MBA INTERNSHIP REPORT ON

SMEC International Pty Ltd.

INTERNSHIP TOPIC

Services Marketing and Company Strategies of SMEC International Pty. Ltd.

PREPARED BY

Name: Md. Rafsanul Alam Khan

Student ID: 16264029

SUPERVISED BY

Dr. Suman Paul Chowdhury

Assistant Professor and Coordinator,

MBA Program, BRAC Business School,

BRAC University

Submission Date: 9 May 2019

PLAGIARISM DECLARATION

- I know that plagiarism means taking and using the ideas, writings, works or inventions of another as if they were one's own. I know that plagiarism not only includes verbatim copying, but also the extensive use of another person's ideas without proper acknowledgement (which includes the proper use of quotation marks). I know that plagiarism covers this sort of use of material found in textual sources and from the Internet.
- I acknowledge and understand that plagiarism is wrong.
- I understand that my research must be accurately referenced.
- This assignment is my own work, or my group's own unique group assignment. I acknowledge that copying someone else's assignment, or part of it, is wrong, and that submitting identical work to others constitutes a form of plagiarism.
- I have not allowed, nor will I in the future allow, anyone to copy my work with the intention of passing it off as their own work

Name: Md. Rafsanul Alam Khan
Student ID: 16264029

Letter of Transmittal

30 April 2019
Suman Paul Chowdhury
Assistant Professor &MBA Coordinator
BRAC Business School
BRAC University
Subject: Submission of Internship Report.

Dear Sir,

With humble honour and respect, it is a great pleasure to submit the internship report on 'Services Marketing and Company Strategy of SMEC International Pty Ltd.' with special reference to SMEC International Pty Ltd. known as **SMEC.**

As an integral part of academic program in completion of MBA, it has been joyful and enlightening experience for me to work in **SMEC** and prepare this internship report. Obviously, this has been a great source of learning for me to conduct this type of studies in future.

In completion of the report I have put my best effort to prepare a complete internship report.

Therefore, it is a humble request to you to accept the report for your judicious evaluation.

Regards

……

Md. Rafsanul Alam Khan

ID: 16264029

Acknowledgement

At first, all praises belong to the almighty Allah, the most merciful, the most beneficent to man and his actions.

The author wishes to express sincere gratitude to his supervisor, Dr. Suman Paul Chowdhury, Assistant Professor and Coordinator of MBA Program, BRAC Business School, BRAC University, for his constant guidance, invaluable suggestions and advice, encouragement, sympathetic co-operation, generous help and strong support towards the successful completion of the study.

The author is also thankful to SMEC International Pty Ltd. for providing various resources required for this work.

The author expresses his heartiest thanks to his fellow colleagues from SMEC International Pty Ltd. for promoting valuable workable environment and enthusiastic encouragement during the whole study period. Last but not the least, the author pays deepest homage to his parents who they believe to be the cardinal source of inspiration for all of his achievements. Their constant moral support was phenomenal and exemplary throughout the course of the study. Special appreciation is expressed by the author to his colleagues especially Saiful Amin, Manager-PMS Group, Ms. Shamima Akter, Assistant Manager-Business Development and Ataul Goni Asif, Manager, Operations-India for their inspiration, cooperation and support and to those whom I have not mentioned here.

Supervisor's Certificate

This is to certify that the internship Report on "Services Marketing and Company Strategy of SMEC International Pty. Ltd" is done by Md. Rafsanul Alam Khan as a partial fulfilment of the requirement of Masters of Business Administration (MBA) major in Marketing Management.

The report has been prepared under my guidance and is carried out successfully.

Dr. Suman paul Chowdhury
Assistant Professor and Coordinator,
MBA Program, BRAC Business School,
BRAC University

Executive Summary

Bangladesh is growing fast in infrastructure development in recent years. Consultancy services in the large infrastructure projects in this country is getting more and more popular as too many projects in different sectors are coming in the next few years. SMEC International Pty. Ltd's journey is not new in this country. SMEC has been involved in so many projects that it's service in this sector plays a significant role. Currently 38 projects across the country are under supervision of SMEC/ JV of SMEC. As the consultancy industry is a purely competitive market and every single entity is actively performing, there are some specific strategies that SMEC adopts to create the difference that makes it unique from others. In this paper we are going to discuss about the service that SMEC provides, the impact of these services to this country and the strategies that SMEC has been implementing to gain the driving position in the market.

Table of Contents

CHAPTER-1

INTRODUCTION

Background of the report

Internship report is a must for the students who are doing MBA from BRAC Business School. If the student is a currently a job holder then s/he must prepare the report on the organization they are working in. The author of this report has also completed his core courses of MBA and currently working as a full-time employee of an organization. So, this report has been originated as a requirement for the completion of the MBA program.

The author has been doing his major in Marketing Management. He has completed 3 major courses. The courses are- 1. Brand Management; 2. Consumer Behaviour; 3. Services Marketing. His current organization is actually a service organization which has been providing the consultancy service to the Government of Bangladesh in different infrastructure sectors. So, the topic for the report has been selected based on the author's job experience in the relevant field; that is the services marketing and marketing strategies of that specific organization. We can summarize 4 specific purposes that this report will serve-

1. To relate the real-life experience with the courses that had been taught in the MBA program; this means any course, not the major courses only.
2. To get the actual vibe of the business world, which will definitely prepare the student for the upcoming corporate life.
3. To learn about the job responsibilities.
4. Last but not the least, to complete the MBA program of BRAC University.

Reason behind this report

Consultancy business in this country has started right after the liberation war. ACE Consultants limited, which is the subsidiary company of SMEC started its journey back in 1977. Since then it has been involved in numerous projects to build the nation. But it is a matter of regret that there's no detailed and vast report, paper or research on consultancy services in Bangladesh. This service is vast and requires specific and advanced strategical action. This report will let

the readers know about the consultancy service in Bangladesh through the research on SMEC and what are the marketing strategies that firms adopt to survive in this industry.

Objectives

With a view to fulfilling the objective some specific objectives have to be satisfied. The specific objectives of preparing this report are given below:

- Study the present scenario of Infrastructure Development in Bangladesh;
- Analysis of SMEC's contribution to the Infrastructure Development of Bangladesh;
- Study SMEC's Service Marketing Mix and overall marketing strategy.

Scope

This study mainly concentrates on infrastructure development in different sectors of Bangladesh and the prospects of the related consultancy firm and considering SMEC as case study. SMEC is working in most of the mega projects of Bangladesh, a study on this company can be a way forward to get a complete scenario on the development process, which is unknown to mass people to some extent.

Organization of the paper

This thesis paper consists of overall five chapters. All the chapters name with sequence are given below.

Chapter 1	Introduction
Chapter 2	About Organization
Chapter 3	Internship Experience
Chapter 4	Services of SMEC and Overall Strategy
Chapter 5	Reference and Conclusion

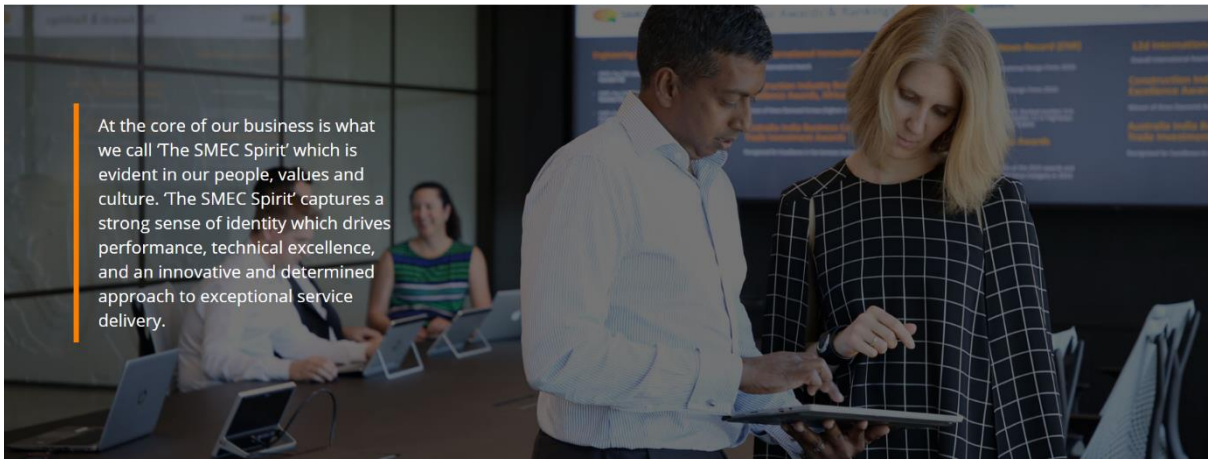
Methodology

This research is mainly exploratory and qualitative research based on Secondary and small scale of Primary data. Secondary Data collected from various sources like, SMEC annual report, Government reports, Journals, newspaper publications etc. Primary data sources is the

Business Management System-Portal of SMEC.net global and the discussion with the key persons in the Business Development team.

Literature review

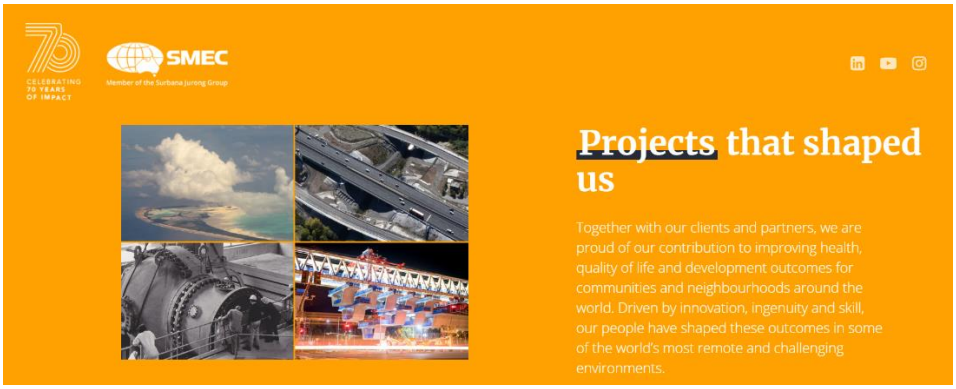
This report is organized into four parts. The first part will emphasize on overview of the infrastructure development sectors in Bangladesh. This section has focus on different development projects and relevant consultancy services. In second part, an insight of SMEC International will be delivered in correspondent to the operation of consultancy services in Bangladesh and globally. In the third party the internship experience, job responsibilities have been described in details. In the fourth part a detailed study of SMEC's Service Marketing Mix and overall marketing strategy will be discussed following the interrelation and other relevant data are provided with conclusion notes.

