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BAHRIA UNIVERSITY LAHORE

(A Project of Pakistan Navy)





Department of Management Sciences
Computer Based Training-1 (MSPM-632)
Spring 2017, MSPM-II

Implementation of PMO in Building Services Division at National Engineering Services, Pakistan (NESPAK)
&
Designing and Construction Supervision for Replacement of Two Existing Elevators with New Elevators for Regional Tax Office at Tax House Building, Lahore

---

SUBMITTED BY:

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SUBMITTED TO:

MR. AHSAN MAQBOOL
PROJECT SUPERVISOR

SUBMISSION DATE: JUNE 20TH, 2017

Department of Management Sciences
Bahria University
(Lahore Campus)

CERTIFICATE

It is to be certified that Master of Philosophy/Masters Project Report Titled **"Implementation of Project Management Office in Building Services Division (NESPAK) & Designing and Construction Supervision for Replacement of Two Existing Elevators with New Elevators for Regional Tax office at Tax House Building, Lahore"** by MSPM-II students named **Mr. M. Mukrram Amin and Mr. Noman Ahmed** has been analyzed by us. We commit the following:

- Project report has apparent new work as comparison to previous published reports or are under review to be published somewhere else. No formula/equation, pictures, tables, sentences or part of it has been duplicated exactly from past works or it is aptly reference mentioned.
- The efforts taken to produce report has no copied data more than allowed limit from any source. (It means there is less than 10% plagiarism).
- There is no fabrication of data or results which have been compiled / analyzed.
- There is no falsification by manipulating research materials, equipment or processes, or changing or omitting data or results such that the research is not accurately represented in the research record.

Mr. Ahsan Maqbool _____

HOD MSPM: _____

NATIONAL ENGINEERING SERVICES PAKISTAN (PVT) LIMITED
IEEEP Building, 17-C-1, Civic Centre, Faisal Town Extension, Lahore 54700 Pakistan
BUILDING SERVICES DIVISION

Established in 1973

REF:

June 15, 2017

CERTIFICATE

This witness statement is issued to the applicant for the fulfilment of his/her MS (Project Management) program requirements being carried out at Bahria University Lahore Campus (BULC).

It is witnessed that **Mr. M. Mukrram Amin Enrollment: 03-298162-018** and **Mr. Noman Ahmad Enrollment: 03-298162-026,** Class: **MSPM-II,** Semester: **SPRING 2017** has contacted / visited / frequently utilized our premises /participated in our real-time projects for implementing project management skills using EPM as a leading software tool.

He / She, in case of participation in organization's project, has contributed fully / partially in the following project(s) and within the highlighted fields (planning, scheduling, earned value analysis, performance monitoring, claim debugging):

1. Designing & Construction Supervision for replacement of two existing elevators with new elevators for Regional Tax Office at Tax House Building, Lahore
2. Pakistan Metro Bus Project at Rawalpindi-Islamabad.
3. Orange line Metro Train Project, Lahore

He, in case of visiting/ frequently utilized premises, has been found skillful in applying EPM in the following highlighted fields (planning, scheduling, earned value analysis, performance monitoring, and report generation).

Additionally, it is noteworthy to mention that **Mr. M. Mukrram Amin Enrollment: 03-298162-018** and **Mr. Noman Ahmad Enrollment: 03-298162-026** demonstrated good ethical practices, enthusiastic approach to work, task convergence capabilities, professionalism while his stay / connection with this organization.

Very truly yours,
for National Engineering Services Pakistan (Pvt) Limited

PROJECT MANAGER
BUILDING SERVICES DIVISION
National Engineering Services Pakistan (Pvt.) Limited NESPAK Lahore

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TÜV AUSTRIA

Department of Management Sciences
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DECLARATION

We (**Mr. M. Mukrram Amin Enrollment: 03-298162-018** and **Mr. Noman Ahmad Enrollment: 03-298162-026,** Class: **MSPM-II,** Semester: **SPRING 2017**) Certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name, in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person. In addition, I certify that no part of this work will, in future, be used in a submission in my name, for any other degree or diploma in any university or other territory institution without the prior approval of the Bahria University, Lahore campus and where applicable, any partner or institution responsible for the joint-award of this degree.

I give consent to this copy of my report, when deposited in the Bahria University, Library, being made available for loan and photocopying, subject to the provision of the Copyright Act.

We (**Mr. M. Mukrram Amin Enrollment: 03-298162-018** and **Mr. Noman Ahmad Enrollment: 03-298162-026,** Class: **MSPM-II,** Semester: **SPRING 2017**) also hereby declare that we produced the work presented in this study, during, the scheduled period of study. We also declare that we have not taken any material from any source except referred to whatever due that amount of plagiarism is within acceptable range.

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N Ahmed.

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PREFACE

Bahria University Lahore Campus has a department of Management sciences under which a master level degree program namely "MS Project Management" is going on. This report is a product of knowledge and skill developed within ourselves by our Instructor Mr. Ahsan Maqbool. The main focus of the report is Implementation of Project Management Office in Building Services Division, NESPAK for better deliverance of consultancy services to the Clients. A project report is being executed "Designing & Construction Supervision for Replacement of Two No. of Elevators for Regional Tax Office at Tax House Building, Lahore" by Building Services Division, NESPAK. Implementation of EVM through Microsoft Project Planner is also part of the report. We are thankful to all who has contributed a lot in developing this report specially Mr. Ahsan Maqbool , EVM Trainer at Bahria University Lahore Campus and Mr. Asif Hafeez, Project Manager Building Services Division, NESPAK for their continuous support and guidance.

CHAPTER 1. INTRODUCTION OF NESPAK

NESPAK is the abbreviation of **"National Engineering Services, Pakistan (Private) Limited"** it claims the right to be among the top 50 consultant firms in Asia and Africa. It also ranked among the top 200 consultancy firms worldwide through its excellence and quality works. NESPAK was established in 1973 as a private organization by at that times Prime Minister of Pakistan **"Mr. Zulfiqar Ali Bhutto"**.

The objective of its creation was to create a pool of talented engineers, attain self-reliance in engineering consultancy and replace foreign consultants. Because at that time a lot of energy projects were in progress and foreign consultants were hired to look after the technical issues of projects. That's how an idea generates to replace foreign highly paid consultant firms a local firm must be established to fulfil the requirements of that era.

Since its establishment NESPAK completed more than **3000 projects** and still counting. At the time NESPAK has more than **6000 employee's** strength and last year's 2015-2016 annual turnover of **Rupees 7.4 Billion** with total combined cost of projects completed by NESPAK is **$ 243 Billion US dollars**.

