



MBA INTERNSHIP REPORT ON

SMEC International Pty Ltd.

INTERNSHIP TOPIC

Business Management System (Project Management) of SMEC International Pty. Ltd.

PREPARED BY

Name: Md Abu Sayed Saad

Student ID: 16264004

SUPERVISED BY

Md. Shamim Ahmed

Lecturer & Deputy Registrar,

BRAC University.

Submission Date: 2 Jan 2020

PLAGIARISM DECLARATION

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- 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.
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Name: Md Abu Sayed Saad
Student ID: 16264004

Letter of Transmittal

1 January 2020
Md. Shamim Ahmed
Lecturer & Deputy Registrar,
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 ‘Business Management System (Project Management) 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 Abu Sayed Saad

ID: 16264004

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, Md. Shamim Ahmed, Lecturer & Deputy Registrar, 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; Syed Hossain-Business Development Engineer and Md Rafsanul Khan, Project Coordinator 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 “Business Management System (Project Management) of SMEC International Pty. Ltd.” is done by Md Abu Sayed Saad as a partial fulfilment of the requirement of Masters of Business Administration (MBA) major in Operation Management.

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

Md. Shamim Ahmed
Lecturer & Deputy Registrar
BRAC University

Executive Summary

SMEC has operated in Bangladesh since 1977, and established a permanent office in Dhaka in 1978. SMEC (Bangladesh) Ltd was established in 1998 to provide domestic support and local firm, ACE Consultants, was acquired in 2002 to operate as an independent subsidiary in Bangladesh.

SMEC's project experience in Bangladesh is extensive, and includes: the Dhaka-Chittagong Railway Development Project; Padma Multi-purpose Bridge; Rural Electrification Upgrade; and urban governance and infrastructure improvements in secondary towns across Bangladesh.

More recently, SMEC has been engaged by Bangladesh Railway to provide consultancy services on the Dohazari-Cox's Bazar Railway Construction Project; SMEC has also been engaged to provide consultancy services for the Matarbari Ultra Super Critical Coal Fired Power Project.

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CHAPTER-1

INTRODUCTION

Background of the report

This report has been prepared as per requirement of the MBA Internship Program. The author has been done his major in Operations Management. His completed major courses are- 1. Supply Chain Management; 2. Project Management; 3. Quality Management. His current organization provides consultancy service to the Government of Bangladesh in different infrastructure sectors. The topic for the report has been selected based on the author's job responsibility in the relevant field. We can summarize 4 specific purposes that this report will serve-

1. To connect the real-life experience with the courses that had been taught in the MBA program;
2. To get a summarized picture of the business world;
3. To learn and implement job responsibilities.
4. Last but not the least, completion of the MBA program of BRAC University.

Reason behind this report

Consultancy Services in this country has been playing significant role to build the infrastructure since the liberation war. ACE Consultants limited, which is the subsidiary company of SMEC started providing consultancy services back in 1977. The Author didn't find any detailed and vast report, paper or research on the Business Management System of consultancy firms in Bangladesh. This report will provide idea to the readers about the Business Management System of consultancy service in Bangladesh through the research on SMEC.

Objectives

The specific objectives for the preparation of this report are given below:

- Study the present scenario of Infrastructure Development of Bangladesh;
- An Analysis of SMEC's involvement to the Infrastructure Development of Bangladesh;

- Study SMEC’s Business Management System.

Scope

This study mostly concentrates on infrastructure development of Bangladesh and the prospects of the related consultancy firm and considering SMEC as case study. SMEC as a Consultant, is working in many mega projects of Bangladesh, a study on the Business Management System 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:

Chapter 1	Introduction
Chapter 2	About Organization
Chapter 3	Internship Experience
Chapter 4	Business Management System (Project Management) of SMEC
Chapter 5	Conclusion and limitations

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 was the Business Management System-Portal of SMEC.net global and the discussion with the key persons in the Project Management Services Group Team.

