

**Project Cost Optimization  
&  
Process Improvement Programme at  
FEAG Middle East LLC**

**Project Report**

**Institute of Management Technology**

**M.B.A in Projects & Operations**

**Dubai – (Jan 10<sup>th</sup> to Apr 15<sup>th</sup>, 2016)**

Submitted by: **Tamilarasi Rajappa - SMBA 14066**

Supervised by: **Dr. Arvind Seth –Institute of Management Technology**



**Institute of  
Management Technology**

## **TITLE PAGE**

**Project Period** : Jan 10<sup>th</sup> to Apr 15<sup>th</sup>, 2016

**Theme** : MBA Project Report

**Title** : Project Cost Optimization & Process Improvement  
Programme at FEAG Middle East LLC

**Education** : MBA in Projects and Operations

**Place** : Institute of Management Technology  
Academic City, Dubai, United Arab Emirates

**External Advisor:** Mr. Chris Renfer, GM - FEAG Middle East LLC

**Author** : Tamilarasi Rajappa

# Contents

- Contents..... 3
- About the Author..... 4
- About the Project Supervisor..... 5
- Acknowledgements ..... 6
- 1. Executive Summary ..... 7
- 2. FEAG Middle East LLC \_ Introduction..... 8
- 3. FEAG Procurement Management Process- Overview ..... 10
- 4. FEAG Quality Control Process for Deliverable–Overview ..... 14
- 5. About SPEED Program ..... 17
- 6. Literature Review ..... 18
- 7. SPEED Implementation..... 20
- 8. Basis of Target Split-Cost Breakdown Structure ..... 21
- 9. SPEED Tracker ..... 24
- 10. References: ..... 37
- 11. Conclusion:..... 37

## **About the Author**

Tamilarasi Rajappa has completed her Bachelors of Engineering in Electronics and Communications in Anna University Chennai in 2010 and currently a M.B.A 2014-2016 Candidate at Institute of Management Technology, Dubai specialized in projects and operations. She is having around 3 years of Experience in managing project proposals in IT peripheral Industry. Tamilarasi Rajappa is a Certified Project Management Professional & Certified Associate in Project Management from Project Management Institute U.S.A. She is also an IRCA approved Quality Management Systems (QMS) Internal Auditor. Her Interests are in Project Management and Operations Management.

She is currently employed with FEAG Middle East LLC as a Project Manager

## About the Project Supervisor

Dr. Arvind Seth is Professor of Operations Management. He holds a Ph. D. from Indian Statistical Institute, Kolkata. He has also done Post Graduate Diploma in Statistical Quality Control and Operations Research after completing his Masters in Statistics

Dr. Arvind Seth has served as Dean MBA program at IMT Dubai from 2006 to 2011. Before joining IMT Dubai, he worked as a faculty member at Indian Statistical Institute, New Delhi for almost thirty years. He has undergone International Training in Total Quality Control in industry in Sweden organized by The Swedish Board for Investment and Technical Support.

He is certified lead Assessor for ISO-9000 and ISO-14000. He was Leader of Indian Delegation to meeting of ISO/TC – 69, Technical Committee on Application of Statistical Methods in industry held in Washington, USA, 1995 and in Tokyo (2002). He served as Chairman of National Committee set up by Bureau of Indian Standard (BIS) on development of Standards for Statistical Methods for Quality and Reliability, 2002-2006.

He has more than 35 years of experience in teaching, research, training and consultancy. Providing/ provided consultancy services in the field of Six Sigma, TQM, ISO – 9000, Operations Management, SPC, DOE, Taguchi Methods and Reliability Analysis to more than 250 different organizations in different countries. Also carried out more than 600 projects and case studies for improving quality, productivity and reducing cost in industries. He has guided Ph.D. and M.Tech students.

## **Acknowledgements**

I am most grateful for the support provided by Institute of Management Technology in Dubai and my sincere thanks to Dr.Arvind Seth, my advisor to the project for his valuable inputs on project management expertise and his guidelines towards future research .All errors or omissions are the responsibility of the author alone.

My Sincere thanks to Dr.Santanu Roy, my advisor during my Internship program, for his valuable inputs towards Operations Management which can be implemented in day to day activities at my work.

I am also grateful for the valuable support provided from my company internal stakeholders for the completion of my project and MBA Course on time.

Mr.Chris Renfer- Group General Manager, FEAG Middle East LLC, Dubai

Mr. Hedley Whitehead- Chief Finance Officer- FEAG Middle East LLC, Dubai

Mr. Denis Taylor- Chief Operations Officer -FEAG Middle East LLC, Dubai

Ms. Nayana Narayanan- Procurement Executive- FEAG Middle East LLC ,Dubai

Mr. Ratheesh Chandran -Head of Estimation/Design- FEAG Middle East LLC, Dubai

## 1. Executive Summary

**Purpose:** This project work is to develop a cost optimization program at FEAG Middle East and to improve the knowledge concerning best practices in Project and Operations Management. The main objective of this project is to improve FEAG existing Process and New Process implementation efforts in areas such as Project Management, Procurement Management, and Project Estimation.

**Background:** During my Internship at FEAG Middle East LLC as a Management \_Intern I was involved in learning the key knowledge areas of Project and Operations Management. This Include

- Engineering Project Management
- Project Procurement Management
- Project Estimation Management

My current project work is an extension of my internship wherein I will be developing and implementing Cost Optimization Program for my Organization in the role of Project Manager.

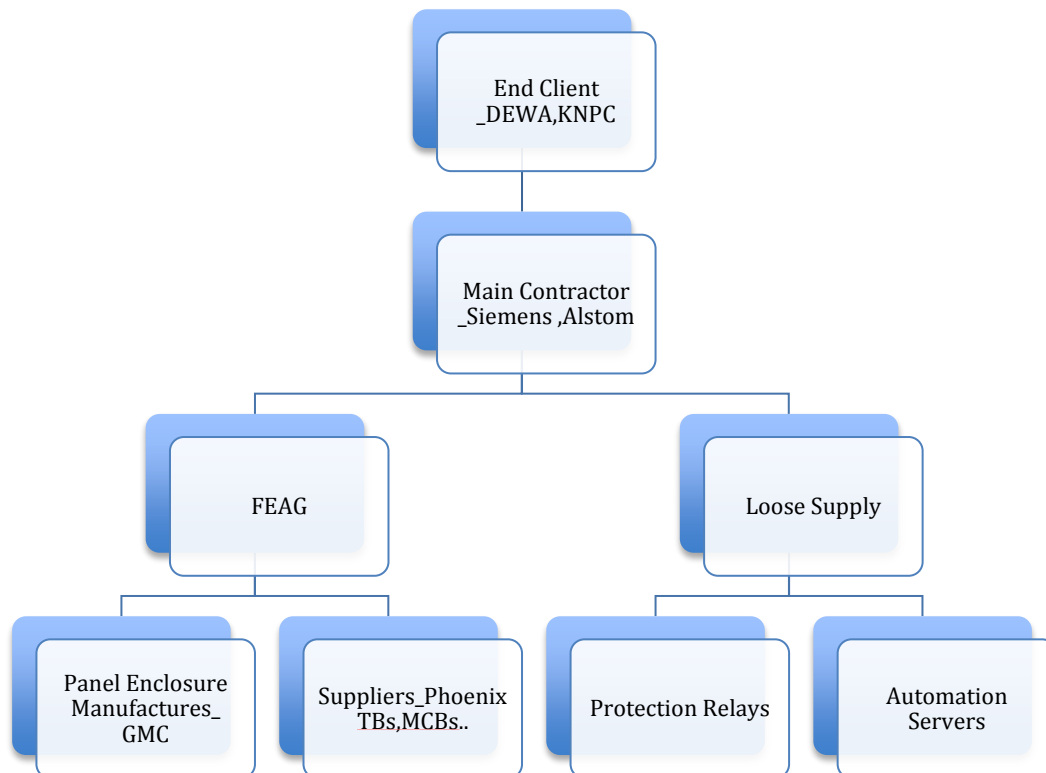
The recent Quarterly Management Meeting under the chair of Mr Chris Renfer who is the Group General Manager of FEAG Middle East had concerns towards the higher market price of their products when compared to competitors and net margin for last fiscal year were not achieved as expected. His immediate thought was to speed up the creation of a program which specifically deals with the Improvement of Net Margin /Cost Optimization in Projects. He named the Program as” SPEED” and I had been appointed as the SPEED Coordinator wherein my role is to setup a Cost Optimization Program and to implement the same. I was directly reporting to Group General Manager in regard to SPEED Program.

**Method:** The Main approach of this implementation is to benchmark the best practices to be followed in the Projects and Operations Management which is key to Process improvements and the success of SPEED Program. Data Gathering Techniques such as Interviewing, Experts Judgement, Observation, and Pilot Templates are the key tools used for addressing the issues and process improvements.

## 2. FEAG Middle East LLC \_ Introduction

FEAG Middle East LLC deals with assembling and manufacturing supply and services of Substation Automation and Protection Panels. Main EPC Customers are Siemens LLC, Alstom Grid and L&T. Major End Clients are Utility Companies like DEWA, SEWA, TRANSCO KNPC and Oil & Gas Industries like ADCO, ADNOC etc. FEAG has its Head office located in Business bay, Dubai. Panel Manufacturing and assembling workshop is in Dubai Investment Park Industrial area located near Jebal Ali, Dubai -United Arab Emirates. Business model is such that the main contractors deliver their loose Supply Automation Equipments to FEAG and FEAG in turn assembles the units with panel accessories and delivers the panel as per client requirements.

Typical Business Model with the End Client for FEAG Middle East LLC is shown below

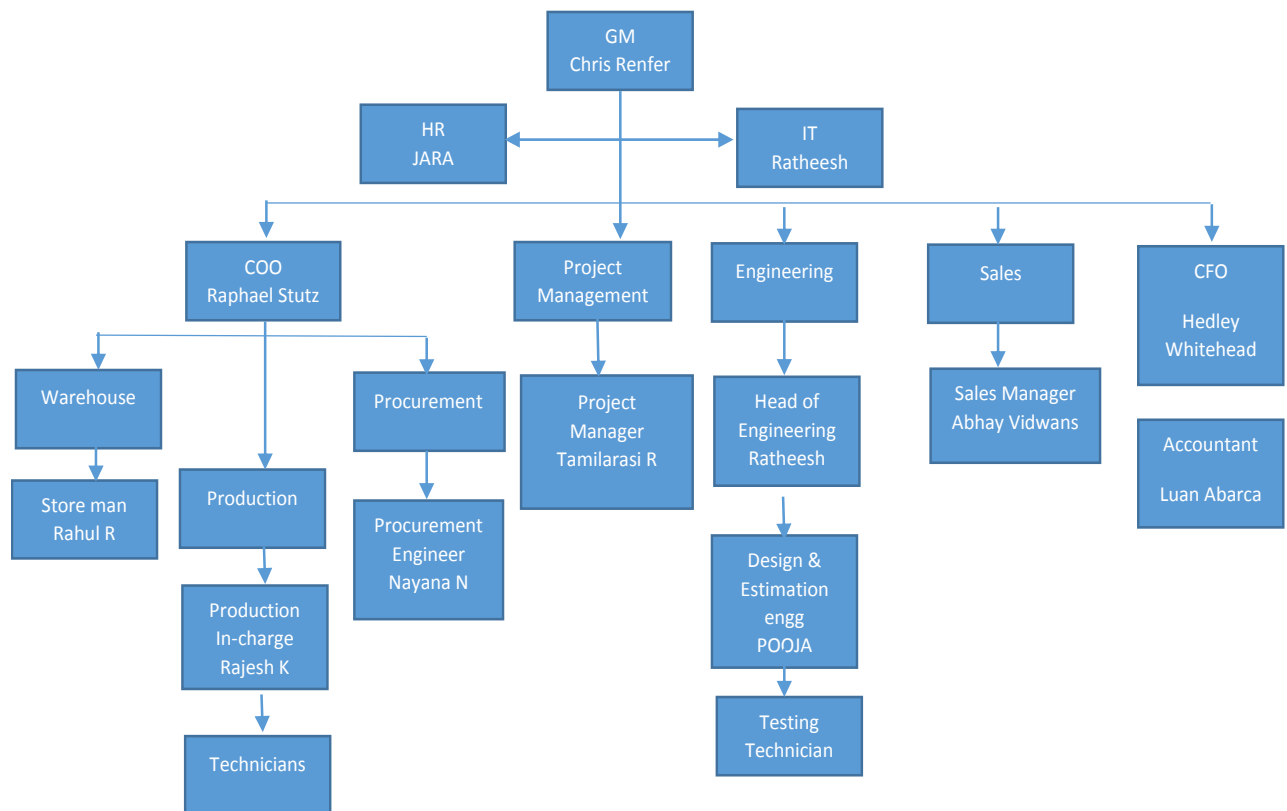


**Figure -1 FEAG Middle East LLC –Typical Business Model**



## FEAG Organization Chart

As a Student from IMT Dubai my main duties include the observation of Key Operational areas of project management and Operations involved in the Company. In this context I was reporting to Mr. Denis Taylor. All Technical and Project Managers are reporting to Head of Projects and Sales wherein administration, Procurement and Assembly Workshop Managers were reporting to the COO. Both COO and Head of Projects report to the Group General Manager Mr.Chris who is in charge Al Mansoori Group of Companies (FEAG is also a part of Almansoori Group)



**Figure -2 FEAG Middle East LLC –Typical Organization Chart**

### 3. FEAG Procurement Management Process Learnings- Overview

There are about 10 process followed in FEAG for managing their procurements as a buyer. The below process flowchart shows how FEAG procurement executes the procurement once the Purchase request is raised form their Engineering project Department.

