

# STRATEGIC MANAGEMENT IN CONSTRUCTION INDUSTRY

Case Company: Custom Design & Construction

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ABSTRACT

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Within construction industry it is largely common for businesses to be more operations oriented rather than strategically led. In particular, small and medium-sized enterprises have been widely myopic in terms of building long-term visions which disrupt their chances for sustainable development. Those, however, that execute strategic planning tend to have higher sales and profit margins, return on assets and employee growth being simultaneously more innovative and nationally recognised.

In this thesis the author reports about the research conducted within a Sydney-based small construction operator with the purpose to identify the case company's needs for improvement from strategic management perspective considering the industry specific nature. The main objective of the research outcome was to support the case company in focusing efforts and unifying its team in a single direction, along with creating the fundamental values, objectives and standards to guide it through future business decisions. The strategic management models and concepts were adopted to the process of new strategy planning, and the recommendations proposed by the author were shaped by the inferences derived from the empirical research.

The general design of the research applicable for the case study is qualitative in nature. The mono method of single data collection technique has been applied to this research due to resources constraints. Throughout this thesis data have been collected through primary sources - semi-structured in-depth interviews with the case company representatives. It was also underpinned by the secondary sources such as acknowledged academic literature and Internet-based sources. Data analysis was conducted mainly via abductive method which partly includes the elements of deductive and inductive reasoning.

The research has found that the case company was operating well without a consistent and clear business strategy until it has reached a certain maturity point which made it critical for future survival in the market. The company was presented an opportunity to undergo through a new stage of development and thus needs to support its ambitions to eliminate growth restricting factors. The key conclusion is that the company has to focus its efforts on establishing a long-term strategy and reinvent the direction of its development by paying attention to enlarging its resources and capabilities.

Keywords: Construction Industry, Construction Management, Small and Medium Sized Enterprises, Strategic Management, Strategy

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## ABBREVIATIONS

ABCC	Australian Building and Construction Commission
AEC	Architecture, Engineering and Construction industry
AR	Augmented Reality
AUD	Australian Dollar
BIM	Business Information Modelling
CDC	Custom Design & Construction
CM	Construction Management
COQ	Cost of Quality
CPM	Construction Project Management
CRM	Customer Relationship Management
DB	Design - Build
DBB	Design - Bid - Build
EBITDA	Earnings before Interest, Taxes, Depreciation & Amortisation
GDP	Gross Domestic Product
ICT	Information Communication Technology
JV	Joint Venture
KPI	Key Performance Indicators
PM	Project Management
PMBOK	Project Management Body of Knowledge
QMS	Quality Management System
R&D	Research and Development
RFI	Request of Further Information
SME	Small and Medium Sized Enterprise
SOP	Standard Operating Procedures
VR	Virtual Reality
WBS	Work Breakdown Structure
CTA	Call to Action Marketing

## 1. INTRODUCTION

The first chapter of this thesis familiarises the reader with the background information supporting the motivation behind the research presented in the following sections. It explains the reasons and incentives for choosing this particular topic and specifies the methodology applied in this thesis to reach goals and objectives stated as the main research questions. Furthermore, the scope and limitations of the research work are identified and the structure of this thesis is formulated.

### 1.1 Research Background

Even though ranked as being one of the fastest growing economies globally (Ruthven 2016) with a safe business investment environment and strong future prosperity prospects, Australia is ranked one of the least affordable housing markets with Sydney being the second severely unaffordable market in the world leaving behind only Hong Kong. It is claimed that high house prices are definitely not a sign of a city's success, but more of a failure to satisfy housing needs of its citizens. (ADIHAS 2017.)

The construction remains the third largest employing industry in Australia and one of the main contributors into Australia's Gross Domestic Product (GDP) (AiGroup 2015). The density of construction activity driven by heavy overseas investment, increasing number of first-time home buyers and government grant support system is projected to continue growing over the next decade. It is especially true for major urban areas with the residential building to be the leading source of growth for the construction as a whole (Bankwest 2015).

Australian residential construction is currently experiencing an expansion phase. Even though the housing markets are always volatile, there are no real signs of a slowdown basing on strong population and economic growth indicators, the employment rate and new housing construction, strong domestic demand, and purchasing power. In particular, the economy of Sydney performs better than the overall Australian economy which feeds into a larger housing demand and presents a promising opportunity for local construction companies to take more projects and raise profit. There is no evident oversupply in a housing market due to constantly increasing fundamental demand, and even though more new dwellings have been built over the past years, the levels still remain far below the population growth. (Lin Lee 2017.)

The researcher performed an internship at the organisation referred to in this thesis as Custom Design & Construction (CDC) located in Sydney, Australia, and taken as a case company for this research. The company operates as a general construction contractor and acts as an intermediary between the property owners (its customers) and subcontractors who perform physical construction work. It brings together two parties from different ends, unites and mobilises all the resources needed for a project completion. Thus it is unarguably crucial for the case company to maintain solid principles behind its management operations and be consistent in its strategic perspectives. However, as was identified during the qualitative research conducted among the company's employees, by now CDC does not appear to pursue clear strategic objectives, and for this reason, fails to improve the efficiency of its operations. This fact is even more exacerbated by the concerns of survival within an intensifying competition in the Australian construction market.

The main motivation for conducting a research on this particular topic was the case company's query and expressed concern in developing a new action plan for retaining market positions and attracting more customers to rekindle revenue growth. This makes the subject at least useful for investigation and at most practically applicable within the case company in terms of its produced results. Another reason that underpins topic selection is a knowledge gap among the existing studies, as there is an ample amount of information related to the strategic development and construction management with a relatively confined knowledge base on strategic management specific to the construction industry, and especially updated literature on that (Pamulu 2010). It has also been noted by Chinowsky & Meredith (2000) that strategic management concepts are rarely applied to the construction context at all putting this industry practices far behind the others that evidently undervalues its importance for national communities. As an inference, the construction-related business management does not appear to incorporate any established working tradition.

Furthermore, this spreads over the fact that the construction strategic management principles and techniques are broadly applied to large corporations with a complex organisational structure almost ignoring the small and medium-sized entities (Pamulu 2010). In other words, it means that the field of managing a small-sized building company remains substantially undeveloped, which once again lays a motivated and reasonable foundation for the research presented in this thesis. At the same time, as stated in the economics report of Aigroup (2015)

the fact that the largest part of contractors engaged in construction industry is small businesses (98.6% of construction businesses) with 60% of sole operators with no employees at all has become one of the greatest drivers for this research. Considering the relatively low entry barriers to industry (Bankwest 2015), their increasing number all across Australia enhances the severity of rivalry pushing them to overcome upcoming challenges on an upgraded level by developing not only operational but a strategically beneficial business view as well.

## 1.2 Thesis Objectives and Research Questions

Research questions are observed through a multidisciplinary perspective of existing theories, previous findings and plural contexts of interpretation (Patrick 2015).

The study aims to give an insight of strategic management within the construction industry. The major objective is to support the case company in devising and adopting the most suitable strategy which is designated to build a more resolute and sustainable future development. The need for a new strategy development was raised by the changing market conditions within the building construction industry and an insufficient development of strategic practices inside the case company. The goal of the empirical research applied to this thesis is to find out the main strategic gaps in the company's activities by gathering relevant data from primary and secondary sources, and finally, base the development plan on the key findings. Therefore, the main research question is formulated as follows:

***How can the case company develop its strategic management to reach out more clients?***

In order to broader understand the background knowledge behind the topic and provide an adequate solution for the research question, several sub-areas have to be investigated in support for the research conclusions. The thesis can be roughly divided into three main parts further elaborated with research questions more specifically:

### **1. Theoretical Framework of Strategic Management**

- What are strategy and strategic management?
- What are the key processes and models applied within a strategic management context?
- What are the particular distinguishing features in strategic management within small and medium-sized enterprises?

## **2. Construction Management Overview**

- Which activities and processes does the construction industry embrace?
- What is the definition and scope of the construction management?

## **3. Case Study of Custom Design & Construction**

- What is the current position of the company in internal and external contexts? What are the challenges and prospects?
- Why is there a need for improving the case company's strategic management?
- What is the most suitable strategy for the case company to reach its goal?

### 1.3 Scope and Limitations

It is crucial to establish certain limitations of the study at the introduction stage to clearly define the extent and borders of research and to avoid any uncertainties further. In this subsection, the author explains which aspects are covered and what is not examined in this thesis establishing key interconnected variables as a research foundation.

The general theoretical framework of the research covers the topics on strategic management. While providing the fundamental concepts applied within this field the strategic management within Small and Medium-Sized Enterprises (SME) deserves a separate consideration in terms of an overall discussion. The reason is that this knowledge is the most supportive of the research undertaken in the case company. The project management theoretical background is provided mainly relevant to the construction industry and does not cover the concepts and models related to other industries or sectors.

The construction industry is very broad, however, even though providing the general idea of industry's image and scope, the key emphasis in the given research is made on the residential building sector due to the nature of operations and needs of the case company. Furthermore, the research focuses exclusively on the Australian market and, particularly, Sydney segment, since the case company is located in the mentioned city and serves for the clients living primarily in this and closely belonging area.

Due to the time constraints, the researcher has explored the subject area within a specific period of time - 5 months in total. Data collection process was limited in the number of participants, however, the respondents' group size reviewed is

sufficient to make reliable conclusions considering interviewees' field-specific competence and professional background experience. In addition, the research does not aim at building a new general theory and the results produced at the end do not guarantee applicability beyond the context of the case study.

All in all, the study provides valuable information on the practices utilised within the small-sized construction company the improved operations of which can be further taken as an industry example for various alike industry operators.

#### 1.4 Theoretical Framework

The theoretical framework is an essential part of the research work developed to demonstrate an understanding of theories and concepts which are relevant to the topic and other broader knowledge areas being considered. The theoretical foundation strengthens the study by connecting the researcher to the existing knowledge and helping to understand the subject better. (University of Southern California 2017.)

Before undertaking any steps towards the development of a new strategy for the case company it is necessary to reach an understanding of the strategic management itself and general processes within the construction industry. Thus, this subsection describes the structural flow of the thesis background to support the research conclusions and new findings.

The thesis is divided into several parts starting with the 1 Chapter as an introduction. Chapter 2 provides a conceptual framework of strategic management explaining the evolvement stages and the background idea behind the strategy along with different processes, types and phases it embraces. Some commonly used models and tools are included and described to effectively introduce the topic and support the development plan further. Chapter 3 is the extension of a theoretical part devoted to describing the nature and scope of the construction industry as a whole and the specifications of management with a particular attention to planning techniques within it. All the necessary concepts, terms and explanations are provided with regards to the purpose of research.

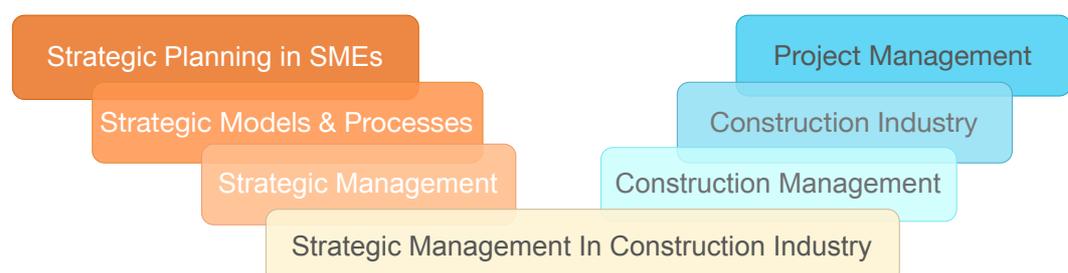


FIGURE 1. Theoretical Framework of This Thesis

Figure 1 summarises the main theoretical blocks necessary for the research framework.

### 1.5 Research Methodology: Data Acquisition and Analysis

The suitability of chosen methodology depends on the purpose of the study, the available resources, existing constraints and researcher's competence (Kumar R. 2014). Before undertaking a research, the researcher's responsibility is to define the method of data acquisition. There are two primary ways of collecting data: qualitative and quantitative research methods the comparison of which is provided in Table 1.

TABLE 1. Research Methods (University of Southern California 2017)

Basis of Comparison	Qualitative	Quantitative
Meaning and Objectives	Seek to develop an understanding of people's reasons, motivations within a particular context	Seek to confirm hypotheses about phenomena, study the relationships, cause and effect
Nature	Holistic	Particularistic
Approach	Rational, Subjective/ Interpretive	Critical, Logical, Objective
Research Type	Exploratory	Conclusive
Sampling	Purposive	Random
Data	Verbal, Textual (Audio/Video tapes, field notes)	Measurable/Non-textual (Graphs, statistics, figures, tables, charts)
Inquiry/ Orientation	Process-oriented	Result-oriented
Method	Non-structured techniques: Interviews Focus groups Observation	Structured methods: Surveys Questionnaire

The data collection methodology for this thesis was selected in compliance with the character and nature of research objectives and goals. Therefore, in order to gain a more accurate and deep insight of a case company's objectives and internal environment including its strengths and weaknesses, along with opportunities and risks presented by the market conditions it operates, the qualitative approach of data collection has been applied. Out of multiple ways of gathering information in a qualitative research, the semi-structured in-depths interviewing has been chosen as a preferred option to enhance an understanding of the natural context within the case company through the perspectives of participants who compose its integral working capital.

The empirical research was conducted using mainly abductive approach which is reflected in giving rise to new ideas or hypothesis through observations. The research is progressing from a general theoretical conceptualisation to analysing a specific company's case and applying aggregate knowledge to it in order to eventually develop propositions. However, the data collected from the empirical research are insufficient to enable complete theory building, while there is no clear theory to be tested chosen by the author through formulating the hypothesis. Thus, such scientific methods as inductive and deductive would not be correctly applicable for this research. Abductive reasoning, as a different alternative, overcomes these impossibilities and adapts a more pragmatist perspective. (Saunders et al. 2012.) A more detailed investigation of different techniques is provided in Chapter 5, where the empirical research methods and approaches applied in this thesis are explained and elaborated.

Primary and secondary sources of data are utilised in this research to produce conclusions. Primary sources include the extraction of data directly from individuals during organised interviews, while the secondary sources include information from books, journals and electronic sources (digital magazines, blogs etc.). The case study research strategy has been chosen due to its ability to ensure a profound understanding of a real-life context of the topic and provide a new source for research questions as well.

## 1.6 Thesis Structure

The successful implementation of the established research goals not least depends on the general flow of research and the consistency of its presentation. Thus, as illustrated in Figure 2, the study has been divided into seven chapters with each including several subsections to thoroughly elaborate various aspects of the chosen topic.



FIGURE 2. Thesis Structure

From a narrative perspective, the thesis can be divided into two substantial sections where one forms the theoretical study of relevant concepts, while another - a practical part - provides an empirical observation of the actual case. If taking a closer look, chapters two and three comprise a sufficient for the research theoretical background of strategic management and construction management relevant to the specific nature of the case company's activities presented in a more detail in the following forth chapter.

The empirical part of this thesis starts with Chapter 4 which introduces the case company to the reader enlightening its main services, core competencies and areas of operations, which is fundamental to produce justified conclusions and develop a strategy. The elaborated Marketing Mix (4P's) model is applied to the case company in this chapter to more comprehensively analyse multiple aspects of its operations. This section also provides an overview of a current state of Australian construction market with challenges and prospects through the perspective of PESTEL framework.

Chapter 5 of this thesis describes the practical processes behind the research which are reflected in data collection and analysis with application of a certain research methodology. The next sixth chapter is built around the main outcome of the theoretical and empirical studies together presented as a new development plan to better the case company's strategic management.

Eventually, the final part of this thesis provides the summary of all the key findings and conclusions derived from the study along with the suggestions and recommendations for further research.

## 2. STRATEGIC MANAGEMENT

Strategy is the overall plan primarily used by the companies to set up a favourable position by reaching long-term objectives at reasonable expenses considering all the resources the company owns and the environment it operates in. It unavoidably includes a certain set of actions taken by company's management to achieve superior performance relative to its rivals, which normally presents an ultimate challenge. If comparing it with the definition of tactics, strategy is a more general concept concerned with winning "the war", while tactics is an arrangement for a specific action like winning "the battle". At the same time, the strategic management is necessary for companies to identify purpose and give direction, to utilise its capabilities effectively and coordinate decisions of different individuals. (Jordan & Grant 2015.)

### 2.1 Historical Perspective: Role and Evolution of Strategy

The historical background of how the strategic concept was developing over the years in the past can help to understand the essence of a strategy itself and how the industry performance was first combined with that of a company's one.

The term "strategy" has its roots in the ancient Greece where it meant to be a military leader or a chief judge. However, the modern use of "strategy" in business has only started in the twentieth century while it has been even more recent to use this term when describing the competitive context. Before the second half of the nineteenth century when the strategy has become a tool for companies to take market forces under control and shape the survival tactics in a competitive environment, such technique, and mindset at the same time, has not been used clearly and widely. (Ghemawat 2002.)

Ghemawat (2002) states that in modern capitalistic age strategic managing has acquired more a meaning of behaviour that requires responsibility for the results of actions, initiative and careful planning to carry out through the limitations of an economic environment. In other words, by using and applying the concepts of strategy on practice a company has a chance to take market forces under control (Drucker 1954, 11).

Harvard Business School established in 1908 was the first to promote the idea of training professionals as those with strategic thinking and not just functional managers (Official Register of Harvard University 1917, as cited in Ghemawat

2002, 42). In terms of a so-called “business policy” course the fundamentals of modern strategic management that every corporation, as well as individual in it, must have a defined set of goals and objectives which makes it moving in a clearly certain direction and avoiding undesired directions were firmly laid (Kenneth 1971, as cited in Ghemawat 2002, 23).

## 2.2 Strategic Models Development

According to Andrews (1971), financial planning and investment assessment which served companies’ long-term objectives in the late 1950s were combined under one concept called *corporate planning* which involved such aspects as:

- defining five years term goals and objectives
- forecasting economic trends (market demand and share, costs and revenues etc.)
- establishing priorities for business areas and products
- allocating capital expenditures. (Andrews 1971.)

However, confidence in corporate planning technique effectiveness was getting lower during the following 20 years since the global market situation was becoming more complex and unpredictable, hence corporations could not anymore forecast that far. That is why the transition from corporate planning to strategic management has taken place with an increased focus on competition as a core characteristic of a business environment and formation of a competitive advantage as a central goal of strategy. (Jordan & Grant 2015.) In other words, a strategic decision is more concerned with the long-term development of a firm which required a different approach to a problem of identifying a distinctive competence, or competitive advantage over the industry rivals, which would be unchanging in the long run. This distinction is essential for the reason of making a strategic choice when investing in long-term projects which involve higher risks. (Andrews 1971.)

The strategic management which involved the analysis of industry and competitive positioning had also become a tool to evaluate and determine the best match of company’s opportunities and resources which led to the creation of a SWOT (“Strengths”, “weaknesses”, “opportunities” and “threats”) model illustrated in Figure 3 (Andrews 1971). SWOT analysis has been highly commended for its practicality, simplicity, and value with attention to key factors that affect business development. It has been widely adopted as a strategic

management tool serving companies' strategic focus disregarding the size and industry of operation (Pickton & Wright 1998, 101). Strategic logic apparently requires the future model of potential actions to be comprised of strengths matching opportunities, preventing threats and seeking to overcome weaknesses (Stacey 1993, 52).



FIGURE 3. SWOT Matrix (Modified from Ifediora, Idoko & Nzekwe 2014)

On a par with increasing diversification and changes in customer needs patterns in the 1960s a more sophisticated approach was required to devise strategies for future growth. Thus, Ansoff Matrix developed by Russian-American leading strategist Igor Ansoff appeared to be an appropriate model to offer four alternatives for growth. (Porter 1982.)



FIGURE 4. Ansoff Matrix (Modified from Ansoff 1957)

Different product-market options presented in Figure 4 can be clarified as follows:

- **Market Penetration** is a company's attempt to grow sales without leaving the initial product-market strategy. At this point, the company has two ways to better business performance: to either increase the volume of sales to its existing customers or to find new clients for present products.
- **Market Development** is an effort to adapt company's present product line with some modifications to new missions.
- **Product Development** strategy is about retaining the current mission but developing new products which are supposed to improve that mission.
- **Diversification** calls for departing both from the existing product line and the current market structure. (Ansoff 1957,114.)

From the beginning of the 21st century with a massive impact of digital technologies development the strategic management was being shaped by new principles and practices. Constantly accelerating rates of alterations in a global market space meant that strategy is no more about just planning, but generating options for the future and encouraging strategic innovation. These modifications have led to an increased company's awareness of corporate social responsibility practices, ethics and sustainability of a natural environment which played a crucial role in a long-term corporate success. (Jordan & Grant 2015.)

## 2.3 Strategic Management Framework

After capturing the main idea of how the strategy was evolving over the decades, and what has been initially put behind the concept of strategic management the reader is now prepared to get deeper into the subject. Thus, the objective of this section of is to give a solid understanding of the strategic management knowledge base which includes various steps of development, processes, phases, models, and types.

### 2.3.1 Strategic Management Concepts and Phases

Over time, many concepts and techniques of strategic management have been developed by academic researchers and successfully used by business practitioners. However, some of its fundamental concepts are represented by strategic thinking and strategic planning, that are different in nature, but complementary and interrelated thought processes that support each other through and around the strategy formation. (Mintzberg & Quinn 1996.)

According to Mintzberg & Quinn (1996), strategic planning is an analytical method of administering the processes of strategic management in order to produce data and analysis further used as inputs for strategic thinking. Afterwards, this is a strategic thinking process that helps to synthesise that data (“connect the dots”) resulting in the strategy (Mintzberg & Quinn 1996).

Strategic thinking is about generating and applying new business insights to existing opportunities to build a competitive advantage of an organisation. This process includes challenging the assumptions behind the existing firm’s value proposition. It refers to considering everything the manager learns from all sources (market research, personal experiences etc.) and then translating that learning into a certain direction for the business. (Mintzberg 1994.)

The summary of differences between strategic planning and strategic thinking is presented in Table 2.

TABLE 2. Strategic Thinking and Strategic Planning Comparison (Liedtka 1998)

DIMENSIONS	STRATEGIC THINKING	STRATEGIC PLANNING
Future Vision	Only the shape of future is predictable	Predictable and specifiable in detail
Strategic Formulation & Implementation	Interactive rather than sequential and discrete	The roles are clearly divided
Managerial Role	All level managers are almost equally involved and connected in a functional way	The responsibilities are specified, narrow-focused and independent
Control	Relies on a sense of strategic intent that guides managers’ choices on a daily basis in a process that is hard to measure and monitor.	Maintains control via measurement systems, assuming that organisations can measure and monitor important variables accurately and quickly.
Strategy Making	New strategic options search and implementation is more important than evaluation	The challenge of setting strategic direction is mainly analytic.
Process and Outcome	Oriented on the planning process itself	Focus ultimately on a plan creation

Originally, strategic management techniques were mostly applied by large organisations operating in multiple industries. However, increasing industries' intensity and volatile environment, costly mistakes, risks of error and economic ruin are prompting today's business professionals to take strategic management seriously if they wish to keep their corporations competitive. Thus, when the firms have to better deal with the changing world, they basically evolve through the phases of strategic management depicted in Figure 5.



FIGURE 5. Graphic Representation of Strategic Management Phases

### 2.3.2 Types and Components of Strategic Management

The dynamic concept of a strategy is not only concerned with competing in today's market, but also preparing and setting up the objectives for the future. When discussing a firm's strategy, the main distinction can be made between two kinds of strategy which is summarised in the Table 3. (Chaffee 1985.)

TABLE 3. Distinctions Between Two Types of Strategy (Chaffee 1985)

TYPES OF STRATEGY	CORPORATE STRATEGY	BUSINESS STRATEGY
Key question for making profit	Where to compete?	How to compete?
Key factor	Industry attractiveness	Competitive advantage
Role for business	Strategy as direction	Strategy as plan (positioning)
Scope	Vision Statement Mission statement Performance goals Guidelines for development Priorities for capital expenditure Research & Development Growth manner: organic growth, Mergers & Acquisitions, alliances	Product market scope Geographical scope Vertical scope The basis of a firm's competitive advantage

As a matter of fact, the strategy is a multidimensional and versatile discipline which requires careful consideration from different perspectives on its nature. Thus, three main models which are not mutually exclusive were developed to provide a way of describing a particular aspect of an organisational activity to which the term strategy has been applied. (Chaffee 1985.)