Literature review

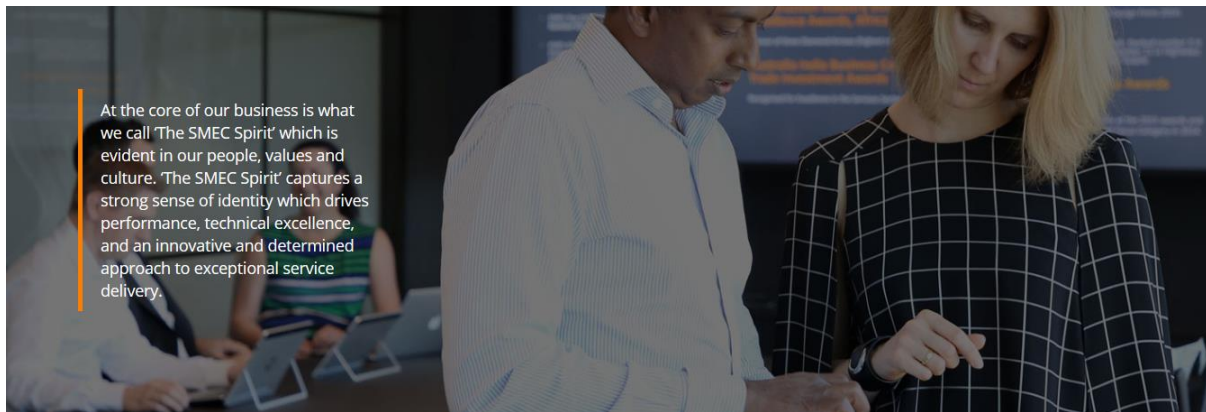
This report is organized into four parts. The first part will emphasize on overview of the infrastructure development sectors in Bangladesh. This section has focus on different development projects and relevant consultancy services. In second part, an insight of SMEC International will be delivered in correspondent to the operation of consultancy services in

Bangladesh and globally. In the third part the internship experience, job responsibilities have been described in details. In the fourth part a detailed study of SMEC's Business Management System (Project Management) 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's origins date back to the iconic Snowy Mountains Hydroelectric Scheme in 1949. Today SMEC is consistently recognized for technical excellence and design innovation by the world's leading engineering bodies. Striving to deliver service excellence across a range of industry sectors, SMEC has developed and refined a core service offering covering the lifecycle of a project. SMEC's projects help to generate economic wealth and provide essential infrastructure services in some of the world's fastest growing economies.




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.



1949-1974

SNOWY MOUNTAINS HYDROELECTRIC SCHEME

Construction of the Snowy Mountains Hydroelectric Scheme commenced on 17 October 1949, with the Governor-General, Sir William McKell, Prime Minister Ben Chifley and William Hudson firing the first blast at Adaminaby. Heralded as Australia’s largest infrastructure project, the A\$820 million multi-purpose project involved hydropower, roads and bridges.

Prime Minister Ben Chifley and Sir William McKell firing the first blast at Adaminaby, 1949

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



2000 — 2012

THE NEW MILLENIUM

SMEC’s growth continued with a number of acquisitions to complement its existing profile including: Brisbane City Enterprises (2005), EGC Pakistan (2007), Dare Sutton Clark (2008), CEIS Pakistan (2009), Lean and Hayward (2011), GMC Global (2012) and Vela VKE (2012).

Legacy Way Tunnel, Brisbane, Australia

was completed.



June 24, 1970

SNOWY MOUNTAINS ENGINEERING COMPANY (SMEC) WAS ESTABLISHED IN 1970

SMEC expanded internationally by opening offices in Dhaka, Jakarta and Kuala Lumpur alongside new Australian offices in Canberra and Sydney. SMEC Malaysia was incorporated in 1991.

International projects included geological investigations along the Mekong River, road construction in northern Thailand and hydropower developments in Cambodia and Malaysia.

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.



2016

SMEC JOINS SURBANA JURONG

As a member of the Surbana Jurong Group we have strengthened our technical functions and service offerings to offer an enhanced lifecycle of services in the urban, industrial and infrastructure space.

Our new partnership provides a talent pool of 13,000 dedicated people working across a network of 110 offices in 40 countries throughout Asia, Australasia, the Middle East, Africa and the Americas.

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 Wyalong 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.