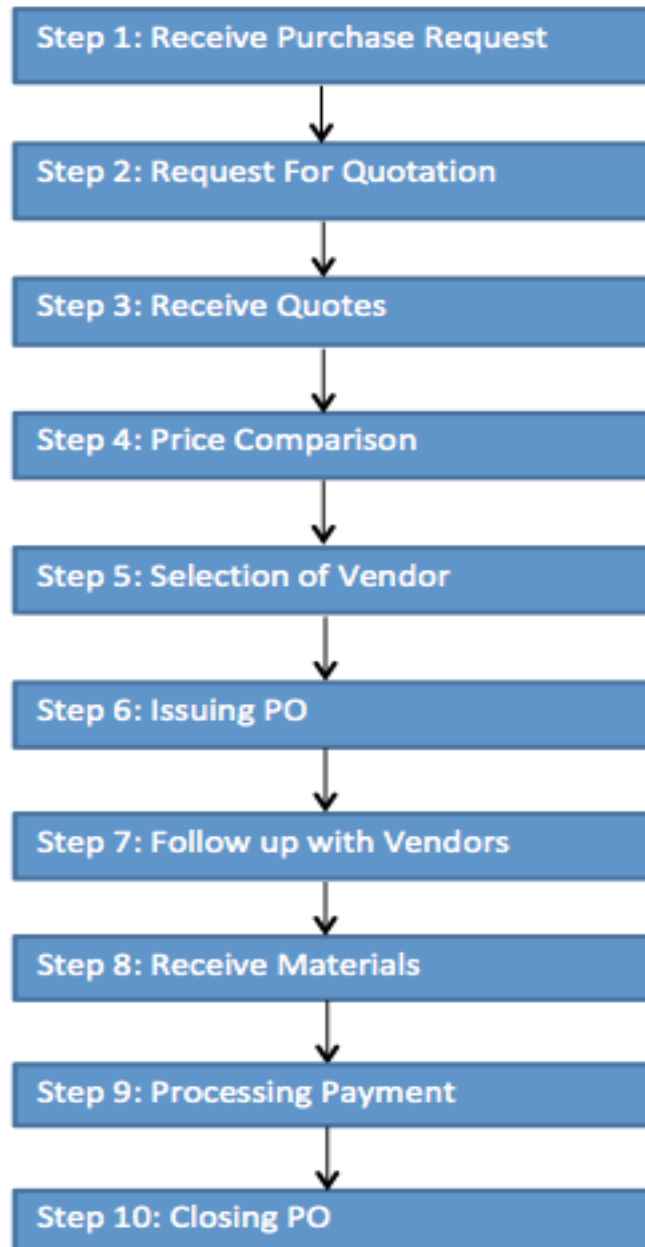
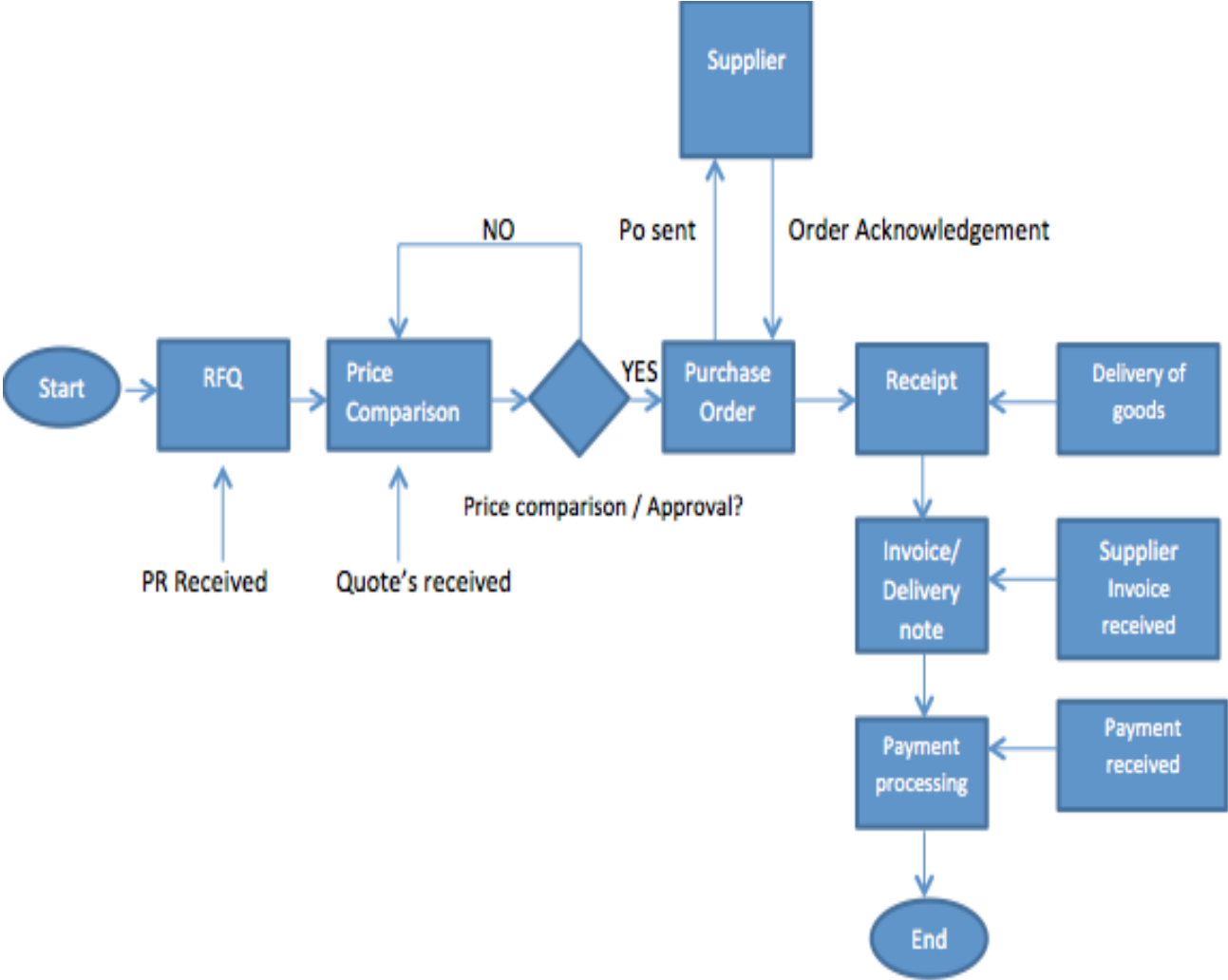


Figure-3 Procurement Management Flow Chart

Once the Purchase request is generated from the Technical manager via signed PR sheet the procurement manager will start sending Request for Quotations for all qualified suppliers/vendors .A Minimum of 3 vendor’s quotations to be received. Based on the receipt of quotations/Offers from vendors price comparison and evaluation based on the project criteria will take place based on the Technical Experts, COO, Project Manager’s, Head of Projects guidance and a final approval from COO is required for the release of Purchase Order to the selected vendor. It is expected an Order Acknowledgement or receipt of PO will be returned from supplied end .As per the PO Terms and Conditions regarding the Delivery, Incoterms and Payments Terms Goods shall be delivered



**Figure-4 Procurement Process Flow**

## **The Detailed Description is as below**

### **I: Receive Purchase Request**

- The process of procurement begins when the Purchase Request is received. Either a Project/Estimation/Stores department may initiate the process by sending a PR

### **II: Request For Quotation (RFQ)**

- The procurement person sends RFQ to the approved vendors/suppliers along with the detailed specification regarding the required items.
- A minimum of 3-5 suppliers are chosen to send the RFQ based on Past performance.

### **III: Receive Quotations**

- A minimum of 3-5 quotations are received from the vendor's.

### **IV: Price Comparison**

- Once the quotations are received, a price comparison process is carried out by the procurement in-charge.
- For ex: If the vendors are from different geographic locations (India, Germany, Dubai) then the offers are worked out including the INCOTERMS. The final cost to the company to receive the items in the warehouse is calculated.
- The final price received after the calculations (including Incoterms) are compared among the vendors.
  - The best/ lowest price is shortlisted.

### **VI: Selection of Vendor**

- Following Criteria's should be satisfied by a Vendor in order to be selected/awarded by an order.
  - ✓ Price Quoted
  - ✓ Quality of Products
  - ✓ Delivery time
  - ✓ Organization structure/ size
  - ✓ Past experience
- Based on the above, a vendor is finalized

## VI: Issuing Purchase Order

- Once the Vendor is selected, a purchase order is issued. The specifications to be included in the PO are as follows:
- Mandatory Requirements:
  - ✓ PO reference number
  - ✓ Payment Terms( stated by Vendor)
  - ✓ Price Basis (stated by Vendor)
  - ✓ Quantities
  - ✓ Delivery/ Lead time etc.
  - ✓ Address (Buyer/Vendor)
  - ✓ Total Amount – Currency
- Preferable Requirements:
  - ✓ No./ Size of boxes
  - ✓ Lot specifications
  - ✓ Packaging Material etc.

## VII: Follow up with the orders

- Regular follow ups with the placed order would avoid delay in receiving the items, in return would avoid risk of project delay.
- A weekly (materials with 3-4week lead time) or an alternate day (Materials with less than a week lead time) follow up is recommended.
- If it seems to be a delay in the delivery, then try to expedite the process and keep the project Head and the customers informed about the same.

## VIII: Receive Items

- Things to be careful before signing a delivery note:
  - ✓ Quantities of items received ( compare it with the PO issued)
  - ✓ Specifications (part no, Brand etc.)
  - ✓ Quality of items
  - ✓ Condition of the item ( if good proceed with it, if damaged then inform the supplier and figure out ways to correct it)
  - ✓ Make sure that the items have reached stores .
- Dos and Don'ts:

If there is any mismatch in the above mentioned criteria's,

  - ✓ Do coordinate with the supplier
  - ✓ Do not receive the items until the things are sorted out
  - ✓ Do not proceed without getting a written explanation from the vendor about the current scenario.

#### IX: Processing Payments

- Proceed with the Payments as per the Incoterms.

#### X: Close Purchase Order

- Close the Purchase order formally.

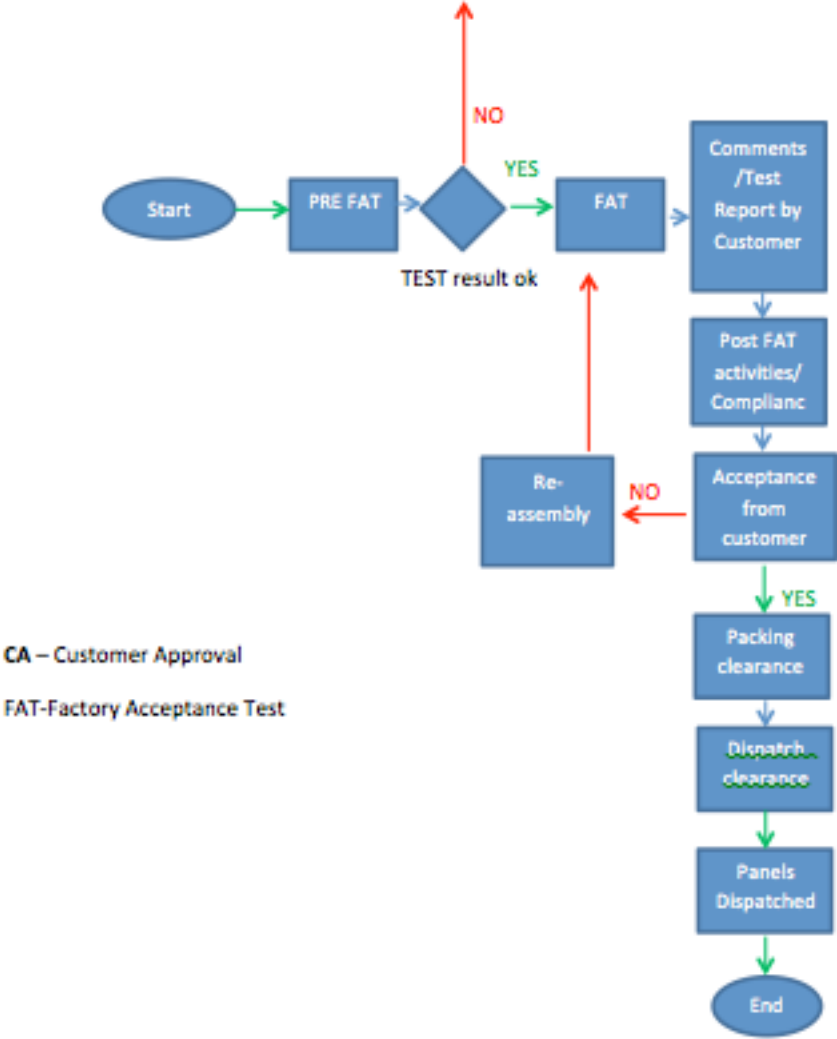
### 4. FEAG Quality Control Process Learnings– Overview

Once the Panel Enclosures are delivered to the FEAG Workshop floor, All the Loose Supply Items supplied by Main Contractors like Siemens, Alstom, ABB and FEAG Procured Materials are assembled as per the approved schematic drawings. The Factory Acceptance process is listed as below. There are 8 Processes involved in dispatching the Offered Panels to Customers.



**Figure-5 FAT-Quality Control Process Overview**

Internal Testing will happen during the PRE FAT Testing, which will be done by FEAG and Main Contractor Specialist. Panel related testing responsibility should be under FEAG and Loose Supply Automation Components responsibility shall be under Main Contractor. Overall Responsibility of the FAT Success lies with Main Contractor Scope. Once PRE FAT is completed, FAT Inspection Invitation shall be sent to Customer for witness and Deliverable Approval and acceptance. The below block diagram shows the flow of PREFAT and FAT Quality Control process and Customer approval.



**Figure-6 Process Flow-FAT & PREFAT-Quality Control**

The Detailed Description shall be as below

#### I:PRE-FAT

- Once the panel assembly is completed, the project manager (Main contractor) calls for a PRE-FAT (around 2-3 weeks before FAT)
- Main contractors Testing Engineer/Third party engineer (appointed by Main Contractor) tests the panel. The testing includes,
  - Component Testing
  - Functional Testing
  - Protection Relay Testing-Using an Omicron Injection Kit and takes the necessary actions.

#### II: FAT witness with customer

- Similar Testing procedures are carried out in-front of the Customer who inspects the Panels
- The testing includes,
  - Component Testing
  - Functional Testing
  - Protection System Testing-Using an Omicron Injection Kit

#### III: Comments from customer/Test report

- Once the FAT is completed , Customer delivers his comments during MOM(Minutes of Meeting) including the changes / corrections than needs to be done before acceptance
- A Test Report is issued.

#### IV: POST FAT activities/Compliance

- This is carried out for a minimum of 2-3days, where the customer requirements are Complied

#### V: Acceptance from Customer

- If all the requirements are satisfied for the customer (as per the Drawing) the Panels are accepted.
- Else , FAT fails and Panels are re-assembled accordingly

#### VI: Packing Clearance

- Packing Clearance is issued once Customer accepts the panels. Panels are packed as per Customer needs.

#### VII: Dispatch Clearance

- Customer issues dispatch Clearance.