- **Linear strategy** focuses on methodical, directed and consequent actions involved in planning. The measures of results for this view include profit and productivity. In other words, corporation leaders plan how to reach their organisational goals by dealing with competitors.
- **Adaptive strategy** is based on the idea that a company has to constantly assess the external environment and internal conditions, which is supposed to lead to adjustments in organisational capabilities in order to reach a perfect “match”. Its behaviour can be defined as more changing with the environment, proactively or reactively, in order to comply with customer preferences.
- **Interpretive model** of strategy focuses on symbols and language to affect the minds of customers instead of placing emphasis on the physical product. The main objective of such strategy is achieving legitimacy and credibility of stakeholders. (Chaffee 1985.)

However, whatever type or model of strategy is considered, four factors of successful strategy which are provided in Figure 6 should be taken into account. It is important to notice that focusing on a single goal without putting similar efforts to the rest is most likely to lead to a failure in other areas. Hence, a holistic approach is usually required to maintain and lead a winning strategy. (Jordan & Grant 2015, 7-8.)



FIGURE 6. Successful Strategy Factors (Modified from Jordan & Grant 2015)

### 2.3.3 Strategic Management Processes

Strategic management includes three major processes - *formulation*, *implementation* and *monitoring* - the conceptual background of which is provided in a more detail further.

#### A. Formulation

Formulation process is about choosing the most suitable course of actions in order to realise organisational goals and achieve an organisational vision basing on the company's resources and capabilities and environmental outlook. The strategy formulation consists of several steps that managers have to go through to reach the best decision outcome. First is to identify and set long-term organisational objectives (including quantitative targets) and define the factors influencing strategic decisions. Second, the organisation has to evaluate the environment in which it operates and review its competitive position. Thus, the techniques of environmental scanning are applied to determine the development and forecast of factors that affect organisational success. Environmental scanning is a process of acquiring and utilising information about trends, patterns and connections within an organisation's internal and external environment. (Management Study Guide 2017.)

Internal analysis helps to identify strengths and weaknesses inside of an organisation. It covers all the interactions between employees, management, shareholders, organisational structure and a chain of command, access to resources (e.g. assets, skills, competencies), values and commitments, operational success and potential, etc. (Management Study Guide 2017.) External analysis embraces two different levels of the environment:

- **Industry: (microenvironment)**

The Porter's 5 forces method of analysis is used to deeply examine the key factors affecting organisational task environment such as the level of competition and the development of business strategy. This framework depicted in Figure 7 consists of forces that influence company's ability to generate profit and serve its customers: horizontal competition represents threat of new and established rivals and a threat of substitute products or services, while the vertical competition involves the bargaining power of suppliers on one side and customers on another. (Porter 1979.)

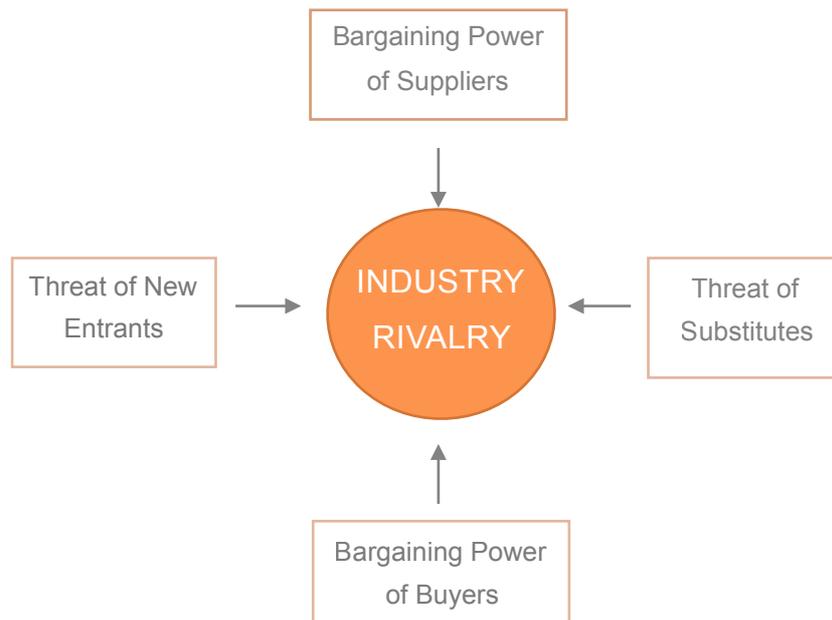


FIGURE 7. Graphical Representation of Porter's 5 Forces (Porter 1979)

- **Socio-economic (macro) environment**

There are certain important variables to consider when analysing national environment which can affect business activity and decision-making process. PESTEL framework the scope of which is illustrated in Table 4, is a business measurement tool used for auditing external influences to understand various macro-environmental factors such as market growth/decline, business position and direction for operations. (CIPD 2009.)

TABLE 4. PESTEL Framework (Modified from Wheelen &amp; Hunger 2012, 106)

Political	Economical	Sociocultural
Tax Policy Trade Restrictions & Regulations Tariffs Political stability Foreign trade policy	GDP trends and economic growth Interest & Inflation rates Global financial system Exchange rates Unemployment Income and price levels	Population growth rates Age distribution Birthrates & Life expectancy Lifestyle changes Career attitudes Consumer activism Health care & Safety Level of education
Technological	Environmental	Legal
R&D Investment Rate of technological change Automation Internet availability Telecommunication infrastructure	Climate change Global warming Weather Pollution Availability of natural resources	Antitrust regulations Immigration legislation Labour Law Environmental Law Health & Safety Law Consumer Law Employment law

The third and final step in strategy formulation is performance analysis which includes critical evaluation and identification of a gap that exists between the company's present position and a desired future condition. Upon completing three main steps the choice of strategy is made using decision-making matrix between several options/solutions devised. (Management Study Guide 2017.)

## B. Implementation

Once the main strategy has been formulated to achieve a certain direction the program has to be turned into an action plan which is the second major part of strategic management - implementation. It is the process by which goals, objectives, and policies are executed through the planning and development of programs, procedures and budget. A poor implementation which leads to an entire strategic failure most commonly occurs for the number of reasons: unrealistic expectations, lack of communication, structural issues, lost momentum, unclear strategic fit or poor top management commitment. In order to avoid any of these strategy makers have to consider the following questions (Wheelen & Hunger 2012.):

1. *Who* are the people responsible for carrying out the strategic plan?

The implementation stage requires more diverse human resources than strategy's formulation. In most of the large and multi-industry companies everyone can be an implementer of a strategic program, and every employee or manager who runs day-to-day operations has to be involved in this process.

Thus, a better organisational performance is achieved when people across all functional levels are engaged in strategy implementation. (Wheelen & Hunger 2012.)

2. *What* has to be done to line up the organisational operations in a newly defined direction?

Strategy enactment includes setting up programs to produce a scope of new activities, budgets to allocate capital for these new activities, and procedures to manage daily operations. (Wheelen & Hunger 2012.)

- Program:** The purpose of a program is making a strategy more action-oriented. In order to evaluate the likely impact of new programs within company's processes, they have to be compared to the existing ones. For this reason, a so-called *Matrix of Change* is proposed to help deciding on the rate and order of changes (when, where and how fast), the stability and coherency of systems etc. Besides, as illustrated in Figure 8, it addresses several questions to decision-makers on program's feasibility, a sequence of execution and stopping points, suitability of location, pace and nature of change (slow/fast, incremental/radical) and stakeholder evaluations. (Wheelen & Hunger 2012.)

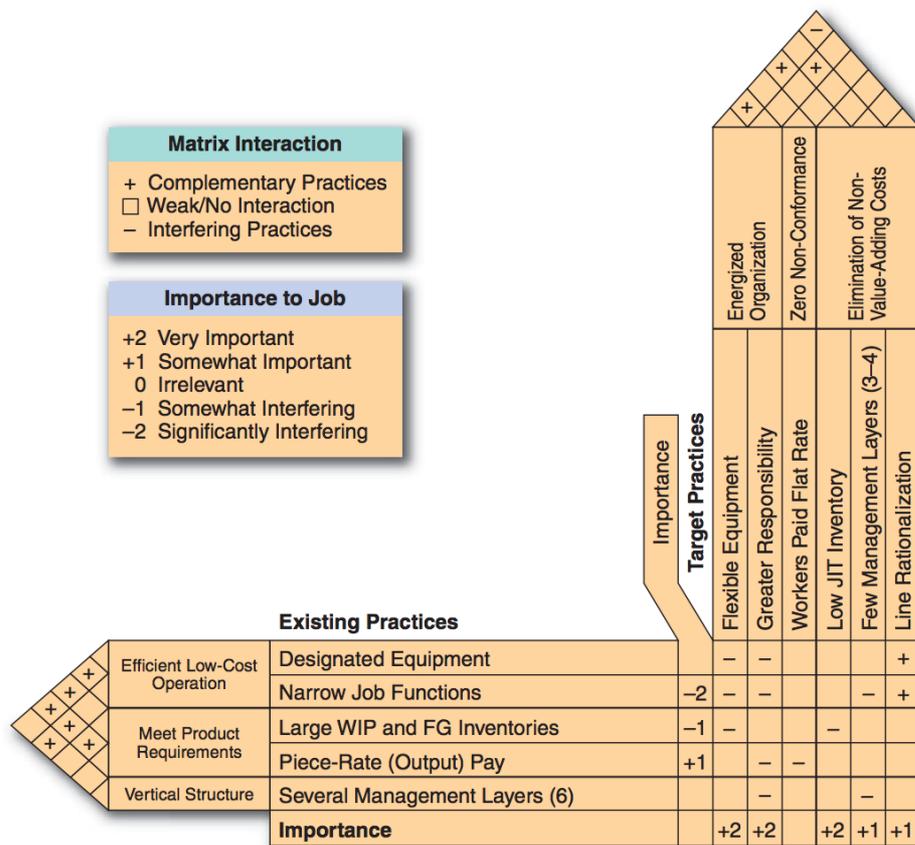


FIGURE 8. The Matrix of Change (Wheelen & Hunger 2012)

- **Budget:** Financial planning is essential to make sure the company's strategy is feasible and practical. Ideally, there should be no large financial constraints or anticipated costs that slow down the process of implementation. (Wheelen & Hunger 2012.)
- **Procedures:** After program and budget have been approved the procedures often called as Standard Operating Procedures (SOPs) must be developed. Such organisational routines are the primary methods by which companies accomplish certain activities. Properly planned actions have to be daily updated to be consistent over time and across all the departments and to reflect any changes in strategy. Thus, procedures help to streamline work projects and avoid poor service and duplicate communications. (Wheelen & Hunger 2012.)

### 3. *How* will everyone work together to undertake determined actions?

According to Wheelen & Hunger (2012), any change in a corporate strategy is most likely to require some modifications in a way an organisation is structured and in the scope of skills needed for further successful implementation. Even though it is a matter of fact that companies with similar strategies in alike industries tend to develop and follow similar structures, the organisational structure differs depending on the environmental conditions, and there is no optimal organisational design. Most commonly, the need of a more advanced structural change within an organisation is raised under the following conditions:

- an increasing environmental uncertainty
- a greater use of sophisticated technological production methods and information systems
- an increasing size and scope of worldwide business corporations
- a higher emphasis on multi-industry competitive strategy
- a more educated cadre of managers and employees. (Wheelen & Hunger 2012.)

Summing up, in order to overcome internal (lack of resources and ability, inflexibility of top management etc.) and external (economic obstacles, lack of market growth, labor shortages) blocks of change, all the company's resources including people and processes, its structure and the environment have to be mobilised and aligned towards the strategic objectives; otherwise, the organisational performance might greatly suffer. (Wheelen & Hunger 2012.)

### C. Evaluation (monitoring)

The evaluation and control are as significant as strategy formulation as it ensures company's effectiveness in accomplishing the desired results. The process of monitoring company's performance is conducted as a five-step model of feedback proposed by Wheelen & Hunger (2012):

1. **Determine what and how to measure** - The implementation processes and results should be those that can be measured in a reasonable, objective and consistent way. Both quantitative and qualitative criteria can be used for comprehensive assessment.
2. **Establish performance standards** - The detailed expressions of strategic goals which are acceptable performance results must be set as a benchmark including acceptable deviations.
3. **Measure actual performance**
4. **Analysing variance between actual and standard performance** - When analysing the gap between the actual and desired performance, the tolerance range is defined. In case of a positive deviation (better than expected results), the evaluation process stops here. Otherwise, the cause of deviations should be identified and corrective actions must be enacted to overcome it.
5. **Take corrective action** - If practice shows the results falling outside the desired benchmark new actions have to be developed considering the following questions:
  - Is the deviation caused by a chance fluctuation?
  - Are the processes implemented incorrectly?
  - Are the processes suitable for achieving the desired results? New action must not only fix the existing deviation but prevent its happening in the future as well.
  - Who is the most appropriate person to take corrective action?

In addition, evaluation and control systems have to be established accordingly within a company to monitor certain functions, divisions, projects or financial indicators. It is important to remember that strategy formulation and environmental scanning which are essential to strategic management are only the beginning of the main process, since the implementation with aligning and carrying out all the day-to-day operations in a workplace is the stage where most failures occur. (Wheelen & Hunger 2012.) The whole strategic planning process can be summarised in Figure 9 provided below:

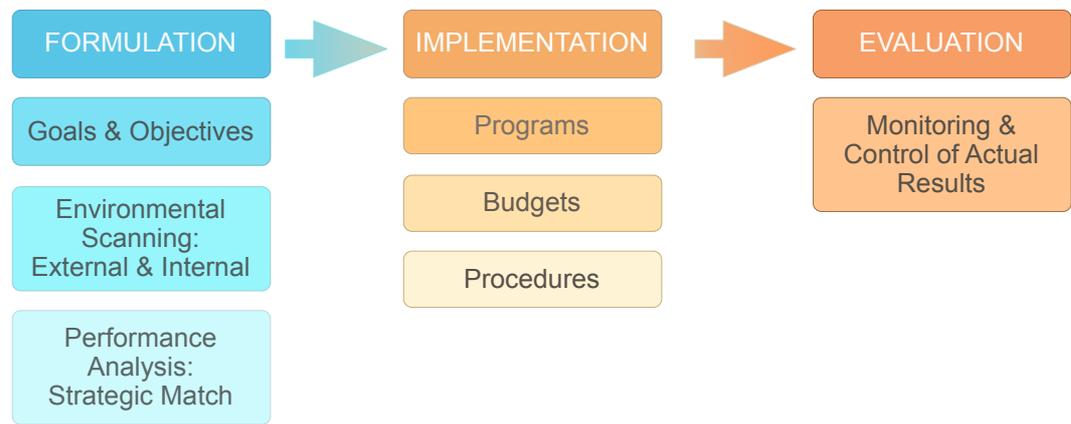


FIGURE 9. Strategic Management Processes (Modified from Wheelen & Hunger 2012, 301)

#### 2.4 Strategic planning in SMEs

According to Lobontiu (2002), over the recent decades, applying strategic management to the operations within small and medium-sized enterprises has become mandatory due to its role in generating employment and competition, promoting innovation and adding value to economic wealth. Even though most of the research practices and data on strategic management are extensively available in regards to large established corporations, the relevance of strategy in small businesses does not diminish in comparison with bigger entities, and the latter can even display an explicit strategic competitive behaviour. There is not yet universally preferred strategy-making style recognised by entrepreneurs and owner-managers, however, some generalisations can be concluded on SMEs behaviour and common characteristics in a context of strategic management. (Lobontiu 2002.)

First, one substantial distinction of SMEs orientation in the market is their focus on short-term financial success rather than long-term sustainable growth combined with entrepreneur's inability to develop the dynamic interactions between an organisation and environment (MacGaryor 1999). Secondly, small businesses are likely to provide a confined range of products/services commonly operating in a single market meaning the scope of firm's operations is less likely to be of a strategic issue. Thirdly, SMEs are usually privately-owned which affects their ability to increase capital. Finally, in an environment of intensive competitive pressures, a small firm is strongly dependant on the knowledge of those running its business and is unlikely to have an access to a complex market analysis. These factors lead to a conclusion that the variety of strategic options can be significantly limited within a SMEs sector and the resources, especially financial, can become a major issue. (Chiew 1998.)

According to Sandu (1997), even though the strategic behaviour of SMEs is different and hard to define due to the unclearness of a small business' boundaries, the actions of a manager can be precisely identified. Some of the demonstrative features in strategic planning processes can be described as follows:

- Intuitive or empirical experience based strategies, not formalised and structured, are usually applied and the nature of strategy is affected by the entrepreneur's personality, a system of values and objectives.
- Strategy implementation barely influences a firm's structure due to a small size of an enterprise; it affects only fundamental structures.
- The strategic horizon of SMEs is limited due to the high uncertainties of their environment.
- The strategic concept for a SME has to be more flexible to be adaptable to change which is reflected in identifying and taking advantage of the opportunities and avoiding potential threats.
- Most of the SMEs practice a combination of strategies rather than isolated competitive strategies. (Sandu 1997.)

Despite the fact that the greatest asset of a business operating in SME sector is its flexibility in a rapid adoption of new techniques, products, strategies and structures, the strategic planning techniques applied to guide large businesses are not appropriate for smaller ones due to a scale of their operations, different cost structure and scarce budget resources (Curtis 1983). Moreover, the strategic process in SMEs has usually shorter planning horizons, is relatively informal and unstructured in nature and accepts somewhat open initial objectives (Robinson & Pearce 1984).

Virtually, the problem of defining the niche or narrow market segment is particularly crucial for small firms, as they have to specify a type of their competitive edge that in turn would comply with their competitive position. It is acknowledged that SMEs cannot compete with larger corporations in terms of investment in Research and Development (R&D), economies of scale or significant promotional expenditure. However, such competitive advantages as lower costs and prices, faster delivery, better quality service, a good brand image or engineering capabilities can become essential elements of strategic behaviour. Small firms are also more likely to maintain a close contact with customers, deliver more responsive service, keep higher employee loyalty and willingness to

innovate within an organisation. (Maclaran & McGowan 1999.) It has also been proposed by Perry (1987) that the most suitable growth strategies for SMEs are a product or market development due to the limitations in resources and tiny market share. As well, focus strategies which emphasise innovation and high quality are most preferred for small businesses (Porter 1980).

In general, the relative growth and profitability of SMEs are mainly connected to an innovative product-market position with an analytical approach to decision-making directed by a clearly organised strategy. Thus, strategy formulation and implementation in small business rely more on being reactive with limited comprehensiveness, while the strategic success is strongly determined by the ability to scan the external environment and adapt to its changes. (Lobontiu 2002.)

## 2.5 The Role of Strategy and Conclusion

Strategy improves and simplifies decision-making process by restraining a range of alternative options and reducing time on search of the most appropriate solutions. Strategic Management provides a firm with a clear sense of vision and allows companies to be more proactive focusing on strategically important aspects. The strategy-making process encourages using analytical tools and allows the knowledge of different individuals to be integrated. It can also serve as a coordination device, or communication tool to effectively deliver the most important information about objectives and performance targets across all business participants. Accurately executed strategic management navigate and orientate individuals within organisations, make them more mobilised, encouraged and following the same focus and direction.

In general, in order to achieve a successful strategic fit a company should be consistent in its external environment which includes relationships with its rivals, customers and suppliers and internal goals, capabilities and structures. (Jordan & Grant 2015.) Figure 10 illustrates strategy as a link between a firm's resources and environment.

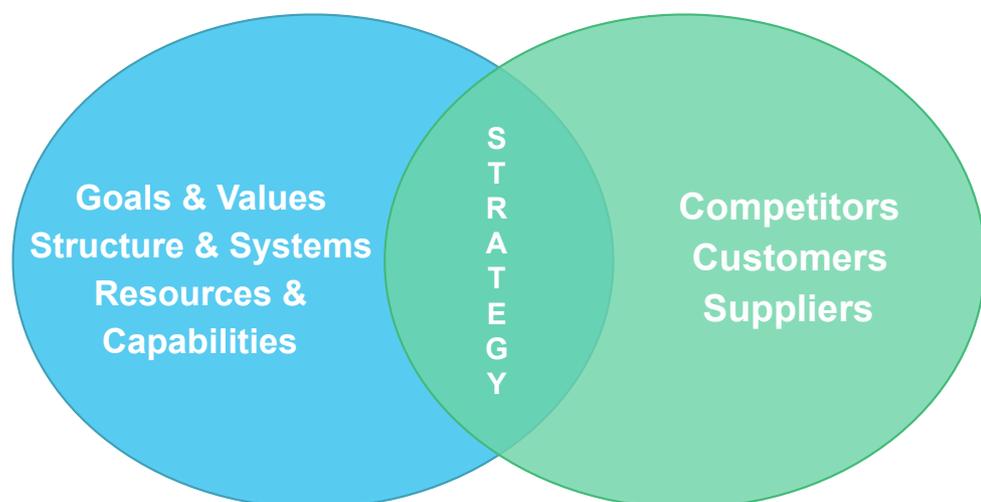


FIGURE 10. Strategy as a Link Between Firm and Its Environment (Modified from Jordan & Grant 2015)

Finally, strategy is executed by transforming organisational structure, selecting the appropriate people to take actions, and communicating accurately how to put the strategy into action (Wheelen & Hunger 2012).

### 3. CONSTRUCTION MANAGEMENT

This chapter intends to explain the nature and scope of construction industry and the specifications of management within it, giving an overview of the processes and stages that take place within building and construction projects.

#### 3.1 The Construction Industry Image and Scope

The construction industry covers everything from small projects easily carried out by a sole worker to vast power plants and skyscrapers with hundreds of people engaged and decades of planning and construction (Dykstra 2011). It is immense and diverse in nature, and the processes it embraces in comparison to the mass production of manufacturing industries are centred on creating an end product which is unique in design and fabrication method (Halpin & Senior 2011).

The so-called built environment is presented by a combination of each facility that reflects a certain need of a society and is manifested as a separate market or sector within the construction industry. Every sector is different in the means, methods and materials used and varies with the types of structural frameworks, suppliers and manufacturers, tools and equipment, techniques and qualifications, contractors and sources of funding. (Jackson 2010.)

The total shape of construction market is presented in Figure 11.

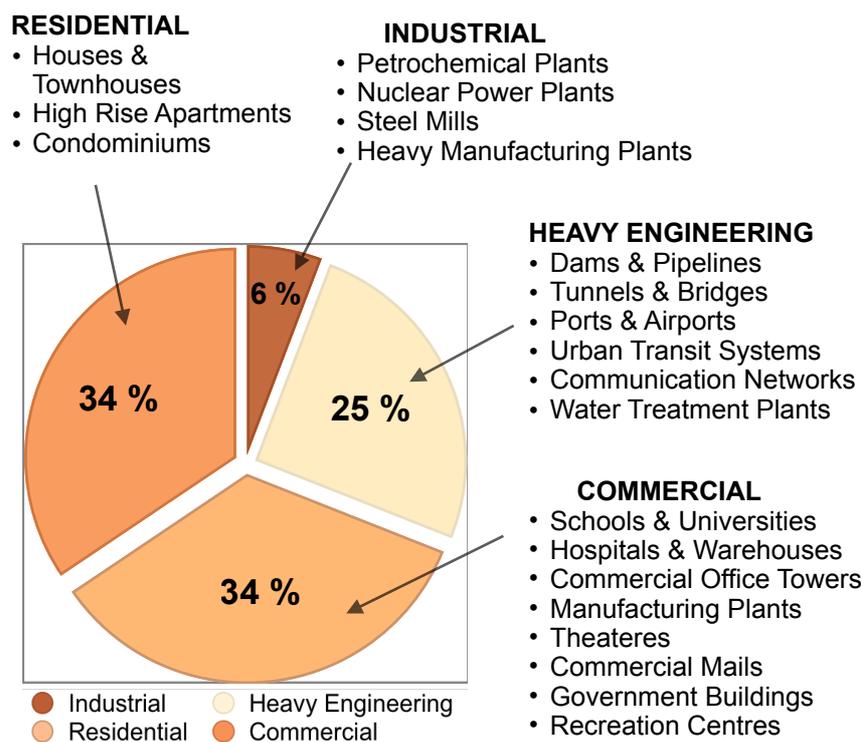


FIGURE 11. Breakdown of Construction Industry Segments (Halpin & Senior 2011)

Any construction project undertaking is complex and distinctive in nature as it requires a varied contribution of skill-set and high risky business endeavours to reach the desired outcome. In order to understand how the processes inside construction industry work it is crucial to be aware of all the primary and secondary players involved and roles they perform. (Jackson 2010.) There is typically a general contractor hired by the project owner (an initiator at the same time) to coordinate the physical work needed to complete the project. The first stage is concerned with producing design and engineering details of a project which is further to be transformed into smaller multiple segments of work performed by separate subcontractors. The overall project is taken under control of a general contractor while the subcontractors are in charge of smaller tasks. However, all of them are dealt with controlling construction time, costs and quality. The range of management activities differs depending on the level of influence of a party, size and complexity of a project. (Dykstra 2011.) Figure 12 displays the influence of different engaged parties with various services and accountabilities on the project and its owner, where each player's power is essential to successfully fulfil project objectives.