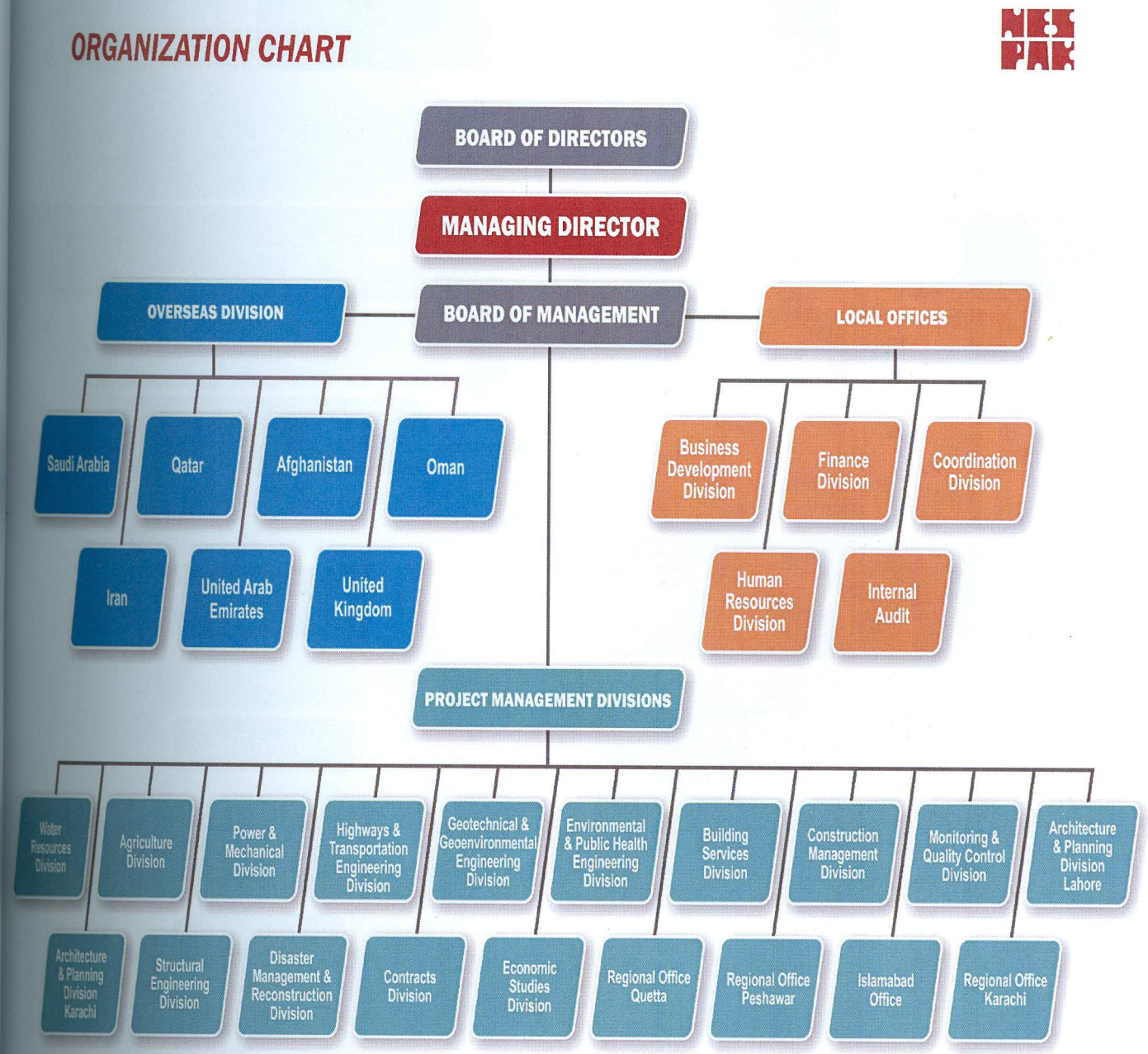
1.1 VISION OF NESPAK

"The objective of creation to create a pool of talented engineers, attain self-reliance in engineering consultancy and replace foreign consultants."

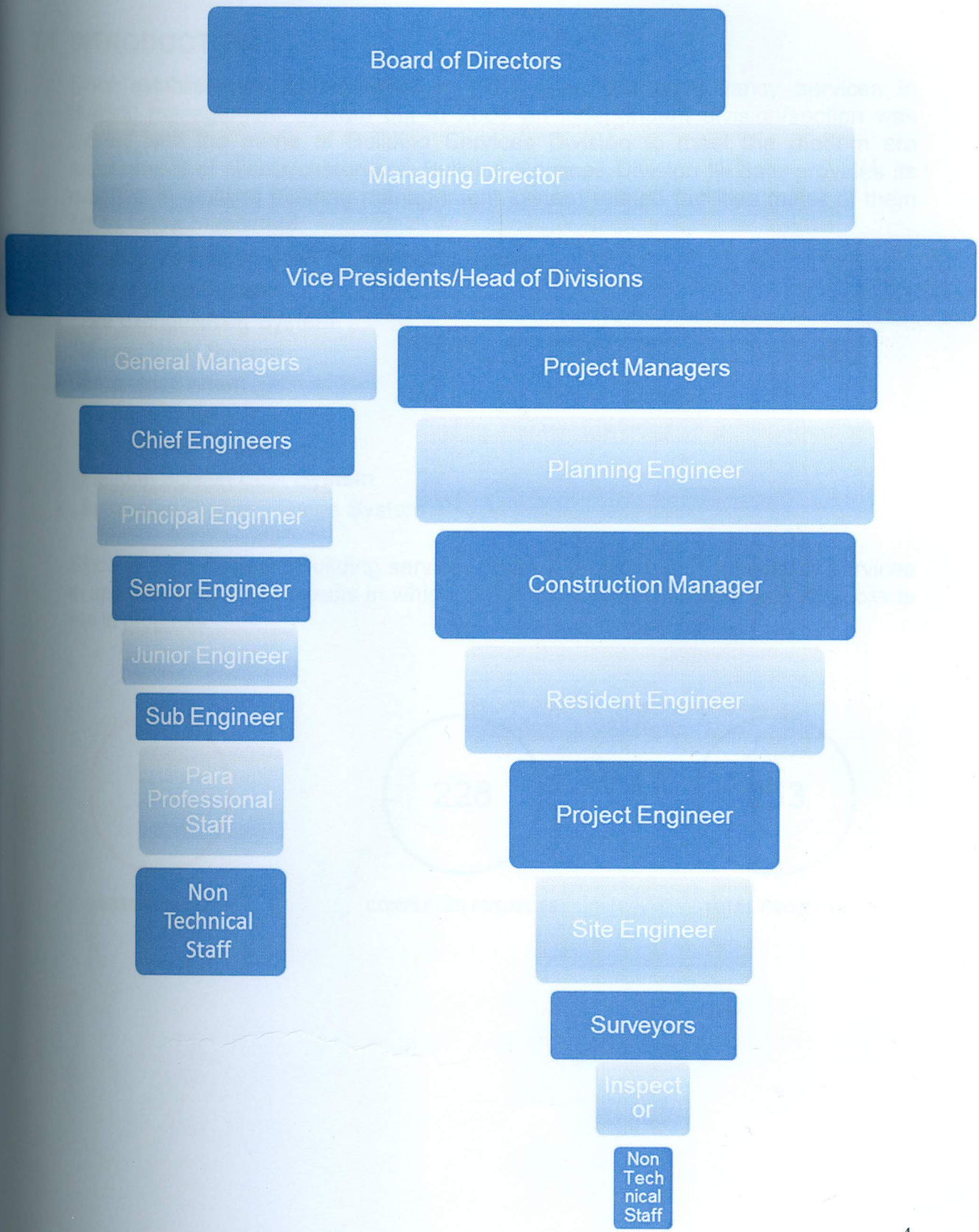
1.2 MISSION OF NESPAK

"We at NESPAK are committed to provide quality Design and Engineering Consultancy services with professionalism and dedication to the complete satisfaction of our clients. The quality of our services is sustained through enhancement of technical know-how and proficiency of our staff. We allocate adequate resources for project implementation and seek improvement through a continuous system of Monitoring and Evaluation".

1.3 ORGANIZATIONAL STRUCTURE OF NESPAK



1.4 ORGANIZATIONAL STAFF HIERARCHY



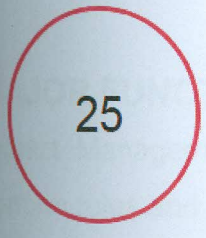
CHAPTER 2. BUILDING SERVICES DIVISION

2.1 INTRODUCTION

Since establishment of NESPAK in 1973 it provide consultancy services in Building management System but in 2008 an independent division/section was created with the name of Building Services Division to meet the modern era requirements of clients/customers. Building Services Division till date provides its expertise in multiple building management system related facilities major of them are as below mentioned;

- Heating Ventilation & Air Conditioning System
- Fire Fighting System
- Fire Extinguishing System
- Moving Walk System
- Escalator System
- Elevator System
- Dumb Waiter System
- Platform Screen Door System
- Automated Platform Gates System

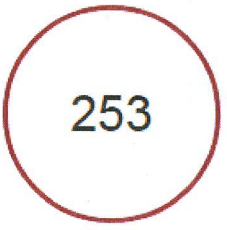
Since its establishment Building services division provides its consultancy services in approximately 253 projects in which 228 are completed till date and 25 projects are in progress.



ONGOING PROJECTS



COMPLETED PROJECTS

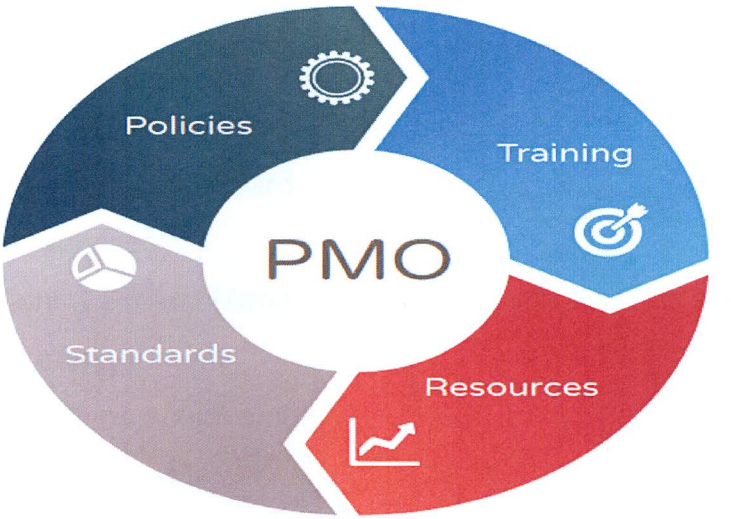


TOTAL PROJECTS

CHAPTER 3. PROJECT MANAGEMENT OFFICE (PMO)

3.1 INTRODUCTION OF PMO:

Project Management Office is an entity which provides help to establish, maintain, organize, define policies, track, level resources and trainings, standardize the projects through a centralized support/control center and coordinate all the projects those come under its domain.