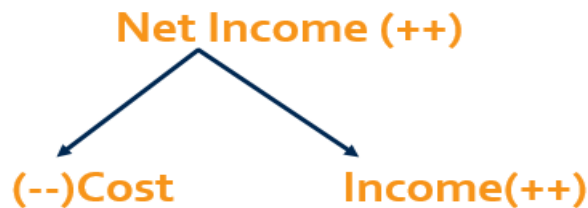
#### VIII: Dispatching the Panels

- The Panels are dispatched as per the Inco terms.



## 5. About SPEED Program

Speed is about improving the income and optimizing the cost positions across the whole organization, as well as becoming more efficient and competitive in the market place. Both Cost Optimization in existing Projects and Improving Sales Revenue needs to be concurrently executed for the Success of Speed Program.



It is a continuous Improvement program and a smaller Improvement at regular Intervals. Every week after the Management Meeting, a dedicated meeting for Speed was organized with a 30 minute duration. The Speed Program was kicked off by me with a presentation and the Implementation of Target 600,000 AED. (\*\*Note: Figures have been modified to maintain confidentiality of FEAG Middle East)

Earlier to SPEED there was no specialized program at FEAG for governing the projects and to measure the variance of Services or Procurements. The Only method of Project Governance was whether the recorded Gross Margin is achieved or not.

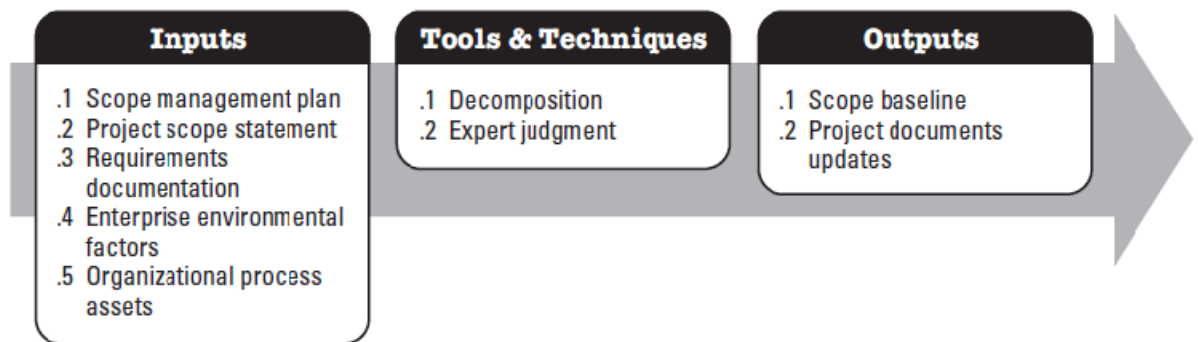
## 6. Literature Review

The Knowledge of Baseline development process in Project Management Body of Knowledge (Scope, Schedule and Cost) provide information and ideas towards developing implementation plan for the SPEED Program.

Our Cost Break down structure and Schedule Development are derived from the standard Scope, Schedule and Cost Baseline processes of PMBOK as below

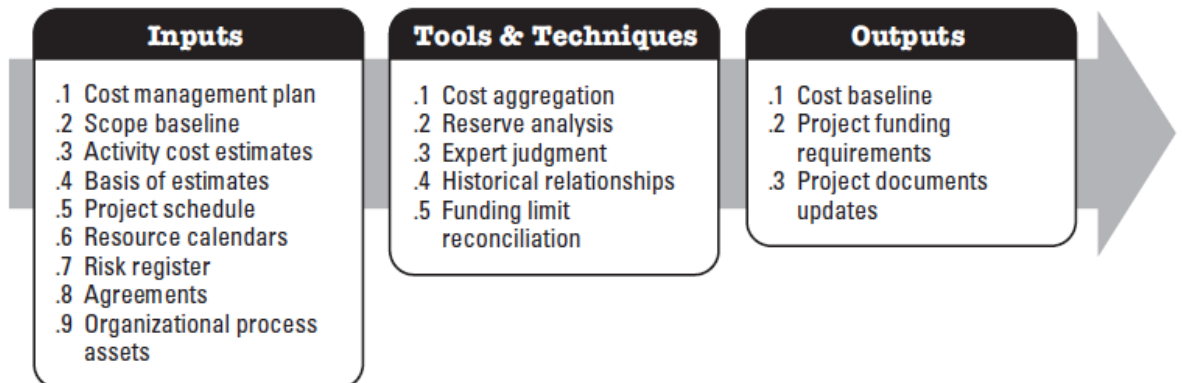
### Create WBS – Scope Baseline

Create WBS is the process of subdividing project deliverables and project work into smaller, more manageable components. The key benefit of this process is that it provides a structured vision of what has to be delivered.



### Determine Budget – Cost Baseline

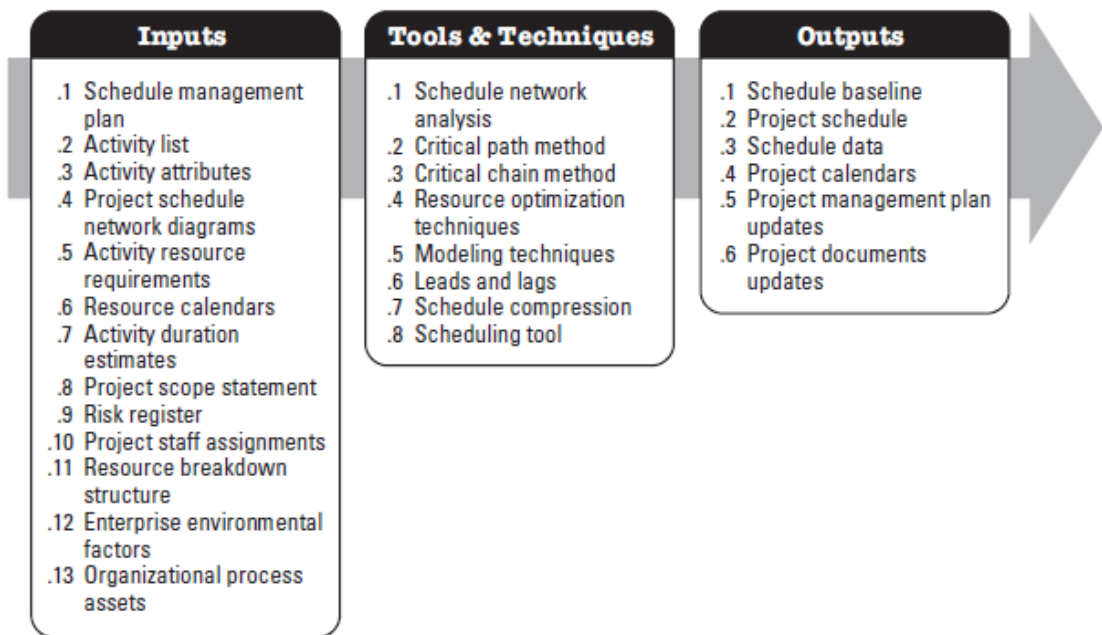
Determine Budget is the process of aggregating the estimated costs of individual Activities or work packages to establish an authorized cost baseline. The key benefit of this process is that it determines the cost baseline against which project performance can be monitored and controlled.



## Develop Schedule – Schedule Baseline

Develop Schedule is the process of analyzing activity sequences, durations, resource requirements, and schedule constraints to create the project schedule model.

The key benefit of this process is that by entering schedule activities, durations, resources, resource availabilities, and logical relationships into the scheduling tool, it generates a schedule model with planned dates for completing project activities.



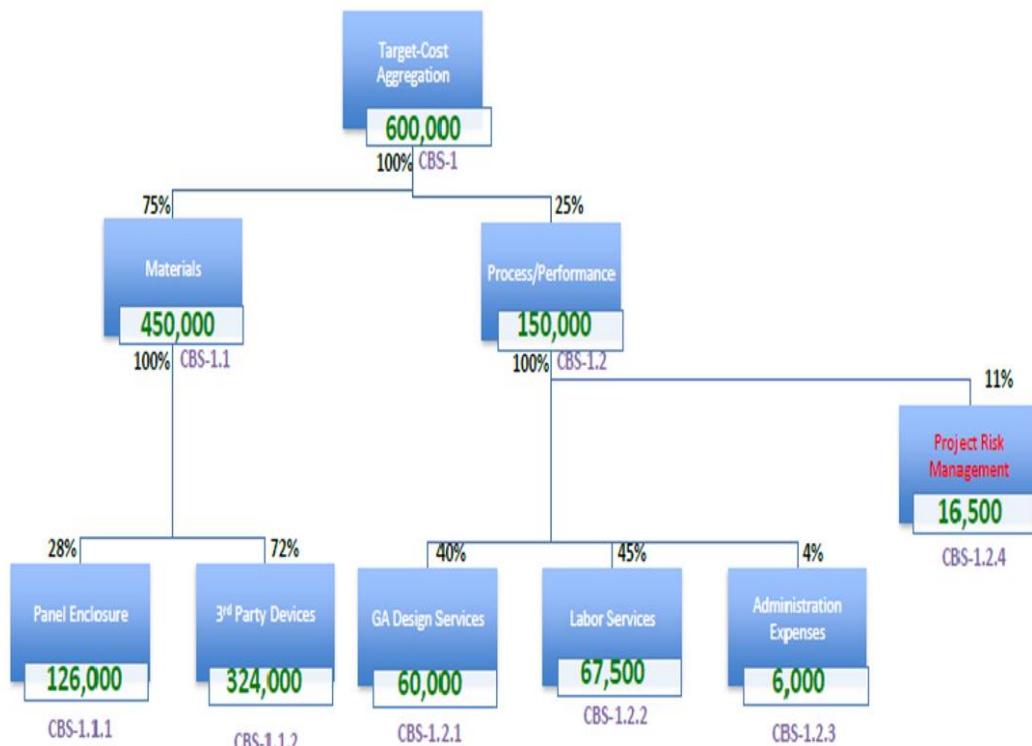
## 7. SPEED Implementation.

A Cost Breakdown structure was developed and presented during the SPEED Meeting with all the Internal Stakeholders. A premortem discussion happened about this proposal whether the below target for each breakdown is really practical/possible and based on the experts/stakeholders inputs it was iterated and adjusted and the ratios were altered according to their experience. Finally at the end meeting the target for each WBS is assigned and agreed with the respective action owners.

The Ideas of Cost Breakdown structure were derived from Create WBS Process of Project Management Body of Knowledge.

### Cost Breakdown Structure

The Cost Breakdown structure of SPEED Program for the Target AED for the financial year 2016 is as below



**Figure -7 Cost Breakdown Structure –Speed Program**

(\*\*Note: Values have been modified to maintain confidentiality of FEAG Middle East)

The Breakup of the values are arrived from the percentage of offer structure which we used to prepare for the Estimation-, a typical Supply and Service Portion of a Panel Manufacturing Project.

SPEED Program expectations and targets almost touched all the process improvement in the Company starting from Estimation to Project Closure. Best Practices in Negotiation, Man Power Management and Effective Project Risk Management are important parts of SPEED Program. To Govern the Tasks and activities of SPEED a Tracker was required and the same was prepared and submitted for approval from Group General Manager.

## **8. Basis of Target Split-Cost Breakdown Structure**

### **CBS 1.1.1- Panel Enclosure**

**Distribution:**

Panel Costs constitute approximately 28% of Material Portion in our Offer Calculations. Similar Distribution % can be applied for Cost Optimization

**Basis:** Total Material Cost: 450,000. 28 % of Material Cost: 126,000 (Target Budget Savings for Panel Enclosures)

**Presumption:** It is expected approx. 800 Panel Orders for FY-2016.

**Target Negotiation:** In a nutshell our Target Reduction per panel is 158 AED as part Of Project budget saving during Execution

### **CBS 1.1.2- 3rd Party Devices**

**Distribution:**

Device Costs constitute approximately 72% of Material Portion in our Offer Calculations. Similar distribution % can be applied for cost optimization

**Basis:** Total Material Cost: 450,000. 72 % of material cost: 324,000 (Target budget savings for panel enclosures)

**Presumption:** It is expected approx. 800 Panel Orders for FY-2016.

**Target Negotiation:** There are 50 Devices per panel. In a nutshell our Target Reduction per panel is 400 AED out of 8250 AED as part of project budget saving during execution

4.9% in all 3rd Party Devices in FY 2016

### **CBS 1.2.1- GA Design Services**

**Basis:** Total Services Cost: 150,000. 40 % of GA Design is 60,000 (Target Budget Savings for Design Costs)

**Presumption:** It is expected approx. 800 Panel Orders for FY-2016.

**Target:** Current/Panel: 10 hours /panel

**Target Reduction:** 8Hrs /Panel      250 AED/Hr.

**Opportunity for reduction:** 1600 hours -→ $1600*250=400,000$ AED

Speed Expectation is minimum of 60,000 out of 400,000 (15%)

### **CBS 1.2.2- Labour Cost**

**Basis:** Total Services Cost: 150,000. 45 % of Labour Cost is 67,500 (Target Budget Savings for Labor Costs)

**Presumption:** It is expected approx. 800 Panel Orders for FY-2016.

**Target:** Current/Panel: approx. 3634 AED

**Target Reduction:** 112.5 AED per panel for Non typical

**Opportunity for reduction:**  $112*800=90,000$  AED

Speed expectation is minimum of 67,500 out of 90,000 (Note:  $112*600=67,500$  AED)

## **CBS 1.2.4- Project Risk Management**

**Basis:** Arbitrary value of 2% per project is considered in all offers for contingency. Actual Risk Identification, Risk Analysis and Response Planning to be done for all projects and to embed in Calculations .Workarounds to be avoided to ensure risk reserve savings.