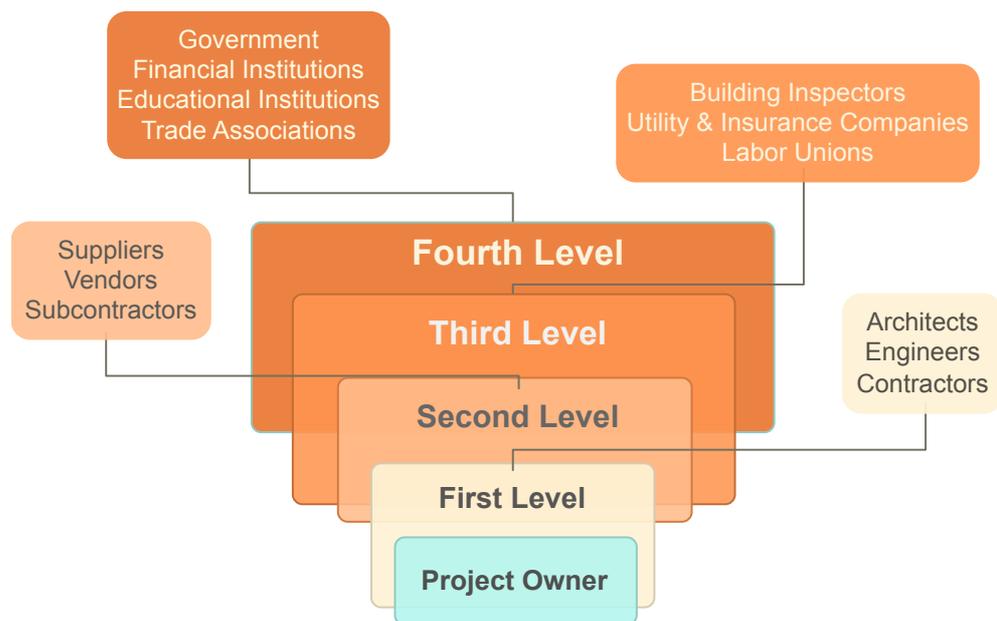


FIGURE 12. Levels of Influence in Construction Projects (Modified from Jackson 2010)

In general, the face of construction industry is constantly changing and the complexity of projects is increasing as well. It remains to be a highly labour-intensive market and one of the major economic contributors by creating new employment opportunities, affecting national Gross Domestic Product (GDP), providing infrastructure of any country and thereby satisfying basic societal needs.

### 3.2 Construction Management: Definition and Scope

Construction Management (CM) embraces an effective organising, planning, coordination, application, monitoring, control and reporting of the key business operations such as production, procurement, marketing, administration and finance which are essential to reach high economic performance and profitability for an enterprise involved in the provision of construction facilities. This function can be undertaken by a client, contracting firm or a consultant company, public body or a combination of different stakeholders agreed to bring a project into fruition sticking to safety and quality levels, time and budget scheme as well as to expected aesthetic, innovative, environmental and socially responsible impact. (Harris & McCaffer 2013.)

Construction management involves several tasks and is typically delivered by a construction management team whose main purpose is project optimisation via mitigating risks associated with time, cost, quality, and safety. Thus, its general functions must be fulfilled to accomplish such tasks as (Halpin & Senior 2011.):

- Project planning and scheduling
- Project estimations
- Contract administration
- Job site and construction operations management
- Risks assessment
- Project quality and safety management
- Performance monitoring.

The construction management is always resources driven and the key responsibility of any project manager within the construction industry is to realise a built facility most effectively on time and within a budget while simultaneously taking care of a crucial aspect of quality. The resources for construction management can be summarised in a framework called 4 M's of construction which involves such fundamental elements of any project: Machinery, Manpower, Materials, and Money. The essence of successful construction management comprises the efficient and timely application of all 4 components to a project execution. Thus, a construction manager has to strongly perform in a variety of skills being innovative and competent enough to reasonably deploy the limited resources available in a dynamic environment with no accidents or errors. (Halpin & Senior 2011.)

According to Halpin & Senior (2011), the construction sector has a certain hierarchy of processes different in their focus which can be presented as the key management levels of construction:

1. Organisational level deals with the legal structure of a company, management functional areas, interaction across its departments and the total portfolio of projects.
2. Project is a more specific level of activity where the project definition, drawings, plans and contracts are embraced along with the focus on time, cost, and resource control.
3. Operation & Process stage is concerned with the entire construction performance at the field level at the centre of which is the selection of construction methods and techniques.
4. Task level includes identification and distribution of duties across specific working units. (Halpin & Senior 2011.)

### 3.2.1 Project Definition: Construction Perspective

In order to move forward with understanding a specific field of construction project management, it is crucial to reach an understanding of a concept of project itself. The Project Management Institute (2000) defines project as a temporary effort undertaken to create a unique outcome (product or service), where “temporary” means that each project has defined beginning and end, while “unique” stands for a product/service that is distinctive in some way. Moreover, projects undertaken at different organisational levels have a certain goal or objective and represent a specific task the accomplishment of which requires various types of resources. (PMI 2000).

Construction projects that can be utterly diverse in nature share some common characteristics which distinguish them from other sectors. First, every project is built as a unique facility on a different location, under changing weather conditions and topographical environment, in particular. In other words, there is no testing undertaken in advance to ensure the project is to work out and all the errors have to be fixed during the process of construction. Secondly, the workforce is rather transient throughout various stages of the projects and the largest part of work is handled manually. Finally, most of the construction materials are nature-made and thus react to changing environmental and weather conditions which have to be taken every time under consideration of a construction manager. (Jackson 2010.)

There are certain factors called The Six Dials of Project Value that need to be managed in order to produce a successful outcome in the long run. As these dials are all interconnected which means that adjustment in one will unavoidably force a change in the rest. For instance, extending the project scope will ultimately increase time and cost schedules. (Jackson 2010.)



FIGURE 13. The Six Dials of Project Value (Jackson 2010, 38)

Despite these determinants shown in Figure 13, any construction project involves risks some of which are more or less predictable and manageable than others. Not only weather alterations, site conditions, transient labour or human errors directly affect the project implementation process, but organisational, political, economic and innovation risks as well. All these influences prompt a construction manager to assess the risks and situation, make quick but reasonable decisions and take the responsibility for the outcome. (Jackson 2010.)

### 3.2.2 Project Lifecycle Stages

Overall, even though the design and construction process is a complex undertaking, it is linear in nature and requires a comprehensive, systematic approach to move the project from the initial concept to the utilisation by an end user. Everyone engaged in construction management have to be familiar with the stages every project must be taken through (Jackson 2010):

#### 1. Design

The first project phase comprises four sequential steps that move the concept to the detailed drawings stage:

- *Programming and feasibility* activities are dealt with clarifying basic project goals and objectives, confirming the needs of the facility and the scope of works, agreeing on the budget, assessing possible risks and approving performance parameters such as time, cost and quality.
- *Schematic design* is the first step of conceptualising the project idea which is made out of rough sketches considering the aesthetic, functional and layout

factors in the selection of materials, sizes, textures, orientation, colours and other design patterns and specifications.

- *Design development* is concerned with the detailed investigation and research regarding the use of equipment, materials, and systems that will potentially be a part of the facility. Accurate pricing, value engineering and constructability reviews are usually performed at this stage.
- *Contract documents* are final working drawings and specifications which constitute a significant part in a legal contract and are primarily used for construction. (Jackson 2010.)

Besides, throughout the design process the plans and drawings have to be submitted to the appropriate building authorities for compliance reviews. Simultaneously with legal procedures, this phase ends up with the bidding process by distributing multiple documents to the contractors and finally awarding the contract. (Jackson 2010.)

## **2. Pre-construction**

This stage is also referred to as job startup and is mostly concerned with thorough planning and devising the course of actions that are most likely to lead to the satisfactory completion of a project for all the parties involved. The steps here include the following:

- Assignment of a team considering the project size, complexity and specific requirements.
- Due diligence including site investigation, soil testing and engineering to identify areas of concern and mitigate unforeseen conditions.
- Value engineering analysis of the design, products, materials as well as their installation, application and execution to define the suitability and cost-efficiency of the proposed solutions.
- The building permits must be received and inspection processes organised by the construction management team. (Jackson 2010.)

## **3. Procurement**

In construction management the procurement refers to purchasing the labour, material and equipment necessary for project execution and success. Two primary tools associated with this process are managing subcontracts through

the bidding process and handling the purchase orders effectively to prevent extra project costs and time delays. The goal of this stage is to secure bidders for every bid package who are competent, competitive and capable of performing the work within the project requirements. (Jackson 2010.)

#### 4. Construction

Construction is the execution of a physical job in accordance with the contract documents. The purpose behind the project management activities taken during the construction stage is to speed up and improve the efficiency via careful planning, scheduling and complying with the scope, cost, quality and timeframes. At this point, the construction management plan is developed by clearly assigning the duties and responsibilities of each party throughout the project procedures. (Jackson B. 2010.)

Jackson (2010) emphasises the following key activities at this phase:

- **Mobilisation** of all the resources which includes proper setting up of the equipment, materials and personnel before construction commences.
- **Pre-construction**, progress and special meetings for tracking the schedule compliance, reviewing activity plans and reporting on the general progress.
- **Construction operations** comprising daily management and coordination of multiple materials and tasks on the job site.

During this stage time and budget along with the quality control and monitoring systems should be settled to track the project terms compliance and avoid any discrepancies and cost overruns. (Jackson 2010.)

#### 5. Post-construction

Effective project close-out is as critical for success as its start-up and any mishandling at this stage might have costly consequences further. Thus, the following actions have to be taken to ensure the project substantial completion (Jackson 2010):

- Project punch-out including the revision, final adjustments, and repairs noted as a result of cumulative observation
- Final inspection and commissioning (testing and checking of systems and equipment within the built facility)

- Certificate of occupancy to ensure all life safety codes requirements are satisfied
- Final documentation (warranties, operation manuals, reports) and completion

At the final stage upon finalising payments and delivering the last documentation parts, it is important to evaluate the project outcome from the two perspectives. First of all, the project has to be found compliant with the requirements for aesthetics, quality, function, time and cost set by the owner at the beginning. Secondly, the project is supposed to bring fair profit to the general contractor to be acknowledged as successful. (Jackson 2010.)

### 3.2.3 Project Planning and Scheduling

Completing a project on time requires a great deal of planning efforts. According to Halpin (2011), within construction projects, planning can be interpreted as definition and sequencing of work packages:

**Planning = Work Breakdown + Work Sequencing**, where the Work Breakdown Structure (WBS) is a hierarchical division of the project work into smaller manageable activities to which costs are applied and Work Sequencing is a particular order of work arrangements depending on their location, method and resources utilised within each involved activity. (Halpin 2011.)

In order to create a schedule, Jackson (2010) advises to include three main types of activities in WBS:

- Production activities associated with the project physical building
- Procurement activities which deal with obtaining equipment and materials for a project
- Administrative activities concerned with coordination of contract such as permitting, inspections, testing etc.

At the same time, the sequencing of work must consider the relationships between different activities, duration of each task and any existing constraints to define the most time and cost efficient work order. (Jackson 2010.)

The planning processes within construction projects take place on the strategic and operational levels. The former one deals with the high-level determination of project objectives, scope and timeframes, procurement and financial options. The operational planning, on the other side, is concerned with establishing the method of undertaking each involved activity considering the resources

requirements and their deployment. The descriptions of work execution are usually presented as a Tender plan, Construction plan or Feasibility plan. (Harris & McCaffer 2013.)

Moreover, Harris & McCaffer (2013) also state that various methods and techniques are utilised when planning both at strategic and operational levels to improve optimisation throughout the project lifecycle. The decision on choosing the most appropriate tool is based on some company- and project-related factors (Jackson 2010.):

- Company's size
- Volume of work
- Type of construction
- Project size and complexity
- Computer capability
- Contract requirements.

*Gantt Chart* (also called bar chart) is a scheduling tool used by project managers to specify certain activities in relation to their duration and responsible authorities. Gantt Chart provides a visually clear timeline as referred to in Figure 14 and works out its full capacity with not too complex projects - such as residential building - as it does not indicate the interrelations between different tasks and impacts across them. (Jackson 2010.)

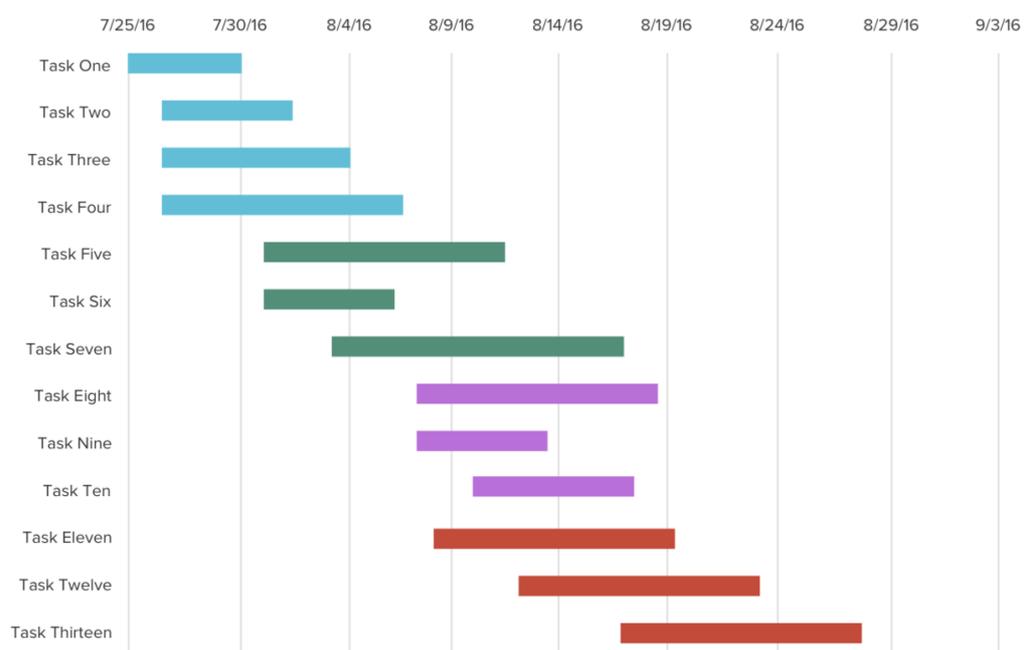


FIGURE 14. Gantt Chart Template Example (TeamGantt 2017)

### 3.2.4 Project Estimating and Cost Control

In order to fully understand the operations behind the construction project, it is key to mention one of the most influential decisions that a construction manager has to take as a part of estimating process which is concerned with the method of project delivery. There are three ways of project delivery that can be chosen by a project initiator. They vary depending on the number of contracts the owner executes, relationship and roles of each party to the contract, the extent of owner's and contractor's involvement, warranty provision on plans and specifications, design and construction activities combination. (Jackson 2010.)

- **Design-bid-build (DBB):** This strategy is the most traditional and common practice applied to a construction project. In this scenario the owner holds two separate contracts for design services, which go first, and construction processes at the end. The competitive bidding is applied whereby the client provides all the specifications and details on the scope of works that has to be done by a contractor and the latter gives the price (bids) on the given information correspondingly. All the competing contractors commonly bid on the same information. Afterwards, the client awards the contract to the one in terms of a certain project basing the decision on the most attractive price (low-bid selection), quality (qualifications-based selection) or both factors combined (best-value selection). (Jackson 2010.) DBB is most suitable for small and straightforward residential projects with a limited budget and conventional design (Dykstra 2011).
- **Design-build (DB):** This single-source delivery method represents an arrangement in which the owner has only one contract with a single design-build entity responsible for the design and construction of the project altogether. DB practice enables continuous communication of all the team players - designers, architects, contractors, manufacturers, and suppliers - throughout the project cycle as well as fast-tracking pace due to early contractor involvement. (Halpin & Senior 2011.)
- **Construction Management (CM):** In this case, construction management is viewed as services provided to an owner independently from a construction work. In other words, in addition to holding contracts with the designer-architect team and a contractor, a construction management advisor or CM agency is hired as an owner's representative. While the CM agency is not liable for the schedule, costs and the work performance, the CM-at-risk consultant - another

option under this delivery method - is responsible for the construction progress and carries financial obligations. (Halpin & Senior 2011.)

Upon deciding on the best bid costs the total project price must be accurately determined - this is where the estimating function of construction management takes place. The estimation is organised before the project is built, hence it only indicates the approximation of potential actual costs. Different type of cost estimates are done throughout the lifecycle, - feasibility and design phase, pre-construction and whenever modifications occur during construction - and the factors affecting project costs include (Halpin & Senior 2011):

- Project size and complexity
- Quality of building materials
- Project location
- Schedule and desired timeframe
- Market conditions
- Management effectiveness during project execution.

The data available on costs can be obtained via published cost data, referring to the previous experience (field-generated) or using information provided from tendering which is the most common and likely accurate practice. Previously mentioned WBS is an important input to cost estimation and supports the cost control during the project life cycle by defining and establishing a unique budget for each activity. (Halpin & Senior 2011.) In general, the cost estimating process is comprised of inputs using various tools and techniques to produce certain outputs, as depicted in Figure 15 (Nokes & Kelly 2007).

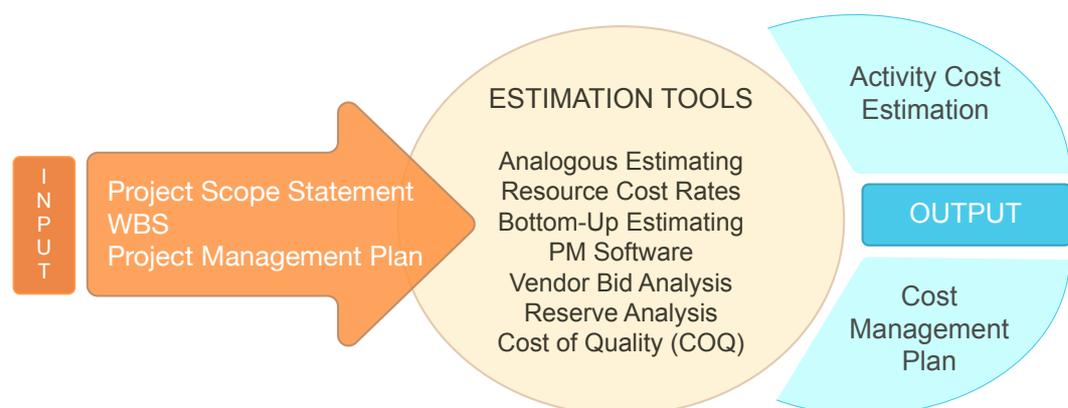


FIGURE 15. Cost Estimating Process (Modified from Nokes & Kelly 2007, 190)

### 3.3 Summary

This chapter has familiarised a reader to the concepts of the construction industry and project management within it, which supports further research findings and the development of a new plan.

The project management definitions and characteristics of a project are presented in relation to a specific nature of construction industry which is broad and comprises market operators on different levels with complex business models. Thereby, it requires an effective managing and coordination throughout all the processes from the project design and initiation to the post-construction and performance monitoring stages. There are various ways of project delivery method that can be selected by a project initiator (customer) and also multiple ways of evaluating and managing the project costs.

Construction management is always a risky ambition and the building project risks are classified according to four main categories: time, cost, quality, and safety. Sticking up to deadlines, budgeting and maintaining costs, evaluating risks and controlling safety regulations compliance are all crucial for successful project management. (Palasty 2014.)

## 4. CASE STUDY: CUSTOM DESIGN & CONSTRUCTION

The following chapter introduces a case company selected for this thesis to build and develop new strategic model basing on the theoretical framework. The general overview including the company's activities, background information, current areas of operation and the analysis of its business model are presented. Moreover, it provides information on the current state of construction market covering trends, challenges and opportunities focusing mainly on Sydney area and partly Australia as a whole.

### 4.1 Core Competencies and Strategic Positioning

Custom Design & Construction Pty Ltd (CDC) is an award-winning, multi-disciplined Australian owned company that provides design, project management and complete "turn-key" construction packages. Founded in 2006, the company has a profound over 10 years experience in a construction industry and positions itself as a specialist in delivering high-quality projects with a strong focus on customer satisfaction, workplace health and safety, excellent project management performance and an environmental sustainability. (CDC Website 2017.)

CDC strives to use the latest technology, build-ability methodology and eco-friendly solutions to combine design trends with commercial needs to better the environment of potential occupants. By now, the company's strategic approach is based on three main components which are crucial to its operations and excellent performance (CDC Website 2017.):

- **Industrial Relations**

CDC tries to attain sustainable practices and achieve efficient project performance via improved communications, greater control over cost, time and quality. The company aims at creating a dispute-free environment through consultation and common purpose in order to keep advance industrial relations capability and management focus. It is important for CDC to spend less time and effort on resolving grievances and compliance issues. (CDC Website 2017.)

- **Quality Assurance**

The Quality Management System (QMS) is used by the company as a tool for achieving the best practice outcomes across the organisation. In order to implement this policy, CDC is particularly focused on consistently monitoring and

meeting customers' requirements. QMS provides mechanisms to detect system shortfalls and stimulate process improvements. Responsibilities for quality are established by communicating them to all departments. (CDC Website 2017.)

- **Environmental Management**

CDC commits to operating in an ecologically sustainable manner by continually increasing the efficiency of its operations: reducing waste, pollution and the use of energy and resources in all areas, provide an environmentally sound workplace, monitor and assess environmental performance on a permanent basis through reports. Moreover, it is important to set objectives for minimising the environmental impacts of each project and identify, implement and promote the best practice Environmental Management Systems. (CDC Website 2017.)

CDC interacts closely with its employees, subcontractors, suppliers, clients and the community to develop and execute agreed environmental initiatives. As well, all environmental documentation is closely integrated with each unit's documentation relating to occupational health and safety, emergency response, plans and site operations and procedures and all staff members are aware of their responsibilities and competencies relating to environmental management. (CDC Website 2017.)

CDC is committed to certain corporate values. The company is aspired to:

- Deliver the highest level of consistent quality in all of its products and services.
- Excel in all forms of effective internal and external communication from stakeholder relationships to design and building.
- Research, understand and anticipate customers, markets and competitors and react with innovative solutions.
- Develop and maintain a transparent and effective organisation clearly defining all duties and responsibilities.
- Ensure cost and operational efficiency by testing various practices and applying appropriate methods and technology.
- Identify and understand opportunities to add value to the services provided by combining existing skills, professional knowledge base and resources.
- Act in the interest of customers, stakeholders, governments and private investors.
- Continuously enhance the compliance culture.
- Act efficiently, honestly and fairly at all times. (CDC Website 2017.)

## 4.2 Marketing Mix Model

4 P's, or Marketing Mix model, is known as a fundamental concept in marketing to identify the tools that company uses to achieve certain marketing objectives in the target market. It includes four main broad levels on which marketing decisions are usually made: product, price, place and promotion (distribution). However, in service marketing a more expanded model comprised of the initial 4 P's plus physical environment, people, processes is used as a so-called 7 P's. (Kotler 2012.)

The information presented below is a combination of data collected from the secondary source - the case company's official website - with the researcher's personal observations possible through being a part of the team during an internship period.

