

# Protecon BTG

*Let's Bridge The Gap Together*

The logo features a central white circle with the Protecon logo (a stylized 'P' with colorful arches) and the text 'PROTECON SMART-PMS'. This central circle is surrounded by four colored segments: a blue segment for 'Infrastructure', an orange segment for 'Oil & Gas', a red segment for 'Project Management', and a red segment for 'Claims & Arbitration'.



**Why PMO needed - To minimize Cost/Time Overruns**  
As per Ministry of Statistics & Program Implementation, the expected Cost overruns for 364/1476 Projects is 4.5 Lakh Crores and 756/1476 projects are in delays ranging from 1 to 5 years

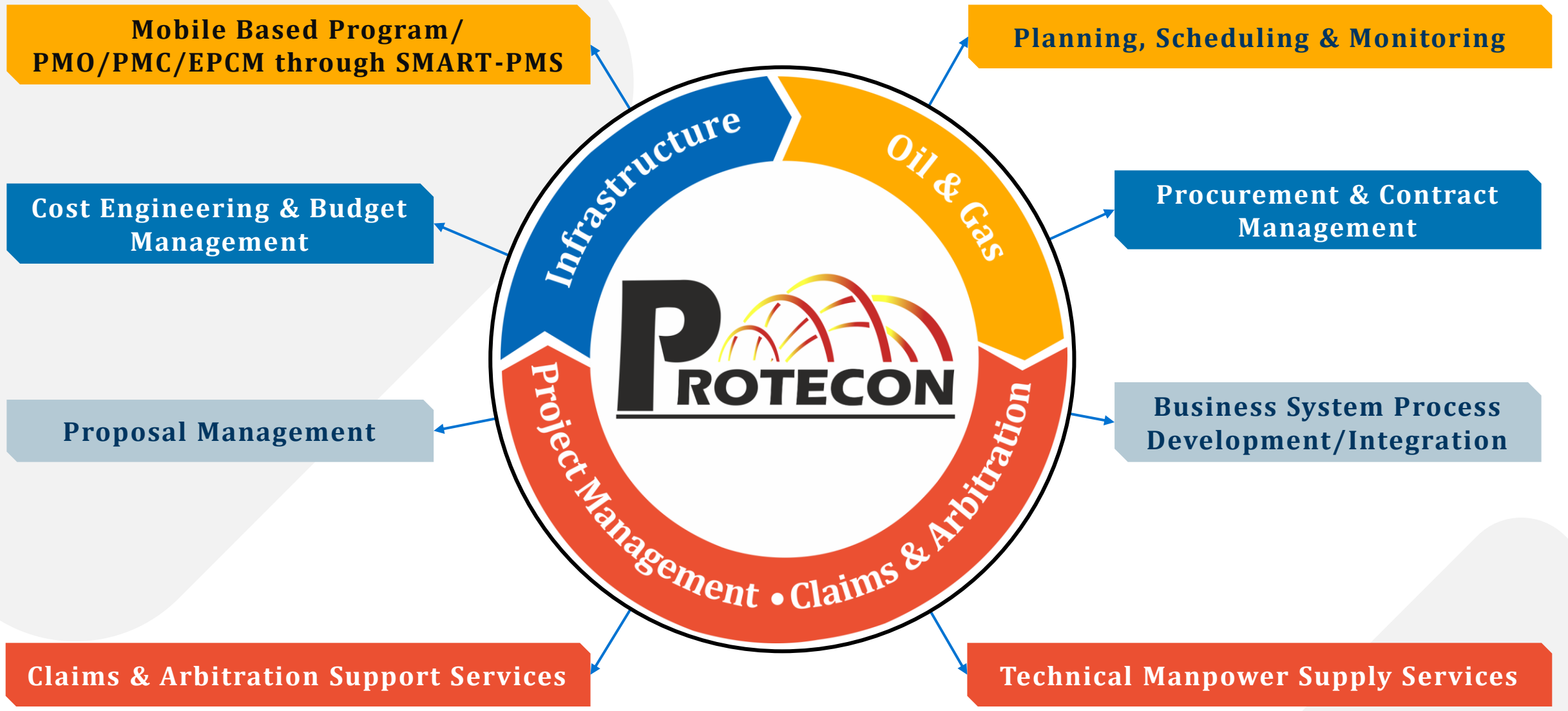
## Consultancy Services



## BTG Program (Training)



**Trained 227 young Engineers in the field of Project Management & Controls**



## Mobile Based Program/PMO/PMC/EPCM through SMART-PMS

- 100 % Digitization of Project Data for Complete Document Management System
- 100% automated actual progress updation of Engineering & Procurement
- Graphical & Tabular Statistical Analysis (Plan Vs Actual) Reports
- Single Window Management Decision Making Tool
- Engineering, Procurement and Construction Management / Integration
- With its inherent Roll-On Roll-Off concept through Multi Located Teams.

## Cost Engineering & Budget Management

- Project Cost Management Plan
- Commitment Recording & Monitoring System
- Cost Forecasts & Trend analysis
- Earned Value Management (EVM) Reports
- Cost analysis for each cost saving / overruns (Post Order Stage)
- Advisories on possible venues of Cost Savings
- Change Impact analysis – Forex Changes, Tax structures, Scope Changes
- Accurate Cash Flow Quarterly Reports for fund management

## Proposal Management

- Qualitative Risk Assessment for Bid-No Bid Decision
- Attending pre-bid meetings and raising queries
- Pre-bid engineering for quantification of scope
- Commercial impact of tender specifications & conditions
- Assistance in preparation of technical bid
- Assistance in preparing the replies against Technical & Commercial queries.

## Claims & Arbitration Support Services

- Cost Impact Analysis for Changes / Extra Work / Idling
- Time Impact Analysis for Execution Delays
- Claims Documentation
- Support during Review & Settlement of Disputes
- Support during Dispute Resolution Board (DRB) proceedings
- Expert Witness Support during Arbitration proceedings

## Planning, Scheduling & Monitoring

- To assist in Defining Project Controls Requirements for Effective Project Monitoring.
- To appraise about project status through Brief & Concise Progress Reports & Dashboards.
- To identify Areas of Concern & advise Mitigation Plan to arrest delays.
- To protect client's interest by demonstrating Potential Risks associated with schedule overruns.
- To highlight the Inter / Intra Dependencies with various projects & executing agencies.
- To collate & integrate the reported information from various executing agencies.

## Procurement & Contract Management

- Vendor Development & Registration
- Preparing Enquiry document / Tenders
- Evaluating Bids
- Techno-commercial Negotiations
- Preparing LOI/LOA
- Preparing PO / Contract Documents
- Preparing Contractual Responses
- Implementing Change Management

## Business System Process Development/Integration

Development and Integration of all project management processes as per client's requirements such as engineering /procurement/construction/planning scheduling & monitoring/budgeting/invoicing/QA-QC/HSE/Risk/Contract management etc.

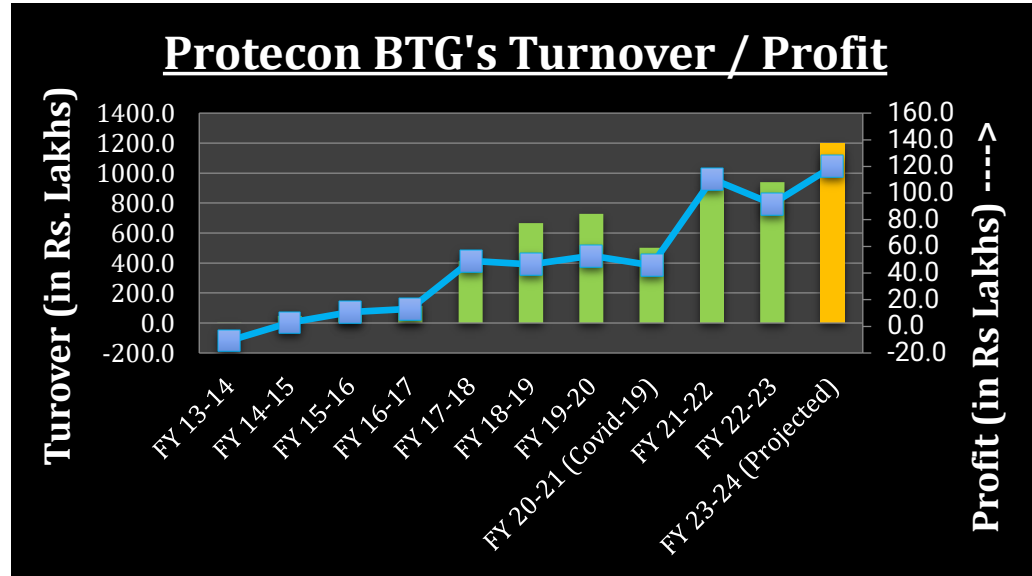
## Technical Manpower Supply Services

- Technology Selection
- Pre-feasibility / Feasibility Studies
- Front –End Engineering Design (FEED)
- Engineering, Procurement & Construction Management (EPCM) by Owner / Client Organizations
- Engineering, Procurement & Construction Management (EPCM) by Engineering Consultant

