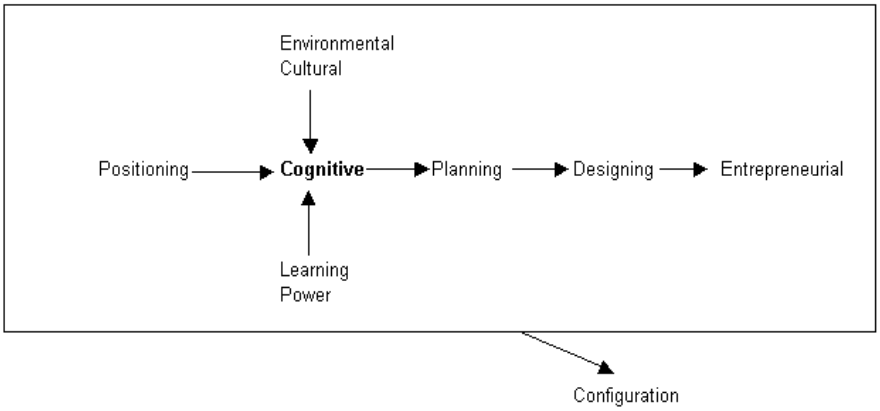


Exhibit XIV Relationship between each School,
Adopted from Mintzberg et al (1998)

The elephant story, in fact, is a legendary parable of Buddha's teaching and describes the peril of incomplete truth. One draws conclusions based on one's experience and observation even through this is a partial picture and limited to some certain aspects - a reductionist's view. In order to acquire a complete picture, a holistic view, co-operation and teamwork would be necessary. The Planning and Design Schools laid the foundation and

concept for the strategic management process, notably SWOT for formulation. These two Schools also provided specific rules and questions to facilitate formulation, step by step, on changes to an organization. The process, therefore, advocates a prescriptive approach in a linear manner favouring rationality. Although these rules and specifications, with the prescribed questions, cater to formulating the strategies, they do not, however, provide any concrete techniques for how to proceed because answers to the questions are contingent on the background, experience, and knowledge of the beholder. It is the Positioning School, using economic, sociology and anthropology theories as basis that laid a cognizant structural procedure. The Learning and Power School further assimilated the behaviour and contingency theories and established the fundamental techniques. These approaches from economic, sociology, anthropology, behavioural and contingency theories collectively form the process models, experiences, and roadmaps to strategy formation for an entrepreneur: the Entrepreneur School. The 'building materials' are there, it only requires a 'blue print' of the framework to erect the building or the decision-making process. It is the Planning and Design Schools provided such a 'blue print' to hold together the 'building materials' to carry out the transformation of and metamorphosing the framework into a different dynamic configuration suitable for survival and prosperity in the competitive environment. Together the reductionist's views synergized to form the whole, becoming a somewhat holistic perspective.

Looking at the 10 schools from another perspective, SW and OT articulate the internal and external environments respectively in the SWOT framework (The Planning and Design Schools). Mapping this relationship with reference to the 10 schools, Exhibit XV, the Configuration School occupies a position that is favorable at the cross road in both the external and internal parameters and the Planning and Design Schools occupy the most comprehensible, controllable and rational position. Other Schools are situated at various positions according to the nature of their actions.

The Planning and Design Schools provide the procedure for carrying out the strategic process while the other Schools link the process to the strategic content and context to which change to an organization is the primary concern in relation to the environment. While conceptually they are separate entities, the strategic process and content are interlinked. When the strategic process is defined specifically, however, it must integrate with the strategic content closely otherwise the two cannot exist [for detail, refer to Section 2.7.2 (A)]. Without defining a concrete "what" in a specific context, there is no "how" to action; "what" needs to precede "how". The process focuses on activities leading to and supporting a choice of strategy: the choice of the strategy is the strategic content that focuses on the goals and objectives. Achieving results by pursuing a competitive strategy would be an example, Ketchen et al (1996). The process will likely use Porter's 3 Generic Strategies, Porter's Five, and Value Chain in a domestic or national environment, if the circumstance (Context) is international, Porter's

Diamond would be an addition. The intended purpose (content, competitive strategy) has to be known before action (process, Porter's notions) can start.

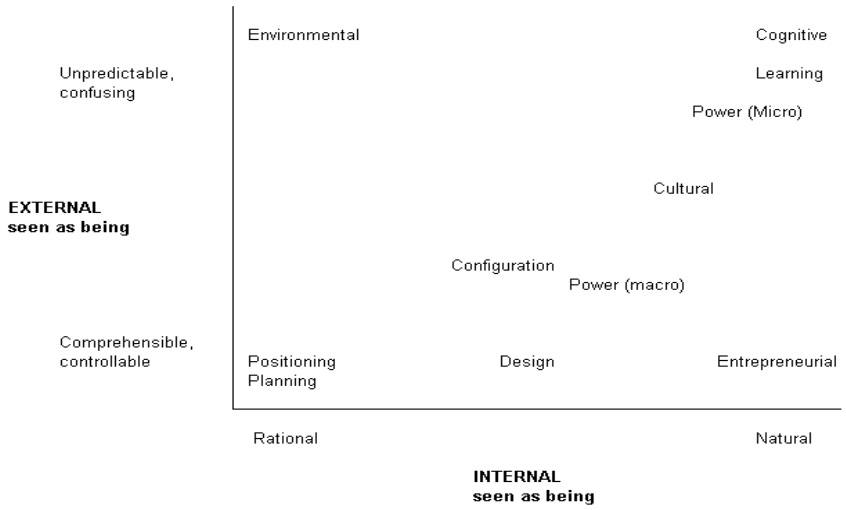


Exhibit XV External and Internal Relationship of the Schools, Adopted from Mintzberg (1998)

Among the different views presented by Mintzberg's 10 schools of thoughts, there is a clear objection to the rational and logical approaches taken to assess and survey the external and internal environments (SWOT). These possible approaches are considered inferior to intuition, creative and inspirational approaches. This may be true as every party in the world is trying to manipulate or second-guess both the short- and long-term outlook of the economy with their knowledge and technology. However, there are too many variables and parameters to consider; relating them logically is virtually impossible and therefore, this is usually carried out with bounded rationality or "muddling through". Perhaps, approaching in another way, instead of the scientific approach (reductionistic); the artistic approach (holistic) may be more viable, Pink (2004).

However, the risk and penalty or the price could be expensive if a mistake were made; especially when individuals' destinies depend on the decision (refer further to Section 2.7.5 on examples of illustrated importance on issues of decision). This notion is echoed in David (2005), "the livelihood of countless employees and shareholders may hinge on the effectiveness of strategies selected, too much is at stake to be less thorough in formulating strategies."

2.7.4 Implementation and Evaluation Process: Concepts & Techniques

The process of implementation follows the choice made from formulation and decision to go ahead with the choice. Invariably implementation is associated with new changes; otherwise, status quo continues that implementation does not need to occur. Carrying out implementation

requires planning and managing the change that ranges from macro (strategic) cascades to micro (operational) levels. Control and monitoring are required to ensure accomplishment, and the evaluation process is the key. A number of implementation/evaluation concepts and tools relevant to E&B have been uncovered. They are presented as follows:

A) Change Management

Paton and McCalman asserted (2000) that domination comes from expansion or, at least, achieving competitive advantage by innovation. Innovation results from the ability to change and the change can be triggered by both internal and external forces. The internal force is a result of the natural progress of time where resources become outdated from aging. Proactive actions anticipate this is possible, though means such as succession planning for skill resources and periodic examination of adequacy of other tangible resources. However, the external forces are more difficult to anticipate even with proactive measures because they are not under the organization's control and uncertainty is higher. Hence, the weaponry includes constant surveying, performing analysis in preparation of the unknown and remaining alert, Boyd's Cycle [for detail, refer to Section 2.7.3 (D)]. For example, Star Alliances in the airline industry, Starwood Hotels and Resorts Worldwide and the ill-fated GM-Nissan-Renault alliance are excellent innovations of established businesses and industries to taking advantage of economy of scale, benefit and overhead savings to combat changes in the environment.

Managing changes

Whether it is personal or organizational, changes need to be managed in stages where they occur in order to be successful. Further, the implementation process of change must be managed to maximize the benefit of change.

Covey's 7 habits training is a program for learning to become effective. The training is a behaviour development (OD) change mechanism [for detail, refer to Section 2.7.4 (E) below]. If one would like to be proficient in Microsoft Excel, one attends courses in Excel; this Excel training is more related to systems intervention (SI) change [for detail, refer to Section 2.7.4 (D) below]. There is a change after each of these learning experiences, but the benefit of proficiency requires practice and application sessions to be organized thereafter. In an organizational setting, conversion of an IBM Generation IV accounting system to an Oracle database system would take place only there is an implementation in sequence of applications after preparation.

Owing to the advent of technology and global competition, it is generally accepted that changes have quicken dynamically than our forefathers' era, where markets were stable and products virtually unchanged. The pace will continue to be dynamic without any indication that it will slow down, echoed in Paton and McCalman (2000). The method for dealing with this beast is innovation. Individuals need to decide how to address innovation to effectively cater to change. One option is to adapt continuous learning by

way of becoming a learning organization and managing knowledge to provide support for the innovation.

Process of change

Methodologies of change processes are situated between the two polar ends of the continuum namely the mechanistic solution for Hard situations, and, the complex solution for Soft situations. The change environment is a factor which complicates matters. Characteristics of the environment include whether objectives and constraints can be easily and clearly quantifiable and defined, and whether it is dynamic or subjective, Paton and McCalman (2000). The relation is shown in Exhibit XVI**,** The Change Spectrum, and is best summarized by Paton and McCalman (2000), "Physical or mechanistic change, exhibiting both systematized technical attributes and a low degree of man machine/systems interface, should be addressed by adopting a system-based solution model [i.e. SI approach] from the scientific management school. On the other hand, more complex and generally messy change, involving personalized relationships and organizational cultures, warrants the adoption of a more people-based model from the organizational development stable [i.e. OD Intervention approach]."

From a process point of view, systems intervention (change) is a direct approach where the change is carried out in four stages, Hersey and Blanchard (1982), as shown in Exhibit XVII:

1) Adjustment of knowledge perspective, followed by
2) Attitude change and
3) Individual behavior change, hopefully
4) Acquiring the desired group behavior for the organization

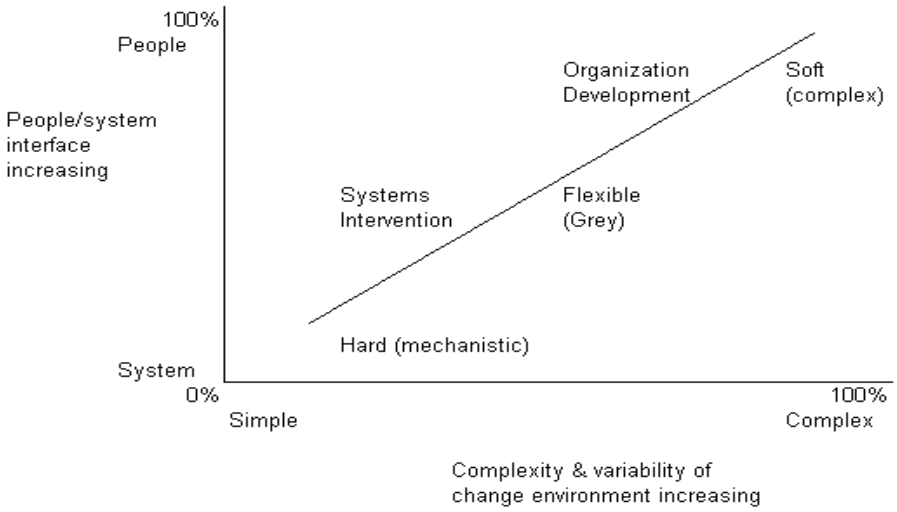


Exhibit XVI The Change Spectrum, adapted from Paton and McCalman (2000)

However, a transformation in organizational culture with the organizational development approach needs to be participatory. This process starts from group behavior and works its way to an individual's change in knowledge, the reverse of the system intervention approach. Upon conclusion of change, the organization and environment should have a healthy match.

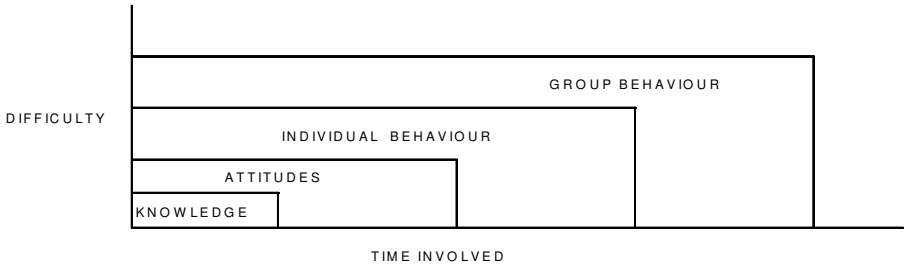


Exhibit XVII Time and difficulty in making changes
Adapted from Hersey and Blanchard (1982)

Further, from a change operation point of view, Michael advocated (1982) six commonly used organizational change techniques along the system intervention (SI) and organizational development (OD) continuum and they are:

1) Organizational Behaviour Modification (OD)
2) Management by Objectives (OD)
3) Management Development (OD)
4) Organization Development (OD)
5) Management Auditing (SI)
6) Control Cycle (SI)

The first four techniques aim to change the organizational culture, using Organizational Development strategies. The first three apply to the individual's level rather than the whole organization level while the last two (Management Auditing and Control Cycle) use the System Intervention approach.

B) Knowledge Management (KM) and the Learning Organization

Knowledge management (KM) is "the process by which an organization creates, captures, acquires and uses knowledge to support and improve the performance of the organization", Kinney (1998). This implies that the function of managing knowledge is equal in importance to the management of other functions and scarce resources in an organization. Thus, following Kinney's definition of knowledge management and taking a cue from liquidity and inventory management, knowledge is an example of scarce resources and should be managed accordingly.

The basic equation of the management cycle, as demonstrated in Exhibit XVIII, for the scarce resources is:

Opening Bal. + Additional Acquisition - Usage/Distribution = Closing Bal.

The difference between knowledge and the other two resources is that after acquisition and usage, if managed properly, knowledge does not diminish. Hence, the equation for knowledge as a scarce resource can be formulated as:

Opening Balance + Additional Acquisition - 0 = Closing Balance
Opening Balance + Additional Acquisition = Closing Balance

	Inventory	**Cash**	**Knowledge**
Opening Balance	Present Level Carried over	Present Level Carried over	Present State of Knowledge Level
Acquisition	Purchased or Produced	Revenue or Investment Matured	Create by Learning Capture Knowledge
Usage or Sold	Consumed or Distribute	Payment or Invested	Transfer, Support to Improve Performance
Closing Balance	Holding for Future Use	Holding for Future Use	**Aggregate state of Knowledge Level Increased**

Exhibit XVIII Comparison between Knowledge and Liquid Assets

With proper knowledge management, with continuous learning or innovation development, the knowledge base of an organization will always increase with acquisition.

Knowledge management and management concepts such as organizational learning and learning organization, being intellectual properties, have gained prominence in business and academic circles (M1 and M2 knowledge production). Before the advent of the current globalization of trade and businesses, when competition was not the imminent result of technology and the explosive information revolution, Western organizations relied primarily on old fashioned processes and mentalities to prosper performance. It was not until a decline due to competition from the East that new weaponries were sought to recapture the competitive advantage; Kinney reflects, " … thought of competitive advantage as growing out of the organization's… are no longer enough…", and "An organization's future… create, capture, obtain and leverage their knowledge", Kinney (1998).

Nevertheless, Garratt suggested (1995) and Paton & McCalman concurred (2000) that the concept of a learning organization is not new and it is "as old as recorded history", Garratt (1995). Nor is knowledge management; as evidenced by the formation during the mediaeval period of the Ancient Universities in the UK, among which the University of Glasgow is one of them. An even more ancient example is that of the first Emperor of China executing the Confucian scholars and burning "all" the books in order to unify the Chinese language around 2000 BCE.

Knowledge/Information hierarchy

The forerunner of the famous information hierarchy or the "knowledge hierarchy" in knowledge management is that wisdom requires learning by experiencing, and understanding as well as internalising the knowledge acquired; in other words, acquisition of wisdom requires both body and mind. This is clearly illustrated by two quotations:

From T. S. Eliot's play, The Rock, Chorus I:

> *Where is the wisdom we have lost in knowledge?*
> *Where is the knowledge we have lost in information?*

And from Lun Yu or Confucian Analects, Section 2, Chapter 15 [James Legge's translation, 1934, The Four Books]:

The Master said, "Learning without thought is labour lost; thought without learning is perilous."

The Author's translation and interpretation:
Learning (experiencing by the body), without internalization (understanding, thus leading to acceptance) will result in confusion ("labour in vain", Psalm 127:1); whereas acceptance alone, without experiencing is a dangerous thing to do (for one could become very inflexible and stubborn, an implication of adaptive learning).

However, Confucius stopped short of defining whether it is a holistic (systems) approach, [for detail, refer to Section 2.7.4 (C)], unification of mind and body where the interdependent relations are closely connected with creating synergy. Synergy is created by the holistic approach, where it is more than the sum of its parts; Gestalt; or alternatively, a reductionist approach [for detail, refer to Section 2.7.4 (C)]; an integration of the dual (body + mind) after differentiation. Grounded on philosophies of the East, the Author's inference is Confucius's approach should be holistic.

Explicit and Tacit Knowledge

There are two types of knowledge: explicit and tacit, coined by Michael Polanyi, Nonaka (1991, 1994). Explicit knowledge is that which can be documented as procedures, policies, specific and traceable, while tacit knowledge is that which is informal, a skill or know-how captured, for example apprenticeship and hands on communications.

Knowledge acquisition, therefore, demands intelligence to understand explicit knowledge, as well as, the ability to capture the subtlety of tacit knowledge. "Understanding is contained in explanation, answers to why questions", Ackoff (1996). Through understanding, the use of knowledge, and reflection on action with sustainable and successful performance, one is able to answer the question "why". "Wisdom is the ability to perceive and evaluate the long term consequence of behaviour", Ackoff (1996), the ability to evaluate: understanding. Innovation is a pre-requisite to sustain competitive advantage and performance; and knowledge creation leads to innovation, Nonaka (1991, 1994), which is "Wisdom". Intellectual property is a term invented as knowledge/innovation was recognized as one of the scarce resources. Therefore, it should be managed like inventory, cash, labour (human resources), and property; but with the added subtlety of tacit knowledge (explicit knowledge can be managed with ease) together with managing the knowledge creation process.

The requisites of knowledge management, as is standard in managing any scarce resource, are:

a) Structure (strategy, process)
b) Technology, and
c) People (culture)

This mirrors Paton & McCalman (2000) quoting the Leavitt Model as "…factors that are critical for adopting Knowledge management (KM). These factors are top management commitment, KM strategy, KM processes, KM infrastructure, and culture", Alazmi and Zairi (2003). Further, "… a knowledge infrastructure consisting of technology, structure, and culture along with a knowledge process architecture of acquisition, conversion, application, and protection are essential organization capabilities or preconditions for effective KM", Gold et al (2001).

a) Structure

The modus operandi of KM is a contingency approach with the basic characteristics of differentiation and integration of organization structure [for detail, refer to Section 2.7.4 (F)], in conjunction with a strategy management methodology.

b) Technology

Proceeding from the objectives formulated with a contingency approach on how to process, share, transfer, and create, the basic characteristic of methodology necessitates a "library" style as well as ease of communication. Grover and Davenport supported (2001) the notion that "… the most common objective involves implementing some sort of knowledge repository… capture knowledge for later and broader access by others within the same organization". Grover and Davenport further suggested (2001) using communication technologies such as Lotus Notes, Intranets, E-mails, and other document management tools. "… tapping into the knowledge pool must be simple, straightforward and efficient…", Alazmi and Zairi (2003). However, the "library" style is only effective for explicit

knowledge; therefore, it is imperative to have a methodology to convert tacit knowledge to explicit knowledge before storage and retrieval could take place.

Relating to this subtlety, Nonaka has advocated (1991, 1994) a sequence of operations converting tacit knowledge to explicit knowledge, namely:

- Socialization (tacit to tacit)
- Externalization or articulation (tacit to explicit)
- Combination (explicit to explicit)
- Internalization (explicit to tacit), and come in a full cycle

Nonaka illustrated (1991), using Matsushita's bread machine design example, the concept of "spiral of knowledge" while demonstrating the necessity of "active involvement of self":

Socialization, learning the tacit secret of the Osaka International Hotel baker, a commitment to be an apprentice in an act of "active involvement of self" with mind and body, echoing the holistic approach, Confucian thought, described above. It is also echoed in Nonaka (1994), in "knowledge of experience", relating to Eastern (Japanese) thought, quoting from Y. Yuasa's The Body: toward on Eastern Mind-Body Theory.

Externalization or articulation, translating the tacit secret into explicit knowledge and this knowledge is communicated to team members at Matsushita.

Combination, the team then standardizes the knowledge, "embodying" it into a product, and documents knowledge into a manual.

To complete the circle, the explicit knowledge created in Combination, i.e. the new product, a bread machine, has enriched the whole team leading to

Internalization, each of the team members benefits with his own tacit knowledge; where the spiral of knowledge could start all over again.

c) People (culture)

Motivation is the key to managing and rewarding workers.

Knowledge (together with data and information) in an organization is disbursed among the workforce. The first task of knowledge management is to acquire a system capable of collecting knowledge in addition to data and information and then ascertaining that the knowledge collected can easily be transferred across the workforce.

However, with the spectre of dispensability, amplified by restructuring, de-layering in organizations owing to BPR and technology improvement, individuals are negatively motivated therefore will not easily share their knowledge because of job security. To a lesser extent, where there is no problem with job security, sharing may inhibit an individual's career

progression and instead of being a 'star' the individual may become a 'dog', thereby not winning any rewards.

"Knowledge is power", Francis Bacon.

It follows that people management plays an important role and that the organization's culture need to be in tune with this belief.

Furthermore, the motive for knowledge management and learning may differ between an individual, especially a worker and an organization. An individual who may have dual motives, as knowledge management via learning supports career advancement leading to an increase in economic returns as well as the satisfaction of learning. A business organization, however, which supports knowledge management and learning have only one motive in mind - to increase performance. The motives need to be aligned. Beaumont and Hunter summarized, advocated, and shed light (2005) on the specific issues of workers and on the solution to resolve these motivation issues:

Degree of flexibility and autonomy within the workforce
Emphasis on performance-related pay
Appraisal systems that monitor and reward knowledge contribution and application
Profit sharing or equity form of reward
Selection criteria and consideration of teamwork
Career development and career path
Priority of knowledge development skill in performance appraisal
Work/life balance

In summary, acquisition of knowledge, from an organization's knowledge management perspective, gives rise to wisdom, in turn promoting innovation that drives performance, resulting in economic returns and growth. However, this sequence of events has a pre-requisite: for changes take place, learning must occur, Garratt (1995). This is the basic premise, which an organization needs to manage its knowledge base and becoming a learning organization.

Learning Organization

A learning organization can be defined as "… an organization skilled at creating, acquiring, and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights", Garvin (1993). It is different from organizational learning where it implies learning, "acquisition of knowledge", Ackoff (1989), by the organization. Argyris further elaborated (1977) "organizational learning is a process of detecting and correcting error", which implies it is a learning process to acquire new knowledge, experience and implement change to improve the status quo with the organization.

Paton & McCalman quoted (2000), Senge (1990a) who coined the term Learning Organization, and articulated the two fundamental concepts of a

learning organization. They are the concepts of adaptive (single loop) and generative (double loop) learning. Single loop, as defined in Argyris (1977), is the process carried out in accordance with the objectives and policy of the organization whereas double loop learning refers to the ability to question the "underlying polices and goals" while carrying out the process, as shown in Exhibit XIX. Generative learning is about creating knowledge**,** Paton & McCalman (2000), which has a connotation of transfer and creation between explicit and tacit knowledge.

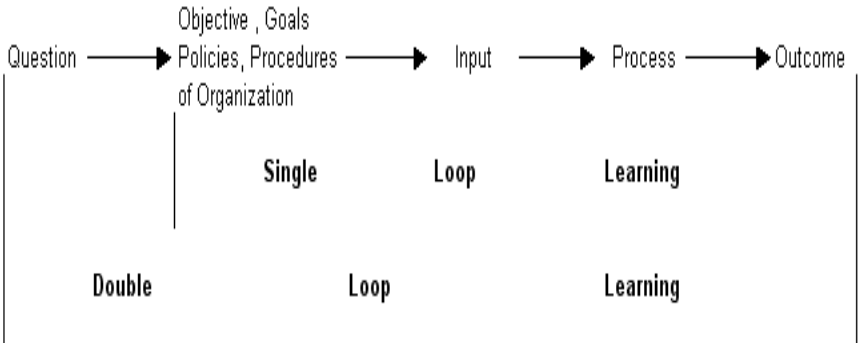


Exhibit XIX Comparison of Double Loop and Single Loop Learning

As knowledge is an entity similar to other scarce resources and properties of an organization, it is important to a learning organization to manage knowledge appropriately. The learning organization and knowledge management are closely related. This is transparent in the "knowledge hierarchy", Ackoff (1989, 1996), which also shows how an organization can acquire knowledge to become insightful thus leading to having an edge over competitors. As shown in Exhibit XX, the characteristics (concepts, sequence, and nomenclatures) of the models of Senge, Nonaka, and Garvin provide the structural definition and requisite features of a learning organization while the models of Pedler, et al and Pearn, et al delineate the process of becoming a learning organization accruing to knowledge. The final step, knowledge progresses to what constitutes wisdom and enables one to use knowledge gained to perform and acquire results in sustain competitive advantage.

	Senge	Nonaka	Garvin	Pedler, et al	Pearn, et al	The Author
Concepts	Definition Adaptive & Generative	Definition, Organization Learning & Knowledge Creation	Providing guidance on methdology & evaluation process of the result of learning	The Process' characteristics, Relevance & Value	Tools to carry out	
Logic Sequence	Content (What)	Content (What)	Context (Where, When, Whom)	Context/Process (How)	Process (How)	
Nonmenclature	5 Disciplines: - Personal mastery - Mental model - Building a share vision - Team learning - System thinking	5 Requirements: - Strategic intention - Employee autonomy - Fluctuation & chaos - Redundancy - Requisite variety	4 Steps: - Systematic problem solving - Experimentation - Learning: Knowledge transfer from experience - Learning: Knowledge transfer from others	11 features: - Strategic approach - Participative - Informative - Accounting & control - Internal change - Reward - Enabling structure - Boundary worker scanning - Learning intercompany - Learning climate - Self develop opportunities	10 Building blocks/steps - Top Mgnt examine concepts - Analysis current status - Devise role of trainers - Train the trainers - Prepare managers - Provide support - Develop learning in groups - Team learning - Upgrade learning skill of individuals - Promote job specific learning	Able to use knowledge gained to perform and having success to sustain competitive advantage
Ackoff	Information	Information	Information	Information/Knowledge	Knowledge Understanding	Wisdom

Exhibit XX Association of Learning Organization Concepts/Thoughts

Characteristics of a learning organization

James affirmed (2003) that the most important aspect of a learning organization is being 'transformational'. Coupled with the fundamental concepts, as shown in Exhibit XXI, it defines the nature of a learning organization. Further, James asserted (2003) that the process and its structure of design and of a learning organization are characterized by:

- 4 Bs framework to secure this 'transformational' quality
- 6 components and their connections

The process starts with 4 Bs (Belief, Boundarylessness, Balance and Behaviour) leading towards Design (6 Components constitute the characteristics and structure) with an iterative nature, as shown in Exhibit XXI. This ends with the result of learning: core competency, innovation, and adaptation, thus gaining competitive advantage, which in turn pointing to performance excellence and reinforce the Beliefs. The cycle starts again.

James adds (2003) that, as a learning organization evolves, the organization would become a teaching organization, in which leaders/mentors, the knowledge workers teach employees. This would lead to the exposition of a "spiral of learning (knowledge)", Nonaka (1991), thus maximizing core competency and gaining competitive advantages result in sustaining superior performance.