**Presumption:** It is expected approx. 800 Panel Orders for FY-2016.

**Target:** Risk Value/Panel: 380 AED for 800 Panels: 304,000 AED

**Target Risk Savings:** 11% out of 304,000

**Opportunity for reduction:** <304,000 AED

Speed Expectation is minimum of 16,500 out of 304,000

## **CBS 1.2.3- Administration Expenses**

**Target:** Claim Management for FAT Hosting in Offers. Food Expenses to be invoiced /reimbursed from Customers

**Target Savings:**  $500 * 6 * 5 \text{ days FAT} = 15000 \text{ AED}$

**Opportunity for reduction:**  $500 * 10 * 5 \text{ days FAT} = 25000 \text{ AED}$

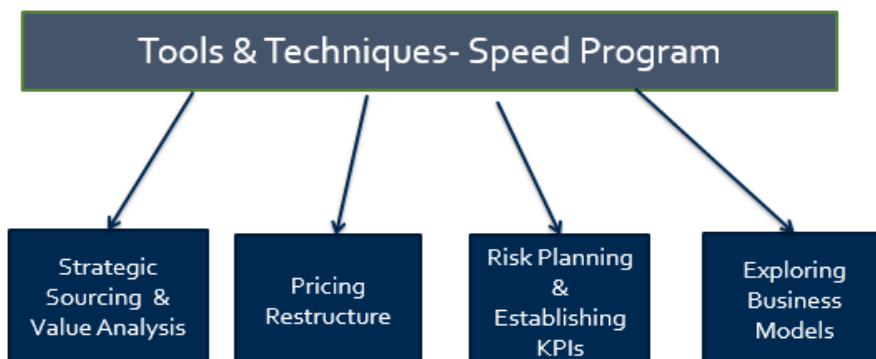
Speed expectation= 15000AED

## 9. SPEED Tracker

A Speed Tracker was developed concerning the Cost Optimization and this tracker serves as Detailed Activity /Task /status tracker.

| Description   | Responsible    | Effective                | Expected Impact (kAED) |                       |            | Effective Net Margin Impact in AED | Expected Completion | Progress | CBS               | Audit Date |
|---|----------------|--------------------------|------------------------|-----------------------|------------|------------------------------------|---------------------|----------|-------------------|------------|
|   |                | Net Margin Impact (kAED) | Expected Revenue       | Expected Gross Margin | Net Margin |                                    |                     |          |                   |            |
| 5% Cost reduction in Selected 3rd Party Materials for projects in Q2                              | Nayana         | 4%                       | 4,235,294.13           | 15%                   | 14%        | 180000.00                          | 15.05.2016          |          | Materials_Devices | 25.06.2016 |
| Cost reduction in Panel Enclosure_Equivalent_Target 150 per                                       | Denis Taylor   | 4%                       | 1,588,234.50           | 15%                   | 14%        | 67500.00                           | 10.04.2016          | 25%      | Materials_Panel   | 25.06.2016 |
| Risk Reserve Savings for Cumulative Projects Closed in Q2   | Hedley/Denis   | n/a                      | n/a                    | n/a                   | n/a        | 18000.00                           | 02.05.2016          |          | Process_Risk Mgt  | 25.06.2016 |
| FAT Expenses - Claim Management_Offer   | Ratheesh/Pooja | n/a                      | n/a                    | n/a                   | n/a        | 15000.00                           | immediate           |          | Process_Services  | 25.06.2016 |
| Capturing Hidden Margins in Cost towards Net Income- <b>Mechanical Assembler_Preparation Time</b> | Denis Taylor   | n/a                      | n/a                    | n/a                   | n/a        | 67500.00                           | Immediate           | 100%     | Process_Services  | 25.06.2016 |
| Capturing Hidden Margins in Cost towards Net Income- <b>Mechanical Assembler_Fixing_C1 Type</b>   | Denis Taylor   | n/a                      | n/a                    | n/a                   | n/a        | 27000.00                           | Immediate           |          | Process_Services  | 25.06.2016 |
| Capturing Hidden Margins in Cost towards Net Income- <b>Engineering Design</b>                    | Ratheesh       | n/a                      | n/a                    | n/a                   | n/a        | 167000.00                          | Immediate           |          | Process_Services  | 25.06.2016 |
| Capturing Hidden Margins in Cost towards Net Income- <b>Transportation</b>                        | Denis Taylor   | n/a                      | n/a                    | n/a                   | n/a        | 20500.00                           | Immediate           |          | Process_Services  | 25.06.2016 |
| Capturing Hidden Margins in Cost towards Net Income- <b>Wiring &amp; Testing</b>                  | Denis/Rajesh   | n/a                      | n/a                    | n/a                   | n/a        | 90000.00                           |                     |          | Process_Services  | 25.06.2016 |
|   |                |                          |                        |                       |            |                                    |                     |          |                   |            |
|   |                |                          |                        |                       |            | 652500.00                          |                     |          |                   |            |

The Speed Tracker was developed concerning the areas of Procurement, Estimation, Risk Management, Project Governance and Eliminating Non Conformance. The Structure is as below





## 1. Pricing Restructure

### **Existing Model:**

While Calculating Base Costs-X (Supply+ Services) the following charges are also included.

1. Transportation Charges such as Customs, Freight -x1
2. Packing Charges -x2
3. Contingency Risk -x3
4. Financing Cost -x4
5. Insurance Cost- x5

Result: Margin Simulation is done inclusive of above items.

$$\text{i.e. Sales Price} = 15 \% (X + x1 + x2 + x3 + x4 + x5)$$

### **Alternate Model:**

Calculate Base Costs-X (Supply+ Services). Margin Simulation only on Base Costs.

Calculate Other Charges below

1. Transportation Charges such as Customs, Freight -x1
2. Packing Charges -x2
3. Contingency Risk -x3
4. Financing Cost -x4
5. Insurance Cost- x5

$$\text{Sales Price} = 15 \% ( X ) + x1 + x2 + x3 + x4 + x5$$

Advantage: Price Competitiveness by 2 %

Can avoid Margin Stacking

## 2. Strategic Sourcing & Value Analysis

Minimum of 3 Vendor Quotations for Major Items and Third Party Outsourcing Services. This will provide us the market rates and to obtain the best competitive price levels

|   |   |  |
|---|---|--|
| <b>Panel Enclosures</b> <ol style="list-style-type: none"><li>1. Gulf Metal Crafts</li><li>2. Prime Steel</li><li>3. Rittal</li><li>4. ETA</li><li>5. ZPAS</li><li>6. Scientechnic</li><li>7 Low Price/Standard Quality Vendors</li></ol> | <b>3<sup>rd</sup> Party Outsourcing</b> <ol style="list-style-type: none"><li>1. Jasubhai</li><li>2. Winstar</li><li>3. Inel power</li><li>4. Romariah</li><li>5. DNJ</li><li>6. Remcon</li><li>7. Acume</li><li>8. Qualifying Low Price/Quality New Vendor</li></ol> | <b>3<sup>rd</sup> Party Devices</b> <ol style="list-style-type: none"><li>1. Phoenix</li><li>2. Weidmuller</li><li>3. Rittal</li><li>4. Kraus &amp; Neimer</li><li>5. Pentagon</li><li>6. Shamz</li><li>7. Scientechnic-Majority Siemens Items</li></ol> |
|---|---|--|

### 3. Establishing KPIs & Risk Planning

#### Proposed KPI Templates for Success of Speed Program

##### A. SPEED Audits –Continuous Improvement

|                                     |  |  |                                    |  |                           |
|-------------------------------------|--|--|------------------------------------|--|---------------------------|
| KPI:Audit Performance               |  | Metric: Number of Audit Performed<br>KPI Owner: Quality Representative |                                    | Strategic SPEED Driver: Continuous Improvement on System |                           |
| CONTENT                             |  |  |                                    |  |                           |
| Purpose                             | To demonstrate the system and process performance check done at regular frequency for all the projects, process and supporting functions by measuring the number of audits performed in a quarter. |  |                                    |  |                           |
| Definition                          | An individual (Part of Quality Team) within the organization audit his or her own company process and projects for improving the system.   |  |                                    |  |                           |
| Calculation                         | Number of audits completed against targeted.   |  |                                    |  |                           |
| Frequency                           | Every 4 month cycle  |  |                                    |  |                           |
| Figures                             | Actual Value   |  | Targeted Value                     |  |                           |
|                                     | 2015   |  | 2016                               | 2017   |                           |
|                                     |  |  |                                    |  |                           |
| Source                              | Number of Audit Reports (From the Audit records maintained by Quality team).   |  |                                    |  |                           |
| Responsible for Tracking /Reporting | Management Representative shall prepare the report.  |  | Responsible for Target achievement |  | Management Representative |

##### B. Project On time Completion & Budget Savings

|  |  |   |                                    |                         |                  |
|--|--|---|------------------------------------|-------------------------|------------------|
| KPI:On Time Completion (Milestone Achievement) |  | Metric:On Time Completion<br>KPI Owner: Project Manager |                                    | Strategic SPEED Driver: |                  |
| CONTENT  |  |   |                                    |                         |                  |
| Purpose  | To assure achievement of the project milestone and contractual completion date of the project.   |   |                                    |                         |                  |
| Definition                                     | Number of milestones achieved against the planned milestones or targets based on the project schedule.   |   |                                    |                         |                  |
| Calculation                                    | OTC=(Number of completed milestone/ Number of Targeted milestones)*100   |   |                                    |                         |                  |
| Frequency                                      | Every 4 month cycle  |   |                                    |                         |                  |
| Figures  | Actual Value   |   | Targeted Value                     |                         |                  |
|  | FY   |   | FY2015/2016                        | 2016/2017               |                  |
|  |  |   |                                    |                         |                  |
| Source   |  |   |                                    |                         |                  |
| Responsible for Tracking /Reporting            | The Technical Project managers shall forward the data on quarterly basis to Process/Quality Coordinator.<br>The Process/Quality Coordinator shall prepare the report in the standard format and the same shall be forwarded to Executive management. |   | Responsible for Target achievement |                         | Project Managers |

## Project Variance Reporting:

To improve the Project Governance, a simple variance Template was developed and it is in practice for the upcoming projects. This Template records the Planned Data with the Actual Work performance Date in order to analyse the Project Performance. Based on the success of this exercise, Earned Value Management Techniques and advance Project Performance measures shall be proposed to the Management for further improvements.

| Project Description |                       |              | Estimated/Budgeted Manhours |                 |             | Actual Manhours |              |             | Delta         |             |            |
|---------------------|-----------------------|--------------|-----------------------------|-----------------|-------------|-----------------|--------------|-------------|---------------|-------------|------------|
| S.No                | Project Name          | Project Code | Resource List               | Estimated Hours | Hourly Rate | Resource List   | Actual Hours | Actual Cost | Resource List | Delta Hours | Delta Cost |
| 1                   | SEWA Muweleah (12#)   | 150063       | Mechanical                  |                 |             | Mechanical      |              |             | Mechanical    |             |            |
|                     |                       |              | Wiring                      |                 |             | Wiring          |              |             | Wiring        |             |            |
|                     |                       |              | Testing                     |                 |             | Testing         |              |             | Testing       |             |            |
|                     |                       |              | Labelling                   |                 |             | Labelling       |              |             | Labelling     |             |            |
|                     |                       |              | Design                      |                 |             | Design          |              |             | Design        |             |            |
| 2                   | Siemens L&T FMS (1#)  | 150041       | Mechanical                  |                 |             | Mechanical      |              |             | Mechanical    |             |            |
|                     |                       |              | Wiring                      |                 |             | Wiring          |              |             | Wiring        |             |            |
|                     |                       |              | Testing                     |                 |             | Testing         |              |             | Testing       |             |            |
|                     |                       |              | Labelling                   |                 |             | Labelling       |              |             | Labelling     |             |            |
|                     |                       |              | Design                      |                 |             | Design          |              |             | Design        |             |            |
| 3                   | ADCO Modem Panel (1#) | 150015       | Mechanical                  |                 |             | Mechanical      |              |             | Mechanical    |             |            |
|                     |                       |              | Wiring                      |                 |             | Wiring          |              |             | Wiring        |             |            |
|                     |                       |              | Testing                     |                 |             | Testing         |              |             | Testing       |             |            |
|                     |                       |              | Labelling                   |                 |             | Labelling       |              |             | Labelling     |             |            |
|                     |                       |              | Design                      |                 |             | Design          |              |             | Design        |             |            |

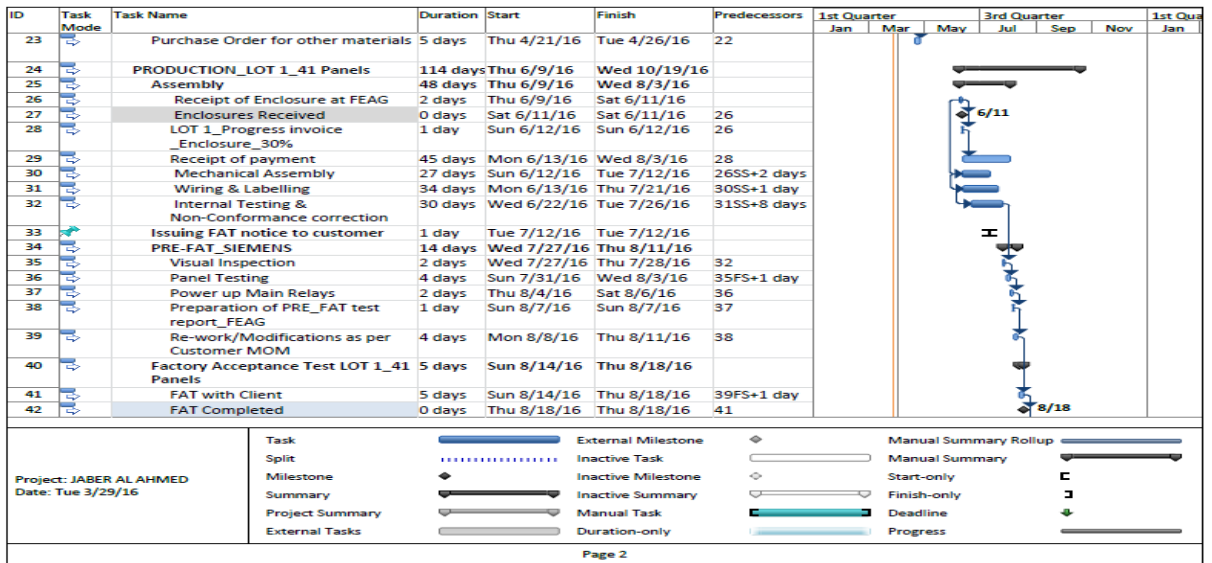
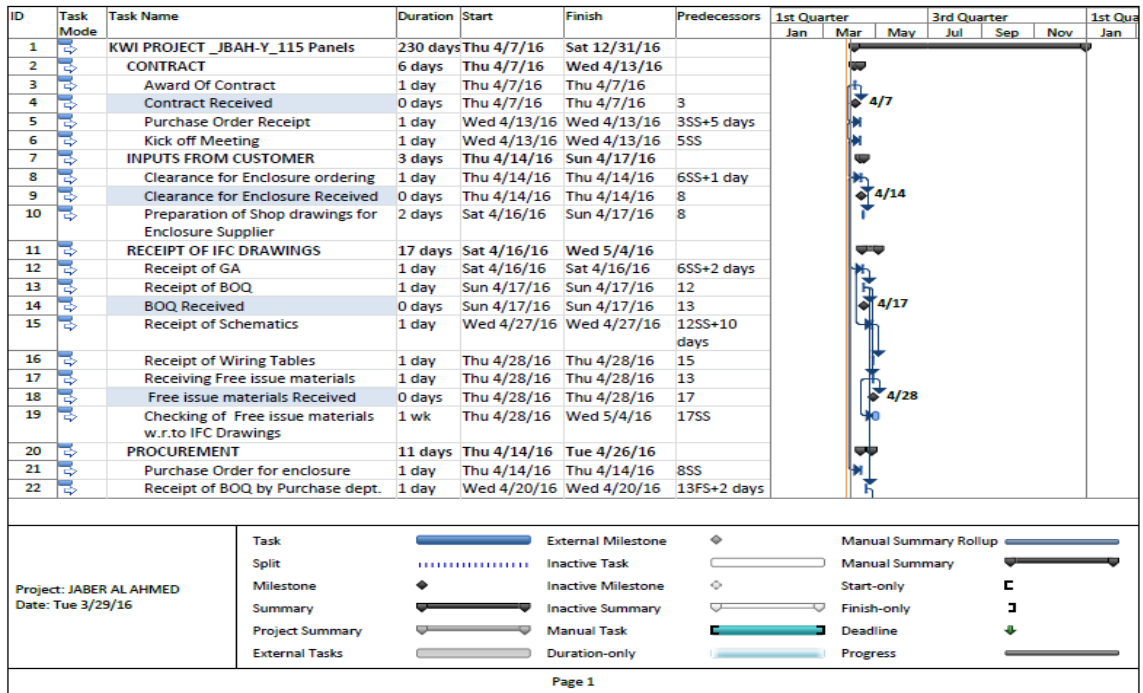
## Developing Project Risk Register:

Practice of Risk Register is implemented for upcoming Estimation and Projects in order to ensure repeated risks should not occur in the projects and the arbitrary risk monetary value considered during project estimation is added to the net margin. Lessons Learned from previous projects are a must to record in all upcoming projects. A specific target is setup for Risk Monetary savings in the SPEED Program.

Also it is advised to the Project Estimation team to plan for the Risk Budget and not to propose an assumed /arbitrary Risk Value considering the fact that all projects are unique in nature. Some projects will have more risk being complex in nature and some projects are simple in nature and will not require more contingency reserves. This practice helps in managing the uncertainty during project execution and governance. This Risk Register and Reserve analysis to be done at every SPEED Status Meeting for all projects in addition to our regular Project Status Meeting.



## Schedule for JBAH-Y Substation



| ID | Task Mode | Task Name                                | Duration | Start        | Finish       | Predecessors | 1st Quarter |     |     | 3rd Quarter |     |     | 1st Qu |
|----|-----------|--|----------|--------------|--------------|--------------|-------------|-----|-----|-------------|-----|-----|--------|
|    |           |  |          |              |              |              | Jan         | Mar | May | Jul         | Sep | Nov |        |
| 43 |           | Preparation of FAT_MOM                   | 1 day    | Thu 8/18/16  | Thu 8/18/16  | 41FS-1 day   |             |     |     |             |     |     |        |
| 44 |           | POST_FAT                                 | 7 days   | Sat 8/20/16  | Sat 8/27/16  |              |             |     |     |             |     |     |        |
| 45 |           | Re-work/Modifications as per MOM         | 1 wk     | Sat 8/20/16  | Thu 8/25/16  | 43           |             |     |     |             |     |     |        |
| 46 |           | MOM compliance statement                 | 1 day    | Sat 8/27/16  | Sat 8/27/16  | 45           |             |     |     |             |     |     |        |
| 47 |           | MOM Complied                             | 0 days   | Sat 8/27/16  | Sat 8/27/16  | 46           |             |     |     |             |     |     |        |
| 48 |           | Payment                                  | 46 days  | Sun 8/28/16  | Wed 10/19/16 |              |             |     |     |             |     |     |        |
| 49 |           | LOT 1_Invoicing_FAT completion_60%       | 1 day    | Sun 8/28/16  | Sun 8/28/16  | 46           |             |     |     |             |     |     |        |
| 50 |           | Processing Payment                       | 45 days  | Mon 8/29/16  | Wed 10/19/16 | 49           |             |     |     |             |     |     |        |
| 51 |           | Receipt of Payment                       | 0 days   | Wed 10/19/16 | Wed 10/19/16 | 50           |             |     |     |             |     |     |        |
| 52 |           | DELIVERY_LOT 1_41 Panels                 | 60 days  | Thu 9/8/16   | Wed 11/16/16 |              |             |     |     |             |     |     |        |
| 53 |           | Receipt of Packing clearance             | 1 day    | Thu 9/8/16   | Thu 9/8/16   | 46FS+10 days |             |     |     |             |     |     |        |
| 54 |           | Final Quality check /Taking Pictures     | 1 day    | Sat 9/10/16  | Sat 9/10/16  | 53           |             |     |     |             |     |     |        |
| 55 |           | Packing                                  | 7 days   | Sun 9/11/16  | Sun 9/18/16  | 54           |             |     |     |             |     |     |        |
| 56 |           | Preparing Delivery Note                  | 1 day    | Sun 9/18/16  | Sun 9/18/16  | 55FS-1 day   |             |     |     |             |     |     |        |
| 57 |           | Receipt of Dispatch clearance            | 1 day    | Mon 9/19/16  | Mon 9/19/16  | 55           |             |     |     |             |     |     |        |
| 58 |           | Dispatch Clearance Received              | 0 days   | Mon 9/19/16  | Mon 9/19/16  | 57           |             |     |     |             |     |     |        |
| 59 |           | Shipping Documentation                   | 2 days   | Tue 9/20/16  | Wed 9/21/16  | 57           |             |     |     |             |     |     |        |
| 60 |           | Verifying Shipping Documentation_SIEMENS | 1 day    | Thu 9/22/16  | Thu 9/22/16  | 59           |             |     |     |             |     |     |        |
| 61 |           | Transportation to Kuwait_SIEMENS         | 5 days   | Sat 9/24/16  | Wed 9/28/16  | 60           |             |     |     |             |     |     |        |
| 62 |           | PAYMENT                                  | 46 days  | Sun 9/25/16  | Wed 11/16/16 |              |             |     |     |             |     |     |        |

Project: JABER AL AHMED  
Date: Tue 3/29/16

|                 |  |                    |  |                       |  |
|-----------------|--|--------------------|--|-----------------------|--|
| Task            |  | External Milestone |  | Manual Summary Rollup |  |
| Split           |  | Inactive Task      |  | Manual Summary        |  |
| Milestone       |  | Inactive Milestone |  | Start-only            |  |
| Summary         |  | Inactive Summary   |  | Finish-only           |  |
| Project Summary |  | Manual Task        |  | Deadline              |  |
| External Tasks  |  | Duration-only      |  | Progress              |  |

Page 3

| ID | Task Mode | Task Name                                     | Duration | Start       | Finish       | Predecessors | 1st Quarter |     |     | 3rd Quarter |     |     | 1st Qu |
|----|-----------|---|----------|-------------|--------------|--------------|-------------|-----|-----|-------------|-----|-----|--------|
|    |           |   |          |             |              |              | Jan         | Mar | May | Jul         | Sep | Nov |        |
| 63 |           | Invoicing LOT 1_Delivery Completion_10%       | 1 day    | Sun 9/25/16 | Sun 9/25/16  | 61FS-4 days  |             |     |     |             |     |     |        |
| 64 |           | Receipt of payment                            | 45 days  | Mon 9/26/16 | Wed 11/16/16 | 63           |             |     |     |             |     |     |        |
| 65 |           | PRODUCTION_LOT 2_44 Panels                    | 106 days | Thu 7/7/16  | Mon 11/7/16  |              |             |     |     |             |     |     |        |
| 66 |           | Assembly                                      | 48 days  | Thu 7/7/16  | Wed 8/31/16  |              |             |     |     |             |     |     |        |
| 67 |           | Receipt of Enclosure at FEAG                  | 2 days   | Thu 7/7/16  | Sat 7/9/16   |              |             |     |     |             |     |     |        |
| 68 |           | Enclosures Received                           | 0 days   | Sat 7/9/16  | Sat 7/9/16   | 67           |             |     |     |             |     |     |        |
| 69 |           | LOT 2_Progress invoice _Enclosure_30%         | 1 day    | Sun 7/10/16 | Sun 7/10/16  | 67           |             |     |     |             |     |     |        |
| 70 |           | Receipt of Payment                            | 45 days  | Mon 7/11/16 | Wed 8/31/16  | 69           |             |     |     |             |     |     |        |
| 71 |           | Mechanical Assembly                           | 29 days  | Tue 7/12/16 | Sun 8/14/16  | 67SS+4 days  |             |     |     |             |     |     |        |
| 72 |           | Wiring & Labelling                            | 36 days  | Wed 7/13/16 | Tue 8/23/16  | 71SS+1 day   |             |     |     |             |     |     |        |
| 73 |           | Internal Testing & Non Conformance Correction | 32 days  | Sat 7/23/16 | Sun 8/28/16  | 72SS+8 days  |             |     |     |             |     |     |        |
| 74 |           | Issuing FAT notice to SIEMENS                 | 1 day    | Sun 8/14/16 | Sun 8/14/16  |              |             |     |     |             |     |     |        |
| 75 |           | PRE- FAT_by SIEMENS                           | 14 days  | Tue 8/30/16 | Wed 9/14/16  |              |             |     |     |             |     |     |        |
| 76 |           | Visual Inspection                             | 2 days   | Tue 8/30/16 | Wed 8/31/16  | 73FS+1 day   |             |     |     |             |     |     |        |
| 77 |           | Panel Testing                                 | 4 days   | Thu 9/1/16  | Mon 9/5/16   | 76           |             |     |     |             |     |     |        |
| 78 |           | Power up Main Relays                          | 2 days   | Tue 9/6/16  | Wed 9/7/16   | 77           |             |     |     |             |     |     |        |
| 79 |           | Preparation of PRE_FAT test report_FEAG       | 1 day    | Thu 9/8/16  | Thu 9/8/16   | 78           |             |     |     |             |     |     |        |
| 80 |           | Re-work/Modifications as per Customer MOM     | 4 days   | Sat 9/10/16 | Tue 9/13/16  | 79           |             |     |     |             |     |     |        |
| 81 |           | MOM Compliance statement                      | 1 day    | Wed 9/14/16 | Wed 9/14/16  | 80           |             |     |     |             |     |     |        |
| 82 |           | MOM Complied                                  | 0 days   | Wed 9/14/16 | Wed 9/14/16  | 81           |             |     |     |             |     |     |        |
| 83 |           | Payment                                       | 46 days  | Thu 9/15/16 | Mon 11/7/16  |              |             |     |     |             |     |     |        |

Project: JABER AL AHMED  
Date: Tue 3/29/16

|                 |  |                    |  |                       |  |
|-----------------|--|--------------------|--|-----------------------|--|
| Task            |  | External Milestone |  | Manual Summary Rollup |  |
| Split           |  | Inactive Task      |  | Manual Summary        |  |
| Milestone       |  | Inactive Milestone |  | Start-only            |  |
| Summary         |  | Inactive Summary   |  | Finish-only           |  |
| Project Summary |  | Manual Task        |  | Deadline              |  |
| External Tasks  |  | Duration-only      |  | Progress              |  |

Page 4

| ID  | Task Mode | Task Name                                | Duration | Start        | Finish       | Predecessors | 1st Quarter |     |     | 3rd Quarter |     |     | 1st Quarter |
|-----|-----------|--|----------|--------------|--------------|--------------|-------------|-----|-----|-------------|-----|-----|-------------|
|     |           |  |          |              |              |              | Jan         | Mar | May | Jul         | Sep | Nov |             |
| 84  |           | LOT 2_Invoicing_FAT completion_60%       | 1 day    | Thu 9/15/16  | Thu 9/15/16  | 81           |             |     |     |             |     |     |             |
| 85  |           | Processing Payment                       | 45 days  | Sat 9/17/16  | Mon 11/7/16  | 84           |             |     |     |             |     |     |             |
| 86  |           | Receipt of Payment                       | 0 days   | Mon 11/7/16  | Mon 11/7/16  | 85           |             |     |     |             |     |     |             |
| 87  |           | DELIVERY_LOT 2_44 Panels                 | 60 days  | Tue 9/27/16  | Mon 12/5/16  |              |             |     |     |             |     |     |             |
| 88  |           | Receipt of Packing clearance             | 1 day    | Tue 9/27/16  | Tue 9/27/16  | 81FS+10 days |             |     |     |             |     |     |             |
| 89  |           | Final Quality check /Taking Pictures     | 1 day    | Wed 9/28/16  | Wed 9/28/16  | 88           |             |     |     |             |     |     |             |
| 90  |           | Packing                                  | 7 days   | Thu 9/29/16  | Thu 10/6/16  | 89           |             |     |     |             |     |     |             |
| 91  |           | Preparing Delivery Note                  | 1 day    | Thu 10/6/16  | Thu 10/6/16  | 90FS-1 day   |             |     |     |             |     |     |             |
| 92  |           | Receipt of Dispatch clearance            | 1 day    | Sat 10/8/16  | Sat 10/8/16  | 91           |             |     |     |             |     |     |             |
| 93  |           | Dispatch Clearance Received              | 0 days   | Sat 10/8/16  | Sat 10/8/16  | 92           |             |     |     |             |     |     |             |
| 94  |           | Shipping Documentation                   | 2 days   | Sun 10/9/16  | Mon 10/10/16 | 92           |             |     |     |             |     |     |             |
| 95  |           | Verifying Shipping Documentation_SIEMENS | 1 day    | Tue 10/11/16 | Tue 10/11/16 | 94           |             |     |     |             |     |     |             |
| 96  |           | Transportation to Kuwait_SIEMENS         | 5 days   | Wed 10/12/16 | Mon 10/17/16 | 95           |             |     |     |             |     |     |             |
| 97  |           | Payment                                  | 46 days  | Thu 10/13/16 | Mon 12/5/16  |              |             |     |     |             |     |     |             |
| 98  |           | Invoicing LOT 2_Delivery Completion_10%  | 1 day    | Thu 10/13/16 | Thu 10/13/16 | 96FS-4 days  |             |     |     |             |     |     |             |
| 99  |           | Processing Payment                       | 45 days  | Sat 10/15/16 | Mon 12/5/16  | 98           |             |     |     |             |     |     |             |
| 100 |           | Receipt of Payment                       | 0 days   | Mon 12/5/16  | Mon 12/5/16  | 99           |             |     |     |             |     |     |             |
| 101 |           | PRODUCTION_LOT 3_30 Panels               | 104 days | Thu 8/4/16   | Sat 12/3/16  |              |             |     |     |             |     |     |             |
| 102 |           | Assembly                                 | 48 days  | Thu 8/4/16   | Wed 9/28/16  |              |             |     |     |             |     |     |             |
| 103 |           | Receipt of Enclosure at FEAG             | 2 days   | Thu 8/4/16   | Sat 8/6/16   |              |             |     |     |             |     |     |             |

|  |                 |  |                    |  |                       |  |
|--|-----------------|--|--------------------|--|-----------------------|--|
| Project: JABER AL AHMED<br>Date: Tue 3/29/16 | Task            |  | External Milestone |  | Manual Summary Rollup |  |
|  | Split           |  | Inactive Task      |  | Manual Summary        |  |
|  | Milestone       |  | Inactive Milestone |  | Start-only            |  |
|  | Summary         |  | Inactive Summary   |  | Finish-only           |  |
|  | Project Summary |  | Manual Task        |  | Deadline              |  |
|  | External Tasks  |  | Duration-only      |  | Progress              |  |