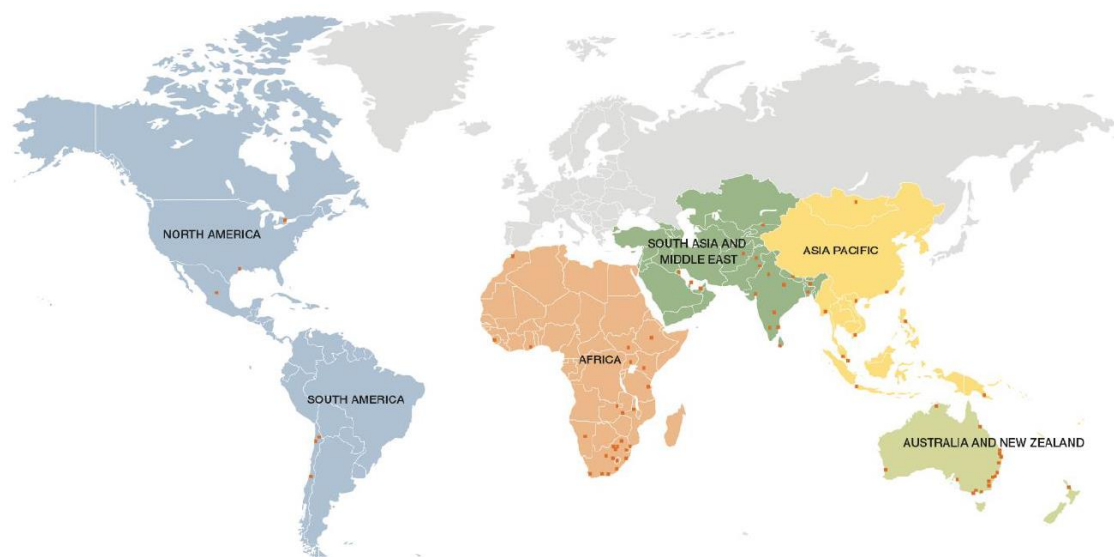
Board of Directors

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).

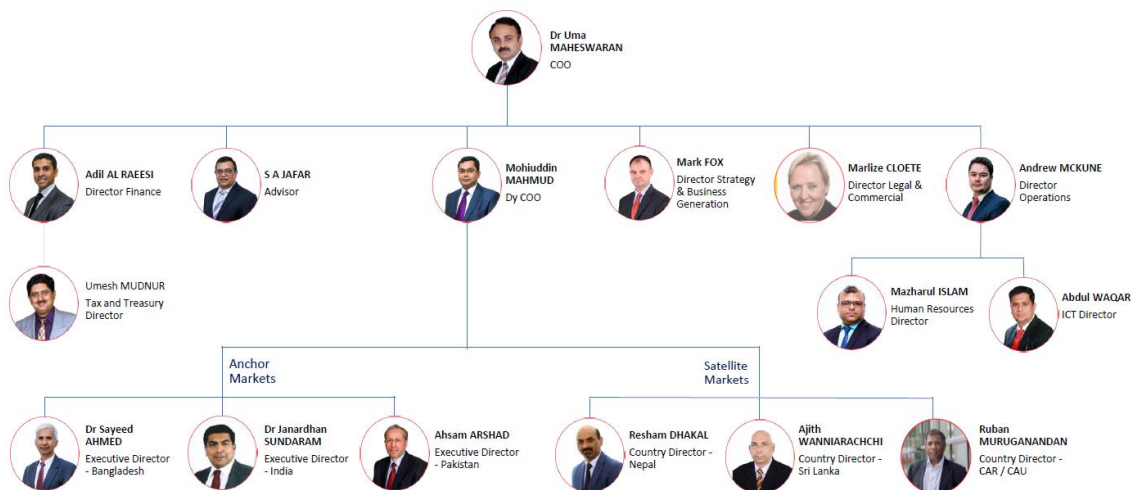
Remuneration and Nominations Committee

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.