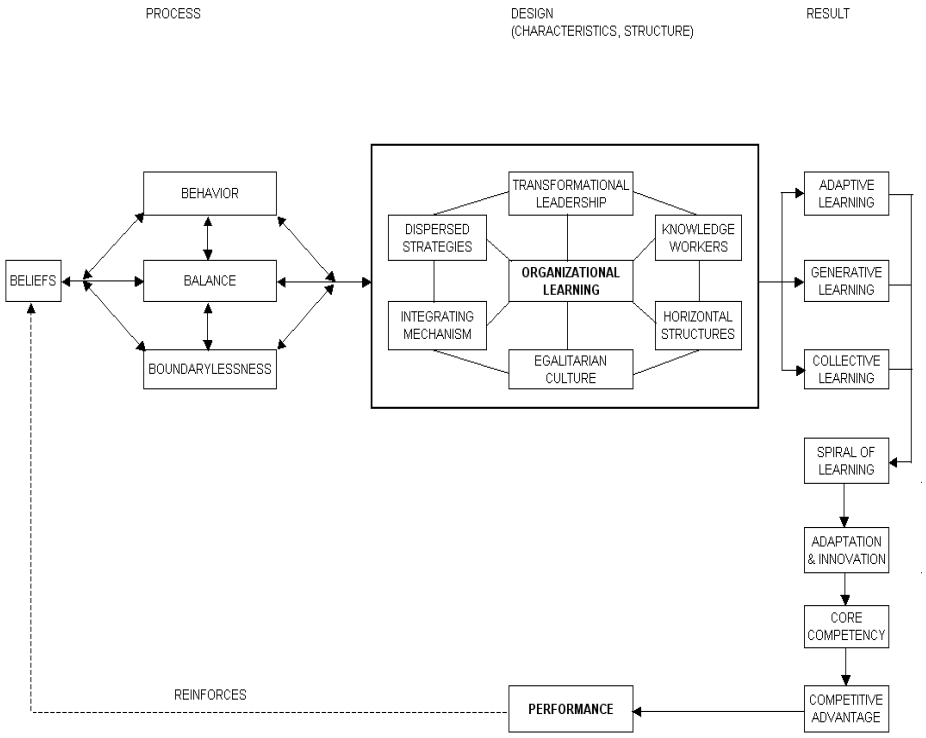


Exhibit XXI Design/Characteristics of A Learning Organization
Adapted from James (2003)

One important message in Senge (1990b) was a question posed to O'Brien in the conversation between Senge and O'Brien, CEO of Hanover Insurance.

"Senge: What concrete steps can top managers take to begin moving toward learning organizations?

O'Brien: Look at the **signals** you send through the organization. For example, one critical signal is how you spend your time. It's hard to build a learning organization **if people are unable to take time to think** through important matter..."

This is reflected in "a learning organization continuously transforms itself in the process reciprocally linked to the development of all its members", Burgoyne (1992), where innovation requires time for idea development and learning.

C) Systems Theory
The Systems approach is not new; pre-industrial societies used them because technology and infrastructure were unavailable before reductionism was invented, Leonard & Beer (1994). Hummelbrunner also advocated (2000) that the systems approach can help "to avoid undue simplifications and provide useful tools for practical work".

"A system is an organized assembly of components (or sub-system) where each component's behaviour will influence the overall status of the system", Paton & McCalman (2000). Any change in a sub-system will affect others and those of interrelated external sub-systems or systems. This is an alternative to Descartes' reductionism. A comparison of the systems approach and the reductionistic approach is shown in Exhibit XXII. Their differentiating characteristics are delineated.

Systems Approach	Reductionist Approach
Focus on whole	Focus on parts
Circular causality (a to b to c to a)	Linear cauality (a to b to c)
Observer stateus subjective	Observer status objective
Context highly relevant	Context not very relevant
Multiple truths & answers	One truth or best answer
Externalities important	Externalities not important
Problems dissolved	Problems solved

Exhibit XXII Comparison between Systems and Reductionism,
adapted from Leonard & Beer (1994)

The systems theory framework is built on the relationship (behaviour) between connections of the whole; a holistic approach. The system structure itself is of no interest; it is what those structures achieved that is important; it is the aim, interaction and behaviour, that are important, Paton & McCalman (2000). Further, the systems approach is used to deal with complex, real world problems and social phenomena because the emergent properties can only be observable as a whole, Cook and Allison (1998). Reductionism can deal with simple systems and up to level 2 "clock work", as shown in Exhibit XXIII.

LEVEL (Increase complexity)	CHARACTERISTICS	EXAMPLES	RELEVANT DISCIPLINES
1 Structures	Static	Crystals, Bridges	Description, Verbal or Pictorial
2 **Clockwork**	Predetermined Motion	Clocks, Machines & solar systems	**Physics, and classic natural sciences**
3 Control Mechanisms	Closed-loop control	Thermostats, mechanisms in organisms	Control theory Cybernetics
4 Open systems	Structurally self maintained	Flames, biological cells	Theory of Metabolism
5 Lower Organisms	Organized structure with growth & reproduction pattern	Plants	Botany
6 Animals	Learning ability & a brain to guide behaviour	Birds& Beasts	Zoology
7 Man	Higher learning ability, knowledge of symbolic language	Human Beings	Biology, Psychology
8 Social-cultural Systems	Roles, communication values & cultures	Families, nations	History, sociology, Behaviour science
9 Transcendental systems	Inescapable unknowables	Idea of God	Unknown

Exhibit XXIII Hierarchy of real-world complexity,
adapted from Cook and Allison (1998)

The attributes of simple and complex systems are compared and shown in Exhibit XXIV where all system components have common elements (a system's structure), input, output, throughput (process), feedback, control, environment and goals. Simple systems are described by a few variables (sub-systems) and characterized by stable and simple mathematical relationships. They are applicable to classic natural science but not very appropriate for the more complex systems, such as social systems. Complex systems are characterized by numerous variables (sub-systems) and they are "interlinked" where the relationships are unstable and non-linear (mathematics): "wicked problems".

Further, application of the systems theory gives rise to an intervention methodology for managing change known as Total Systems Intervention (TSI). Cook & Allison quoted (1998) the work of Flood & Jackson (1991) on the 3 phases of TSI, Creativity, Choice, Implementation, Exhibit XXV. The thrust is the formulation of objectives (creativity) which creates different alternatives, resulting in a choice of intervention methodology or procedure for implementation.

ATTRIBUTES	SIMPLE SYSTEMS	COMPLEX SYSTEMS
Numbers of system elements	Small	Large
Interaction between elements	Few	Many
Attributes of elements	Predetermined	Not predetermined
Interaction between elements	Highly organized	Loosely organized
Behaviour	Governed by well defined laws	Probabilistic
Evolution	Does not evolve	Evolves over time
Nature of sub-systems	Do not pursue their own goals	Are purposeful & generate their own goals
Interaction with environment	None	Interacts strongly

Exhibit XXIV Definitions of System complexity,
adapted from Cook & Allison (1998)

CREATIVITY	
Task	To highlight aims, concerns and problems
Tools	Systems Metaphors
Outcome	Dominants & dependent metaphors highlighting major issues
CHOICE	
Task	To choose appropriate systems based intervention methodologies
Tools	Relationship between metaphors & Methodologies
Outcome	Dominant and dependent methodologies chosen for use
IMPLEMENTATION	
Task	To arrive at and implement specfic change proposals
Tool	Systems methodologies employed according to logic of TSI
Outcome	Highly relevant and co-ordinated intervention

Exhibit XXV The three phases of TSI,
adapted from Cook & Allison (1998)

D) System Intervention (SI) Approach

This is referred to as applying the change methodology of the Hard end of the Soft-Hard Continuum: The Change Spectrum, Exhibit XVI, which is effectively an application of the systems mapping, as illustrated by Exhibit XXVI. The purely technical problem change is at the hard end of the continuum. It is characterized by a purely scientific or engineering problem, Paton & McCalman (2000).

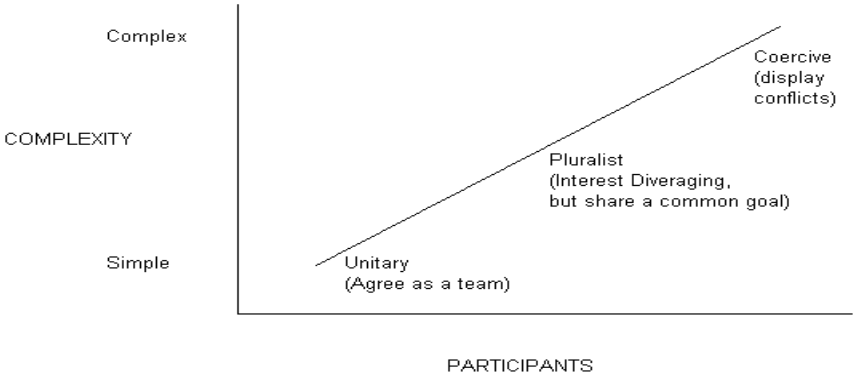


Exhibit XXVI Mapping of Systems Methodologies,
after Cook & Allison (1998)

Paton & McCalman advocated (2000) a two contrasting change methodology to manage this change process; concepts Organization Development (OD) and systems theory (SI). It is called Intervention Strategy Model (ISM). ISM is a derivation of:

1) Notion of participation from Total System Intervention (TSI)
2) A cycle of inquiries or iterations from System Intervention Strategy (SIS)
3) OD and project (or objective) validation from the Total Project Management Model (TPMM).

Purely technical problem change is virtually non-existent because there is always a human factor, at best; it is only a matter of degrees. Paton & McCalman put forward (2000) this hybrid model (ISM) based on the system theory's Total System Intervention (TSI) [for detail, refer to Section 2.7.4 (C)], System Intervention Strategy (SIS) developed by B. Mayon-White of the Open Business School and Total Project Management Model (TPMM) developed by Geoff Southern and Robert Paton of the University of Glasgow Business School. They are variations of the application of the decision-making process model.

The thrusts of ISM are being iterative and TSI rooted. It places emphasis on linkage between evaluation and implementation, i.e. the choice and benchmark selected, depicted in Exhibit XXVII, and consideration of

implementation issues ensuring acceptance of the change. In the evaluation (assessment of alternative choices) phase, it is engaging some form of team building that promotes co-operation thus growing the possibility of level of performance. It also facilitates the learning development process, which is crucial to successes in a participation approach.

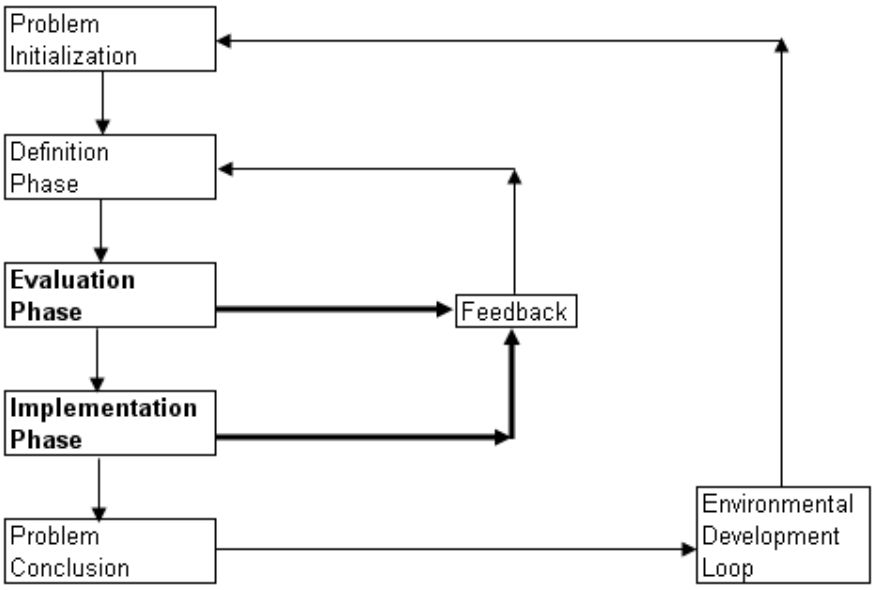


Exhibit XXVII The basic phases of ISM, adapted from Paton and McCalman (2000)

Total System Intervention (TSI) is made up of three phases, namely **Creation, Choice, and Implementation** [for detail, refer to Section 2.7.4 (C) above]. Paton & McCalman had made (2000) it more explicit as a decision making process and called them the Definition phase, the Evaluation or Design phase, and the Implementation phase.

Mayon-White's SIS is based on three phases in **a cycle of inquiry**, not intended to be linear (sequential) of structure examination, but with iterations and feedback intermingled in between phases, Yolles (1999).

TPMM addresses both the hard and soft issues by focusing on the technical and more physical aspects of a project from a system's point of view, while adopting techniques associated with OD to address the softer aspects. It uses an **iterative** and system based technique, which integrates the softer management philosophies and techniques into a traditional project management process, Paton & McCalman (2000).

The steps of ISM are, therefore, summarized as follows:
With a Problem Initiation as a starting point

- Definition phase
    1) Problem/systems Specification
    2) Formulation of success criteria
    3) Identification of performance indicators

    Review progress, iterations, and agreement of participants of each stage. At the end of the phase, an overall iteration to ensure harmony
- Evaluation phase (assessing alternative choices)
    4) Generation of options and solutions
    5) Selection of evaluation techniques and option editing
    6) Option evaluation

    Review progress, iteration, agreement of participants at each stage and consideration of implementation issues

    At the end of the phase, an overall iteration to ensure harmony

    Further review and iterations of the two phases to ascertain conformity
- Implementation phase
    7) Development of Implementation strategies
    8) Consolidation

    Review progress, iteration, and agreement of participants of each stage. At the end of the phase, an overall iteration to ensure harmony

    Further review and iterations with all three phases to avert issues

End the process with interfacing desired solutions with environment development for consideration of changes.

Truly hard systems problems will concede to ISM. The requisite change will go ahead with little or no resistance. However, when a problem gravitates towards the softer end of the change continuum, the risk of latent resistance is always possible. Thus an OD approach is required; TPMM can be useful.

E) Organization Development (OD) Intervention Approach

Organization Development Model (OD) is "a planned process of change [or intervention] in an organization's culture through the utilization of behavioural science technologies, research and theory", Paton & McCalman quoted (2000) Warner Burke (1994). OD process is located at the soft end of the Soft-Hard continuum, The Change Spectrum [for detail, refer to Section 2.7.4 (A)], Exhibit XVI.

Change is required when an organization is out of equilibrium with values between the organization and its members are not congruent. It means an organization's structure, decision information processes, people, work and reward systems may not fit or be integrating, Paton & McCalman (2000). They need to be realigned. "OD is about changing the organization from one situation which is regarded as unsatisfactory to another by means of social science techniques for change", Paton & McCalman (2000). However, an organization is made up of groups of people from different cultures and backgrounds that hold different values; realignment can be challenging. The OD Intervention process is ideal in this respect. It is a process capable to manage change that reinforces the support of the organization's goals, i.e. changing the "mindset of the whole organization and in the behaviour of

senior manager", Bohn (2000). OD is applicable as a tool in operant conditioning before application of the hard systems change.

As a starting point for OD changes, goals need to be communicated to members of the organization where values of the members as well as politics need to be considered. Paton & McCalman has identified (2000) situations where the OD approach can be used and they are:

1) Current nature of the organization is leading to a failure to achieve objectives
2) Change is required to react faster to external environment development
3) Introduction of factors such as new technology requires change in the organization itself
4) Introduction of change allows a new approach to be adopted.

The process change structure is essentially a generic systems approach. Initially, it is similar to the SI decision making process: observing symptoms, studying and confirming that there are issues, conducting research on the grounding theory leading to a diagnosis and establishing the cause. Then the cause is addressed and a search is initiated for possible solutions; subsequently, a solution is implemented.

The difference between SI and OD is the nature of solution methodology. OD uses behavioural psychology to change the value/culture of the individuals within an organization, notably by re-education and operant conditioning/motivations. The methodology used is contingent on the national and corporate cultures, [for detail, refer to Sections 2.5.1 (A) (D)]. Specifically, Paton & McCalman established (2000) a five step strategic process which is a generic process structure, and it is also echoed in Bohn (2000):

1) Recognition of change is required in the organization
2) Establishing the change relationship
3) Moving towards the desired change
4) Stabilizing the change
5) Allowing the change agent to move on

Further, there are three major well-known models of change management operational processes, Mento et al (2002):

1) Kotter's strategic eight-step model for transforming organizations
2) Jick's tactical ten-step model for implementing change
3) GE's seven-step change acceleration process model (follow Lewin's notion of unfreezing, movement {change} and refreezing, as the essential components of the change process)

Paton & McCalman advocated (2000) the GE model. Primarily, the focus is on leadership; the vision and objective of the change are communicated down the line, which constitute the unfreezing and movement (change), and "institutionalizing the change", Mento et al (2002), the refreezing.

F) Organization Structure

An infrastructure is required to support any process; without exception, an organization must make choices in its reporting levels in both directions of the vertical/horizontal integration and differentiation. This hierarchy structure also determines the degree of decentralization as desired by the organization's strategies.

"The concept of the design in organization is associated with establishing a fit between these three areas of choices", and "the three areas are goals and purpose of the organization, pattern of labour division, people who do the work", Paton and McCalman (2000). Hence, in designing an organization's structure, consideration must be given to:

1) Nature and purpose of the business
2) Control mechanism, which needs to be flexible to measure performance and appropriate rewards. Governance is carried out by policies, standardized procedures, and benchmark standardization to measure output performance.
3) Organizational, indigenous and national cultures considerations are also paramount in the design. The norms and values need to be congruent to the reward system and maximize the congruence between personal and the organizational goals.

Structures of an organization can range from a simple functional structure to a vertically differentiated and/or matrix structure, but the acts of governing and control as a whole, integration, requires coordination in conjunction with the structure differentiation. Differentiation is defined as "the state of segmentation of the organization system into subsystems, each of which tends to develop particular attributes in relation to the requirements posed by the relevant external environment", and integration is defined as "the process of achieving unity of effort among the various subsystems in the accomplishment of the organization's task", Lawrence and Lorsch (1967).

Simple Functional Structure

This framework usually is grounded on the division of labour concept. It is organized on a natural basis of selection, a classification similar to that among social insects, which are differentiated by function and behaviour into castes (hierarchy). At the same time integration and coordination of the whole is by association and communication. The functional structure is, therefore, built around basic activities of specialization, as illustrated in Exhibit XXVIII.

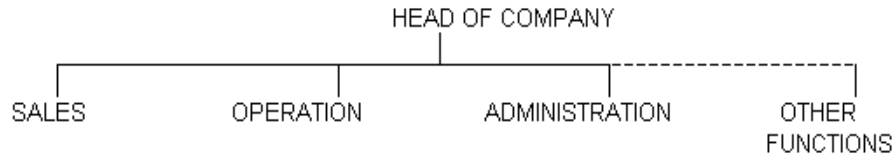


Exhibit XXVIII A typical business organization chart with simple structure

This is the fundamental model of all organizational hierarchal configurations; other structures are variations of this framework. One added feature of this structure is an excellent vehicle for dissemination of specialized knowledge of the functional discipline, but the ability to share organizational knowledge is inferior. The opposite is true for Divisional/product structure.

Functional Structure by Division of Product Line

As an organization grows and offers various product lines (products or services), priority attention must be given to the product lines. One reason is control and monitoring: conducive to flexibility in decision-making to sustain a competitive advantage. It is necessary to know which products are stars, cash cows or dogs and to initiate appropriate action to remedy or otherwise. A generic structure catered to this aspect is shown in Exhibit XXIX. The corporate office (Head of Company) becomes the control center where high-level decisions are made. It is unlikely that these decision makers are familiar with all the operations of the organization; knowledge acquisition essential to decision making therefore rests with the specialists known as Advisors, the head of these Advisors is commonly known as the chief of staff.

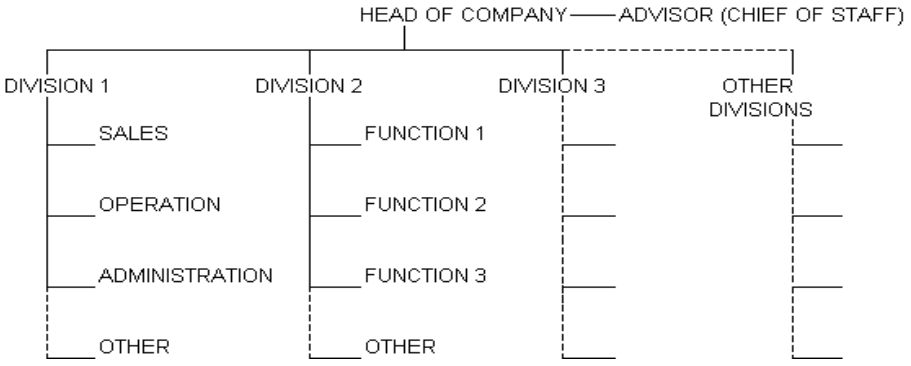


Exhibit XXIX A generic organization chart of a multi-divisional company

Matrix Structure

This concept is related to a dual responsibility of functions and a job, commonly referred to as a project.

A project is usually multi-disciplinal, involving resources from marketing, operations, finance, accounting and human resources, regardless of the size

and organizational structure of an organization; e.g. marketing a product, it involves the functions of

Sales - to advertise, to conduct market research
Operation - to manufacture the product, to manage the supply chain
Finance – to finance, to keep the books, to collect the proceeds of Sales, to pay the bills
Human Resources – to handle the staff's benefits, payroll, and employment records

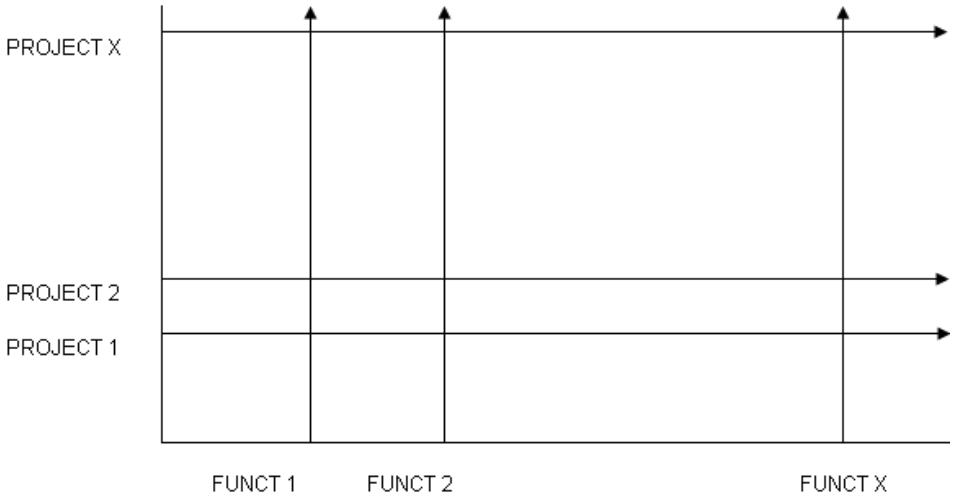


Exhibit XXX A conceptual diagram of a matrix organization

To state it generally, a project (Project X) would require a team effort from all the functions of an organization (Function 1…X). Alternately, a function, say Accounting would handle the billing, keeping the books for all projects, i.e. Function 1 would supply services to all projects of the organization (Project 1…X), as shown in Exhibit XXX.

However, when the matrix structure is mentioned, it usually refers to one of the polar ends of the continuum; staff is assigned from their home bases, various functions of the organization, temporary and full time, to a project. When it is complete, the staff returns to their home bases. At the other end of the continuum, the staff does not leave their home bases but multi-task on various projects as required. Further, in the middle of the continuum, it follows 50% of the staff would multi-task while 50% would be assigned full time. Along the continuum, lies this *Matrix Trilogy* (puns intended) of strategic positions, plus various degrees of multitasking and full assignment dependent on the requirement.

The presence of a Project Management Function is dependent on the complexity of the organization's projects. In the case of full time assignments present, usually a complex undertaking, there is definitely a

project management function in the Organization, as shown in Exhibit XXXI.

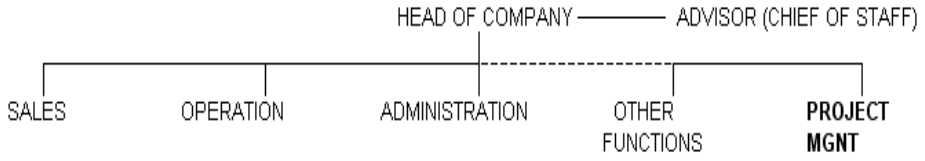


Exhibit XXXI A generic organization with Project Management Function

Project Management Structure

When a number of complex projects are present, the Project Management Function would have its own hierarchy within the governing structure similar to other functions. In some mega projects by product line, the Project Management could be organized as a separate Product Line Division, as shown in Exhibit XXXII.

Again, this involves multitasking or full time assignment similar to the matrix structure describe above, but with an added level (Project Management Division) of complexity to consider on whether multitasking and/or assignment.

When there is no full time assignment, the organization may have a structure similar to Exhibits XXVIII and XXIX. In the former case, Exhibit XXVIII, the project structure is embedded within the organization without a formal reporting hierarchy structure, but a team leader is assigned temporarily until the team is disbanded for small projects. On the other hand, as in Exhibit XXXI, when there is a Project Management Function, it follows that the multitasking staff will have a dual reporting responsibility line: directly to the Home Base and indirectly (dotted line) to Project Management, or vice versa.

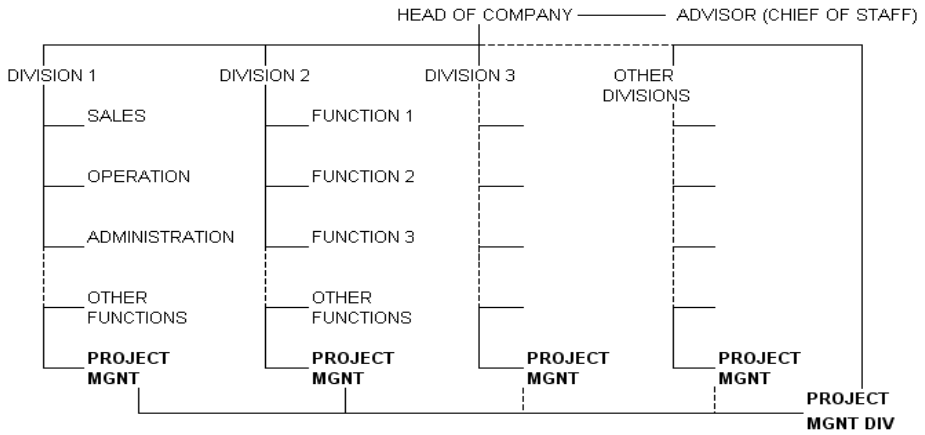


Exhibit XXXII A typical multi divisional organizations with Project Mgnt function

To further complicate matters, another dimension can be added to the organizational structure types by geographic region, as shown in Exhibit XXXIII:

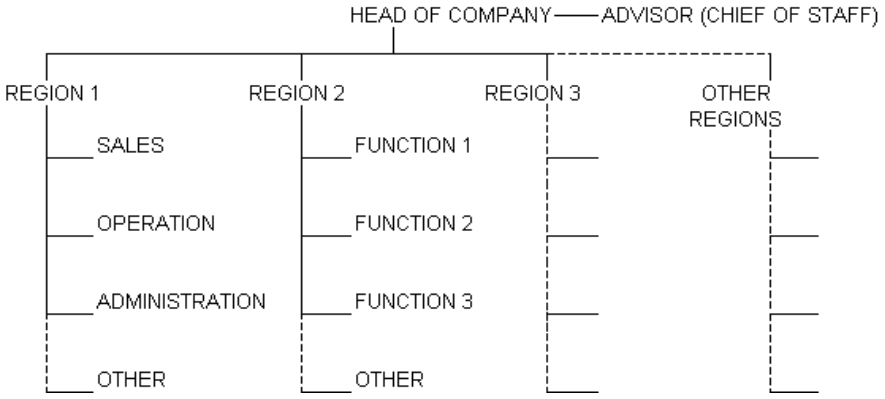


Exhibit XXXIII A typical organization organized by Geographical regions

The Region can be differentiated below or above the Division and/or the Function hierarchy. Hence, in general, diverse forms of structures of differentiation can be created from the combination, by priority, based on Function, Project (Matrix), Region, and Product Line Division and with other dimensions embedded; the permutations are virtually limitless. The complexity of integration grows exponentially with the complexity of differentiation.