3.2 MAJOR FUNCTIONS/ROLES AND RESPONSIBILITIES OF A PMO:

Project Management Office contains but not limited to following functions or perform roles and responsibilities;

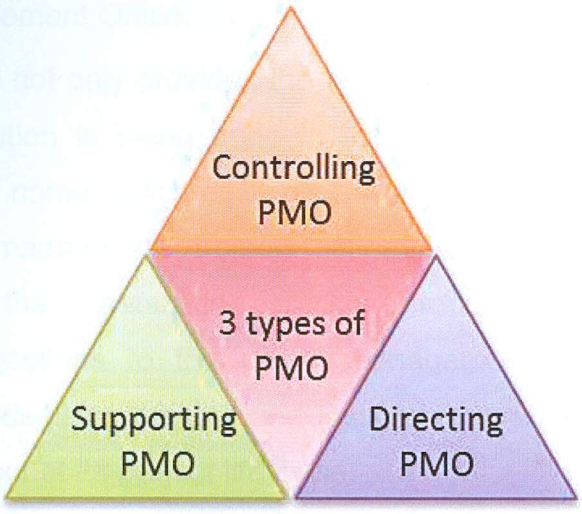
- Reporting to the CEO
- Collect, Organize & distribute the project information
- Develop, review and circulate the templates to the project managers
- Standardize the documents and distribute among the project managers
- Documents Repository
- Standardize the methodologies
- Trainings

- Resource Leveling
- Prioritizing the works
- Direct Management
- Go No Go decisions
- Risk Assessment
- Contract Management
- Tools & Techniques
- Communication
- Reporting
- Tracking the Projects
- Advice the higher management
- Develop a project Score Board
- Consultative services
- Manage Client & Project Managers relationships
- Multi project management
- Strategic objectives achievements
- Allocation of resources
- Progress review meetings
- Project management governance
- Controlling the projects
- Change control system
- Road map milestones
- PMO Maturity Levels assessment
- Supportive approach towards the project team
- Conflict resolution
- Manage Organizational Process Assets
- Lessons Learned
- Closing of projects

3.3 TYPES OF PMO:

There are three types of Project Management Offices (PMO) categorize by its role in organizations;

- Supportive type Project Management Office
- Controlling type Project Management Office
- Directive type Project Management Office



3.3.1 Supportive type Project Management Office:

Following type of PMO`s degree of control is low. It provides the consultative role in the organization. It will be responsible for templates of best practices for the future and ongoing projects in the organization. It also responsible to provide the meaningful information, lesson learned from the previous projects, and trainings for the Project management teams.

3.3.2 Controlling type Project Management Office:

The degree of control in this type of PMO is at medium level. After implementation of supportive level PMO roles it is the second level in maturity assessment model of PMO. Major roles of this type of PMO is to not only provide the templates but conduct audits that these templates are being followed by the

process, activities and documentation as recommended in the templates. It also provide governance to the projects.

3.3.3 Directive type Project Management Office:

The degree of control observed in this type of PMO is at very higher side. After implementation of functions of supportive and controlling type PMO`s the next level is directive PMO. It takes around 5 years to achieve the highest level of directive PMO that is called Centre of Excellence the highest maturity level in Project Management Office.

Directive PMO not only provides the templates, standards and policies but make sure its execution is being done in the standard formats as identified in the templates. As name indicates it govern at higher level and direct the project managers to manage the projects accordingly. It works to attain the strategic objectives of the organization, tracking, reporting, controlling, audits of the projects, suggestions to the upper management, resource leveling, change management, decision making and lessons learned in short directly control the projects throughout its project life cycle.

CHAPTER 4. IMPLEMENTATION OF PMO IN BUILDING SERVICES DIVISION

4.1 NEED OF PMO IN BSD:

After analysis of the Building Services Division working environment following are the reasons Project Management Office is being proposed;

- NESPAK as a whole is a matrix type organization and the same is applied for BSD and other project management divisions.
- Multiple reporting bosses is the major issue for the project teams.
- Currently 10 projects are being executed by BSD independently with 7 project managers and on more than 25 projects BSD giving its inputs regarding its specialties.
- Project Managers are working for different clients using different formats of documentation.
- Every project manager is performing project management by his own way producing different formats.
- Resource allocation is not even causing mess and resource leveling is desperately needed.
- Trainings required for newly hired staff.
- Transfer of key personals of project leads to project failure
- Strategic objectives are being ignored.
- Produce the checklists for quality assurance
- Communication Gaps
- Standardize the methodologies
- Specialist professionals in different disciplines use different procedures.
- Projects/Works are not being prioritize causing unwanted results.
- Projects are being delayed, out of cost and scoop creep issues causing project failures.

- Tools & Techniques being utilized are different.
- Not seeking from the experience of other project managers.
- Same type of mistakes are being observed in different kind of projects.
- After completion of the projects data is not being saved properly.

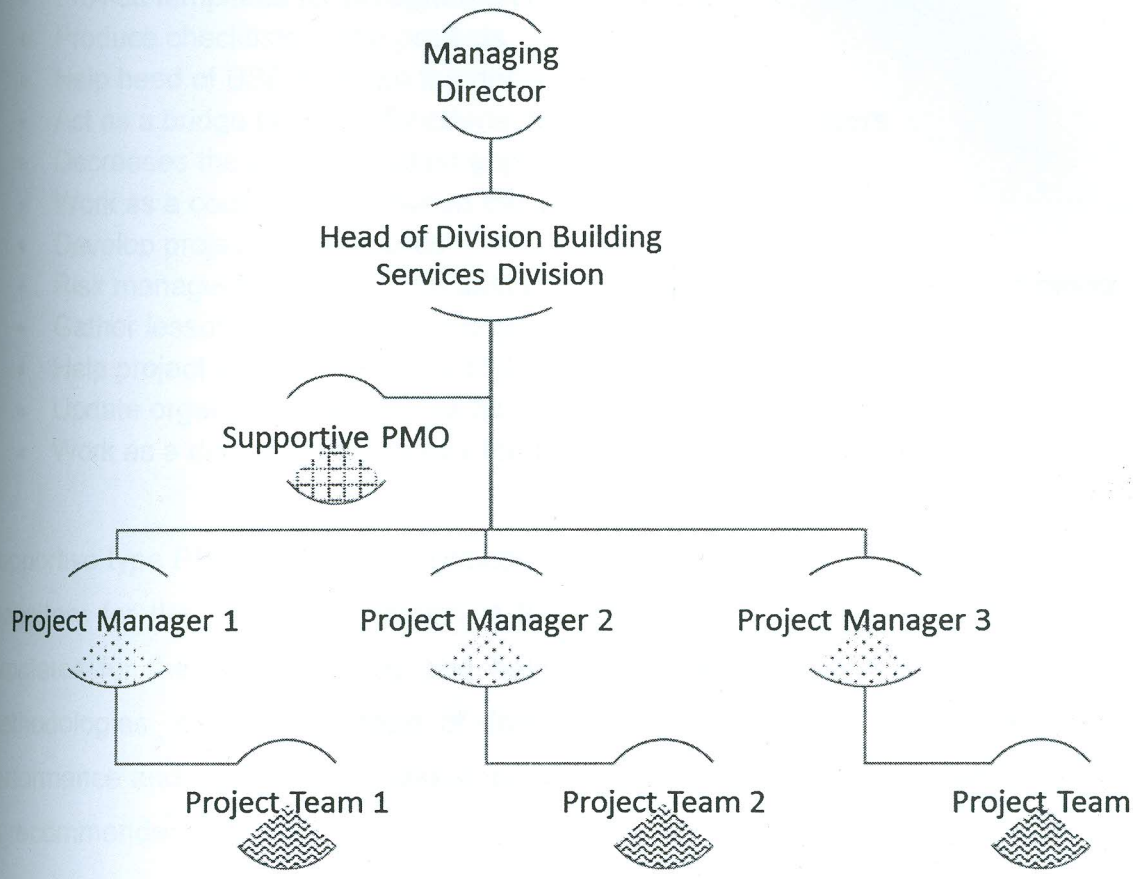
4.2 VISION OF PMO IN BSD:

The vision of Project Management Office in Building Services Division is "To standardize the Project Management practices to meet the triple constraints in project management more efficiently and achieve the strategic objectives of NESPAK".

4.3 MISSION OF PMO IN BSD:

We at Building Services Division NESPAK are committed to comply the latest era requirements in project management by using the good practices and templates as indicated by Project Management Institute and satisfy our clients in well manner".