Member of the Surbana Jurong Group

Key Clients



Government of Bangladesh







Bangladesh Army



Roads and Highways



Bangladesh Bridge Authority



Bangladesh Railway







KWASA



CWASA



CDA



BREB




Sumitomo Corporation

Company Overview

3

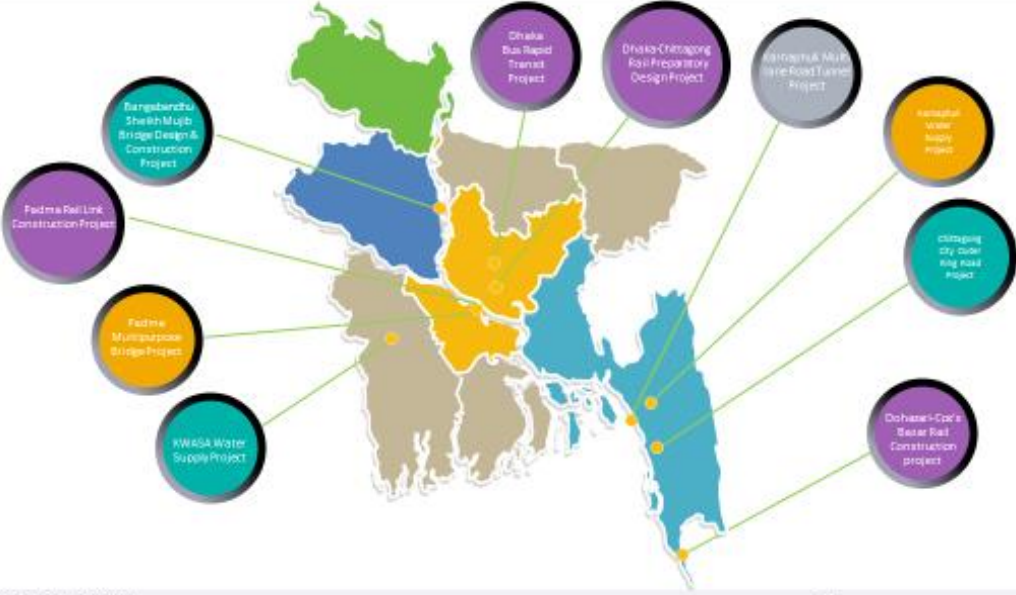
Bangladesh Projects

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



Member of the Surbana Jurong Group

Active Projects



Company Overview

4

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 in 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

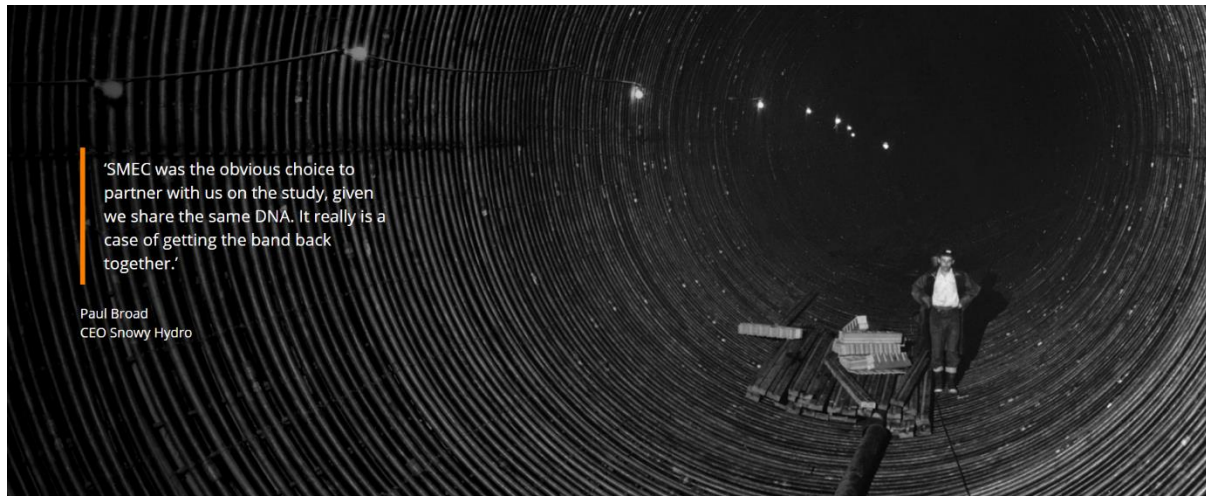
Client: Bangladesh Bridge Authority

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 from home and abroad in various sectors 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 work 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 work in different sectors 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 competitors of each other for any project. Relationship between consulting firms depends 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 requirements 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.

MARKET FOOTPRINT



<p>SMEC in Bangladesh for 40 years since 1977</p>	<p>Wholly-owned local subsidiary from 2002 ACE Consultants Ltd</p>	<p>ACE - the oldest consulting firm established in 1958</p>	<p>SJ Branch Office 'SJPL' and local subsidiary 'SJBD' Registered in 2018</p>
<p>36 Ongoing and 200+ Completed Multi-Disciplinary Urban & Infrastructure Projects</p>	<p>Clientele - Gov't Department / Ministry, Private Clients & Investors</p>	<p>Strength of Int'l & National Staff 600+ in Different Disciplines</p>	<p>Work in Hand Volume AU\$ 190m and Annual Revenue AU\$ 20m</p>

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

OUR MARKET FOOTPRINT (CONTD.)