Choice of structure

With so many forms of organizational structure combination available, what criteria should management used to decide on an optimal structure?

Structure follows strategy - Chandler

The criterion is "Fitness", such as *acquiring clothing, whether going to Savile Row or Marks and Spencer*, with the notion of the contingency theory of management. The premises of Contingency Theory are grounded on, Hellriegel and Slocum (1974):

- Environment
- Technology and size,

Environment

This concept refers to both internal and external environments of an organization. The former includes culture, communication, decision-making authority, and controls such as policies and procedures. The latter refers to the certainty/uncertainty of conditions within which the organization operates, such as dependence on the goodwill of support from customers and suppliers and degree of control over the circumstances.

According to Burns and Stalker, the internal environment runs parallel to the mechanistic-organistic continuum, Hellriegel and Slocum (1974). From the culture point of view, Handy (1986) advocates a generic model of four types of organizational structures, each on a continuum; they can be conceptualised as degrees of centralization-decentralization, bureaucratic-organic, individually differentiated-team integrated, and dictatorial-democratic.

The external environment, which has become globally competitive, has evolved from a comparative advantage environment into a competitive advantage environment, Porter (1990), through alliance and knowledge acquisition. Consequently, the market place is less stable as it used to be [for rationale, refer to Sections 2.2], comparatively, with added suppliers equipped in price advantage and innovation ability to compete in the market place.

Technology and Size

Technology employed and size of firm, according to Woodward, are related to the structure and business of the firm, Hellriegel and Slocum (1974), e.g. in a small batch production technology, the span of control is "flatter" as compared to mass production technology with its "taller" span of control. When a firm grows, a more formal structure is required in order to co-ordinate information, direction, and control. Handy put forward (1989) the notion of knowledge-based structure, with technology, rather than labour, providing added value to gain comparative and competitive advantages. The organization will be small, flexible and flatter, but the form is assorted. Three generic forms dominate, Shamrock (3 coordinated group core specialist, contract staff, and flexible worker employed as required), Federal (alliance of individuals groups of organizations, such as an integrated alliance of various Shamrocks) and Triple I (**I**ntelligence, **I**nformation and **I**deas).

In summary, structure is a factor of performance where environment, size and technology offer a definite influence, while strategy has an impact on structure and performance, Bourgeois and Graham (1979). In order to compete, the strategic weaponry would need to include a sense of being proactive, customer oriented, productivity alert, value driven, and core competency motivated, autonomous and entrepreneurial, i.e. the "fitness" of an organizational structure is established by consideration of these principles.

G) Work Breakdown Structure (WBS)

WBS, together with scheduling, is the soul of project management. It is a methodology to break up a complicated piece of work into its constituent parts; therefore, it is hierarchical in nature, taking a shape similar to an organization chart structure.

"…WBS is a deliverable or product oriented grouping of project work elements shown in graphical display to organize and subdivide the total work scope of a projects", Project Management Practices (2003). WBS is a

general methodology of classifying work; it is applicable to manufacturing processes, service work and mega projects like a nuclear reactor as long as a deliverable exists, where a deliverable is a physical and a tangible output, such as a batch of paint, a design drawing, or a scientific report.

The lowest level of a WBS is where the work is performed, cost accumulated, and budget assigned. The terminology of each level of the hierarchy varies depending on each organization's choice. However, in general, at the top of the hierarchy it is usually called project, and Project cascades into Deliverables (or Work packages), Jobs, and Tasks. Each partition of a deliverable is an independent piece of work allowing resource allocation, responsibilities for measurement and performance control.

From the notation of Exhibit XXXIV, a generic WBS, it could be observed that they are activity based with no indication of who the performer is, e.g. whether marketing or HR. Hence, the worker and the functional organization (department) charged with the task will be tagged in the WBS when the work is performed, [for detail, refer to Matrix Structure in Section 2.7.4 (F)] above.

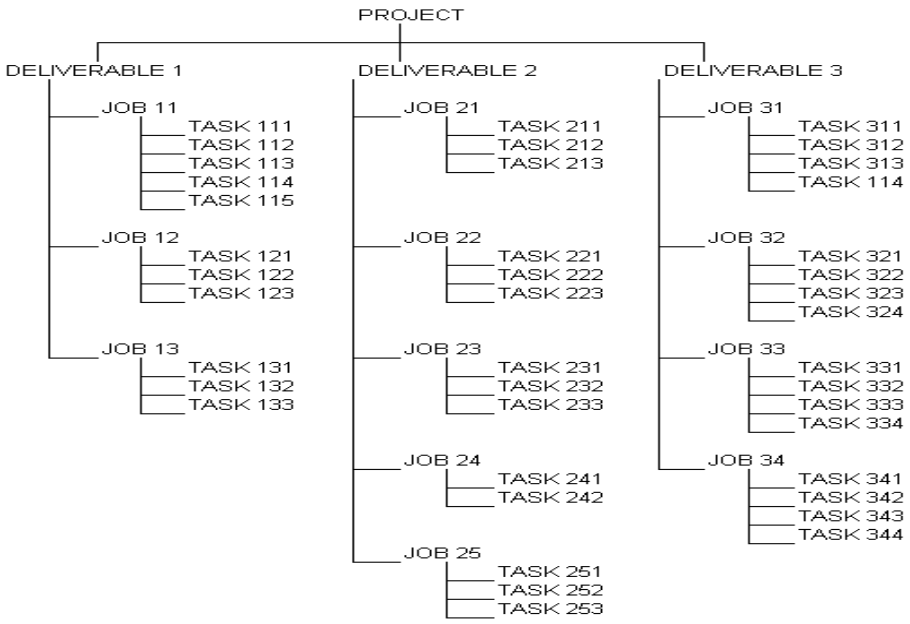


Exhibit XXXIV A Generic Activity Based Work Breakdown Structure

H) Concept of Lean

The term "Lean Production" was coined by John Krafcika, refer to using everything less than mass production, Womack et al (1990). Lean Production is an outgrowth of the Toyota Way and Toyota Production System (TPS), developed by Eiji Toyoda and Taiichi [Õno] Ohno, whereas TPS is kaizen based.

"The Toyota Way, which incorporates the spirit of kaizen – continuous improvement – and Toyota Production System (TPS) – streamlined efficiency [eliminate Muda] – drives the F1 [Formula 1] project forward", Time (2006).

"The Toyota Way philosophy means starting the development of a new car [referring to the TF106, Formula 1 car for the 2006 race] before anyone else, taking extra time to improve it and only racing it when it is fully reliable and competitive", Time (2006).

Kaizen is interpreted as continuous improvement in the West; the process mainly concentrates on maintenance and improves current standards and practices. A connotation that kaizen mainly applies to operational and not strategic. However, "Kaizen means ongoing improvement involving everyone [of the firm], including managers and workers", Imai (1986). The meaning of kaizen is not restrictive as interpreted; it is all encompassing, including the strategic domain. Literally, it means change for the better [kai = change, zen = good; where Kanji for 'kai' 'zen' is identical to the Chinese characters, 改善. The character for 'zen' has an implication, in the religion of the East, of 'benefiting the mass'], or simply 'improvement' which encompasses continuous as well as innovation; abrupt change. Further, this 'zen' is not the 'Zen' of the branch of Mahayana Buddhism that practices meditation. They are two different Chinese characters that happen to have identical pronunciation when translated into English.

The mechanics of kaizen is best exemplified by two processes, called Quality Improvement Process and Problem Solving Process, created by Xerox - The Document Company.

The Quality Improvement Process is made up of 9 steps within 3 courses of action explicitly:

1) Planning
   It starts with the i) output and ii) customer identification leading to ascertain the iii) customer's requirement translated into iv) supply specification and v) identifying steps in the work process
2) Organizing
   vi) Selection of measurement is followed by vii) determining whether there is a process capability. If it is negative, the **problem solving process** needs to be resolved. If there is capability, the output is generated.
3) Monitoring
   viii) The output is evaluated to determine whether there are problems. If so, the **problem solving process needs to be resolved**. If not, the process is repeated and ix) **recycle** to the 1st course of action.

Implicitly, it is the Recycle, Step ix, being the key to the improvement process. Thus, it follows that review, re-examination; and re-assessment are the pre-requisites for the diagnostics leading to any improvement scheme.

The Problem Solving Process mentioned in the Quality Improvement Process is a decision making process, as the term implies: decisions usually arised from problems. There are 6 steps, Formulation (Steps 1 to 4), Implementation (Step 5) and Evaluation (6):

1) Identifying and selecting Problem
2) Analyzing Problem (asking 5 Whys)
3) Generating Potential Solutions
4) Selecting and Planning Solution
5) Implementing Solution
6) Evaluating Solution.

The Problem Solving Process concentrates on finding a **solution** while Quality Improvement Process focuses on **Perfection** by iteration.

Historical Background

Toyoda and Ohno updated Henry Ford, Ohno (1988). They rearranged the process sequence of mass production traceable to Deming and Juran's quality concept, Imai (1986), on TQM. "Like Ford, the Toyota production system is based on the workflow system. The difference is that, while Sorensen worried about warehousing parts, Toyota eliminated the warehouse", and "Tracing the conception and evolution of work flow by Ford …true intention was to extend a work flow from final assembly line to all other processes … from machine processing to the die press that corresponds to the earlier processes in our Toyota system", Ohno (1988).

Toyoda and Ohno's TPS is a change management application with a system intervention approach, considered 'hard', as well as using organization development (behaviour) approach, considered 'soft'. It decentralizes operation decisions, teamwork, continuous improvement, and communication to motivate workers; an application exemplified the Mayo's Hawthorne Experiments, but with a flair of Taylorism.

Liker & Lamb noted (2000) that Henry Ford clearly laid out all the basic concepts of Lean manufacturing, but that "Ford's successors, however, did not make production flow as Ford intended … ended up with concept 'the larger the lot size, the better'", Ohno (1988), resulting in the contemporary mass production process. The external and internal environments of the time helped shape this particular mass production process in the US. The US was able to sell anything produced at the time after WWII, [for detail, refer to Section 2.2], while the rest of the world was struggling to rebuild from wreckage, Liker & Lamb (2000). The American continent was literally untouched by the 'Dogs of War'. It was also difficult to co-ordinate 'Flow', Liker & Lamb (2000), because of the growing complexity of car design and increased consumer demand for variety resulting in a 'buffer supply' mentality. Henry Ford II, after Henry Ford's death in 1947, emphasised financial and economic matters and company growth. Liker & Lamb further remarked (2000) that the error was adapting mass production to fit the changing situation, rather than re-evaluating the fundamental strategic approach. The practice continued, owing to the massive demand and the

economy of scale (large volume) in production, where the extra cost of muda is distributed among the cost of production; cost per unit is immaterial. The consequence did not surface and rally attention until competition/challengers arrived with better quality, better diversity and worst of all with better price fitting the environment [for detail, refer to Sections 2.2].

The environmental conditions were also critical for Toyoda and Ohno in history. After WWII ended, Japan needed rebuilding [for detail, refer to Section 2.2]. Short of capital and immigrants, Japan had no 'guest workers', and "…economy was starved for capital, … massive purchases of the Western production technology were quite impossible", Womack et al (1990). In the late 1940s, Kiichiro Toyoda, President at Toyota, fired a quarter of the work force. Subsequently, with the help of the Japanese government, the union negotiated 2 guarantees for the remaining employees: a life employment clause and graded pay by seniority. The workers became long term fixed liabilities, "... old machinery could be depreciated and scrapped, Toyota needed to get most out of the human resources… until they reach retirement…. So it made sense to continuously enhance the workers' skill and to gain the benefit of their knowledge….", Womack et al (1990). This is the pre-birth of kaizen. While North America produced a million or more automobiles, Japan only needed a fraction at that juncture, Womack et al (1990). To meet customer demand, an innovative production system was needed, one flexible and efficient yet cost effective and without muda, Swank (2003). This led to JIT, supply chain management, and team concepts which eventually led to kaizen.

Process of Lean

Lean means reducing overhead, using generalized machines to facilitate ease of tooling change; rejects are not acceptable, team-work, and communication in vertical and horizontal directions, where inventory is considered a muda. The notion is a "manufacturing virtuosity", Hays & Pisano (1994), and it brought the production process up another notch from Taylorism. It is a logical progression from Scientific Management/Ford Mass Production to Kaizen/TPS: Lean Manufacturing is similar to the progression of Adam Smith's 'division of labour' factory management evolved to Scientific Management/Ford Mass Production.

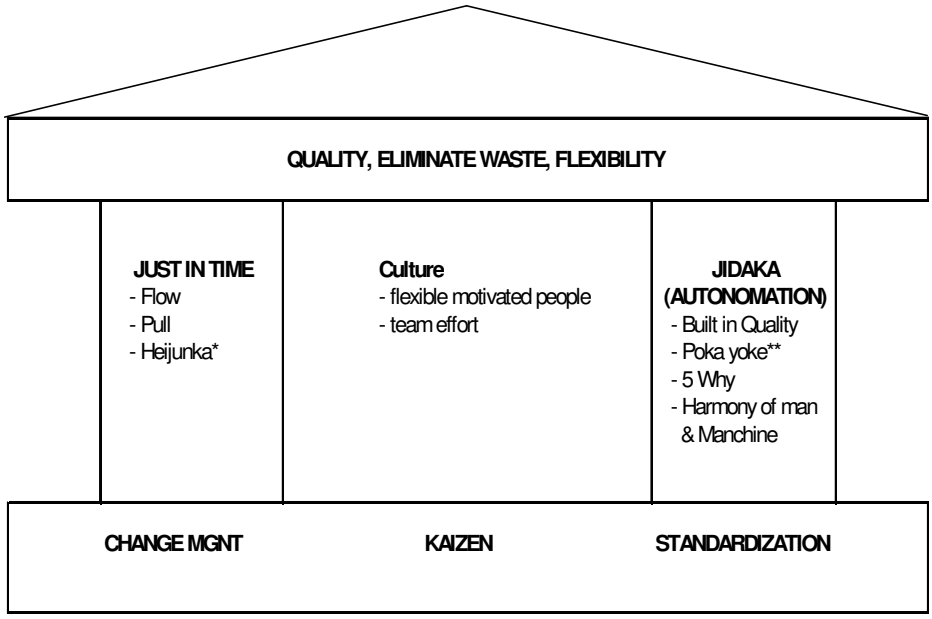
Lean production is built around the concept of continuous flow processing, a departure from 'traditional production systems' [contemporary mass production process], in which large batches are processed at each step and are passed along only after an entire batch has been processed, Womack & Jones (1996), and echoed in Swank (2003). The notion of Lean is an outgrowth of TPS, which is composed of two pillars, Ohno (1988):

- Just in Time
- Jikodo (Autonomation), automation with a human touch

"… Just in time and Jidoka do more than simply eliminate waste and improve quality. They bring the manufacturing process into crisp focus,

exposing problems as they arise. They are the scientific basis of kaizen, and the bedrock of the Toyota Production System (TPS)", Cho (2002).

These two pillars are built on the foundation of change management, standardization, and kaizen to pursue "Perfection". They support quality, flexibility to adjust to needs quickly, effectively, and eliminating waste; thereby lowering the cost. Subsequently, the savings are passed on to customers while retaining an acceptable share of the margin. The spirits and minds of individuals who are motivated, flexible, exerting team effort, driven by need and adaptation to a slow growth economy reside in the heart of the house. These notions have been conceptualized into a "House of Lean", Alukai & Mano (2006), Liker & Lamb (2000), as shown in Exhibit XXV.



* Process levelling, lowering the crest and rasing the trough
** Error proofing or Baka yoke (fool proof)

Exhibit XXXV House of Lean, adapted from Alukai and Mano (2006), Liker and Lamb (2000)

Not long ago, while trying to break into the North American market, Japanese automobile advertisements showed comparisons to GM and Ford's mid-range cars to demonstrate their competitiveness. Recent GM's advertisements show Pontiac's specifications are comparable to Camry's. What had happened and what made the difference? Is what happened history now? "The difference lies in history and culture", Ohno (1988); success was in Japan [and the East] and not in the US because of cross-functional competency rather than skill specialization. An operator in Japan has a broad spectrum of skills; coupled with this, he finds "value in working". This implies that a multi-skilled work force would be important to this lean revolution and suggests recognition of the importance of cross training, including continuous learning, knowledge acquisition, adapting to

opportunities, and motivation to create job satisfaction, all of which are important in a lean environment.

Spear & Bowen disagreed (1999) with this notion of a cultural hypothesis and argues it is caused by kaizen being an experiment. It is conceivable then, that emulating kaizen, according to Spear & Bowen should work beautifully in North America. Spear & Bowen further hypothesised (1999) that it is a paradox; while TPS advocates rigid specifications, there is flexibility and creativity. Spear and Bowen reiterated (1999) that TPS is a learning organization, with continued experimenting "following the scientific method pursuing perfection by kaizen that it is duplicable elsewhere". However, Hofstede has clearly indicated (1993) that different cultures have distinct differences in working and management styles. The emulation is very difficult to duplicate. This divergence is reconcilable by hypothesising that it is the result of change management: culture change as well as learning, [for detail, refer to Sections 2.5.1 (A), 2.7.4 (A) and (B)], exemplified by Porsche AG' transformation to Lean thinking took 5 years for the "Lean Leap", Womack & Jones (1996). This is further evidenced: "It took 10 years to establish kanban at the Toyota Motor Company", Ohno (1988).

Nonetheless, the rigid and flexibility paradox, Spear and Bowen (1999), can be rationalized. It is specification and standardization. The flexibility is built into the rigid standard with strategizing ahead, scenario planning; training workers, alongside tools like standardization (time and motion studies), worksheets and kanban, providing visual control to facilitate speed. These are creativity, but not creativity in the originality sense. Karajan could create magnificent interpretations of The Eroica, The Pastorale, and The Chorale; but there was no comparison to the "Immortal Beloved". Karajan had undertaken thorough rigid cross training and painstaking practice in various technical exercises to become proficient, together with continuous learning plus the mentality and ability to maintain focus. The technical exercises that cover various scenarios of play provide flexibility and creativity. On a less towering level, a sushi chef or bar tender who can produce various kinds of orders of beautiful sushi or cocktails (creativity) respectively in no time and to rigid standards (flexibility) has recited the menu/formulas covering the bases and has undergone rigid training.

Further, after the oil crisis in the eighties consumers credited the Japanese with creation of the fuel injection system, with four valves per cylinder and double overhead cams, turbocharger and supercharger systems to enhance power of small engines. In fact, these systems were invented in the twenties and thirties, but not popularized. They were too expensive to manufacture until re-introduced, Womack et al (1990). The creativity of Toyota is the creation of use, not a creation of origination, with a sense of competitive advantage through a continuous improvement process that Spear and Bowen (1999) called a continuing experiment.

Principles of Lean Thinking

Lean thinking, Womack & Jones (1996A, 1996); Lean consumption, Womack & Jones (2005); lean enterprise and production, Womack & Jones (1994); and lean service, Swank (2003), all refer to the application of the concept of Lean, the concept is not restricted to the manufacturing process, but applicable to all processes and businesses.

In association with lean thinking, the elimination of muda is a pre-requisite. There are seven categories of muda, Ohno (1988), to which Womack & Jones added (1996) an eighth:

1) Overproduction
2) Waiting (for processing)
3) Transportation (unnecessary transport of goods and equipment)
4) Too much machining (unnecessary and over processing)
5) Inventory
6) Moving
7) Making defective parts and products
8) Not meeting users' needs

Principles of Lean thinking, based on implications derived from TPS (Toyota Production System) and the Toyota Way, refer to, Womack & Jones (1996):

- **Value specification**
  Defining value; customer's point of view
- **Value stream identification**
  Valuing process and identifying "muda" and to eliminate Type 2 muda (create no value as perceived by customers and clients)
- **Policy deployment**
  Deciding attack precedence on muda
- **Flow**
  Technique for tackling Type 1 muda (creating no value but required by the organization)
- **Pull**
  Technique to improve value added activities and remove Type 1 muda
- **Perfection**
  Kaizen, the technique for slowly pursuing perfection

Value specification

Value is defined as "a capability provided to a customer at the right time at an appropriate price, as defined in each case by the customer", Womack & Jones (1996). A connotation and a supposition echoing Porter's 3 generic competitive strategies and value chain concept. It focuses on the customers' want whether it is by quality or pricing preference, [for detail, refer to Section 2.7.3 (A)], but in either case minimizes support cost (non-value added activities), "muda". It is a customer oriented idea, providing superior

service to encourage repeats, outwardly looking, providing the customer with a complete and comprehensive satisfaction package.

Value stream identification

It is defined as "the specific activities required to design, order, and provide a specific product, from concept to launch, order to delivery, and raw materials into the hands of the customer", Womack & Jones (1996). The idea is analogous to Porter's value chain, [for detail, refer to Section 2.7.3 (A)], but in an operations mode. In order to delineate inefficiencies or muda, a process map is needed to identify the specific activities occurring along a value stream for a product, goods or services, Womack & Jones (1996). This is known as value stream mapping.

The three critical steps of a value stream mapping, [aka a decision making process] Womack & Jones (1996), are:

1) Problem solving,
   Concept through detail design and engineering to production
2) Information management
   Order taking through detail scheduling to delivery
3) Transformation
   Raw material to finished product in the hands of the customer

Essentially, it is a procedure to map a process, from dust to dust, of initial observations of problem definition to the proposed deliverable of the present state, the future state, and the future state after implementation. The objective is to map the actions required to design, order, and make a specific deliverable, Womack & Jones (1996):

1) Those which create value perceived by customer
2) Those which create no value but required by the organization, Type 1 muda
3) Those which create no value as perceived by customers and clients, Type 2 muda

Policy deployment

Type 2 muda should be eliminated immediately; upon accomplishment, the 3 remaining principles: Flow, Pull and Perfection, are used to minimize or to eliminate type 1 muda, the non-value added entities. This mirrors Porter's concept related to minimizing value chain's support cost and improving the value added activities as perceived by customers. This process, to eliminate "muda", may necessitate taking steps which extend beyond the chain from the organization's operation and suppliers to customers. The value chain in competitive strategy [for detail, refer to Section 2.7.3 (A)] is referred to as "strategic alliance", in lean thinking and TPS; it is "supply chain management" resulting in JIT supply.

Flow

Flow is defined as "the progressive achievement of tasks along the value stream so that a product proceeds from design to launch, order to delivery,

and raw materials into the hands of the customer with no stoppages, scraps or backflow", Womack & Jones (1996). Womack & Jones suggested (1996) 3 concurrent courses of action:

1) To focus on the task objective of a task-functional matrix.
2) To ignore and remove impediments to the objective and the continuous flow
3) To rethink and consider the specific work practices and tools to eliminate muda.

Supply chain management is necessary to keep the Flow to run continuously, i.e. to maintain the down/up streams of the process to cooperate and to avoid bottlenecks. It is a team concept that needs co-operation among work groups as well as customer and supplier alliances. JIT is a critical cost saving concept for the continuous flow but can work effectively only if there is co-operation among all parties. At the same time, the supply has to have quality, otherwise, 'defect supply' buffer stock will be required, thus destroying JIT. Level scheduling (heijunka) is a tool employed to even out the fluctuation in Flow that creates bottlenecks. Heijunka is defined as "creation of a 'level schedule' by sequencing orders in repetitive patterns and smoothing the day-to-day variations in total orders to correspond to longer term demand", Womack & Jones (1996). It is a levelling (even out) technique in production to manufacture only those that are needed while keeping other resources as active as possible. The resources at fixed cost with time-sensitive element would be most critical to subject to level scheduling; i.e. workers need to be trained in different tasks and become multitasking oriented. Hence, the basic requirement to support Flow is a combination of multi-tasking workers, Jidoka (autonomation with a human touch, auto error detection system), self-inspection [Juran's original idea that started the whole revolution], Poka-yoke (error proofing) or Baka-Yoke (fool-proofing), Alukai and Mano (2006), Womack & Jones (1996), Ohno (1988). However, if the Flow is considered an end in itself instead of the means by which to achieve Lean, muda will amplify. It is imperative to keep the objective in focus on the 1st principle, Value, as defined, and provide what the customer wants.

Pull

Pull (Kanban) is defined as "a system of cascading production and delivery instructions from downstream to upstream activities in which nothing is produced by the upstream supplier until the downstream customer signal a need", Womack & Jones (1996). Maximizing Pull demands a continuous flow with a state of readiness. Supporting Pull in real time can be very expensive and create tremendous muda. Therefore, there is a conflict between muda, on the other hand, and convenience and speed of supply on the other. Pull in lean thinking has the implicit property of Pull with minimal muda. Pull is a JIT tool. Hence, the underlying supply chain management is the key to re-orienting for efficiency and effectiveness by design and practice process re-engineering.

Perfection

Perfection is defined as "the complete elimination of muda so that all activities along a value stream create value", Womack & Jones (1996).

The goals of Lean and mass production are both based on value for the customer and oriented toward customer need. The difference is priority of concentration and method employed. Mass production's priority is volume and cost because large quantity is the aim; while Lean's priority is cost, flexibility and competition to gain competitive advantage so that volume can follow. Both concepts were created based on adaptation to the external environment's conditions at the time in order to achieve this perfection principle.

Lean in Practice

Putting lean thinking in practice requires application of the 6 principles to eliminate the 8 structural muda (Ohno identified 7 and Womack identified the 8th) with change management technique, i.e. upon attaining an acceptable process method and standardizing the procedure, but continuing to refine with improvement, Spear (2004). Alukai and Manos advocated (2006) a process called "Kaizen Blitz", the application of Lean principles in practice, which is an application of kaizen techniques focusing on a specific area for improvement as an event which includes 9 steps.

In order to make it applicable to E&B, as an exemplar, comparable to Lean thinking, Step 10 was added as an enhancement and is referred to as Kaizen Blitz Plus [the 10th step is the Author's addition, deduced directly from Lean thinking]. It is compared to Lean thinking as shown in Exhibit XXXVI:

	Kaizen Blitz	**Lean Thinking**
1)	Assemble the team	Value specification
2)	Identify the project	
3)	Set aggressive goals	Policy deployment
4)	Document the Current State	Stream line mapping
5)	Brainstorm ideas for improvement	
6)	Create the Future State	
7)	Implement the Future State	Flow, Pull to eliminate muda
8)	Document and Standardize	
9)	Record results and present to management	
PLUS		
10)	Continuous improvement	Pursuing perfection

Exhibit XXXVI Kaizen Blitz Plus (the application) and Lean Thinking

Kaizen Blitz is a decision process, a team effort to access the objective at hand with the project identified. It involves formulating the problem, finding alternatives, implementing the decision and measuring the accomplishment. It is organized in a structural framework minimizing time muda. The crucial action is the comparison of steps 4 and 5 after documentation to delineate and prioritize the improvement actions before

implementation. The pre-requisite to implementation is the road map (flowchart) as a guide: the plan and the schedule. The 1st priorities are 5 Whys (to get to the root of the problem) and 5 S (housekeeping to keep neat, and tidy, i.e. knowing where the tools are) before execution. Upon completion, the process is documented and standardized; otherwise, "wheels would be re-invented each time", causing muda.

In pursuing perfection by kaizen, Step 10 is a plus; in all practicality, a certain steady state needs to have been reach reaching before embarking on more changes after standardization. Otherwise, it will become aimless and give an impression of the aim is to perform constant change instead of improving performance.

I) Business Process Re-engineering/Re-design (BPR)

Davenport & Short provided (1990) a conceptual definition of BPR, "The analysis and design of workflows and process within and between organizations."