4.4 HERARICHY OF PMO IN BUILDING SERVICES DIVISION:



4.5 SUPPORTIVE TYPE PMO IN BUILDING SERVICES DIVISION

After deep gap analysis of the BSD supportive type PMO is suggested. Project Management Office will perform but not limited to the following responsibilities;

- Standardize the methodologies of project management
- Identify the common tools & techniques to perform the projects
- Provide the templates for the project management documentation
- Prioritize the projects
- Recommend resource allocation
- Provide the resource leveling charts on the basis of priorities of the projects
- Provide trainings to the newly hired and old staff on latest project management practices
- Organize the meetings between project managers to discuss the issues
- Gather the information's from the projects and store it properly
- Gather the project reports from the project managers and update to the head of the division of BSD

- Tracking the project status
- Provide templates for procurement management
- Produce checklists of the projects
- Help head of BSD to make the decisions
- Act as a bridge between functional boss and project mangers
- Decreases the communication gaps
- Work as a coordinator between the project team members
- Develop project score boards
- Risk management plans from best practices already done in previous projects
- Gather lessons learned from the projects
- Help project managers by identifying the best practices
- Update organizational process assets
- Work as a document repository for the project mangers

Supportive type PMO in BSD only provide the consultative role. It works as a document repository for the project managers. It helps the project managers by providing the templates for the best practices and helps the project managers to standardize the methodologies. It helps the head of division of BSD to stay up to date with project performance and helps him to make important decisions to shuffle the staff and projects as recommended.

CHAPTER 5. PROJECT BRIEF

5.1 BACKGROUND OF THE PROJECT:

Tax House, Lahore comprises of Six (06) floors divided between the Regional Tax Office & Large Taxpayers Unit (LTU), Lahore. Two public lifts (1GV NEUTECH) loading capacity is about 08 persons installed in the year 1999 and have outlived their useful life. Due to their frequent breakdown, these lift operate intermittently and cause serious hardships to the visiting public. Besides its mal-function poses significant danger to the human lives as it get stuck every now and then without prior warning. In addition, their operation has also become burdensome on the national exchequer as it require frequent repair and maintenance. Likewise, being old this lift is not coping with the present work load as long ques of the visitors can be seen every day in the morning till afternoon. So Regional Tax Office, Lahore intends to replace two existing already installed public lifts with new ones at Tax House building Lahore.

5.2 THE PROJECT:

The Project Comprises of designing and construction supervision of two already installed elevators with new ones for Regional Tax Office at Tax House Building, Lahore.

5.3 SCOPE OF SERVICES:

The services (Elevator Works) provided by the consultant shall be as mentioned below;

5.3.1 Stage -1

- Planning & Designing
- Preparation of Drawings
- Specifications
- Bill of Quantities/Schedule of Prices
- Cost Estimates

- Tender Documents including Tender Drawings
- Preparation of Bid Evaluation Reports
- Preparation of Contract Agreement

5.3.2 Stage-2

The Consultant shall deploy site staff with scope of work as mentioned below.

- The Consultant will be in charge for construction supervision of the works with the appropriate graduate Electrical/Mechanical Engineers in the concerned fields with experience in the area of Electrical & Mechanical in order to conform quality of works delivered.
- The Consultant will make sure the each work is being executed by the approved manufacturer/design drawings, approved technical specifications remaining within the boundaries of contract agreement.
- The Consultant will make sure that latest standards are being followed during the work period as specified or not in the contract documents.
- The Consultant is responsible to conduct any type of tests from approved laboratories as mentioned or not in the contract document to verify the quality of material being utilized for installation works.
- The Consultant will make sure to make a progress report on weekly basis to gain the interest of clients towards project and made them up to date with project.
- The Consultant will maintain and review the installation and quality of the material. Consultant is also bound to perform the testing & Commissioning of equipment and advice the client to issue the acceptance certificate and after that provide the substantial completion of the project as per contract clauses.

5.4 TIME SCHEDULE FOR SERVICES

44 Weeks

5.5 ALLOCATED BUDGET:

Rs. 25,000,000/-PKR

CHAPTER 6. PROJECT CHARTER

6.1 PURPOSE OF PROJECT CHARTER

The Designing and construction supervision of two passenger elevators for regional tax office at tax house building, Lahore project charter contains the major information of the project like business need, impact of the project, scope of work, high level deliverables, funding source, time frame, high level risks and decision made by the project sponsor to continue or reject the project.

The major stakeholders of the Designing and construction supervision of two passenger elevators for regional tax office at tax house building, Lahore project charter is the project sponsor, consultant and other higher authorities.

6.2 BUSINESS NEED

Old elevators of Regional Tax Office completed their designed life and consistent interruption in the operation due to certain technical issues occurred. It effects the movement of staff between the seven (07) stories buildings that's the reason it needs to be replaced.

6.3 PUBLIC HEALTH AND BUSINESS IMPACT

The new elevators meeting the modern era requirements to facilitate the Regional Tax Office Staff travel between the seven (07) stories building more conveniently, quickly and easily.

6.4 OBJECTIVES

The objectives of the Designing and construction supervision of two passenger elevators for regional tax office at tax house building, Lahore are as follows:

- Stage-1 Planning/Designing
- Stage-2 Construction Supervision

6.5 SPECIAL REQUIREMENTS

Following describes the special high level requirements without project considered to be incomplete and unacceptable;

Sr. No.	Detail
1.	New Elevators should meet the international standards En-81 or higher
2.	High Speed Elevators
3.	Energy Efficient
4.	Make or Manufacturer of Elevators must be from Europe

6.6 MAJOR DELIVERABLES

The following table presents the major deliverables that the project's product, service or result must meet in order for the project objectives to be satisfied.

Major Deliverable	Deliverable Description
Planning	Documentation, Approvals, Bidding
Procurement	Procurement of New Elevator From Europe
Construction Supervision	Dismantling, Supply, Installation, Testing & Commissioning, Payments, Quality Assurance, Closing of Project

6.7 TIMELINE

44 Weeks.

6.8 HIGH LEVEL MILESTONE

Table below shows the identified higher level milestones for the project.

Highlighted Milestones	Activities Estimated Timeline
Planning, Designing and Estimation	04 Weeks
Preparation of Tender Documents	05 Weeks
Invitation of Tender	03 Weeks
Award of Contract	03 Weeks
Construction Supervision	25 Weeks
Closing	04 Weeks

6.9 FUNDING SOURCE

Regional Tax Office at Tax House Building, Federal Board of Revenue, Lahore

6.10 ALLOCATED BUDGET

PKR 25,000,000/- Rupees only.

6.11 HYPOTHESIS/ASSUMPTIONS

Before starting the project below mentioned events or activities are being assumed to be truth up to the knowledge of stakeholders;

1. Existing Civil Structure of Elevator Shafts are suitable for installation of new elevators.
2. The Quality of material procured will meet the EN-81 Standards.
3. The client will provide the structural layout drawings for shaft analysis.

6.12 LIMITATIONS/CONSTRAINTS

Following are the limitations of the project which needs special attention before starting a project;

1. Time Frame provided to achieve the goals is very short.
2. The existing shafts may be rejected by the structural team for installation of new elevators.
3. The execution team is bound to work after the office timing only.

6.13 MAJOR RISKS

Risk	Mitigation/Response Plan
Procurement Time can be delay	Parallel activities can be performed during this delay of time. Or Extension of Timeline of Project can be raised to the sponsor.
Shaft may require additional civil work	Execution may hire the additional team for the civil works.
Currency rates can be change	The supplier is bound to provide the material in a fix price as agreed at the stage of order.

6.14 MAJOR PERSONALS AND ASSIGNMENTS

Key personals and their responsibilities in the project are following.

Stakeholder & Companies	Project Designation	Assignments/Responsibilities
Mr. Naveed Akhtar Regional Tax Office at Large Tax Payer Unit, Lahore	Client/ Project Sponsor	Project Sponsor is a person who have the final authority to control the project within its legal limits, he is responsible for the arrangement of funding and authorized the project manager to act responsible on his behalf.
Mr. Asif Hafeez NESPAK, Lahore	Project Manager	Project manager is one who actually responsible to manage the project and has authorized authority and accountability from the project sponsor. He is the one who actually overlooks the project day by day, manage project team, approved required

Stakeholder & Companies	Project Designation	Assignments/Responsibilities
		documents, release payments and to tally accountable for the project performance, quality and the triple constraints of project management.
Supplier	Execution Team	A Person or Team who supply the new elevators, dismantle the existing elevators and install the new elevators.

6.15 STAKEHOLDERS (INTERNAL AND EXTERNAL)

- Mr. Naveed Akhtar, Project Sponsor
- Mr. Asif Hafeez, Project Manager
- Supplier
- Project Team
- Staff of Regional Tax Office

6.16 APPROVAL/SIGN OFF

The undersigned make sure that we have checked the project charter, authorize and fund the Designing and construction supervision of two passenger elevators for regional tax office at tax house building, Lahore project. Any changes required in this project charter will be approved and reviewed by us.