# Protecon's Journey So far...

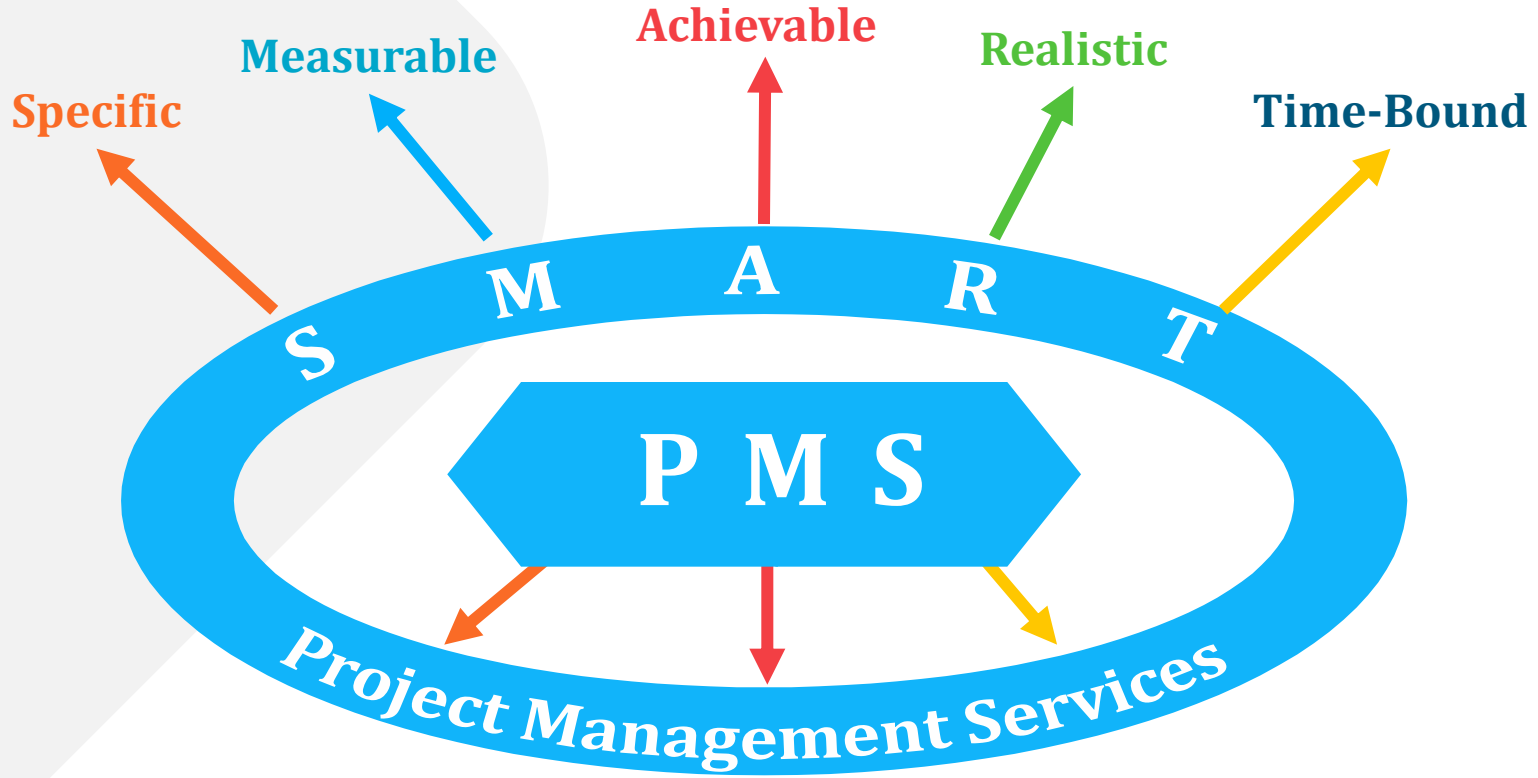


**CLIENTS**

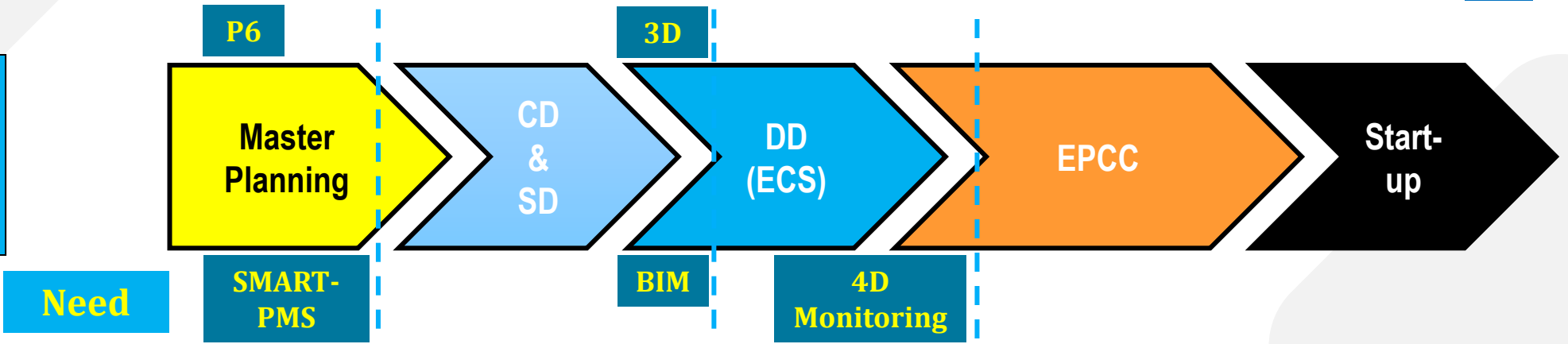


Designed by Protecon

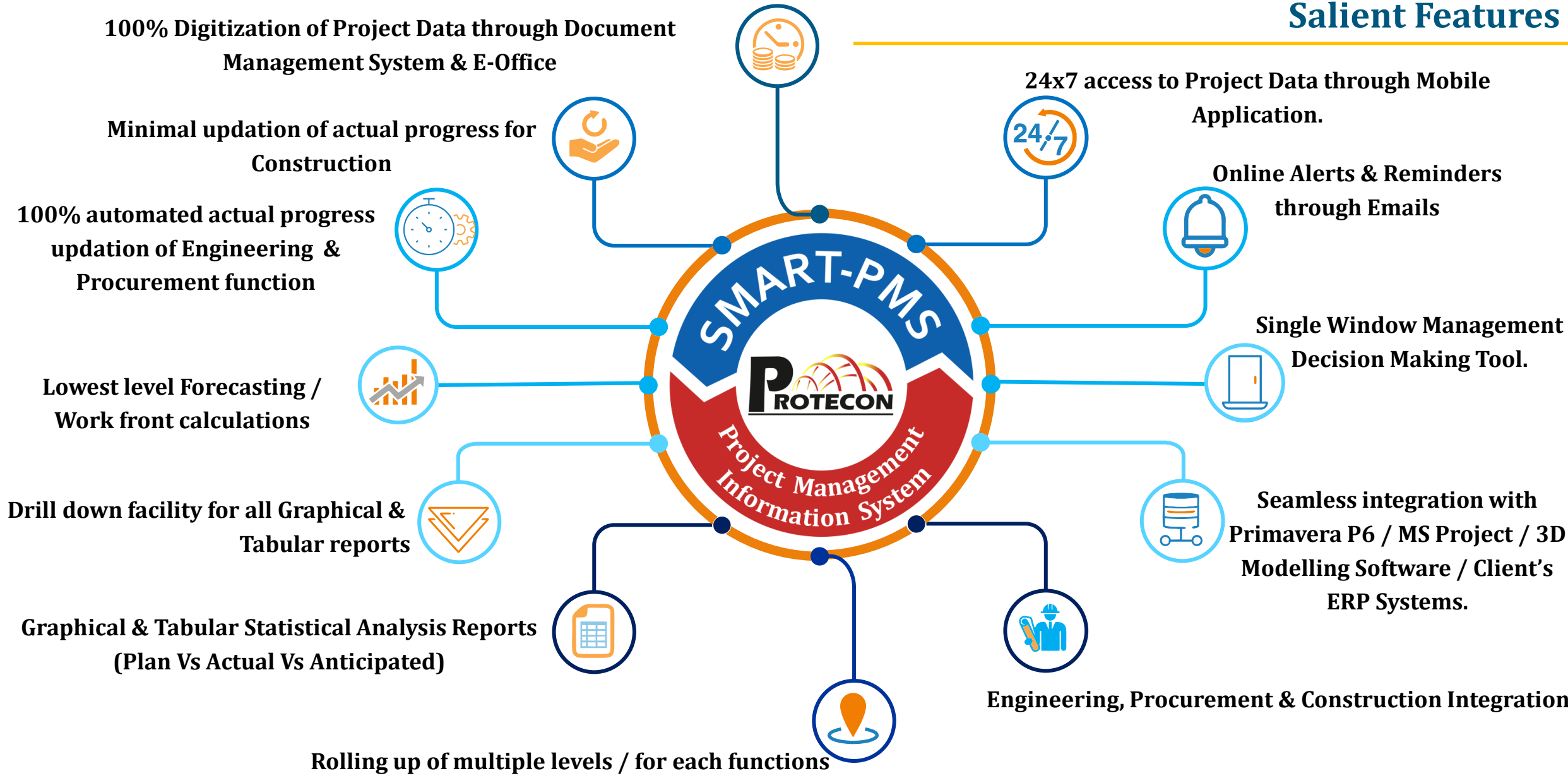
Powered by WRENCH



Typical Project Life Cycle



## Salient Features



## Salient Features

**Integrated Common data Environment for all the stakeholders.**

**Online & Concurrent Commenting of documents.**

**Online creation of Comment Resolution Sheets (CRS) with historical track record of every CRS.**

**Automatic updating of Billing Schedule / Invoices**

**Cash flow & Expenditure monitoring**

**Pictorial Line Diagram / Strip chart for Linear Projects**

**Cloud hosting with 100% Data Confidentiality Assurance**

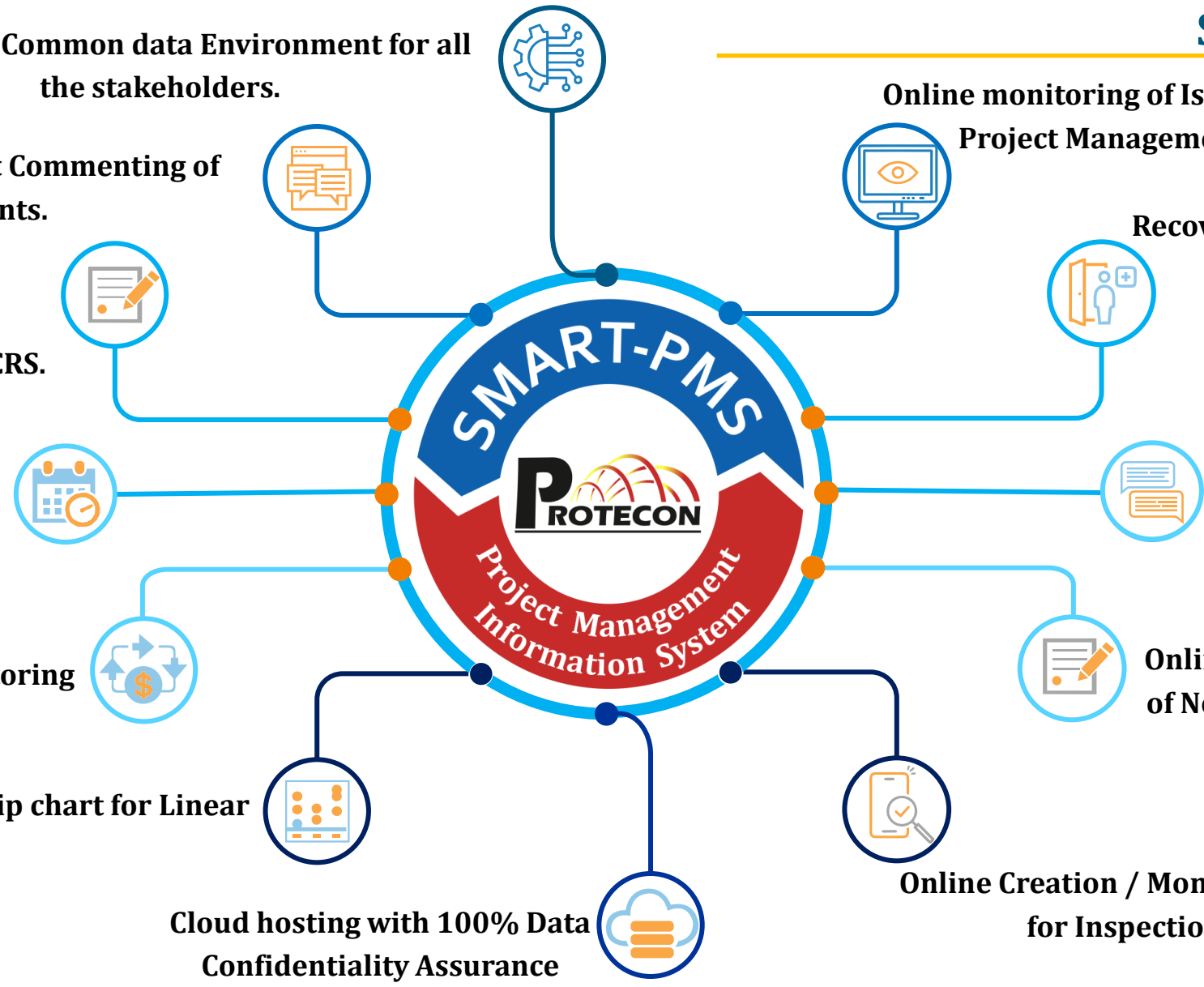
**Online monitoring of Issues linked with all Project Management Processes.**

**Recovery/Catch-up Plans Application.**

**Online Creation / Monitoring of Request of clarification (RFCs).**

**Online Creation / Monitoring of Non-conformance Reports (NCRs).**

**Online Creation / Monitoring of Request for Inspections (RFIs)**





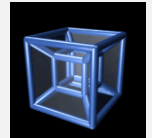
## Additional Features



**Integrated Timesheet Management for effective Cost/Resource Monitoring**



**Live Streaming of Construction Work through CCTV.**



**4-D Planning, Scheduling & Monitoring.**



**Integration with GIS Software & Satellite Imaging System.**



**Online Equipment Tracking through RFID for effective Cost/Resource Monitoring.**



**Integration with Drone Monitoring System.**



**Online Monitoring / Witnessing of Inspection Tests / Factory Acceptance Tests .**



## Input Requirements

### TIME/SCHEDULE

Integrated Project schedule  
Timeline, Key Milestones, Delay,  
Pending Approval

### PROGRESS

Package wise progress,  
Deliverable wise progress,  
Construction quantity wise  
progress

### COST/BUDGET

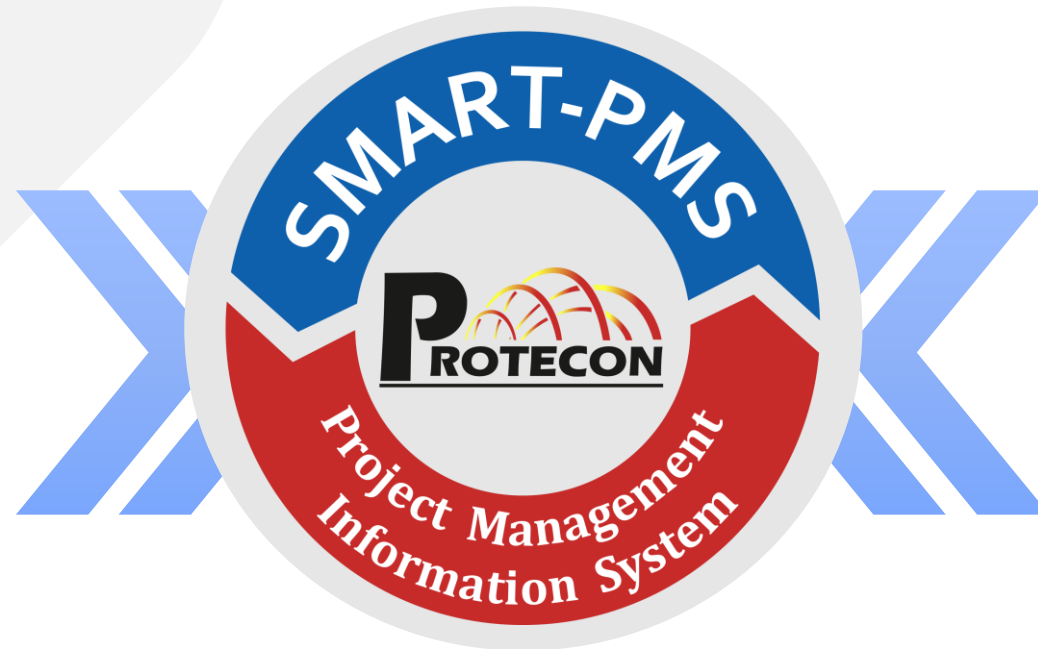
Budgets & Commitments, PO,  
Invoice certified, Payments &  
Expenditure