Page 5

| ID  | Task Mode | Task Name                                     | Duration | Start        | Finish       | Predecessors | 1st Quarter |     |     | 3rd Quarter |     |     | 1st Quarter |
|-----|-----------|---|----------|--------------|--------------|--------------|-------------|-----|-----|-------------|-----|-----|-------------|
|     |           |   |          |              |              |              | Jan         | Mar | May | Jul         | Sep | Nov |             |
| 104 |           | Enclosures Received                           | 0 days   | Sat 8/6/16   | Sat 8/6/16   | 103          |             |     |     |             |     |     |             |
| 105 |           | LOT 3_Progress invoice _Enclosure_30%         | 1 day    | Sun 8/7/16   | Sun 8/7/16   | 103          |             |     |     |             |     |     |             |
| 106 |           | Receipt of Payment                            | 45 days  | Mon 8/8/16   | Wed 9/28/16  | 105          |             |     |     |             |     |     |             |
| 107 |           | Mechanical Assembly                           | 22 days  | Sun 8/14/16  | Wed 9/7/16   | 103SS+8 days |             |     |     |             |     |     |             |
| 108 |           | Wiring & Labelling                            | 28 days  | Mon 8/15/16  | Thu 9/15/16  | 107SS+1 day  |             |     |     |             |     |     |             |
| 109 |           | Internal Testing & Non conformance Correction | 24 days  | Wed 8/24/16  | Tue 9/20/16  | 108SS+8 days |             |     |     |             |     |     |             |
| 110 |           | Issuing FAT notice to customer                | 1 day    | Sun 9/11/16  | Sun 9/11/16  |              |             |     |     |             |     |     |             |
| 111 |           | PRE-FAT_by SIEMENS                            | 14 days  | Sun 9/25/16  | Mon 10/10/16 |              |             |     |     |             |     |     |             |
| 112 |           | Visual Inspection                             | 2 days   | Sun 9/25/16  | Mon 9/26/16  | 109FS+3 days |             |     |     |             |     |     |             |
| 113 |           | Panel Testing                                 | 4 days   | Tue 9/27/16  | Sat 10/1/16  | 112          |             |     |     |             |     |     |             |
| 114 |           | Power up Main Relays                          | 2 days   | Sun 10/2/16  | Mon 10/3/16  | 113          |             |     |     |             |     |     |             |
| 115 |           | Preparation of PRE_FAT test report_FEAG       | 1 day    | Tue 10/4/16  | Tue 10/4/16  | 114          |             |     |     |             |     |     |             |
| 116 |           | Re-work/Modifications as per Customer MOM     | 4 days   | Wed 10/5/16  | Sun 10/9/16  | 115          |             |     |     |             |     |     |             |
| 117 |           | MOM compliance statement                      | 1 day    | Mon 10/10/16 | Mon 10/10/16 | 116          |             |     |     |             |     |     |             |
| 118 |           | MOM Complied                                  | 0 days   | Mon 10/10/16 | Mon 10/10/16 | 117          |             |     |     |             |     |     |             |
| 119 |           | Payment                                       | 46 days  | Tue 10/11/16 | Sat 12/3/16  |              |             |     |     |             |     |     |             |
| 120 |           | LOT 3_Invoicing_FAT completion_60%            | 1 day    | Tue 10/11/16 | Tue 10/11/16 | 117          |             |     |     |             |     |     |             |
| 121 |           | Processing Payment                            | 45 days  | Wed 10/12/16 | Sat 12/3/16  | 120          |             |     |     |             |     |     |             |
| 122 |           | Receipt of Payment                            | 0 days   | Sat 12/3/16  | Sat 12/3/16  | 121          |             |     |     |             |     |     |             |
| 123 |           | DELIVERY_LOT 3_30 Panels                      | 60 days  | Sun 10/23/16 | Sat 12/31/16 |              |             |     |     |             |     |     |             |

|  |                 |  |                    |  |                       |  |
|--|-----------------|--|--------------------|--|-----------------------|--|
| Project: JABER AL AHMED<br>Date: Tue 3/29/16 | Task            |  | External Milestone |  | Manual Summary Rollup |  |
|  | Split           |  | Inactive Task      |  | Manual Summary        |  |
|  | Milestone       |  | Inactive Milestone |  | Start-only            |  |
|  | Summary         |  | Inactive Summary   |  | Finish-only           |  |
|  | Project Summary |  | Manual Task        |  | Deadline              |  |
|  | External Tasks  |  | Duration-only      |  | Progress              |  |

Page 6



| ID  | Task Mode | Task Name                                | Duration | Start        | Finish       | Predecessors | 1st Quarter |     |     | 3rd Quarter |     |     | 1st Qua |  |
|-----|-----------|--|----------|--------------|--------------|--------------|-------------|-----|-----|-------------|-----|-----|---------|--|
|     |           |  |          |              |              |              | Jan         | Mar | May | Jul         | Sep | Nov | Jan     |  |
| 124 |           | Receipt of Packing clearance             | 1 day    | Sun 10/23/16 | Sun 10/23/16 | 117FS+10 day |             |     |     |             |     |     |         |  |
| 125 |           | Final Quality check /Taking Pictures     | 1 day    | Mon 10/24/16 | Mon 10/24/16 | 124          |             |     |     |             |     |     |         |  |
| 126 |           | Packing                                  | 7 days   | Tue 10/25/16 | Tue 11/1/16  | 125          |             |     |     |             |     |     |         |  |
| 127 |           | Preparing Delivery Note                  | 1 day    | Tue 11/1/16  | Tue 11/1/16  | 126FS-1 day  |             |     |     |             |     |     |         |  |
| 128 |           | Receipt of Dispatch clearance            | 1 day    | Wed 11/2/16  | Wed 11/2/16  | 127          |             |     |     |             |     |     |         |  |
| 129 |           | Dispatch Clearance Received              | 0 days   | Wed 11/2/16  | Wed 11/2/16  | 128          |             |     |     |             |     |     |         |  |
| 130 |           | Shipping Documentation                   | 2 days   | Thu 11/3/16  | Sat 11/5/16  | 128          |             |     |     |             |     |     |         |  |
| 131 |           | Verifying Shipping Documentation_SIEMENS | 1 day    | Sun 11/6/16  | Sun 11/6/16  | 130          |             |     |     |             |     |     |         |  |
| 132 |           | Transportation to Kuwait_SIEMENS         | 5 days   | Mon 11/7/16  | Sat 11/12/16 | 131          |             |     |     |             |     |     |         |  |
| 133 |           | PAYMENT                                  | 46 days  | Tue 11/8/16  | Sat 12/31/16 |              |             |     |     |             |     |     |         |  |
| 134 |           | Invoicing LOT 3_Delivery Completion_10%  | 1 day    | Tue 11/8/16  | Tue 11/8/16  | 132FS-4 days |             |     |     |             |     |     |         |  |
| 135 |           | Processing Payment                       | 45 days  | Wed 11/9/16  | Sat 12/31/16 | 134          |             |     |     |             |     |     |         |  |
| 136 |           | Receipt of Payment                       | 0 days   | Sat 12/31/16 | Sat 12/31/16 | 135          |             |     |     |             |     |     |         |  |

|  |                 |  |                    |  |                       |  |
|--|-----------------|--|--------------------|--|-----------------------|--|
| Project: JABER AL AHMED<br>Date: Tue 3/29/16 | Task            |  | External Milestone |  | Manual Summary Rollup |  |
|  | Split           |  | Inactive Task      |  | Manual Summary        |  |
|  | Milestone       |  | Inactive Milestone |  | Start-only            |  |
|  | Summary         |  | Inactive Summary   |  | Finish-only           |  |
|  | Project Summary |  | Manual Task        |  | Deadline              |  |
|  | External Tasks  |  | Duration-only      |  | Progress              |  |

Page 7

### Schedule for WFRA-Z Substation

| ID | Task Mode | Task Name  | Duration | Start       | Finish      | Predecessors | 2nd Quarter |     |     | 1st Quarter |     |     |
|----|-----------|--|----------|-------------|-------------|--------------|-------------|-----|-----|-------------|-----|-----|
|    |           |  |          |             |             |              | Sep         | Jan | May | Sep         | Jan | May |
| 1  |           | KWI PROJECT _WFRA-Z_115 Panels                       | 272.4 da | Sun 4/3/16  | Tue 2/14/17 |              |             |     |     |             |     |     |
| 2  |           | CONTRACT   | 6 days   | Thu 4/21/16 | Wed 4/27/16 |              |             |     |     |             |     |     |
| 3  |           | Award Of Contract                                    | 1 day    | Thu 4/21/16 | Thu 4/21/16 |              |             |     |     |             |     |     |
| 4  |           | Contract Received                                    | 0 days   | Thu 4/21/16 | Thu 4/21/16 | 3            |             |     |     |             |     |     |
| 5  |           | Purchase Order Receipt                               | 1 day    | Wed 4/27/16 | Wed 4/27/16 | 3SS+5 days   |             |     |     |             |     |     |
| 6  |           | Kick off Meeting                                     | 1 day    | Wed 4/27/16 | Wed 4/27/16 | 5SS          |             |     |     |             |     |     |
| 7  |           | INPUTS FROM CUSTOMER                                 | 3 days   | Thu 4/28/16 | Sun 5/1/16  |              |             |     |     |             |     |     |
| 8  |           | Clearance for Enclosure ordering                     | 1 day    | Thu 4/28/16 | Thu 4/28/16 | 6SS+1 day    |             |     |     |             |     |     |
| 9  |           | Clearance for Enclosure Received                     | 0 days   | Thu 4/28/16 | Thu 4/28/16 | 8            |             |     |     |             |     |     |
| 10 |           | Preparation of Shop drawings for Enclosure Supplier  | 2 days   | Sat 4/30/16 | Sun 5/1/16  | 8            |             |     |     |             |     |     |
| 11 |           | RECEIPT OF IFC DRAWINGS                              | 61 days  | Sat 4/30/16 | Sat 7/9/16  |              |             |     |     |             |     |     |
| 12 |           | Receipt of GA  | 1 day    | Sat 4/30/16 | Sat 4/30/16 | 6SS+2 days   |             |     |     |             |     |     |
| 13 |           | Receipt of BOQ                                       | 1 day    | Sun 5/1/16  | Sun 5/1/16  | 12           |             |     |     |             |     |     |
| 14 |           | BOQ Received   | 0 days   | Sun 5/1/16  | Sun 5/1/16  | 13           |             |     |     |             |     |     |
| 15 |           | Receipt of Schematics                                | 1 day    | Wed 5/11/16 | Wed 5/11/16 | 12SS+10 days |             |     |     |             |     |     |
| 16 |           | Receipt of Wiring Tables                             | 1 day    | Thu 5/12/16 | Thu 5/12/16 | 15           |             |     |     |             |     |     |
| 17 |           | Receiving Free issue materials                       | 1 day    | Sun 7/3/16  | Sun 7/3/16  | 13           |             |     |     |             |     |     |
| 18 |           | Free issue materials Received                        | 0 days   | Sun 7/3/16  | Sun 7/3/16  | 17           |             |     |     |             |     |     |
| 19 |           | Checking of Free issue materials w.r.to IFC Drawings | 1 wk     | Sun 7/3/16  | Sat 7/9/16  | 17SS         |             |     |     |             |     |     |
| 20 |           | PROCUREMENT  | 11 days  | Thu 4/28/16 | Tue 5/10/16 |              |             |     |     |             |     |     |
| 21 |           | Purchase Order for enclosure                         | 1 day    | Thu 4/28/16 | Thu 4/28/16 | 8SS          |             |     |     |             |     |     |
| 22 |           | Receipt of BOQ by Purchase dept.                     | 1 day    | Wed 5/4/16  | Wed 5/4/16  | 13FS+2 days  |             |     |     |             |     |     |

|  |                 |  |                    |  |                       |  |
|--|-----------------|--|--------------------|--|-----------------------|--|
| Project: JABER AL AHMED<br>Date: Thu 3/31/16 | Task            |  | External Milestone |  | Manual Summary Rollup |  |
|  | Split           |  | Inactive Task      |  | Manual Summary        |  |
|  | Milestone       |  | Inactive Milestone |  | Start-only            |  |
|  | Summary         |  | Inactive Summary   |  | Finish-only           |  |
|  | Project Summary |  | Manual Task        |  | Deadline              |  |
|  | External Tasks  |  | Duration-only      |  | Progress              |  |