Signature: _____ Date: _____

Print Name: _____

Title: Chief Commissioner Inland Revenue

Role: Head of Regional Tax Office

Signature: Date:

Print Name:

Title: Head of Division

Role: Building Services Division, NESPAK

CHAPTER 7. PROJECT SCOPE STATEMENT

7.1 SCOPE OF THE PROJECT

The Project "Designing and construction supervision of two passenger elevators for regional tax office at tax house building, Lahore" as name indicate required the following works and detail services;

- Two (02) No. brand new fully-EN certified heavy duty Passenger Elevator (for public use) MRL Type serving Ground + six (06) upper floors of travel height 23.7m. Design to operate 10 hours/day, 6 days/week and 300 days/year.
- All associated civil, architectural and electrical works necessarily required for installation of elevator in the existing shaft.
- Making good any damage done to the civil works including supply and installation of matching paint, floor tiles, granite / marble wall finish etc, whichever is applicable as per site conditions and / or as directed by Engineer.
- Supply and installation of exhaust fan propeller type of size 800 CFM (SP 0.2 inch of WG) are required for the shaft including complete electrical work.
- Supply and installation of Electric DB and related electrical works at elevator control panel on last floor and cables for elevator power supply and other electrical accessories required for proper installation of the elevator.

7.2 DESCRIPTION OF THE PROJECT SCOPE

The detail description for the scope of work must cover the following;

- Design, supply, installation, testing & commissioning, operation and maintenance of entire elevator equipment including hoisting machinery, sheaves and girders, controller, car, ropes, counterweights, supports, brackets and guides for car & counterweights, car & landing doors, door operator, switches & control, safety devices, signals, governor, safety gears, buffers, pit screens, well trimming girders, trap door and such related accessories complete in all respects as specified herein. The project team shall also furnish all labor, erection equipment,

(i.e. winches, scaffolding etc.), erection tools, appurtenances, embedded parts and materials, etc. necessary to supply, install, test and commission the elevator all in perfect operating condition in accordance with the design Specifications and Drawings.

7.3 PROJECT DELIVERABLES

Project deliverables consist of the following;

- Produce Documentations of the project
- Designing/Planning
- Hiring of the contractor to supply and install the new elevators
- Construction Supervision of the project
- Inspections & quality checks
- Dismantling of the Existing Elevators
- Installation of the new elevators
- Civil work finish of the project
- Installation, Testing & commissioning of the elevators
- Handing over to the client after his satisfaction

7.4 MILESTONES

Following the are milestones of the project;

- Project Management Documents Approved
- Production of complete design, Technical specifications, scheduling, Costing of project for PC-1
- Production of Bidding Documents and Tender Notice Advertisement
- Outsourcing/Procurement of Equipment and services (Hiring of a supplier & installation company)
- Selection of Elevators (Approval of Technical Submittal)
- Delivery of Elevators on site
- Dismantling of Existing Elevators
- Installation verification & Approval

- Testing & Commissioning of Elevators
- Handing Over to the client
- Inauguration
- Substantial Completion of the project
- Closing of the project

7.5 ACCEPTANCE CRITERIA/TECHNICAL REQUIREMENTS

- Elevator procured/supplied must be of the European origin
- Elevators must fulfil the requirements of the highest standards EN-81.
- High speed elevator is required.
- Elevators installed carries at least 10 persons at a time.
- Elevators must be in align with the approved technical specifications.

7.6 ASSUMPTIONS

Before starting the project below mentioned events or activities are being assumed to be truth up to the knowledge of stakeholders;

- Existing Civil Structure of Elevator Shafts are suitable for installation of new elevators.
- The Quality of material procured will meet the EN-81 Standards.
- The client will provide the structural layout drawings for shaft analysis.

7.7 CONSTRAINTS

Following are the limitations of the project which needs special attention before starting a project;

- Time Frame provided to achieve the goals is very short.
- The existing shafts may be rejected by the structural team for installation of new elevators.
- The execution team is bound to work after the office timing only or as approved by the project sponsor.

CHAPTER 8. MS PROJECT REPORT

List of Microsoft Project Reports attached is mentioned here;

- **Gantt Chart**
- **Milestone Report**
- **Burn Down**
- **Cost Overview**
- **Project Overview**
- **Resources Overview**
- **Cash Flow**
- **Cost Overruns**
- **Earned Value Report**
- **Resource Cost Overview**
- **Task Cost Overview**
- **Critical Task**
- **S-Curve**

MILESTONE REPORT

LATE MILESTONES

Milestones that are past due.

Name	Finish

MILESTONES UP NEXT

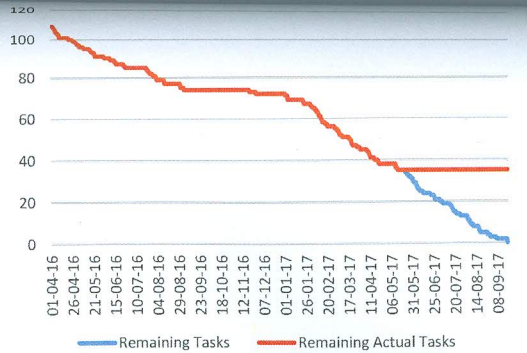
Milestones due in this month.

Name	Finish

COMPLETED MILESTONES

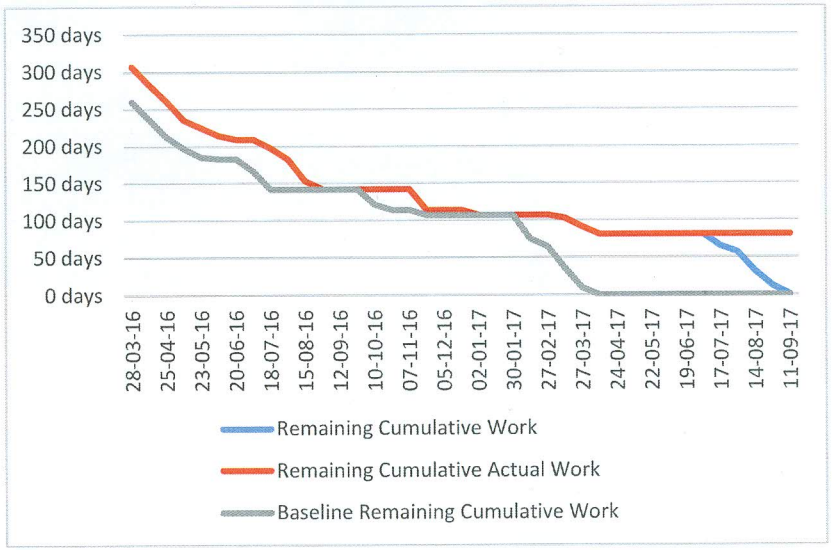
Milestones that are 100% complete.

Name	Finish
Complete Design, Pc-1, Schedule	23 May '16
Out Sourceing of Equipment & Services	13 Aug '16
Model of Elevator Selected	01 Sep '16
Pre-Shipment Inspection	29 Nov '16
Equipment Procurred	05 Jan '17
Dismantelling Of Existing Elevators Completed	12 May '17



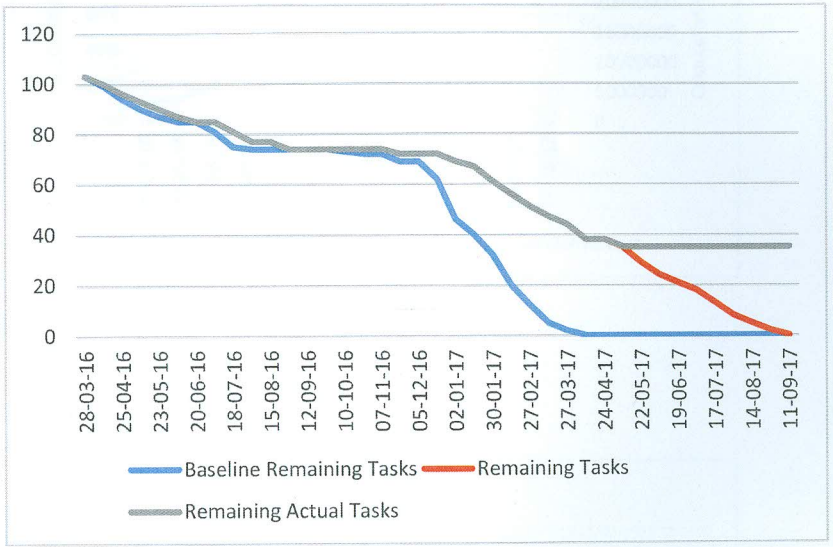
01 Apr '16 20 Sep '17

BURNDOWN



WORK BURNDOWN

Shows how much work you have completed and how much you have left. If the remaining cumulative work line is steeper, then the project may be late. Is your baseline zero?



TASK BURNDOWN

Shows how many tasks you have completed and how many you have left. If the remaining tasks line is steeper, then your project may be late.