### ENGINEERING

Document Controls Register

### PROCUREMENT

Procurement Plan



### RISK / ISSUE

Risk Register

### INTERFACE / RFCs

PMC Interface/ RFC Register

### HSE / QUALITY

HSE Register, LTIs, Audits,  
Trainings, NCRs, RFIs

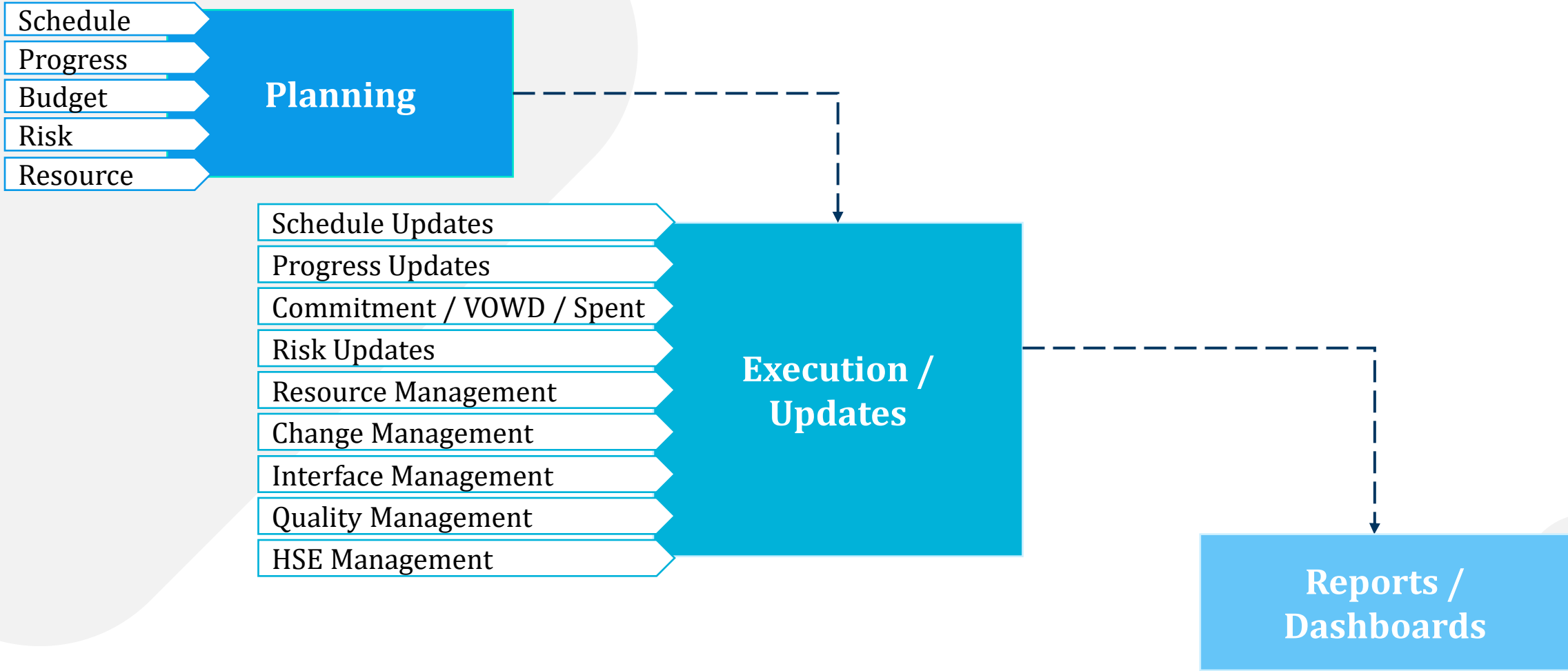
### RESOURCES

Manpower & Machinery

### CONSTRUCTION

Construction Plan  
Commodity Tracking

## Execution



## Outputs

### Dashboards

- Portfolio Level
- Project High Level Information
- Project Detailed Level Information
- Package Level Information

### Reports

#### Schedule

- Key Milestone Analysis
- Timeline

#### Progress

- Progress S-curve
  - Overall / Package wise
- Progress Tables
  - Overall / Packages
- Planned Vs Actual
- Variance Analysis

#### Cost

- Cost Control
- Budget Vs Commitment
- Package wise Cashflow/ VOWD

#### Risk

- Risk Register
- Heat Map

#### Resource

- Resource Requirements
- Resource utilization

#### Interface

- Interface / RFC Status
- Contractor wise interface status

#### Quality

- Overall Status (RFIs/NCRs)
- Contractor wise Status

#### HSE

- HSE Statistics
- HSE Monthly report
- HSE Tabular report

#### Engineering

- Engineering Status
- Document Control Register

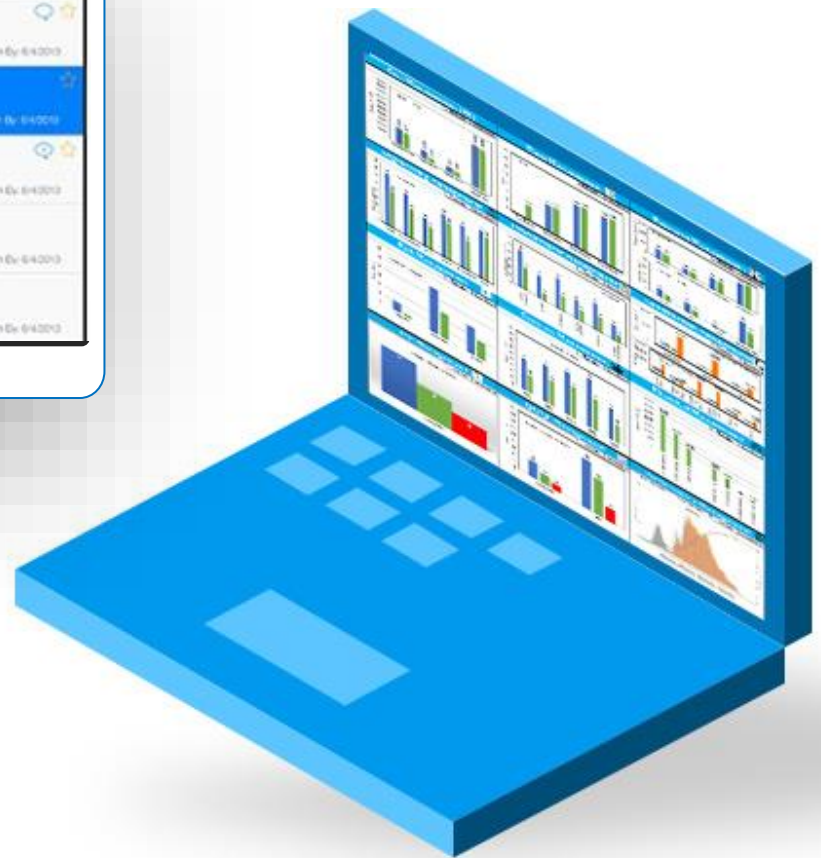
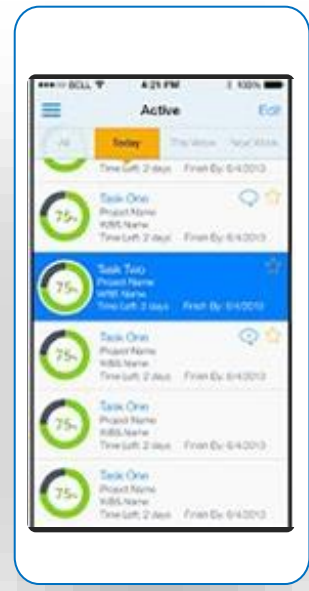
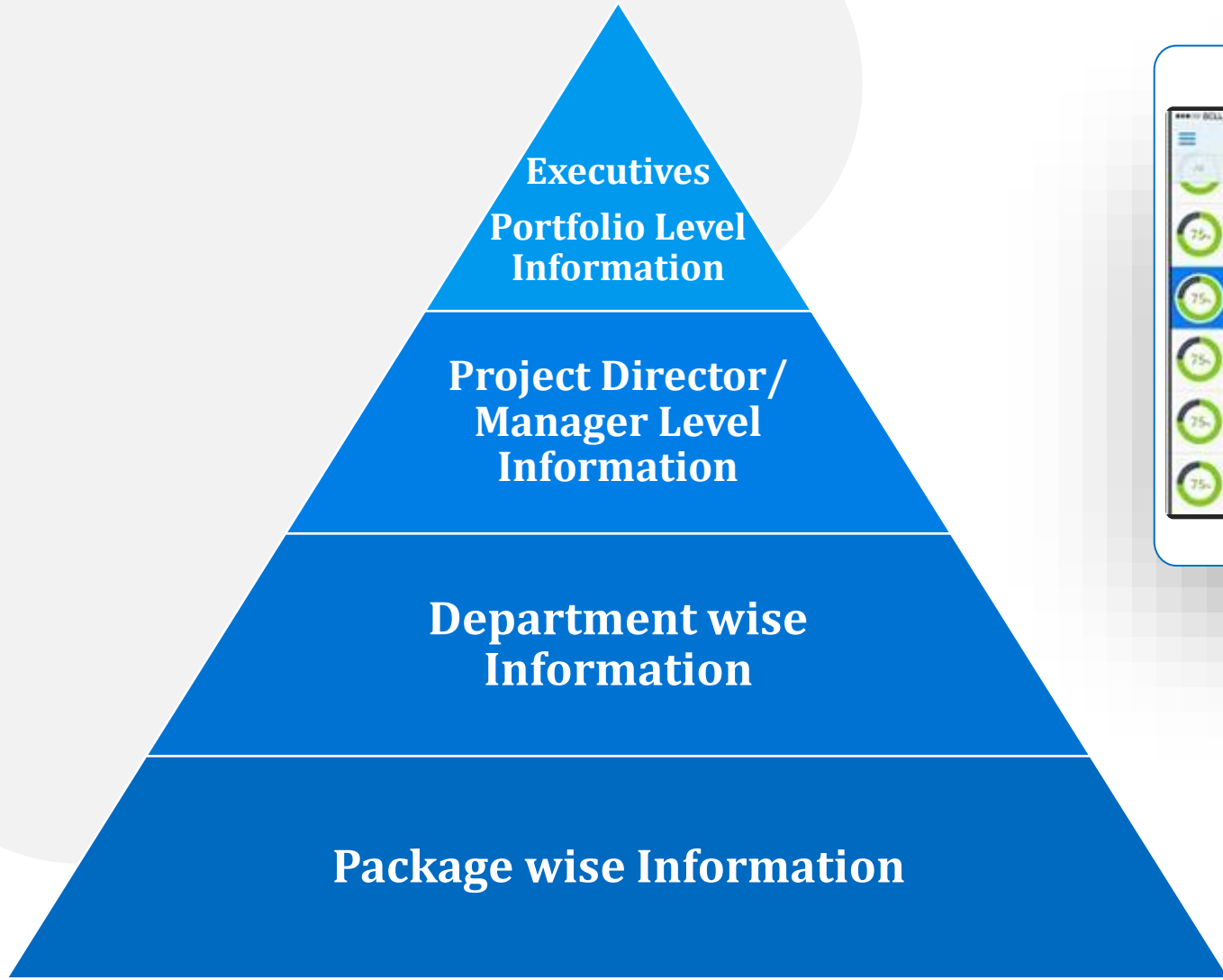
#### Procurement

- Procurement Tracking
- Procurement Status table

#### Construction

- Commodity Tracking
- Quantum Analysis
- Variance Analysis

## Avoid !!! Information Overload - Adapt Multi-layered Dashboards



**EPC Contractor**  
**Larsen & Toubro**  
 Scope Breakdown

**Timeline**

- Week/Month
- Month/Year**
- Quarter/Year

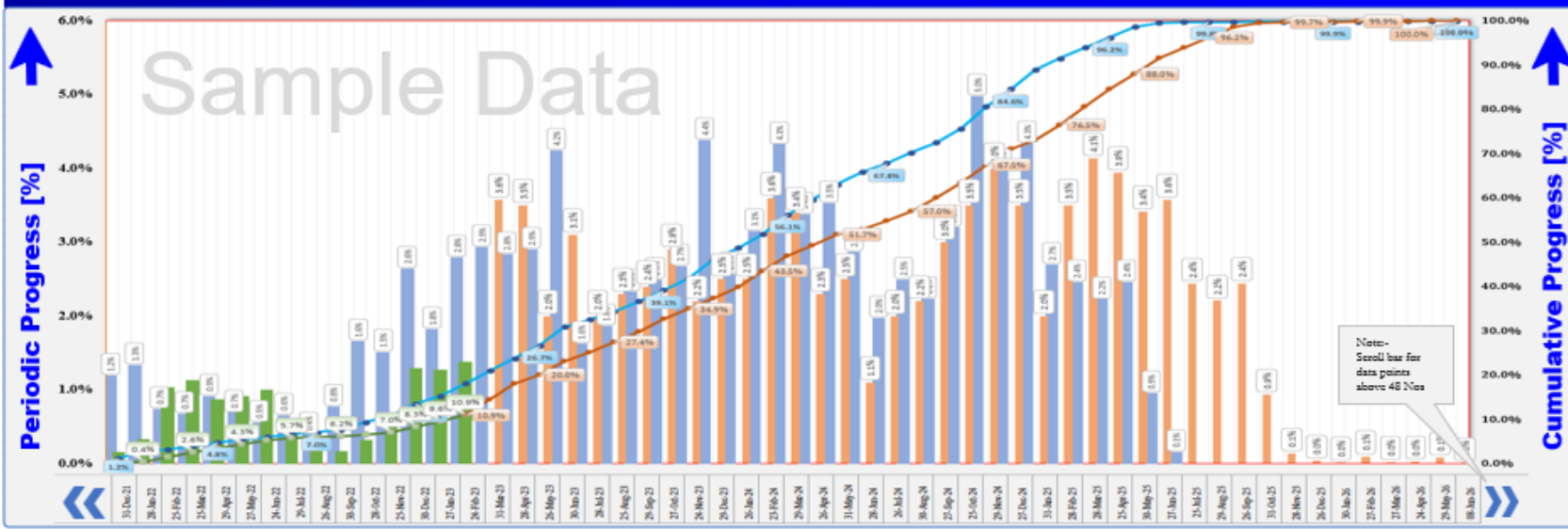
**Base Schedule**

- Original Baseline**
- Revised Baseline
- Recovery Plan

**Modules**

- Performance Management**
- Schedule Management
- Cost Management
- Contract Management
- QA/QC Management
- HSSE Management
- Resource Management
- Risk/Issue Management