"Business Process Redesign (BPR), alternatively called reengineering", Teng et al (1994), and further defined BPR in a more specific manner: "the critical analysis and radical redesign of existing business processes to achieve breakthrough improvements in performance measure", associated with "the ability to achieve paradigm shifts throughout the organization", Gauken (2002); a radical improvement, Womack & Jones (1996), "kaikaku" in Japanese. Hammer & Champy defined (1993, 2001) reengineering as "the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service and speed".

Individuals/organizations tend to perform by force of habit even if the conditions and environments have changed, and use technology to mechanize old ways of doing business, simply speeding up the process, Hammer (1990). However, circumstances may force a BPR process. Hammer & Champy identified (1993, 2001) three conditions in which a BPR process will occur:

1) Trouble arriving, e.g. cost is too high, necessitating a change [the re-engineering process]
2) Trouble on the radar screen, where foresight senses its coming
3) Being in a competitive advantageous position and deciding to build a barrier with cost raising strategy [for detail, refer to Section 2.7.3 (C)] to secure leadership.

A five-step process to implement BPR is prescribed, Davenport & Short (1990); it can be considered being strategic decision making to manage change in nature:

1) To develop vision and process objectives
2) To identify processes to be redesigned

3) To understand and measure existing processes
4) To identify the IT Levers [assuming IT technology is the medium]
5) To design and build a prototype of the process [implying a small scale, if successful, go for the Big Bang, Paton and McCalman (2000)]

Further, Hammer & Champy exemplified (1993, 2001) characteristics of results from the process, typical traits of an OD approach of change management:

1) Several jobs are combined into one
2) Workers making decisions
3) Rethink how work should be performed
4) Holistic approach to improvement

In addition, BPM and TQM [for detail, refer to Section 2.7.4 (J) below] have many similarities because both TQM and BPR are change methodologies. However, TQM's main focus is a "continuous", movement of incremental change in work processes in contrast to BPR's characteristic tends to be radical and "discontinuous" and abrupt. BPR change is revolutionary while TQM change is evolutionary.

J) Total Quality Management (TQM)

The manufacturing revolution, or the quality movement, was started by the idea of Statistical Quality Control (SQC) delivered in Deming and Juran's lectures after WWII in Japan. It was accepted as gospel, Drucker (1990), Juran (1993, 2004), Imai (1986). This eventually led to the Toyota Production System or the "Toyota Way" and the concept of kaizen in Japan, Spear & Bowen (1999). When it was noticed in the West [for detail, refer to Section 2.2], concepts such as of Quality, BPR, and Lean grew collectively into TQM.

"Total quality is a description of the culture, attitude and organization of a company that strives to provide **customers** with products and services that **satisfy** their needs. The **culture** requires **quality in all** respects of the company's operations, with processes being done **right the first time** and **defects** and waste **eradicated** from operations", Padhi (2002). It follows, therefore, the fundamental principles of Total Quality can be summarized, Evans & Lindsay (2002), as:

1) Customer and Stakeholder focus
2) Participation and teamwork approach by all in an organization
3) Continuous Improvement and Learning focused processes.

The term total quality management (TQM) was coined by the US Dept of Defence during the eighties, Evans & Lindsay (2002). An outgrowth from the A. V. Feigenbaum's concept of TQC of the 1950s, denoting the scope of

quality across both the internal and external environments of an organization and implying that quality is of prime importance to an organization's performance. The process incorporates quality control and assurance into each step of the production process as opposed to a distinct task at the end of the production run, Juran (1993, 2004); a business process re-engineering idea. With control at each step of the process, potentially there will be 'zero defect' at the end. This echoes another important concept in the Quality Movement, advocated by Phil Crosby. It does not cost financially to improve quality; rather the benefit of quality improvement outweighs time and resources spent. Therefore, the overall goal of TQM is working toward 'zero defect' and 'do it right the first time'.

TQM tools and implementation

Using a system approach to fathom quality, it "integrates the various functions and responsibilities of the different units and provide a mechanism to ensure that organization goals are being met through the coordination … of the units", Mitra (2000).

The tools are:

1) The Deming Cycle, a System Intervention
2) Company-Wide Quality Control (CWQC), a combination of SI and OD Interventions, ISM application
3) Quality Circle and Quality Improvement Team

The basic tool comes from Walter Shewhart's Statistical Quality Control (SQC) for zero defects mass production of complex telephone exchanges and telephone sets and rests on the statistical theory developed by Sir Ronald Fisher, Drucker (1990). SQC was referred to as "Shewhart Cycle", later on became the "Deming Cycle" [renamed by the Japanese, Mitra (2000)] and finally came to known as kaizen.

The essence of the Deming cycle or kaizen under the quality control concept is a logical sequence of circular steps known as Plan, Do, Check and Act, at times it is also known as "PDCA Cycle", Mitra (2000). It is a decision making process. The Planning step begins with recognizing the opportunities for improvement, whether it is from customer and/or operation process feedback. It is followed by determining how to improve; and once found then migrates to the Do step. The DO step is to test the findings in a small scale, a pilot study (a systems intervention change), Paton and McCalman (2000). A statistical method (SQC) is used for the quality assurance process in the Check stage. It involves acceptance sampling and statistical process control (SPC); where SPC uses a predetermined process control chart as benchmark. Such a chart is prepared by calculating the mean of the objective measure and their variability of the mean while assuming a normal distribution around the mean. This process is common today, but in those early days, when IT tools were limited, quality control was conducted by thorough inspection of all, Juran (2004). If the result of the Check stage is positive, full-scale implementation, a Big Bang (another systems intervention change), Paton & McCalman (2000), is adapted in this

Act stage. If the result is indifferent or negative, the cycle reverts to the Plan step and resumes again.

While the Deming cycle is operational approach oriented, CWQC operates at the management and control level. It is to design, produce and sell products that satisfy customers' requirements and it is the heart of the Japanese success with quality, Evans & Lindsay (2002). It includes ensuring quality customer service, quality of management, quality of labour, quality of material, quality of technique and quality of equipment; i.e. organization wide Quality.

A Quality Circle is an informal group consisting of members from various hierarchical levels of an organization who gather to brainstorm on ways to improve making the product or service delivery, Mitra (2000). The approach of operation is strategic. Quality Improvement team is another group which identifies quality problems; typically it is a cross-functional group with different disciplines of expertise. The function of both groups is organizational integration in nature to foster a holistic approach where synergy could be resulted from this OD Intervention; a predecessor to the "Hot Groups" related to innovation, Leavitt & Lipman-Blumen (1995).

Carrying out these three functions is what Spear & Bowen referred (1999) to as a continuing experiment [for detail refer to Section 2.7.4 (H)]. Armed with these TQM tools, implementation becomes a structural change management process.

It requires recognition of the need to change and is followed by the decision-making process with the support of leadership. It involves both SI and OD interventions. OD intervention requires a culture (practice) change in the organization, and systems intervention requires technology change, both of which demand new knowledge and training [for detail, refer to Sections 2.7.4 (D) and (E)]. One of the underlying requirements for the organization is becoming a learning organization. The destination of change and control is toward reconciliation of Scientific Management (an engineering approach) and Human Relation (a behaviour approach), Drucker (1990); balance of SI and OD Intervention, i.e. a Yin and Yang harmony also echoed in Simons (1995), Four Levers of Control [for detail refer to Section 2.7.4 (L)].

The Implementation process is best exemplified by the observations on the "Toyota Way".

It commences with the concept of focusing on customer value: quality, cost effectiveness and satisfaction. Quality is achieved through production engineering, where "all work is highly specified as to content, sequence, timing and outcome", e.g. "to make problem detection even simpler, the length of the floor for each area is marked" in relation to the allowed work completion time [the work is moving at a fixed speed through the worker's working zone], Spear & Bowen (1999). Quality control is in the hands of

the production operators, working methods are specified and synchronised to the last detail, and each worker is pursuing quality, a SI approach. "Toyota explicitly teaches people how to improve, not expecting them to learn strictly from experience", [explicit knowledge translated from tacit knowledge], but in team spirit and constantly being challenged to pursuing improvement, Spear & Bowen (1999), up the bar and push to the performance limit; as indicative of a learning organization. The way to achieve this is leadership and expertise, "That's why at these organizations [plants] all managers are expected to be able to do the jobs of everyone they supervise and also to teach their workers how to solve problems… The leadership model applies as much to the first level team leader supervisors as it does to those at the top of the organization [plant]", Spear & Bowen (1999), an OD Intervention. Economy is achieved owing to the result of the quality approach where "…introduction of SQC almost always increases the number of machine operators. But this increase is offset many times over by the sharp drop in the number of non-operators: inspectors, above all, but also the people who do not do but fix, …", Drucker (1990); high overhead cost is greatly eliminated. As it "begins with the end in mind", Covey (2004), the requisite processes are needed to fulfil and support the end result desired.

With regards to marketing and customer satisfaction, Maslow's hierarchy of needs comes into play but the needs are influenced by factors such as culture, age, environment, and degree of affluence with the intervention of the media and government. Toyota markets several brands, segmenting the market with Lexus (a luxury division), Avalon (Full Size Sedan), Solara (Sports), Highlander (SUV) and Pruis (the hybrid). Although this is also done by other marques, from Mercedes and BMW to Hyundai and Skoda, Toyota appears to position itself and target the mid-middle to low markets of North America. To illustrate, Lexus, aiming at a niche, is gaining ground on Mercedes and BMW, with quality, pricing and economy, Porter's Curve [for rationale, refer to Section 2.7.3 (A)]. Also, regardless of brands (segments of the market), All Toyota's advertisements where safety and fuel economy is the basic fundamental, show the excitement and vanity of owning a Toyota; such as attraction of the opposite sex, speed or just admiration from others. If it is referencing a specific model, the appropriate depiction is more lucid and articulated as necessary, e.g. happy children with family for the SUV, and zooming and thrilling adventures for the singles or the young at heart. Toyota is doing an excellent job catering to the needs of customers and gaining competitive advantages.

The above actions need to be reinforced by rewards, recognition and celebration, Schonberger (1992). Central to the Schonberger's thought is M. S. Meyer's notion of three dimensional approach to rewards: individual monetary, group monetary, and non-monetary rewards. An individual's monetary reward aims at encouraging hard work, promoting accomplishment, and satisfaction in kind via the freedom of choice by the purchasing power of money [for detail, refer to Section 2.5.1 (C)] related to concepts of money; a tempting offer of a positive threat. A similar analogy

applies to teamwork; however, individual monetary rewards deter the teamwork concept, which the "Toyota Way" prizes. Promoting the creation of options, profit sharing, with group recognition and honouring and celebration with status symbols are the additional mechanisms.

K) Lewin's Field Theory, Force Field Analysis, and Unfreeze, Change, and Refreeze

Lewin is a physicist turned psychologist; therefore, his concepts have traces of physical science overtones. He defined behaviour (B) as a function of the person (P) and his environment (E),

$$B = f(P, E)$$

which suggests that a person's behaviour is related to his characteristics, the social surroundings, and the interaction around him.

Lewin developed the Field Theory and Force Field Analysis (a diagnosing technique), which advocates that organization systems are not static but in equilibrium because of the driving forces and the restraining forces cancel each other out. If a change is to be successful, the driving forces need to overcome the restraining forces whereas when the change is not successful, it follows that the restraining forces are prevailing. *Newton's 3rd Law of Motion is carried over to the sociology world!* Lewin's analogy to his theories is somewhat relating to the Kinetic Molecular Theory of Matters on how to turn a square block of ice into a circular ring of ice. The process is melting the square block into water (Unfreezing); putting the water into a mould (Change) and solidifying it with (Refreezing).

In order to carry out a change, the present behaviour/situation must somehow fade away. This refers to applying a new Driving Forces to reduce the old Driving Forces (Restraining Forces) that maintain (unfreeze) the present behaviour/situation and then applying the change process (Movement or Change). When the change process has been completed, the new desired behaviour or situation must be made to stay (refreeze) by reinforcing the New Driving Forces and minimize the old Driving Forces.

L) Four Levers of Control

Simon argued (1995) for a concept of monitoring and control on innovation in the age of empowerment. It is termed as the four Levers of Control,

Diagnostic Control Systems
Boundary Systems
Belief Systems
Interactive Control Systems

The Diagnostic Control Systems monitor critical performance outcome, e.g. the Balanced Scorecard. The Boundary Systems are the critical outcome standard that the Diagnostic Control Systems monitor, the measures (benchmarks) of the Balanced Scorecard, while the Belief Systems empower

and entrust employees to "promote commitment to the organization's core value", Simons (1995). Interactive Control Systems are sensing systems, the formal information systems used to monitor the decision of subordinates, focusing on significance and "on going debates" by "face to face meetings", Simons (1995), an OD Intervention approach.

M) Covey' s 7 Habits of Highly Effective People

Covey (2004) articulates the philosophy of change and transformation in life for a person.

The main concepts and themes are adopting and strategizing in decisions, a help others and others will help you: team approach, and resolving conflicts whether in life or work by taking a balance approach, Yin Yang balance, thus leading to a person's maturity.

The seven habits are set in under 3 transformation groupings, Covey (2004):

A) To achieve a private victory and be rid of dependence:

- **Be Proactive**
  Fosters courage to take risk and accepts new challenges to achieve goals
- **Begin with the End in Mind**
  Brings projects to completion and unites teams and the organization under a shared vision, and purpose
- **Put First Thing First**
  Promotes getting the most important things done first and encourages direct effectiveness

B) To achieve public victory and become independent:

- **Think Win-Win**
  Encourages conflicts resolution and helps individuals seek mutual benefit, increasing group momentum
- **Seek First to Understand, Then to be Understood**
  Helps people understand problems, resulting in what targeted
- **Synergize** (the above 6 habits)
  Ensures greater 'buy-in" from team members and leverages the diversity of individuals to increase level of success

C) To become interdependent and effective:

- **Sharpen the Saw** (Restoring spiritual and material balance)
  Promotes continuous improvements and safeguards against "burn-out" and subsequent non-productivity (a Yin Yang balance)

A recent addition is the 8th habit, which elevates effectiveness to greatness, and states that teaching others will benefit oneself, and it is:

Find your voice and inspire others to find theirs.

N) The Balanced-Scorecard Concept

Kaplan and Norton developed a model, known as The Balanced Scorecard, to evaluate and measure the strategy management's performance of an organization as well as to map and to orient the underlying structure of the process. "…the strategy map provides a framework for linking intangible assets to shareholder value creation through four interrelated perspectives", Kaplan and Norton (2004). It is based on principles of:

1) Cause and effect relationships
2) Outcome measures and Performance drivers
3) Linking them to the financials

The methodology emphasizes on the information provided for decision-making as a result of evaluation between benchmark and performance of outcome measures (indicators such as profitability, market shares, customer satisfaction, customer retention, and employee skills) and performance drivers (indicators such as the financial drivers of profitability, internal processes and the learning and growth objectives) as well as its financial implications. The interrelated perspectives of the balanced scorecard structure are generic in nature;

1) Learning and Growth
2) Internal Process
3) Customer
4) Financial Perspectives

Kaplan and Norton originally called Perspective 1) as the Learning & Innovation perspective and Perspective 2) was termed as Internal Business Process perspective where in the present nomenclature Innovation in Perspective 1) has migrated to Perspective 2) and become part of the Internal Process perspective.

The main driving force of the Balanced Scorecard concept is the balanced approach among the 4 perspectives as applied throughout all areas of an organization. Fundamental to an organization is the Learning and Growth perspective, which is delineated by the core competence, skill, technology, and culture of the organization. Kaplan and Norton further argued (2000) that the Internal Process perspective allows cultivation of innovation, fosters customer value orientation, acquires excellence in operation, and establishes good citizenship in the community. With these resources and this capabilities base, the organization is able to fathom the customer's value and to differentiate via operational excellence, customer intimacy and product leadership: the Customer perspective. Once the significance of the aforementioned 3 perspectives has been grasped, the organization can continue the journey to "… determine the means by which it will achieve the differentiated value proposition for customers and productivity improvements to reach its financial objectives", Kaplan and Norton (2000). The organization could then embark on the revenue growth thus building a market, creating product, and attracting customers together with

productivity improving the cost structure and using assets more effectively and efficiently. Hence, it is a relationship, sort of in Porter's value chain sense, leading from intangible assets (human capital, information capital and organization capital: Learning and Growth perspective) to tangible outcomes (profit and wealth: Financial perspective), Kaplan and Norton (2000, 2004), via the Internal Process and Customer perspectives. It also implies that short-term benefit would come from operating efficiency, and medium term profitability comes from enhancement of customer relationship; but long-term growth and sustained performance with competitive advantage only come from innovation.

Central to the balanced scorecard concept is its application to the strategic decision management process, where it is indispensable in the implementation and evaluation stage as a tool. The process commences from choices of the objectives created in the formulation stage for each of the perspectives, followed by determining whether a balanced view is reached and benchmark measures established as targets. Depending on the nature of the strategies formulated, measures' weights would reflect the emphasis placed on each of the perspectives as well as the goals of a perspective. Similar to a SWOT analysis, if a cost leadership strategy is followed, more emphasis would be placed on the Internal Process perspective as contrast to extra weight would be given to the Financial perspective if the strategic choice is focused on "Milking the Cow". When actual performance information is available in due course for control and monitoring, comparisons are made to the perspectives' targets and explanations of the discrepancies are pursued. Resolutions are made to facilitate decision-making.

The balance scorecard process implies that the performance information for comparison to target is acquired by cascading up the information chain from results of operations while the objectives of target measures are prescribed top down based on input that has cascade up. Another corollary, the technique is a conduit of measure applicable throughout levels of the organization: the mechanism is information chain based, whether functional or project (cross functional), by placing spotlights on the 4 generic areas. Further, the scorecard (benchmark), in essence, is the basic minimum requirement of performance. In order to motivate better than minimal performance, a graduated scorecard measure could be implemented with an upper limit in parallel with a reward scheme, Scholey (2002).

2.7.5 Examples to illustrate the importance of issues of Decision

Making incorrect decisions have dire consequences. A notable example, being an insignificant event, Britney Spears, after deciding to take a risky jump, was injured resulting in 100 people having to be laid off due to the consequential cancelled tour in 2004. This does not even take into consideration the multiplier effect on the cities where she was supposed to perform.

Three significant strategic decisions are described below in detail. They are related to operations of Kodak v Polaroid, issues of the textile import and the GM problem.

The Kodak v Polaroid example demonstrates the pitfalls of an organization's culture and the consequences of resistance to change influence knowledge acquisition, learning, and improvement processes of an organization - *arrogance leads to carelessness.*
Both digital resource and capability were absent in Polaroid and Kodak; however, Kodak was able to make the correct decision to manage change, knowledge and learning thus acquiring the core knowledge to thrive. Their core businesses (operation competencies) were films and chemicals (albeit success in Polaroid instant cameras and Kodak Brownie and Instamatic cameras). They had almost monopolized the industry, but failed to detect early the evolution from film to digital, i.e. to acquire core competence and to develop the capability. After Polaroid won the injunction against Kodak's entry to the instant camera market in the mid eighties, Polaroid monopolized the entire instant picture market. *Complacency leads to arrogance and arrogance breeds carelessness*. Kodak was able to manage change by acquiring the necessary knowledge (digital, although Kodak was the original inventor of the digital camera recorded on bulky tapes) via a strategic alliance with Japan's Chinon (they merged later on). Kodak further exercised tough measures with major plant closures and layoffs, while Polaroid bankrupted (the present Polaroid Corporation is not the original firm). Further, Kodak always prides itself as in the "Image" business, while Polaroid was in the instant pictures business. The core competence and strategy of Kodak is, therefore, "imaging" (comprehensive) and Polaroid is "instant picturing" (restrictive). While digital technology offers more convenience, better quality, and economy, it is only a tool for Kodak, but a substitute to Polaroid, being a direct competing technology. With the current revival in photo prints from digital, Kodak, perhaps, will be doing fine.

The uproars in August 2005 regarding the textile import quota to the EU and the US from China may have resulted in empty shelves in stores at Christmas and children without trousers to go to school. Europe & the US were flooded with inexpensive textile products from the East. The West had been enjoying the fruit of the cheap labour (comparative advantage) without taking proactive actions regarding the latent effect on the textile industry on a global scale. The European textile industry is traditionally a high cost low productivity affair and, thus, is prone to the assault from the East. At the same time, after over half a century, Barrett and Paris (2005), the quota system came off finally in January 2005. Then, again, a defence on home industry was raised, exercising protectionism; an import quota was levied by the EU in mid 2005 without anticipation of the direct fall out of the consequence.

From a decision-making point of view, the main culprits were twofold:

1) Making the quota choice without enough considerations of the pertinent critical factors and/or failing to consider the weight and impact of the pertinent critical factors as a defence mechanism
2) While enjoying the benefit, it is necessary to complement and divert the labour force concentration to other industries with a demand and competitive advantage over others, Porter (1990, 1990a) and [for detail, refer to Chapter 2, Section 2.7.3 (A)(3)]; the objectives are leaning towards low cost high productivity or high cost high productivity industries.

The final example is the manufacturing industries in the US v Japan, especially the automotive industry. It has been generally known that the underlying issues are innovation, quality and cost minimization. Although the US carmakers had since made quality improvement by the mid eighties, Juran (1993), they still lag behind the Japanese. News [since 2004] about GM was publicized that the cause is attributed to the high costs of pension and health insurance related contributions, coupled with issues created by the all-powerful unions, such as wage demand. However, these problems are not new, and have been known since the eighties and even the seventies when Honda made its presence in the US. Perhaps the issue is elsewhere. In general, US corporations are characterized as placing emphasis on the decision to boost share prices thus providing short-term gains over long term prosperity; a selected choice. GM offered the general public the same discount identical to their employees' discount benefit on car purchases after the 'no financing charge campaign' ended. This can be characterized as a strategic choice to increase short-term gain as opposed to long-term yield without mending the root of the problem.

Implicit to the textile and GM examples or any choice's implementation (whether strategic or operational) is that change is required. EU resolved the impasse by negotiation. The resolution was to use future quota in advance; a change with OD solution temporarily. In contrast, GM attacked the problems by closing plants with a cost cutting approach.

2.8 Observations and concluding remarks derived from Decision Making Sections

This section serves as the summary of the decision making sections relevant to this research study and introduces the Strato-Operation Management Model (SOMM) in linking strategy and operation.

Sections 2.81 to 2.8.6 outline respectively observations and conclusions to the decision making sections (Sections 2.2 to 2.7).

Section 2.8.7 introduces a structural decision model termed as Strato-Operation Management Model (SOMM).

2.8.1 Theoretical Observations derived from Section 2.2

Section 2.2 traced the history of decision making, providing insights into the decision-making process.

It shows that the environment has evolved from a stable and supplier oriented market to a customer demand oriented market (from a static environment to one that is dynamic), partly due to competition from the Far East and partly due to the advent of technology resulting in the globalization of manufacturing and businesses. Adaptation is required to compete in the market place. Innovation and change (continuous improvement) are crucial in adaptation in order to gain competitive advantage and influence the market. This leads to paradigm shifts, customer-oriented and lean thinking, employing initiatives such as TQM, corporate culture (practice) and managing changes.

These paradigm changes are a result of strategic thinking focused on a macro outlook and insight needed to realign and to better position to compete for survival to prosperity. A useful weapon (process) is the Harvard Policy Approach: SWOT Analysis coupled with the objective to offer excellent utilities for the consumers while delivering decent profits. Above all, it is imperative to "keep an eye open", be aware of change, and adapt.

2.8.2 Theoretical Observation derived from Section 2.3

Section 2.3 introduced and demonstrated the three decision-making models and further developed the generalized decision making process.

The decision making process consists of three stages/elements, referencing the steps in Section 2.3.4:

- Formulation, Steps 1 to 5
- Implementation, Step 6
- Evaluation, Step 7

Further, Paton and McCalman termed (2000) this process, relating to System Intervention, an investigative methodology [for detail, refer to Section 2.7.4 (D), System Intervention]. The methodology comprises 3 phases:

- Definition phase
- Evaluation or design phase
- Implementation and Appraisal.

Specifically, decision-making is the process to choose amongst the alternatives to acquire the best utility or some other predetermined criteria and conditions. It improves with learning. The first requirement involves understanding the issues of the problem, the second identifying the alternatives and making considerations, i.e. constructing the model of circumstances, then performing analysis based on acceptable theories and rationale to predict the outcomes thus making a choice based on the predicted outcomes. Finding the optimal solution is not an easy task, in most cases, a satisficing solution is acceptable using short cuts like heuristics and bounded rationality, Todd and Gigerenzer (1999), Tolvanen (1998),

Edwards et al (2000), Radner (1996), albeit shortcomings and perils of heuristics may hinder the quality of decisions, Wickham (2003).

2.8.3 Theoretical Observations derived from Section 2.4

Sections 2.4 further elaborated decision making in the business arena.

Elements of decisions making (formulation, implementation and evaluation) are entwined with the hierarchy (holistic to reductionistic or macro to micro) of the decision making process. This hierarchy parallels to Anthony's 3-levelled hierarchical structure (strategy management, management control & planning, and operation management), which is formally defined in larger organizations. The decision-making processes also affect the quality of decisions, especially making decisions strategically, Fredrickson (1985), which involve an integrated process within an interdisciplinary framework, Harrison (1975). Further, the information utilized in determining decisions strategically is essentially the same in small and large organizations except that the constraints on the decision processes are different. As such, the decision-making processes in small and large firms differ in form and practice only.

Small firms tend to lie toward the descriptive side of the prescriptive-descriptive decision-making continuum. Small firms are usually able to address and respond holistically to issues more efficiently than larger firms do. Larger firms, however, do have resources to provide support for formal analyses; as a result, they are positioned relatively closer to the prescriptive polar end. The decision process is therefore comparatively more effective with technical quality, which may compensate somewhat for the efficiency of decisions. Furthermore, the decision maker is usually not the one doing the analyses, as such, the decision-making process is bottom up (micro to macro), whereas in a small business, with limited resources, analyses are usually informal; the decision making process is usually top down (macro to micro). Hence, strategic management ability for longer term is limited in small firms. At the same time, the competitive prowess to deal with uncertainties can be constrained and inhibited owing to the limited resources. Therefore, small firms usually lack strategic application ability for long-term planning, requirement to grow an organization, and devoid of the capacity to combat uncertainties that could destabilize an expanding business. As a result, "Many small businesses prefer to stay small instead of expansion", Tibbits (1979), exemplified by the Morgan (a British sports car firm).

Further, paradigm shifts, in context of management, play a pivotal role in decision-making. When firms become dinosaurs, it implies these colossal creatures have not adjusted to the altered landscape. The blunders are primarily rooted in being unaware of the dynamic changes in the environment: in competition, continuous improvement, meeting customer needs, and complacency. This is best exemplified by the automobile market in North America. The market has become highly competitive and invaded by foreign competitors where previously it was mostly domestic

competition. These domestic firms used to invade the foreign markets, but decisions were not centred on the movement of continuous improvement and not able to converge on the longer term needs of customers, Lawler III and Galbraith (1994), as well as risk management, "to increase their predictability", Goldoff (2000). The old fashioned decision-making mentality becomes an obstacle to innovation, to the creation of new viable products and new practices. Decisions that worked yesterday may not work tomorrow. The conventional attitude, complacency, also gives opportunities and prospects to new firms and competitors, which capitalise on the new environment to prosper. Thus, one's probability of survival is reduced. Most devastating of all, quality is compromised and customers' needs are ignored with attention not focused, Hummel (1987), and obsolescence built-in.

With respect to managing performance and motivation, it is imperative to maintain goal congruency and to improve managers' decision-making ability continuously. The notion is having objectives yielding inducement to managers to align with objectives of the firm. At the same time, it is important to exert motivation, encouraging better "muddling through" decisions and loyalty by incentives and training to provide knowledge and confidence.

2.8.4 Theoretical Observations derived from Section 2.5

Section 2.5 introduced the critical factors representative to the fundamental assumptions essential and significant to managing the present E&B as well as the future E&B.

The value and orientation of a firm need to match the needs of the customers. As such, the marketing effort and the resource base (innovations) require concentration on satisfying customers' whims. Fundamentally, the critical need of the customers is contingent on their underlying culture, background and upbringing which is market segment specific. However, it is still an art to determine and satisfy customers' needs. Often the predicting process is oriented on "muddling through" with calculated risks.