COST OVERVIEW

01 APR '16 - 20 SEP '17

COST

Rs25,445,200.00

REMAINING COST

Rs21,053,700.00

% COMPLETE

78%

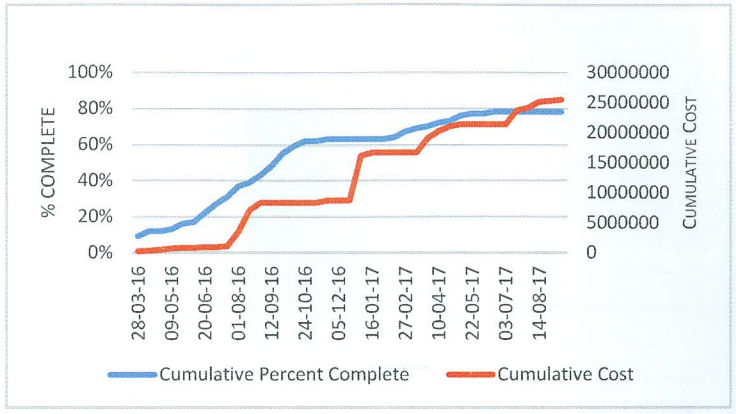
COST STATUS

Cost status for top level tasks.

Name	Actual Cost	Remaining Cost	Baseline Cost	Cost	Cost Variance
Designin And Construction Supervision for Replacement of Two Existing Elevators with the New Elevator For Regional Tax Office at Tax House Building, Lahore	Rs4,391,500.00	Rs21,053,700.00	Rs25,040,950.00	Rs25,445,200.00	Rs404,250.00

PROGRESS VERSUS COST

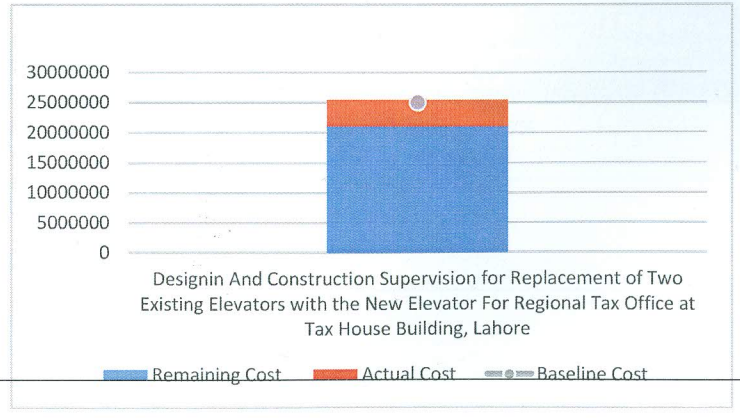
Progress made versus the cost spent over time. If % Complete line below the cumulative cost line,your project may be over budget.



COST STATUS

Cost status for all top-level tasks. Is your baseline zero?

Try setting as baseline



PROJECT OVERVIEW

01 APR '16 - 20 SEP '17

% COMPLETE

78%

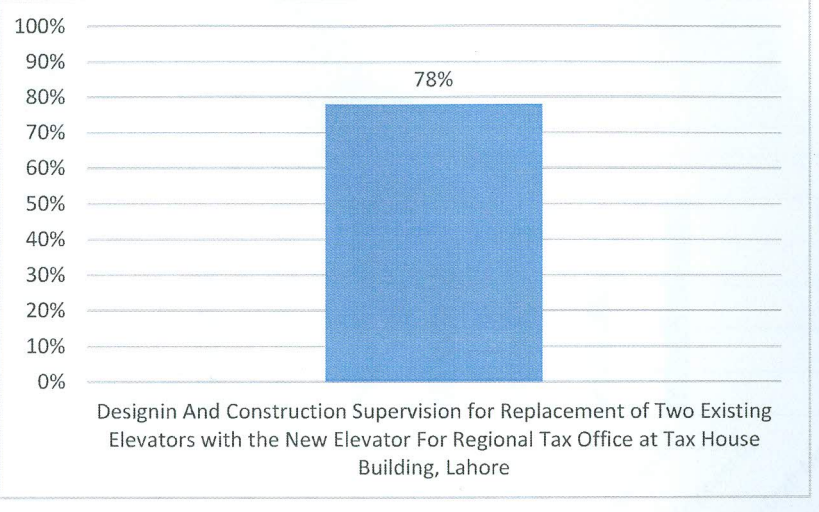
MILESTONES DUE

Milestones that are coming soon.

Name	Finish

% COMPLETE

Status for all top-level tasks. To see the status for subtasks, click on the chart and update the outline level in the Field List.



LATE TASKS

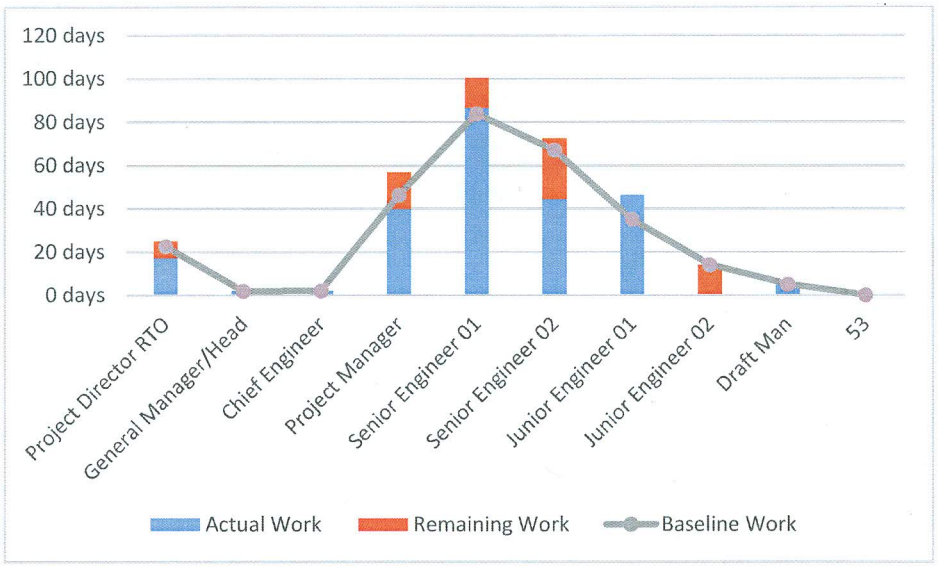
Tasks that are past due.

Name	Start	Finish	Duration	% Complete	Resource Names
Chamfering of the shaft	15 May '17	23 May '17	7 days	57%	

RESOURCE OVERVIEW

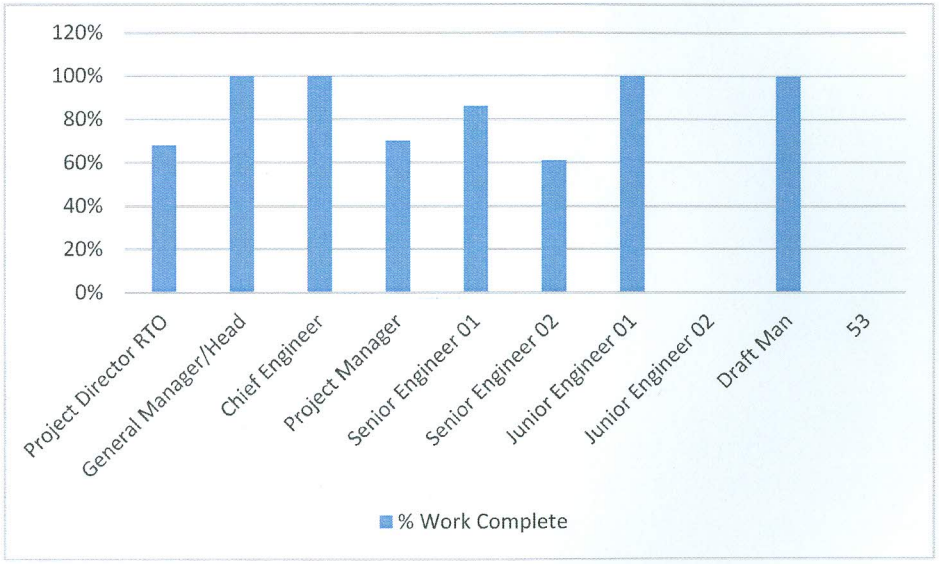
RESOURCE STATS

Work status for all work resources.



WORK STATUS

% work done by all the work resources.