## 1. Progress S-Curve – Overall Performance



## 2. Progress Trend Analysis

Period	25-Nov-22	30-Dec-22	27-Jan-23	24-Feb-23	31-Mar-23	28-Apr-23	26-May-23	30-Jun-23	28-Jul-23	26-Aug-23	29-Sep-23	27-Oct-23	24-Nov-23
	M-6	M-5	M-4	M-3	M-2	M-1	M-0	M+1	M+2	M+3	M+4	M+5	M+6
<b>Plan</b>	0.4%	0.7%	1.7%	1.5%	2.6%	1.8%	2.8%	2.9%	2.8%	2.9%	4.2%	1.6%	1.8%
<b>Actual/Forecast</b>	0.6%	0.4%	0.8%	0.7%	0.4%	1.2%	1.4%	3.6%	3.5%	2.0%	3.1%	2.0%	2.3%
<b>Variance</b>	0.2%	-0.3%	-0.9%	-0.8%	-2.3%	-0.6%	-1.4%						

## 3. Overall Progress Status

Item	Wtg %	Up-to last month (%)			For this Month (%)			Cumm. up to this month (%)		
		Plan	Act	Var.	Plan	Act	Var.	Plan	Act	Var.
<b>General</b> <a href="#">(Click here)</a>	3.1%	94.4%	78.5%	-16.0%	0.1%	0.0%	-0.1%	94.6%	78.5%	-16.1%
<b>Engineering</b> <a href="#">(Click here)</a>	0.4%	68.8%	65.5%	-3.3%	2.5%	2.4%	-0.1%	71.3%	67.9%	-3.4%
<b>Procurement</b> <a href="#">(Click here)</a>	2.0%	48.3%	11.6%	-36.7%	15.1%	0.1%	-15.0%	63.3%	11.7%	-51.7%
<b>Construction</b> <a href="#">(Click here)</a>	94.3%	11.8%	7.1%	-4.7%	2.6%	1.4%	-1.2%	14.4%	8.5%	-5.9%
<b>Closeout</b> <a href="#">(Click here)</a>	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Overall Ppogress</b>	<b>100.0%</b>	<b>15.3%</b>	<b>9.6%</b>	<b>-5.7%</b>	<b>2.8%</b>	<b>1.4%</b>	<b>-1.4%</b>	<b>18.0%</b>	<b>10.9%</b>	<b>-7.1%</b>

## Status as of 16-JUN-2023



Sch. Start	Sch. Finish	Rev. Finish
Act. Start	Act. Finish	Ant. Finish
Cum. Plan	Cum. Act.	Variance
Sch. Dur.	Ant. Dur.	Rem. Dur.
Awarded ₹	Invoiced ₹	Paid ₹

## Legends

- Periodic Plan
- Periodic Actual
- Periodic Forecast
- Cumulative Plan
- Cumulative Actual
- Cumulative Forecast

**EPC Contractor**  
**Larsen & Toubro**  
 Scope Breakdown

**Timeline**

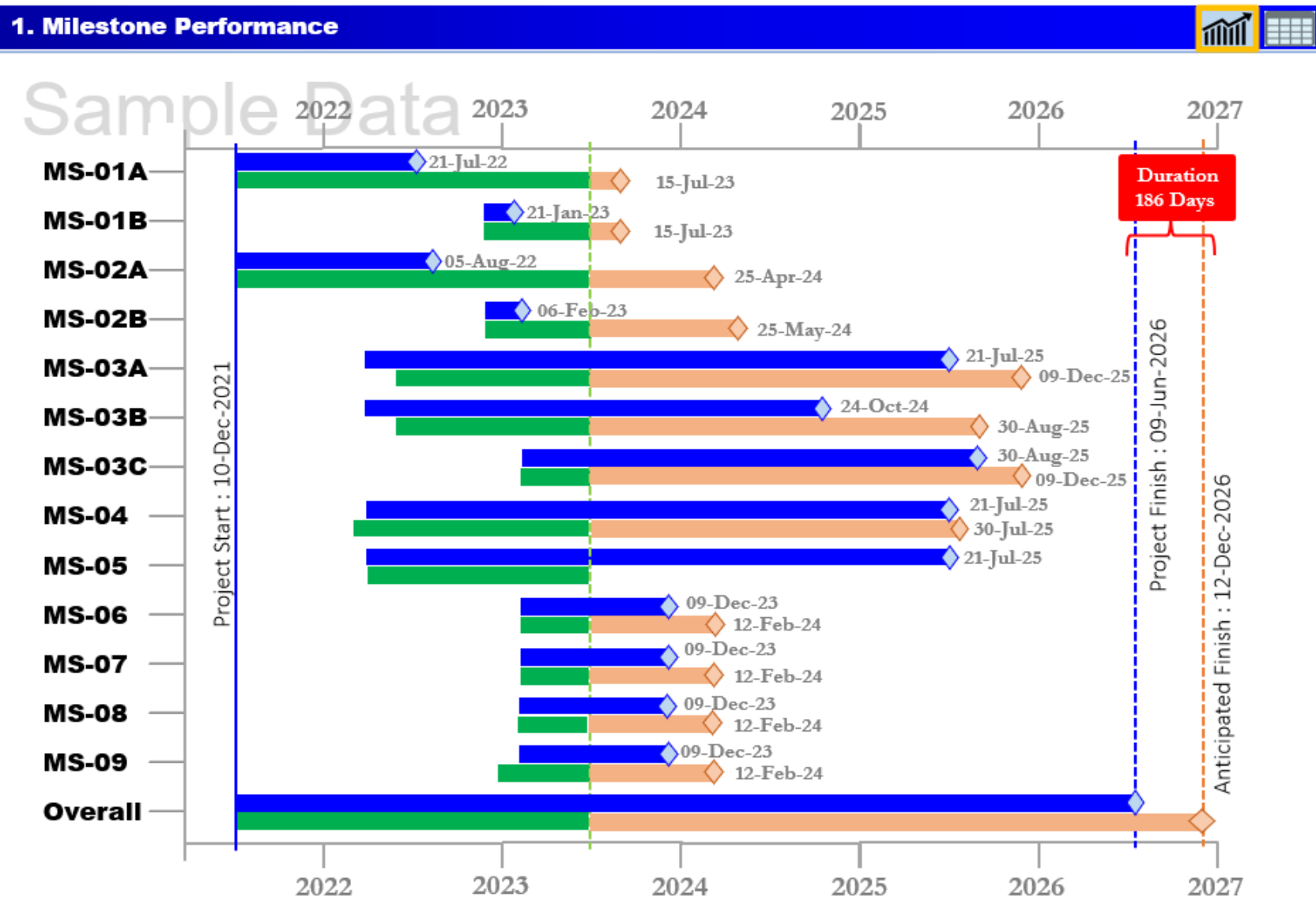
- Week/Month
- Month/Year**
- Quarter/Year

**Base Schedule**

- Original Baseline**
- Revised Baseline
- Recovery Plan

**Modules**

- Performance Management
- Schedule Management**
- Cost Management
- Contract Management
- QA/QC Management
- HSSE Management
- Resource Management
- Risk/Issue Management



Status as of: **16-JUN-2023**

### Baseline Status

Baseline Start Date	Baseline Finish Date	Baseline Duration (Days)
10-Dec-21	09-Jun-26	1643 d

### EOT Status

Latest EOT Requested	Latest EOT Approved	Latest EOT Duration
20-Oct-27	15-Jun-27	372 d

### Schedule Analysis

Total Milestones	Completed Milestones	Balance Milestones
9 No	2 No	7 No

Total Activities in CWP	Actualized Activities in updated CWP	Balance / In-Progress Activities
11449 No	1589 No	9870 No

Critical Activities in CWP	Critical Activities in updated CWP	Variances per updated CWP
1066 No	4929 No	+3863 No

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## 1. Milestone Performance

Milestone ID	Milestone Description	Baseline Finish	Actual / Anticipated Finish	Variance [Days]	Schedule Progress [%]	Actual Progress [%]	Variance [%]
		Schedule Analysis			Performance Analysis		
MS-01A	Submission of Technical design drawings - Viaduct & Bridges - (excluding KM 501.519 to KM 503.750)	21-Jul-22	06-Jun-22	45	78%	60%	-18%
MS-01B	Submission of Technical design drawings - Viaduct & Bridges - (KM 501.519 to KM 503.750)	21-Jan-23	26-May-22	240	68%	51%	-17%
MS-02A	Submission of Technical design drawings - Interface Contractor & All Structures	05-Aug-22	24-Jan-24	-537	58%	42%	-16%
MS-02B	Submission of Technical design drawings - Interface Contractor & All Structures-(KM 501.519 to KM 503.750)	06-Feb-23	16-Jun-23	-130	48%	26%	-22%
MA-03A	Mainline- Handing over to T-3 Contractor- (KM.489.467 to KM 507.599) Excluding MS-03B & MS-03C	09-Jun-25	29-Jun-26	-385	38%	18%	-20%
MS-03B	Mainline- Handing over to T-3 Contractor- (KM 490.6 to KM 492.6)	11-Oct-24	30-Jun-25	-262	28%	9%	-19%
MS-03C	Mainline- Handing over to T-3 Contractor- (KM 501.519 to KM 503.750)	08-Sep-25	26-May-26	-260	18%	-2%	-20%
MS 04	Handover of Ahmedabad Station to T3 Contractor	09-Jun-25	12-Jun-26	-368	8%	10%	2%
MS 05	Handover of Sabarmati Station to T3 Contractor	09-Jun-25	23-Apr-26	-318	7%	0%	1%
MS 06	Handover of SSP (Ahmedabad) to E1 Contractor	08-Dec-23	04-Jan-24	-27	6%	0%	-6%
MS 07	Handover of SER & DSS (Ahmedabad) to E1 Contractor	08-Dec-23	04-Jan-24	-27	5%	0%	-5%
MS 08	Handover of SER (Sabarmati) to E1 Contractor	22-Mar-25	12-Jun-25	-82	4%	0%	-4%
MS 09	Handover of DSS (Sabarmati) to E1 Contractor	08-Dec-23	04-Jan-24	-27	4%	0%	-4%
<b>Overall</b>	<b>Project Close-Out &amp; Taking-Over Certificate</b>	<b>08-Jun-26</b>	<b>12-Dec-26</b>	<b>-187</b>	<b>31%</b>	<b>26%</b>	<b>-5%</b>

Status as of: **16-JUN-2023**

**Baseline Status**

Baseline Start Date	Baseline Finish Date	Baseline Duration (Days)
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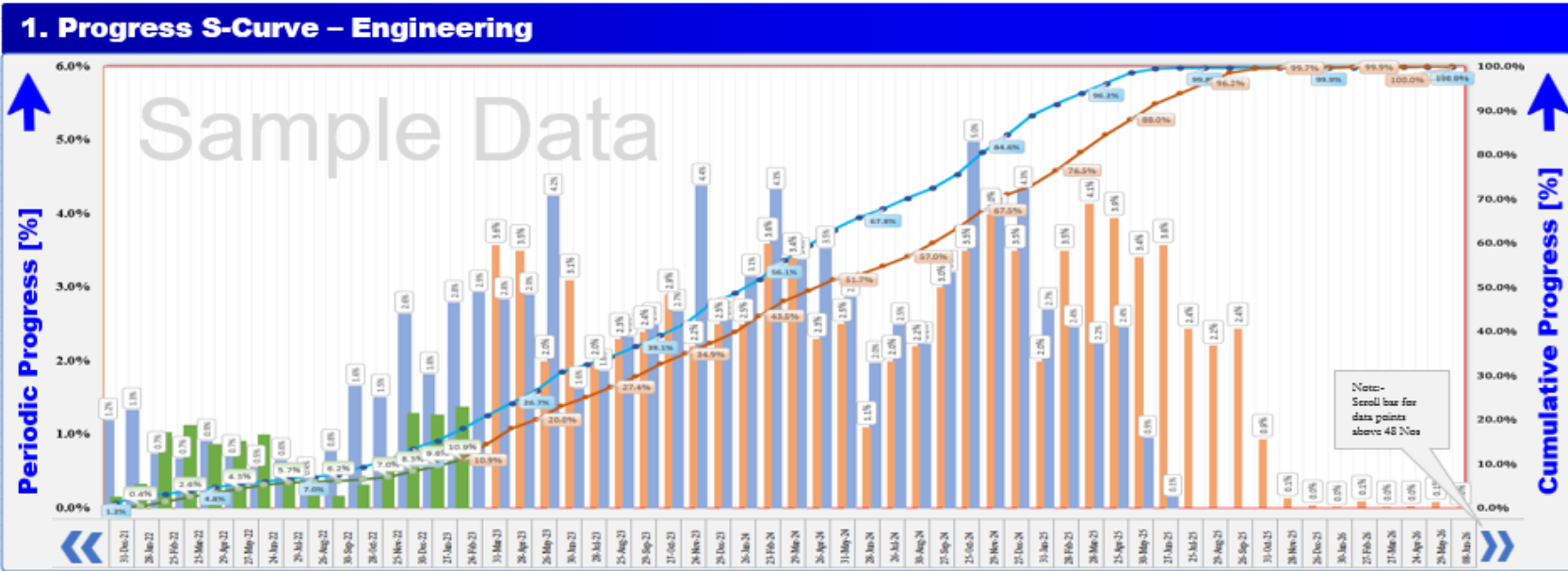
**EPC Contractor**  
**Larsen & Toubro**  
 Scope Breakdown