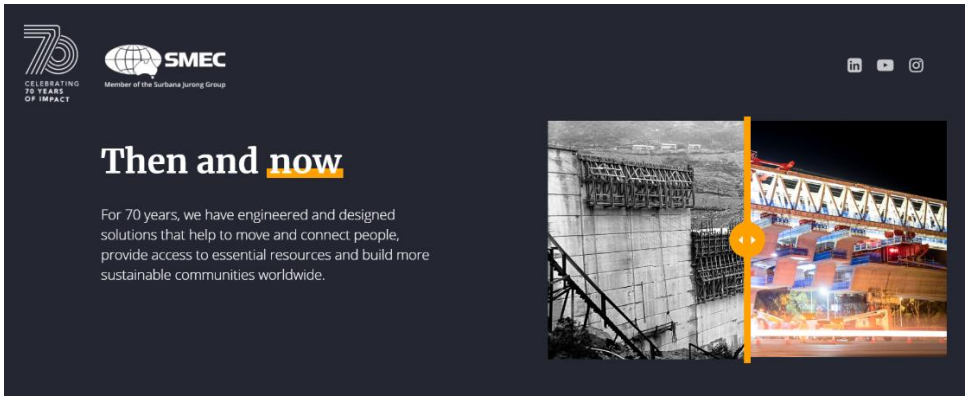


CHAPTER-2

The Consulting Firm: SMEC International Pty Ltd.

SMEC is recognized around the world for providing high-quality, practical solutions for social and physical infrastructure projects. SMEC aligns technical expertise with local knowledge to address the needs of its diverse client base.





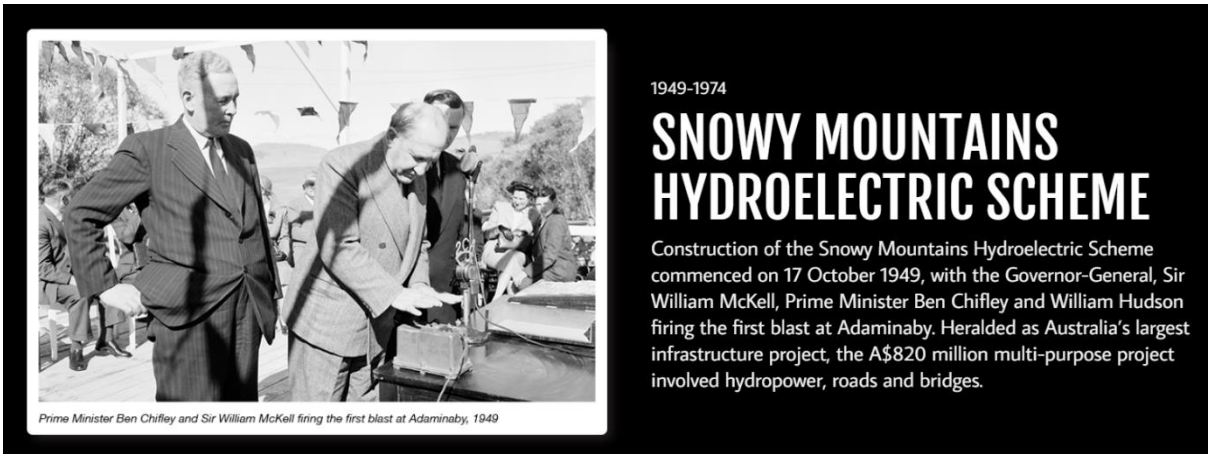
Company Profile

SMEC is a multidisciplinary consultancy firm with a global footprint, recognized around the world for providing fully integrated engineering solutions for physical and social infrastructure projects. SMEC provides consultancy services to a broad range of industry sectors including: Transport; Hydropower and Energy; Water and Environment; Urban and Social Development; Resources (Mining, Oil & Gas); and Industrial and Manufacturing. SMEC provides clients with consulting services for the lifecycle of an infrastructure project and has successfully delivered thousands of projects in more than 100 countries throughout Australia and New Zealand, Asia Pacific, South Asia, the Middle East, Africa and North and

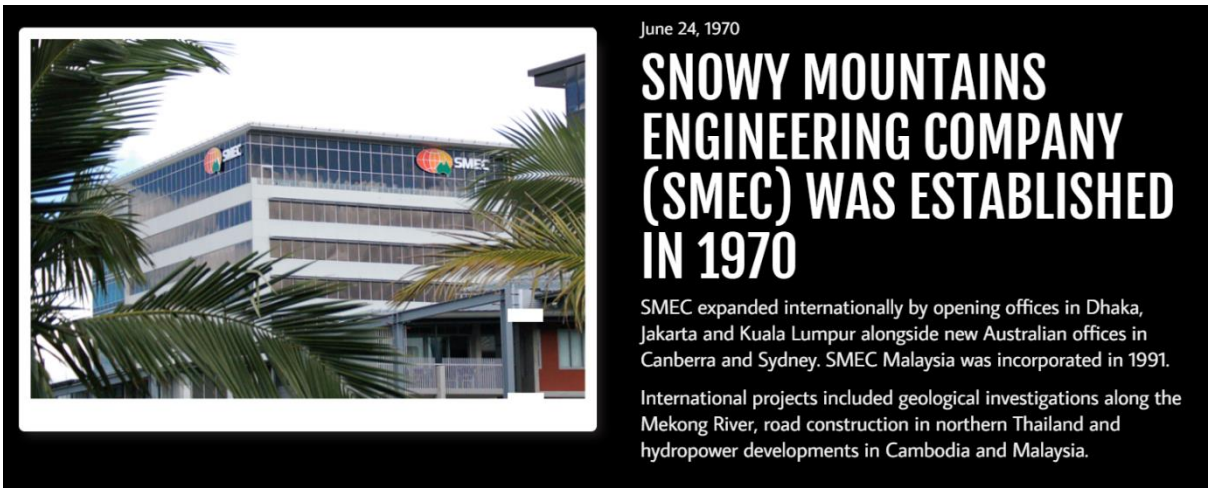
South America SMEC works with clients to provide cost-effective, practical and sustainable project outcomes that deliver strong returns for shareholders while contributing to the economic and social development of nations. SMEC's client base is diverse and includes: local and multi-national contractors; government departments; statutory bodies; private sector organizations; utility providers; and International Financial Institutions (IFI) responsible for funding and coordinating major infrastructure projects.

History

SMEC has operated for more than 40 years (in its current form), with the Company's origins dating back to the landmark Snowy Mountains Hydroelectric Scheme in 1949. As Australia's largest infrastructure project, this scheme brought together over 100,000 people from 30 countries to construct 16 dams, seven power stations, one pumping station, 145 km of tunnels, 80 km of aqueducts and 2,000 km of roads. The aim of the Scheme was to provide water for irrigation and generate peak load electricity. Managed by the Snowy Mountains Authority (SMA), this A$820 million project became an iconic symbol of nation building in Australia.



As the scheme neared completion, the Australian Government passed an Act of Parliament which recognized SMEC as an agency of the Commonwealth Government. SMEC was established on 24 June 1970, and four years later the Snowy Mountains Hydroelectric Scheme was completed.



On July 2016, SMEC merged with Surbana Jurong Holdings (Australia) Pty Ltd. SMEC is now part of the Surbana Jurong Group of Companies based in Singapore. SMEC International Pty Ltd.'s Ultimate holding company Temasek Holdings (Private) Limited, Singapore which is beneficially held by the Government of Singapore.

Awards and Rankings

SMEC is consistently recognized by the world's top engineering design firms for technical excellence, design innovation and environmental and social risk management. In 2015, SMEC was ranked at Number 51 in Engineering News Record's (ENR). Top 225 International Design Firms and Number 76 in the Top 150 Global Design Firms. SMEC also secured strong rankings in ENR's Global Sourcebook. This annual edition provides rankings of the Top International Design Firms across nine regional markets and eight major industry sectors. SMEC ranked at number three in the Dams and Reservoirs sectors; number 11 in the Highways sector; number 12 in Water Supply; and number 13 in Transmission Lines and Aqueducts. Recent awards include:

- Gold Award (Client Focus category): Mid-West Ports Authority Asset Condition Assessment
- High Commendation (Collaborations category): Gosford Passing Loops Project
- High Commendation (Client of the Year category): Brisbane City Council
- High Commendation (Future Leader category): Luke Menefy, Senior Engineer Materials Technology, Gold Coast, Australia
- High Commendation (Firm of the Year category) Governor of Victoria Export Awards
- Minerals, Energy and Related Services Award Australian Charity Awards
- Outstanding Achievement in Australian Charity Awards: The SMEC Foundation Stormwater Industry Association of Queensland (SIAQ) Excellence Awards
- Excellence in Asset Management Award: Brisbane's Natural Waterways Asset Management Plan Consulting Engineers South Africa (CESA)
- Aon Engineering Excellence Awards (under R50 Million category): The Isando Pedestrian Bridge 'The Walking Wonder' for SANRAL Urban Development Institute of Australia (Victoria Division) Awards for Excellence
- Environmental Excellence Award: Caroline Springs

Quality Management

SMEC implements quality management principles on all projects, and has developed a Quality Management System (QMS) to comply with the requirements of ISO 9001:2008. SMEC's QMS provides systematic control of business activities to ensure that client expectations are

being met, and where possible, exceeded. The QMS includes processes for planning, documenting, managing and controlling everyday business needs and activities, as well as review processes to monitor and measure performance and identify improvements.

