



## **System Analysis and Design**

**Group Assignment**

**Batch: PLY 16.2**

**Faculty of Computing**

**National School of Business Management**

**Mrs Dileeka Alwis**

## **Team Members**

- |                                |   |                      |
|--------------------------------|---|----------------------|
| 1. S.A.D Ushan Indeewara Alwis | - | Bsc-ply-com-16.2-008 |
| 2. K.M Yomal Himasha           | - | Bsc-ply-com-16.2-271 |
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| 4. R.M Pasan H Rathnayaka      | - | Bsc-ply-com-16.2-239 |
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| 6. M.C Mohamed Ajeeth          | - | Bsc-ply-com-16.2-181 |

## **Company & Client Details**

Company : SOIL TECH (pvt) LTD  
Rajagiriya  
Srilanka.

Web site : [www. http://soiltechltd.com](http://soiltechltd.com)

Client Name : Mr Ishara Gamage.  
Head Of the IT Department  
Soil Tech (pvt) Ltd

## **SOIL TECH (PVT) LTD**

Its core business is the soil related engineering services. The business advantage of the SOILTECH in the current competitive market is the incremental development and value addition to all its processes, namely technical management, business management, staff training and mainly the customer care. In fact SOILTECH is highlighted among the equals. Our customer base never turned back, instead grew day by day. SOILTECH attempts to listen and recognize customer requirement in detail and in a clear format. Our solution is then interpreted to the client in very simple

## **SERVICES**

- Earth Retention System
- Forensic Engineering
- Geotechnical Investigations
- Construction of Play grounds and Sports Fields
- Ground Improvement
- Ground water Explorations
- Landscaping
- Landslide Remediation
- Pilling
- Stream Bank Protection and Riverine Systems
- Survey and Mapping
- Road Development

## INTRODUCTION

### The connections between IS and the construction industry

Advances in information and communications (ICT) technology have rigorously improved productivity in all industry sectors, and the role of information systems has changed further to support for even shaping organizational strategy. Thus, utilizing information systems (IS) in the construction industry has been an issue of great concern in order to achieve competitive advantages of an organization and also to enhance the effectiveness of construction projects throughout their life cycle and across different construction business functions. Information systems (IS) research in the construction industry is one of the most frequently addressed areas in the academia and industry. Numerous studies have explored the IS concepts, methodologies, technologies, and solutions for specific construction tasks using the ICT.



Ground Modification



Sports Fields & Playgrounds



Soil Nailing



Pilling

## **INTERNAL ENVIRONMENT OF THE COMPANY**

Soli Tech has a dedicated workforce of over 1000 led by a team of professionals with extensive experience in construction project management. It is home to over 80 graduate engineers in the fields of civil, electrical, mechanical and materials engineering, along with an extensive group of skilled crafts-personnel. We consider them our vital strength of our internal environment.

### **1. Senior Management**

- Managing Director(MD) -  
Mr Gamage (MD) of the Soil tech (PVT) LTD
- Accounts and Finance Department
- HR Department
- IT & Corporate Affairs Department
- Sales & Marketing Department
- Logistic and Operations Department

### **2. Board of Senior Engineers**

- Mr S.A.D Dammika Wishwanath Alwis(Mechanical Engineer)
- Mr S.K. Rupassara(Electrical Engineer)
- Mr A.B. Kumarasinghe(Civil Engineer)
- Mr B.S. Ananda(Mechanical Engineer)
- Mr S. Perera(Electrical Engineer)

### **3. Human Rights & Workplace**

SOIL TECH is committed to maintain an organizational culture which upholds internationally recognized human rights while actively engaging in the prevention of human rights abuses & violations. SOIL TECH strives to identify, evaluate and manage human rights impacts on all stakeholders, and play an active role in the achievement of human rights within our direct spheres of influence, as follows:

- To uphold the human rights of our employees, including non-discrimination, prohibition of child and enforced labour, and Freedom of Association.
- To establish and maintain fair and appropriate procedures while evaluating and selecting suppliers and subcontractors and to review their performance with fairness.
- To engage in open discourse with stakeholders, and be involved in community activities.