**Facility**

- Mainline
- Tunnel
- Earth Structures
- Crossing Bridge
- River Bridge
- Station/SEB/FOB's
- Depot
- SMD/Ramp
- TSS/SP/SSP/SER/DSS/IDSS

**Modules**

- Performance Management
- Schedule Management
- Cost Management
- Contract Management
- QA/QC Management
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- Risk/Issue Management



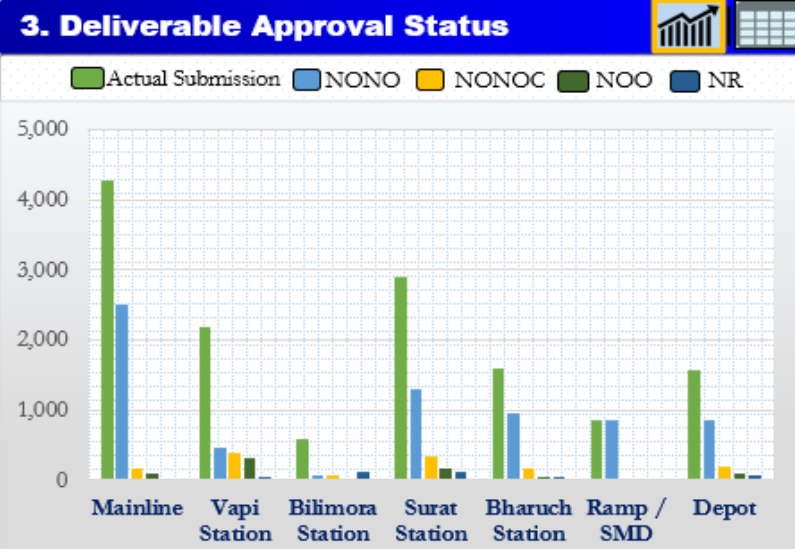
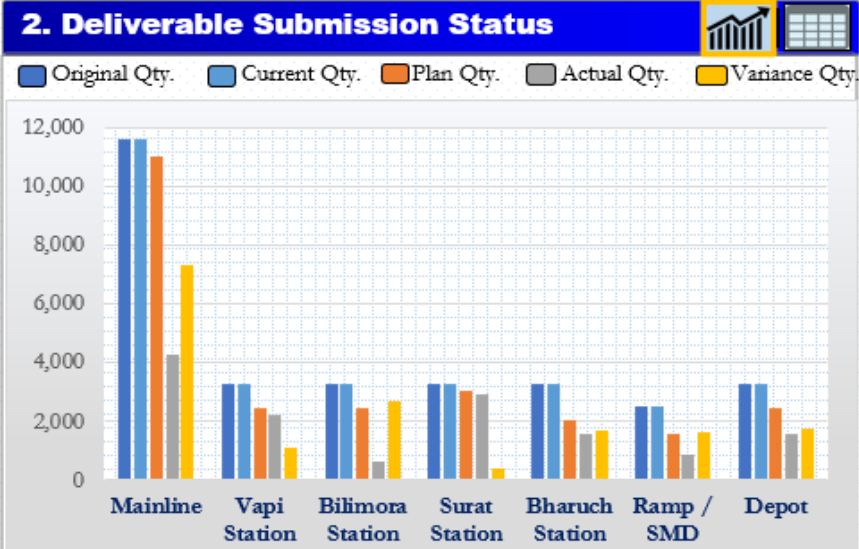
Status as of: **16-JUN-2023**

Cum. Plan	Cum. Act.	Variance
87.6%	75.8%	-11.8%

Sch. Dur.	Ant. Dur.	Variance
360 days	820 days	-460 days

Submittals Pending with Engineer for Review <=21 Days	Submittals Pending with Engineer for Review > 21 Days	Total Submittals Pending with Engineer
2810 No	1661 No	4471 No

Resubmission Pending with Contractor <=14 Days	Resubmission Pending with Contractor >14 Days	Total Resubmission Pending with Contractor
300 No	1030 No	1330 No



**Legends**

- Periodic Plan (Light Blue)
- Periodic Actual (Green)
- Periodic Forecast (Orange)
- Cumulative Plan (Blue line with dots)
- Cumulative Actual (Green line with dots)
- Cumulative Forecast (Orange line with dots)

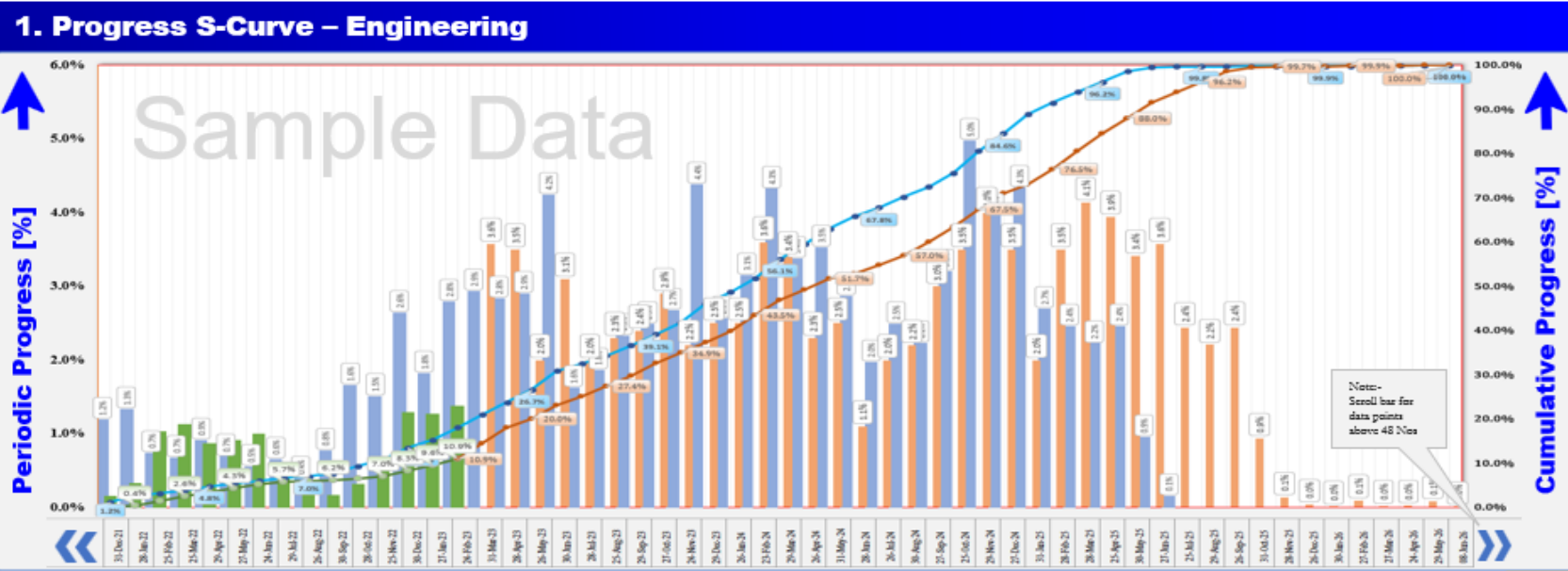
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360 days	820 days	-460 days

<b>Submittals Pending with Engineer for Review &lt;=21 Days</b>	<b>Submittals Pending with Engineer for Review &gt; 21 Days</b>	<b>Total Submittals Pending with Engineer</b>
2810	1661	4471

<b>Resubmission Pending with Contractor &lt;=14 Days</b>	<b>Resubmission Pending with Contractor &gt;14 Days</b>	<b>Total Resubmission Pending with Contractor</b>
300	1030	1330

### 2. Deliverable Submission Status

Facility	Original	Current	Plan Qty.	Actual Qty.	Variance Qty.
Vapi Station	3,284	3,284	2,472	2,891	419
Bilimora Station	3,284	3,284	2,472	598	-1,874
Surat Station	3,284	3,284	3,050	3589	539
Bharuch Station	3,284	3,284	2,050	1585	-465
Ramp / SMD	2500	2500	1560	1958	398
Depot	3,284	3,284	2,472	1560	-912
<b>Total</b>	<b>30,518</b>	<b>30,518</b>	<b>25,064</b>	<b>13,968</b>	<b>-11,096</b>

Note: Click here to download Original Drawing / Deliverable List in XL / csv format

### 3. Deliverable Approval Status

Facility	Actual Submission	NONO	NONOC	NOO	NR
Mainline	4,274	2,507	175	102	28
Vapi Station	2,191	456	380	317	39
Bilimora Station	598	79	71	27	111
Surat Station	2895	1,300	350	158	127
Bharuch Station	1585	950	158	58	45
Ramp / SMD	865	857	1	0	2
Depot	1560	858	195	85	61
<b>Total</b>	<b>13,968</b>	<b>7,007</b>	<b>1,330</b>	<b>747</b>	<b>413</b>

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- Cumulative Plan
- Cumulative Actual
- Cumulative Forecast

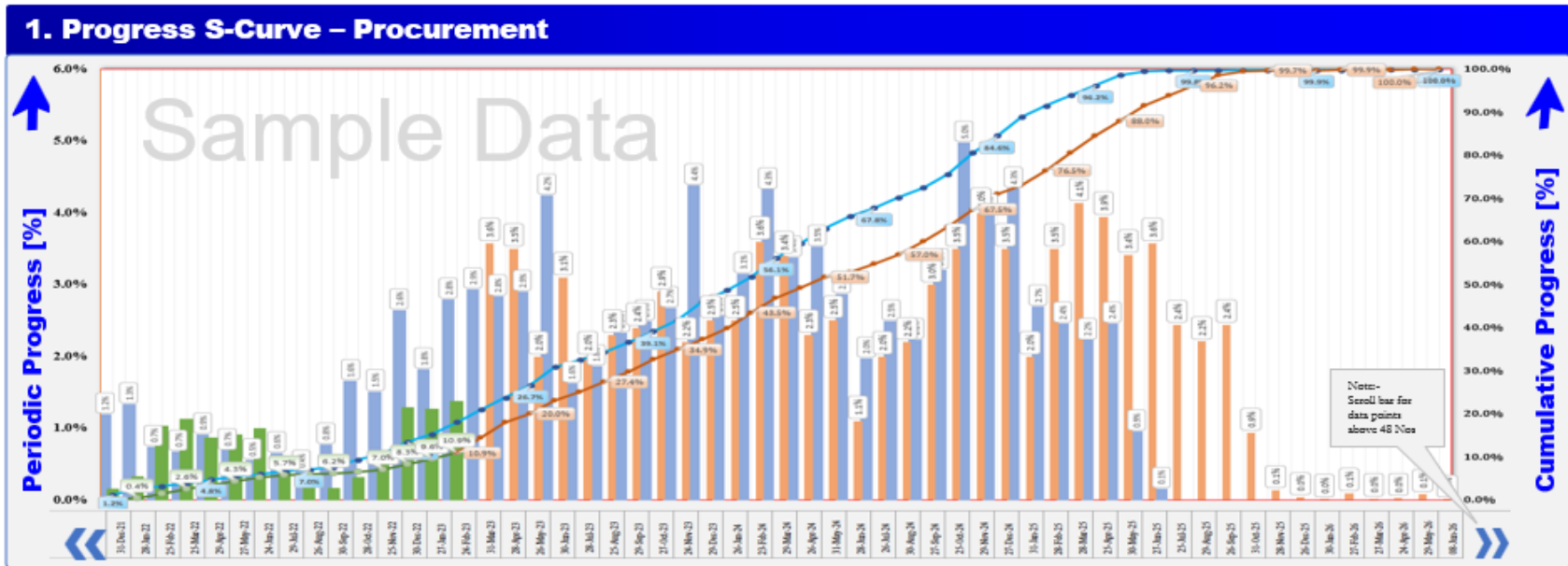
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**Facility**

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**Modules**

- Performance Management**
  - Schedule Management
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  - QA/QC Management
  - HSSE Management
  - Resource Management
  - Risk/Issue Management