Risk Management

SMEC maintains an appropriate system of governance and risk management applicable to all of the Company's locations, business units and functional groups in order to: implement a Risk Management System conforming to ISO 31000; clarify the roles and responsibilities of management and Boards; identify, assess and manage significant risks and opportunities; maintain the integrity of SMEC's assets, people and reporting; and comply with legal obligations in all jurisdictions in which SMEC operates. SMEC seeks to improve risk management through: appropriate charters for the Board and management groups (including obligations to their various stakeholders); a Code of Conduct recognizing SMEC's responsibilities to all stakeholder groups; promotion of workplace culture, practices and behaviors which value and reflect honesty, integrity and professionalism; the identification and management of risks, issues and opportunities at team, project, business unit, subsidiary and corporate levels; alignment of controls with the SMEC governance and risk management policy and framework; and the application of policies, controls, and review processes to all business units and subsidiaries.

Health and Safety Commitment

SMEC is committed to promoting and maintaining a culture and working environment in which risk to health and safety is unacceptable. To meet this commitment, SMEC (in so far as reasonably practicable) provides safe and healthy working conditions for all people associated with the Company, including employees, contractors, visitors and the general public. In order to meet these responsibilities, SMEC: maintains a safe work environment (including work conditions, practices and procedures); ensures full compliance with all applicable statutory and licensing requirements; undertakes proactive reporting of near misses, hazards, drills and inspections to ensure that all incidents are accurately reported, recorded and lessons learnt are shared; involves all employees and management in health and safety management through consultation; develops safety awareness throughout the Company via formal and informal training; and minimizes or eliminates hazards within the workplace through risk identification, assessment, control and monitoring.

Environmental Management

SMEC invests in sustainable business practices to achieve long-term prosperity, and is committed to embedding a culture of sustainability and environmental awareness in all functional, operational and regional areas of the business. SMEC strives to undertake all project and office activities in an environmentally responsible manner, and to identify, manage and mitigate any risks that may impact negatively on the environment.

SMEC continues to improve its understanding of the sources, scope and extent of its resource use, and is committed to improving the energy efficiency of its offices, and reducing the Greenhouse Gas (GHG) emissions generated by the Company's operations.

Since 1999, SMEC has operated under a companywide Environmental Management Policy and an Environmental Management System (EMS), formalising the Company's commitment to environmental responsibility. SMEC's EMS complies with the requirements of ISO 14001 (Environmental Management), and is designed to ensure the implementation of sustainable business systems, procedures and practices.

Gender Diversity

SMEC is committed to promoting gender diversity, establishing an inclusive working environment and promoting engineering to women through active industry representation and participation. SMEC promotes a gender diverse workforce by: developing strategies to attract and retain female employees; measuring progress in gender diverse recruitment; encouraging the development of high-potential employees to establish a pipeline of female managers and leaders; and providing training to raise internal awareness of gender diversity and equal employment opportunity in the workplace.

Human Rights

SMEC supports and respects the protection of internationally proclaimed human rights, and ensures the Company is not complicit in human rights abuses through a broad range of policies and frameworks. SMEC works closely with clients to ensure the rights and heritage of indigenous populations are protected. This includes the completion of Indigenous Heritage Assessments and Management Plans as a component of Environmental Impact Assessments.

SMEC encourages active participation, skill development and long-term employment opportunities for indigenous people wherever possible. SMEC's Child Protection Policy establishes a zero-tolerance policy in relation to child exploitation and abuse. SMEC complies with national employment legislation and is committed to the elimination of all forms of forced and child labor. SMEC's Code of Conduct ensures that ethical employment and labour practices are implemented across the Company. SMEC is committed to attracting the best talent, and engages in recruitment and selection processes that are based on merit and free from bias.

Global Network

SMEC operates in diverse geographic regions implementing challenging projects in some of the world's most demanding operating environments. SMEC uses its global expertise to successfully deliver projects throughout Australia and New Zealand, Africa, South Asia and Middle East, Asia Pacific and North and South America.

Australia and New Zealand

SMEC has operated in Australia and New Zealand since 1949 (although not in its current form), with the Company's origins dating back to the landmark Snowy Mountains Hydroelectric Scheme. SMEC established its first permanent office in Australia in Cooma, New South Wales in 1970, and its first New Zealand office in Auckland in 2011. SMEC currently has 18 permanent offices located throughout Australia and New Zealand.

SMEC has assisted public and private sector clients on some of the largest infrastructure projects in Australia, and has a long-standing reputation for technical excellence and sustainable project solutions. SMEC is an established leader in the Australian transport sector, has delivered some of the country's largest, most complex and high-profile transport infrastructure projects, including the East Link Tollway in Victoria, the South West Rail Link in New South Wales and the Gateway Bridge Upgrade in Queensland.

SMEC has developed extensive technical capabilities in the fields of hydropower and energy, and has worked on the Hume Dam and Crookwell Wind Farm in New South Wales, Cockburn Power Station in Western Australia and the Wyralong Dam in Queensland. SMEC remains at the forefront of advancements in the Australian water and environment sectors, and has provided multidisciplinary services on the Melbourne, Sydney and Adelaide desalination plants.

Asia Pacific

SMEC has operated in Asia Pacific since 1962, and established its first office in the region in 1972 in Kuala Lumpur, Malaysia. SMEC's first project in the region was a prefeasibility study for the proposed Batang Ai Hydroelectric Project; the first hydroelectric project ever undertaken in Malaysia. SMEC currently has 10 offices located in Asia Pacific, and has delivered innovative, robust and on-schedule solutions for clients throughout more than 25 countries in the region.

SMEC has delivered multidisciplinary transport infrastructure projects in Asia Pacific for more than 50 years, and has been involved in some of the region's most significant transport projects, including the North Luzon Expressway in the Philippines, the My Thuan Bridge in Vietnam and the Mass Transit Rail Corporation's South Island Line in Hong Kong.

SMEC provides cost-effective solutions that maximise productivity while balancing performance, safety, operability and output. SMEC has applied this approach to numerous landmark hydropower and energy developments throughout the region, including the Ulu Jelai Hydroelectric Project in Malaysia, the Lihir Geothermal Power Plant in Papua New Guinea and the Lungga Interim Power Gensets Project in the Solomon Islands. SMEC is also an established leader in the Asia Pacific water and environment sector, having worked on the Dili Urban Water Supply Project in East Timor and the National Soil and Water Conservation Project in China.

South Asia and Middle East

SMEC has operated in South Asia since 1968, and opened the Company's first divisional office in Dhaka, Bangladesh in 1978. SMEC's experience in the Middle East dates back to 1995, with the first office opened in Dubai, United Arab Emirates in 1999. SMEC currently has 17 permanent offices located throughout South Asia and the Middle East.

SMEC has delivered multidisciplinary transport infrastructure projects throughout the region for more than 40 years, including the Dhaka-Chittagong Railway Development in Bangladesh and the King Abdul Aziz Motorway Maintenance Project in Kuwait.

SMEC offers specialist capabilities to cover the complete geotechnical, hydrological, civil, electrical and mechanical scope for the development of hydropower and energy infrastructure and associated networks, and has applied this experience to the Haripur Power Plant Project in

Bangladesh, the Kohala Hydropower Project in Pakistan and the Regional Power Interconnection Project in Tajikistan. SMEC is also well established in the water and environment sector, and has been involved in the Uttar Pradesh Water Sector Restructuring Project in India and the Dukhan Fields Contaminated Soils Remediation in Qatar.

Africa

SMEC commenced operations in Africa in 1974, and opened its first office in the region in 1996 in Maseru, Lesotho. A permanent divisional head office was opened in Dar es Salaam, Tanzania in 2001. SMEC's first project in Africa was hydrogeological studies for the Singida Region Water Supply and Groundwater Development in Tanzania. SMEC has since delivered integrated projects to a diverse range of clients in more than 25 countries throughout Africa.

SMEC has provided innovative and integrated design and engineering solutions for African transport infrastructure projects for more than 40 years, and has delivered some of the continent's most significant infrastructure projects, including the Francistown to Matsiloje Road project in Botswana, the Dar es Salaam Bus Rapid Transport Infrastructure Project in Tanzania and the Ten-Year Rail Plan in South Africa.

North and South America

SMEC established its first office in North America in 2004 in Houston, Texas, and its first office in South America in Santiago, Chile in 2009. SMEC currently has six permanent offices located throughout North and South America.

Through a focused and dedicated Asset Management function (formally branded as GMC Global), SMEC provides the optimum balance between risk, performance and cost for asset management clients operating in the transport, hydropower and energy, water and environment, urban and social development, resources, and industrial and manufacturing sectors.

SMEC's asset management services are complemented by extensive engineering expertise, allowing asset management solutions to be developed and incorporated at one or every stage of a development's life cycle, including: design, planning, construction, commissioning, and operations and maintenance phases. In addition, SMEC offers extensive experience in the development of a number of bespoke asset management software tools. SMEC can assist with the deployment of complete systems implementation, targeted improvement programs or small individual projects.