Page 1



| ID | Task Mode | Task Name                                     | Duration | Start        | Finish       | Predecessors | 2nd Quarter |     |     | 1st Quarter |     |     |
|----|-----------|---|----------|--------------|--------------|--------------|-------------|-----|-----|-------------|-----|-----|
|    |           |   |          |              |              |              | Sep         | Jan | May | Sep         | Jan | May |
| 23 |           | Purchase Order for other materials            | 5 days   | Thu 5/5/16   | Tue 5/10/16  | 22           |             |     |     |             |     |     |
| 24 |           | PRODUCTION_LOT_1_41 Panels                    | 171.4 da | Thu 6/23/16  | Mon 1/9/17   |              |             |     |     |             |     |     |
| 25 |           | Assembly                                      | 96.4 day | Thu 6/23/16  | Thu 10/13/16 |              |             |     |     |             |     |     |
| 26 |           | Receipt of Enclosure at FEAG                  | 2 days   | Thu 6/23/16  | Sat 6/25/16  | 21           |             |     |     |             |     |     |
| 27 |           | Enclosures Received                           | 0 days   | Sat 6/25/16  | Sat 6/25/16  | 26           |             |     |     |             |     |     |
| 28 |           | LOT_1_Progress invoice Enclosure_30%          | 1 day    | Sun 6/26/16  | Sun 6/26/16  | 26           |             |     |     |             |     |     |
| 29 |           | Receipt of payment                            | 45 days  | Mon 6/27/16  | Wed 8/17/16  | 28           |             |     |     |             |     |     |
| 30 |           | Mechanical Assembly                           | 20 days  | Wed 9/7/16   | Sat 10/1/16  | 26SS+10.9 w  |             |     |     |             |     |     |
| 31 |           | Wiring & Labelling                            | 26 days  | Thu 9/8/16   | Sun 10/9/16  | 30SS+1 day   |             |     |     |             |     |     |
| 32 |           | Internal Testing & Non-Conformance correction | 23 days  | Sat 9/17/16  | Thu 10/13/16 | 31SS+7 days  |             |     |     |             |     |     |
| 33 |           | Issuing FAT notice to customer                | 1 day    | Thu 9/29/16  | Sat 10/1/16  | 32FS-2 wks   |             |     |     |             |     |     |
| 34 |           | PRE-FAT_SIEMENS                               | 14 days  | Sun 10/16/16 | Tue 11/1/16  |              |             |     |     |             |     |     |
| 35 |           | Visual Inspection                             | 2 days   | Sun 10/16/16 | Tue 10/18/16 | 32FS+2 days  |             |     |     |             |     |     |
| 36 |           | Panel Testing                                 | 4 days   | Tue 10/18/16 | Sun 10/23/16 | 35           |             |     |     |             |     |     |
| 37 |           | Power up Main Relays                          | 2 days   | Mon 10/24/16 | Wed 10/26/16 | 36FS+1 day   |             |     |     |             |     |     |
| 38 |           | Preparation of PRE_FAT test report_FEAG       | 1 day    | Wed 10/26/16 | Thu 10/27/16 | 37           |             |     |     |             |     |     |
| 39 |           | Re-work/Modifications as per Customer MOM     | 4 days   | Thu 10/27/16 | Tue 11/1/16  | 38           |             |     |     |             |     |     |
| 40 |           | Factory Acceptance Test LOT_1_41 Panels       | 5 days   | Tue 11/1/16  | Mon 11/7/16  |              |             |     |     |             |     |     |
| 41 |           | FAT with Client                               | 5 days   | Tue 11/1/16  | Mon 11/7/16  | 39           |             |     |     |             |     |     |
| 42 |           | FAT Completed                                 | 0 days   | Mon 11/7/16  | Mon 11/7/16  | 41           |             |     |     |             |     |     |

Project: JABER AL AHMED  
Date: Thu 3/31/16

|                 |  |                    |  |                       |  |
|-----------------|--|--------------------|--|-----------------------|--|
| Task            |  | External Milestone |  | Manual Summary Rollup |  |
| Split           |  | Inactive Task      |  | Manual Summary        |  |
| Milestone       |  | Inactive Milestone |  | Start-only            |  |
| Summary         |  | Inactive Summary   |  | Finish-only           |  |
| Project Summary |  | Manual Task        |  | Deadline              |  |
| External Tasks  |  | Duration-only      |  | Progress              |  |

Page 2

| ID | Task Mode | Task Name                                | Duration | Start        | Finish       | Predecessors | 2nd Quarter |     |     | 1st Quarter |     |     |
|----|-----------|--|----------|--------------|--------------|--------------|-------------|-----|-----|-------------|-----|-----|
|    |           |  |          |              |              |              | Sep         | Jan | May | Sep         | Jan | May |
| 43 |           | Preparation of FAT_MOM                   | 1 day    | Sun 11/6/16  | Mon 11/7/16  | 41FS-1 day   |             |     |     |             |     |     |
| 44 |           | POST_FAT                                 | 7 days   | Tue 11/8/16  | Wed 11/16/16 |              |             |     |     |             |     |     |
| 45 |           | Re-work/Modifications as per MOM         | 1 wk     | Tue 11/8/16  | Tue 11/15/16 | 43FS+1 day   |             |     |     |             |     |     |
| 46 |           | MOM compliance statement                 | 1 day    | Tue 11/15/16 | Wed 11/16/16 | 45           |             |     |     |             |     |     |
| 47 |           | MOM Complied                             | 0 days   | Wed 11/16/16 | Wed 11/16/16 | 46           |             |     |     |             |     |     |
| 48 |           | Payment                                  | 46 days  | Wed 11/16/16 | Mon 1/9/17   |              |             |     |     |             |     |     |
| 49 |           | LOT_1_Invoicing_FAT completion_60%       | 1 day    | Wed 11/16/16 | Thu 11/17/16 | 46           |             |     |     |             |     |     |
| 50 |           | Processing Payment                       | 45 days  | Thu 11/17/16 | Mon 1/9/17   | 49           |             |     |     |             |     |     |
| 51 |           | Receipt of Payment                       | 0 days   | Mon 1/9/17   | Mon 1/9/17   | 50           |             |     |     |             |     |     |
| 52 |           | DELIVERY_LOT_1_41 Panels                 | 60 days  | Tue 11/22/16 | Tue 1/31/17  |              |             |     |     |             |     |     |
| 53 |           | Receipt of Packing clearance             | 1 day    | Tue 11/22/16 | Wed 11/23/16 | 46FS+5 days  |             |     |     |             |     |     |
| 54 |           | Final Quality check /Taking Pictures     | 1 day    | Wed 11/23/16 | Thu 11/24/16 | 53           |             |     |     |             |     |     |
| 55 |           | Packing                                  | 7 days   | Thu 11/24/16 | Sat 12/3/16  | 54           |             |     |     |             |     |     |
| 56 |           | Preparing Delivery Note                  | 1 day    | Thu 12/1/16  | Sat 12/3/16  | 55FS-1 day   |             |     |     |             |     |     |
| 57 |           | Receipt of Dispatch clearance            | 1 day    | Sat 12/3/16  | Sun 12/4/16  | 55           |             |     |     |             |     |     |
| 58 |           | Dispatch Clearance Received              | 0 days   | Sun 12/4/16  | Sun 12/4/16  | 57           |             |     |     |             |     |     |
| 59 |           | Shipping Documentation                   | 2 days   | Sun 12/4/16  | Tue 12/6/16  | 57           |             |     |     |             |     |     |
| 60 |           | Verifying Shipping Documentation_SIEMENS | 1 day    | Tue 12/6/16  | Wed 12/7/16  | 59           |             |     |     |             |     |     |
| 61 |           | Transportation to Kuwait_SIEMENS         | 5 days   | Wed 12/7/16  | Tue 12/13/16 | 60           |             |     |     |             |     |     |
| 62 |           | PAYMENT                                  | 46 days  | Thu 12/8/16  | Tue 1/31/17  |              |             |     |     |             |     |     |

Project: JABER AL AHMED  
Date: Thu 3/31/16

|                 |  |                    |  |                       |  |
|-----------------|--|--------------------|--|-----------------------|--|
| Task            |  | External Milestone |  | Manual Summary Rollup |  |
| Split           |  | Inactive Task      |  | Manual Summary        |  |
| Milestone       |  | Inactive Milestone |  | Start-only            |  |
| Summary         |  | Inactive Summary   |  | Finish-only           |  |
| Project Summary |  | Manual Task        |  | Deadline              |  |
| External Tasks  |  | Duration-only      |  | Progress              |  |

Page 3

| ID | Task Mode | Task Name                                     | Duration | Start        | Finish       | Predecessors | Quarter |     |     | 2nd Quarter |     |     | 1st Quarter |  |  |
|----|-----------|---|----------|--------------|--------------|--------------|---------|-----|-----|-------------|-----|-----|-------------|--|--|
|    |           |   |          |              |              |              | Sep     | Jan | May | Sep         | Jan | May |             |  |  |
| 63 |           | Invoicing LOT 1_Delivery Completion_10%       | 1 day    | Thu 12/8/16  | Sat 12/10/16 | 61FS-4 days  |         |     |     |             |     |     |             |  |  |
| 64 |           | Receipt of payment                            | 45 days  | Sat 12/10/16 | Tue 1/31/17  | 63           |         |     |     |             |     |     |             |  |  |
| 65 |           | PRODUCTION_LOT 2_44 Panels                    | 135.4 da | Thu 8/18/16  | Mon 1/23/17  |              |         |     |     |             |     |     |             |  |  |
| 66 |           | Assembly                                      | 70.4 day | Thu 8/18/16  | Tue 11/8/16  |              |         |     |     |             |     |     |             |  |  |
| 67 |           | Receipt of Enclosure at FEAG                  | 2 days   | Thu 8/18/16  | Sat 8/20/16  |              |         |     |     |             |     |     |             |  |  |
| 68 |           | Enclosures Received                           | 0 days   | Sat 8/20/16  | Sat 8/20/16  | 67           |         |     |     |             |     |     |             |  |  |
| 69 |           | LOT 2_Progress invoice _Enclosure_30%         | 1 day    | Sun 8/21/16  | Sun 8/21/16  | 67           |         |     |     |             |     |     |             |  |  |
| 70 |           | Receipt of Payment                            | 45 days  | Mon 8/22/16  | Wed 10/12/16 | 69           |         |     |     |             |     |     |             |  |  |
| 71 |           | Mechanical Assembly                           | 21 days  | Sun 10/2/16  | Wed 10/26/16 | 67SS+6.4 wks |         |     |     |             |     |     |             |  |  |
| 72 |           | Wiring & Labelling                            | 27 days  | Mon 10/5/16  | Thu 11/5/16  | 71SS+1 day   |         |     |     |             |     |     |             |  |  |
| 73 |           | Internal Testing & Non Conformance Correction | 24 days  | Tue 10/11/16 | Tue 11/8/16  | 72SS+7 days  |         |     |     |             |     |     |             |  |  |
| 74 |           | Issuing FAT notice to customer                | 1 day    | Tue 10/25/16 | Wed 10/26/16 | 73FS-2 wks   |         |     |     |             |     |     |             |  |  |
| 75 |           | PRE- FAT_by SIEMENS                           | 15 days  | Sun 11/13/16 | Wed 11/30/16 |              |         |     |     |             |     |     |             |  |  |
| 76 |           | Visual Inspection                             | 2 days   | Sun 11/13/16 | Tue 11/15/16 | 73FS+4 days  |         |     |     |             |     |     |             |  |  |
| 77 |           | Panel Testing                                 | 4 days   | Tue 11/15/16 | Sun 11/20/16 | 76           |         |     |     |             |     |     |             |  |  |
| 78 |           | Power up Main Relays                          | 2 days   | Mon 11/21/16 | Wed 11/23/16 | 77FS+1 day   |         |     |     |             |     |     |             |  |  |
| 79 |           | Preparation of PRE_FAT test report_FEAG       | 1 day    | Wed 11/23/16 | Thu 11/24/16 | 78           |         |     |     |             |     |     |             |  |  |
| 80 |           | Re-work/Modifications as per Customer MOM     | 4 days   | Thu 11/24/16 | Tue 11/29/16 | 79           |         |     |     |             |     |     |             |  |  |
| 81 |           | MOM Compliance statement                      | 1 day    | Tue 11/29/16 | Wed 11/30/16 | 80           |         |     |     |             |     |     |             |  |  |
| 82 |           | MOM Complied                                  | 0 days   | Wed 11/30/16 | Wed 11/30/16 | 81           |         |     |     |             |     |     |             |  |  |
| 83 |           | Payment                                       | 46 days  | Wed 11/30/16 | Mon 1/23/17  |              |         |     |     |             |     |     |             |  |  |

Project: JABER AL AHMED  
Date: Thu 3/31/16

|                 |  |                    |  |                       |  |
|-----------------|--|--------------------|--|-----------------------|--|
| Task            |  | External Milestone |  | Manual Summary Rollup |  |
| Split           |  | Inactive Task      |  | Manual Summary        |  |
| Milestone       |  | Inactive Milestone |  | Start-only            |  |
| Summary         |  | Inactive Summary   |  | Finish-only           |  |
| Project Summary |  | Manual Task        |  | Deadline              |  |
| External Tasks  |  | Duration-only      |  | Progress              |  |