### 2. Pre-Ordering Performance

Material/Bulk Supply | **Plant & Equipment** | Consumables | Services

SN	List of Plant & Equipment	UoM	Scope Qty	Order (Sch)	Order (Act)	Variance Qty
1	Launching Gantry - 01 (1200T)	No	1	1	1	-
2	Launching Gantry - 02 (1200T)	No	1	1	1	-
3	Launching Gantry - 03 (1200T)	No	1	1	1	-
4	Launching Gantry - 04 (1200T)	No	1	1	0	-1
5	Launching Gantry - 05 (1800T)	No	1	0	1	+1
6	Mobile Crane 350T (I Girder Erection)	No	2	0	2	+2
7	Launching Nose for Steel Truss	No	1	1	1	-
8	Gantries Cranes (120T) for Casting Yard	No	5	5	4	-1
9	Formwork and Supporting System (Pier Cap)	Set	12	12	10	-2
10	Formwork and Supporting System (Pier)	Set	8	5	4	-1
11	Formwork and Supporting System (Pier Cap)	Set	10	10	8	-2
12	Precast segment molds / formwork System	Set	12	13	13	-

**Note:** Click here to download List of Activities from EPPM in XL / csv format

### 3. Post-Ordering Performance

Material/Bulk Supply | **Plant & Equipment** | Consumables | Services

SN	List of Plant & Equipment	UoM	Ordered (Act)	Delivery (Sch)	Delivery (Act)	Variance Qty
1	Launching Gantry - 01 (1200T)	No	1	1	1	-
2	Launching Gantry - 02 (1200T)	No	1	1	1	-
3	Launching Gantry - 03 (1200T)	No	1	1	1	-
4	Launching Gantry - 04 (1200T)	No	1	1	0	-1
5	Launching Gantry - 05 (1800T)	No	1	0	1	+1
6	Mobile Crane 350T (I Girder Erection)	No	2	0	2	+2
7	Launching Nose for Steel Truss	No	1	1	1	-
8	Gantries Cranes (120T) for Casting Yard	No	5	5	4	-1
9	Formwork and Supporting System (Pier Cap)	Set	10	10	8	-2
10	Formwork and Supporting System (Pier)	Set	4	3	2	-1
11	Formwork and Supporting System (Pier Cap)	Set	8	6	4	-2
12	Precast segment molds / formwork System	Set	13	13	13	-

Status as of: **16-JUN-2023**

Cum. Plan	Cum. Act.	Variance
15.3%	12.4%	-2.9%
Sch. Dur.	Ant. Dur.	Variance
360 days	820 days	-460 days

### FIM Status

Total FIM(S)	Delivery Scheduled	Delivery Actual
23 Nos	20 Nos	15 Nos

### Imported Items Status

Imported Items	Delivery Scheduled	Delivery Actual
15 Nos	12 Nos	3 Nos

### Legends

- Periodic Plan
- Periodic Actual
- Periodic Forecast
- Cumulative Plan
- Cumulative Actual
- Cumulative Forecast

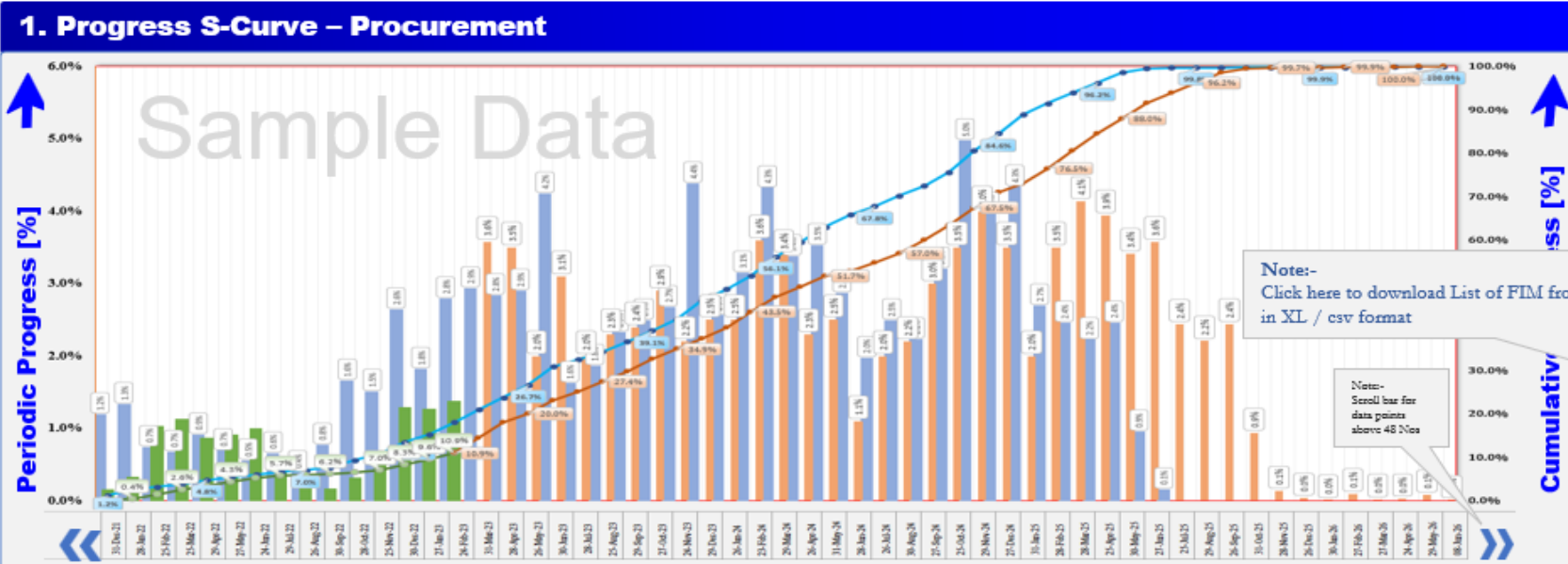
**EPC Contractor**  
**Larsen & Toubro**

**Facility**

- Viaduct
- Tunnel
- Earth Structures
- Crossing Bridge
- River Bridge
- Station/SEB/FOB's
- Depot
- SMD/Ramp
- TSS/SP/SSP/SER/DSS/IDSS

**Modules**

- Performance Management**
  - Schedule Management
  - Cost Management
  - Contract Management
  - QA/QC Management
  - HSSE Management
  - Resource Management
  - Risk/Issue Management



Status as of: **16-JUN-2023**

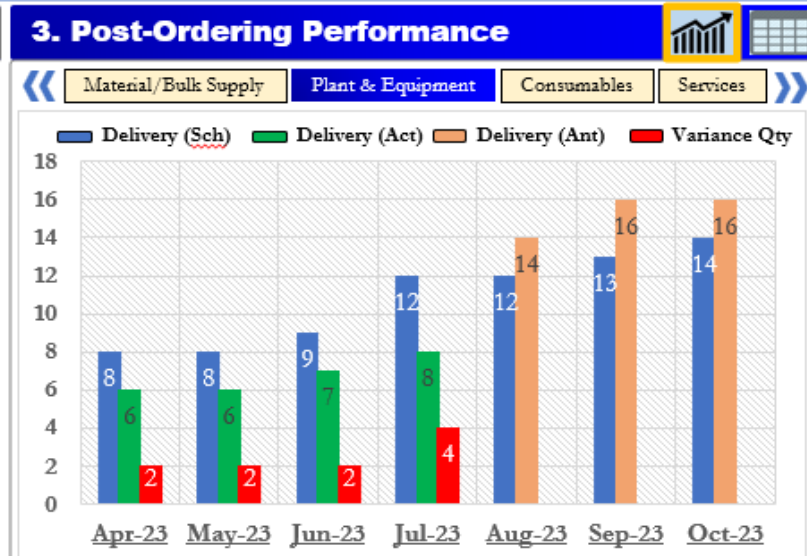
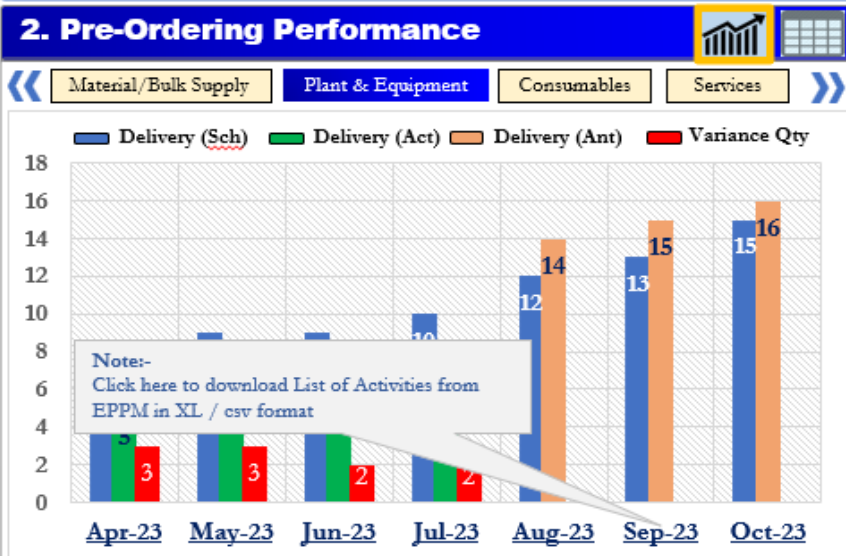
Cum. Plan	Cum. Act.	Variance
15.3%	12.4%	-2.9%
Sch. Dur.	Ant. Dur.	Variance
360 days	820 days	-460 days

**Item Status**

Total FIM(S)	Delivery Scheduled	Delivery Actual
23 Nos	20 Nos	15 Nos

**Imported Items Status**

Imported Items	Delivery Scheduled	Delivery Actual
15 Nos	12 Nos	3 Nos



**Legends**

- Periodic Plan
- Periodic Actual
- Periodic Forecast
- Cumulative Plan
- Cumulative Actual
- Cumulative Forecast

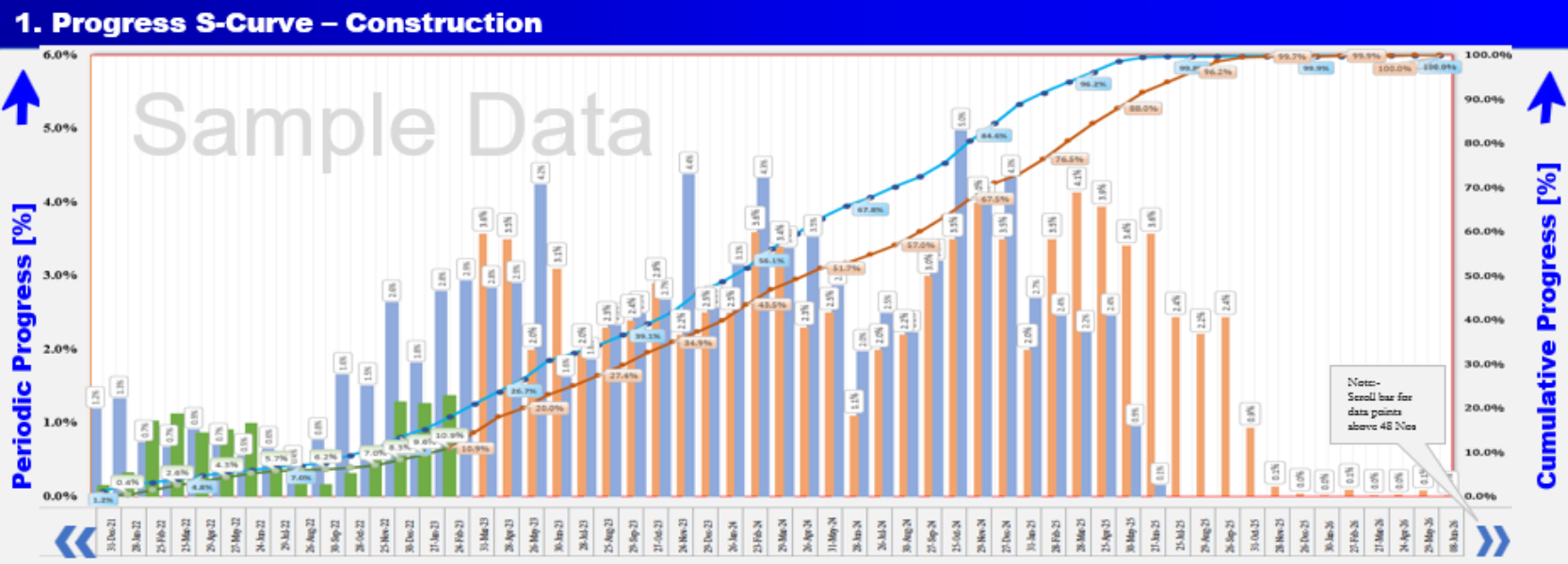
**EPC Contractor**  
**Larsen & Toubro**  
 Scope Breakdown

**Facility**

- Viaduct
- Tunnel
- Earth Structures
- Crossing Bridge
- River Bridge
- Station/SEB/FOB's
- Depot
- SMD/Ramp
- TSS/SP/SSP/SER/DSS/IDSS

**Modules**

- Performance Management
- Schedule Management
- Cost Management
- Contract Management
- QA/QC Management
- HSSE Management
- Resource Management
- Risk/Issue Management