Management Structure

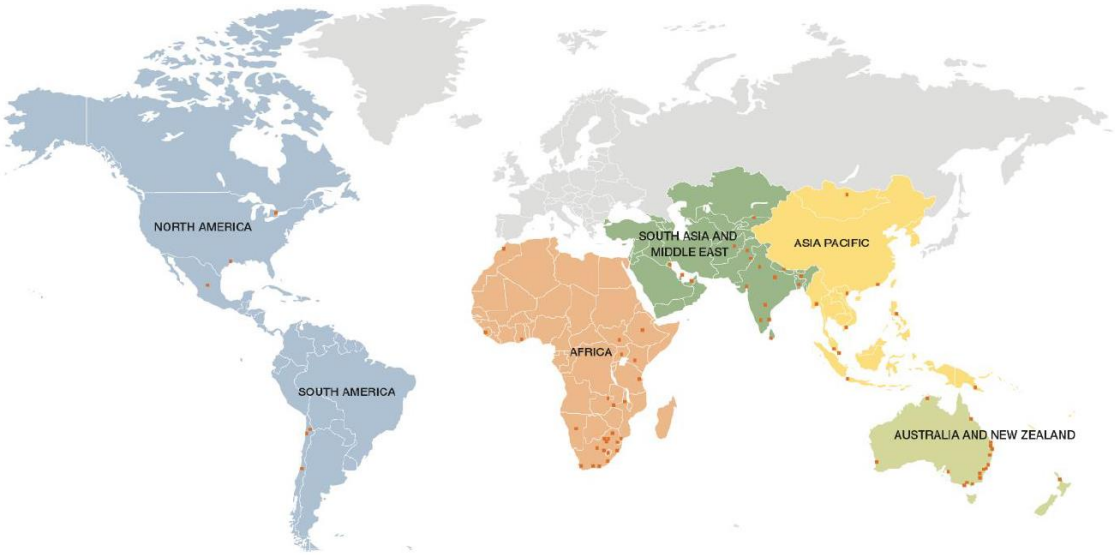
SMEC is structured to meet the needs of clients and community through professional excellence and innovation. SMEC's management structure also supports the Company's regional and functional organisational matrix.

Board of Directors

SMEC's Board of Directors is responsible for formulating SMEC's strategic direction and maintaining good corporate governance. Acting on behalf of shareholders, the Board is accountable for SMEC's financial and operational performance. The Board has a written charter which outlines its responsibilities and governance framework.

SMEC's Board is composed of two Executive Directors, three Non-Executive Directors (all of whom are considered to be independent), and a Chair elected by the other members of the Board. Directors are leaders in their field, and their expertise, skills and experience drive the Company's sustained long-term growth and ensure transparency of operations. All Directors are required to retire at the fourth Annual General Meeting following their appointment, with the exception of the Managing Director.

The Board has two permanent committees which provide direction on specific areas. Each committee has written terms of reference and is subject to annual review by the Board. These committees are: the Audit and Risk Committee; and the Remuneration and Nominations Committee. The Executive Committee (EC) is not considered to be a Board committee. The EC consists of senior executives appointed by the CEO. The EC assists in the performance of the CEO's duties to the Board and in their role as an officer of the Company.



Audit and Risk Committee

The Audit and Risk Committee assists the Board with financial reporting, managing SMEC's material risks and ensuring that financial information (provided to investors and the Board) is accurate and timely. The Audit and Risk Committee must have at least three members, consist only of Non-Executive Directors, have a majority of independent Directors, and have an independent Chair (who is not the Chair of the Board).

Remuneration and Nominations Committee

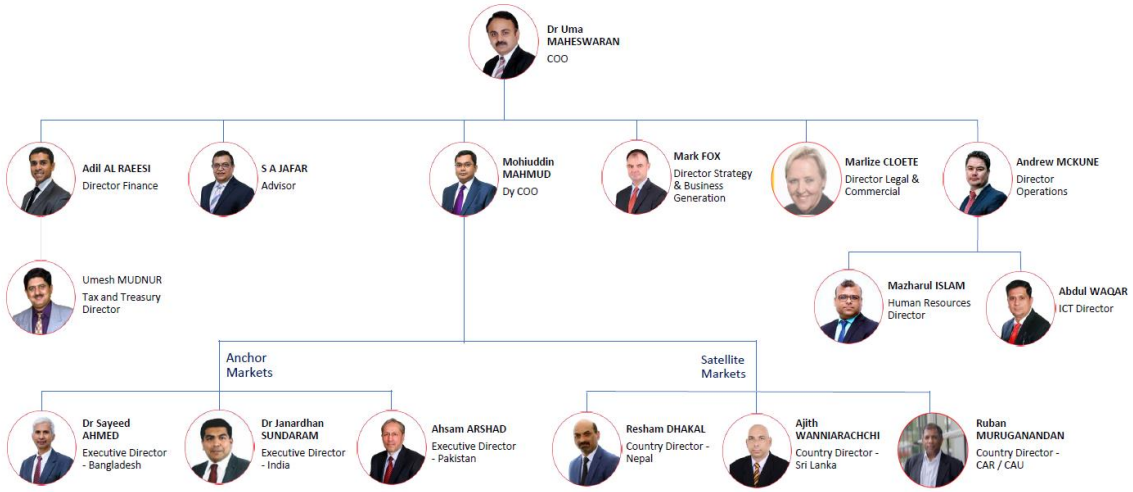
The Remuneration and Nominations Committee assists in establishing a Board with an effective composition, diversity and size to adequately perform its responsibilities. The Committee aims to ensure that SMEC secures, motivates and retains highly skilled and diverse senior executives and employees in order to guarantee SMEC's long-term success. The Remuneration and Nominations Committee must have at least three members, consist only of Non-Executive Directors, have a majority of independent Directors, and have an independent Chair.

Executive Committee

The Executive Committee (EC) has primary authority for the management and monitoring of the Company's operations, and the implementation of the Company Strategy subject to policies and procedures approved by the Board of Directors. The EC is comprised of nine senior managers, all of whom have extensive experience in strategic and operational planning in the engineering industry. SMEC's CEO is the Chair of the Committee, and is responsible for all

matters not reserved for the Board or individual Directors (generally described as the day-to-day operations and management of the SMEC Group). The EC's terms of reference and authority are approved by the Board.

SAME Divisional Organogram



SMEC in Bangladesh

SMEC has operated in Bangladesh since 1977. SMEC's first project in Bangladesh was an aid mission involving road design. A permanent office was opened in Dhaka in 1978. SMEC (Bangladesh) Ltd was established in 1998 to provide domestic support and local firm, ACE Consultants Ltd, was acquired in 2002 to operate as an independent subsidiary in Bangladesh.

In Bangladesh, SMEC has had extensive involvement in infrastructure, power, urban, transport and social sectors, having completed a whole range of projects. Currently, the company manages a portfolio of nearly 34 projects in the country. These projects are varied in scope, in sector and in magnitude.

Bangladesh Clients

- Roads and highways Department (RHD)
- Local Government Engineering Department
- Bangladesh Water Development Board
- Chevron Bangladesh
- Bangladesh Railway (BR)
- United Nations Development Program (UNDP)Bangladesh
- Ministry of Planning
- Bangladesh Bridge Authority (BBA)
- Chittagong Development Authority (CDA)

- Khulna WASA
- Chittagong WASA
- Dhaka WASA etc.

Bangladesh Projects

Few of the major projects in Bangladesh which are being undertaken by SMEC are described in brief as below:

Chittagong Port Trade Facilitation Project
Client: Roads and Highways Department

The project involves construction of a 1.5km two lane single carriageway flyover connector road from the Chittagong Port Access Road to the Chittagong Container Terminal and New Mooring Container Terminal; the main container handling facilities in Bangladesh.

Khulna Water Supply
Client: Khulna Water Supply and Sewerage Authority

The objective of the project was to improve access to drinking water for the people of Khulna..

Design of Padma Multi-Purpose Bridge
Client: Bangladesh Bridge Authority

The Padma Multi-purpose Bridge is a multi-faceted mega project, located 40km southwest of Dhaka. The project includes a 6km bridge, major river training works and approximately 12km of approach roads and bridge-end facilities.

Haripur Power Plant Development Project
Client: Electricity Generation Company of Bangladesh

The 360MW Haripur Power Plant in Dhaka will contribute to the maintenance of a healthy voltage level in and around Dhaka.

Monitoring and Evaluation of Emergency Cyclone Recovery and Restoration
Client: Project Coordination and Monitoring Unit and the Ministry of Planning

The Government of Bangladesh facilitated restoration and recovery from the damage to livelihoods and infrastructure caused by Cyclone Sidr in 2007.

Dhaka-Chittagong Railway Development Project
Client: Bangladesh Railway and the Ministry of Communications

The Government of Bangladesh (with the Japan Bank for International Cooperation funding) implemented railway sector investment projects including construction of double tracking on

the Dhaka-Chittagong line, major improvement of the principal carriage and locomotive workshop, remodeling of the terminal station at Chittagong, and procurement of rolling stock.

Rural Electrification Upgrade
Client: Government of Bangladesh

This project aimed to improve the quality of power for the local population. The project reduced power losses suffered by 30 rural electricity cooperatives, in western Bangladesh. The Japan International Cooperation Agency funded project involved the installation and upgrade of sub-stations and the construction of transmission lines. SMEC provided design, construction supervision and project management services.

Karnaphuly River Bridge Feasibility Study
Client: Bangladesh Railway

Karnaphuly is a 667 m wide river in the south-east of Bangladesh. A large hydroelectric power plant was built upstream of the river. The mouth of the right bank of the river hosts the Chittagong Sea Port, the main port of Bangladesh. In light of this, the Government is constructing a railway and road bridge across the river at Kalurghat. SMEC undertook a detailed feasibility study including site selection, river training works, conceptual drawings, hydrodynamic modelling, erosion projection, social impact assessments, detailed surveys and preparation of land acquisition plan.

Bangladesh Railway Sector Improvement Project
Client: Bangladesh Railway

The program is designed to help economic growth by improving rail infrastructure and implementing policy reforms and commercialization. The ADB is financing priority projects (in the Dhaka-Chittagong and Bangladesh-India corridors) that strengthen Bangladesh Railway's core business. SMEC is undertaking project preparation for six sub-projects (covering the routes Tongi-Bhairab Bazar, Dhaka-Laksam, Dhaka-Tongi, Ishurdi-Darsana, Khulna-Parbatipur and Bogra-Jamtoil); detailed design and documentation for double tracking and signal improvements on the Tongi-Bhairab Bazar route and supervision of construction works.