### **4. Undergraduate/Industrial Trainers**

Every year, SOIL TECH provides industrial training to university undergraduates and students from higher educational institutions. Our three major partners in this programme are the civil engineering departments of the Universities of MORATUWA, PERADENIYA and RUHUNA. In addition, the company also provides industrial training opportunities for undergraduates and other students in quantity surveying, mechanical engineering and construction site supervision etc.

### **5. Suppliers & Subcontractors**

Subcontracting and supplying of services and materials is pivotal to our industry, in the face of increasingly diverse skills for construction operations. From a technical point of view, subcontracting may be required to cater for work of high technical complexity, entailing an ever-increasing need for specialist inputs into construction processes. Outsourcing the supply of material and specialized workforce can also enable the mitigation of certain risks through organizations which are better equipped to manage them. As such, we rely on our subcontractors and suppliers to deliver major segments of our projects.

## **EXTERNEL ENVIRONMENT OF THE COMPANY**

### **1.CLIENTS AND PROJECTS**

➤ **Mack Woods (Pvt) Ltd, Sri Lanka**

Soil investigation & Topographic Survey , at Bridges sites , French bridge Project

➤ **Mech Engineering,Sri Lanka**

Remedial Works for Bowatanna dam, (VWPizometer Installation)

➤ **Jet Wing Travels, Sri Lanka**

Jet Grouting for Jetwing Travels Extension Building col-02

➤ **East West Foods (Pvt) Ltd,Sri Lanka**

Restoration of Ground Settlement of 4 Storied Buildings at Mattakkuliya

➤ **China Metallurgical Group Corporation (MCC), Sri Lnaka**

Soil Anchoring works at Wattala

➤ **South Asia Gateway Terminal (Pvt) Ltd, Sri Lanka**

Grouting Slab jacking gantry crane tracks

➤ **Sri Lanka Army**

Construction of Embankment protection wall at Army garment factory - Alawwa

➤ **Sri Lanka Navy**

Design & Construction of Reinforced earth retaining structre by soil nailing at naval headquarters

### **2. INTERNATIONAL PARTNERS**

➤ **South-East-Asia**

Thiphalansy Group (TPLS), Head Office,  
KM67, Namcheang, Phonghong  
Vientiane Province, Lao PDR.

## **DETAILS OF THE EXISTING SYSTEM OF THE COMPANY**

- No standard for the presentation of Client and project information,
- There system didn't have any method to get clients feedbacks and advices.
- Project progress is not clearly maintained.
- Billing takes a longer time, and no proper billing system available.
- Finance is handing by another department which is in another place.
- They didn't have regular stock managing system.
- The system is not flexible.
- Their information sending and reserving system was not work properly.

## **DETAILS OF THE PROPOSED SYSTEM**

### **Implementation**

- Software implementation for clients and customers.
- Information sending and receiving efficiently and accuracy.
- User ID System and attendants marking system.
- Introduce the new stock management system.
- Training the clients for essential and several works.
- Create the Staff meeting for clients' ideas to share.

### **Monitoring**

- Testing and bug fixing.
- Increase the Flexible and efficient of service.
- Decrease the clients and company construction and other errors.



## **OUR PLAN**

### ➤ **Realtime communications and project documents**

Full creation and tracking of submittals, Change Project Requests, Meeting Minutes, Punch Lists and general letters. Always have everything in writing and at your fingertips.

### ➤ **Project handling**

Shows, tracks, and monitors all aspects of a project. From the bidding process to warranty issues, if it's needed IS tracks it. With the ability to track almost 1,000 data points you will always know where your job stands. The most detailed Work In Process reporting system in the industry that allows for true real world accounting.

### ➤ **Payroll system**

Think of this area as the most comprehensive payroll service that intimately knows everything about their projects. It can handle all types of pay such as piece work, hourly, and salary, as well as unlimited pay rates for each employee. Plus unlimited benefit and deductions can be applied to each employee and even each pay rate.

### ➤ **Complete costing and proposal writing**

Create proposals and cost estimates the way they and their client want to see them. Scope templates, quantity take-off templates, unit costs, assemblies, and RFP's are some of the tools that are available. Track multiple versions of an estimate as the scope develops.