When it is a bull market, it may be opportune to take further risk in contrast to being prudent to be risk avert in the bear market. However, recognizing the market conditions is a "wicked problem". A conservative style is taking a middle of the road approach - a Yin Yang balance, hedging for a safe course of action. Yin Yang represents the "unified" forces of the universe, which range from negative infinity to positive infinity with null as the axis (neutrality). The ideal state is one where negative passes over to positive and all collectives are in balance without conflict and tension: a basic strategy decision-making objective, in ancient form, balance and harmony.

2.8.5 Theoretical Observations derived from Section 2.6

Section 2.6 featured the logic tools relevant to E&B's strategic decision-making process.

The distinction between SWOT and SMART is that the former engages the fundamental environment factors to arrive at the strategies forming the alternatives, whereas SMART starts with the alternatives and dissects them for analysis thus drawing the conclusion of choice.

It is necessary to link SWOT factors into a matrix configuration (SW v OT) in order to formulate possible strategies, thus deducing the alternatives. The premise is to use internal strengths to take advantage of the external opportunities (SO strategy), internal strengths to compensate for the impact of the external threats (ST strategy), self-improvement of internal weaknesses to take advantage of external opportunities (WO strategy) and the remote possibility of to minimizing weaknesses to avoid threats (WT strategy).

The SMART method applies the concept of the composite decision model [for detail, refer to Section 2.3.3] where each issue of the alternatives is subdivided into components. Each component is considered separately for its validity and value. The evaluating method involves rating and weighing values (and their risks, if considered one of the attributes). This simple method also presents to the decision maker a structure that would give clarification and allows the decision process to be articulated before applying the influencing factors to arrive at a judgment.

With respect to the portfolio technique, it has long been accepted as the cornerstone technology of analysis in strategy making literatures. It is the normal procedure for any strategic planning [for detail, refer to Section 2.7.3 (H) Subsection (A) Prescriptive Group, Mintzberg's 10 Schools of thoughts of Strategic Management]. As such, this technique has effectively diminished the "wicked problem" issue of strategic decision into a relatively standardized process in an application format.

2.8.6 Theoretical Observations derived from Section 2.7

Section 2.7 presented the structure and processes of strategic decision management of Anthony, Ansoff and Pettigrew & Whipp. It further outlined a collection of concepts and techniques of formulation and implementation & evaluation. Then it closed with further comments on several examples demonstrating the importance of decision making related to consequences that result from such decisions.

With respect to formulation, the thrust is segmentation and market focused (Porter's notions) to defend one's territory as priority and make offensive moves when conditions are ripe (Sun Tzu's notion). The necessary presumption is to offer goods and services at an attractive price and at the same time to deliver decent profitability. Core competence is imperative as a start, concurrent with awareness and constant scanning of the external environment and adapting to suit (Boyd's notion) as necessary. Core competence can be developed internally (notions of knowledge management and learning organization) or acquired from the market. In order to sustain competitive advantage, it is not enough to have just unique core competence

(resources and capability); knowledge and intellectual properties are only the pre-requisite, "to provide sustainable competitive advantage, one needs knowledge that is difficult for outsiders to copy [RBV] as well as the ability to rapidly develop new knowledge [continuous learning]", Lubit (2001). Although core competency and RBV are important dimensions of an organization's strategy, the positional point of view (market driven) cannot be ignored - industry structure drives strategic position that drives the organizational structure, Porter (1980). "… knowledge that companies possess and value will provide a transient competitive advantage. Moreover, core competencies can turn into core rigidities impeding performance, if changes in an industry, or advances by one's competitors are not countered by the ability to rapidity develop and spread new knowledge", Lubit (2001). The best competence is of a monopolized nature (notion of RBV) in a niche and unexplored market segment (notion of Red and Blue Oceans).

Once formulation has been finalized, implementation commences. However, formulation continues even after implementation has started because environment changes and decision making are based on incomplete environment information (notions of muddling through, satisficing and incrementalism). Inherently, implementation is a change which necessitates control and monitoring (notion of change management) where benchmarks (notions of Lewin and Kaplan & Norton) are required to assess whether implementation or change is accomplished.

Implementation is both strategic and operationally characterized. Hofestede emphasized that (1999) it is changing practice rather than changing value that drives corporate culture change [for detail, refer to Section 2.5.1 (D)]. It is for this reason that management problems remain unchanged and will continue in the future. This indicates implicitly that methods of implementation need to adapt to the environment. From a decision-making point of view, implementation is to action the formulated plan where it ranges from strategic (macro) to tactical/operational (micro) levels in scope (notion of systems theory). Changes can be generated (triggered) internally in an organization because of outdated resources, externally to adapt to the environment, or a combination of both. The environments trigger the change and an agent to implement the change. Implementation of a change needs to be managed.

Inevitably, any change would encompass application of new knowledge (notions of core competence, RBV, Mintzberg's learning and culture views of thought). Application in performance is nature of change dependent, and methodologies employed could range from Hard to Soft approaches (notions SI and OD). The Hard approach is considered easier because it is more mechanistic and less organistic oriented. More importantly, the organization structure and nature of the change are the dimensions determining the approach employed. The functional structure is discipline oriented, where specialists congregate and usually knowledge leans towards their own fields; while divisional or product oriented is discipline divergence, and converges more toward company specialties; at a lesser in degree being

specialists in their fields. The matrix structure is the hybrid of the two. Ease of implementation, therefore, in descending order would be divisional, matrix, and functional (notion on organization structure).

The outcome of the implementation is having a result of performance of continuing effectiveness and efficiency (notions of TQM, BPR and Lean), whether applying OD or SI approach. Reinforcements by motivation with incentives are the fundamental requirements, but contingent on the culture and value of the organization and its members (notion of Covey).

How does an organization fathom change and implementation to become successful? How can an organization evaluate the degree of its success? The short answer is whether the organization is profitable; however, short run gain can foster long run loss. Simon has devised a strategic concept to control performance (notion of 4 Levers of Control). But an evaluation process must first be measurable and comparable to a benchmark (notion of Kaplan and Norton's Balanced Scorecard).

In the case of examples of the demise of Polaroid and survival of Kodak, textile import and GM problems, they had demonstrated the consequence of incorrect decision making which affected the livelihood of others in great measures. On an even more serious scale, one could easily imagine the effect of decisions made in campaigns such as Desert Storm, Desert Freedom, the Iraq and Afghanistan missions, and the Thai Government's decision to withhold the announcement of the possibility of the Tsunami.

2.8.7 Strato-Operation Management Model

This portion of the Section is devoted to the introduction of a structural decision model, Strato-Operation Management Model (SOMM). This model, rooted in the decision fundamentals (formulation, implementation and evaluation), is brought to fruition by recognizing the values of the underlying elements associated with the findings of the Chapter. These elements are:

1) Systems approach and Business process re-engineering [for detail, refer to Section 2.7.4 (C) and (I)]
2) Pettigrew and Whipp's notion of strategic decisions-making dimensions [for detail, refer to Section 2.7.2 (A)]
3) Anthony and Ansoff's notion of management structure [for detail, refer to Sections 2.4.1 and 2.7.1]
4) Paton & McCalman's ISM iterative nature [for detail, refer to Section 2.7.4 (D)]
5) James' notion on dispersed strategizing in the management hierarchy [for detail, refer to Section 2.7.4 (B)]
6) Rouleau's notion of the practical consciousness of individuals to carry out implementation in succeeding level of managements [for detail, refer to Section 2.7.2 (B)]

The platform of SOMM is grounded in the thoughts of Pettigrew and Whipp (1991) and Rouleau (2005), with the spirit of systems theory, business process reengineering/redesign, and Anthony's management structure. It further absorbs characteristics of a Learning Organization, with "dispersed strategizing", James (2003). Most importantly, the notion of "strategizing" is not just linear and sequential, deliberate and intentional but also incidental and emerging with Patons & McCalman ISM's iteration nature. The emphasis is on the relationship of the structure's characteristics: input, output, process, feedback, control, environment and goals with a footing of the nature of the heterarchical structure, and at the same time simplifying the inter-connections, making it easy to comprehend. This conceptual notion of SOMM is shown in Exhibits XXXVII, XXXVIII and XXXIX. The characteristic is like a matryoshka with the three components nesting within each other.

Exhibit XXXVII Schematic Relationship of the 3 modules of SOMM

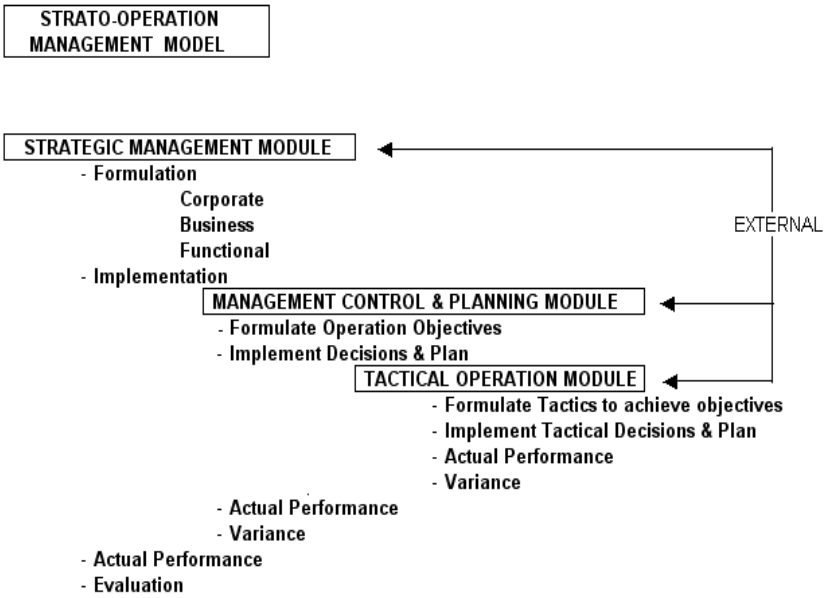


Exhibit XXXVIII Conceptual Structure of the 3 modules of SOMM

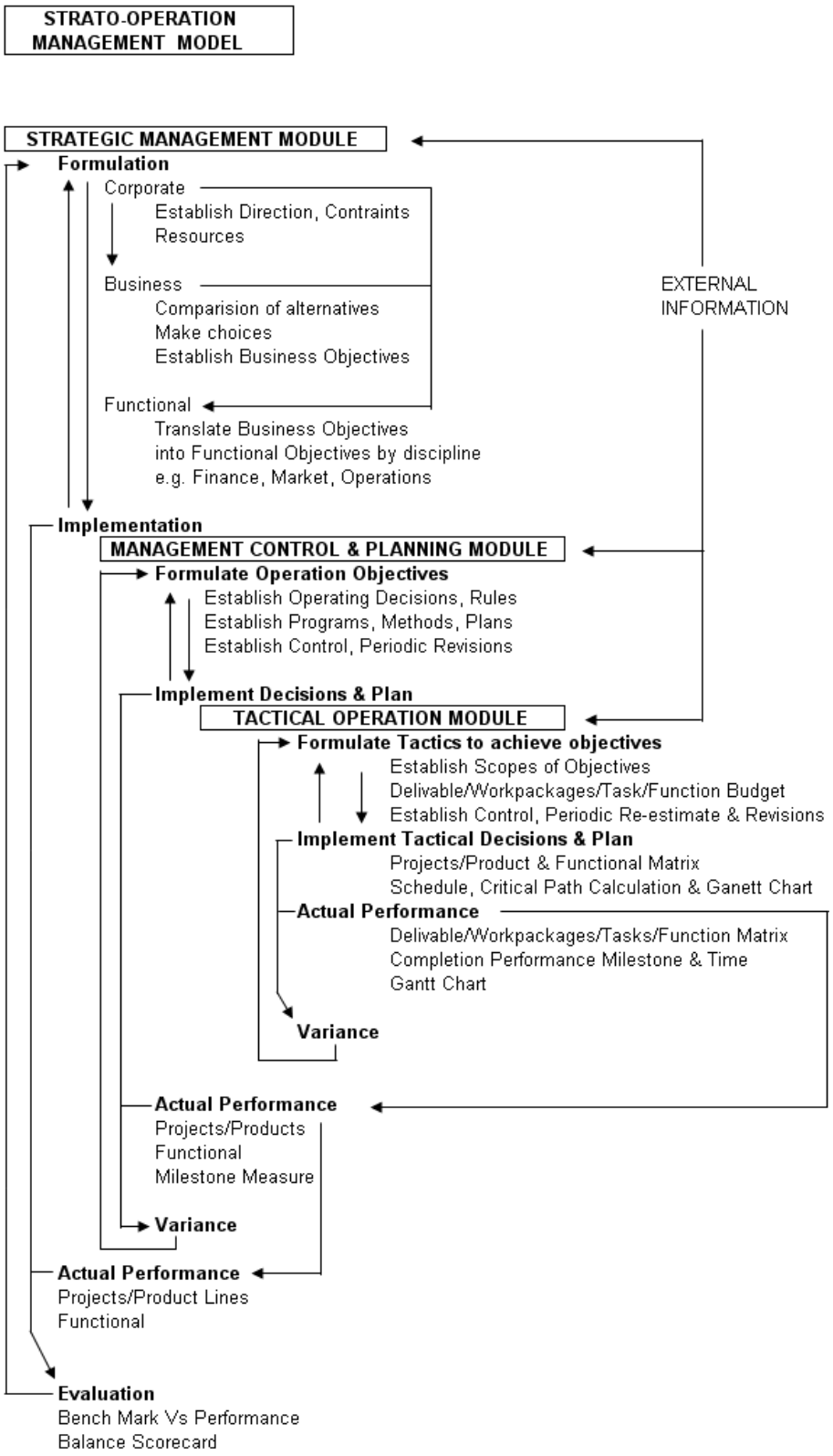


Exhibit XXXIX Strato-Operation Management Model (SOMM)

In essence, SOMM commences with the macro view of Strategic Management Module (SM). It determines the general direction of certain decisions (from formulation of corporate to business to functional strategies) as well as their implementation and evaluation processes. It also captures the emerging and incident ideas continually with feed back loops and an iterative process. Strategies can emerge from anywhere and at any time from all levels of the organization and not just the high echelon of the firm, dispersed strategizing, James (2003). Carrying out the formulated decision is the implementation process, which is the beginning of the Management Control and Planning Module (MCP) with its own decision making process within the confine of the objectives and policy established by the Strategic Management Module (SM). This establishes operating policies, decision of programs, planning and control rules, and capturing continually emerging and incident ideas. In turn, the Tactical Operation Module (TO) carries out the implementation process of the Management Control and Planning Module (MCP). As a result, a broad decision/direction is differentiated and resolved into many specific tasks that can be executed while traversed from the SM to the TO through the MCP. The MCP is the buffer ensuring proper execution and integration as a conduit where each module's performance is monitored with benchmark and milestone measures and an iteration process. It carries out the planning and control to ensure proper performance as well as monitoring and capturing the emerging knowledge and changes in the environments. Each stage of performance needs to effect and action its own decision formulation before implementation, as Rouleau described (2005) it as the practical consciousness of an individual's core competency.

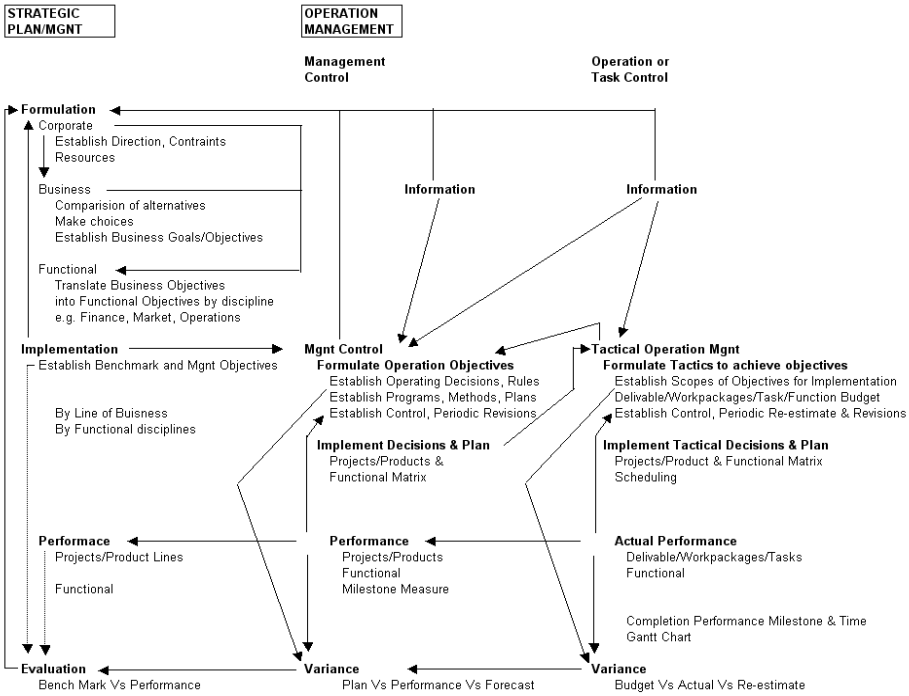


Exhibit XL The Decision Model based on Ansoff & Anthony's Notions

Further, the traditional approach of Anthony and Ansoff's management control, as shown in Exhibit XL, is an integration of the three (strategic planning/management, management control and operation or task control) differentiated processes, a reductionist's view, where emphasis is on each discrete process. The conceptual and schematic structure of the SOMM matryoshka relation, as shown in Exhibits XXXVIII and XXXIX, shows more transparency. The relationship is organized into a more holistic nomenclature, where the association of management control and planning process and tactical operation process is embedded within the strategy management process.

As a final note, with respect to employing SOMM to carry out the decision making exercise, it would require additional weaponry to complement its process. SOMM is an 'architectural design' that establishes the strategic decision making guidelines structurally. In context of E&B, the weaponry to complete the gap is the decision-making models (Section 2.3), the critical influencing factors (Section 2.5), tools (Section 2.6), concepts and techniques (Section 2.7). To put them in perspective, a matrix, as shown Exhibit XLI, is engaged to show the role of the findings in the decision making process in connection with the weaponry's utility. This matrix is grounded on Pettigrew and Whipp's strategic dimensions [for detail, refer to 2.7.2 (A)], to classify the choice of weaponry undertaking the appropriate decision circumstances.

Theoretical Foundation	Learning Goals - Concepts & Techniques (Applied to E&B)	DECISION MAKING				
		FORMULATION				IMPLEMENTATION & EVALUATION
		ALTERNATIVES		DIAGNOSIS	CHOICE	
		CONTENT	CONTEXT			PROCESS
		What When	Where	Why		How
Sec 2.3	**G1 - Models of decision Making**					
	Normative Model	X				
	Descriptive Model	X				
	Composite Model	X				
	Generalized Process Model	X				X
Sec 2.5	**Influencing Factors**					
	G1 - Bounded Rationality			X		
	G1 - Muddling Through			X		
	G1 - Mills vs Kant			X		
	G1 - Incrementalism			X		
	G1 - Group Think			X		
	G1 - Risk Management			X		
	G1 - Culture and Values			X		
	G2 - Yin Yang			X		
	G2 - Hierarchy of Needs			X		
	G2 - Wicked Problem			X		X
Sec 2.6	**Common Decision making tools**					
	G1&2 - SWOT Analysis	X		X	X	
	G1- SMART	X		X	X	
	G2 - The Portfolio Technique	X		X	X	
Sec 2.7.1	**G2&3 - Ansoff & Anthony: Planning & Control**					
	Strategic Planning	X				X
	Operation Activities	X				X
	Management Control	X				X
	Operation or Task Control	X				X
Sec 2.7.2	**G2&3 - Strategic Management**					
	Structure of Decision-making Dimensions	X				X
	Process of Making Decision (Strategic) applied	X				X
Sec 2.7.3	**Formulation**					
	G1&2 - Porter's Trilogy of competitive concepts	X		X	X	
	G2 - Defense and Offence Strategy	X		X	X	
	G2 - Cost Raising Strategy and Barrier	X		X	X	
	G2 - The Boyd's Cycle	X		X	X	
	G2 - Red and Blue Oceans Strategies	X		X	X	
	G2&3 - Core Competence	X		X	X	
	G2 - Resources Based View (RBV)	X		X	X	
	G2 - Mintzberg's 10 Schools of Thought	X		X	X	
Sec 2.7.4	**Implementation & Evaluation**					
	G1&3 - Change Management					X
	G3 - Knowledge Management (KM) & Learning Organization					X
	G3 - Systems Theory					X
	G3 - System Intervention (SI) Approach					X
	G3 - Organization Development (OD) Intervention Approach					X
	G3 - Organization Structure					X
	G3 - Work Breakdown Structure (WBS)					X
	G3 - Concept of Lean (Kaizen, etc)					X
	G3 - Business Process Re-engineering/Re-design (BPR)					X
	G3 - Total Quality Management (TQM)					X
	G3 - Lewin's Field Theory, Force Field Analysis,					X
	G3 - Lewin's Unfreeze, Change, Refreeze					X
	G3 - Simon's Four Levers of Control					X
	G3 - Covey's 7 Habits of Highly Effective People					X
	G3 - The Balanced-Scorecard Concept					X

Exhibit XLI Role of findings in context of E&B & its decision making

Chapter 3
Application of the Research Methodologies in context of E&B

This chapter establishes the choice of research methodology applied to this study. In this respect, the relevant research methodologies, in context of E&B and appropriate for application, are identified. An analysis is then carried out to determine the selection. The choice resolved is Mode 2 (M2) research methodology approach.

The structure of the chapter is laid out as follows:

Section 3.1 identifies the nature of management and its implied research methodology approach. It introduces the issues connected with the debate over the two choices (M1, pure research approach or M2, applied research approach) with respect to management research methodologies. It concludes that applied research methodology is the choice for a management inquiry.

Section 3.2 presents M2 as a valid choice. The choice is advocated by authoritative academia, undertaking to resolve the debate, with support of emerging queries framed by a series of pertinent questions and implied objectives.

Section 3.3 introduces support for M2 with examples of research inquiries carried out by accomplished members of academe, reinforcing the legitimacy of M2.

Section 3.4 establishes the choice of this research inquiry, in context of E&B, based on an analysis to choose between Action Research (AR) and M2 using the Qualitative Process tool [for detail, refer to Chapter 2 Section 2.1.1.3.3].

Section 3.5 provides a chapter summary and identifies the benefit of using the selected research methodology. It further makes a theoretical observation relating to the advantage gained from such action.

3.1 Management Research Methodology Consideration

Application of research methodologies in management studies should not be any more complicated than that of its counter parts in other social science streams. First and foremost, social science deals with people and people have physical and psychological complexities of emotions as well as inherited cultures; it requires understanding and interpretation of the verbal and non-verbal signals. A positivist's approach may not be sufficient. Moreover, management is the practice of utilizing resources (human and non-human) to achieve the desired goals and objectives. This nuance implies that management research points directly toward an application-oriented approach (i.e. M2 or AR) that a pure research approach (M1)

should play a less major role. At the same time, most pure research studies (M1) stop short of applying findings' outcome: once a report is submitted, the research ends, which is contrary to the spirit, purpose and principle of management.

However, debates over the appropriate research mode are on going between M1 (pure research approach) and M2 (applied research approach) in management studies. This is primarily a conflict between academics and practitioners, Whitley (1984), Huff (2000), Tranfield (2002). Both approaches contribute to the body of knowledge, but their goals are not congruent, as management studies is still a growing young discipline that has not reached maturity, slightly different from the study of medicine and engineering, Huff (2000).

This study, in context of E&B, is related to an inquiry to find an integrated management practice benefiting E&B and perhaps the notions can be significant enough to extend beyond E&B to serve other businesses and professionals, as stated in Chapter 1. The inquiry is applied in nature; therefore, the valid choice is the applied research approach, having either an action research or an M2 connotation.

3.2 Debate to M2 as Management Research Methodology

The Mode 2 (M2) knowledge producing system is a justifiable and valid choice to be used in management research, Tranfield and Starkey (1998). Tranfield, as a possible solution to resolve the arguments between M1 and M2 issues, characterizes (2002) the debate of management research issues as an inquiry with several emerging questions:

1) What are the purposes of the research and to what end?
2) What makes management research unique and different from associated discipline like other social science subjects?
3) How could the boundary of management research be recognized?
4) What constitutes the intellectual properties?
5) What constitute the respective roles between academics and practitioners?

Tranfield further put (2002) the above questions in perspective and in a clearer context by restating Gibbons' M2 features and Becher's notion [for detail, refer to Section 3.3]. Furthermore, MacLean et al defended (2002) the M2 mode as indeed common in the social science stream, but "express[ed] in different terms"; noting that MacLean et al (2002) has created the term 5mode2, where 5 refers to Gibbons' five features of mode 2 knowledge production.

However, the debate continues because at stake are not simply an academic points of view, research methodology and knowledge production issues, but also name, reputation, power and respectability, competition, and funding. Names, reputation, power, and respectability are obvious. Competition and

funding can be subtler, Huff (2000) because of acute shortages of financial resources.

3.3 Support of M2 Research Mode

As aforementioned, by using Gibbons' M2 knowledge production concept and Becher's notion of academic culture, Becker & Trowler (2001), Tranfield formulated (2000) a conceptual framework in support of M2 as a valid and preferred management research methodology.

Becher and Trowler identified and described (2001) the academic culture as operating within a framework of 3 concepts, organizational, cognitive and social by "tribes" of scholars in "territories", defined as the domains of knowledge in the disciplines, i.e. those related to the notion of a structure facilitating exploration and understanding of the nature of any discipline of study. Tranfield summarized (2002) these conceptual frameworks into 2 appropriate dimensions:

2) Cognitive dimension- **soft/**hard, pure**/applied**,
3) Social organization - convergent**/divergent**, urban**/rural**

Tranfield mapped the 2 notions (Gibbons and Becher) to argue that management research fits the M2 mode being soft, applied, divergent, and rural characterized, originally developed in Tranfield and Starkey (1998), [for detail, refer to Chapter 2 Section 2.1]:

- Transdisciplinary encourages multi-paradigms, thus facilitates the soft aspect
- Problems are set, resolved, and disseminated by integrating theories and application in a more contextual manner than M1, which it only carries out application linearly down stream after theories are rendered.
- This facilitates the applied aspect.
- Mode 2 uses themes and shared problem contexts between divergent matters, and facilitates the divergent aspect
- Mode 2 couples transient heterogeneous networks with a low researcher to problem ratio. This facilitates the rural aspect.

M2 also gains certain support among some significant academic community as evidenced in several publications, where Tranfield articulated (2000A) vividly how these supporting publications fit in with the M2 fashion and demonstrated the M2 use fluidly:

a. MacLean and MacIntosh (2002)
   The theme of the paper was focused on the differences in approaching research issues between academics and practitioners by conducting a series of projects with 25 organizations selected from public and private sector. Recommendations were offered.

b. Macbeth (2002)
   The paper presented a demonstration of the M2 operating mode over a 14 year study with the grounded theory adapted to application in practice. Differences and similarities between academics (action-oriented) and consultants (practitioners) related to the rules of engagement were delineated. Lessons learned were presented.
c. Southern (2002)
   The paper presented a study of Balanced Scorecard of randomly selected organizations by using MBA students who participated in the elective course. The research concluded with a support of effectiveness of using the Balance Scorecard Methodology.

Hence, M2 has well support from accomplished members of academia; therefore, making it a compelling choice.

3.4 Choice of this Research Inquiry method, in context of E&B

The question remains is whether M2 or AR should be selected for this E&B study.

Applied research, in general, has been established in Section 3.1 as a valid preference. Members of authoritative and accomplished academe have specifically supported M2 use in management research; however, the support's implication is only a selection of the applied research approach.

In order to establish whether M2 or AR methodology should be the choice of the inquiry, an assessment, using a Qualitative Process Tool (Compare, Contrast, and profiling) [for detail, refer to Chapter 2, Section 2.1] is carried out.