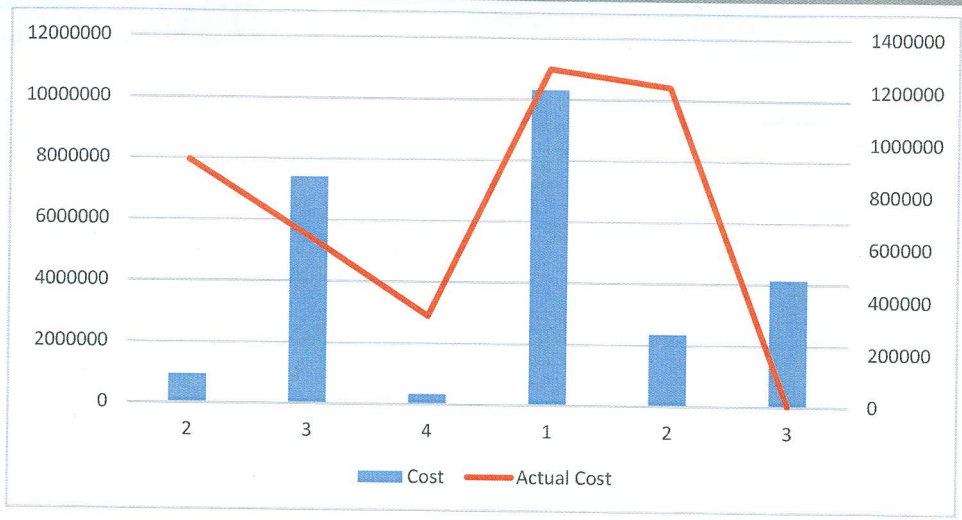
RESOURCE STATUS

Remaing work for all work resources.

Name	Start	Finish	Remaining Work
Project Director RTO	05 Apr '16	20 Sep '17	8 days
General Manager/Head	05 Apr '16	25 Jun '16	0 days
Chief Engineer	04 Apr '16	17 Jun '16	0 days
Project Manager	06 Apr '16	20 Sep '17	17 days
Senior Engineer 01	01 Apr '16	07 Sep '17	14 days
Senior Engineer 02	01 Apr '16	07 Sep '17	28 days
Junior Engineer 01	11 Apr '16	17 Apr '17	0 days
Junior Engineer 02	19 Jul '17	17 Aug '17	14 days
Draft Man	28 Apr '16	15 Jun '16	0 days
53	NA	NA	0 days

CASH FLOW

Actual Cost	Baseline Cost	Remaining Cost	Cost Variance
Rs4,391,500.00	Rs25,040,950.00	Rs21,053,700.00	Rs404,250.00



The chart shows the project's cumulative cost and the cost per quater.
To see the costs for a different time period, select the Edit option from the Field List.

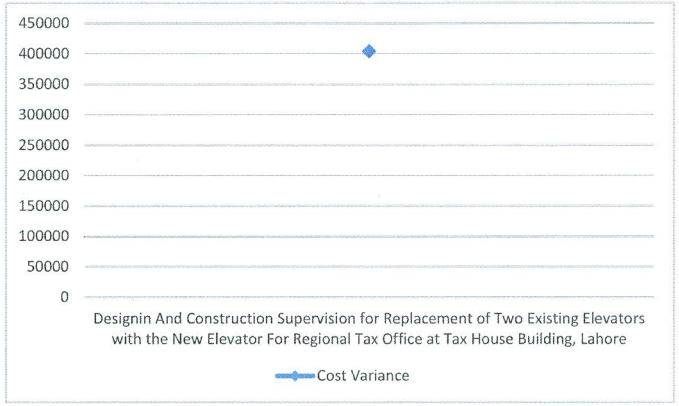
The table below shows cost information for all top-level tasks.
To see cost stats for all tasks, set the Outline Level in the Field List.

Name	Remaining Cost	Actual Cost	Cost	ACWP	BCWP	BCWS
Designin And Construction Supervision for Replacement of Two Existing Elevators with the New Elevator For Regional Tax Office at Tax House Building, Lahore	Rs21,053,700.00	Rs4,391,500.00	Rs25,445,200.00	Rs2,126,200.00	Rs1,671,153.54	Rs2,477,950.00

COST OVERRUNS

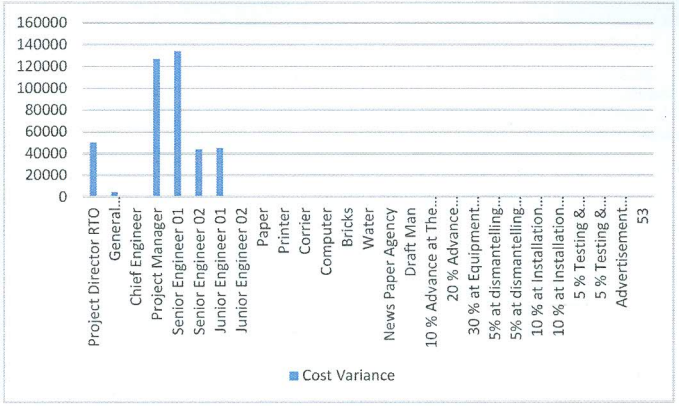
TASK COST VARIANCE

Cost variance for all top-level tasks in the project.



RESOURCE COST VARIANCE

Cost variance for all the work resources.



Name	% Complete	Cost	Baseline Cost	Cost Variance
Designin And Construction Supervision for Replacement of Two Existing Elevators with the New Elevator For Regional Tax Office at Tax House Building, Lahore	78%	Rs25,445,200.00	Rs25,040,950.00	Rs404,250.00

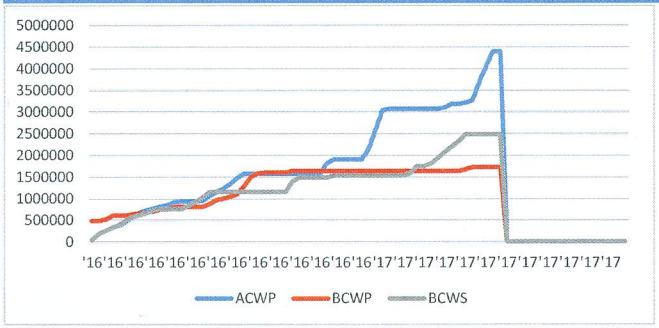
Name	Cost	Baseline Cost	Cost Variance
Project Director RTO	Rs500,000.00	Rs450,000.00	Rs50,000.00
General Manager/Head	Rs32,500.00	Rs28,000.00	Rs4,500.00
Chief Engineer	Rs28,800.00	Rs28,800.00	Rs0.00
Project Manager	Rs681,750.00	Rs555,000.00	Rs126,750.00
Senior Engineer 01	Rs804,000.00	Rs670,000.00	Rs134,000.00
Senior Engineer 02	Rs580,000.00	Rs536,000.00	Rs44,000.00
Junior Engineer 01	Rs185,000.00	Rs140,000.00	Rs45,000.00
Junior Engineer 02	Rs56,000.00	Rs56,000.00	Rs0.00
Draft Man	Rs12,000.00	Rs12,000.00	Rs0.00
53	Rs0.00	Rs0.00	Rs0.00

EARNED VALUE

Earned value management helps you quantify the performance of a project. It compares costs and schedules to a baseline to determine if the project is on track.

If the charts don't look right, make sure you have set a baseline, assigned costs to tasks or resources, and entered progress.

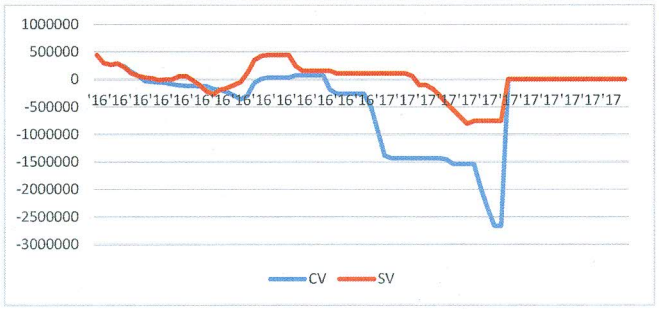
EAC	ACWP	BCWP
Rs31,859,522.04	Rs2,126,200.00	Rs1,671,153.54



EARNED VALUE OVER TIME

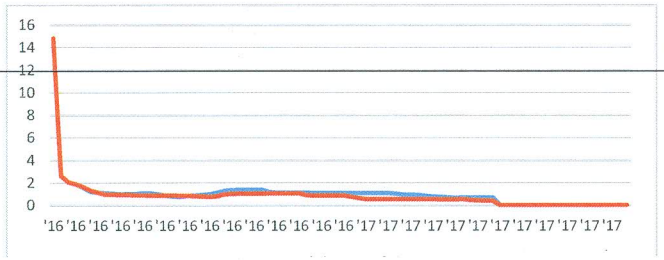
The project's earned value based on the status date. If actual cost (ACWP) is higher than earned value (BCWP), then the project is over budget. If planned value (BCWS) is higher than earned value, then the project is behind schedule.

Learn more about earned value



VARIANCE OVER TIME

Cost and schedule variances for the project based on status date. If CV is negative then, the project is over budget. If SV is positive then the project is behind schedule.