### **PRODUCT**

The company specialises on designing and building activities across different functional fields. These areas of expertise include (CDC Website 2017):

#### ***1. Residential & Commercial Projects***

- Custom designed housing solutions
- Multi-level apartment blocks
- High-rise & commercial buildings
- Land Subdivisions

#### ***2. Educational & Government Projects***

- Refurbishment of government centres
- Renewal and reconstruction of Private Childcare Centres
- Schools engineering

Custom Design & Construction is a one-stop-shop for all design and building needs. Thus its main services are wide in range and nature on various stages:

- A. Design and architecture consultancy
- B. Pre-construction: Quantity surveying, estimation, contract administration
- C. Construction: Budget and cost control
- D. Post Construction: Home warranty, liabilities and customer service.

In general, the company executes various project management activities taking care of on-time project delivery overseeing safety, quality and environmental responsibility. (CDC Website 2017.)

## **PRICE**

CDC provides affordable design solutions at the same time undercutting the market to out-rival its competitors. As the company has to support its brand image, the price strategy should correspond to this purpose. In practice it means that CDC establishes the price per house design and construction lower than a market average. CDC constructs its pricing by estimating the project costs and adding to the final marketed price a builder's margin the standards of which vary depending on multiple factors. CDC is committed to providing reasonable and fair pricing and is backed by the value that it brings to customers in functional, social and psychological contexts. (Interviewee 2017.)

## **PLACE**

Services are delivered to customers mainly via office spaces where a customer is met by one of the customer service representatives and then further demands are discussed directly with the managing director. As the company is concerned with construction it is barely possible to introduce services any other way than physical office fields. A customer has to present his/her requirements and provide sufficient details of what he/she wants in relation to a future project; thus, all the main negotiations take place in the head office.

CDC headquarter is located in one of the suburbs of the Australia's commercial capital - Sydney. The location is beneficial for reaching out new customers for the reason that there is a considerable number of undeveloped regions close to the company's location which have prospects for being built in the future. Another argument in support of its favourable place is that it avoids facing a tough competition existing in the central part of a huge city Sydney. Otherwise, such a relatively small builder as CDC could remain completely unnoticed amongst the other more powerful and larger construction firms.

In addition, the process of reaching CDC has been made more comfortable through its official website, where customers have an access to all the company's information about its activity, services, completed projects etc. It is also possible to contact CDC via phone or email left on the website and send an enquiry or request a quote online.

## PROMOTION

CDC uses several communication channels to contact customers. The main priority is to cultivate new clients rather than retain existing ones, since the company operates on project-based principles. Once the project is completed (an infrastructure is built), the customer is gone having the material outcome left with him/her for many years ahead. Thus, there are currently two main ways the case company promotes its activity and encourage orders: direct marketing and online marketing.

Direct marketing is an unchanging ongoing activity which is about finding potential clients via sending personalised mails in those regions defined to be largely undeveloped. CDC is continuously looking for land and property owners ready to sell their assets so that it could build on this land in the future, which is one of the most important ways to find new opportunities and scale up the business to new regions increasing the volume of orders.

Taking into consideration a small size of the company the first priority method to reach the target audience is online and media marketing. CDC is limited in online activity, though it is holding profiles on several social media platforms such as Facebook, Instagram and LinkedIn periodically making updates on the new projects. The official website with all the services, projects information, customer experiences and contact details is one of the key elements of overall promotion strategy. Direct communication with customers is, however, the most preferred option due to the specificity of the industry.

The last, but not least crucial activity is the company's brochure and catalogue which play a significant role when customers come straight to CDC's headquarter office and would like to see physical evidence of the previous projects and the history record. The general promotional activities flow are summarised in Figure 16 as follows:

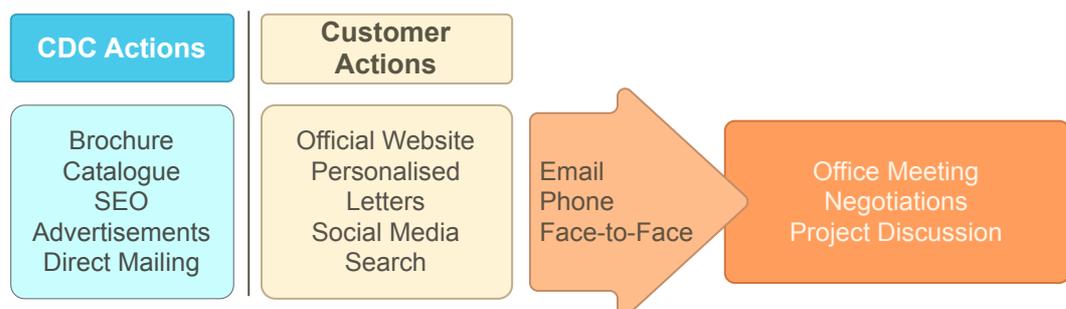


FIGURE 16. Customer Journey and Promotional Activity in CDC

**PEOPLE (incl. partners)**

All the staff involved in the processes meet the requirements of a high performance in their particular area of competency. The CDC's team consists of design and architect skill set, licensed builder qualifications, contract administration and marketing management. The customer service consists of a few employees who are in charge of providing the full support and assistance to customers if they call, email or come directly to the office.

Moreover, CDC constantly seeks out Joint Venture (JV) partners and works closely with landowners who share the same vision, passion for excellence and mutual qualities of transparency, trust and flexibility at all levels of relationships. The company is interested in establishing long-lasting and profitable partnerships to maximise the value of the return on investment. (CDC Website 2017.)

**PROCESSES**

The processes are distributed and handled across different departments depending on the specification of task or customer request. In other words, the roles are not strictly defined among the company's employees which is a recently integrated model of operation for CDC. Earlier, the range of tasks was limited for a certain assistant/manager, however, now it allows a broader perspective on different projects when the duties of employees can vary and change depending on their skills and needs of a project.

**PHYSICAL ENVIRONMENT (Evidence)**

The main physical product CDC provides is a built infrastructure or facility. An intangible element of its activities is the provision of customer assistance, contract administration and project management services. Besides, the office and some promotional materials, such as brochures and catalogues, are a part of the physical environment that supports service delivery.

### 4.3 The Construction Industry Image: Australian Market

#### 4.3.1 Composition and Role

The construction industry has a great impact on Australian economic development, since it is the third largest contributor to its Gross Domestic Product (GDP) in terms of its output volume - 7.8% in 2014-15. The upstream and downstream supply chain processes are also facilitated by construction and are complex and closely interrelated, comprising manufacturing (equipment components and materials), services (engineering, design, surveying, consulting, lease management), traditional construction trades, real estate and financial services sectors. Altogether with transport and wholesale trade they extend construction-related activities to 20% of the economy. (AiGroup 2015.)

According to Australian Bureau of Statistics (2010), the key operational areas of construction industry include private and public sectors, which are engaged in three extensive fields of activity:

- **Engineering construction** - the largest sector (mining, main infrastructure, heavy industrial resource-based projects)
- **Residential building** - the second largest market (flats, home units, houses and townhouses)
- **Non-residential/Commercial building** (industrial premises, offices, hotels, shops, hospitals, entertainment facilities)

Such economic forces as demand and supply of these services are mostly driven by population and income growth rates, technological changes and industry activity, commodity cycles and consumer confidence, changes in inflation and interest rates. Moreover, government policies such as taxation, industrial and planning regulations and land allocation have a strong effect on infrastructure, pricing and housing projects. The availability of such resources as labour and building materials, and transformations within closely operating sectors (e.g. manufacturing, mining, agriculture), have an influence on the industry as well. (Australian Bureau of Statistics 2010.)

Last but not the least significant for an industry's good performance are highly developed industrial relations and an intense competition that encourages widespread transmission of innovative production practices. (McKinsey Australia Office 1995.)

The primary focus of construction in Australia is a domestic market which is extremely fragmented with nearly 338,000 businesses representing more than one-fifth share of the total number of firms in Australia. The majority of industry participants are sole operators or small businesses with less than 20 employees (98.6% of construction businesses). (AiGroup 2015.) On the one hand, it shows the importance of construction industry for Australian employment, while on the other, the harshness of competition among different building firms.

#### 4.3.2 Industry Trends

As can be derived from Figure 17, Engineering Construction is halfway through an abrupt decline due to further falling demand on mining-related construction and large infrastructure investment from recent peaks. At the same time, residential building is experiencing its own boom and is forecast to stay solid due to high approvals rate, low mortgage interest rates, urban transport infrastructure developments and robust population growth, even though the upcoming recession is on its way. In general, both sectors are still going strong, while non-residential building activity has dropped and is expected to remain relatively steady in the next 10 years. (ACIF 2017.)

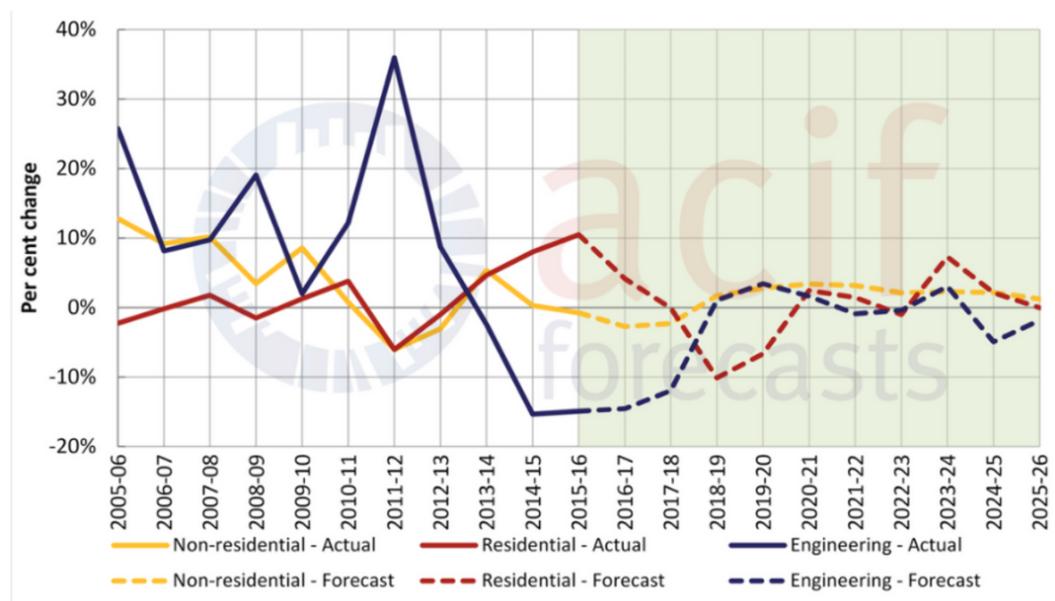


FIGURE 17. Actual and Forecast Activity in Australian Construction Market (Australian Construction Industry Forum 2017)

EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortisation) which is one of the measures of profit volume have increased by 3.3% during the period of 2014-2016, meaning the demand for construction services has been undergoing a substantial growth (AiGroup 2015). The segment share of construction work differs significantly by state and territory (Kumar & Hart 2014).

The breakdown of Australian construction work value is presented in Figure 18.

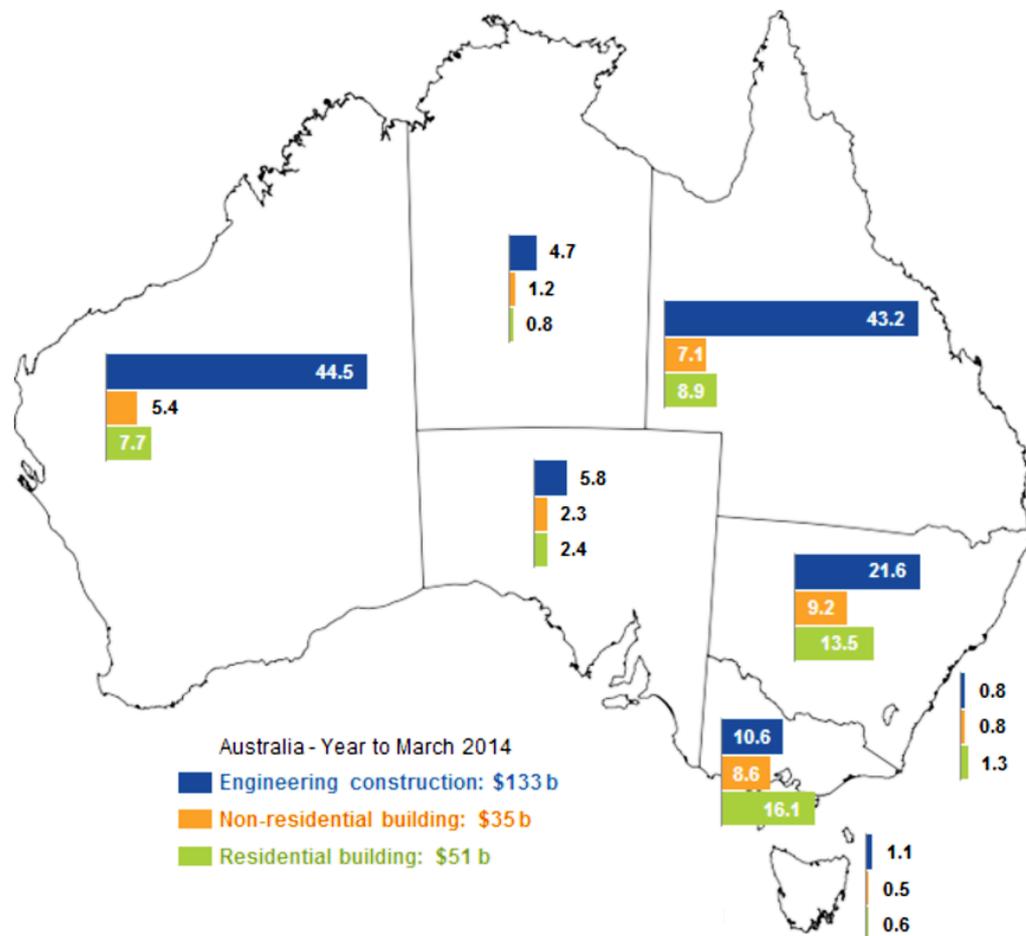


FIGURE 18. Construction Work Value (Kumar & Hart 2014)

#### 4.3.3 PESTEL Framework for Australian Construction Market

##### Political

The global shifts in political power and dominance mainly over the last decade present both risks and opportunities for the Australian construction sector. Overseas construction market players have been unprecedentedly active purchasing local businesses and competing for projects. (Loosemore 2015.) For instance, developing Asian economies, rapid urbanisation and escalating population are creating an apparent need to accelerate construction speed to

keep up with infrastructural demand. It forces Australian policymakers and market participants to generate more cost-effective developmental solutions. (Hook 2017.) The Australian government, however, encourage them to do so as they bring new clients, supply chains and innovations attempting to improve a problematic construction sector in Australia which used to be of a low productivity and innovation (Loosemore 2015).

One of the key influences affecting the residential building, infrastructure development and pricing strategies is government policies. Decisions on land subdivision, resources and labour allocation, taxation, industrial and planning policies are those levers of governmental power which can determine industry's ups and downs. The government also takes an essential part in undertaking large engineering projects related to decision-making on commencing major transport, railroad, telecommunications or heavy industrial infrastructure projects. (AiGroup 2015.) One of the key priorities of Australian federal budget is quality infrastructure building to ensure a proper development and growth of cities and regions, while another aspect of involvement is supporting more affordable residential housing provision (ACIF 2017).

As for recent government activities, active selling of public housing by the state governments has well affected regional housing markets. Many local governments have disseminated their public housing stock and labor into rural and regional communities which led to a lower supply of affordable apartments and intensified rivalry in real estate markets. Simultaneously, some towns have experienced the withdrawal of government investment and reduction of ownership which has resulted in a significant deterioration of dwellings. (Beer 2017.)

### **Economical**

Broadly speaking, the substantial investment boom in mining has led to considerably higher levels of construction activity over the past years (AiGroup 2015). Policymakers state this boom is followed by lower mining investment levels and inflation is predicted to increase gradually as the national economy strengthens (Trading Economics 2017). At the same time, it is important to note that Australia was found to carry out poor investment planning and allocation of resources wasting billions of dollars spent on infrastructure (Hook 2017).

If taking a closer look to a specific area of Sydney, there are several factors that can be defined as those most influencing the outlook for the residential property market. There has been an apparent demand shift towards new residential

buildings instead of to old apartments, which in fact exceeded the increase in established house turnover. At the same time, the price rates on established properties still remain higher than on new dwellings whilst the relative affordability of new houses remains highly supportive of demand at current levels. The central point of a long-term outlook in Sydney area is the prospects for household income growth and overall local economic activity. The considerable upswing in Sydney's construction cycle is forecasted to take place across transport infrastructure networks, apartment and non-residential building. (Anderson 2015.)

There have been many discussions around the Australian housing overheated market as it has some of the most unaffordable housing markets globally, whilst Sydney is ranked to be the second least affordable in the world after Hong Kong. One of the main factors behind this housing crisis across the regions is challenges in new building projects, where the largest barrier is the land cost unstopably rising in and outside the capitals. (Beer 2017.) One of the key findings that is worth attention is Sydney's deficiency of dwellings which supports the price rises while being stimulated by steady low interest rates and strong economic conditions. Sydney's dwellings undersupply in a combination with an increasing investor demand and healthy sentiment in the market is forecast to keep reinforcing further price growth in this environment while discouraging both investors and owner occupiers. It, however, records extremely low interstate migration outflows which prevents its dwelling undersupply from being absorbed faster than could be otherwise expected. (Urbanalyst 2015.)

In fact, the average size of a household keeps declining and forcing most of the market participants to seek cheaper housing alternatives. Moreover, an inflation rate affects the construction industry in a way that it strengthens cost-sensitivities around new developments and infrastructure maintenance. (Hook 2017.)

## **Social**

Australia is among the most urbanised countries in the world with high rates of labour productivity and constantly increasing employment rates. Along with that, the wage rates are expected to keep rising which is a positive indicator of a better level of living and a large contributor to the overall purchasing power. (Trading Economics 2017.) In addition, the constant annual increase in population rates (Australian Bureau of Statistics 2017) provides promising prospects for the entire construction industry in terms of potential demand, especially on commercial and residential building. On the other side of the coin, however, is the ageing Australian workforce which is hardly able to maintain the physical demands of

construction onsite jobs. It becomes a great concern for the whole nation when exhaustion and other health implications come with ages which is especially crucial in the construction sector where a healthy physical state is required to get the job done. Another important issue is that the industry is still strongly reliant on its manual labour, which puts pressure on its workers and market caused by massive skill shortage. (Hook 2017.)

From the viewpoint of Sydney region development, the local unemployment rate is at the level of 5.8% and the increase in workers is limited to an existing labour force. Whilst working hours across local construction sector are supposed to increase, the hourly rates will be lifted up as well which is most likely to improve mortgage affordability and raise household incomes. (Anderson 2015.)

While newcomers and immigrants coming to Australia unavoidably push up the prices on housing, one of the main factors affecting land and house extreme unaffordability is changes in Australian lifestyle and living preferences. Affluent city buyers have a common feature to occupy a newly acquired property for nearly several weeks a year which affects housing market cumulatively in the long-term. (Beer 2017.)

### **Technological**

As the national economy of Australia moves away from the mining boom, operators in the construction industry are hunting for efficiencies to bring them a competitive edge. Those businesses embracing technology to advance their operations are most likely to transform into market leaders in satisfying the demand of Australia's growing population while reaping profitability and efficiency benefits in the process. (Sinclair 2016.) Moreover, the companies that would gain a better digital view are likely to have a better access to global construction markets and be more encouraged to invest in new technologies and their labour (Sourceable 2016).

Sustainability, cost and time effectiveness, and waste reduction have become the primary focus that drove the invention of much innovation and new technology which is mainly reflected in modular construction (pre-fabricated homes built off-site cheaper and faster), super-strong innovative materials, devices and energy technologies (e.g. self-healing concrete, solar generated hot water systems, photovoltaic glass converting light into electricity etc.), 3D printing that enhances strength and durability (Hunter 2017). Along with these, incorporation of robot automation, which makes the processes increasingly safer and more efficient,

and drones on building sites will shape the construction industry in Australia in the nearest future (Hook 2017).

Despite the fact that construction industry has always fallen behind other industries in the area of high technologies it has been proved that productivity growth of 30-40% can be largely facilitated by the incorporation of emerging high-tech solutions (Loosemore 2015). Thereby, digital technologies can be potentially applied to workplace safety maintenance via the allocation of smart education and cloud-based technology such as remote diagnostics of the construction area and equipment (its conditions and functioning), and integration with systems of personal safety (Sourceable 2016). The example of the latter is wearable technology designed to mitigate budget and time risks while fostering productivity rates. The most innovative wearable devices are presented by safety vests with integrated GPS navigation, hard hats with virtual display masks, wireless ultra-mobile wearable computers and virtual (VR) and augmented reality (AR) appliances to maximise an experience of design elements. (Hook 2017.)

When assessing the success of construction project management within Australian Architecture, Engineering and Construction (AEC) industry, it would be of a vital importance to mention the Business Information Modelling (BIM) technology that has recently made a revolutionary change in a way the construction projects are being carried out. BIM is a digital representation of physical and functional features of a certain facility to manage the project data and building design throughout an entire building lifecycle. (Gelic, Niemann & Wallwork 2016.) Its popularity has stemmed from such existing industry issues as insufficient integration across linking parties of the supply chain and between the project stages. Companies that have incorporated BIM tools have recognised substantial benefits embracing cost and time savings, increased collaboration and communication across the project management team, improved asset management and reduced industry fragmentation. (Alabdulqader 2013.)

Described above are some of the emerging technologies on the horizon promising to transform the construction sector ahead. Even though Australia is highly advanced in using and embedding hi-tech innovations, there are certain risks to be aware of including obsolescence, integration, security, costs, training and skills deficit, limited understanding of new practices. For instance, a recent research has revealed that existing level of skills in the construction industry is not developing fast enough to integrate new technological solutions, and there are issues of synergies and interoperability while the work processes are reluctant to change to effectively accommodate them. (Loosemore 2015.) This

can be largely resolved by progressive investment into educating business and local communities, customers and financiers of the benefits and upsides these technologies bring - less waste, reduced labour costs, fewer defects, better health and safety, increase productivity etc. (Sinclair 2016).

### **Environmental**

Decisions taken by governments and businesses on water usage and conservation, energy generation and utilisation, and control of greenhouse gas emissions all influence the environment and the socio-economy. Not only them, but the infrastructure building itself significantly impacts the environment. Direct impacts mostly reflected in the resources usage (land, materials and energy) are combined with indirect ones including factors of location (ecological sensitiveness of area), the building use throughout its life-span and the urban structure built. There has been observed a substantial decline in environmental concern across all the states of Australia from the beginning of the 20th century. Younger people (below 50 years old) and those living in capital areas are more concerned about water shortages, environmental and climate changes than the rest. (Australian Bureau of Statistics 2012.)

It is of a significant importance to track emissions from activities within the construction industry due to its crucial position in the national economy. Even though Australia contributes only 0.33% of the world's population it is ranked as one of the highest emitting countries globally in terms of per-capita emissions. (Yu, Wiedmann, Crawford & Tait 2016.) Thus, Australia is currently not on a track to meet its established climate change targets in considerably reducing carbon emissions by 2030 in compliance with the Paris climate agreement concluded in 2016 (Patel & Woodley 2016). Materials that play a major role in embodied emissions are commonly selected on a base of their durability, energy consumption during the lifecycle, recycling potential, transportation conditions and environmental impact of all component processes, and Australia is in a transition stage towards more eco-efficient resources (Chandler 2016). The positive prospects are that prices on carbon-rich processes and materials are expected to go up. Considering that up to 80% of a company's carbon footprint is embedded in its supply chain, large corporations are already starting to put pressure on their suppliers in an attempt to reduce carbon emissions. (Loosemore 2015).

Construction contributes 40% of Australia's waste generation in total which is though almost entirely recyclable. Thus, there is a significant potential to reduce the environmental footprint from construction by recycling and reusing building materials which in general improves eco-efficiency principles application throughout the design and life-cycle of a building process. However, it has been concluded that successful reduction of waste generation in the residential building sector more extensively tackles with a number of challenges such as the culture of over-supply, development in material quality systems and influencing consumer choices that define material selection. (Chandler 2016.)