3.4.1 The Assessment

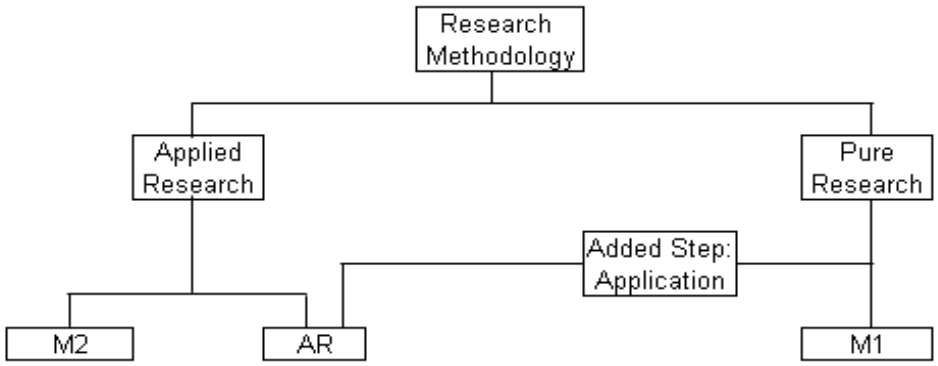


Exhibit XLII Relationship between M1, AR and M2

The relationship of M1, AR and M2 is depicted in Exhibit XLII. In essence, AR is an extension of pure research where an extra step is added: application. This step has propelled AR to become an applied research methodology.

The most important attribute of the selected choice is that the findings of the concepts and theories uncovered need to be readily applicable, and in a circularly mixed mode between application and findings. There should not be a linear flow from concepts and theories to findings and to application. E&B cannot afford to wait until the study finishes and put the findings to work; whatever uncovered, if benefits, need to be put to work.

The two choices are framed as follows:

Method A — Theories and concepts that are considered/proven and valid that flow to application and formulae into practice or vice versa tend to be hierarchical in nature and feature either a vertical top down or bottom up direction, i.e. AR

Method M — Application of the appropriate theories and concepts uncovered in context of data collected and observed or vice versa is heterarchical in nature. It is in a vertical, horizontal, and/or mixed or circular direction (like a Microsoft Window OS instead of the Microsoft DOS OS); i.e. M2.

By virtue of M2 research mode, as put forward by Tranfield based on Gibbons' and Becher's notions, its perspective attributes are put in a concrete and tangible distinctive meaning for ease of ranking and analysis below:

a) Transdisciplinary
   The subject matters under study cut across disciplinary lines. In a management study aspect, the context encompasses disciplines such as economics, finances, marketing, psychology, accounting, and operations (purchasing, and production)
b) In a context of application
   It is framed in specifically to an application and not to a generalized range of other situations' applications; though the outcome is certainly applicable to other situations
c) Organization wise; heterarchical and transient, both socially accountable and reflexive
   Team oriented, consensual, and horizontal with a mix of top down and bottom up structure, a social like environment
d) Heterogeneity with characteristics being soft, applied, divergent, and rural collectively
   A "homogeneous" group refers to academic elites i.e. M2 is carried out by a range of academics, consultants,

practitioners, and professional researchers who are not working at universities.

By definition, AR is a social study discipline aiming to improve issues of certain states of conditions or problem and to promote improvements. As the main profile of this present research is decision-making at E&B, a case study, AR is a suitable method. However, the other alternative, M2, founded by Tranfield's argument and based on both Gibbons' and Becher's notion, is also a good choice too. The notable difference between AR (Method A) and M2 (Method M) approaches is that AR is an established method within the social science stream, and the action portion of the engagement occurs downstream at the end, while M2 is integrated throughout the whole engagement and is transdisciplinary. Furthermore, M2 uses a heterogeneous assembly of operators while AR uses at least one academic as the leader and teams of other practitioners.

The indication is that M2 is more suitable than AR.

Supplementary to the above rationale, the Qualitative Process tool is engaged to evaluate as a confirmation. Gibbons' M2 knowledge production criterion is mapped to the defined requirement of this study, applying a composite comparison in Becher's notion, Exhibit XLIII., where "Non-Bold" elements indicate non-conformity and the "Bold" elements indicate conformity.

	AR approach (Method A)	**M2 approach (Method M)**
Soft/Hard	Disciplinary Hard	**Transdisciplinary** **Soft**
Applied/ Pure	**Context of application** **Applied**	**Context of Application** **Applied**
Divergent/ Convergent	**Heterarchical** **Divergent**	**Heterarchical** **Divergent**
Rural/ Urban	Not Homogeneity Nor heterogeneity (At least 1 Academic) Urban or less Rural	**Heterogeneity** **Rural**

Exhibit XLIII Comparison between AR and M2 Approaches

It can be observed that M2 Approach (Method M) has all "Bold" elements while M1 approach (Method A) has some "Non-Bold" elements, indicating AR has non-conforming properties.

Therefore, M2 fits the requirement more closely than AR; further reinforcing the choice of M2 research methodology for this research study.

3.4.2 Literature Review

Literature review is a pre-requisite to research studies independent of any research methodology approach. It highlights and recognizes prior established knowledge.

The purpose of this inquiry is to find a tool (an integrated management process) and apply it to improve performance and future expansion of E&B. As stated in Chapter 1, it is based on "notions and collective wisdom available in literature".

The identified and relevant findings of "notions and collective wisdom" are articulated in Chapter 2, Theoretical foundation and perspectives.

3.5 Chapter Summary & Recapitulation

This chapter has demonstrated that M2 research methodology is the preferred alternative for the inquiry as oppose to AR being the choice. The evaluation, in context of E&B, was via considerations of assessment of the relevant research methodologies. M1 research methodology was eliminated in the first instance because of the nature of management and purpose of this inquiry. Further, AR is determined not as closely related to the requirement and M2 is supported by authoritative and accomplished members of academe.

The application of M2 research methodology, as an to exploratory framework for the decision-making process in context of E&B, in fact, bridges the gap between available research literatures and the innovation tools required to manage and operate E&B efficiently and effectively. This gap is the difference between what E&B can exploit and what is available to be exploited. In short, E&B is taking advantage of the opportunity to develop a decision-making framework by examining the technology of knowledge available: a defensive [as well as, perhaps, also an offensive] barrier mechanism by positioning and filling the gap to gain a competitive advantage over others, Porter (1985).

Further, as aforementioned, M2 research mode's action is integrated throughout the research engagement instead of occurring downstream at the end. A parallel universe is found in the Toyota Way and Juran's notions of quality control. QA is built into the process instead of quality control being performed at the end of the process [for detail, refer to Chapter 2 Section 2.8 TQM], Juran (1993, Chap 9 2004), Spear & Bowen (1999). The Toyota Way and Juran's notion have proven to be an effective methodology; so should the M2 research methodology.

Chapter 4
Application of Changes to E&B

This chapter defines the way in which the research is conducted. It first provides an account of the previous decision making process. It then outlines the process introducing changes at the three decision levels and the methods introduced to bring about the changes.

The chapter is structured as follows:

Section 4.1 describes how the research inquiry was carried out and findings reported.

Section 4.2 outlines the decision-making processes prior to the introduction of changes.

Section 4.3 articulates the process E&B employed to go about to introduce changes at the three decision levels.

Section 4.4 imparts the methods introduced.

Section 4.5 concludes and summarizes the chapter.

4.1 Process of the Research

M2 research methodology was selected, as presented in Chapter 3, to carry out this research inquiry. Challenges and issues confronting E&B, defined in Chapter 1 Section 1.2 as research-learning goals and questions, were explored. The findings, applicable concepts and techniques, in context of E&B, were presented in Chapter 2 Sections 2.2 to 2.8. This chapter addresses the application of these findings to E&B.

4.2 Previous Decision Making Processes

Being a simple (functionally structured), small, flat, and shamrock based organization where sources of fund are limited, E&B's decision-making processes, where funds are not to be contempt with, are destined to be financial priority related.

Cash is king and profitability is queen.

The decision making model was 'economics' rooted and the decision processes solely focused on liquidity conservation.

Strategic considerations had been minimal, either because conditions were non-dynamic or not considered at all. The main and sole strategy was to preserve cash and minimize outflow as reserves for expansion and possible time of need. If there were any strategic decisions, the processes usually fell back on heuristics. As such, the emphasis was not on strategic processes. Processes were operationally dominated. Most decisions were grounded on

the tactical level (a reductionistic approach) instead of beginning with strategic considerations (a holistic approach). There was no shortage of tenants (sales). Major worries were timely collection of rent (cash inflow) to cover expenditures in operations (cash outflow) and pervade with profitability (cash reserve). The circumstances paralleled somewhat decision-making in the Anglo-Saxon culture [for detail, refer to Chapter 2 Section 2.2] of the sixties, although minuscule in scope.

However, this operation mode was recognized being inadequate. Additional processes and/or changes were necessary. A coordinated framework of conceptual thinking and assessment linking to work execution were required.

4.3 The Processes Introducing Changes

Collectively, the processes used a combination of selected concepts and techniques uncovered from the research and in conjunction with application of the structural model developed, a strategic decision making system, SOMM [for rationale, refer to Chapter 2 Section 2.8]. The methodology is shaped by the influencing factors and practice guidelines developed by the Author [for detail, refer to Chapter 2 Section 2.5 and Section 4.3.1 respectively].

The critical aspects of the changes are:

- The means to achieve successful change
- processes introducing the changes

This section is organized as follows:

Section 4.3.1 presents the means to ensure success

Section 4.3.2 puts forward the processes introducing the changes and the scope of the changes

4.3.1 The Means Ensuring Success of Change

The approach used is an approach edging toward the OD polar end of the SI/OD continuum [for rationale, refer to Chapter 2 Sections 2.7.4 (D) (E)].

The weaponries were Lewin's notions of Forces Field Analysis and Simon's Four Levers of Control [for rationale, refer to Chapter 2 Section 2.7.4 (K) and (L) respectively]. The technique used was changing the organizational culture or practice [for rationale, refer to Chapter 2 Section 2.5.1 (D)] via the introduction of the practice guidelines.

It was anticipated, in each stage of the changes, that resistance existed and control was necessary to ensure a successful performance outcome. The application of Lewin's notions on Force Field Analysis was preempted to combat the resistance. It turned out resistance was minimal because changes

had already been recognized as a necessity. However, self-discipline was required of the Industrial Advisor, the Author and the managers.

Simon's Four Levers of Control were employed to promote performance success. Balanced scorecard and benchmarks [for detail, refer to Section 4.4.2.1] were used for evaluation of critical performance, the diagnostic control system. The perspectives and measures (benchmarks) comprised the boundary system (the tight control) and decentralization and rewards (empowerment of decision-making and entrust) were used to motivate performance, the belief system (the soft control). The interactive control systems (sensing systems) included the process of communication among all, together with the formal information systems used to monitor and report performance.

The means to redirect the organization's attitude or "frame of mind" were the practice guidelines, developed by the Author. It was grounded on Covey's notions; in particular "with an end in mind" and "win-win".

The practice guidelines are:

- Continuous improvement is mandatory

- Everybody in E&B needs to understand and embrace the quality process and to reduce muda.

- Everybody should communicate clearly and "operate on the same wavelength" leading to working seamlessly as a team

- All processes start with a holistic consideration and proceed to the reductionistic mode, i.e. Not just seeing the trees **(Doing it)** and forgetting the forest **(Overall decision)** or seeing the forest **(Overall)** and forgetting about the trees **(Doing it).**

- Internalizing the decision-making process, where the steps are:
  - Formulating the issues and problems
  - Considering the alternatives
  - Assessing the alternatives and making the choice
  - Implementing the choice and evaluating whether there is success

- Adapt and use a three hierarchical level decision process: Top (Overall conceptualization), Mid (translation of concept to solid work), Low (Doing it). Each level of the decision process is connected and embedded within the others.

- All processes may need iteration to capture the incidental and emerging notions.

- Practice makes perfect and manage with critical thinking

4.3.2 The Processes Introducing Changes and Scope of the Changes

In the beginning, the process of change was not systematic owing to the nature of the M2 style of research application [for rationale, refer to Chapter 3, Section 3.4]. It was carried out piecemeal and not in any sort of an orderly fashion. However, with continuing progress in research findings (weaponry inventory built up) and formulation of SOMM, it became transparent that an orderly, and systematic way to implement change was viable. SOMM builds on the application of the Systems Theory and application of Anthony's notions of three leveled management framework.

This section conveys the SOMM introduction processes which started from the top (holistic issues) down (reductionistic issues) with three hierarchy levels. It is ordered as follows:

Section 4.3.2.1 addresses the strategic management (SM) level change introduction process.

Section 4.3.2.2 addresses the management control and planning (MCP) level change introduction process.

Section 4.3.2.3 addresses the tactical operations (TO) level change introduction process

4.3.2.1 Strategic Management (SM) Change Introduction Process

The introduction process was primarily to explain and to re-orient the notions of strategies, and to define strategic decision-making. This led to formulation of the strategies and the overall objectives. Several sessions of discussion between the Industrial Advisor and the Author were held to finalize the details.

The strategies and overall objectives were developed via several stages:

- Established a situation/system analysis [for detail, refer to Section 4.4.1.1]
- Employed exploratory tools to engage strategy formulation of change: the SMART Technique, a SWOT analysis and the Portfolio Technique [for detail, refer to Section 4.4.1.2]
- Rationalized the choices of the strategies to be implemented [for detail, refer to Section 4.4.1.3]
- Formulated and developed the overall objectives [for detail, refer to Section 4.4.1.4]

The findings were discussed with and communicated to the managers and implementation followed, which was the beginning of the formulation stage of the MCP.

4.3.2.2 Management Control and Planning (MCP) Change Introduction Process

The Industrial Advisor and the Author guided the MCP functions. One of the student workers (a Commerce student at Rotman) prepared the documentation, based on input from the managers, with the Author's guidance. The managers have limited formal education and their skills have been developed from tactical experience, thus the knowledge possessed is mostly tacit. Formulation from tacit knowledge to explicit knowledge is challenging for them.

Primarily, it was preparation of procedures, and business plan [for detail, refer to Section 4.4.2.2]. The Industrial Advisor and the Author developed the policies, the concrete operational objectives and benchmark measures [for detail, refer to Section 4.4.2.1] for monitor and control of performance. The information required was derived from the strategies and the overall objectives, developed in Section 4.3.2.1.

The objectives, policies, business plan and benchmarks had been completed, however, only a major portion of the procedures had been completed and the remainder was on going. Although the procedures had not been completed fully, the Industrial Advisor communicated the change structure and process at E&B's annual dinner.

4.3.2.3 Tactical Operations (TO) Change Introduction Process

The managers, together with staff, were generally able to follow through with the concrete operational objectives delineated from MCP and operating with the guidance of the policies and procedures.

Two specific tasks were implemented, a customer satisfaction survey [for detail, refer to Section 4.4.3.1] and training [for detail, refer to Section 4.4.3.2]. The intentions of these two tasks were to promote understanding of a customer-oriented mentality and kaizen to create value-added work performance, thus improving profitability.

From a strategic perspective, the survey provides feedback on performance as a monitor and control medium whereas the training sessions are to instill the "gospel" of the practice guidelines, policies and procedures and above all, to ascertain internalization.

4.4 Methods Introduced

This Section presents the core methods that E&B introduced to effect changes. The Section is organized as follows:

Section 4.4.1 elaborates on the formulation of the strategic change outlined in Section 4.3.2.1, which established the strategies and the overall objectives.

Section 4.4.2 describes the management control and planning change outlined in Section 4.3.2.2, which formulated the operations structural framework.

Section 4.4.3 details the tactical operation change outlined in Section 4.3.2.3, which instituted the improvement process.

Section 4.4.4 addresses the change implemented that applied across the above three levels.

4.4.1 Strategic Management Change Processes (Strategies and Overall Objectives Formulation)

It began with a situation/system analysis. An exploratory analysis followed and then further proceeded by rationalization to introduce the strategies and the overall objectives. Formulation of the strategies and objectives was guided by the principles of Boyd's Cycle and Porter's notions, together with a predisposition to acquire core competence via the resources based notions.

4.4.1.1 The Situation Analysis

This process engaged a systems map, a detail objective tree and a strategy map. The blueprint was grounded on the four balanced scorecard perspectives as foundation and guided by Dr G. Southern's draft BBC TV Systems Map, Objective Tree, Strategy Map, Southern (2006).

4.4.1.1.1 The Systems Map of E&B

The purpose of the systems map is to provide an overall bird's eye view of E&B, in the context of its environments. It is depicted in Exhibit XLIV. The arrows indicate the relative interactions between the functions/components. Most critical is the interaction of the functions of Property Management and the Management Control system.

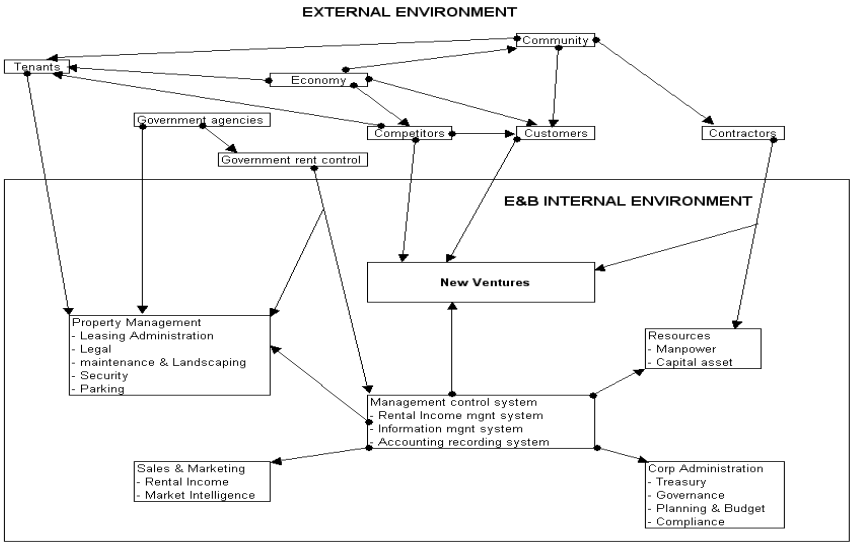


Exhibit XLIV Systems Map of E&B

They are the centre of E&B's "information/knowledge universe" [for rationale, refer to Chapter 2 Section 2.7.4 (B), Knowledge Management], being the depository of the fundamental information that can be used for strategizing and eliminating muda as well as running the company. Information can strengthen E&B's competitive (offence or defense strategy) potential, to take advantage of opportunities and compensate for threats in the external environment.

4.4.1.1.2 The Objective Tree of E&B

The objective tree was introduced in Chapter 1 Section 1.3.2.1 and it is considered in detail in this section. It is evident, tracing down the detail objective tree depicted in Exhibit XLV, that the required components crucial to E&B's success are competent staff, labour and their development. Examining the tree in detail, the objective strategies are bolded while the objective operational goals are not, revealing that Profitability comes from:

- Productivity Strategy
- Revenue & growth strategy

Kaizen and Cost Leadership support the Productivity Strategy while Growth, Sales and Publicity support the Revenue & Growth Strategy.

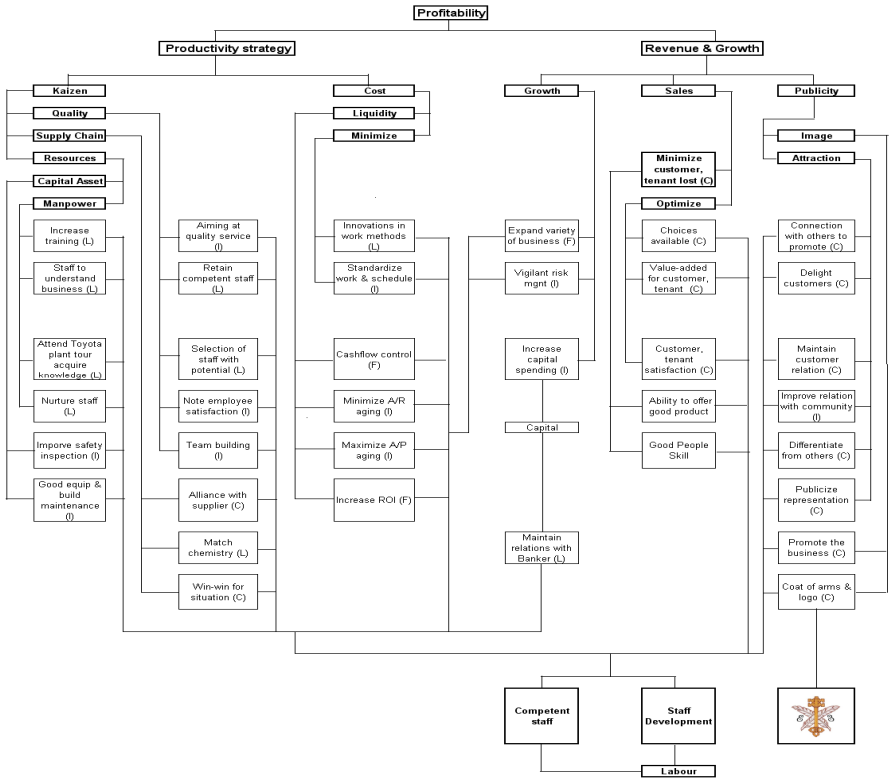


Exhibit XLV E&B's Objectives Tree

Productivity Strategy
The pre-requisite for achieving high productivity is cost saving; and at the same time quality cannot deteriorate. This requires E&B to find a better way to perform, thus achieving efficiency and effectiveness. The strategies for increasing productivity are to achieve Kaizen, improve Quality, manage Supply Chain, and apply Resources effectively; while achieving Cost Leadership would require managing Liquidity and Minimize Cost, which is linked to Revenue and growth.

Revenue & growth strategy
Primarily, this would require Minimizing Customer (tenant) Loss, Optimize Sales Volume and Creating Image together with Customer Attraction. Revenue & Growth can also be achieved by increasing prices (rent) and volume of sales (rental units) and/or alternatively expanding into new ventures coupled with publicity, a cost raising strategy, (e.g. aggressive rental advertising), and promotion (providing incentives).

The mapping continues to flow, from these objective strategies through the various objective operational goals [for individual detail, refer to Exhibit XLV], and it terminates at Labour and its Development. In this respect, the strategy map becomes a blueprint to follow for achieving success. However, competent staff members are not easy to find. If they are, they can leave for greener pastures (a better career path at a larger firm) after gaining experience. Therefore, the critical factor is the need to have the capability to develop and train staff quickly contingent on turnovers. This issue is managed by embracing it and controlling the outcomes, Sarasvathy et al (1998), by employing detailed operating procedures as instructions: compensating for staff's lack of experience and shortening the learning curve.

4.4.1.1.3 The Strategy Map of E&B

A strategy map, based on the anatomy of the Objectives Tree, was developed; it also paved the way for the scorecard evaluation in measurement and assessment of performance. The structure is based on, in addition to Dr G. Southern's draft BBC TV Strategy Map, Southern (2006), as a guide, a template adapted from Kaplan and Norton (2000). The strategy map summarized how to achieve profitability from the bottom up and offered a bird's eye view of the hierarchy from the top down. The four perspectives of the balance scorecard are linked hierarchically. In essence, the perspectives offer a strategic conduit to prosperity, as shown in Exhibit XLVI: Learning and Growth drives a better Internal Process while a better process, in turn, provides improved cost structure and offers Customers value-added service. These three perspectives, working together, drive up sales and revenue, at the same time offering a potential increase in profitability.

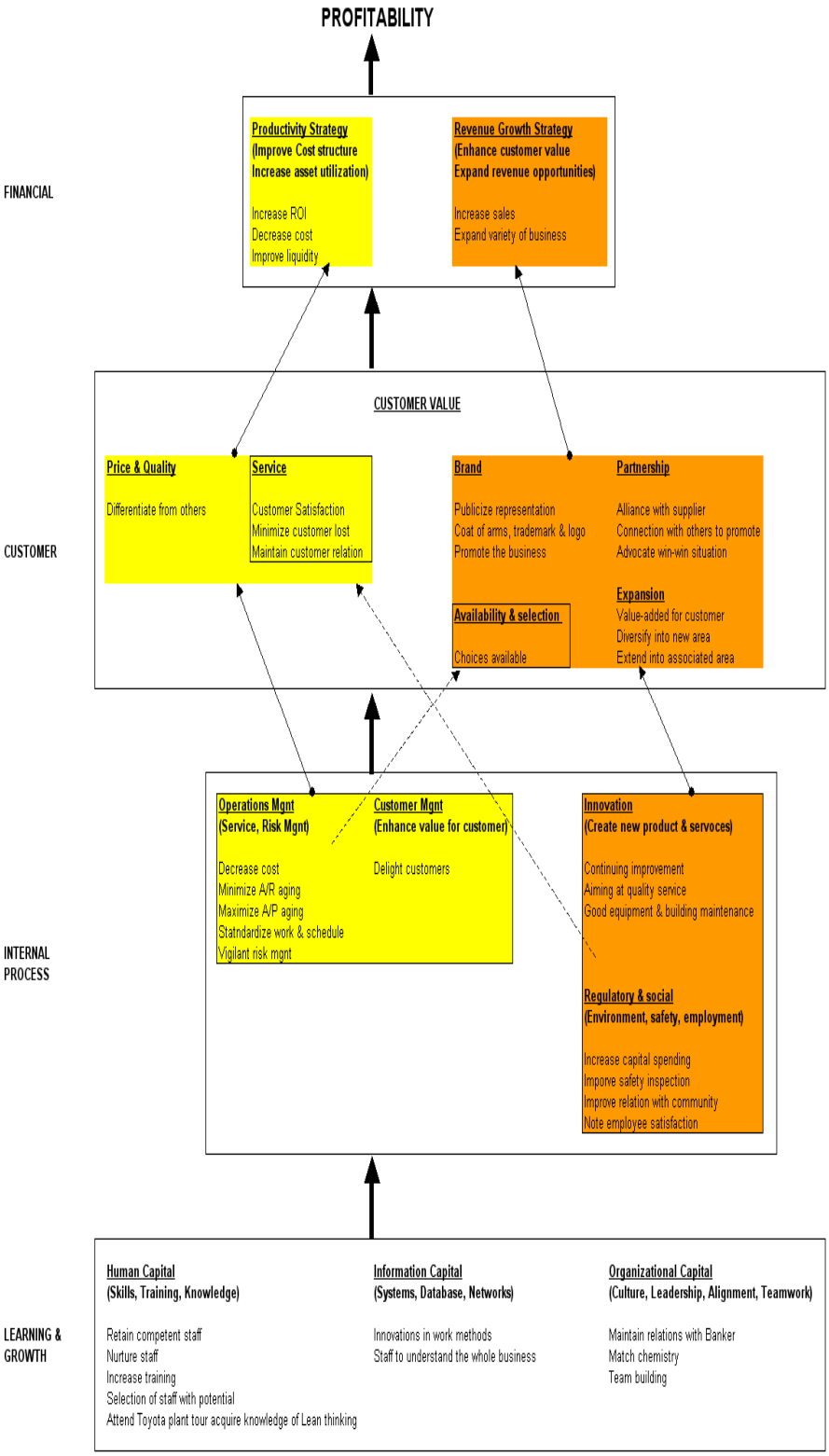


Exhibit XLVI E&B's Strategy Map

Financial Perspective
E&B's core goal (vision and mission) is profitability. To achieve this goal the drivers are:

1) Productivity Strategy
   a) Improve cost structure
   b) Increase asset utilization
2) Revenue & Growth Strategy
   a) Enhance customer value
   b) Expand revenue opportunities

The Productivity Strategy advocates that E&B cut cost effectively but constrained by the aspects of acceptable quality and efficiency. This calls for better ways to do the same work and improving liquidity thus increasing return on investment. Referring to the Objectives Tree, Kaizen and BPR are necessary for the former while improving liquidity (better control of cash flow) is essential for the latter.

In terms of pursuing the Revenue & Growth strategy, E&B needs to focus on increase sales and expand the business. Again referring to the Objectives Tree, it is minimizing vacancy, better pricing on the rent, extending the business and/or diversifying into new ventures, which are needed to increase capital spending and to delight the customers or tenants. At the same time, with publicity, it would attract potential customers, thus prospectively increasing revenue.