Sub regional Transport Project Preparatory Facility (Road Component Package 1)
Client: Roads and Highways Department

Funded by the ADB, this project includes feasibility studies and detailed engineering designs for the upgrade of national highways and county roads that have significant implications to

sub-regional development to four-lane highways. SMEC, as lead consultant, is responsible for: visual condition surveys of the roads, feasibility study and detailed engineering designs (including structures and bridges), cost estimates, economic analysis, social and environmental assessment, procurement assistance, resettlement assessment and land acquisition and reporting.

Design Review & Construction Supervision of Moghbazar-Mouchak Flyover
Client: Local Government Engineering Department (LGED)

To alleviate congestion in central Dhaka, the Government has decided to construct a number of flyover bridges throughout the city including the Moghbazar-Mouchak flyover. The objective of the project is to support the LGED in construction of the flyover including: the development of a work plan; design, monitoring, supervision and evaluation of construction works; traffic surveys and traffic impact studies; review of the project's design and progress; quality assurance; and capacity building of LGED employees.

Phulbari Coal Project
Client: Asia Energy Corporation (Bangladesh) Pty Ltd

The project included groundwater assessment over 600,000ha; management of the water mine infrastructure area (water supplies, mine dewatering (100 bores); aquifer injection (120 bores); waste water runoff, development of 224km2 for irrigation purposes; community water supplies to 189 rural villages; 14km river diversion; establishing telemetric and manual water and environmental monitoring systems. SMEC also carried out a feasibility study of resettlement of 40,000 people; developed public consultation plans and a purchase plan for 6,000ha; and assessment of health impact.

Bibiyana Gas Field Development and Gas Plant Expansion
Client: Chevron Bangladesh

Chevron Bangladesh produces natural gas from three operational gas fields in northern Bangladesh (Bibiyana, Jalalabad and Moulavi Bazar). Chevron plans to develop the existing Bibiyana Gas Field and expand the Bibiyana Gas Processing Facility. Under Bangladesh Environmental Conservations Rules (1997), a full environmental study is mandatory for all oil and gas exploration, development and production. SMEC is undertaking the Initial Environmental Examination report, an Environmental Impact Assessment and an Environmental Management Plan.

Matarbari Ultra Super Critical Coal-Fired Power Project
Client: Coal Power Generation Company Bangladesh Ltd

The Objectives of the 2 x 600 MW power plants Project are to improve the power supply capacity in Bangladesh, to ease the stringency of power demand and to improve the reliability of the power supply. The Engineering Services is to assist the Client in implementation of the Project. SMEC and associates intends to carry out the services in a satisfactory manner I order to ensure the successful completion of the project with high quality and reasonable cost.

Project Management, Coordination and Capacity Building under Greater Dhaka Sustainable Urban Transport Project
Client: Roads and Highways Department

Greater Dhaka, the capital of Bangladesh, is one of the fastest growing mega-cities in the world. Public transport in Greater Dhaka is inadequate and of poor quality. The Project will improve quality of life within Greater Dhaka, through the delivery of a more efficient and sustainable Urban Transport System including a 20 kilometer Bus Rapid Transit all designed and built following international best practices.

Dhaka Chittagong Expressway Public Private Partnership Design Project
Client: Roads and Highways Department

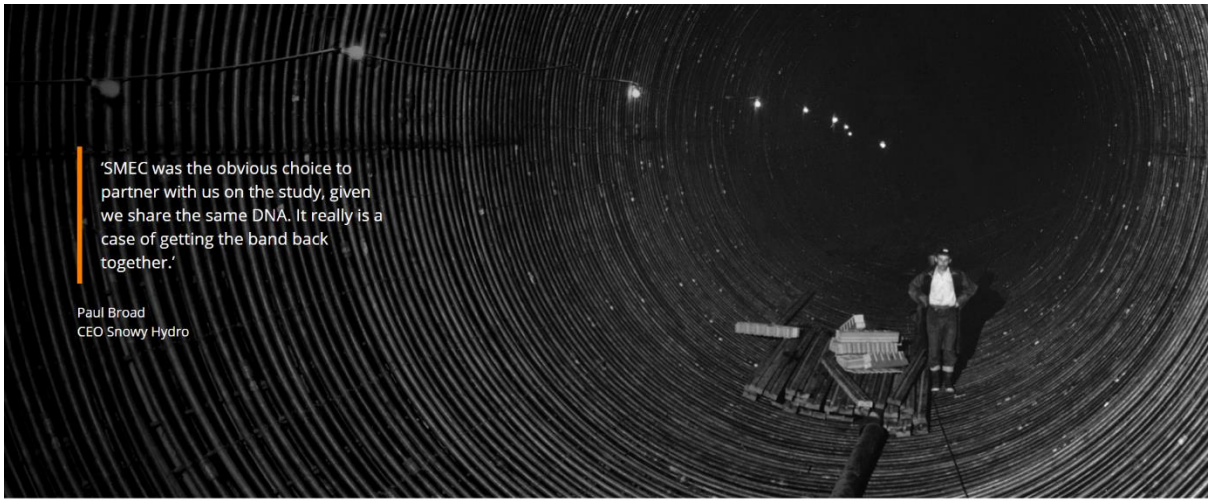
The existing road link between the Capital Dhaka and the port city of Chittagong, is heavily trafficked and suffers from numerous traffic jams and blockages. To ensure the objective of the services is to provide the technical assessment, development, and technical bid documents for a commercially viable PPP-Scheme for the developed detailed design, construction, operation and maintenance of a new expressway linking Dhaka to Chittagong.

Construction Supervision Consulting Services for Padma Multipurpose Bridge
Client: Bangladesh Bridge Authority

The Padma River drains much of the Indian subcontinent and is the main distributary of the Ganges. The river is a major impediment to transport and the movement of people and goods in southern Bangladesh which have to date been reliant on ferry services for their movement. SMEC is providing construction supervision services for the 6.15 km long four lane road traffic on the upper level and a single track dual gauge railway on the lower level bridge.

Design Review and Construction Supervision of Multi-Lane Road Tunnel under the River Karnaphuli, Chittagong

The Project is located in Chittagong, Bangladesh. This city is the major port city and the gateway of Bangladesh and also the second largest city of the country. The Karnaphuli River divides Chittagong City into two parts, one part is confined with the city and the port, the other part is the area of potential future heavy industry. Currently these two parts are connected by two bridges that are not capable of accommodating the expected future traffic flows. Another crossing of the Karnaphuli River needs to be constructed to increase the connectivity between two areas. Karnaphuli Tunnel Project consist of two twin tunnels with two lanes and 10.80 m internal diameter. The tunnels will be bored with a pressurize TBM over a length of 2,450 m, starting on the west bank at CK 2+550 and ending in the east bank at CK 5+000 and with a maximum longitudinal gradient of 4%. These tunnels are provided with a reinforced concrete segmental lining formed with 8 pieces per ring (5 + 2 +1) with a thickness of 500 mm and a length of 2 m. These tunnels will be connected with traverse cross passages every 700 m that will allow the tunnel users to escape to the other tube in case an emergency.



Market Footprint

In consultancy market, there are competitors form home and abroad in various sector of work. Maximum of the consultancy firm working on project as per their expertise on specific sector. For example, Mott MacDonald UK based multinational firm works in Water sector, CANARAIL Canada Based firm works in Railway sector, Oriental Consultant Japan based firm works in Transportation sector, DOWHA Engineering, SUNJIN, Korean Engineering Corporation, Korean firms works in Transportation sector. Development Design Consultants Ltd. (DDC), BCL Associates Ltd, DevConsultants Ltd, AQUA, AQUA Consultant & Associates Limited, BETS Consultants Ltd etc. Local consulting firms' works in different sector of infrastructure development of Bangladesh.

All these firms work with each other for projects of Bangladesh as a consortium to enhance their strength as consultants. SMEC is working with each & every sector of Infrastructure development exists in Bangladesh along with its local subsidiary, other local and international firms. On the other hand, these consulting firms are competitor of each other for any project. Relationship between consulting firms depend on project opportunities & interest of work.

A consulting firm can win a project by its own capacity as a Sole consultant or can form a group with 2/3 other firms, some cases more than that to secure and serve a project. Consortium forms in terms of the requirement of the project (criteria, size, value, technical issue etc.).

In consultancy market, each and every firm is rival to each other as well partner to each other. This relationship depends on the interest of the project and facility. True challenge for the consultancy firms are the client concept and project requirements.

OUR MARKET FOOTPRINT

SMEC - Completed & Historical Projects in Bangladesh							
Sectoral Footprint		Power	Water	Transport	Rural Infrastructure Development	Architectural & Building	Environmental, Survey & Others
Duration		Number of Projects					
1977	1990		1	1			
1991	2000	1	5	3	2		
2001	2010	5	4	12	2		9
2011	2018	3	3	20		1	4

SMEC Bangladesh - Completed & Historical Projects in Bangladesh					
Sectoral Footprint		Power	Water	Transport	Environmental, Survey & Others
Duration		Number of Projects			
1998	2018	3	1	5	25

ACE - Completed & Historical Projects								
Sectoral Footprint		Power	Water	Transport	Rural Infrastructure Development	Agriculture & Fisheries	Architectural & Building	Environmental, Survey & Others
Duration		No of Projects						
1958	1970		9				2	
1971	1980		1	1	1	1	9	1
1981	1990		5	2	7	1	4	5
1991	2000		10	1	1	6	3	1
2001	2010	2	6	7		2	1	1
2011	2018	3	6	20	2			5

CHAPTER-3

Internship Experience

The author has been working as Project Coordinator in Project Management Services Department in this company since April 2018. His job responsibilities here are as follows-

Project implementation Start-up

- To review all the documents from Business Development Departments to start-up project operation.
- To assist to finalize the Contracts, JV agreements, Intercompany sub-consultant agreements.
- To attend the negotiation meetings with the Clients, JV members and assist to finalize the meeting minutes.
- To liaison with the recruitment team to finalize the professionals as per staffing schedule.