From the perspective of environmental influences, the construction sector in Australia mostly suffers from nature impacts - rising average temperatures, extreme weather, heatwaves and storms which are forecasted to increase in severity and frequency leading to setbacks in infrastructural projects. Such conditions directly affect the industry's productivity and project planning processes. On the other hand, it is a reasonable ground to adopt new models and construction estimating softwares which would help to mitigate the risks and emergency costs making complex projects more flexible. (Hook 2017.)

### **Legislative**

All the activities and processes within the construction industry are protected by the construction law, planning legislation, codes and building regulations applied to any building project. They govern the employment relations and rights, disputes, contingency events, building process, occupational health and safety etc. (Australian Government 2017.)

As for the legal issues affecting construction industry one of the greatest challenges is raising ethical concern which involves systematic corruption, organised crime, unlawful conduct, physical and verbal violence, intimidation and threats, abuse of right of entry permits etc. However, the Australian government is taking action towards building better workplace relations framework by having recently established Australian Building and Construction Commission (ABCC) which ensures the construction work is executed fairly, productively and efficiently. (Westacott, Pearson & Willox 2016.)

The construction sector has a larger shadow economy than any other Australian industry which is harmful to maintaining taxation revenue, healthy business competition and proper safety and quality standards. An illegal consumption of alcohol and drugs, especially on-site during the building process, is another

informal activity that produces a background challenge for improving the well-being of constructors. (Chandler 2016.)

As the issue of severe housing unaffordability has been put as one of the central aspects of the Australian construction market analysis, some influential factors from a legal perspective certainly arise here. Thus, for instance, planning restrictions and laws which are supposed to protect native vegetation on valuable and productive agricultural land leave no more land available for further urban development. (Beer 2017.)

Overall, Australia still remains one of the least corrupted countries in the world and is ranked as one of the global most well-regulated and transparent business environments backed by political stability, peacefulness and strong governmental support (Pascoe 2017).

### 3.4 Key Findings

This chapter is the introduction to the empirical part of the case study where the reader has become familiarised with the case company's internal activities and its external environment through the perspective of PESTEL model.

Custom Design & Construction located in Sydney has been specialising over 10 years on providing a variety of building and construction management services covering all the stages required to deliver a completed built facility. The company positions itself to be committed to high-quality standards, environmental practices and strong industrial relations.

From the review of the Australian construction industry where CDC operates, it is possible to conclude that the rise is expected in the proportion of work for residential and non-residential building markets presenting certain opportunities for the case company. Domestically, business investment and capacity utilisation have both improved. This outlook is also underpinned by the low level of interest rates and the exchange rate depreciation since 2013. Looking forward, an economic upswing is expected to strengthen progressively over the next following years.

Residential market conditions vary significantly around the country. Prompt price rises in undersupplied housing markets are expected to ease. In the eastern capital cities, including Sydney, a substantial supply of new additional apartments is supposed to come on stream in the nearest future. (Trading Economics 2017.)

To sum up, the construction industry still plays the major role in the Australian economy, as it produces infrastructure essential to the operation of other industries, enhances wealth and capital stock of the country and supports the productivity improvements contributing to future incomes and prosperity. It drives and is driven by the employment levels and economic growth as a whole. The movements and changes in this industry are often directly connected to modifications in mainly social, political and economic trends. The biggest challenges remain to be modernising of operational practices in construction business on a par with skilled workforce shortages and reduced productivity. However, the overall outlook for the construction industry and in relation to the case company looks positive due to favourable economic conditions, stable population growth, active governmental actions to fix up legal issues and soon acceleration into the digital economy.

## 5. EMPIRICAL RESEARCH

After having reviewed the theoretical background and the introduction to the case study analysis which supports the research presented in this chapter the reader is now familiarised with the main concepts and processes explained to navigate him/her through the next parts of this thesis. Understanding of strategic management and the processes specific to the construction industry is crucial to further investigation of the case study and coming to adequate conclusions.

In order to refresh all the earlier findings and make it easier for the reader to follow the flow of the research, a rundown of the previous chapters is presented in Figure 19.

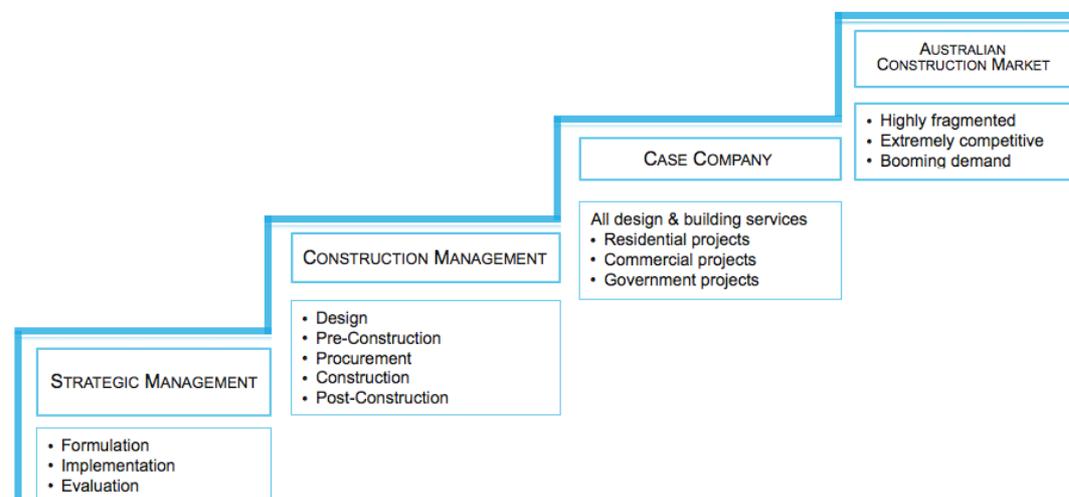


FIGURE 19. Theoretical Framework Inferences in a Nutshell

The following chapter is a detailed report of a conducted empirical research different parts of which are consecutively narrated further. First, the methodology applied for data collection and analysis along with the research design and formulation process are described. Second and third sections of this chapter explain the data collection and analysis procedure. The final section is devoted to the general discussion of main outcomes to support the development plan further. The main objective of this chapter is to report on the findings derived from the research within the case company and arrive at new conclusions to be eventually used as a foundation of a strategy development.

## 5.1 Design and Formulation of Research

The knowledge of certain research traditions not only contributes to a more informed decision on a research design but adapts the ways of conducting a study taking into consideration practical constraints as well. The research design provides an idea of how the research is constructed and which methods and techniques are worthwhile in various cases to gather and interpret outcome data. (Saunders et al. 2009.)

In general, the research is abductive in nature. Abduction is a form of cognitive reasoning which flows from an observation and seeks to find the simplest and most likely explanation. The deductive approach is characterised by the researcher's independence and highly structured scientific principles, while an inductive reasoning assumes the result of data generation to be a new theory formulation. There is no general rule or theory chosen by the author to validate or challenge, and as a result provides no grounds for applying strictly deductive approach. At the same time, the results produced from the research are not sufficient to construct a valid hypothesis and makes it impossible to apply a single inductive technique to this research as well. Thus, the author tries to seek for underlying reasons for the conclusions which is the main characteristic of the abductive reasoning. Figure 20 illustrates the main differences between three main scientific research methods.



FIGURE 20. Abduction, Deduction and Induction (Saunders et al. 2012)

Abductive approach is relatively new and lays in between deductive and inductive methods and is based on incomplete observations which do not guarantee to establish a general rule, however, propose a possible hypothesis. Despite many other possible explanations for any event being observed, a single or a few explanations for this event is abducted in the expectation that it would help to better orient ourselves in our environment and disregard some possibilities. (Saunders et al. 2012.) Information collected from the primary sources is

underpinned by the theoretical model built earlier in the chapters to establish a more convincing conclusion.

The research philosophy adopted by the author is influenced by practical considerations and affects the view on what is important and useful for the purposes of the thesis and which observation inferences play a significant role. It indicates an ability to reflect upon the philosophical choices undertaken during the research and defend a preference of a particular strategy instead of other alternatives. (Saunders et al. 2009.) The positivistic philosophy in a combination with objective realism primarily reflects the preferred researcher view on the subject and newly derived knowledge. In a nutshell, the researcher's objective is to explore the respondents' perceptions as they are and to reflect on them in a form of proposal for improvement basing on the built theoretical background.

The qualitative technique of research which is used for collecting and analysing non-numerical data is opposite to the quantitative method predominantly applied for generating numerical data. While the quantitative approach is utilised to find out reliable generalisable information for building cause-and-effect relationships, the qualitative research is suitable for understanding in-depth reasons and underlying motivations as it creates rich, detailed and valid data contributing to a deeper insight of the context. (Saunders et al. 2009.) The main differences between two research approaches are presented in Table 5.

TABLE 5. Distinctions Between Qualitative and Quantitative Methods (Modified from Saunders et al. 2009)

QUALITATIVE	QUANTITATIVE
Subjective process Informal, personal Language Based on meanings expressed by words Non-standardised data that requires classification into categories Analysis conducted via conceptualisation	Objective process Formal, impersonal Language Based on meanings derived from numbers Numerical and standardised data Analysis conducted via diagrams and statistics

Due to the nature and character of the research question and objectives, the qualitative approach has been applied to build a complex, holistic picture on the natural settings and people's reflections on them which will potentially serve as a solid ground for reasonable conclusions and constructive action plan.

The main characteristics of a qualitative research that this study complies with are as follows (Creswell 2014):

- **The natural setting:** The participants are commonly engaged in their natural context and familiar environment to experience the issue or a problem under the study.
- **Researcher as key instrument:** The qualitative researcher acts as the main source of observing behaviour and interviewing participants rather than using someone else to gather information.
- **Inductive and deductive data analysis:** The combination of both methods and transition from inductive to deductive are generally applied as the study moves forward. In this thesis, the elements of both approaches are reflected in an abductive reasoning which has more indefinite conclusions based on observations.
- **Participants' meanings:** The expressions of participants on a study problem are the key focus of a qualitative research.
- **Emergent Design:** The initial plan for the research can be flexible. The key concept behind qualitative study is to learn about the issue from participants and to address the research to acquire that information. Thus, the shifts and changes are natural in forms of data collection, design of questions, external setting etc.
- **Reflexivity:** The researcher's personal background, values and culture admittedly influence the shape of interpretations and the study concerning the meanings ascribed to the data.
- **Holistic Account:** A complex picture of the problem considering multiple perspectives and factors is developed around the central phenomenon of the study.

The study reported about in this thesis is exploratory in nature since its main objective is to identify and profoundly understand the existing strategic problems and gaps assessing business phenomena in its real-life conditions and seeking to generate further direction (Saunders et al. 2009). The selection of a strategy for the research was based on the main research question and objectives as well as available resources and conditions; it is, however, rather a case company's query that has become an incentive for the study and entailed an application of a certain approach than vice versa. Thus it is a single holistic case study method that tends to be more associated with deductive approach has been chosen for this research. It involves an empirical investigation of a specific contemporary

phenomenon within its natural context using numerous sources of evidence. The case study is worthwhile for collecting data as it allows to gain a rich insight of what is happening inside a particular organisation with its integral processes being enacted. (Saunders et al. 2009.)

After considering the limited resources available for conducting the study, the author had to make a selection in favour of only one method of investigation. Thus, a single data collection technique has been used in a combination with corresponding analysis procedures which indicates that mono-method is a preferable research choice for this thesis.

## 5.2 Data Collection Process

The workflow of data collection process is summarised in Figure 21, where the main stages in relation to time when data were gathered are presented.

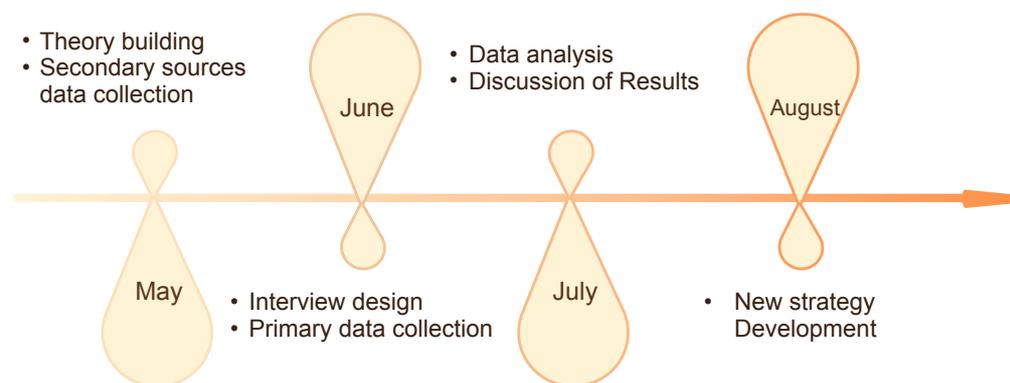


FIGURE 21. Data Collection Process Timeline

The primary data collection method used in this research was interviews. Interview is a widely utilised way of gathering data from people which involves face-to-face interaction between two or more individuals (Kumar 2014).

The semi-structured in-depth interview format has become preferred in this research to facilitate a more open environment and a flexible flow of discussion. In-depth interview is characterised by intensive interviewing, open atmosphere and an idea to gain valuable and rich information on perspectives, opinions and experience of a small number of respondents (Boyce & Neale 2006). The author's intentions were to derive maximum clear data on interviewees' professional knowledge and views, thus follow up questions were common during the interviews which allowed for clarifications and specifications.

The interview schedule presented in Table 6 was designed by the author of this thesis basing primarily on the objectives of the research, theoretical knowledge base and available information on the case company. The data collection process included 4 semi-structured interviews with each embracing 11 questions divided into two main parts the reference to which is given in Appendix 1. The questions were divided basing on the nature of data that had to be obtained. The first set of 8 questions is devoted to the internal activities and operations in CDC and the respondents' opinions concerning the company's performance across different functional areas. The objective of the first part of interview was to get an insight of how the employees evaluate the company's current positioning in terms of operational power, its strengths and weaknesses, and potential to develop. The next set of questions was devised to get to know how the respondents see the market environment and the most influential risks and opportunities in relation to the company's activities and future prospects. The researcher has tried to ask open questions to make the interviewees think of how the case company can take advantage of the changing market conditions and mitigate the risks by improving its performance. The discussion was organised in a way to facilitate any respondents' suggestions and proposals which were taken into account when developing the strategic plan.

Each interview took from 20 to 30 minutes in total, the duration of which varied depending on the length of respondents' responses, arising follow up questions and the interviewees' ability to provide solid and satisfactory answers.

TABLE 6. Interview Schedule

NAME	TITLE	WHEN	WHERE
Tracey	Marketing Manager	5 Jun 2017	Custom Design & Construction headquarter office
Michael	Architect/Designer	7 Jun 2017	
Christopher	Contracts Administrator	18 Jun 2017	
Gary	Managing Director (CEO)	31 Jun 2017	

All the real names, surnames, ages, nationalities and other personal characteristics of the respondents have been left out for the sake of retaining the anonymity right as it was requested by the company's senior executive. The name of the case company has been changed for the same purpose. Even though the socio-cultural background is regarded to be important when collecting and analysing data (Kumar 2014), the research has a practice-oriented nature,

and thus, the objectiveness of the data interpretation was achieved by referring only to the respondents' personal knowledge and view of the company and professional experience excluding other factors that might in any way influence further data interpretation.

### 5.3 Data Analysis

During non-standardised (qualitative) interviews the data are commonly audio-recorded and afterwards reproduced as a written account using the actual words (transcribed). Such method has been applied to this research as well. In general, the analytical approaches used in this thesis are hypothesis generating in nature relevant to exploratory studies. The author tries to provide the most probable explanation of the company's current state of affairs and propose a new model based on the observations. Specifically, the narrative analysis which is common in organisational researches and based on a hybrid of inductive and deductive reasoning elements is partly utilised in this thesis to produce a new knowledge in relation to the specific case and illuminate the particular issues related to corporate structure, culture and change. (Saunders et al. 2009.)

As this thesis is not scientific in nature and has practical-oriented objectives it is hard to clearly identify and establish a particular method of data analysis. Thereby, the abductive analysis including some elements of both deductive and inductive reasoning is applied in order to make data useful for further theory development out of collected material. In particular, the inductive approach is used in analysis to assess which themes and issues emerge from the data collected and build a conceptual framework designed to serve as a backbone of a strategic plan presented in the next chapter. At the same time, the deductive reasoning has been supportive in a way to design interview schedule basing on the existing body of knowledge on strategic management. Thus, the study was conducted with a clearly defined theoretical framework and objectives that shape the data collection questions. It aims to identify new topics or relationships used as an adequate ground for a new practical action plan development. Afterwards, the data have been condensed (summarised) and coherently structured as a narrative to support meaningful analysis and construct a conceptual framework, formulated after presenting the initial interview outcome. (Saunders et al. 2009.)

Consequently, the discussion of results is presented by the researcher in the next sub-chapter where the main topics brought up during the interview are categorised to provide an emergent structure (conceptual framework) relevant to previously established research objectives.

This sub chapter presents the summary of interviews from each respondent that took part in the research. The narration flow follows the structure and sequencing of questions presented in Appendix 1 at the end of this thesis.

### ***Tracey, Marketing Manager***

Tracey assumes that the amount of clients per year for the CDC to perform profitable would be around 2-3, however, she adds that this number is sufficient only if the projects are large-scale worth of more than 1-2 million Australian Dollars (AUD). Otherwise, executing small residential projects of that amount will not bring enough profit to cover the construction costs which is most likely to result in vast financial and operational losses.

In the nearest years, in order to keep up with the competition levels in the market and survive profitably, Tracey would consider the main strategic objective for CDC is to rise its customer base and margin by taking over more projects. Tracey sees the best strategic option for fulfilling this objective is focusing on a close relationship development and collaboration with JV partners who are able to provide CDC with an access to a large market demand and connect it to potential customers.

As for the project management and planning within the company's activities, Tracey sees it as one of the main and significant drawbacks in CDC's construction management. Due to being a small operator in the market, the CDC does not have a certain fixed strategy so far, and it usually customises its operations depending on the type of order and the client's query. Even though at that point CDC remains flexible undertaking 1-2 projects per year for now, Tracey thinks that the lack of strategic planning will probably become an issue once the company undertakes more and larger projects which is one of its main goals so far.

Tracey sees feasibility and marketing practices to be relatively weak comparing to the company's ambitions, however, she claims that it might improve soon due to the fact that the company has recently started operating under the Joint Venture business model combining its efforts with another real estate company. The absence of a project management tool/technique from her perspective is one of the main issues that CDC has to tackle with if looking forward to scaling its business.

As a marketing manager, Tracey suggests to be a good idea to make a marketing strategy more consistent, as for now CDC does not seem to have a clear vision

and positioning in the market. Tracey is confident in saying that CDC does not need large scale marketing campaigns for the reason that CDC has not formed a sound brand name yet and is not able to afford and handle the returns on these campaigns. It is more reasonable to concentrate on direct marketing to target and approach particular focus groups living in certain areas with a potential building activity need.

In the nearest future, the main challenges for CDC are rather external; for instance, housing unaffordability and inflated prices which have a potential to make up a so-called housing market bubble. This is definitely a risk when it comes to building companies, since the prices on building materials remain increasingly high, and if the bubble collapses one day the Sydney residential market will severely lose its financial value. On the other hand, Tracey adds that the housing market is currently booming in demand which presents more opportunities for CDC as a great portion of land has been untouched yet, and the government takes initiative to encourage and support local builders' active engagement.

From the perspective of internal threats, the company is not capable of withstanding a pressure that the larger amount of projects might entail due to the lack of human capital and coordination tools. In general, Tracey assumes that the largest share of efforts to improve CDC's performance should be contributed into developing relationships under the JV partnership and increasing administration and operational productivity inside the company. By doing this, CDC will get a better chance to handle more projects at the same time and thus, raise its return on investment.

### ***Michael, Designer & Architect***

In Michael's opinion, currently CDC has an insufficient amount of clients/orders per year to be satisfied with. Over the past 5 years there has been a growth in company's sales and currently, the company expects to undertake ten projects per year - the target to reach in a year or two, according to Michael. Michael expects to see a constant substantial growth in the amount of projects for the next few years, setting at least 20 completed projects in the next 3 years as a target. However, at the same time he admits that a current builder's capability is not sufficient for achieving this objective and thus requires increasing its operational power in multiple aspects.

From the business perspective, the optimal method for achieving this goal is taking advantage of establishing a strong JV partnership which will potentially

become the key source of clients for CDC through its brand name and active marketing performance. Not less important is hiring more professionals and enhancing qualifications of existing ones to be able to manage more internal procedures. Michael is certain to claim that the project management is one of the weakest sides within the company now which rises a huge need in an effective project management tool/software or a specialist who will keep track on numerous things to handle at the same time, especially with increasing range of building projects.

Low house design lead times and sticking to the deadlines are primary strengths that give CDC a competitive edge. CDC is committed to high quality standards when producing house designs and strives for making its service affordable for the variety of customers. Moreover, the CDC team is inclined to take initiative and offer better propositions to the client if there is room for improvement when it comes to the design stage. However, there is usually a slow progress in managing relationships with clients and chasing the pre-construction process which includes documentation, administration tasks, mobilisation of resources etc. The main challenge for the future Michael sees is the lack of human resources taking part in coordinating multiple tasks.

The location of CDC and its area of operation is not compatible with luxury construction, and this land is being occupied more with average income and lifestyle residents, rather than wealthy ones. Thus, Michael thinks that the primary target group of CDC should be conventional citizens while the value proposition to be affordable, but of a high quality, land and house packages.

The main current risk of CDC Michael sees is being heavily dependant on the recently established JV partnership and suggests that the lack of marketing promotion prevents CDC from getting more projects outside this partnership. Michael regards marketing weakness as the greatest obstacle in an attempt of reaching new clients and attracting more projects. The way to improve this situation is hiring more marketing professionals with certain background qualifications and residential field expertise on a permanent basis, since so far this department consists of mainly contract-based workers which undermines their long-term commitment. The lack of in-house training and the amount of time it takes are also viewed as a part of a general slowdown. As per Michael's remarks, in order to scale recruitment activities which would save the company's strategy CDC has to stay in a positive zone of capital gains which now can be hardly observed.

As for the external market situation, the building construction activity in Sydney is largely scaling now, however, Michael notes that there are much more opportunities for CDC in the Sydney surrounding areas and suburbs, since the city centre is already so densely populated and built that it is barely possible to reach new builds there, and, especially, compete with big market leaders.

***David, Contracts Administrator***

From David's perspective, CDC now performs at its full capacity taking only 1-2 projects per year which, however, would be better to increase up to 5 residential projects taking into account high scale of profits that every building project brings. If CDC is assigned to take over governmental orders, then 1-2 is a good performance for such a small company. The company's sales and revenue have significantly improved over the past 5 years which happened along with other important milestones such as changing the headquarter's location and acquiring a different legal status.

CDC has not implemented any purposeful analysis of its performance at this stage, thus it is hard to define any apparent existing weaknesses, however, David suggests that the deficiency of effective communication could be an increasing issue. According to David, there are no standardised communication methods which slows down the efficiency of information dissemination. Moreover, the operational capacity and capability has great room for improvement and is viewed by David as a current gap in CDC's strategy, since approaching every specific project individually is very time inefficient and CDC has not yet devised an internal universal model for implementing projects from the entire beginning to the completion stage. Even though the project delivery timeframes are higher than the market standards, the project-specific approach is one of the main constraints on a way of improving operational efficiency. At the same time, David states that CDC business model is flexible enough to effectively outsource professionals - more project managers and quantity surveyors - if their qualifications will be required depending on the scalability of each project. Purchasing of such assets when a situation requires so, without a necessity to induct them internally, is the option David considers for the future.

On the side of the company's strengths, David claims that CDC can be proud of its strong business culture that is youthful and lively enough to let every voice within the company be heard, which is a result of a small number of people involved. It undoubtedly gives an advantage to CDC in terms of flexibility and transparency.

CDC stands for providing people, and especially, first home-buyers with a fair price on their new dwellings. Besides, ethical and legal culture is something that CDC is strongly committed to, meaning that even though keeping company's profits are highly prioritised as in any other commercial activity, CDC never expects to become involved in a highly risky and not fully legitimate undertakings that might cause someone's losses even though it looks financially promising.