CHAPTER-3

Internship Experience

The author has been working as Assistant Manager in Project Management Services Department in this company since January 2016. 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. *Project Management, Coordination and Capacity Building under Greater Dhaka Sustainable Urban Development Project.*



2. *Engineering, Procurement and Construction Management under Greater Dhaka Sustainable Urban Development Project*

3. *Detailed Design and Construction Supervision of Matarbari Ultra Super Critical Coal Fired Power Plant (RHD Part).*



Matarbari Coal-Fired Power Project Access Road Bangladesh

Project Description:

- Access Road Component consists of 37 km access road construction
- Construction of 10.5 km new road
- Rehabilitation of 12.8 km road
- Repairing 20.5 km road
- Construction of an approximately 640 meter Pre-stressed Concrete Bridge and 2 jetties.

SMEC's Role:

- Field Survey & Investigation: Topographical, Geotechnical, Traffic, Hydrological Surveys
- Detailed Design of Bridge and Approach
- Geometric and Pavement Design of Road
- Construction Supervision

Value of the Project:

- USD 123 million

CHAPTER-4

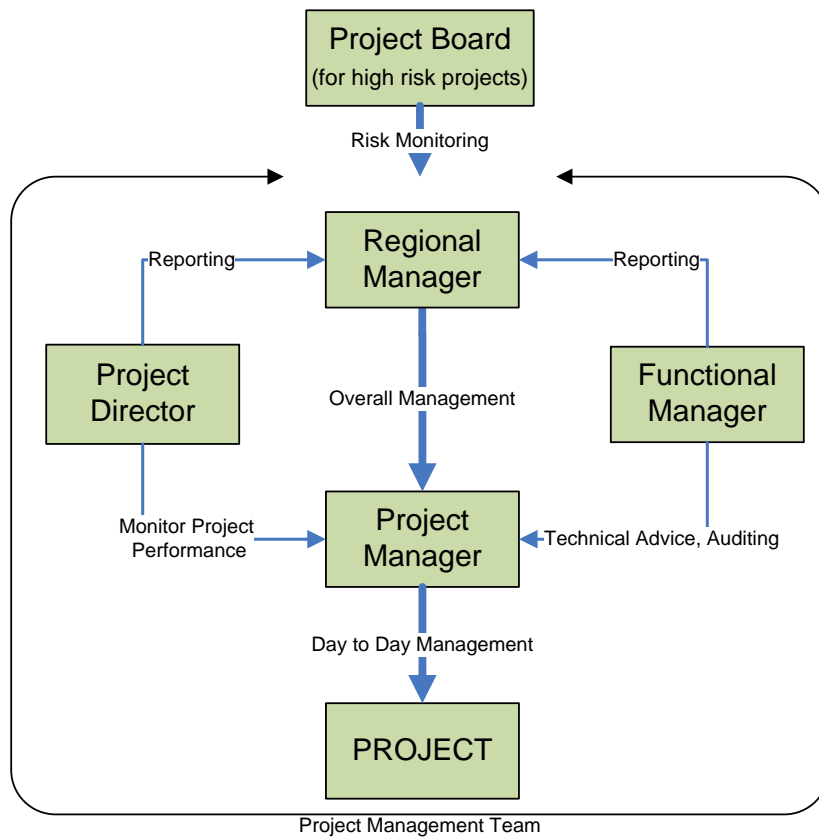
Business Management System (Project Management) of SMEC

Project management is the application of knowledge, skills, tools and techniques for the planning and management of a project ensuring that the product or services included in the project are completed with the required quality, on or before the desired time.



All revenue generating work undertaken by SMEC is packaged into unique units. Each unit is called a “project” and has attributes that distinguishes it from SMEC’s other business activities. Projects are temporary in nature, having a definitive start date and end date, and each has a client and its own management team. Each project is managed as a separate entity having its own financial and technical reporting requirements and is assigned a unique project number.