Status as of: **16-JUN-2023**

Cum. Plan	Cum. Act.	Variance
15.3%	12.4%	-2.9%

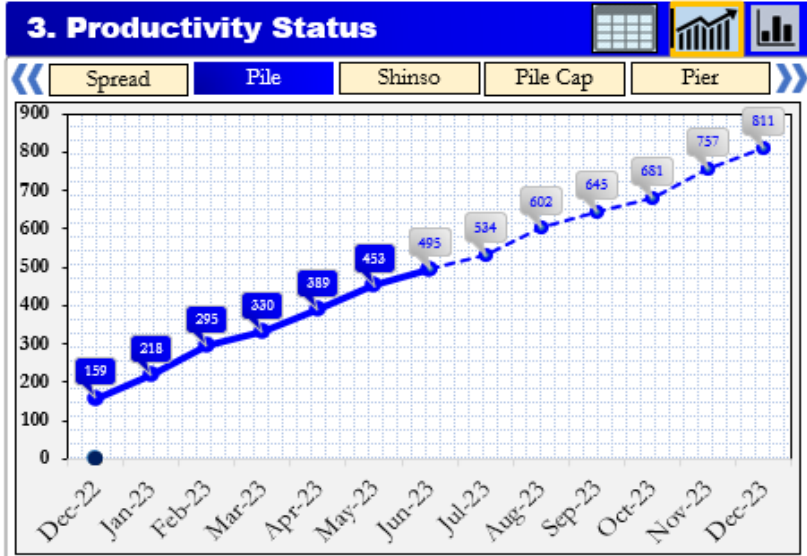
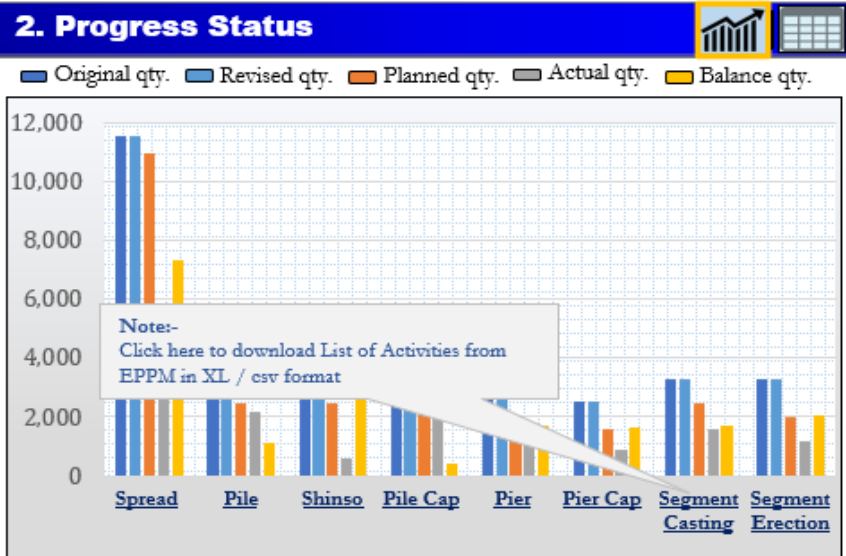
Sch. Dur.	Ant. Dur.	Variance
360 days	820 days	-460 days

**ROW Handover Status**

Total ROW [KM]	ROW Encumbrance-free	ROW Balance [KM]
237.100	236.100	1.000

**Utility Shifting Status**

Total Utilities [Numbers]	Utilities Shifted [Numbers]	Shifting Balance [Number]
15	12	3



**Legends**

- Periodic Plan (Light Blue)
- Periodic Actual (Green)
- Periodic Forecast (Orange)
- Cumulative Plan (Blue)
- Cumulative Actual (Light Green)
- Cumulative Forecast (Light Orange)

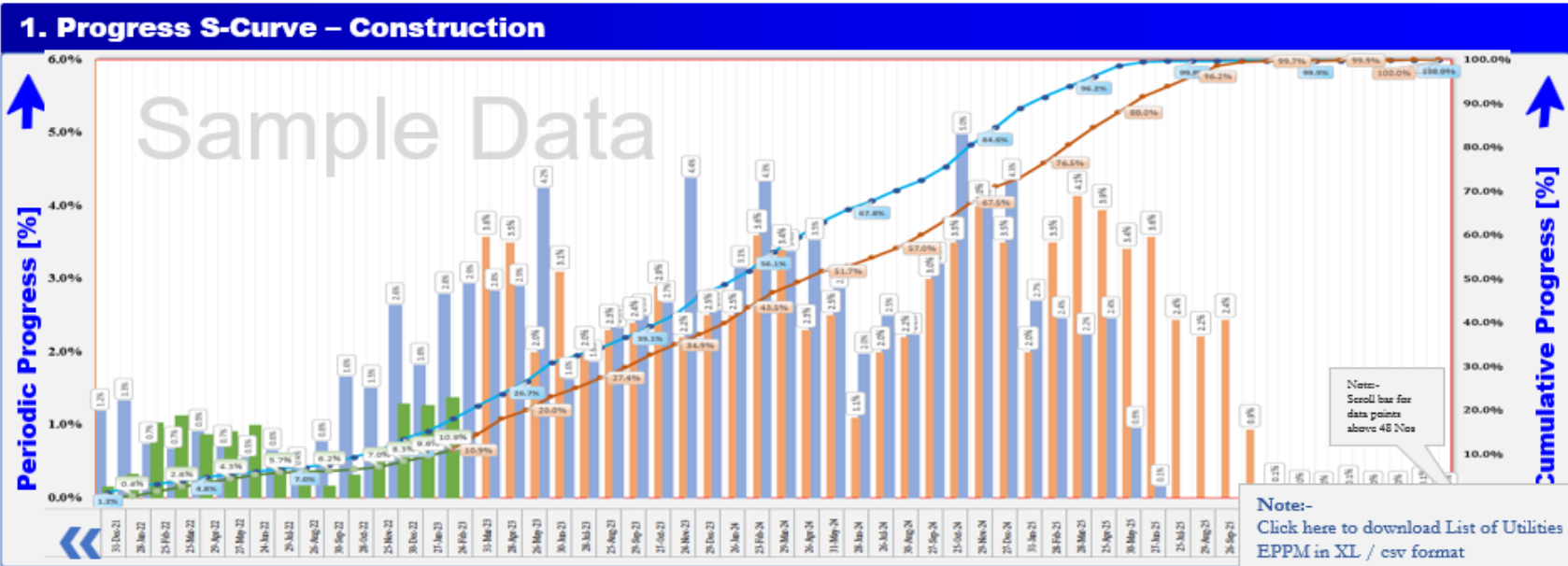
**EPC Contractor**  
**Larsen & Toubro**  
 Scope: Bangalore

**Facility**

- Viaduct
- Tunnel
- Earth Structures
- Crossing Bridge
- River Bridge
- Station/SEB/FOB's
- Depot
- SMD/Ramp
- TSS/SP/SSP/SER/DSS/IDSS

**Modules**

- Performance Management
- Schedule Management
- Cost Management
- Contract Management
- QA/QC Management
- HSSE Management
- Resource Management
- Risk/Issue Management



Status as of: **16-JUN-2023**

Cum. Plan	Cum. Act.	Variance
15.3%	12.4%	-2.9%
Sch. Dur.	Ant. Dur.	Variance
360 days	820 days	-460 days

**ROW Handover Status**

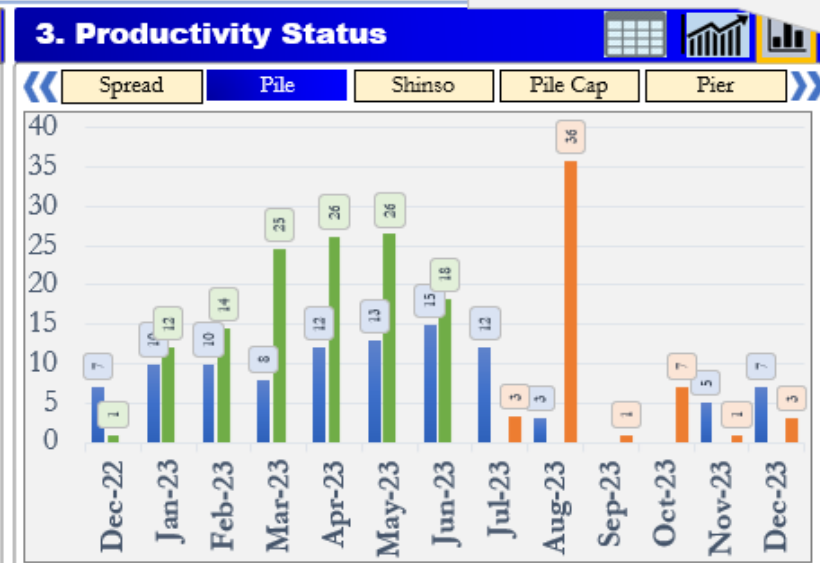
Total ROW [KM]	ROW Encumbrance-free	ROW Balance [KM]
237.100	236.100	1.000

**Utility Shifting Status**

Utilities [Numbers]	Utilities Shifted [Numbers]	Shifting Balance [Number]
15	12	3

### 2. Progress Status

Type	Original Qty.	Current Qty.	Plan Qty.	Actual Qty.	Variance Qty.
Note: Click here to download List of Activities from EPPM in XL / csv format					
rule	2,284	2,472	10,988	4,274	-6,714
Shinso	3,284	3,284	2,472	598	-1,874
Pile Cap	3,284	3,284	3,050	2895	-155
Pier	3,284	3,284	2,050	1585	-465
Pier Cap	2500	2500	1560	865	-695
Segment Casting	3,284	3,284	2,472	1560	-912
Segment Erection	3,284	3,284	2,000	1200	-800



**Legends**

- Periodic Plan
- Periodic Actual
- Periodic Forecast
- Cumulative Plan
- Cumulative Actual
- Cumulative Forecast

**EPC Contractor**  
**Larsen & Toubro**

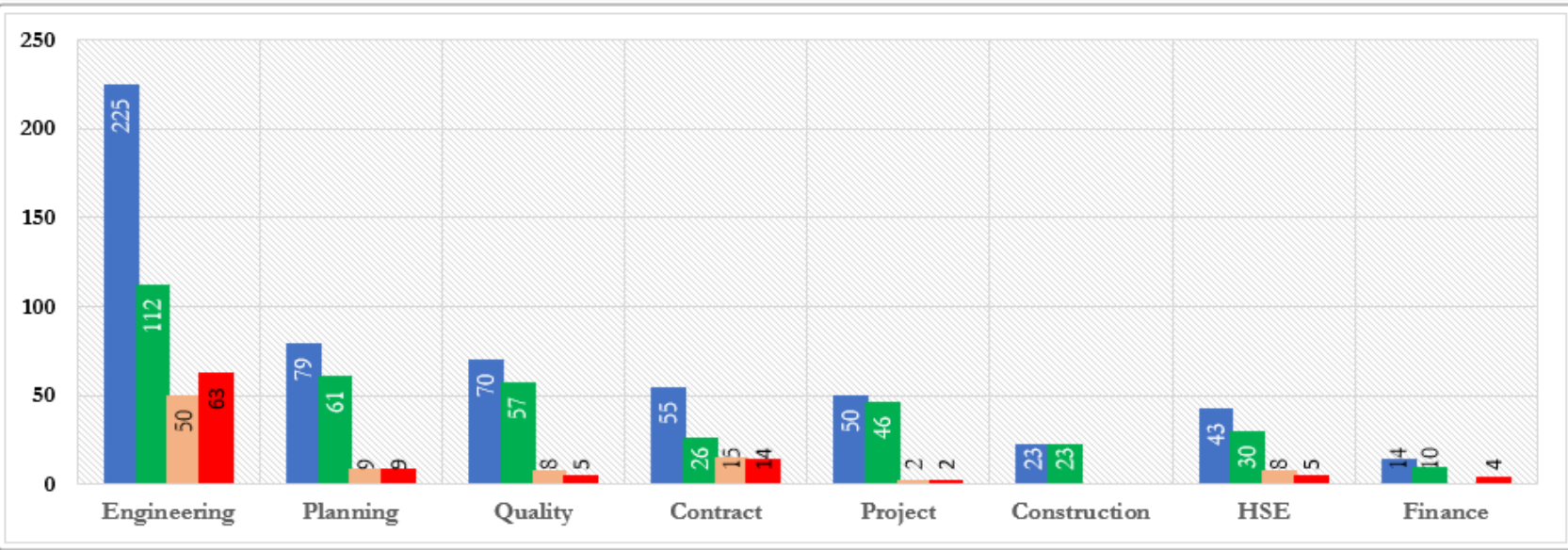
**Communication With**

- Engineer/PMC
- Sub-Contractor Earth Works
- Sub-Contractor Structural Works
- Sub-Contractor MEP Works
- Sub-Contractor S&T. Works
- Sub-Contractor Building Works
- Sub-Contractor Mainline Works

**Modules**

- Performance Management
- Schedule Management
- Cost Management
- Contract Management**
- QAQC Management
- HSSE Management
- Resource Management
- Risk/Issue Management