CDC serves mainly for local people and government to build various public facilities, e.g. childcare centres. The next step for improving CDC's performance is to employ more professionals with diversified skill set, and improve promotion by personalised marketing and communicating directly to the customers. David sees Word-Of-Mouth marketing as one with the most working potential for CDC, as when it comes to such important decisions as property building and acquisition clients, would prefer to deal closely with the company representatives.

David sees more prospects for CDC in the future in allocating part of its resources into the investment property gaining the returns through potential resale of a property. This is exactly what a new JV partnership brings for CDC, since its partnering company act as a renowned real estate agency in the market, and building stronger connections with it might open new long-term opportunities for the case company. At the same time, David suggests that CDC should not limit its builder's activity only to the projects under JV collaboration and is better to take initiative to develop independent strategies of additional profit attainment. Furthermore, in David's point of view, legal issues related to concluding contracts and partnership agreements, which are very relevant in small businesses, have become a challenge for CDC recently incurring unexpected delays and costs.

The current state of construction sector David evaluates as not booming anymore as it used to be, even though the population growth and demand keep growing, pushing the prices up. He notes there is more land being built far from the city which presents more opportunities for building activity in those areas. The risks however might appear in increasingly inflated housing prices which might suppress the growing demand and make the market even less affordable. The stricter governmental regulations and dealing with authority institutions, which is usually time consuming, is viewed as another challenge. Besides, the costs of building materials and labor are rising as well due to growing investment from overseas which makes the housing market respond with the higher prices. Small companies are less likely to receive that amount of attention that usually goes to large market players, which makes the price competition tougher for such small domestic builders as CDC.

***Gary, the Managing Director (CEO)***

Gary states that even though the perfect number of projects is hard to precisely define as it depends on the scale of each - residential, commercial or governmental - 15 average-sized projects per year would be sufficient for ensuring permanent growth and sustainable profitability. Even though over the past 5 years, the company has experienced a general substantial improvement in terms of profitability, Gary admits that so far CDC does not own enough resources to fulfil the goal of reaching out more projects annually and straighten its financial situation.

The company's main strategic goal is to constantly perform at its highest capability and increase the amount of projects year by year. High quality and exceptional design standards along with affordability is the selling formula under which CDC operates. It positions itself in the market as a provider of land and house packages for Sydney suburbs. The target group is very diversified ranging from first-time home buyers who seek affordable solutions to the families and established households with more sophisticated preferences looking for exquisite options. At the moment, besides increasing the value proposition of every next project delivery CDC is committed to building strong long-term relationships with its new JV partners. Gary considers JV collaborative initiatives with independent projects to be a good working model, however, the current marketing and promotion strategy is not strong enough to attract more on-side projects.

The main weakness of the project management and planning noted by Gary is the estimation side of operations which is about the uncertainty and inaccuracy of the actual costs of construction. Gary suggests that in order to improve this, there is a need to create a template model which can be used for various projects and would cover all the steps of construction at each phase with the updated market rates. There are two ways of making accurate estimations: using the standard market rate per square meter provided by an outsourced online database or via tendering and receiving actual rates from the subcontractors that are willing to execute a particular type of job. The best method, however, is to combine both ways and optimise the efficiency of this process, which is where Gary sees large improvements can be made: "Our business will survive and prosper only if we have a thorough quotation system. The estimations and costs are critically prioritised in every construction project."

Currently, the project planning techniques within CDC practices have not yet been developed for the residential projects, as the company used to undertake

mainly governmental and commercial orders which greatly vary from residential construction in terms of project management tools and approaches. Referring to Gary's experience and the company's history, the most common issue arising during the construction phase was concerned with the reliability of subcontractors and suppliers. There is always a risk they can provide an inaccurate quotation of their job or be absent during the construction works, which causes delays for time management and incurs additional costs to fix up the issue.

From Gary's perspective, the current housing market is currently a favourable ground for CDC's activities and provides large opportunities due to constantly growing population and demand. In contrast, the external threats include those relative to the fixed contracts due to the market volatility and unstable price fluctuations which can result in huge unexpected costs on building materials, suppliers and subcontractors' jobs. The contingency risk is also something that a builder is always concerned about - if something happens in the post-construction phase a general contractor is liable to cover all the costs related to the raised issue - and one more reason why sticking to the budget and bringing only profitable projects to fruition is crucial to long-term market prosperity.

In order to take advantage of these prospects and mitigate potential risks Gary suggests providing intense in-house training as a part of development. Moreover, the effectiveness of communication has to be improved across all levels of operations to make everyone constantly aware of all project updates.

#### 5.4 Discussion of Results and Key outcomes

First and foremost, the key answers concerning the reasons behind the company's need to develop its strategic management have been received and processed. The inferences drawn from the interview were sufficient enough to gain an insight of what the next steps and movements should be to facilitate the company's strategic development. In this section the author provides an analysis of gathered data interpreting it in a way to deduct certain conclusions which further underpin the development plan for the case company.

The data analysis started during the interviews with note-taking and supportive questions has shaped the direction of the entire data collection process. All the respondents have provided extremely valuable information on their personal perspectives of the company with similar views at some points, but very diversified outlooks in general. In order to follow the logic of interview questions,

the discussion matters are presented further in the same order as they were introduced during the interviews.

### **Part 1: Custom Design & Construction**

1. Firstly, all the participants have come to a common opinion that currently CDC lacks a number of clients/orders. The satisfactory amount for all the respondents varies ranging from 5-10 residential projects to the target of 20 per year in the upcoming years. The factor of such uncertainty is largely affected by the scalability of each individual project.
2. The company's sales have been substantially improving over the past 5 years which allowed it to stay profitable and grow until recently. However, all the respondents admitted the fact that it has reached a point where it needs to undertake certain actions to survive and prosper in the long-term. The absence of a consistent and determined strategy has not been an issue before, which has changed with the emergence of new residential projects. This argument is also supported by the financial position that has been weakened and requires a certain correction.
3. The current strategy of CDC can be characterised as entirely project-based. Depending on the type of project, the scale, order and nature of operations vary, but the fundamental procedures and project phases remain the same behind every building construction. The key strategic objectives are primarily the expansion of building activity and increasing the projects volume which is directly related to the amount of clients the company intends to increase year by year.
4. The high quality design standards, fair and attractive market prices along with the project delivery timeframes are the areas where CDC excels at. It is committed to deliver consistent quality across all the stages of construction starting from customer service and design up to a post construction responsibility. Basing on the strong sides of a company, it would be reasonable to assume that CDC highly prioritises its time management along with the quality of designs it delivers. Due to CDC's lively and relatively young corporate culture the company has a vast potential to grow applying better solutions to its daily task management.
5. During the research an apparent concern was expressed by the respondents' relative to the internal project management and planning techniques. The conclusions derived from interviewing lead to the thoughts that the

coordination of tasks is not performed at its highest level, which slows down the processes within internal construction management and prevents the company from effectively undertaking a larger number of projects simultaneously. This consequently results into an inability to keep up with the company's strategic objectives - to increase profitability and scale its customer base. A part of this problem deals with the project cost management. The estimations efficiency has been raised as another existing issue by the participants, since this is the side of operations where a high risk of cost variations, inaccuracies and time delays take place. The ability to estimate, plan, manage and control costs throughout all the stages of pre-construction and construction is crucial, and so far is not reflected in a consistent and strong model within CDC.

6. The communication issue throughout the CDC is another side of a general management problem. One of the most crucial things for operational efficiency is making everyone throughout various departments staying on the same page and updated at all times. The research has shown that even though being a small-sized company, CDC lacks an ability to continually deliver updates across its team members which occasionally causes delays in its project management leading into a poor brand image in front of its stakeholders. External communication and relationships management can be upgraded a lot, as it was observed that suppliers and subcontractors tend to perform less reliably than expected in a form of faulty pricing or unprofessional behaviour.
7. Over the last year, the main focus of CDC has shifted from the governmental projects to residential housing which makes it worth little value to discuss the strategy related to the former. Currently, the main audience CDC serves is suburban citizens who are interested in obtaining a property. The age groups vary largely, however, due to the nature of activity it would be reasonable to assume that the core target group ranges from 25 - 65 basing on the income differentiation. This apparently implies the fact that the targeting strategy should not be directed to teenagers and very young people, most of whom have not had enough lifetime to own personal capital, and individuals above 65 who supposedly are no longer concerned with accommodation issues. Thereby, CDC targeting has to be oriented more to the values of mature people who are likely to be attracted by design quality, safety, eco-efficiency and adequate pricing.
8. The absence of a consistent and definitive marketing strategy makes the small operator ordinary leaving it with a little chance to differentiate its service from

the other builders. Increasing its brand awareness is essential when it comes to aspirations of attracting more clients. The same has been noted by the operations department staff - the fact that in such a dense and intense residential market CDC is not highly perceptible is a large drawback on a way of increasing its profitability. As it has been observed by the respondents, the contract nature of works usually does not involve the same amount of commitment as an employer-employee relationship. Due to such employment practice and the absence of an ongoing marketing role on a fixed basis, the continuity and integrity of marketing strategy was disrupted.

9. The financial situation in CDC can be evaluated as relatively weak basing on the information provided by one of the interviewees. The rest of the team do not have a direct access to information concerning the distribution and management of finances throughout internal company's operations, however, it was noted by the respondents that CDC is in a stagnation phase in terms of profit margins.

10. Finally, out of the initial questions asked during the interviews, follow-up ones raised another matter that all of the team members are currently concerned about. Joint Venture is to be regarded as one of the crucial stages at the moment that the company undergoes through, and is viewed differently across the respondents. Some see this partnership as a promising prospect which has a huge potential to bring new clients to the company's doors - the company can avoid considerable marketing costs since the main channel of promotion would be JV partnership due to the nature of its business model. On the other side, however, some of the respondents have expressed their uncertainty in relying solely on the project's grown from this partnership, and thereby, support the idea of independent on-side undertakings which would secure the confidence of CDC in its future profitability, in case the partnership fails.

Thus, as the company is currently opening a new page in the history of its existence, one of the key questions arose during the research concerning the strategy of further development: should the company concentrate all its resources and prospects in JV partnership or still simultaneously continue operating on-side independently? Or is it better to reject partnership and keep growing entirely on CDC's resources? All possible case scenarios will be considered when devising a future steps plan. If the company proceeds operating on its own, the marketing, graphic design and operations team might expect to be enlarged with new field professionals.

## **Part 2: Market**

It has been observed that the external environment presents almost as many potential opportunities as threats. All interviewees have agreed that the current situation is favourable for residential building activity due to stimulative demand of growing domestic population and largely undeveloped land, especially in the Sydney suburbs where CDC operates. At the same time, the expenses on building materials and construction services keep rising as well which makes builders take a higher care of the financial side of their businesses and become more resourceful in commercial decisions.

Since the market in the central areas of Sydney is slowing down, the main construction activity has already shown positive signs of being transferred to the Western suburbs which CDC can take a great advantage of due to its location being favourable to this shift. In general, the land has been almost untouched in the regions where CDC operates which provides valuable prospects for defining the directions of its development. Due to these swings and consistent housing market growth CDC has to adapt its strategy concentrating more on adjusting its service to the right target audience.

### **5.5 Summary of Empirical Research**

In this sub-section the main research techniques and approaches applied in this thesis were presented and described. The empirical part was fully devoted to primary data collection and analysis utilising recognised qualitative research tools such as semi-structured in-depth interviews with open-ended questions to facilitate free discussion flow. The goal was to extract as much valuable information as possible from those taking part in company's daily operations.

CDC is currently functioning relatively well, but the future is uncertain and it does not seem to be strategically prepared for it. As it was observed and deduced, the company's ambitions are not supported by the real state of things within it, which is very understandable as it has only started a different page in its history and needs proper planning to succeed at its new stage of development. All the issues discussed and identified by the researcher basing on the respondents' data can be narrowed to the definition of a general problem that currently restricts the case company's growth which can be formulated as:

### **The Absence of Internal Operational Model**

The key underlying reason behind the issue can be defined as the insufficient amount of operations which would allow the case company to construct a strong pattern and apply it to every future building project. So far the case company has been concentrated on carrying out governmental projects the operational model of which varies significantly from the residential construction. Thus, the company was unable to devise a certain strategy to approach a new type of projects and has to upgrade its operations to operate effectively on a different level, which lays a reasonable ground for attempting to develop a possible program of actions taking into consideration the knowledge base of the strategic and construction project management.

To summarise all the internal attributes of the case company based on the empirical research and the external environment characteristics concluded from the relevant theoretical background, the SWOT analysis of CDC is summarised in Figure 22.



FIGURE 22. SWOT Analysis of Custom Design & Construction

In terms of the business life-cycle that can be applied to industry, product or company, CDC has reached the maturity stage characterised by the slowing sales rate growth and earnings, high input costs and increasing price competition. As portrayed in Figure 23, this critical period that brings two options of further development is either to reinvent the company's strategy or exit the business. (Hill & Jones 2010.)

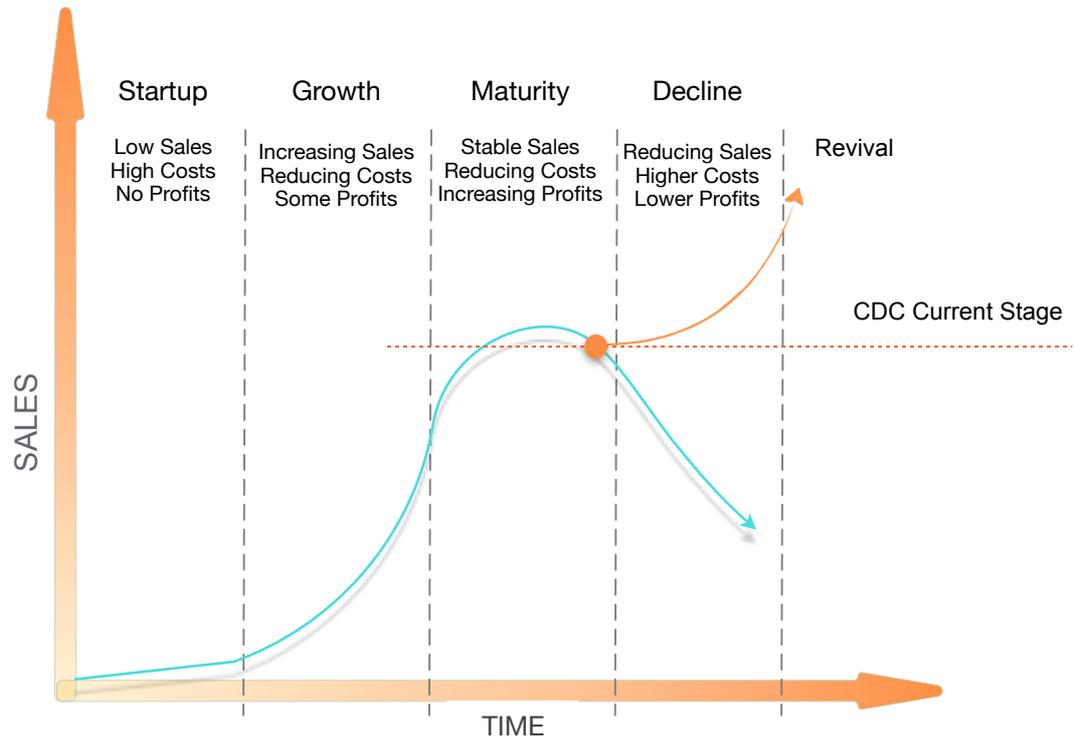


FIGURE 23. Business/Product Life Cycle (Adjusted according to Porter 1980)

The strategic management plan presented in the next chapter is largely based on these conclusions and oriented on the improvement of identified issues while strengthening the existing positions.

## 6. NEW STRATEGY DEVELOPMENT

This chapter is the finalisation of a completed research which presents a possible development plan as an option for the case company to become profitable and survive competitively in the following years. All the plan aspects and steps devised are based on the gathered data from the empirical research and formulated in a strategy with the application of strategic and project management models introduced in the theoretical framework part.

### 6.1. The Strategic Gap Identification and Strategy Formulation

Out of various existing types of strategy an adaptive model suits the company's case best, meaning that the core of its main activities will be the reflection of market changes and response to a changing environment. The adaptive strategy can be either reactive or proactive and involves directive planning leaving some space for flexibility and agility. Moreover, instead of building predictions and collecting data via classic methods, the company can switch to a new model of actions to experiment with, and recognise market patterns. As it has been established through the theoretical framework, the strategic success in small and medium-sized companies - which are rather reactive due to limited access to market resources - is strongly dependant on the ability to scan the environment and react to it quickly with internal changes.

Basing on the theoretical framework built earlier in this thesis, in order to upgrade the company's operations from a strategic management perspective the primary order of actions embraces identifying:

1. Company's current situation, summarised in SWOT analysis
2. Company's desired position, deduced from the empirical research
3. The existing gap and the actions to fill it, presented further in this chapter

In a summary, the case company is struggling for reviving profitability by scaling its capabilities to undertake a larger number of projects, however, lacks certain resources and definite internal operational model to keep up with its ambitions and goals. The objective of a new strategic plan is to help the case company adjust the current direction of development in a way to support acquiring these missing resources and improve its capabilities.

First of all, the company has to clarify the following concerns: “What is a big target that polarises our team and makes everyone contribute into it? How do we see ourselves in 3-5 years?” This can be reflected in the vision statement which makes the governing principles of the company clear to the greater community (e.g. staff, customers, other stakeholders). The proposed vision for the case company can be formulated as such:

*“We aspire to become the most preferred and acknowledged providers of cost effective and sustainable building services in Sydney regional area.”*

Developing a mission statement is the next step of a planning process. The mission statement answers such questions as: “Why do we exist? Who is our main customer and what do we do it for?” The mission statement is concise in language and broad in scope, more outcome- and action-oriented than the vision. The current mission statement of the case company can be transformed into a suggested one as follows:

*“We strive to become partners with our customers in developing building activity by delivering design and construction solutions of a high quality and fair pricing.”*

The proposed vision and mission statements reflect the characteristics of the target audience CDC primarily serves in such word combinations as “cost effective”, “sustainable” and “fair pricing” which makes it more specific and customer-oriented. As well, it clearly states which service the company provides and for whom - “design and construction solutions for Sydney regions”. Another argument in support of devised statements is that they lay out the beliefs of the organisation such as bringing value to communities via project collaboration - “we strive to become partners with our customers”.

Moving forward, it is recommended for the company to develop certain values which would help it to express its commitment throughout all the processes that take place within it. Organisational values encompass things that are important and worth dedication, and that are agreed to comply with during the company’s existence.

Some values the author has considered to be suitable for the new strategy can deal with the following proposed principles:

- **Integrity** - Our team upholds the highest ethical standards at all levels of operations.
- **Community Relationships** - An honest and transparent dialogue with the local communities is the way we build trust and customer loyalty.
- **Personal accountability** - CDC is responsible for delivering on its commitments and values.
- **Stakeholders Collaboration** - The nature of industry makes it critical for us to maintain close bonds with our partners, suppliers and subcontractors and to protect the interests of all the stakeholders we cooperate with.
- **Environmental Management** - We believe that everyone can contribute daily to the preservation of natural resources and saving the beauty and value of our planet. Throughout all our building activities we keep in mind that the environmental responsibility is a matter of future that begins now.
- **Expertise** - Our industry expertise in design, estimating, construction and project management services ensures that our customers receive a quality product at a fair price and within a reasonable timeframe. This is accomplished through the selective use of responsible subcontractors, hiring and retaining first class employees, and working for clients that share our belief in open, honest, and direct communication.

The next stage of strategic development is to become more concrete and specific in its objectives focused on achieving its mission. Objectives have to present specific measurable results for broad goals and keep the format of answering: "What should be achieved by when?"

Thus, new strategic objectives for CDC are categorised into various directions of improvement in Table 7. It presents the main strategic areas of development, possible ways of achievement and the expected results after and in case of successful implementation. Across all of the departments time frames are established to be 3 years from the commencement of plan implementation to be able to measure the results, however, some of the areas such as marketing require longer period of time to be shaped and visible.

TABLE 7. New Proposed Strategic Objectives for CDC

Strategic Objective (WHAT)	Solution (HOW)	Result (WHY)
<p><b>The major business goal is to build an efficient internal model that would help to boost operational performance in the next 3 years and increase profitability by at least 20% to keep business growing and avoid insolvency.</b></p>		
<p><b>Operations</b></p> <ol style="list-style-type: none"> <li>1. Achieve better market rates via improved channel management</li> <li>2. Increase operational capability from 2 to 8-10 projects a year</li> <li>3. Accelerate communication flows with stakeholders</li> </ol>	<ol style="list-style-type: none"> <li>1. Build long-term suppliers' and subcontractors' partnerships</li> <li>2. Integrate project management software</li> <li>3. Build strong and effectively operating model of Joint Venture</li> </ol>	<ul style="list-style-type: none"> <li>• To source more prospective clients and reduce efforts put into self-promotion</li> <li>• To improve cost and operational efficiency</li> <li>• To decrease a risk of budget overruns and time delays</li> <li>• To ensure the reliability and consistent quality of trades along with receiving stable rates and allowances</li> </ul>
<p><b>Marketing</b></p> <ol style="list-style-type: none"> <li>1. Increase local brand awareness and community outreach</li> </ol>	<ol style="list-style-type: none"> <li>1. Specify targeting</li> <li>2. Develop promotional plan activities</li> </ol>	<ul style="list-style-type: none"> <li>• To increase customer loyalty and shape long-term brand image</li> </ul>
<p><b>HR</b></p> <ol style="list-style-type: none"> <li>1. Expand professional knowledge base, team potential and strengthen collaboration</li> </ol>	<ol style="list-style-type: none"> <li>1. Specialists recruitment with diversified qualifications and solid industry expertise</li> <li>2. Reach an optimal balance between contract and full time workers</li> <li>3. Reinforced Integration of ICT tools into day-to-day communication</li> <li>4. Provide professional training</li> </ol>	<ul style="list-style-type: none"> <li>• To drive higher performance, workplace productivity and increase team dedication</li> <li>• To accelerate communication flows</li> </ul>

## 6.2 Options Evaluation: Decision Making Matrix

Basing on the data derived from empirical research the company has reached a new milestone in its development history. Now the key aspect to pay attention to is to evaluate how far the company can go with the new Joint Venture partnership and whether it is capable to handle it. Thus, as presented in Table 8, the author has identified three possible alternatives of development evaluated against each other basing on certain criteria.

The first possible scenario for CDC is to operate only in collaboration with JV and within the projects it sources. By functioning this way CDC has to focus on increasing the efficiency of its operations in order to meet the interests of its associates. At the same time, the case company becomes highly dependent on its partners and less flexible, hence incurring the risks of being left with no other source of profit and undeveloped strategy to operate on its own in case of partnership termination. It might take a considerable amount of efforts, time and costs to restructure some of the internal procedures and seek new ways of reaching out market demand.

Another case to take into consideration implies that CDC operations to be scaled across JV and other independent projects simultaneously. Currently, considering the amount of resources and capabilities the case company owns, it will more likely find itself struggling in an attempt to successfully manage the amount of projects coming from both directions. However, by choosing this way of development CDC would be more financially secure and mitigate the risks of profit losses. This would open CDC to new opportunities for scaling its network and increasing the awareness of local audience while enhancing the market share growth.

The third alternative of future development is retaining the positions and business affairs as they are. In this case, JV partnership is not taken as an opportunity, and CDC concentrates all its efforts on projects reached via mobilising only its internal capabilities. Even though being the most feasible option, it presents more unsafe perspectives. There is no guarantee of CDC to be a preferred option for clients among the other builders considering its relatively modest marketing and differentiating strategy, which entails risks in terms of profitability and uncertainties concerning the future survival within severe market conditions.

TABLE 8. Decision-Making Matrix

STRATEGY EVALUATION CRITERIA 1 - low ("no"), 2 - neutral ("50/50"), 3 - high ("yes")	1 CASE JV only	2 CASE JV + CDC	3 CASE CDC ONLY
<b>Profitability</b> • Will facilitate reaching the main strategic objective (financial growth)?	3	3	1
<b>Feasibility</b> • Feasible in terms of current resources?	3	2	3
<b>Flexibility</b> • Manageable to adjust the strategy to maintain the balance between demand and capacity?	1	2	3
<b>Scalability</b> • Has the potential to be enlarged to accommodate the economic growth?	3	2	1
<b>Suitability</b> • Will eliminate an existing issue of growth restriction?	2	3	1
<b>Acceptability</b> • Is risk acceptable for the stakeholders?	1	3	2
<b>TOTAL SCORE</b>	<b>13</b>	<b>15</b>	<b>11</b>

The results of Decision-Making matrix used for assessing the options shows that the winning strategy for the case company is developing its operations under the JV partnership while at the same time retaining independent market activity in seeking and executing on-side projects. JV has a potential to bring access to new markets and distribution networks while increasing the case company's capacity and sharing the risks and costs with it. As previously mentioned, in order to fulfil the requirements of this scenario CDC must strengthen its current capabilities and resources. In return, CDC is most likely to sustainably grow the next following years by undertaking increasing amount of projects and staying adaptable both internally and externally.