Customer Perspective
Imperative to E&B's core strategy, or any business, is to attract customers and provide values held dear to them, and they are:

1) Price and Quality, generic competitive strategies (Porter's notion)
2) Service excellence
3) Branding for publicity to attract potential customers
4) Partnership and strategic alliance (supply chain management) to improve cost
5) Availability and selection of choices
6) Expansion of service

These six drivers characterize how E&B can differentiate itself from competition, thus gaining advantage to boot. They are the essence of success and the gateway to profitability because they are the outcome of internal processes and intermediate to the financial reward, providing profitability, exemplified by terms such as "customer-oriented", "customer satisfaction", and "delight the customer". E&B needs to continue offering quality product, using marketing strategy in advertising and promotion, upgrading service quality to match that found in the luxury rental market, such as improved security service, and day to day site maintenance, but at a price level slightly below market, thus gaining competitive advantage over others of the same class or those slightly above. This strategy could also apply to potential new

ventures. Further, networking with suppliers (supply chain and strategic alliance) such as movers, repairmen, delivery vendors, and car rental agencies can provide convenience for the customers/tenants and extra revenue for E&B. It is a win-win situation for the service partners, the customers, and E&B. E&B could even pass some of the benefit on to the customers.

Internal Process Perspective
This is the means by which to provide value, differentiate services, and increase productivity and revenue to achieve E&B's mission and objectives.

Efficient and effective operation management provides immediate cost reduction while enhancing customer value with customer management would provide increase revenue. Innovation to services/products could offer improvement to both cost and revenue, pointing to increased profitability. Referencing the Objectives Tree, E&B's weaponry are liquidity management, standardizing work, vigilant control of risk, continuous improvement to quality and services, and frequent site maintenance to improve safety to minimize danger to the public and strict conformance to government regulations. Moreover, in line with the concept of continuous improvement, standard internal policies and procedures to standardizing work will strengthen this perspective.

Learning and Growth Perspective
Learning and Growth have been the core ingredients contributing to today's E&B, although this is not a formal program. E&B started with limited experience in property management; the core competency was acquired through "on the job training". It is best exemplified by maintenance (Productivity), eviction (Productivity), and parking control (Customer).

Our staff members are qualified to do regular maintenance, such as cleaning, painting, and minor repairs, even repairing small electrical devices and laundry machines. It appears it is meaningful to acquire proficiency to contain the more major skill chain such as laying broadloom, hardwood and marble flooring, installing drywall and doing tile work. This type of work can be imperative because speed of completion is required between one tenant vacating and the next one moving in. Moreover, it can be accomplished at a fraction of the market price.

Like other businesses, collection is a predicament. Non-payment of rent leads to eviction and usually involves court orders. E&B is qualified to prepare court documents such as affidavits, taking oaths and process serving (appointed by the Ministry of Attorney General of Ontario for the Courts of Toronto); while a contract paralegal handles court attendance and legal actions. The arrangement has always allowed the process to accelerate by weeks. Additionally, acquiring the skills of a paralegal has potential cost saving opportunities.

Furthermore, parking control is important, with downtown locations, where trespassers frequent. E&B has qualification as a Certified Enforcement Officer Agency issuing infraction notices (parking tickets) for the Toronto Police.

These skills have allowed E&B to differentiate, and they can also help to prevail in extra profitability. Growing such services as providers (a renovation business, a paralegal business and a security firm) by developing the supply chain is another opportunity.

4.4.1.2 Formulation of Change by Structural Means

This section engages to determine the changes envisioned and their priority, which involved the SMART Technique, a SWOT analysis, and the Portfolio Technique [for rationale, refer to Chapter 2 Section 2.6 Logic Tools] as exploratory tools.

SMART

Applying the SMART technique to determine future direction and the concluded alternatives' ranking of operating directions:

1) Continue with the present course of core activities only
2) Diversify into related activities (vertical expansion) while continue with 1)
3) Become more aggressive in development of business (horizontal expansion)
4) Diversify into unrelated activities (expand in diagonal direction)

They were arrived at by the SMART process with a cost benefit graph, as shown in Exhibit XLVII, on the alternatives and coupled with the notions of adaptation to fit.

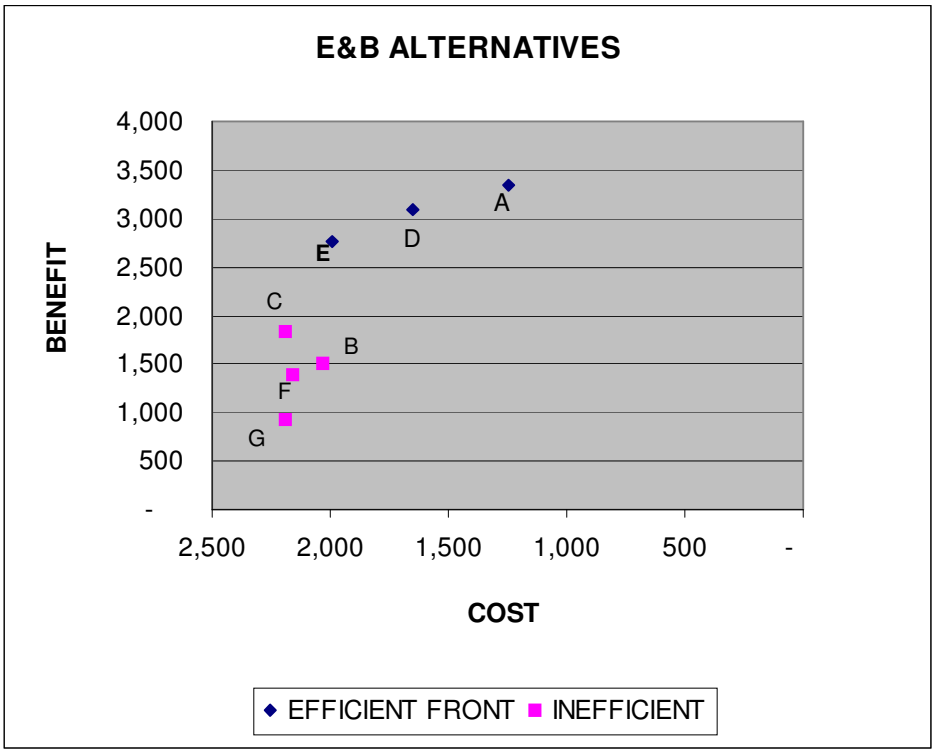


Exhibit XLVII Benefit Vs Cost of the E&B Alternatives

The alternatives are:

(A) Proceed with present continuing operation and core activities
(B) Diversify into security and parking control business (Vertical)
(C) Diversify into building maintenance (Vertical)
(D) Expand into furnished, bed and breakfast type units (Horizontal)
(E) Expand into renovation of properties (Horizontal)
(F) Diversify into import leading to an "Old Curiosity Shop" (Unrelated)
(G) Diversify into Viennese style Café leading to a chain (Unrelated)

(C), (B), (F) and (G) cluster around with similar cost structure and lower benefit.

SWOT Analysis

SWOT analysis was employed to confirm E&B's footing; that is, whether E&B is on solid ground for the change. The Matrix, as shown in Exhibit XLVIII, provided a score of IFE= 3.48 and EFE = 2.42, where the standard

To evaluate the External Threats & Opportunities and the Internal Strengths & Weaknesses factors (SWOT factors) facing E&B by weighing their importance & rating

	EFE (External Factor Evaluation)	Wt of importance ((0 to 100%)	Weight normalized	Rating (1-4)	Weighted Score
	External Threats (1=MAJOR THREAT, 4=SOME THREAT)				
1	INCREASE OF CONDOMINIUMS RENTAL SUBSTITION IN MARKET	80%	9.8%	1	0.10
2	INCREASE OF VACANCY RATE, RESULT TO RENTAL PRICE DROP	100%	12.2%	1	0.12
3	CONTINUING INCREASE OF COMPETITION IN MARKET PREDICTED	80%	9.8%	1	0.10
4	ACQUIRING OWN DWELLING; BABY BOOMER & GENERATION X	80%	9.8%	1	0.10
5	IN THE HEIGHT OF THE BEAR MARKET	80%	9.8%	4	0.39
	Ext Opportunities (1=SOME OPPORTUNITY, 4=SUPERIOR OPPORTUNITY)				
1	RENTAL BUILDING IN DOWNTOWN TORONTO	80%	9.8%	2	0.20
2	INCREASE IMMIGRATION	100%	12.2%	4	0.49
3	NICHE MARKET FOR UNIVERSITY STUDENTS	80%	9.8%	3	0.29
4	RISE IN INTEREST RATE	70%	8.5%	2	0.17
5	ECONOMIC GROWTH OWING TO EXPORT TO CHNIA	70%	8.5%	3	0.26
	TOTAL	**820%**	**100%**		**2.22**

	IFE (Internal Factor Evaluation)	Wt of importance (0 to 100%)	Weight normalized	Rating (1-4)	Weighted Score
	Internal Strengths (1=SOME STRENGTH, 4=MAJOR STRENGTH)				
1	CONTINUOUS LEARNING INITIATIVE IN PLACE	100%	10.8%	4	0.43
2	LOW COST OPERATION WITH CORE COMPETENCY	100%	10.8%	4	0.43
3	FLEXIBILITY IN DECISION MAKING, PRICING ADVANTAGE	100%	10.8%	4	0.43
4	SERVICE LEVEL HIGH END MARKET, COST RAISING BARRIER	100%	10.8%	4	0.43
5	EFFICEINT COLLECTION AND EVICTION PROCESSING	100%	10.8%	4	0.43
	Internal Weaknesses (1=MAJOR WEAKNESS, 4= MINOR WEAKNESS)				
1	POWERLESS IN DEALING WITH COMPETITVE FORCES	100%	10.8%	3	0.32
2	POSSIBLE PROBLEM OF VACANCY LEVEL	100%	10.8%	2	0.22
3	LEAN IN STAFF LEVEL, ALWAYS FIRE-FIGHTING	80%	8.6%	2	0.17
4	OLDER APARTMENT BUILDINGS	70%	7.5%	4	0.30
5	FREQUENT MAINTENNANCE ON OLDER FACILITY EQUIPEMENT	80%	8.6%	3	0.26
	TOTAL	**930%**	**100%**		**3.42**

LEGEND
EFE RATINGS: THREATS: 1= MAJOR THREAT, 4 = SOME THREAT
OPPORTUNITIES: 1= SOME OPPORTUNITY, 4= SUPERIOR OPPORTUNITY
IFE RATINGS: STRENGTHS: 1 = SOME STRENGTH, 4 = MAJOR STRENGTH
WEAKNESSES: 1 = MAJOR WEAKNESS, 4 = MINOR WEAKNESS
% WEIGHT: 0% TO 100% = RANGE OF IMPORTANCE

Exhibit XLVIII SWOT Analysis: EFE/IFE Evaluation

This implies, based on the critical factors, E&B's chance of success is above average overall, but internal factors would need to compensate for the slightly unfavourable situation in the external environment.

Portfolio Technique

A series of matrices and rankings were performed following the portfolio technique regime [for specific rationale, refer to Chapter 2 Section 2.6.3] where QSP (Quantitative Strategic Planning) Matrix is the final matrix of the portfolio technique and is shown in Exhibit XLIX. The thrust of QSP Matrix is to re-rank the key factors of the EFE-IFE Matrices (SWOT analysis) in terms of attractiveness. The ranking is then weighted one more time with the weighted score of key factors of the EFE-IFE Matrices.

The final ranking from the QSP Matrix is as follows

1st strategy ranking choice — To upgrade building Alternative 2 = 20.72 (differentiation, defensive and TQM strategy)

2nd strategy ranking choice	To acquire new units to support growth of immigration in clustered area Alternative 1 = 20.38 (offensive and BPR strategy)
3rd strategy ranking choice	To diversify into unrelated products and services; e.g. trading, import and export, and Café franchise etc Alternative 6 = 20.10 (offensive strategy)
4th strategy ranking choice	To diversify into related products and services; e.g. Security products and services; grow the property management arm, on consulting such as tax, accounting, financing, and financial services Alternative 5 = 19.80 (both offensive and defensive and BPR strategies)
5th strategy ranking choice	To provide additional services Alternative 3 = 19.77 (Yin and Yang balance, differentiation and cost leadership strategies)
6th strategy ranking choice	To rent below market prices slightly Alternative 4 = 19.02 (Yin and Yang balance, differentiation and cost leadership strategies)

Phase 3: The Prioritization/Decision Phase - to evaluate the ATTRACTIVENESS

QUESTION: To choose a strategy and/or priority of strategies based on the key factors and their attractiveness; ie Is this key factor considered to be (choices 1 to 4) as being attractive relating to the strategic alternatives

		Strategic Alternative						(Alternative description at bottom of the page)					
QSPM (QUANTITATIVE STRATEGIC PLANNING MATRIX)		Strategic Alternative 1		Strategic Alternative 2		Strategic Alternative 3		Strategic Alternative 4		Strategic Alternative 5		Strategic Alternative 6	
1=not acceptable,2=possibly acceptable,3=probably acceptable,4=most acceptable		(1 TO 4)		(1 TO 4)		(1 TO 4)		(1 TO 4)		(1 TO 4)		(1 TO 4)	
Key Factors	Wt. Score	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS	AS	TAS
	EFE-IFE												
External Threats													
INCREASE OF CONDOMINIUMS RENTAL SUBSTITION IN MARKET	0.10	1	0.10	3	0.30	4	0.40	2	0.20	4	0.40	1	0.10
INCREASE OF VACANCY RATE, RESULT TO RENTAL PRICE DROP	0.13	1	0.13	1	0.13	2	0.26	2	0.26	4	0.52	1	0.13
CONTINUING INCREASE OF COMPETITION IN MARKET PREDICTED	0.20	4	0.80	1	0.20	3	0.60	2	0.40	2	0.40	1	0.20
ACQUIRING OWN DWELLING; BABY BOOMER & GENERATION X	0.13	4	0.52	3	0.39	3	0.39	1	0.13	2	0.26	4	0.52
IN THE HEIGHT OF THE BEAR MARKET	0.40	2	0.80	2	0.80	2	0.80	1	0.40	2	0.80	4	1.60
External Opportunities													
INCREASE IMMIGRATION	0.20	4	0.80	3	0.60	4	0.80	4	0.80	4	0.80	4	0.80
RENTAL BUILDING IN DOWNTOWN TORONTO	0.51	4	2.04	4	2.04	4	2.04	4	2.04	4	2.04	4	2.04
NICHE MARKET FOR UNIVERSITY STUDENTS	0.30	4	1.20	4	1.20	4	1.20	4	1.20	4	1.20	4	1.20
RISE IN INTEREST RATE	0.18	4	0.72	3	0.54	4	0.72	4	0.72	4	0.72	4	0.72
ECONOMIC GROWTH OWING TO EXPORT TO CHNIA	0.27	4	1.08	4	1.08	4	1.08	4	1.08	4	1.08	4	1.08
Internal Strengths													
CONTINUOUS IMPROVEMENT INITIATIVE IN PLACE	0.47	4	1.88	4	1.88	4	1.88	4	1.88	4	1.88	4	1.88
LOW COST OPERATION WITH CORE COMPETENT	0.47	4	1.88	4	1.88	4	1.88	4	1.88	4	1.88	4	1.88
FLEXIBILITY IN DECISION MAKING; PRICING ADVANTAGE	0.47	4	1.88	4	1.88	4	1.88	4	1.88	4	1.88	4	1.88
SERVICE LEVEL HIGH END MARKET, COST RAISING BARRIER	0.47	4	1.88	4	1.88	4	1.88	4	1.88	4	1.88	4	1.88
EFFICEINT COLLECTION AND EVICTION PROCESSING	0.47	4	1.88	4	1.88	4	1.88	4	1.88	4	1.88	4	1.88
Internal Weaknesses													
POWERLESS IN DEALING WITH COMPETITVE FORCES	0.35	3	1.05	4	1.40	2	0.70	1	0.35	4	1.40	3	1.05
PROBLEM OF VACANCY LEVEL	0.24	2	0.48	3	0.72	2	0.48	1	0.24	1	0.24	3	0.72
LEAN IN STAFF LEVEL, ALWAYS FIRE-FIGHTING	0.12	2	0.24	2	0.24	2	0.24	1	0.12	1	0.12	1	0.12
OLDER APARTMENT BUILDINGS	0.24	2	0.48	4	0.96	2	0.48	4	0.96	1	0.24	1	0.24
FREQUENT MAINTENINANCE ON OLDER FACILITY EQUIPEMENT	0.18	3	0.54	4	0.72	1	0.18	4	0.72	1	0.18	1	0.18
SUM TOTAL ATTRACTIVENESS SCORE (TAS)			20.38		20.72		19.77		19.02		19.80		20.10

LEGEND

Attractiveness Score: Degree of attractiveness (AS)

1 = not acceptable, 2 = possibly acceptable, 3 = probably acceptable, 4 = most acceptable

Strategic Alternatives

The Strategic alternatives were identified from Phase 2 matching SWOT matrix (a priori determined)

Alternative 1 Acquiring new units	20.38
Alternative 2 Upgrade building	20.72
Alternative 3 Provide additional services	19.77
Alternative 4 Rent below market prices slightly	19.02
Alternative 5 To diversify into related products and services	19.80
Alternative 6 To diversify into unrelated products and services	20.10

Exhibit XLIX QSP Matrix

4.4.1.3 Strategies Formulated

Taking into consideration of results of Sections 4.4.1.1 and 4.4.1.2, the viable strategies deduced after rationalization:

- Acquire new units to support growth in clustered area
  Growth of immigration is predicted in 2007-8 and beyond as well as "young people decoupled from their parents", although many more condo units will be coming into market, they are high end and usually new immigrants and young people can only afford low to mid range units, CMHC (2005).
- Upgrade buildings to compete
  Present E&B buildings are comparatively old; facilities need upgrade and decorations modernized
- Provide additional services
  In order to be flexible, furnished units could be made available at a small additional cost to provide linen service or cleaning and maid-service. Further, it could extend to convenience stores or even providing hot food, ultimately to provide some quasi-hotel services
- Rent below market price slightly
  The services are provided at only marginal cost to promote the rental; i.e. using pricing strategy to gain competitive advantage over others.
- Train staff
- Streamline work methods

4.4.1.4 Overall Abstract Objectives Developed

Based on the 6 viable strategies developed in Section 4.4.1.3, the following objectives were determined:

a) To grow and expand the business
b) To re-vitalize and keep abreast of technology
c) To encourage innovation
d) To grow profitability
e) To be a responsible and trustworthy corporate citizen and employer
f) Also implicitly, a continuous improvement is always happening

These are E&B's objectives: making profit within the bounds of the law and benefiting employees and community, keeping up with innovation and technology (at acceptable cost) and kaizen. These are the pre-requisite and underlying assumptions of adjustments and changes, as required, to grow and expand the business.

4.4.2 Management Control and Planning Change Processes (Formulation of the Operation Structural Framework)

This section features the process design devised to introduce the changes to be implemented. The abstract objectives [for detail, refer to Section 4.4.1.4] led to derivation of concrete operation objectives, in turn, translated to the balanced scorecard measures [for detail, refer to Section 4.4.2.1] and a benchmark template for performance monitoring. Further it outlined the policies, procedures and business plan schemes.

4.4.2.1 Balanced Scorecard Attributes and Measurement Template

In conjunction with the attributes from the Objective Tree and Strategy Map, the abstract objectives were decoded into concrete operational objectives:

To increase sales, grow business 5% a year (Financial, Customer)
To decrease cost, 2% a year; use technology and innovations (Financial, Internal Process)
To increase capital spending max 5% a year (Financial, Internal process)
To nurture staff, increase training spend 3% a year (Financial, Learn and Growth)
To standardize work and schedules (Internal Process)
To increase ROI by 3% (Financial)
To keep accounts receivable aging within maximum 7 days (Internal Process)
To keep accounts payable aging minimum 40 days, if no penalty (Internal Proc)
To keep cash requirement for 2 months liquidity (Financial, Internal Process)
To invest excess cash, return at 15 basis point >30 days – T-bill (Financial)
To maintain good relations with our banker (Financial, Internal Process)
To keep good maintenance on equipment and building (Internal Process)
To retain competent employees (Learning and Growth)
To maximize customer and tenant satisfaction (Customer)
To minimize customer loss (Customer)
To maintain relations with customer and tenant (Customer)
To encourage innovation (Learning and Growth)

These objectives were translated into balanced scorecard fundamentals: objectives, measurement criteria with ideas for improvement, Southern (2006) and quantified with measurement weighting, Scholey (2002).

PERSPECTIVES	(P) PERSPECTIVES' WEIGHTS	OBJECTIVES	MEASURES	(M) MEASURES' WEIGHTS	(B) BASELINE TARGET	(S) REPORT** CARD SCORE	(W) = (M) * (S) WEIGHTED SCORE	(O) = Σ (W) * (P) OVERALL SCORE	IDEA/ENHANCEMENT FOR IMPROVEMENT
LEARNING & GROWTH		To nurture staff	Training course, understand whole business	10%	6/year	80%	8%		Concentrate training on delivering customer value, company
		To retain competent employees	Important employees' stability (average)	20%	3 years	60%	12%		goal congruence, improvement & quality processes
		To promote Kaizen	Communciations on quality & improvement	50%	12/year	80%	40%		Stress on communication to encourage quality services
		To encourage innovation	Awards on performance	20%	2/year	90%	18%		Alliance & connection to promote Win -Win
	15%		LEARNING & GROWTH PERSPECTIVE SCORE				78%	12%	Need to understand company business, & the industry
INTERNAL PROCESS		To decrease cost	Improve work methods, team building	40%	2%	60%	24%		Encourage finding better efficient & effective process methods
		To maintain relations with Banker	Adv economic info, meeting with banker	15%	6/year	90%	14%		Knowledge acquired to innovate & standardize processes
		To standardize work	Create/Revise Policies & Procedures	15%	6/year	60%	9%		Aware of environements' economic & political development
		To maintain Equip & Building	Scheduled Inspection & maintenance	30%	24/year	90%	27%		Balance between effective maintenance & value of replacement
	15%		INTERNAL PROCESS PERSPECTIVE SCORE				74%	11%	Effective relation with Bankers to optimize interest rate & loans
CUSTOMER		To promote business	Advertising, reputation creation	20%	Optimize	50%	10%		Differentiate among others in the same class
		To max customer/tenants satisfaction	Score of satisfaction survey questions (max@5)	15%	Min @4	70%	11%		Strive to exceed customer expectation within cost allowed
		To minimize tenant loss	Favourable terms with longer leases	40%	Optimize	60%	24%		Customer is always right, but not necessary correct
		To maintain customer relation	Acting professionally, delight customers	25%	Maximize	70%	18%		Convenience to customers whenever opportunities allowed
	35%		CUSTOMER PERSPECTIVE SCORE				63%	22%	
FINANCIAL		To increase sales & expand	Benchmark requirement, manage risk	50%	5%	50%	25%		Manage risk, anything prevents achieving objective is a risk
		To increase ROI	% of total investment.	20%	3%	50%	10%		Balance of L-term to S-term gain, Cashflow liquidity is prime
		Optimize liquidity	A/P & AR agings	20%	40 & 7 days	80%	16%		Minimize A/R & maximize A/P days with no reputation damage
		Optimize cash Invested	Benchmark, above 30days Fed Treasury Bill	10%	15 pts	90%	9%		Maximize return of surplus cash with TB or Blue chip stocks
	35%		FINANCIAL PERSPECTIVE SCORE				60%	21%	
TOTAL OVERALL BALANCED SCORE								66%	

REPORT CARD SCHEME**	
Target (Max)	90%
Not Reach Target	50%

Exhibit L The Balanced Scorecard Measures for E&B

The targets were set. For illustration purposes, they were compared to the simulated report card's "Score" column(s), as shown in Exhibit L, demonstrating the calculation of an overall score as evaluation. This method of appraisal is based on profiling or benchmarking. Baseline standards for each and overall total acceptable target score were set, together with the weighting options, and actual performance was assessed against such rules of engagement.

Further to the scorecard measures, a methodology was established to collect data for the scorecard measurement. The majority of the information was derived from the existing accounting system; others required a separate database. A template was developed for this purpose, as shown in Exhibit LI. At the same time, it served as a first control point, a variation of a

dashboard for evaluation. It also serves as an early warning system, tracking dysfunctions and taking timely corrective actions.

PERFORMANCE BENCHMARK REPORT
Everest & Blanc Corporation
TO & MCP Management Performance

Performance Indicators	Month	Year - to - date		Year End	Trend	Current Status
	Actual	Actual	Target	Target		
Indicators for internal business process						
Property Management						
Number of vacanies in Place Alex						
Number of vacanies in St George						
Number of vacanies in Others						
Average showing/unit						
Average time vacancies turnover						
Number of late rent payment						
Property Maintenance						
No of Units painted						
No of compliants received						
Eviction Notices issued						
Parking Infraction issued						
- Old Curosity Shop						
Inventory turnover						
Customer count						
Visitor Count						
$Spent/customer						
- Café						
Food & beverage cost						
Patron count						
Patron count/day						
$Spent/patron						
- Fines/Violations of Government regulations						
Indicators for resources						
- Training hours						
- Number of praise to employees						
- employees suggestions						
Indicators for competitors and market						
- Tenant satisfaction						
- Café market general performance						
- Market Price of Rental						
- Market Conditions						
Indicators for Financial Information						
- Revenue growth						
- Return of sales						
- Working capital Turnover						
- Return on capital						
- Return on Equity						
- Cash flow						
- Profit & Loss						

Exhibit LI Benchmark template

4.4.2.2. Standard Policies, Procedures and Business Plan Specification

Policies are the workhorse. They define the rein and limit imaginations that confer the directives on learning, knowledge acquisition, and a culture blueprint for E&B. They are formulated as follow:

- Being a good corporate citizen and abiding by the law with respect to the community as well as within the perimeter of properties:

    1) Environmental alert and not to cause pollution
    2) Health and safety conscious
    3) Security awareness and protection

- Striving for quality service and always applying quality management principles (e.g. continuous improvement to work processes)

- Customer-oriented and towards value and commitments

- Prudent liquidity management and maximizing return on investment appropriately for the short-, mid- or long-term

- Extending innovation and technology to economize and progress

- Prudence in risk management: to conduct the business in an efficient manner and maintain a conservative outlook.

- Periodic meetings must be held to communicate and facilitate a two-way dialogue and to convey market conditions, to review internal operations and strategy formulations.

The procedures further established, following the policies' guidelines, the internal compliance control requirements, planning, reporting and performance measures for the primary and supporting activities. They identify the specification of standards, reporting, performance measures and improvement methodologies. They are organized primarily under the activities classification, functional disciplines and work scope methods.

The content titles of the operating procedures of E&B are:

Procedure numbering and classification rules
Corporate Governance
Rules of preparation of Business Plans
Primary Activities Functions
- Property Management
- Maintenance Management
- New Ventures

Supporting Activities Functions

Human Resources and Payroll
Controllership
Treasury and Secretariat

Operating Guidelines
Rent collection
Eviction process
Rental application and leasing administration
Business and Operation Planning and Forecasting
Evaluation of new ventures
Pricing
Marketing guideline
How to deal with customers
How to solve problems

A business plan was prepared following the headings:
Executive Summary
Current situation survey
Key issues and objectives
Marketing/Sales strategy [extend to all functions of E&B]
Action plan
Profitability analysis, P&L projections
Controls

This business planning only established an initial benchmark and a road map. Manage and control (the traffic lights) require rules (policies and procedures) to regulate the integrity of operations, as well as mechanisms to handle change, such as a quarterly forecast, instrumental to keeping abreast of changing conditions.

4.4.3 Tactical Operation (TO) Change Processes (Action all the Formulations and Implementations)

Traversing along the hierarchy to this operation stage, this is the 'Pit Stop' of the application of concepts of change management and knowledge management of a learning organization to acquire core competence. A balance between OD and SI approaches is particularly relevant with respect to managing the TO changes. TPMM (Total Project Management Model), developed by Geoff Southern and Robert Paton, is most appropriate. BPR and concept of Lean are the key processes.