Project Planning

- To assist finance for initial project plan as per Contract Financial provision.
- To assist TL to finalize staffing schedule.
- To assist TL to preparing Project Management Plan according to Business Management System (BMS).
- To coordinate among Corporate, Team Leader/ project team and the Clients.

Project Execution

- To prepare monthly project status update.
- To follow up monthly invoice submission and payment with the Team Leader/ Accountants.
- To prepare report on WIP and Debtor and update the workbench.
- To do project re-plan as and when required.
- To monitor the staff mobilization/ replacements and liaison with the recruitment cell.
- To assist TL/ DTL and FGMs' in preparing variation order proposals, replacement proposals, drafting meeting minutes, letter correspondences and/or any contractual issues.
- To report monthly MM forecast to finance consulting with TL/DTL/FGMs'.

Project Monitoring and Control

- To prepare project summary for Board Meetings.
- To monitor project revenue, expenses and MM against the base line.
- To assist PMU ensuring project outputs meet contractual obligations in terms of time, cost and quality.

Project Closing

- To assist GM and project team to complete the closing procedures as per BMS
- To assist in corporate audits and project audits.
- To ensure timely collection of Employer's Certificate on completion of the Project.
- To update the Project Data Sheet.
- To assist OM for documentation of the projects.

Besides the regular responsibilities, there are some other tasks that he has to do which includes: assisting the recruitment cell to recruit the right experts (Both national and international) in the assigned projects, forecasting on a monthly basis, ensuring compliance and code of conducts and code of ethics in the projects, project site visit, updating resourcing lists, keeping records of the internal meetings etc. He also had the chance to work with the Business Development Team. This team is a specialized team whose actual responsibility is to keep the business running by regularly keeping up to date with the new govt. projects, preparing the Express of Interest, preparing and submitting the tender documents against the Request for proposals and winning projects.

3 projects have been assigned to the author in which he has the complete access and he works as the main communication bridge between the top management and the client.

Assigned Projects:

1. *Kanchpur-Meghna-Gumti Second Bridges Construction and Existing bridges Rehabilitation Project. ***
2. *Cross Border Road Network Improvement Project*
3. *Western Bangladesh Bridge Improvement Project.*

The detailed description of the major project (**) assigned to me is as follows-

Kanchpur-Meghna-Gumti second Bridges Construction and Existing Bridges Rehabilitation Project:

The Government of Bangladesh (with JBIC/JICA funding) with RHD as the executing agency; is implementing the project which is the construction of 2nd new bridges in Kanchpur, Meghna, Gumti and rehabilitation of the existing ones.

The Project consists of the construction of above three (3) bridges and the rehabilitation of three (3) existing bridges with improvement of approach roads respectively within the section

between Dhaka and Chittagong along National Highway No.1. Based on the conduct of the preliminary design for the bridge components through the Preparatory Survey (F/S) of JICA in 2012, the implementation of the following four components was proposed under the financial assistance of Japanese ODA:

Component-I: Construction of 2nd Kanchpur Bridge and Rehabilitation of the existing Kanchpur Bridge across Sitalakhya River with Approach Roads

Component-II: Construction of 2nd Meghna Bridge and Rehabilitation of the existing Meghna Bridge across Meghna River with Approach Roads

Component-III: Construction of 2nd Gumti Bridge and Rehabilitation of the existing Gumti Bridge across Gumti River with Approach Roads

Component-IV: Procurement of Axle load Scale, Weigh Scale and Inspection equipment/vehicles for the Bridges above

Description of actual services provided by staff of this firm in the assignment:

The main feature of the general consulting services is to lead the Project to be successfully completed timely. This will be achieved through the following:

Engineering/Detailed Design:

1) Review of the Feasibility Studies and relevant existing reports;
2) Preparation of the detailed design
3) Cost estimates based on the detailed design; and
4) Financial analysis based on the revised cost estimation and toll policy.

Bid Assistance:

5) Preparation of bidding documents, assistance for RHD to select the Contractor: bid evaluation; award of the contract; contract negotiation; and finalizing the contract documents.
6) Construction Supervision
7) Supervision of Works comprising aforementioned three components of bridge rehabilitation and construction;
8) Guidance on Operation and Maintenance measures (Preparation of Manual, Training plan, and others) for RHD officials and outsourcing;
9) Guidance on Axle load scale and weigh scale and its Control for outsourcing, and;
10) Capacity building for Operation and Maintenance.

Safeguard Assistance:

11) Environmental and Social Considerations (updating, and implementing, the Resettlement Action Plan (RAP), Environmental Management Plan (EMP), and the Environmental Monitoring Plan (EMoP), and other relevant considerations)

Others:

12) Safety Considerations (Complying with Safety policy based on JICA policy)
13) HIV/AIDS prevention
14) Dispute Board (DB) assistance
15) Transfer of Technology
16) Assistance in implementation of Public Relations (PR) of the Project

The consulting services will be provided by an international consulting firm in compliance with Guidelines for the Employment of Consultants under Japanese ODA Loans, April 2012. The Consultant will ensure that all of the procurement under the civil works contracts conforms to Guidelines for Procurement under Japanese ODA Loans, April 2012.

The services that the Consultant is responsible for carrying out on behalf of and in collaboration with RHD/Project Implementation Unit (hereafter, "PIU") are stated below. Other government agencies and/or institutions, such as, local government and other organizations concerned will be extensively involved in the implementation of the consulting services. RHD/PIU will make all the coordination and arrangement with the said agencies/organizations concerned and provide necessary/available data/information to the Consultant.

The Consultant will coordinate with other agencies/organizations concerned in order to reach a common ground for the implementation of the activities at every stage of the consulting services.

Also, the Engineer shall obtain approval, if, in the opinion of the Engineer, an emergency occurs affecting the safety of the lives or of the works or of adjoining property, the Engineer may without relieving the Contractor of any of his duties and responsibilities under its Contract, instruct the Contractor to execute all such works or to do all such things as may, in the opinion of the engineer, be necessary to abate or reduce the risk. The Contractor shall forthwith comply, despite the absence of approval of the Employer, with any such instruction of the Engineer.

Detailed Design

Review of Feasibility Study

JICA Preparatory Study comprising Preliminary Design, Environmental Impact Assessment (EIA) and Resettlement Action Plan (RAP) has been conducted by Oriental Consultants Co., Ltd in association with Katahira & Engineers International under JICA (hereinafter, "JICA F/S") (February 2013). The study report provides the design conditions, preliminary studies and feature of bridge structure undertaken. The Consultant shall review the contents of report and verify any technical, economic, or commercial findings given in them that may affect directly project cost. To develop the alternatives in accordance with the design criteria and standards to prove technical feasibility and permit costing to the required level of accuracy with review of the following points;

- Evaluation/Analysis of investigated and surveyed data for hydrology, geology, hydraulics, etc.;
- Scale and Technical Standards applied to the Project;
- Alignment for Approach Roads;
- Alignment for Main Bridges, approach roads;
- Structural Alternatives for the Main Bridges;
- Alternatives for Structural Alternatives for the approach roads

Preparation of Detailed Design

The Consultant will prepare the detailed design for the Project. More specifically, the Consultant will provide the following:

1. Preparatory for Detailed Design

- To collect and review all of the available existing data to be utilized, and determine
- its adequacy and appropriateness;
- To review the preliminary engineering design prepared under JICA F/S, and to conduct the site survey to confirm if the current conditions on site will influence the design previously carried out;
- To define the work to be done and data required to be collected to progress the services; to identify the points and areas where the topographical survey, the soils/materials survey and any other surveys are to be conducted;

- To prepare detailed work plan, progress reports and implementation schedule for the Project to ensure effective monitoring and timely project outputs, and regularly update the same;
- To seek RHD/PIU"s comments on the Inception Report in references to the items (1), (2), (3) and (4) stated above.

2. Survey and Study

- To assess the stability of the foundation and substructure for existing bridges (pier cap, wall, abutment, and others.) in JICA F/S, to determine which sections need to be rehabilitated and/or strengthened;
- To undertake the topographical survey including the followings to prepare the topographic map and all other necessary data for the detailed engineering design;
  a) Establishment of horizontal and vertical control monuments
  b) Topographic profile survey along the center line (Area of topographic profile survey will be one hundred (100) m of upstream and downstream sides of the center line)
  c) River cross-section survey (Interval of cross-sections will be twenty (20) m for straight and uniform river reaches, ten (10) m at minor bends and five (5) to ten (10) m at sharp bends.)
  d) Topographic survey to reflect all-natural changes and man-made structures with contour lines
- To undertake the soils/materials survey and the geotechnical investigation;
  a) To undertake test pitting, boring and corresponding laboratory tests.
  b) To collect materials samples at candidate material sources, and to undertake necessary laboratory tests for samples.
  c) To study utilization of materials for concrete, asphalt, and embankment, etc.
- To study possibility of liquefaction, and existence of soft ground based on the surveys above; to study necessary countermeasures to be incorporated in the detailed engineering design if liquefaction layers and soft ground layers are confirmed;
- To find the level and quality of groundwater for existing wells located adjacent to each bridge site, the survey shall be carried out by local consultant. Data is to be used as a baseline of monitoring during the construction. Terms of reference for

survey shall be prepared by the Consultant for numbers of wells located in the presumed area affected by the construction;

- To review environmental impact analysis;
- To review the projec's expected costs and revenues