### 6.3 Strategy Implementation: Actions Planning

This section presents the specific ideas of actions relative to a particular nature of activities divided by the author. The main criteria for the strategy to be successfully implemented is to make it simple, time efficient and action-oriented

(practically feasible). Another crucial aspect of planning to avoid the strategic management failure is to make the actions aligned with the company's vision, mission and strategic objectives.

### 6.3.1 Operations

A firm with flexible operations can consistently keep lead times low and maintain budgetary constraints, which is a way to achieve a better cost-efficiency and increase an operational productivity. The researcher has identified certain areas in company's operations that have to be developed in order to comply with new strategic objectives and proposed management plan if the company chooses to follow them.

In order to handle several projects at the same time it is necessary to work out every procedure that takes place on the pre-construction stage to maximise value generated during construction. Thus, it is essential to develop a sustainable and coherent model that would reflect a consistent order of operations and be universally applied to every residential project. The sections below present the solutions for the operations department as a part of a major attempt to improve the company's strategic management.

#### ***Relationships Management***

As it has been established previously in the theoretical chapters, construction involves multiple parties and a broad range of activities on different levels. The building company's success is directly linked to the performance of its subcontractors, vendors and manufacturers who produce, supply and deliver necessary facilities for potential infrastructure and execute all physical labor. Failures of the procurement side of operations will poorly reflect on the firm. Thereby, as a part of operations improvement plan it is proposed for the case company to build long-term relationships with its subcontractors and suppliers to effectively manage the procedures during the pre-construction (e.g. tendering and estimations processes) and construction stages.

In order to conduct careful market research and find the right business, certain factors have to be considered for establishing effective partnerships with subcontractors:

- Ensuring that the company's philosophies, business objectives and commitments are shared by subcontractors.
- Confirming the subcontractors are proficient in the required areas and licensed.

- Verifying an available capacity of subcontractors and ensuring the ability to scale it with the company's growth.
- Making sure the quality expectations of the company meet the standard performance of subcontractors.
- Providing all necessary project management tools for subcontractors to organise them on-site.

In order to support this recommendation, there are certain advantages worth consideration when making decisions of this type. First, close partnerships will help to ensure the quality of awarded subcontractors is up to Australian building standards and as per plan. Under the partnership it would be easier to evaluate and control their performance as they will simply have to be liable for the job done for more than one project. Even though it might entail less flexibility for the case company, at the same time it gives more power and lever of influence to CDC. Second, the company will get a great opportunity to lower down the rates. Concluding a long-term agreement is likely to provide the case company with more acceptable, stable and unchangeable prices on subcontractors' services and materials. Third, the issue raised during the empirical research related to subcontractors' unreliability and absenteeism can well be eliminated since the highest interest of subcontractors would be to demonstrate and prove their trustworthiness and credibility in order to secure job orders.

### ***Project Management Tool***

In order to track the progress and budget of each project there is an essential need to set up a system that would automatically monitor and update the status of work with a possibility to make adjustments in real-time mode and communicate the changes across stakeholders. Better project management tool can help to advance operations efficiency and feasibility. Thus, it is highly recommended that the case company acquire a construction project management tool in a form of a cloud-based software. The criteria for the construction management software to be effective in incorporation with the internal processes of CDC include the following features:

- Supports residential projects
- Integrated with accounting systems (MYOB or Xero)
- Cloud based and available through various devices
- Bid and subcontractor management
- Project/tasks management (scheduling, real-time jobs tracking)
- Financial tools (purchase orders, change orders, invoices)
- Job costing, budget and payments progress tracking

- Team collaboration/ Stakeholder coordination
- Automatic Request of Further Information (RFI) track and record
- Defects identification and correction
- Documentation Templates

As a part of the estimations process, CDC uses the actual market rates obtained via tendering which is the most realistic and practical method of calculating the costs. Receiving the rates of subcontractors and suppliers as per plan considerably reduces the risks of miscalculations and budget overruns since they are liable for the accuracy of provided pricing. This procedure can be covered by the construction software as well which will considerably simplify and speed up the process of project estimations. There would be no more need to outsource online databases for acquiring standard market rates which are usually not very up-to-date and expensive to get.

In order to manage the risks that might occur during construction activities, the company has to incorporate mobile solutions. During the pre-construction mobilisation, a streamlined estimation process has to be integrated and communicated across all levels. Upon commencing the construction works, the communication between the office and the field has to be smooth and efficient to avoid time delays and extra financial obligations. All the issues raised must be immediately reported and fixed. The reaction and efficiency of actions undertaken to sort out an issue from the administration side is crucial for the consistency of operations. These capabilities can all be incorporated in one thoroughly chosen construction software.

Another crucial feature that will work out for CDC is Customer Relationship Management (CRM). CRM built in the software will make it possible to organise and keep track of customer contacts and manage business development activities to stay on top of upcoming project bids. Furthermore, the customers are likely to appreciate having access to reports on the project success which can be published and updated per week/month by the company to bring confidence to the clients that everything has been stick to the schedule and as per plan. If any variations from an initial project plan arise, the clients are notified straight away via the software system which again adds to the company's credibility.

Basing on the research of multiple construction management softwares and evaluating them against each other on the criteria listed above and pricing schedule, the best options for the case company the author suggests is to use platforms the brand names of which are illustrated in Figure 24:



FIGURE 24. Brand Names of Proposed Construction Softwares

Afterwards, the proposed softwares have to be reviewed and assessed on a pricing basis by the senior management of the company to make a decision in favour of a particular one.

### ***Joint Venture Partnership***

The other factor that impacts operational process is the relationship management under the Joint Venture partnership. In order to develop an effective functioning model that would work for both sides - the case company and the partner company - the first step is to clearly assign the roles of everyone involved and make all parties aware of them. Another responsibility is the distribution of financial and legal liabilities. The expenses and profit margins between both sides should be fairly shared; the reasonable way of doing this is to quantify the value each party brings to the table in terms of invested capital, time, expertise, duties and liabilities contribution. These factors determine the percentage split between the real estate agency on one side and the construction company on the other. As there are two different but closely related industries, issues may arise while attempting to calculate the value. Eventually, this can only be tested through time and future collaborative projects. Thereby, at the beginning stage it is highly recommended for the case company to stick to the practice of getting a builder's margin close to the industry standard - 16-22% of a project cost, considering the factors of demand and supply, the complexity, size and type of project, the contract and administrative structure of a builder (Master Builders 2017).

The communication issue directly concerns the effectiveness of a new partnership. Thus, it is advised to use more advanced communication and task management tools between partners besides standard phone calls, emailing and face-to-face meetings.

Another thing to consider when developing relationships under the JV is to make sure the partners share the core values and commitments of the case company and vice versa. Otherwise, if the parties are not aligned in their vision and pursue contradictory goals, such partnership is less likely to become sustainable and long-lasting. As a practical example, if the case company is committed to transparency practices and eco-efficiency - e.g. using eco-friendly building

materials and regulating waste - the partner company has to be aware and share the costs engaged. Such alignment and agreement on values at the beginning stage of partnership will only benefit both parties in the long run by reducing the probability of conflicts on an ethical basis.

Table 9 presents the recommendations for building a partnership model designed to fairly and beneficially work for both sides.

TABLE 9. Joint Venture Partnership: Factors for Success

Aspects of Partnership	Recommendations
HR and Relationship Management	Clear definition of roles and responsibilities (fixed for each project)
Finance	Financial split as per value invested
Operations	Communication software integration across parties
Ethics	Accompanied and shared values, goals and commitments

In addition, as a part of a new model, the output that the JV partnership brings is helping to narrow down the variations of house designs and specific differences between the projects by bringing more than one client to order the same house plan. Even though the uniqueness of each design is likely to diminish as well, which might harm the opportunity of competing on this basis, this solution will cater for a different purpose - increased lead time and more accurate budget planning with a less chance of significant cost variations.

### 6.3.2 Marketing

The marketing strategy of the case company has to incorporate market intelligence underlying in the customer satisfaction orientation in order to acquire a sustainable competitive advantage, increase customer loyalty and enhance an ultimate business performance.

#### ***Segmenting and Targeting***

The first-home buyers along with those coming from overseas should not be the priority group for CDC as those who are inexperienced and new to the Australian residential market are more likely to search for large builders with sound and recognisable brand names for personal safety and risks avoidance. In particular,

it has been identified during the research analysis that local dwellers of Sydney suburbs aged from 25 to 65 with a stable income and personal capital savings to afford a house are more likely to compose the customer base for CDC. This statement contains the consideration of such factors as demographic, geographic and psychographic which are crucial when identifying a specific market segment (Mind Tools 2017). Another argument in support of the chosen target group is that its size and potential for growth are highly promising due to attractive investment climate for international buyers and growing population as deduced from the theoretical framework.

### ***Positioning***

In order to reach the most valuable customer groups, CDC has to determine its unique selling proposition by finding a competitive edge over its rivals. Eventually, this value proposition is to be delivered through marketing activities that the audience is most likely to appreciate. Business development and marketing teams need to focus on compatibility with the market housing needs and distinction which helps to stand out from a one-size-fits-all approach and position a construction business for success.

The researcher has identified certain areas where CDC can compete basing on the data analysis:

- **Total lead time:** CDC has very high levels of time management and performance since the delivery projects rates are less than the average in the market which allows CDC to take an advantage from its project time resources.
- **Cost:** CDC is able to compete on costs on designs and building materials due to being not a widely recognised brand, but a small organisation. It thus can afford maintaining cheaper project rates comparing to renowned local enterprises.
- **Customer service:** Due to operations flexibility and adaptability to changes CDC can differentiate itself by having high response rates and being sensitive to market alterations.

Basing on the research results and analysis the current marketing objective is supposed to be formulated as follows:

***Forming a local brand image by increasing awareness and community outreach***

For this objective a few directions of development are proposed by the researcher which are successively presented below.

Physical marketing if implemented effectively can be a powerful tool of promotion. Thereby, it is highly recommended for the case company to use signage boards on land subdivision areas and on-sites during the construction activities. The signages can be used as a tool to attract attention of those passing by which can have a strong influence on local communities. If CDC's brand logo is constantly displayed on different construction sites, the image of the company is likely to be imprinted and recalled in the minds of potential customers once they think of undertaking any building initiative.

Another aspect of direct marketing is brochures and booklets which can serve as an information guide for new prospective clients. As the main target audience has been identified as income-rich adults, CDC has to be oriented more to the values of this market segment, which is likely to be attracted by design quality, safety, eco-efficiency and adequate pricing due to their higher propensity to consume. As for the designing part of the company's brochure it is suggested to use such colour combinations as blue, beige, creamy, sand and various shades of brown as they psychologically stimulate the senses of reliability, stability and trustworthiness. Especially, it is important to deliver visual rather than textual impressions, to attract the described audience.

In order to reach out the community's attention attending networking events is highly recommended for the company to raise the community profile. Large events attract a variety of industry leaders and offer a wide market overview, while small events are a better option for meeting decision-makers and making valuable business contacts.

In addition, attending trade shows where new products and services from local builders and contractors are displayed is a way to interact not only with communities and homeowners, but with field-related professionals as well. Such visits facilitate an understanding of the current market needs and enable quicker reflection in a service development. New design and architecture solutions, latest construction technologies and innovations that can be incorporated into business production processes is another reason to pay attention to such activity.

Community involvement allows a construction business to project an image of corporate responsibility and enhances interaction between employees and communities in a meaningful way whilst contributing into relationships building and networking with potential vendors or future partners.

The direct marketing in a combination with online promotion is highly recommended for the case company. Active presence in social media is probably one of the low cost and easiest ways for the company to demonstrate its power and grab the audience's attention. It is particularly true for construction business which finds it harder than other industries to express itself in a different way. Engaging in a dialogue with local communities through social platforms supports the brand image and increases customer awareness which is especially important for a small building company.

Using LinkedIn and Facebook profile pages apart from general company presentation can be helpful as a source of cross-promotion via connecting with local industry-related professionals such as architects, interior designers, real estate agencies and various subcontractors (plumbers, carpenters, concretors etc.). Thus, the company has to actively search for an opportunity to conclude agreements with other enterprises involved in building construction and renovation sector to increase the chances of being noticed in such a dense market.

The content creation is another crucial aspect of social media activity. It is advised that the company makes its followers constantly updated on the current projects and initiatives it undertakes. Moreover, as there are not many projects to post about, the company can attract more views by applying an interest to industry-related content and educate communities about market specific products and services. Example topics to offer an audience can be:

- Residential construction tips/fact sheets/news
- Newest house design trends
- Quality business materials,
- Home furnishing
- Architecture innovations etc.

Call to Action Marketing (CTA) is another option for the company to express itself online. The suitable application of visuals and graphics, texts and web-design features can contribute into the quality of the official website. In order to make it more appealing, those responsible for marketing content the company can update it with project stories including graphics, customer case studies, testimonials and news/events that take place within the company. Moreover, integrating the forms for feedback and clients reviews/ratings can contribute into making it customer-oriented and reflective. As it is important for the construction company to catch an eye of the audience on design and outlook of the outcome product, it is recommended to produce a marketing video which will present the

company, its main services, activities and points of differentiation in the market. The company can even go further and incorporate visual 3D tours throughout the project designed in an architectural program which could provide the best experience and impressions for potential homeowners.

So far the traffic has been relatively low according to the data provided by Google Analytics of the company's official website. Google Analytics enables e-commerce tracking, reporting and advertising campaigns. It is advised for the company to connect this data to Google Adwords and start increasing conversion rates by using online advertisements and strategic keywords appeared once the right request has been put on the search engine.

In general, having been in the market for a long period, the company has undertaken relatively small steps in a direction of improving its marketing performance. Thereby, a new stage in its history, which is characterised by switching from governmental and commercial projects to residential ones, can be started more successfully with supportive attention of local communities which can be attracted mainly via online and direct marketing.

### 6.3.3 Human Resources

The implementation of new strategies and programs usually calls for new approach to the priorities in human resources management and a different way of using labour potential. These issues can be roughly divided into hiring new people with new skills, firing those with inappropriate knowledge, or training existing ones to learn and acquire new skills. (Wheelen & Hunger 2012.) There are three main areas where the researcher has identified the improvements can be made:

- Expand intangible assets through recruitment
- New methods of collaboration and communication
- Staff training

#### ***Recruitment***

Basing on the results of empirical research it would be reasonable to assume that it has insufficient human resources to reach the established goals. A small in-house team of professionals remains flexible and dynamic in terms of corporate culture, attitudes, communication patterns, adaptability and willingness to change. However, its greatest weakness is inability to accomplish large amount of work, which is a vast constraint for the development of operational capabilities. In other words, the company should be internally prepared and capable of

undertaking a larger number projects if more clients are reached through effective marketing strategy implementation and the JV partnership.

Table 10 presents the proposed composition of team against the amount of current human resources defining the duties and responsibilities of each department.

TABLE 10. Team Composition and Roles

Roles/Functions	Current Staff	Required Staff	Employment Contract	Responsibilities
<b>Operations</b>				
1. Architect/ Designer	1	2	Full time	Project Designs
2. Business Development Manager	1	2	Full time	Tendering/Bid management Trades facilitation Search of prospect market opportunities and new projects
3. Contract Administrator	1	1	Full time	External relationships coordination with stakeholders
4. Quantity Surveyor	0	1	Fixed Term	Legal issues resolution
5. Project Manager/ Construction Supervisor	0	1	Fixed Term	Project Cost Management  On-site supervision
<b>Marketing</b> • Marketing Manager	1	2	Full time	Direct marketing Online promotion, SEO Customer Service
<b>HR</b> • Managing Director	1	1	Full time	General administration Recruitment Staff training
<b>Finance</b> • Financial Accountant	1	1	Full time	Corporate financial management

As can be derived from the Table 10, the author proposes to enlarge the team by recruiting new workers in order to add to qualifications, expertise and operational capacity of the company. However, due to specific nature of industry, there is no

need to hire everyone on a permanent basis, in particular, construction project managers and quantity surveying specialists. These are needed for completion of specific tasks under a particular project and thus do not have to be an integral part of the team on a regular basis. Quantity Surveyor is required during the pre-construction stage to build initial project estimates with precise identification of all items quantities and description of labor. Project managers, on the other hand, are assigned for work during the entire construction activities to be in charge of keeping track of the progress and comply with time and budget requirements. Thereby, it would be more cost efficient to outsource such professionals separately for each project or a few projects at the same time. Even though it will likely require a higher time flexibility for recruitment of those specialists, the benefits of cost efficiency (avoiding employees' and office maintenance expenses) exceed the losses in time.

It is highly recommended to pay a strong attention to business development department as its efficiency and ability to seek new market opportunities and projects directly influences the extent CDC is dependant on its Joint Venture partner. The more proactively a market research is conducted, the more chances CDC gets higher returns on its operational capacity, productivity and independent existence.

### ***Communication***

The workplace productivity can be facilitated not only through talent acquisition, but via improved connectivity between the co-workers. The empirical research has shown that the staff currently experiences evident communication issues which cause overlaps in tasks and delays. But communication is crucial for the effective management of change (Wheelen & Hunger 2012), and thus, everyone has to stay on the same page to deliver better performance.

Communication tools will most likely improve the team's reaction to the environment and enhance the ability to rapidly make decisions and act. Needless to say, by using a new communication management software the company has more chances to reduce project delivery times, become more proactive and even exceed the expectations of its clients. What is more important is to turn team collaboration into productivity by using task management tools which help allocating duties effectively and track further performance.

Knowledge sharing is another aspect that improved communication will serve for as it can cultivate a better industry insight and facilitate learning and staff training.

For this and other communication and sharing purposes, an extensive use of such software as Bitrix24, which involves various aspects of collaboration and team management tools, is recommended.

Within an organisation there are usually multiple critical documents related to intranet that have to be stored in a secured place and updated. Inconsistency in working materials may result in poor performance. Thereby, everyone has to work on the same and current version of document and this can be enabled by Bitrix24. It also allows for conducting group conferences/presentations and organising meetings when physical availability of participants is not possible at required location. In general, it comprises:

- Centralised employee search directory and recruiting
- Organisational/Company structure chart
- Time management and Absenteeism control
- Knowledge and Idea management
- Document management, records and HR forms
- Flexible workforce (full-time/contractors/temps/interns).

In order to motivate everyone in the same direction it is important to make sure that employees have the shared mindset concerning the organisational vision, mission and goals. Thus, it is likely to be useful for the case company to regularly organise internal staff meetings with an objective to make announcements, discuss current status on projects and communicate the strategy to get everyone's daily contribution into progressing throughout the plan.

### ***Staff Training***

The last area of possible improvement has to do with staff training. It is highly recommended for the company to develop a program of training for the newcomers to make them faster adapt to a new environment and better understand the business model of the company. The guidelines should be developed in relation to corporate culture, fundamental values, company's objectives, core competencies, office administration rules as well as the navigation throughout daily processes and common operations of each department. It is advised to design a consistent guide book with all the instructions that the existing team and the CEO would consider important for a new employee to learn about. This should be in the highest interest of the company to accelerate and smooth the adaptation process to start yielding returns on investment more promptly.

As for the training of those who already compose an integral part of the organisation, it is advised to systematically (twice or once a year) conduct staff skills assessment to work out and identify individual training needs and areas of improvement. This can be done through interviewing or group discussions. Afterwards, various training options should be evaluated against each other and communicated to all participants on the delivery of a program (whether it is on-the-job, internally, or an external training provider). (Queensland Government 2016.)

Generally, in order to increase the organisational capabilities to carry out more projects, which serves the main strategic objective, the human capital is one of the first and key aspects where changes in operations take place.

#### 6.4 Strategy Evaluation: KPI, Risks and Constraints

In order to measure whether the success has been achieved in the areas described above, the desired outcome has to be defined precisely and the criteria that measure the performance of a particular activity have to be established. This metric is called Key Performance Indicators (KPI) the objective of which is to provide a reference and a ground of evaluation on the basis of the expected outcome. KPI have to be concrete, measurable, reachable and relevant. (Gutierrez 2017.)

First of all, in order to track the progress of operations in a new strategy the following performance factors can be taken into account:

1. **Project costs** - the result of built partnerships with the subcontractors is likely to lead to lower and stable rates. The way to measure that is to calculate an average percentage of the rate decrease from all the subcontractors.
2. **Lead times** and **project schedule variances** - the construction software is supposed to manage timeframes more efficiently reducing the project delivery period. The success is achieved if the lead times are visibly improved from completing a project in standard 7 months to 5, for example. Variances might occur due to inaccurate budgeting and planning, or inefficient implementation of repeatable work, and the software is to help mitigating these risks.
3. **Operational capability** - the ability to undertake more projects at a time can be simply calculated by the number of projects completed in a specific period of time (5 months) currently and then in 3 years.

From the marketing point of view, the company can use the following metric to evaluate its success:

1. **Number of customers** - with successful implementation of strategy the company can expect increase in the amount of orders up to ten annually in three years.
2. **Leads and conversion rate** - the ranking in the search engine, number of visits and views and the general traffic of the company can expect being increased and 3 years of active, and targeted marketing actions are supposed to make the company easier to find and recognise among other companies.
3. **Customer satisfaction score** - the customers should have a chance to provide feedback, rate the service and leave reviews. Then this feedback is analysed and generalised to identify the opportunities for further customer service improvement.

In addition, according to Moustakis, Litos, Dalivigas & Tsironis (2004), in order to evaluate the effectiveness of website it is worth paying attention to such aspects of quality as:

- Content - its utility, reliability and completeness.
- Navigation - ease, convenience and means of navigation tools.
- Structure and design - site map, layout, information structure and order, loading speed.
- Appearance and multimedia - graphics representation and readability of content, general aesthetics and uniqueness (Moustakis, Litos, Dalivigas & Tsironis 2004).

As for HR management, the case company has to support its strategic vision, goals and objectives by making sure that they are firstly easy to communicate, well understood and shared across all the team members. Moreover, the strategy has to be broad enough to embrace a variety of local perspectives. Once the strategic plan is understood and recognised by the whole team, all the daily and short-term operations will fit into the long-term desired outcome.(Gutierrez 2017.) The following KPIs for measuring the success of strategy can be applied:

1. **Larger team with clear roles** - in order to attain the established strategic goals, the company's human capital has to be enlarged with new members owning relevant industry-related qualifications. It can be simply measured by the number of people currently working in the company and the size of team in 3 years considering the employment basis (full-time and fixed-term).
2. **Duration in the position and remuneration** - the employees have to be motivated to stay in the company with an opportunity to be promoted. Depending on the position in the company and professional performance, an employee has to receive stimulations and awards. To track employees' growth

the range of responsibilities and tasks at the beginning can be compared with those acquired by the end of strategic plan execution.

3. **Absenteeism and workplace productivity** - this indicator shows how long it takes for employees to achieve their goals considering the factor of absenteeism. This can be calculated by the average expected value of assigned working hours and value of hours actually worked.
4. **Average time for recruitment and training** - this indicator is one of the most crucial in relation to this case, as the recruitment time of, for example, on-site supervisors, construction project managers and quantity surveyors can considerably affect the project delivery time frames. During the implementation process, the recruitment time has to be constantly reduced and training programs have to become more time and cost efficient.
5. **Knowledge achieved via training** - the effectiveness of employee training can be evaluated by creating an exam and monitoring the results with an average score percent. However, the real value will be reflected in practical operations achievements.

The evaluation matrix to assess the strategic implementation success is organised in a way to determine whether the company has progressed on its planned activities and initiatives and if the corrective actions have to be taken further. The example of matrix is presented in Figure 25.