4.4.3.1 Customer Satisfaction Survey

The purpose of the survey is to monitor performance from the customer's point of view. Tenant satisfaction survey forms, as shown in Exhibit LII (a sample), were distributed to the tenants of the two main buildings twice. During the two periods, changes were being driven forward for improvement and correction. The response rates and survey results showed excellent customer satisfaction. A survey will be held bi-annually.

Satisfying requests is *not enough; customers needed to be delighted and dazzled*

EVEREST AND BLANC

Tenant Satisfaction Survey Aug 2006 for 41 Dundonald

Please take a moment to complete and return this survey before 2006 Sep 1.

Return and deposit in the suggestion box in the Lobby area beside the Coke vending machine or mail to Everest and Blanc Corporation RPO 91013, Bayview Village, North York, Ontario M2K 2Y6

Please indicate Suite Number (Optional):
Number of tenants in your Suites and names (Optional):

Evaluation Scale: unsatisfactory (1) to outstanding (5)

Question	1	2	3	4	5
A. Outside Ground					
1. Landscaping	☐	☐	☐	☐	☐
2. Garbage Disposal	☐	☐	☐	☐	☐
3. Grounds Cleanliness	☐	☐	☐	☐	☐
B. Parking					
1. Visitor Parking availability	☐	☐	☐	☐	☐
2. Underground Parking	☐	☐	☐	☐	☐
3. Cleanliness	☐	☐	☐	☐	☐
C. Security					
1. Adequacy of monitoring level	☐	☐	☐	☐	☐
2. Your level of security comfort	☐	☐	☐	☐	☐
3. Intercom Access	☐	☐	☐	☐	☐
D. Building Cleanliness					
1. Overall	☐	☐	☐	☐	☐
2. Lobby	☐	☐	☐	☐	☐
3. Stairwells	☐	☐	☐	☐	☐
4. Elevator	☐	☐	☐	☐	☐
5. Your floor's corridor	☐	☐	☐	☐	☐
6. Laundry room	☐	☐	☐	☐	☐
E. Processing of Maintenance Request					
1. Speed of response	☐	☐	☐	☐	☐
2. Speed of resolution	☐	☐	☐	☐	☐
3. Professionalism in manner, politeness and courteous	☐	☐	☐	☐	☐

Overall Comments - Please provide additional comments/suggestions.

Thank you for your participation

Exhibit LII Example of the Customer Satisfaction Survey

4.4.3.2 Training

The main purpose of training is to change the organization value (practice) towards customer satisfaction and kaizen; in congruence with strategies and objectives developed.

Training provides and maintains the continuous improvement mandate, Covey's idea between the balance of life & work, and the notion of "dispersed Strategizing", James (2003). In house training sessions were carried out in four areas:

a) How to make decision (holistic and reductionistic modes)
b) Delivery on Customer Commitment (based on result of survey outcomes)
c) Kaizen (Lean thinking) and Touring of Toyota Assembly Plant
d) Covey's idea on the seven habits of effective people

In particular, the most important objective is to ingrain and to internalize:

1) Mechanics of Xerox's Quality Improvement and Problem Solving Processes, and Kaizen Blitz Plus [for rationale, refer to Chapter 2 2.7.4 (H)]
2) Concepts of "Win - Win" and "With an end in mind" [for rationale, refer to Chapter Section 2.7.4 (M)]

Owing to potential staff turnover, training was directed toward all (including the Industrial Advisor). Review sessions are also planned periodically.

4.4.4 Changes applied across the Three Levels of Decision Making Process

The two categories are Control (Soft) and Rewards which are inter-related [for rationale, refer to Chapter 2 Section 2.7.4 (B)(c), People].

4.4.4.1 Controls (Soft)

The conceptual notion of control is tightening starts from SM to MCP to TO and reversed as it transmits in the opposite direction.

Mandatory formal monthly meetings between the Board and the Industrial Advisor (in reality it is the Industrial Advisor and the Author) take place with discussions recorded. Weekly meetings between the Industrial Advisor and the immediate subordinates and/or all subordinates also take place, although exchange of information takes place daily. Daily meetings must be held between Property and Maintenance managers with their respective subordinates. This ensures clear understanding and encouraging open channels of communications, ensuring objectives are congruent among all. The aim is to apply the practicing guidelines [for detail, refer to Section 4.3.1], to interface relations, to minimize and resolve conflicts, utilizing the teamwork approach, always starting by looking at the overall picture (a holistic approach), and undertaking goal congruence with benchmarking.

Most vital is to establish and reinforce the concept that when a lesson has been learnt, assessment must be made, and revise the process.

4.4.4.2 Rewards to encourage goal congruence

This is consequential to notions of Section 4.4.4.1, on control. The rewards can be positive or negative. However, financial reward is the most powerful motivator, an intermediate instrument, to control and acquire the requisite needs. It cuts across all the needs as postulated by Maslow's notions. As such, a bonus system linking to performance was introduced.

Certificates of completion of training course, as shown in Exhibit LIII, are presented to participants. The certificates are valuable. They are testimonies to those who pursue further education or are seeking for other employment as well as satisfying the higher needs.

EVEREST & BLANC CORPORATION

This is to certify that

Ioseph Iacob I. Iurane

has successfully completed the training course

Effective Work Managing Practice

and possesses the capacity to put in practice the Improvement Process

In witness here, signed and affixed the Corporation Seal at Toronto, Ontario, Canada this

17th August 2006

Vera S. W. C. Chiu
President

Exhibit LIII Sample of Training Completion Certificate

4.5 Conclusion and Summary of the Chapter

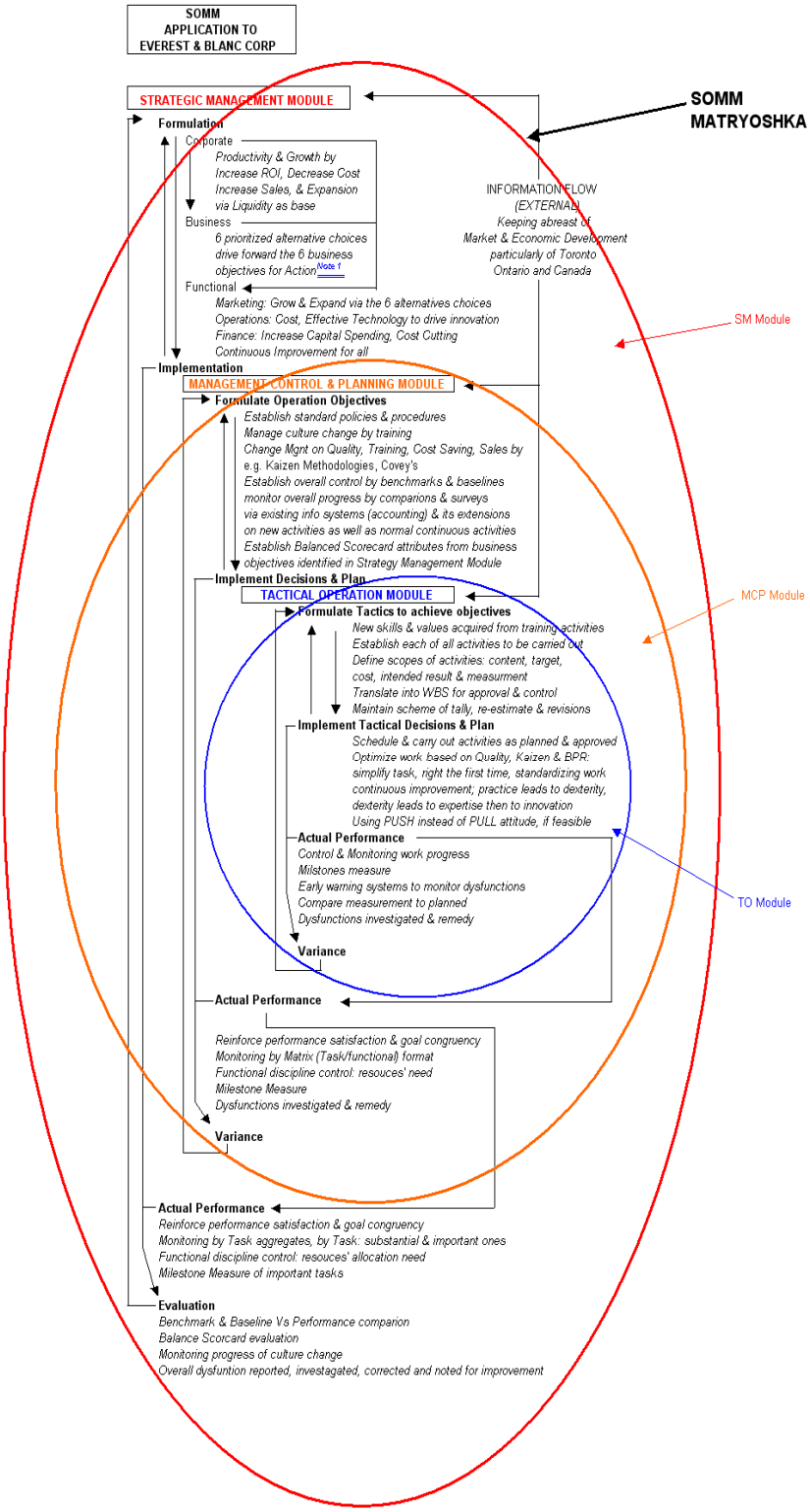
Vital to E&B's future is continuing to have profitability. It only materializes from sales and productivity, which, in turn are driven by customers, cost savings, and quality leading from innovation, learning, training, and development of staff. Leadership ability needs to be nurtured and all staff need to understand the business process.

SOMM, the structural model, applied to E&B setting, as shown in Exhibit LIV, was employed in conjunction with Pettigrew's Change Dimensions as the framework to develop the changes applied:

- The **Context,** Situation Analysis [for detail, refer to Section 4.4.1.1] established the circumstances and the direction of the operation

- The **Content,** specific formulated strategies determining explicitly on what to proceed [for detail, refer to Sections 4.4.1.2 to 4.4.1.4]

- The **Process**, followed the structure of SOMM to direct methodology to proceed with the Change: the method introducing the change and the method introduced [for detail, refer to Sections 4.3 and 4.4 respectively and collectively]



Note 1: Refer to Section 4.3.1.4, formulated strategies

Exhibit LIV E&B's SOMM

As a final note to the Chapter, differences between "Before" and "After" changes applied to E&B are presented in Exhibit LV. They are framed under four themes, namely Model of Decision, Strategies, Objectives and Control. The comparison provides a glimpse of the gap between "Before" and "After" further illustrates and summarizes comprehensively the improvements made.

	BEFORE	AFTER
MODEL OF DECISION		
Decision model	Economics oriented	Strategic
STRATEGIES		
Strategic attention	Mostly muddling through	Holistic leading to reductionistic
Decision style	Top heavy	Distributive strategizing
Decision method	Heuristic	Holistic to reductionistic approach SOMM
External Environment awareness	Not strategic	Strategic
OBJECTIVES		
Objectives	Liquidity, Minimize cost	A comprehensive scope and balanced approach
Quality	Secondary to cost	Quality and cost in parallel, from value-added orientation
Attention of activities	Operational	Strategic and operational
Communication	Not clearly defined	Clearly defined
Policy and procedure	Not written, by word of mouth	Formally prepared
Business Plan and Forecast	Not formal	Formal
Cash mgnt	Short term vision on cash Longer term from cash reserve saved from minimized cost or cash outflow	Short term vision on cash Longer term from cash reserve saved from minimized cost or cash outflow
Training	Informal	Formal
Survey to know customer attention	None	Implemented
CONTROL		
Control	Solely Finanically based	balanced, using the 4 perspectives of balanced Scorecard
Benchmark and evaluation	None	Formalized
Rewards	E&B provide lunches	Monetary as well as achivement oriented and provide lunches
Performance evaluation	Financially oriented	Balanced Scorecard approach

Exhibit LV Difference Before and After Changes

Chapter 5
Effectiveness of changes introduced to E&B

This chapter addresses the effectiveness of changes introduced as well as the merit of the process of change and the decision-making processes. It is organized as follows:

Section 5.1 describes the manner in which decisions were made prior to changes being introduced.

Section 5.2 reviews the new decision-making processes assessing whether the objectives of the change were met, their implementation issues and limitations.

Section 5.3 concludes and summarizes the chapter.

5.1 Manner in which Decisions were made prior to Changes being introduced

The decision-making process prior to the introduction of changes was founded on the reductionistic approach [for rationale, refer to Chapter 4 Sections 4.2 and 4.5].

The decision-making process was mostly passive and submissive to the control of the environment. A proactive and assertive way to carry out an integrated decision-making process was practically absent. “Fire-fighting” was the norm. Decisions were made as they arose. Strategic and operational decisions were intermingled; heuristics and “muddling through somehow” were the basic modes.

Further, the decision style was “top heavy” as most, if not all, decisions were made at the top of the organization. This methodology was useful, when the business was first formed, at the beginning of a growth cycle of the growth curve. However, when growth continues, an integrated process of decision-making process is required to better combat the environment and to compete in the market place.

5.2 Review on the enhanced new Decision-making Process

This section presents a review of the achievement of objectives of the change and identifies the implementation issues, limitations and their remedies.

The purpose of the new decision making process is effectively an application to change the organizational culture by shaping its practice and value [for rationale, refer to Section 2.5.1 (D)], of the notions of SOMM framework operating under the practicing guidelines [for detail, refer to Section 4.3.1]. History indicated that it took Toyota ten years to implement kanban, Womack & Jones (1996) and five years for Porsche to implement TPS methodology, Ohno (1988), [for detail, refer to Chapter 2 Section 2.7.4

(H), Concept of Lean]. However, it was not anticipated to be a very difficult battle at E&B, employing face-to-face communication and the "carrot and stick" process, because of the size of the firm and number of staff. Therefore, the expectation was somewhat on the optimistic side, but with a sense of vigilance.

The section is laid out as follows:

Section 5.2.1 provides comments on the achievement of the objectives.

Section 5.2.2 presents the implementation issues and limitations.

5.2.1 Achievement of the Objectives

It was not evident whether the strategic notions (as opposite to the operational notions), under Ansoff and Anthony's nomenclatures had been accepted with attitude and behaviour changes among the staff [for rationale, refer to Chapter 2 Section 2.7.4 (A)]. However, the objectives for operational improvements showed color promptly. This essentially resulted from tours of the Toyota's assembly plant in Cambridge, Ontario and the GM assembly plant in Oshawa. The contrasts in efficiency and work methods were transparent, which reinforced the notions of the practicing guidelines. However, most important of all, the objective to cast changes on the Industrial Advisor and the Author, were successful, both on strategic and operational notions. The author has observed noticeable style changes in the processes of the decisions, communications, and in issuing orders and instructions.

5.2.2 Implementation issues and Limitations

Overall, the introduction and implementation were effective but met with difficulties in the beginning. The difficulties were mostly overcome after understanding the issues. The student workers and the managers had contrasting issues. The students had problems implementing changes but no problems comprehending the concepts while the managers' issues were the opposite. This was not recognized while designing the new processes, but the reason was later identified. E&B, a small firm, where integration is not problematic because decisions are centralized and it is small enough to exert an effective control. However, problems are predominantly in differentiation as a result of economic constraints and because workers are required to be multi-functional to handle a myriad of tasks. At the same time, a well-defined policy and procedure framework is lacking for guidance. Workers' problems were easily resolved by providing additional specific instructions and tools to act accordingly, e.g. phone manner to achieve "win-win", by looking at a mirror (a small mirror with magnetic back was supplied at each phone location) occasionally while talking and ensuring a smile is on the face. These types of instructions were implemented to the procedures under preparation. The managers' issues with respect to conceptual thinking on strategic notions (SM module of SOMM) are still unresolved. This is attributable to the new driving force, which is not as strong as the restraining forces [for rationale, refer to Chapter 2 Section 2.7.4 (K)]. Life

experiences have already set their characters and values have already been formed. A mere several hours of knowledge management and change management "brain washing" sessions will not overcome their deep-seated values. However, formulation issues, strategically, on operational notions (MCP and TO modules of SOMM), are considered successful, most notably on observing how the maintenance manager chose the snow blower. Instead of two separate machines, a flexible system, where the blower or a grass cutting mechanism attaches to a small tractor, was chosen.

With respect to the evaluation process, the balanced scorecard's formal implementation was abandoned. The reasons were twofold; the Author was managing the information from data accumulated and the Author was distracted by other responsibilities. If the information were managed by a delegate and were unfavourable, it might create a morale problem with the staff. However, the benchmarks of the perspectives were set [for detail, refer to Chapter 4 Section 4.4.2.1] and the notions of balanced scorecard have been applied strategically [for rationale, refer to Chapter 4 Section 4.4.1.13]. Both the Industrial Advisor and the Author are accountants who have acquired and internalized the techniques established and able to assess the evaluation informally.

In addition, implicit to application of SOMM, it could be interpreted that an in-depth critical analysis is necessary, though not expressly specified in the model. Perhaps, this could put a strain on cost with an exhaustive formal analytical process, exemplified by the aforementioned balanced scorecard application. However, it is the beholder who decides the extent of the application.

5.3 Conclusion and Chapter Summary

Overall, the Industrial Advisor and the Author agreed unequivocally that the changes introduced, the process of changes, and the decision-making process were effective. Certain issues outlined in the above section were unresolved, such as those relating to value internalization by the staff, which will take time. The heads (the Industrial Advisor and the Author) of the organization are able to apply the new decision processes. The staff's work practice reflected continuous improvements, which showed acceptance of the practice guidelines. Any further internal changes would be more "to become interdependence and effective" and "sharpening the Saw", Covey (2004).

As a final note, the cost of the implementation was not substantial but the benefit is considered significant. The variable costs were only entertainment and meal expenses for several occasions and transportation costs (rental of small buses for the two trips, etc.) to Cambridge and Oshawa for the plant tours. The major cost is, however, the pre-introduction of changes related to this research inquiry. Nevertheless, in due course, the benefit is expected to substantially exceed costs.

Chapter 6
Conclusions about the Research and Contributions

This chapter provides an overall conclusion and closing comments about the research inquiry and its contributions. It is organized as follows:

Section 6.1 recapitulates the findings of this research inquiry and summarizes the significance of the work for E&B.

Section 6.2 articulates the findings of this research inquiry, specific to E&B, which may interest a wider audience.

Section 6.3 provides a final comment on whether the structural model developed, SOMM, can function as an "oracle" tool forecasting the future.

6.1 Recapitulation of the this study

This study had been completed as set out in the research proposal where the basic working material was shaped by the intent of the five learning goals. The objectives and findings achieved are summarized as follows:

- Cognition of theories of research methodologies and applying the relevant research methodology for this study

- Business decision-making theories and integrating decision-making processes of the three levels of decision-making

- Evolution of strategic management (SM), management planning and control (MPC) and tactical operation (TO) relating to business decision and control systems

- The tools, critical influencing factors and relevant making decision and management models of a strategic decision making framework

- The elements of decision-making: formulating, implementing, and evaluating, leading to conceptualizing and generalizing the three levels of management into a comprehensive model, The Strato-Operation Management Model (SOMM). SOMM is a decision-making framework building on the strategic approach to form a business decision model applicable to a service organization's (such as E&B) survival and ability to gain an edge in the competitive environment.

- Applying the technique learnt, complementing the decision-making process, and the model developed, E&B is able to focus on and apply improvement to the organization in response to or before the changes in the environment.

Most significant in this study's findings with respect to E&B is the formulation of SOMM. It links notions of strategy management and

operations. It bridges the gap between SM and MCP, likewise the gap between MCP and TO in both practice and theory. Although only three levels of decision-making processes [top, mid, bottom represent SM, MCP, and TO] were portrayed in SOMM, the number of decision-making processes is infinite hypothetically as mirrored in the theoretical number of dolls in a matryoshka. The three level classifications only demonstrate how the methodology works; it can easily apply to a multiple level management system infrastructure.

The work has taken more than four years, and this voyage has provided a valuable experience. Piloted through a study of research methods, an assessment of management education philosophy, decision-making, management theories, and concepts, and surveys of the three levels of management of decision-making processes, finally an applicable framework (SOMM) has been shaped for utilization by E&B. Further, it is evolutionary, not revolutionary; it starts with a holistic (macro) level traversed down to a reductionistic (micro) level, a structural technique which fuses existing concepts into a comprehensive framework of decision-making processes leading to the implementation of changes. The main discovery has been that potential success, other than awareness of the external environment as a must, is grounded on the ability to relate to system (holistic) decision making, change management, kaizen, and knowledge management together with a customer oriented mindset, which plays the most important role.

E&B possesses the knowledge (SOMM, lean and continuous improvement thinking), an upcoming DBA on staff, and a far-sighted growth orientation; with proper risk management, future potential should be rosy.

In addition, during this discovery process, knowledge of a great number of tools was acquired; benefiting not just the study, but also the Author's outlook on life, which is a plus.

6.2 Significance of the Work for E&B warrant Interest of Others

That the findings of the study are most significant for E&B is evident. However, the work may be noteworthy to a wider audience and applicable to other entities such as interested academics and practicing professionals.

The scope of the study, in particular SOMM, is limited to E&B. The findings are conceptually and potentially applicable to all organizations. For interested academics, it would be an ideal topic to further generalize on the applicability by empirical research studies to advance knowledge in management and operations. However, practicing professionals, business managers and owners are constantly looking for prescribed innovative applications as solutions applying to their problems. Rigorous confirmation before application or advancing knowledge is of no interest to them. This is in contrast to academics whose aspirations are different – "knowledge for knowledge's sake", Huff (2000). The applicability of E&B's new decision-

making methodology may be an ideal tool for practicing professionals and business managers. Applicability and utility for use are pivotal.

A small management business operating under the administration of professional accountants, E&B's personality and nature are wedged between those of a professional firm (e.g. architects, consulting engineers, accountants, and lawyers) and those of a business firm. It functions under provincial legislation: the Landlord and Tenant Act and the Company Acts as well as acting somewhat within a set of codes of professional/ethical conduct, as the officers of the firm are members of an independent professional society.

A professional and his firm are governed by their respective quasi-judicial societies created under special acts of Parliament or the Queen's Charters; as such, their authorities, services, and approvals are highly self-regulated. A business firm's fundamental objective is to achieve profitability, not under some special acts of parliament and not to be governed by quasi-judicial societies or institutions other than the Company Acts.

Thus, E&B edges closer towards a business firm than a professional firm.

However, the challenges and threats are similar, and the major ones are:

- Non-dynamic and stable environment is changing
- Need to change operation mode from micro (operational) to macro (strategic)
- Competition owing to globalization and information technology
- Dilution of power by government
- Proliferation of knowledge

Traditionally, professionals have a near "monopolistic" skill and operating advantage. They are sources of specialized knowledge and operate under the governance of their professional societies, which provide a relatively non-dynamic environment. These governing watchful eyes are supposed to ascertain that the respective universes would not be overly competitive with membership control. Clients needing services, at times, are not by choice but mandatory by law. In addition, a professional is primarily trained in solving problems and drawing conclusions from "small prints", analysis of micro issues. This is further amplified by the fact that legislation, the aforementioned charters/acts, is on his side to provide a relative stable universe. As a result, the modus operandi is operational in nature instead of strategic, Ansoff (1988).

However, owing to corollaries of the globalization movement and the information revolution, the operating arenas have evolved to be very competitive and under threat, albeit with their societies' subtle intervention and struggle. The universal professions (e.g. engineering and medical professions), in particular, are under siege from the emerging countries. At the same time, governments are trying to dilute their powers. Noted

examples are the Sarbanes-Oxley Act in the US, and in Ontario, under which paralegals and paramedics have been legalized, and the Public Accountants Act, which has been strengthened with more government control and under which audit rights are given to all three societies of accountants and audit requirement are exempt, if not relaxed, on certain companies under the Corporation Act. Moreover, most devastating of all is the distribution of knowledge with respect to the proliferation of computer power and the Internet: common specialized knowledge is readily accessible and available to all.

These greatly infringe on professionals' competitiveness. With the environment's wind shifting, professionals need to become business leaders to be concerned about macro issues, to combat the competition, and to endure the pressure of these "wicked problems", Pacanowsky (1995). As such, in order to confront such competitive and dynamic forces in the environment, a new weaponry is, therefore, essential to fathom the environment and to do battles. Hence, by concept of induction, the findings for E&B could also be applicable and adaptable to other professional and business entities alike.

6.3 A Final Comment – Can SOMM function to predict the future?

SOMM is a structural model of a strategic decision making system. It provides the framework, coupled with analytical weaponry complementing the strategic processes, to better manage (monitor & control) and operate (carry out the action) an organization. Forecasting and making prediction are prerequisites of management of an organization. The model's design is not only for forecasting and for predicting, via its associated weaponry, its primary purpose is to further expand and utilize the outcome of the predictions to manage an organization. Prediction and forecasting is only a subset of the set of functions within SOMM.

In essence, the processes of SOMM always start with holistic considerations and cascade to a reductionistic mode where the decision-making processes are embedded within each other. The fundamental tool within the SOMM design, in forecasting and prediction, is the Harvard Policy Model or SWOT Analysis [for detail, refer to Chapter 2 Section 2.8.5] to formulate the alternatives for strategizing. This requires scanning the external environment; making observations with respect to threats and opportunities, drawing implications from these observations and utilizing internal strength (capability and resources) to combat the threats or to take advantage of the opportunities. The key is the creativity and resourcefulness in the judgment process and this process is governed by certain influencing forces inherent to the decision maker [for detail, refer to Chapter 2 Sections 2.5 and 2.8.4] to forecast and make predictions. This pre-emptively shapes the initial prediction but needs to maintain a constant continuous scanning of the environment and observing changes to determine the appropriate actions [for rationale, refer to Chapter 2 Section 2.7.3) over time. However, once the original set of strategies formed, the action continues with the rest of the

decision and management processes [for detail, refer to Chapter 2, Section 2.8.7] of the model.

This is best exemplified by examining the competitive circumstance at E&B, which is in a potentially unfavourable economical environment [for rationale & detail, refer to Chapter 1 Section 1.3.1] that could turn negative. With this potential risk present, E&B had assessed the possibility of mitigating the effects of this downturn. It was determined that E&B is able to use its internal strengths to compensate the impact of the economical situation (threats), as evident in the SWOT analysis performed [for detail, refer to Chapter 4 Section 4.4.1.2]. This is partly because of the more than ample resources of reserves (strength) and partly because of the Industrial Advisor and the Author's management style (capabilities). At the same time, the character of the threat is not overly hazardous to the intrinsic nature of E&B's affairs. However, if an organization were highly leveraged, and hinged on risk and volatility (weaknesses), such as a financial institution or an automobile manufacturer, an economic downturn could be detrimental. The strengths are usually not sufficient to mitigate the threats; it requires minimizing the weaknesses in order to lessen and to avoid the threats. The aim is to find a balance between the potential risk and action in deciding on the moves to be made to prevent the organization from deteriorating and/or leading to a collapse while cascading down the rest of the decision chain. Moves could range from dramatically cutting overhead and discretionary expenses to eliminating potential cash or cash draining ventures. The aim is to preserve cash to meet the potential down turn of the economy and build strengths.

The above has, hence, suggested that the structural requirements of a SWOT analysis, an element of SOMM, lay out the background condition and status of the environments (internal and external) where implication could be drawn, thus making predictions from the observations and forming the strategies for doing battle in the arena. At the same time, the remainder of the SOMM elements are involved in ensuring that execution is accomplished effectively and efficiently.

To recapitulate, decision-making is a complicated process nowadays because the environment is dynamic and no longer stable. It is always necessary to take a proactive approach and gamble on the outcome with a certain degree of risk and peril in order to be successful; otherwise, one perishes in time. The right tool is important, as well as the decision maker's ability to exert the aforementioned creativity and resourcefulness in the judgment process. SOMM is a management decision-making tool containing the function of forecasting and predicting the future whether it has a negative or positive outlook, but it cannot replace the inherent and intrinsic ability of the decision maker.

SOMM is a process pulling elements of concepts and theories into a "grand synthesis" for management practitioners that are over and above the mere capability to function as a forecasting and prediction tool.

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