Page 4

| ID  | Task Mode | Task Name                                | Duration | Start        | Finish       | Predecessors | Quarter |     |     | 2nd Quarter |     |     | 1st Quarter |  |  |
|-----|-----------|--|----------|--------------|--------------|--------------|---------|-----|-----|-------------|-----|-----|-------------|--|--|
|     |           |  |          |              |              |              | Sep     | Jan | May | Sep         | Jan | May |             |  |  |
| 84  |           | LOT 2_Invoicing FAT completion_60%       | 1 day    | Wed 11/30/16 | Thu 12/1/16  | 81           |         |     |     |             |     |     |             |  |  |
| 85  |           | Receipt of Payment                       | 45 days  | Thu 12/1/16  | Mon 1/23/17  | 84           |         |     |     |             |     |     |             |  |  |
| 86  |           | DELIVERY_LOT 2_44 Panels                 | 60 days  | Tue 12/6/16  | Tue 2/14/17  |              |         |     |     |             |     |     |             |  |  |
| 87  |           | Receipt of Packing clearance             | 1 day    | Tue 12/6/16  | Wed 12/7/16  | 81FS+5 days  |         |     |     |             |     |     |             |  |  |
| 88  |           | Final Quality check /Taking Pictures     | 1 day    | Wed 12/7/16  | Thu 12/8/16  | 87           |         |     |     |             |     |     |             |  |  |
| 89  |           | Packing                                  | 7 days   | Thu 12/8/16  | Sat 12/17/16 | 88           |         |     |     |             |     |     |             |  |  |
| 90  |           | Preparing Delivery Note                  | 1 day    | Thu 12/15/16 | Sat 12/17/16 | 89FS-1 day   |         |     |     |             |     |     |             |  |  |
| 91  |           | Receipt of Dispatch clearance            | 1 day    | Sat 12/17/16 | Sun 12/18/16 | 90           |         |     |     |             |     |     |             |  |  |
| 92  |           | Dispatch Clearance Received              | 0 days   | Sun 12/18/16 | Sun 12/18/16 | 91           |         |     |     |             |     |     |             |  |  |
| 93  |           | Shipping Documentation                   | 2 days   | Sun 12/18/16 | Tue 12/20/16 | 91           |         |     |     |             |     |     |             |  |  |
| 94  |           | Verifying Shipping Documentation_SIEMENS | 1 day    | Tue 12/20/16 | Wed 12/21/16 | 93           |         |     |     |             |     |     |             |  |  |
| 95  |           | Transportation to Kuwait_SIEMENS         | 5 days   | Wed 12/21/16 | Tue 12/27/16 | 94           |         |     |     |             |     |     |             |  |  |
| 96  |           | PAYMENT                                  | 46 days  | Thu 12/22/16 | Tue 2/14/17  |              |         |     |     |             |     |     |             |  |  |
| 97  |           | Invoicing LOT 2_Delivery Completion_10%  | 1 day    | Thu 12/22/16 | Sat 12/24/16 | 95FS-4 days  |         |     |     |             |     |     |             |  |  |
| 98  |           | Receipt of payment                       | 45 days  | Sat 12/24/16 | Tue 2/14/17  | 97           |         |     |     |             |     |     |             |  |  |
| 99  |           | PRODUCTION_LOT 3_30 Panels               | 218.2 da | Sun 4/3/16   | Tue 12/13/16 |              |         |     |     |             |     |     |             |  |  |
| 100 |           | Assembly                                 | 48 days  | Thu 10/13/16 | Wed 12/7/16  |              |         |     |     |             |     |     |             |  |  |
| 101 |           | Receipt of Enclosure at FEAG             | 2 days   | Thu 10/13/16 | Sat 10/15/16 |              |         |     |     |             |     |     |             |  |  |
| 102 |           | Enclosures Received                      | 0 days   | Sat 10/15/16 | Sat 10/15/16 | 101          |         |     |     |             |     |     |             |  |  |

Project: JABER AL AHMED  
Date: Thu 3/31/16

|                 |  |                    |  |                       |  |
|-----------------|--|--------------------|--|-----------------------|--|
| Task            |  | External Milestone |  | Manual Summary Rollup |  |
| Split           |  | Inactive Task      |  | Manual Summary        |  |
| Milestone       |  | Inactive Milestone |  | Start-only            |  |
| Summary         |  | Inactive Summary   |  | Finish-only           |  |
| Project Summary |  | Manual Task        |  | Deadline              |  |
| External Tasks  |  | Duration-only      |  | Progress              |  |

Page 5

| ID  | Task Mode | Task Name                                     | Duration | Start        | Finish       | Predecessors | 2nd Quarter |     |     | 1st Quarter |     |     |
|-----|-----------|---|----------|--------------|--------------|--------------|-------------|-----|-----|-------------|-----|-----|
|     |           |   |          |              |              |              | Sep         | Jan | May | Sep         | Jan | May |
| 103 |           | LOT 3_Progress invoice Enclosure_30%          | 1 day    | Sun 10/16/16 | Sun 10/16/16 | 101          |             |     |     |             |     |     |
| 104 |           | Receipt of Payment                            | 45 days  | Mon 10/17/16 | Wed 12/7/16  | 103          |             |     |     |             |     |     |
| 105 |           | Mechanical Assembly                           | 14 days  | Thu 10/27/16 | Sun 11/13/16 | 101FS+1.7 w  |             |     |     |             |     |     |
| 106 |           | Wiring & Labelling                            | 20 days  | Sat 10/29/16 | Mon 11/21/16 | 105SS+1 day  |             |     |     |             |     |     |
| 107 |           | Internal Testing & Non conformance Correction | 17 days  | Sun 11/6/16  | Sat 11/26/16 | 106SS+7 days |             |     |     |             |     |     |
| 108 |           | Issuing FAT notice to customer                | 1 day    | Sat 11/12/16 | Sun 11/13/16 | 107FS-2 wks  |             |     |     |             |     |     |
| 109 |           | PRE-FAT_by SIEMENS                            | 218.2 da | Sun 4/3/16   | Tue 12/13/16 |              |             |     |     |             |     |     |
| 110 |           | Visual Inspection                             | 2 days   | Sun 11/27/16 | Tue 11/29/16 | 107FS+1 day  |             |     |     |             |     |     |
| 111 |           | Panel Testing                                 | 4 days   | Tue 11/29/16 | Sun 12/4/16  | 110          |             |     |     |             |     |     |
| 112 |           | Power up Main Relays                          | 2 days   | Mon 12/5/16  | Wed 12/7/16  | 111FS+1 day  |             |     |     |             |     |     |
| 113 |           | Preparation of PRE_FAT test report_FEAG       | 1 day    | Wed 12/7/16  | Thu 12/8/16  | 112          |             |     |     |             |     |     |
| 114 |           | Re-work/Modifications as per Customer MOM     | 4 days   | Thu 12/8/16  | Tue 12/13/16 | 113          |             |     |     |             |     |     |
| 115 |           | MOM compliance statement                      | 1 day    | Sun 4/3/16   | Sun 4/3/16   |              |             |     |     |             |     |     |
| 116 |           | MOM Complied                                  | 0 days   | Sun 4/3/16   | Sun 4/3/16   | 115          |             |     |     |             |     |     |
| 117 |           | Payment                                       | 46 days  | Mon 4/4/16   | Thu 5/26/16  |              |             |     |     |             |     |     |
| 118 |           | LOT 3_Invoicing_FAT completion_60%            | 1 day    | Mon 4/4/16   | Mon 4/4/16   | 115          |             |     |     |             |     |     |
| 119 |           | Processing Payment                            | 45 days  | Tue 4/5/16   | Thu 5/26/16  | 118          |             |     |     |             |     |     |
| 120 |           | Receipt of Payment                            | 0 days   | Thu 5/26/16  | Thu 5/26/16  | 119          |             |     |     |             |     |     |
| 121 |           | DELIVERY_LOT 3_30 Panels                      | 59 days  | Sun 4/10/16  | Thu 6/16/16  |              |             |     |     |             |     |     |
| 122 |           | Receipt of Packing clearance                  | 1 day    | Sun 4/10/16  | Sun 4/10/16  | 115FS+5 day  |             |     |     |             |     |     |

|  |                 |  |                    |  |                       |  |
|--|-----------------|--|--------------------|--|-----------------------|--|
| Project: JABER AL AHMED<br>Date: Thu 3/31/16 | Task            |  | External Milestone |  | Manual Summary Rollup |  |
|  | Split           |  | Inactive Task      |  | Manual Summary        |  |
|  | Milestone       |  | Inactive Milestone |  | Start-only            |  |
|  | Summary         |  | Inactive Summary   |  | Finish-only           |  |
|  | Project Summary |  | Manual Task        |  | Deadline              |  |
|  | External Tasks  |  | Duration-only      |  | Progress              |  |

Page 6

| ID  | Task Mode | Task Name                                | Duration | Start       | Finish      | Predecessors | 2nd Quarter |     |     | 1st Quarter |     |     |
|-----|-----------|--|----------|-------------|-------------|--------------|-------------|-----|-----|-------------|-----|-----|
|     |           |  |          |             |             |              | Sep         | Jan | May | Sep         | Jan | May |
| 123 |           | Final Quality check /Taking Pictures     | 1 day    | Mon 4/11/16 | Mon 4/11/16 | 122          |             |     |     |             |     |     |
| 124 |           | Packing                                  | 6 days   | Tue 4/12/16 | Mon 4/18/16 | 123          |             |     |     |             |     |     |
| 125 |           | Preparing Delivery Note                  | 1 day    | Mon 4/18/16 | Mon 4/18/16 | 124FS-1 day  |             |     |     |             |     |     |
| 126 |           | Receipt of Dispatch clearance            | 1 day    | Tue 4/19/16 | Tue 4/19/16 | 125          |             |     |     |             |     |     |
| 127 |           | Dispatch Clearance Received              | 0 days   | Tue 4/19/16 | Tue 4/19/16 | 126          |             |     |     |             |     |     |
| 128 |           | Shipping Documentation                   | 2 days   | Wed 4/20/16 | Thu 4/21/16 | 126          |             |     |     |             |     |     |
| 129 |           | Verifying Shipping Documentation_SIEMENS | 1 day    | Sat 4/23/16 | Sat 4/23/16 | 128          |             |     |     |             |     |     |
| 130 |           | Transportation to Kuwait_SIEMENS         | 5 days   | Sun 4/24/16 | Thu 4/28/16 | 129          |             |     |     |             |     |     |
| 131 |           | PAYMENT                                  | 46 days  | Mon 4/25/16 | Thu 6/16/16 |              |             |     |     |             |     |     |
| 132 |           | Invoicing LOT 3_Delivery Completion_10%  | 1 day    | Mon 4/25/16 | Mon 4/25/16 | 130FS-4 days |             |     |     |             |     |     |
| 133 |           | Receipt of payment                       | 45 days  | Tue 4/26/16 | Thu 6/16/16 | 132          |             |     |     |             |     |     |

|  |                 |  |                    |  |                       |  |
|--|-----------------|--|--------------------|--|-----------------------|--|
| Project: JABER AL AHMED<br>Date: Thu 3/31/16 | Task            |  | External Milestone |  | Manual Summary Rollup |  |
|  | Split           |  | Inactive Task      |  | Manual Summary        |  |
|  | Milestone       |  | Inactive Milestone |  | Start-only            |  |
|  | Summary         |  | Inactive Summary   |  | Finish-only           |  |
|  | Project Summary |  | Manual Task        |  | Deadline              |  |
|  | External Tasks  |  | Duration-only      |  | Progress              |  |

Page 7

## Exploring New Business Models

### Existing Business Model:

FEAG is currently on subcontracting model with Major EPCs & as OEM Vendor shown as below

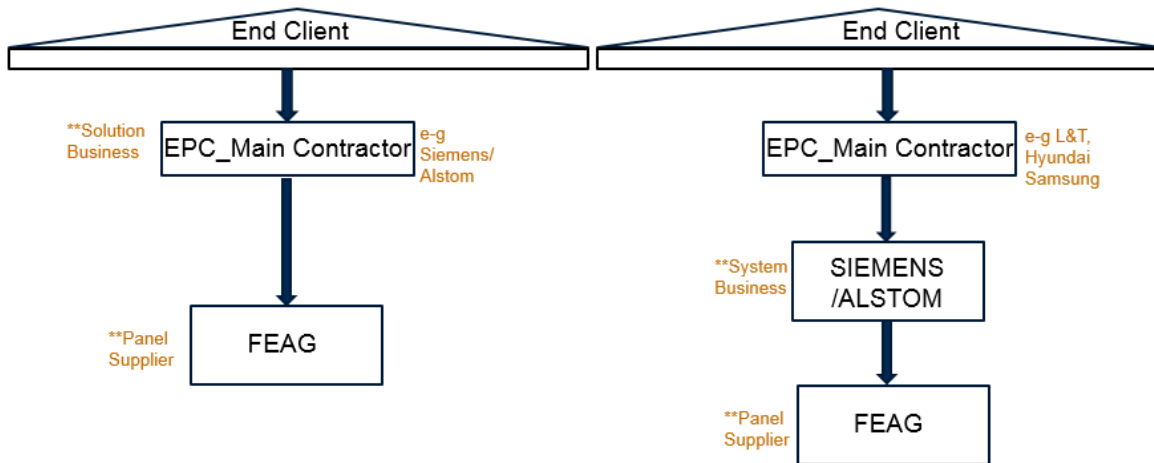


Figure -8 Existing Business Model-FEAG Middle East

### Possible Alternate Business Model:

Based on the acquired experience and knowledge in Control and Protection Panel Business for the last 10 years, the below alternate models shall also to be considered for future expandability and increased market share in the region.

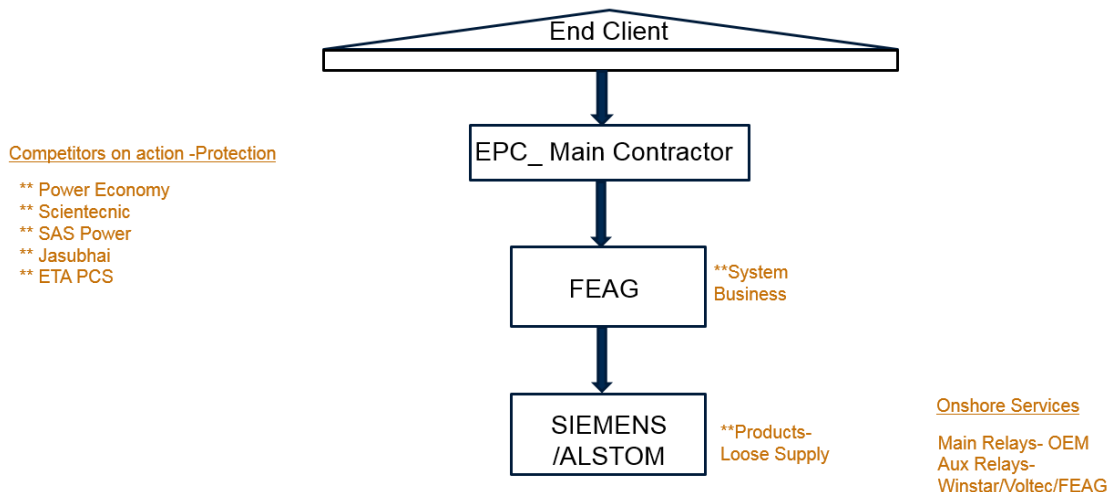


Figure -9 Proposed Business Model-FEAG Middle East

## **10. References:**

1. A guide to Project Management Body of Knowledge (PMBOK Guide) 5<sup>th</sup> Edition, Project Management Institute U.S.A
2. Chapter 14 of Managing Quality Improvement Teams & Projects- Managing Quality, Fifth Edition, Authored by S.Thomas Foster
3. Tamilarasi Rajappa MBA\_Internship Report\_2015 Institute of Management Technology Dubai \_SMBA14066

## **11. Conclusion:**

This Project work can be used as a base framework for any Cost Optimization in Projects. Though it is a company project the proposed practices are generalized for any projects as it is based on Project Management Body of Knowledge and derived from these standards.

The real success of the speed Program will be the project savings of the Target Monetary amount which will be recorded at the end of the each Fiscal year.