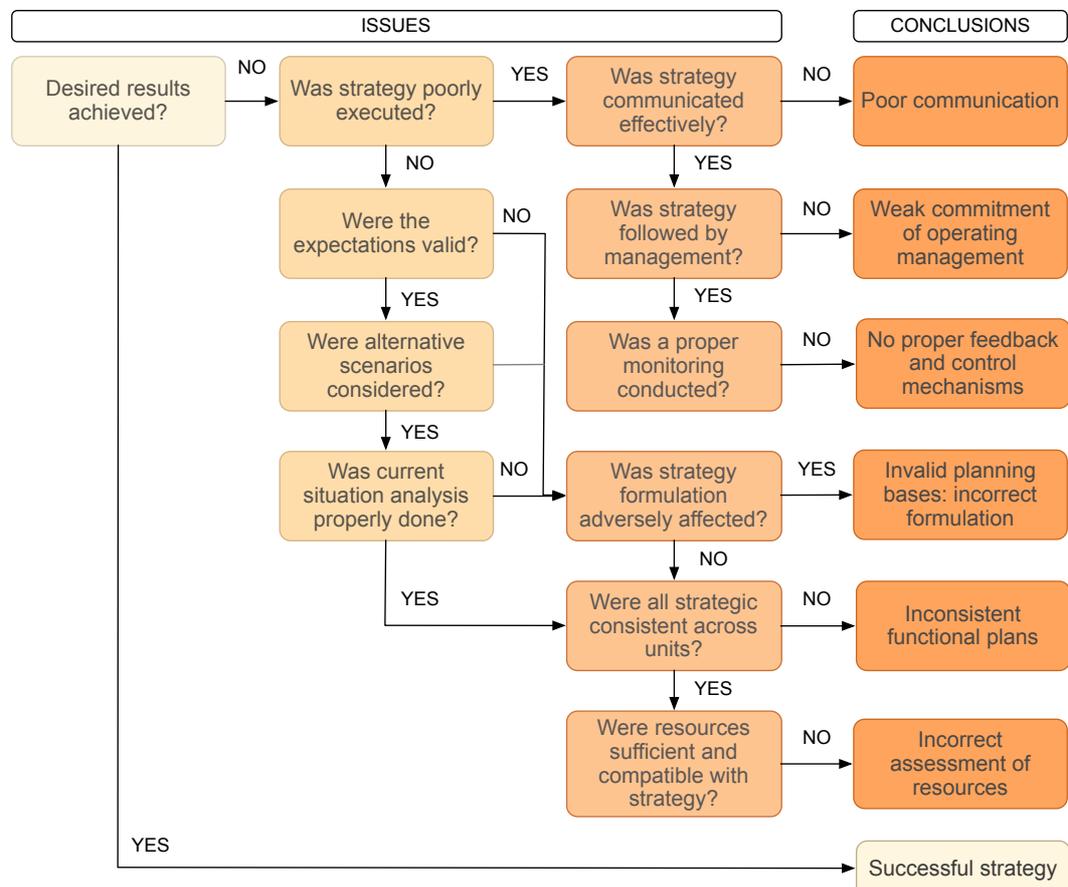


FIGURE 25. Strategy Evaluation Matrix (Modified from Wheelen & Hunger 2012)

There are some possible risks and constraints that might arise on a way of strategy execution. There is a less chance and likelihood of risks in terms of strategy's acceptability for the stakeholders and the general suitability of the plan. Feasibility area which is concerned with resources is more likely to bring uncertainties for CDC. The potential risks have to be appropriately managed and prioritised in terms of severity of impacts they might entail.

Some limiting factors can include:

- Time pressure
- Budget (insufficiency of funding)
- Technological unavailability
- Human Resources (e.g. loss of key personnel, lack of skills)
- External environment changes: governmental regulations, drastic market swings etc.

In order to avoid large constraints and mitigate technical, strategic and external risks, the company has to make sure that every new project complies with the organisational policies and the established pattern of processes. Some of the strategic risks may also include the failure to recognise market opportunities. Thus, it is recommended to constantly conduct environmental scanning and research. The level of financial risk is directly linked to the operational success of the company (adherence to time and budget) and budget overruns can be caused by poor planning or wishful pricing. The best way to avoid deviations from the initial plan is to communicate it properly and effectively, and follow a single model of actions with similar processes involved from project to project. In order to prevent the corporate budget from abrupt costs, it is proposed to incorporate changes gradually and use funding sources of current projects.

Market risks are external and largely uncontrollable, however, the pre-construction risk is internal to the team and can be handled. The key to success in this phase, as elsewhere, is picking the right team and then providing coordination and central direction. (Macomber 1989). Furthermore, it is recommended to constantly conduct risks monitoring and control throughout various project stages to make sure possible obstacles or uncertainties are addressed at their earliest phase to mitigate long-term effects. In general, for the case company there are more particular project-related risks rather than those associated with new strategy integration.

## 6.5 New Model: Summary and Future Recommendations

This chapter was devoted to building a new model of strategic management for the case company basing on the data collected and analysed in the previous parts of this thesis. Everything that has been proposed by the author has a single purpose - to support the company in its development and help it to identify and solve the existing issues that restrict its growth. The author has tried to work out the strategy in the best company's interest. All the ideas and options presented and supported by the earlier constructed knowledge base are for the company's considerations only and at no means claim to be the single best alternative.

With a new partnership the main priority of CDC should be finding a reasonable resource balance which can be achieved by increasing the operational capacity, improved communication and upgraded project and relationship management.

Building an infrastructure is a considerable investment and every stage of its process requires careful analysis of various factors that affect an ultimate outcome. Managing technical competencies of each party involved in construction manually is a large financial and time-consuming burden. Thereby, one of the first things to be improved in the case company deals with coordinating the tasks effectively from the beginning to the very end of building works. The construction management software simplifies and modernises the entire procedure by organising the scheduling of tasks, monitoring the performance, allowing for efficient resource use and easily communicating with clients and subcontractors.

After successful installation of the selected software the next step is to integrate all the parties that need to be involved. These include all the suppliers and subcontractors assigned for work. On this note, building long-term partnerships with them is highly advised in this case, as it has a large prospect to reduce production costs and increase the company's confidence in the reliability of services procured, while mitigating the risks of underperformance.

By developing a universal operational framework the general standardised approach of taking a project through all the steps on a way to its completion is more possible. Such model would improve the operational efficiency and easier the procedures taken prior to construction. By having an image of a possible outcome and range of options and objectives to reach within a project, the company is aware of what to expect and better prepared for the future.

In an alignment with the key strategic intention of acquiring more projects and scaling the operations, the strategy is largely oriented on customer acquisition. The key marketing goal is to shape the right image of CDC in the minds of the local public and increase their awareness of the company's activities. One of the main objectives behind an active presence in social media is to stay available and get personal with the audience which is almost the only way for a building company to do so. In general, it is important for the case company to stay consistent in various aspects of its brand display throughout multiple applied marketing strategies - whether it is through direct (e.g. brochures) or online marketing (e.g. social media).

Organisational architecture has social and commercial aspects. Its external element is about relationships with suppliers and customers, while an internal component reflects communication between employees. Purposeful collaboration is a way to build productivity, and active employee engagement increases the chances of improving customer service while catering for the main strategic goal.

Thereby, it is crucial to provide the opportunities for promotion and make sure everyone is on the same page sharing a common vision. Apart from integral simulations, an ICT tool which would better communication flows is necessary for successful strategy implementation. As an option for this the author has proposed using Bitrix24 collaboration platform.

The strategy presented in this chapter covers the actions planning for a 3-year term. However, if the company decides to move forward with its strategic management improvement, here are a few recommendations to consider in the future.

First, if the company's operations expect to be scaled in the future, integration of BIM tools and softwares can help to better coordinate project delivery, create comprehensive time schedule to manage more projects at a time, and therefore increase project execution efficiency. This would be a new upgraded level of operations to sequence actions, resolve conflicts and maintain larger control.

Second, if CDC continues developing its client portfolio and cultivating new customer groups, diversity marketing might be an option to facilitate this process. It involves developing a customised marketing plan and unique custom-design house plans for individual needs of each target group by analysing various customer segments based on their cultural differences including tastes,

expectations, beliefs, world-views, and specific needs. As for the CDC's official website the company can go even further and integrate into its main homepage visual 3-Dimensional (3D) house tours and more sophisticated advertising campaigns.

Third, the company might be interested in relocating part of its assets into a different strategically beneficial location, since the regions around main Sydney area are expected to be developed intensively basing on the market research and prospects introduced in PESTEL framework. New office acquisition will also require more field specialists and the company will have to be prepared for sustainably generating enough profit to invest in its future growth.

To sum up, creating and executing a strategic plan requires a lot of effort, research and collaboration, however, the amount of benefit the companies get in the long run from an improved strategic management is a way larger than the input contributed. The most crucial thing here is to ensure all the strategic aspects and actions are aligned by communicating the strategy clearly and simply, providing the right tools for implementation and the direction of motivation.

## 7. CONCLUSION

This chapter is the final part of the research conducted and described in this thesis. This section has the most meaning only after the theoretical and conceptual framework has been developed to underpin the empirical research, the data collected, analysed and presented to build a foundation for the strategic management plan and the new model of actions introduced and justified. Thereby, here the author makes conclusions summarising the key findings altogether by answering the main research questions and evaluating the outcome. Along with that, the validity and reliability of data relative to the study are explained and affirmed. Last but not the least, the chapter contains recommendations and grounds for a future research.

### 7.1 Evaluation of Research Objectives fulfilment

Due to the complexity of the subject, it is important to understand various aspects of the problem under the research. In order to summarise all the findings in a logical and consistent manner, the research sub-questions were developed and introduced before building the main conclusions. Thus, it would be reasonable to provide brief clarifications of those questions dealt with the theoretical framework that supports the research and get a closer look into the key issue around the research. In general, this chapter is supposed to help the reader refresh the thoughts presented earlier on in this thesis.

The primary goal of the researcher was to work out each activity in the development plan in a way to make it relevant for achieving the strategic goals and getting the necessary job accomplished. It was critical to create a coherent and stable program where the activities are complementary and do not interfere or contradict each other.

The first area of the discussion was focused on the conceptual knowledge base of strategic management theories and models:

- *What is Strategy and Strategic Management?*

Strategy is a multidimensional and versatile science of planning and allocating resources for their most effective use on a way to achieve the desired future. Strategic management has been evolving through simple concepts and applications until being recognised as an independent aspect of company's ability to succeed. The main goal behind it is to support the managers in incorporating various functional areas to ensure they are harmonised and work well together to

reach better performance, higher profitability and a competitive advantage. Strategic Management gives a clear sense of vision to companies making them more proactive, mobilised, encouraged and achieving aligned focus and direction across its individuals.

- *What are the key processes and models applied within a strategic management context?*

Before turning strategy into practice, there should be an analysis thoroughly undertaken in a context of external environment and internal capabilities of an organisation. SWOT is a tool useful for assessing organisational strengths and weaknesses along with the environmental prospects and threats, while PESTEL and Porter's 5 forces are applied for environmental scanning of different societal aspects and business-related factors. Afterwards, strategy becomes action when it is implemented by modifying organisational structure, assigning the appropriate people for certain activities and communicating the direction and goals effectively. Thus, the three major processes composing strategic management are formulation (choosing the course of actions), implementation (programming, budgeting and procedures developing) and evaluation (monitoring performance and taking corrective action if needed). The strategy is likely to be successful if it is made of developing simple and consistent goals, deep understanding of a competitive environment, objective evaluation and allocation of resources, and implementation.

- *What are the particular distinguishing features in strategic management within Small and Medium-Sized enterprises?*

SMEs are commonly oriented on a short-term financial success rather than long-term sustainable growth, limited in resources, market knowledge and capital, and affected by personal management style of its private owner. Lower costs and prices, faster delivery, higher service quality or a good brand image can become essential in creating competitive behaviour. The conclusion is that small businesses are more reactive, while the strategic success is highly determined by the ability to scan an external environment and adapt to its changes. Thus, the strategic concept or a combination of strategies has to be flexible enough to quickly identify market opportunities and respond to them.

Another set of questions deals with the construction management background overview:

- *Which activities and processes does the construction industry embrace?*

The construction industry is vast and diverse in nature comprising market operators on different levels with commonly complex business models. The key operation areas of construction industry include engineering construction, residential building and commercial, which all vary depending on used types of materials and methods, tools and equipment, qualifications and labor. There are various roles engaged and levels of performance on which market players operate, however, there is always a project owner (initiator) and a general contractor (builder) with smaller subcontractors under control. The range of management activities differs depending on the level of influence of a party, size and complexity of a project.

- *What is the definition and scope of construction management?*

Construction management is the process of an effective organising, coordination, implementation and monitoring of machinery, materials, labor and finance involved in the provision of construction facilities. Planning of production, procurement, marketing and administration are also essentially involved to reach higher economic performance and profitability. Construction management includes four levels - organisational, project, operation & process and task - embodying such necessary project stages as design, pre-construction, procurement, construction and post-construction. The face of construction industry is constantly changing along with the increasing complexity of projects. It requires smarter and more sophisticated approaches and techniques within the construction management. It especially concerns such aspects as project planning, scheduling, budgeting and cost control for which Gantt chart is commonly applied to organise and sequence interrelated activities.

The final part of the research framework is directly linked with activities of the company on a national arena and the main related questions were formulated as follows:

- *What is the current position of the company in internal and external contexts?  
What are the challenges and prospects?*

Custom Design & Construction is a general contractor which serves the housing needs of community by providing a full package of design and construction services. CDC is notable for its high-quality standards of performance, service affordability, commitment to environmental practices and flexible internal model. However, the empirical research has shown that at the same time the company is unable to fully exploit potential and support its ambitions due to lack of

operational power, the absence of clear strategic vision, ineffective communication and project management.

The housing affordability crisis in Sydney where the case company operates is becoming more severe causing the floating prices on dwellings, building resources and services. This is even more exacerbated by international investors, stricter government regulations and high market segmentation among the industry competitors. Nevertheless, the overall outlook for the Australian construction industry looks positive due to favourable economic conditions, stable population growth and governmental support. It certainly presents multiple opportunities for the case company to meet an increasing demand. At the same time, it pushes CDC to seek new ways of withstanding external pressure by improving its operational capabilities to a higher productivity.

- *Why is there a need for improving the case company's strategic management?*

CDC currently undergoes through a new page of development in its history switching from governmental and commercial projects to specialising on residential housing which entails the transformation of organisational operations and requires adjusting its strategy to better meet the demand of a new market segment. The company had been increasing sales profitably over the last years, however, it has now reached the maturity stage which has brought a significant growth slowdown and income stagnation. Another driving force affecting the decision to change is the company's expressed interest and opportunity to merge its resources and share responsibilities under the Joint Venture partnership which provides promising prospects and pushes the company to eliminate growth restricting factors. Finally, CDC is aspired to revive profitability by scaling its ability to handle more projects, but lacks internal power and resources to keep up with its ambitions and goals.

- *What is the most suitable strategy for the case company to reach its goal?*

Due to being a small market player, it is less likely for the company to successfully compete on the basis of R&D and innovations investment, scope of operations or extensive marketing campaigns which leaves a relatively confined number of options for the case company in terms of strategy. However, its competitive edge can express in maintaining close relationships with communities, cultivating employees' loyalty and delivering more responsive service. Thereby, the author proposes that an adaptive model currently suits the company's case best meaning that the shape of its main activities has to be the reflection of market changes and response to a changing environment. The most

suitable and realistic option for the strategic management development is to aim at seeking the right balance between the available operational resources that would bring sustainable sales and profit growth.

After clarifying the sub-questions of the research it is time to answer the main question that gave a rise to this writing. It was formulated as follows:

***How can the case company develop its strategic management to reach out more clients?***

Due to the lack of practice in carrying out residential projects in the past, the case company has not developed an established model/standard of behaviour which has led to uncertainties in its ability to undertake and properly manage multiple projects at the same time. The formation of internal model is only possible through experience, and the author has attempted to help the company to accelerate this process by directing its focus on those aspects of operations that can be improved.

Basing on the theoretical and empirical research that has identified strategic gaps in the company's current development, the author has attempted to fill them with the right actions that would lead to the achievement of established objectives. As the main company's objective has a financial nature, the strategic management has been viewed from the key aspects that constitute company's core competencies and activities - operations, marketing and HR. It has been determined by the researcher that in order to keep growing after having reached the maturity stage the company has to reinvent the direction of its development and acquire a new clear reason for further existence (mission), a big dream driving its operations (vision) and fundamental principles that would guide its daily decision-making (values). The company has to be more decisive in identifying itself in the market by choosing those target groups the needs and demands of whom would be the most compatible with the company's value proposition.

It has been deduced that one of the major opportunities the company can take advantage of is its collaboration with Joint Venture partners, whose primary role is to source clients for CDC. Thus, the function of CDC under this partnership is to further retain acquired customers by providing them with the desired building services. Besides significant benefits this partnership brings, CDC has to share new responsibilities and make sure that it is strong enough to operate effectively in its pole and carry out independent projects at the same time.

First, in order to increase the operational capability, the company has to pay attention to an optimisation of its cost estimation processes and project delivery to compete on the basis of price and time, which is technically possible for such internally flexible operator. For this purpose, it is extremely recommended to integrate construction management software as soon as possible which would allow for accelerated communication flows between the company and its stakeholders (customers, suppliers and partners) as well. The value of complete software's incorporation cannot be overestimated for this case and is likely to streamline multiple daily operations from planning, scheduling and budgeting on the pre-construction stage to mobilising resources, tracking progress and reporting during construction works.

Second, the company has to improve its relationships with various stakeholders. Establishing long-term partnerships with subcontractors is advised for ensuring the reliability, consistent quality and stable competitive rates.

Third, the primary marketing initiative to facilitate the main strategic objective should concern the formation of a local brand image and building of an ongoing dialogue with communities through social media, functionality and design of the official website, direct marketing, attending trade shows and networking events. Active online presence and constant updates on company's activities along with quality content creation will increase community involvement and customers' awareness of a local builder.

Finally, the company has to enlarge the capabilities of its human resources through new talent acquisition, intensive staff training and new methods of collaboration. Communication management is a critical aspect of any construction project; thus, the company cannot ignore the opportunity to integrate collaboration, task management and knowledge sharing platform to organise daily team operations.

In order to successfully manage strategy implementation the case company has to ensure that the goals, objectives and plans are aligned and effectively communicated across all the departments internally and stakeholders externally. It is also advised to consider and evaluate any possible risks and constraints on a way to goals accomplishment.

As most of the strategic improvement is likely to entail extra financial costs, the company may integrate new propositions very gradually without abrupt changes getting its investments from monetary gains of projects based on the current model. Eventually, the company is likely to be able to sponsor new activities by

acquiring a more solid competence and experience in the residential field and slowly but surely building a new and strong operational model.

## 7.2 Validity and Reliability

The importance of measuring the consistency and accuracy of research instruments, known as validity and reliability, can hardly be overvalued. The quality of data gathered depends on several factors such as the socioeconomic characteristics and educational background of the respondents, their attitudes towards being interviewed and awareness of the research purpose and importance (Kumar 2014). The author has relied on the academic sources and the works of “old masters” acknowledged as certified industry specialists in strategic management and construction project management. The most up-to-date and relevant information was also extracted from articles of credible journals and Internet sources on industry and market analysis.

In the conducted research all the participants were introduced to the research goals and objectives to avoid any miscommunication of purposes, uncertainties and ambiguities. The interviewees were encouraged to be flexible in asking for clarifications if they felt a necessity of doing so which gives a certain amount of confidence in their willingness to provide the most satisfactory and useful for the research information. Thereby, it would be fair to claim that the data received and the conclusions deduced match the queries and needs of this particular research.

As the qualitative research involves the researcher’s factor of having personal background, culture and established values through the perspective of which the data have been collected and analysed, there was a need to reduce a possible influence of subjective perception. Thus, all the transcribed and summarised data derived from the empirical research were given to the respondents’ for their verification and acknowledgement of the interpretation accuracy. In that case, the reliability of data provided has a little chance to be questioned or mistrusted.

Another argument in support of the authenticity of the research is the industry expertise of its participants who provided fact- and observations- based data rather than gut-feeling or intuition grounded. This can be proved by the real state of affairs within the company during the research period reflected in the clearly measurable indicators (e.g. number of leads, customers, project times and costs etc.).

Overall, as the research has a qualitative nature, the sample size and the richness of findings are sufficient to assess the success of the research objectives fulfilment and provide a reliable foundation to deeper investigate and broaden the topic further.

### 7.3 Further Research Proposals

The study indicates a number of opportunities for future research in a context of the case company as well as on a general theoretical level. As an organisational entity is a complex and dynamic organism there will always be challenges and new milestones to deal with. In terms of the case company, a future research can be based on testing the company's model for residential needs and evaluating its success. Another research opportunity is to examine the possibilities of a technical upgrade in operations management such as BIM integration and its suitability for small residential projects.

Furthermore, the field of strategic management the scope and essence of which constantly evolves could be investigated more specifically in relation to construction management. For instance, such issues as resources expansion, product and service diversification and exploitation of general business opportunities would be worthwhile to study to contribute into this field. Risk management and assessment of functional operations is necessary for construction projects and requires particular attention along with structured control systems evolving beyond one person. The implementation and management of various strategies on an international level in a context of a large-scale building activity development would also be interesting to examine.

Thus, the conducted study not only sheds a light on the field of strategic management in terms of construction projects, but also opens new doors for conducting such inquiries in other related fields such as project management, risk management and cost management.

## 8. SUMMARY

Strategic management which is mostly associated with large corporations has been advocated as crucially important to the success of small companies as well to outline its strategic direction, coordinate action and assist in achieving goals. Particularly within the construction industry, company strategies are often more intuitive than deliberate with a strong orientation towards operational rather than strategic issues. Within Australian construction industry, taken as a case for this research, the need for strategic planning is exacerbated by the rapidly changing market conditions with increasingly soaring demand and intensifying rivalry.

In this thesis the strategic management models and concepts were adopted to analyse external and internal environment of the case company and identify the strategic gaps. The author has also provided a theoretical knowledge base of the construction project management relative to the research objectives in order to support an understanding of the company's operations nature.

The empirical research conducted via interviewing the case company representatives and further data analysis has helped to deduce that the case company lacks a stable internal model that would allow it to optimise the processes and utilise potential at its full capacity. The research has revealed that the case company is strategically unprepared for the future which pushes it to seek new ways of survival. In order to revive profitability and sustainable growth, the case company has expressed the need to eliminate growth restricting factors.

The particular actions of strategic management improvements were proposed in terms of the main organisational departments - operations, marketing and HR. The company has to reorient itself into the direction of establishing a recognisable local brand image to reach out more clients. Moreover, it has to increase its operational capabilities to handle the desired amount of projects through improved communication with stakeholders, community engagement and active ICT integration (construction management software).

To sum up, the company has to concentrate on building, implementing and communicating effectively a new strategy while constantly scanning the environment, seeking new opportunities and scaling its resources to achieve higher returns.

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## APPENDICES

### APPENDIX 1. **Interview Schedule**

**Interviewer:** Daria Torzhevskaja (the researcher)

**Interviewee:** Name (Title)

**Date of Interview:** dd/mm/yyyy

**Purpose:** The interview takes approximately 20-30 and is designed to identify the existing issues in CDC's strategy in order to further develop an action plan that would help the company to improve its operations. Please, provide the truthful and elaborated answers to support the reliability and sufficiency of research data.

#### **Questions for discussion**

##### Part 1: CDC internal Operations

1. What are the company's strategic goals and objectives? What is the mission statement?
2. How would you describe a current strategy of CDC? What is CDC committed to the most?
3. What is the amount of clients (projects per year) the company intends to reach that would be considered good in your opinion?
4. What is CDC's target group? What do you think about current marketing strategy?
5. What are the strong and weak points in company's strategy? What are the weak points in project management and planning? What are the main problems company has and why do you see them as obstacles?
6. How the company's sales improved during the last 2 - 5 years? Was there a growth or slowdown?
7. What project management tools/techniques is company using now?
8. How could the company's finances be managed and distributed better?

##### Part 2: MARKET

1. How do you evaluate a current situation in construction sector in Sydney and Australia as a whole?
2. What are the opportunities and risks for CDC presented by the market? What can be done to take advantage of these opportunities and avoid/mitigate risks?
3. What in your opinion is CDC's next step to improve its performance? What does it lack and what should it do then?