3. Detailed Design

- To conduct further surveys and investigations as necessary;
- To conduct the design in accordance with the design criteria and standards established and the agreed implementation approach;
- To prepare all necessary design drawings at an appropriate scale for the civil works to be implemented including river bank protection work, if necessary;
- To estimate quantities in accordance with the construction pay items;
- To provide the design of weigh station for over loading vehicle to be installed at Meghna and Gumti bridges with its operation guide. The countermeasures for overloading vehicle at Kanchpur bridge shall be studied and provided for the design of necessary facilities;
- To prepare the construction execution plan covering construction procedures, construction schedule, location and size of construction camp and equipment motor pool/workshop, safety measures, methodologies to mitigate environmental impacts, disposal sites of dredged materials, materials sources, material transport routes and traffic control measures along the transport routes, and environmental monitoring system;
- To study inflow of construction materials and outflow of construction waste and disposal materials and identify all negative impacts; to specify possible mitigation measures in the special provision of the construction contract;
- To prepare the Traffic Management Plan during construction to avoid or at least mitigate traffic congestion, traffic accidents, traffic disturbance to school children, commuters, local business, etc., that is to be specified in the special provisions of the construction contract;
- To undertake unit price analysis classified into labor, material, equipment, tax, overheads, profit, and others; to estimate cost based on the established unit prices;
- To perform constructability review and value engineering review;
- To prepare the Detailed Design Report, as a minimum, include construction drawings, detailed cost estimates, necessary calculations to determine and justify

the engineering details for the Project, associated contract documentation to include detailed specifications, bill of quantities (BOQ), implementation schedule for the Project. Such detailed specifications will contain those in relation to i) quality control of plant materials and workmanship, ii) safety, and iii) protection of the environment;

- To seek RHD/PIU‟s comments on the Detailed Design Report, and to obtain
- RHD/PIU‟s and JICA‟s approval;

Visiting the project sites on a regular basis was another opportunity here

Trainings and Workshops

The author had the opportunity to take part in a number of training sessions and workshops while working in SMEC. SMEC's core values are- Integrity, Professionalism, People, Partnership and Purpose. SMEC is very much strict in maintaining all the core values. The author had the chance to attend anti-bribery and corruption training, workplace health and safety training, Fire safety and first aid training. These trainings were basically done internally. There were some external trainings as well; such as- Workplace communication training, FIDIC based contract training. Most of these trainings were day long sessions and the trainings were a must for each SMEC employee for better understanding and execution of the job.


SMEC
LEARNINGSEAT
Certificate of Completion
This is to certify that:
Rafsanul Alam Khan
has successfully completed the following course:
The SAFE Files Work Health & Safety Policy (2014)
Stephanie Bowman
Learning & Organisational Development Manager
14 August 2018
Date of Completion


SMEC
LEARNINGSEAT
Certificate of Completion
This is to certify that:
Rafsanul Alam Khan
has successfully completed the following course:
SMEC Anti Bribery and Corruption Training
Stephanie Bowman
Learning & Organisational Development Manager
29 July 2018
Date of Completion


FUTURE LEADERS®
Inspiring to actualize potential!
Follow-up Participation Certificate
This is to certify that
Md. Rafsanul Alam Khan
has successfully participated in the
Follow-up to workshop on "Workplace Communication Skills"
QUAZI M. AHMED
LLB., MBA (IBA), MA (Japan), IMP (NYU, USA), CISS (Norway)
Lead Consultant and CEO, FutureLeaders™
President, Bangladesh Organization for Learning & Development
August 31, 2018
SMEC Bangladesh
House NO: 174, Lane 6, DOHS Baridhara, Dhaka 1206, Bangladesh
Organized by:
SMEC
Member of the Surbana Jurong Group
www.futureleadersgroup.com

CHAPTER-4

Services Marketing and Overall Company Strategies

SMEC International Pty. Ltd. Provides consultancy services to the government of Bangladesh in a number of projects in different sectors, i.e. transport (Road, rail, bridge), water, power, urban etc. This consultancy service includes feasibility study, detailed design, tender assistance, supervision, knowledge sharing, technology sharing, project management service, defect liability period service and maintenance, study tour etc.

Bangladesh is a developing country and there are a number of large infrastructure projects going on across the country in different sectors. But it is a matter of fact that in Bangladesh there are not too many qualified consultants to supervise the huge infrastructure projects. Besides, in every project the contractor executes the works under the supervision of national and international consultants. The whole service comes in a package or individually according to the projects' requirements.

Let's focus on the sector wise services description below-

SMEC provides multidisciplinary consultancy services across six key industry sectors: Transport; Hydropower and Energy; Water and Environment; Urban and Social Development; Resources (Mining, Oil & Gas); and Industrial and Manufacturing.

Hydropower and Energy

SMEC's expertise in the hydropower and energy sector originated from the Snowy Mountains Hydroelectric Scheme in the early 1940s. SMEC has since developed extensive technical capabilities in the fields of hydropower, renewable energy, dams, transmission and distribution, thermal and geothermal power, geotechnics, tunnels and infrastructure asset management. SMEC remains at the forefront of hydropower and energy innovations through widespread experience, ongoing research and development in association with power and water utilities and government authorities worldwide.


Transport

SMEC is an established leader in the transport sector, and has a long-standing reputation for technical excellence, innovation and sustainable engineering solutions. SMEC's multidisciplinary consultancy services extend throughout the entire transport sector, including: roads and highways

(both construction supervision and planning and design); bridges and structures; traffic and transport planning; rail infrastructure; ports and marine; airports; pavement management systems; tunnels; geotechnics; and asset management.

SMEC manages all forms of project delivery, from institutionally-funded projects and direct appointment by road and transport authorities, through to Design and Construct, Build-Own-Operate-Transfer and Alliance contracts. SMEC has been an international front-runner in the use

of advanced technology approaches to undertake transport design works, and has developed in-house tailored software systems for pavement, road, bridge, maintenance and asset management to improve client project outcomes and long-term return on investment.


Water and Environment

SMEC understands the importance of water resources and is committed to providing environmentally sustainable services that balance the short-term horizons of projects with the

competing long-term demands of the community, the environment and economic viability. SMEC's capabilities encompass the full spectrum of water and environment projects, including: water resources; water supply, wastewater and stormwater management; dams, irrigation and river structures; hydrogeology and contamination; sustainability and land use; and coastal, waste and asset management.


Urban & Social Development

SMEC's integrated urban development services maximise the social, economic and environmental potential of each project, and include urban design, landscape architecture, surveying, urban planning and engineering, and project and asset management. SMEC works with a broad range of clients, from private developers through to local, state and federal government bodies, to deliver urban engineering solutions for: sports complexes; schools and universities; offices; housing and estates; industrial and mining infrastructure; places of worship; health, resort and tourism facilities; aviation; and defence works.


Resources

SMEC assists mining, oil and gas clients to improve efficiency and financial performance through innovative technical design and management support of sustainable resources infrastructure, including: power generation and energy supply; water and sewerage processing; telecommunications; mine site groundwork; road and rail transport; urban infrastructure; and tunnelling and geotechnics. SMEC tailors its engineering and design solutions to meet local

conditions and has delivered resources projects in some of the world's harshest and most remote environments.

Industrial and Manufacturing

SMEC's Industrial and Manufacturing capabilities extend through all stages of a project, from initial concept, survey and evaluation through to delivery, management and certification. These capabilities span the full range of industrial and manufacturing projects, including: plastics and chemicals; food and beverage; pulp and paper; aerospace and defence; and asset management.

Through a strong global network, SMEC provides fully-integrated engineering services for the design, construction and commissioning of new facilities; the relocation, expansion and upgrade of existing plants; and the optimisation of operations and processes to improve performance, safety and sustainability. SMEC has a wealth of experience in design, engineering, master planning, site evaluation, quality control, supply chain management, procurement, asset management, operations streamlining, process evaluation and debottlenecking. SMEC works with clients to understand their business drivers, resources and processes in order to deliver the best possible outcomes for grassroots, expansion, relocation and modification projects.

Corporate Social Responsibility

In 2013, SMEC set a number of five-year objectives to help deliver on the commitments the Company has made in each of its three Corporate Social Responsibility (CSR) categories: People; Community; and Sustainability and Environment.

People

SMEC is committed to creating a rewarding, inclusive workplace for our people by encouraging personal development, recognising good performance, fostering equal opportunity and ensuring employee health, safety and wellbeing.

Five Year Objectives

- To provide and maintain a satisfying and rewarding work environment for all employees
- To achieve and maintain cultural and gender balance, and to increase awareness of the importance of diversity
- To provide employees with personal and career development opportunities and clear career paths

- To eliminate or manage hazards and practices that could cause accidents, injuries or illness

SMEC provides a workplace with targeted learning and development programs and an equitable reward and recognition framework. SMEC conducts annual Performance and Development Reviews through the in-house appraisal system, CareerTrac. The objective of CareerTrac is to review employee performance and set future objectives by aligning individual performance, development needs and aspirations with SMEC's business plan.

Community

SMEC is committed to supporting community and charitable programs that provide long-term solutions.

Five Year Objectives

- To deliver the best possible social and development outcomes for people in need through small-scale grant support provided by the SMEC Foundation
- To protect and uphold internationally proclaimed human rights, particularly in the areas of child abuse and forced compulsory labour
- To support and encourage employee participation in their local community, particularly charity work

Sustainability and Environment

SMEC is committed to eliminating or minimising any adverse impacts that SMEC's office activities and projects have on the environment. SMEC aims to raise employee, client and community awareness of the importance of environmental sustainability.

Five Year Objectives

- To operate energy efficient offices and reduce Greenhouse Gas (GHG) emissions generated by SMEC's operations
- To provide long-term environmentally sustainable project advice to clients
- To implement an Environmental Awareness Program to educate employees, clients, partners and contractors about the importance of environmental sustainability

(Environmental Management) and is designed to ensure the implementation of sustainable business systems, procedures and practices.