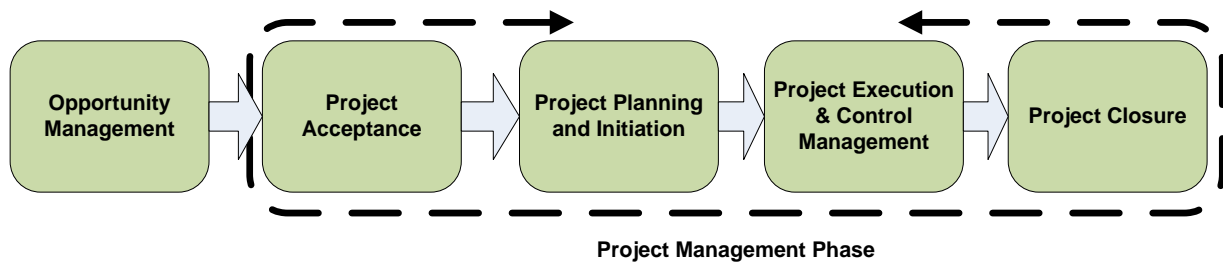
Each project is managed by a Project Manager. SMEC appoints an individual as Project Manager. The Project Manager has day to day responsibility for the project’s technical and financial performance and is the primary person responsible for project quality. The Project Manager is supported by a Project Board (for some projects), Project Director, Regional Manager and Functional Manager as shown 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.

Project Lifecycle

SMEC projects are considered to have 5 phases as shown below.



Project Acceptance

Project execution occurs after the client has advised that it is prepared to enter into a contract with SMEC. As a result, actions are undertaken by the Opportunity Manager and Regional Manager and summarised below:

- confirming availability of staff, subcontractors and subconsultants
- checking that insurances are in place
- checking terms and conditions of contract are acceptable prior to initiating the contract
- confirming with the person who has the delegated authority to execute the contract how the work offer or contract will be reviewed, and executed
- executing the contract
- appointing the PM and Project Director.

Project Planning and Initiation

Once a proposal has been successful and the contract executed between the client and SMEC, the project enters the planning phase. It is early on in this phase that the PM will be mobilised to the project. Until such times as this occurs, the Regional Manager is responsible for undertaking the PM's activities associated with this phase. The actions that must be taken and these include:

- project set up in Epicor Enterprise (also called SMECnet Enterprise or E4SE) for projects operating under this financial management system
- project set up in subsidiary companies where projects do not operate under the Epicor Enterprise system
- arrange for staff to be mobilised to the project
- key project staff review contract documentation to fully understand the project requirements
- appointment of a Project Board (if required)
- development of the Project Data Sheet (PDS)
- development of the Project Management Plan (PMP)

- development of a Procurement Plan.

At the end of this phase, the project should have been planned, staffed with key staff and be ready to be executed.

Project Execution and Control

This phase involves the management of the execution of each project activity and task. While the activities and tasks are being executed, a number of management processes are undertaken to monitor and control the deliverables being output by the project. These processes are developed as part of the Project Management Plan then implemented in the execution phase. The processes can be divided into eight management disciplines of scope, time, cost, human resources, risk, procurement, quality, and communications and ensure a quality product is delivered on or before the desired time, at or below the desired budget. Once all of the deliverables have been produced and the client has accepted these, this phase is complete and the project is ready for closure.

This phase requires the physical production of each deliverable for acceptance by the client. The actual activities undertaken to produce each deliverable will vary, depending on the type of project. Deliverables may be constructed or developed in a ‘waterfall’ fashion (where each activity is undertaken in sequence until the deliverable is finished) or an ‘iterative’ fashion (where iterations of each deliverable are constructed until the deliverable meets the requirements of the client). Regardless of the method used, careful monitoring and effective control processes should be employed to ensure that the quality of the final deliverable meets the acceptance criteria set by the client.

Project Closure

Project Closure commences after the acceptance by the client of the last project deliverable and includes handing over project documentation, terminating supplier contracts, releasing project resources and communicating the closure of the project to all stakeholders. The last remaining step is to undertake a post implementation review to quantify the overall success of the project and list any lessons learnt for future projects.

CHAPTER-5

Conclusion

Bangladesh is going towards to achieve Millennium Development Goals and development of infrastructure plays a vital role in that path. Consultancy Services are required to achieve excellence in terms of planning and execution of Infrastructure Development. Consultants provide their technical expertise to add values to the development works which has become part and parcel to any kind of development activities. 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. 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. Thus, it requires a methodical and standard Project Management System within the organization for the successful delivery of the projects. Project Management System needs to be implemented to attain deserved quality of works and effectivity of the project team. Due to the rapid expansion in the development sector, Consultancy Services need to be top notch in terms of performance and quality of work to achieve 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.
- Confidentiality of the information because of its commercial nature.
- Complexity of the system itself that restrain the capacity of individual to get into it full.

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