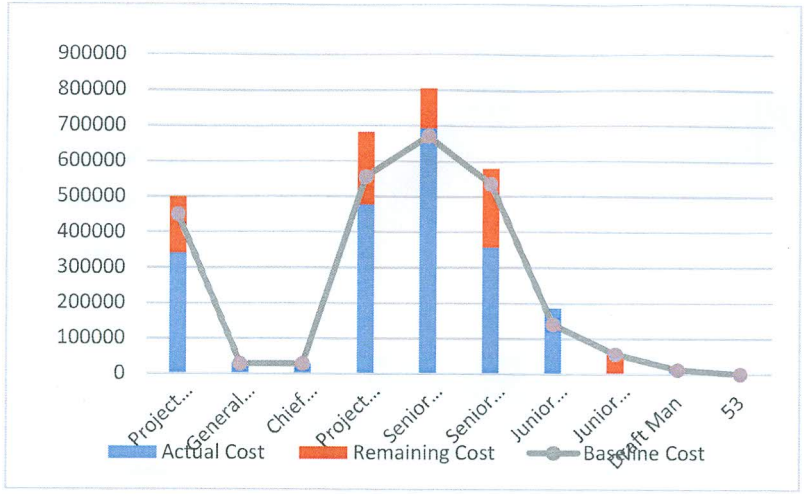


INDICES OVER TIME

Cost and schedule performance indices for the project based on status date. The greater the performance index, the more on schedule and cost saving the project.

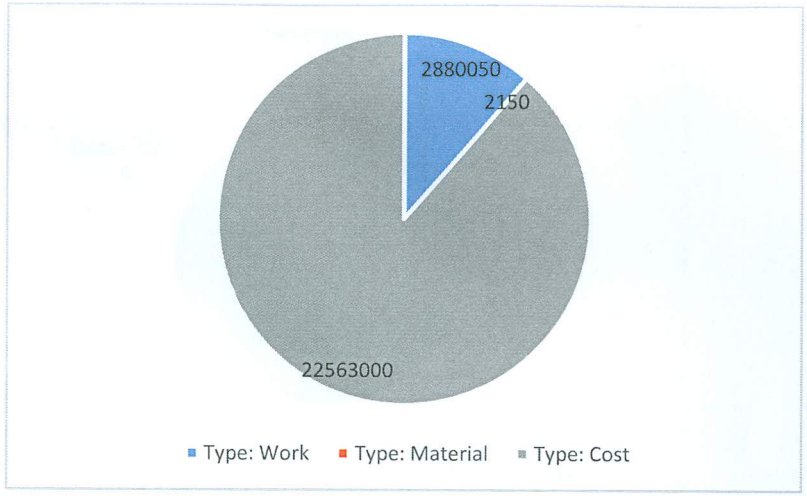
COST STATUS

Cost status for work resources.



COST DISTRIBUTION

How costs are spread out amongst different resource types.



COST DETAILS

Cost details for all work resources.

Name	Actual Work	Actual Cost	Standard Rate
Project Director RTO	17 days	Rs340,000.00	Rs2,500.00/hr
General Manager/Head	2.03 days	Rs32,500.00	Rs2,000.00/hr
Chief Engineer	2 days	Rs28,800.00	Rs1,800.00/hr
Project Manager	39.81 days	Rs477,750.00	Rs1,500.00/hr
Senior Engineer 01	86.5 days	Rs692,000.00	Rs1,000.00/hr
Senior Engineer 02	44.5 days	Rs356,000.00	Rs1,000.00/hr
Junior Engineer 01	46.25 days	Rs185,000.00	Rs500.00/hr
Junior Engineer 02	0 days	Rs0.00	Rs500.00/hr
Draft Man	5 days	Rs12,000.00	Rs300.00/hr
53	0 days	Rs0.00	Rs0.00/hr

TASK COST OVERVIEW

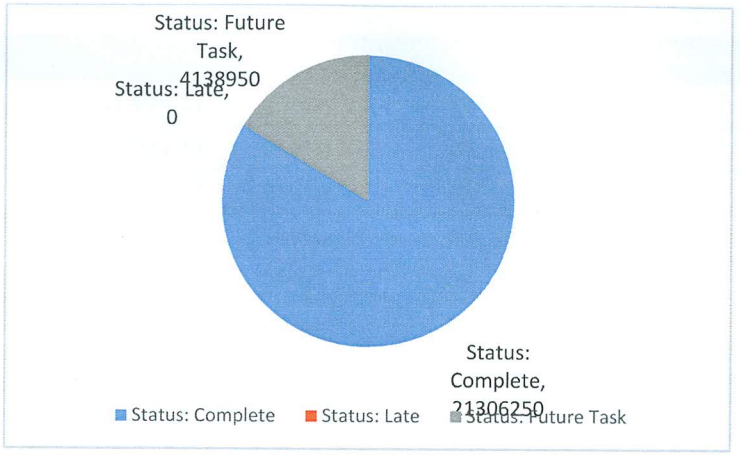
COST STATUS

Cost status for top-level tasks.



COST DISTRIBUTION

How costs are spread out amongst tasks based on their status.

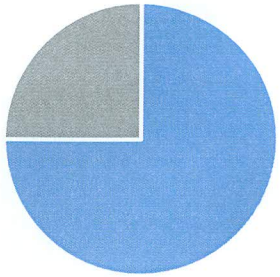


COST DETAILS

Cost details for all top-level tasks.

Name	Fixed Cost	Actual Cost	Remaining Cost	Cost	Baseline Cost	Cost Variance
Designin And Construction Supervision for Replacement of Two Existing Elevators with the New Elevator For Regional Tax Office at Tax House Building, Lahore	Rs0.00	Rs4,391,500.00	Rs21,053,700.00	Rs25,445,200.00	Rs25,040,950.00	Rs404,250.00

CRITICAL TASKS



Status: Complete Status: Late

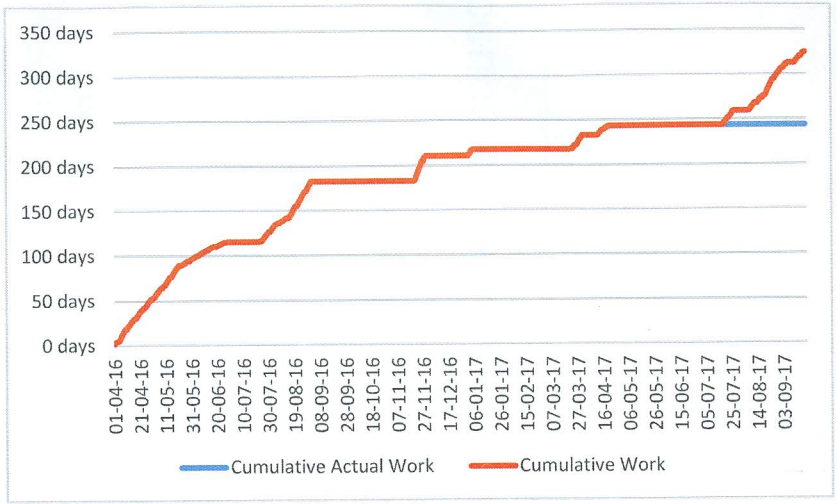
Status: Future Task

A task is critical if there is no room in the schedule for it to slip.

Learn more about managing your project's critical path.

Name	Start	Finish	% Complete	Remaining Work	Resource Names
Chamfering of the shaft	15 May '17	23 May '17	57%	0 days	
Brackets	23 May '17	25 May '17	0%	0 days	
Guide Rails	25 May '17	27 May '17	0%	0 days	
Motor	27 May '17	30 May '17	0%	0 days	
Counter Weight Frame and Weights	30 May '17	01 Jun '17	0%	0 days	
Cabin Base	01 Jun '17	02 Jun '17	0%	0 days	
Cabin Walls	03 Jun '17	05 Jun '17	0%	0 days	
Cabin Roof	05 Jun '17	06 Jun '17	0%	0 days	
Cabin Door	06 Jun '17	07 Jun '17	0%	0 days	
Cabin interior Finishes	07 Jun '17	09 Jun '17	0%	0 days	
Belts and Ropes	09 Jun '17	13 Jun '17	0%	0 days	
Adjustment of Door Cut Out at each Floor	13 Jun '17	22 Jun '17	0%	0 days	
Installation of Landing Doors	22 Jun '17	26 Jun '17	0%	0 days	
Buffer	26 Jun '17	27 Jun '17	0%	0 days	
Governor	03 Jul '17	03 Jul '17	0%	0 days	
Electrical Connections	04 Jul '17	06 Jul '17	0%	0 days	
Safeties	07 Jul '17	15 Jul '17	0%	0 days	
Civil Work Finishes	27 Jul '17	04 Aug '17	0%	0 days	
Handing Over of Elevator 01	17 Aug '17	18 Aug '17	0%	0 days	

S Curve


350 days
300 days
250 days
200 days
150 days
100 days
50 days
0 days
01-04-16
21-04-16
11-05-16
31-05-16
20-06-16
10-07-16
30-07-16
19-08-16
08-09-16
28-09-16
18-10-16
07-11-16
27-11-16
17-12-16
06-01-17
26-01-17
15-02-17
07-03-17
27-03-17
16-04-17
06-05-17
26-05-17
15-06-17
05-07-17
25-07-17
14-08-17
03-09-17
Cumulative Actual Work
Cumulative Work