Major Projects assisted by SMEC in Bangladesh

In Bangladesh Consultancy Service is very much Popular. Consultants are required for big projects in our country. Like other consulting firms SMEC also provide different services in different sectors. Some of the major projects are

- Padma Multipurpose Bridge
- Corporate Management System (CMS) Restructuring of Khulna Water Supply Project
- Dhaka-Chittagong PPP Expressway Project
- Regional Cooperation and Integration Project
- Chittagong Outer City Ring Road
- First Bus Rapid Transit Project in Bangladesh
- Bangabandhu Railway Bridge Construction Project
- First Tunnel Project in Bangladesh – Tunnel Boring Method
- Dhaka-Ashulia Expressway Project, 24 km
- Beautification of Bangabandhu Bridge Project



SMEC's Services Marketing Mix:

The service marketing mix is also known as an extended marketing mix and is an integral part of a service blueprint design. The service marketing mix consists of 7 P's as compared to the 4 P's of a product marketing mix. Simply said, the service marketing mix assumes the service as a product itself. However, it adds 3 more P's which are required for optimum service delivery.

The product marketing mix consists of the 4 P's which are Product, Pricing, Promotions and Placement. The extended service marketing mix places 3 further P's which include People, Process and Physical evidence. All of these factors are necessary for optimum service delivery.

Product: All the outputs of the consultancy service falls under this category. The Inception report, Express of Interest, Monthly Progress Report, Variation Order, Amendment,

Consultancy Report, project Completion Report, Environmental Action Program all are the products delivered to the client.

Pricing: The consultancy service specific numbers of positions and experts against each of the position. The pricing of the whole package may be Quality and Cost Based System (QCBS) or Quality Based System (QBS). Most of the times the donor agency funds the project.

Promotions: SMEC's promotional activities are different from the mainstream promotional plans of the other organizations. As consultancy service here is based on the previous working experience in different sectors, SMEC's promotional activities include regular basis client meeting, liaison with the ministries, arranging study tour abroad and appointing more international experts.

Place: SMEC has individual project office for every single project in Dhaka which are separated from the Head Office/ Corporate Office and in-site project office from where all the works are executed. The Dhaka based project offices are used to monitor the project works and these offices report directly to the head office.

People: Consultancy business is all about people. There are 38 projects running in Bangladesh in which SMEC is actively working. In those projects around 500 engineers, surveyors, inspectors, office managers are providing continuous service. Even from the head office the project coordinators are providing service whenever required.

Process: The process starts from the Express of Interest to delivering the final project completion report. After the client publishes the Request for Proposal, a number of stages i.e., Express of Interest, Tender bidding, Feasibility Study, Detailed Design, Construction Supervision and then project closing. The recruitment of numerous experts is also involved in different stage of a project.

Physical Evidence: Physical evidence includes all the infrastructures, roads, bridges, dams, buildings, pavements, rail tracks, reports, equipment, security measures and all other things used in the services.

Company Strategies:

Client Focus

SMEC is focused on the development of long-term partnerships with clients built on collaboration, commitment and integrity. SMEC works with clients to understand their business objectives, drivers, resources and processes to deliver solutions with commercial advantage and sustainable project outcomes. SMEC is responsive to clients' changing needs and utilizes a dedicated Client Relationship Management (CRM) system to drive client-focused initiatives. SMEC's localization model strengthens global capabilities, and provides local experts who deliver cost-effective and tailored services to the meet the needs of a diverse client base.

People Development

SMEC will continue to invest in developing the technical capabilities, skills, experience and knowledge required for employees to excel in their roles. This includes increasing the number of Chief Technical Principals across the Company in order to promote innovation and continuous improvement. SMEC fosters a culture of mutual trust and encourages all employees to adopt a partnership approach. SMEC operates under an 'open door' philosophy of continuous disclosure and communication with all employees, clients and shareholders.

Organic Growth

Growing the business organically is a key priority for SMEC. This includes expanding and strengthening technical disciplines and developing capabilities to service the entire lifecycle of physical, social and environmental assets.

Systems and Processes

SMEC will continue to integrate systems and processes across the Company's global network. This will include an ongoing review of operational requirements to ensure systems and processes provide operational efficiency and improved access to information. SMEC will maintain investment in Information Communications Technology (ICT) to enhance networking across the Company's geographic divisions and provide increased support to employees throughout project delivery.

Vision & Values

SMEC's Vision is 'to deliver outstanding infrastructure services for our clients and communities'. This Vision aligns with the Company's ethos of 'Local People. Global Experience.' and supports SMEC's localization model of developing local people and being responsive to the needs of local clients.

SMEC's Values are:

- Teamwork & Trust
- Diversity & Delivery
- Integrity & Innovation
- Safety & Sustainability

These Values underpin the way SMEC operates, and define the way SMEC works. Employees are encouraged to adopt these values in a meaningful way. This will enable SMEC to continue to grow as a business and strengthen its reputation in the global markets a leading provider of high-quality consultancy services.

Analysis of the marketing strategies: Reasons and outcomes

Selecting the overall strategies of a company may seem easy sometimes but it is actually the outcome of the continuous market research, customer feedback, study of the competitors, SWOT analysis and many more things which comes directly from the top-level management. Marketing strategies are the part of the company mission, vision, forecast, plan and adopting the right strategies for the right market and for the right customers help the organization achieve its goals and targets. SMEC's strategies were not established overnight. They were built for some specific reasons and to get a planned output. The reasons of these strategies are as follows-

1. The govt. or the private organizations are not the only clients of the projects. Donor agencies like ADB, WB, JICA, IFAD are also the clients of these projects. Most of the times multiples project is run by the same funding agency or the client. As an example, BRT-1, BRT-2, DMRT all of these projects are under ADB's funding and the client is Bangladesh Bridge Authority. So SMEC's focus is always on building a good relationship with the clients.

2. "People" is the most important element is any consulting service. In Quality Base Project System, the experts' qualification is the only thing that may help the organization win a project. So SMEC trains its internal customers i.e. the employees through many workshops and training activities so that they can execute the best way possible.

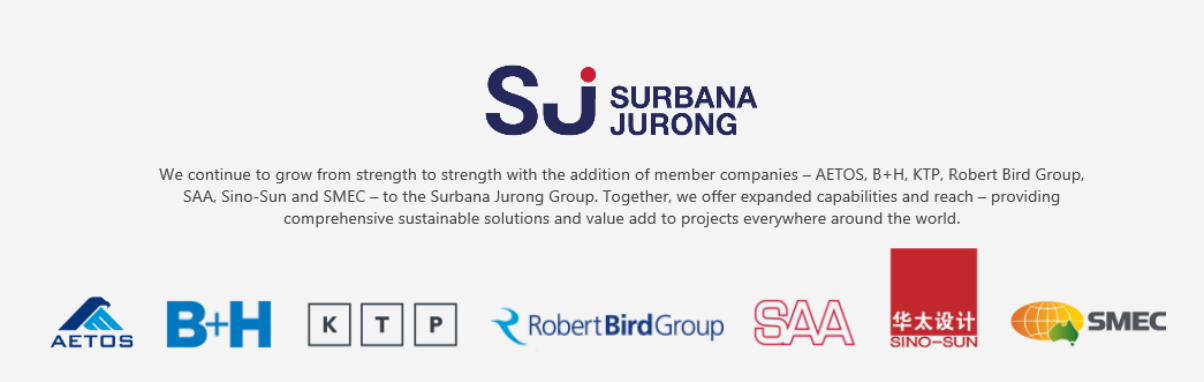
3. Growing is always a tool to grab the market. Currently SMEC is operating in more than 50 countries across the world. Under Surbana Jurong, SMEC has more scope to collaborate with companies like RBG, AETOS, ILF and thus to gain the control of different consultancy markets.

Outcomes: The outputs or result of the implemented strategies are as follows-

1. More client satisfaction: The customers/ clients are more interested to work with SMEC than the other local/international consultants as SMEC's reputation for being client oriented is globally recognized.

2. Internal Customer (Employee) Satisfaction: SMEC values its employees than its competitors. The remuneration package, bonus, opportunity for growth, internal working environment, job specific training etc. enables the employees to be more efficient and productive which creates greater employee satisfaction.

3. There are now 7 organizations working in Surbana Jurong Group. Surbana Jurong (SJ) is the powerhouse of the urbanization in the whole Asia region. The 7 organizations are- AETOS, B+H, KTP, Robert Bird Group, SAA, Sino-Sun and SMEC. This group is growing even bigger to spread its expertise in multiple sector like infrastructure development, urbanization, security management etc.



CHAPTER-5

Conclusion

In Bangladesh, the quality of the infrastructure is central to growth, poverty reduction, and achievement of the Millennium Development Goals. Consultants manage the project by the application of their skill, knowledge and experience. Project Consultancies face so many problems such as managing the team members, problems related to design issues, engineering issues, safety of workers on the site and so on. Awareness of various processes involved in construction work are the integral part of consultancy. Consultant has a wide variety of roles to play in the construction process in terms of Infrastructure development. Infrastructure development consist with study, design & construction of project, which gives benefits to the Customer / Client in terms of satisfaction and it consists of business development, profit, resources utilization, etc. Because of this consultancy plays a multifaceted part in projects, and is usually involved in the project from the project's inception to its completion. It is important to fully understand Consultancy and authority. Every project is different and unique, every project demands the full attention, professionalism and energy of its project team specially consultants, every project depends upon an experienced leader to make it happen. The infrastructure development sector in Bangladesh has grown very fast with the construction of new projects. Due to the rapid expansion in the development sector, the services provided by the Consultancy need to be improved in terms of performance and quality of work to meet the project goals and objective and also the clients' satisfaction.

Limitations:

The study had the following limitations:

- Getting Relevant papers and documents were strictly prohibited.
- Since the office personals were very busy, they could provide me very little time.
- Confidentiality of the information because of its commercial nature.
- Complexity of the system itself that restrain the capacity of individual to get into it ful

Bibliography/ References

1. https://one.smecnet.com/pages/default.aspx
2. http://www.smec.com/en_bd
3. https://surbanajurong.com/
4. https://group.surbanajurong.com/sites/bms/SitePages/same.aspx
5. one.smecnet.com/bms/Knowledge/default.aspx
6. Project Data Workspace of SMEC