## 1. Correspondence Status



## 2. Correspondence Performance

Status	Engineering	Planning	Quality	Contract	Project	Construction	HSE	Finance
<u>Received from Engineer</u>	225	79	70	55	50	23	43	14
<u>Replied by Contractor</u>	112	61	57	26	46	23	30	10
<u>Total Pending with Contractor</u>	113	18	13	29	4	0	13	4
<u>Pending with Contractor ≤ 14 days</u>	50	9	8	15	2	0	8	0
<u>Pending with Contractor &gt; 14 days</u>	63	9	5	14	2	0	5	4

Status as of: **16-JUN-2023**

### EOT Status

Submitted	Approved	Under review/ finalization
3	0	3

### PVN Status

Submitted	Approved	Under review/ finalization
15	2	13

### PCN Status

Submitted	Approved	Under review/ finalization
6	1	5

### Legends

- Received from Client
- Replied by Contractor
- Pending with Contractor ≤ 14 days
- Pending with Contractor > 14 days

**EPC Contractor**  
**Larsen & Toubro**  
 Scope Breakdown

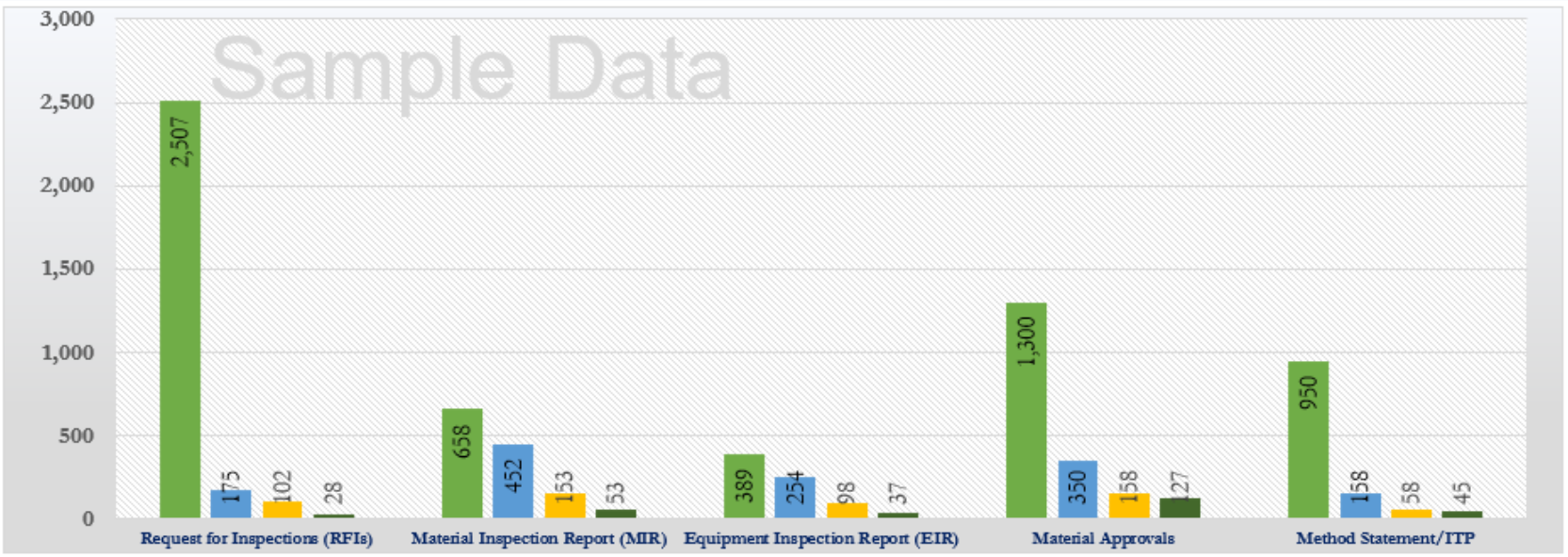
**Timeline**

- 2019
- 2020
- 2021
- 2022
- 2023
- 2024
- 2025

**Modules**

- Performance Management
- Schedule Management
- Cost Management
- Contract Management
- QA/QC Management**
- HSSE Management
- Resource Management
- Risk/Issue Management

## 1. QA/QC Deliverables Status



## 1. QA/QC Performance

Type	Submitted	Approved	Cancelled/Terminated	Under Review
<u>Request for Inspections (RFIs)</u>	2,507	175	102	28
<u>Material Inspection Report (MIR)</u>	658	452	153	53
<u>Equipment Inspection Report (EIR)</u>	389	254	98	37
<u>Material Approvals</u>	1,300	350	158	127
<u>Method Statement/ITP</u>	950	158	58	45

Status as of: **16-JUN-2023**

**Quality Manpower**

Cum. Plan	Cum. Act	Variance
3,448,050	3,394,875	-53,175

**Quality Analysis**

Total NCR	Open NCR	Closed NCR
158 No	24 No	134 No
Total SOR	Open SOR	Closed SOR
650 No	192 No	458 No
Total NCR Amount	Total Withheld Amount	Total Release Amount
54405648	22451303	7984455

**Legends**

- Submitted
- Approved
- Cancelled/Terminated
- Under Review



**EPC Contractor**  
**Larsen & Toubro**  
 Scope Breakdown

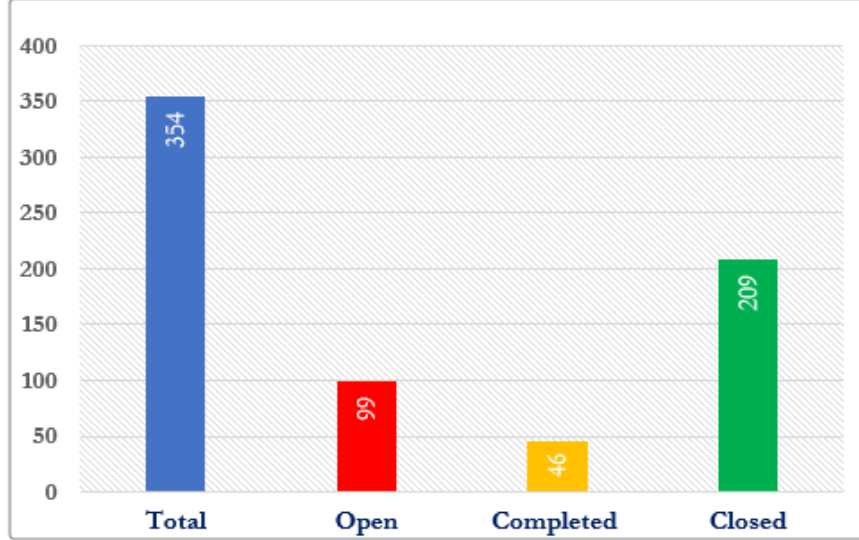
**Timeline**

- 2019
- 2020
- 2021
- 2022
- 2023
- 2024
- 2025

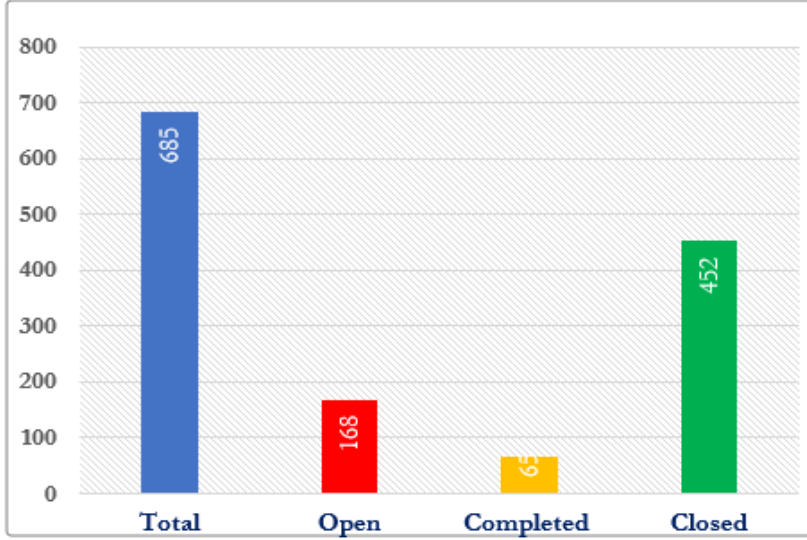
**Modules**

- Performance Management
- Schedule Management
- Cost Management
- Contract Management
- QA/QC Management
- HSSE Management**
- Resource Management
- Risk/Issue Management

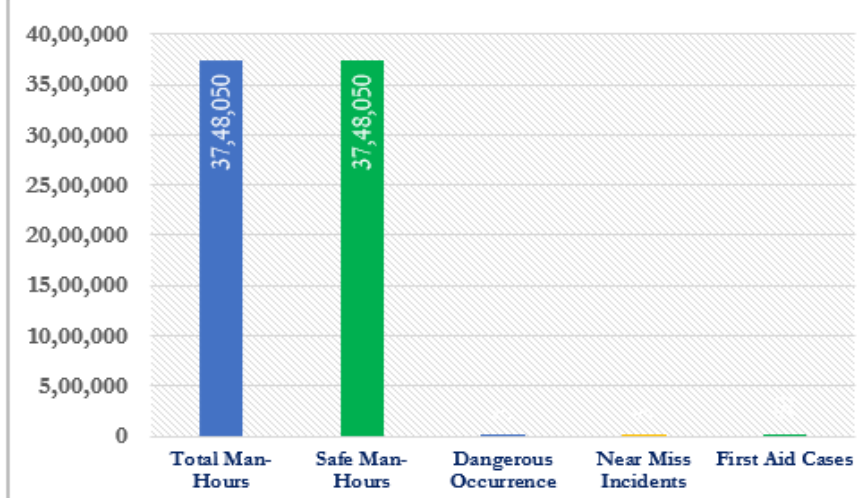
**1. NCR Safety**



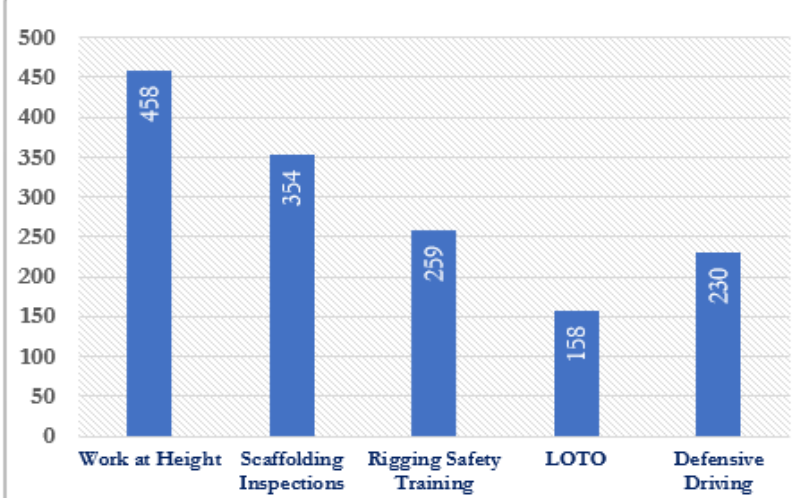
**2. SOR Safety**



**3. Safety Statistics**



**4. Training Statistics**



Status as of: **16-JUN-2023**

**Safety Manpower**

Plan Man-month	Actual Man-month	Variance
3330	2200	-1130
Plan Permit Holder	Actual Permit Holder	Variance
1150	857	-293

**Safety Analysis**

Total NCR Amount	Total Withheld Amount	Total Release Amount
65286778	26941564	9581347
Safety Induction	Safety Training	Other Training
9147	1059	4598
Mock Drill	Safety Walk	Fire Drill
18 No	14 No	22 No

**EPC Contractor**  
**Larsen & Toubro**  
 Scope Breakdown

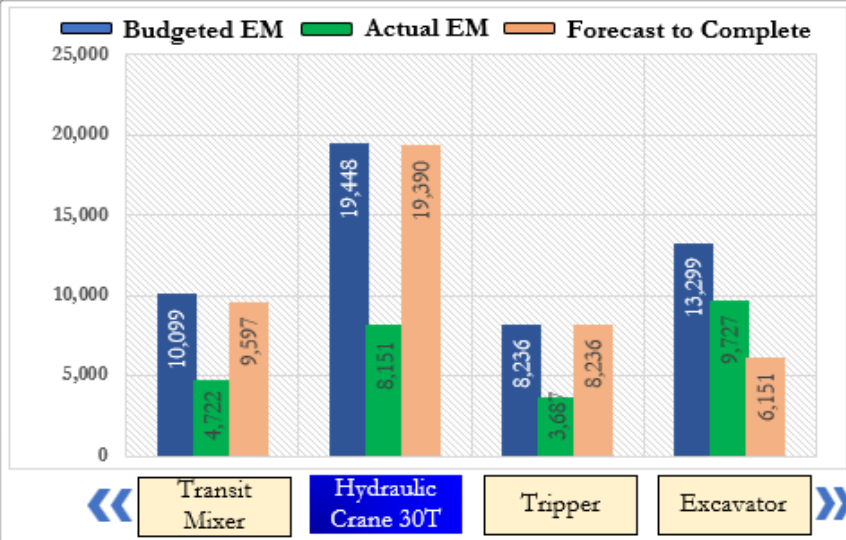
**Facility**

- Viaduct
- Tunnel
- Earth Structures
- Crossing Bridge
- River Bridge
- Station/SEB/FOB's
- Depot
- SMD/Ramp
- TSS/SP/SSP/SER/DSS/IDSS

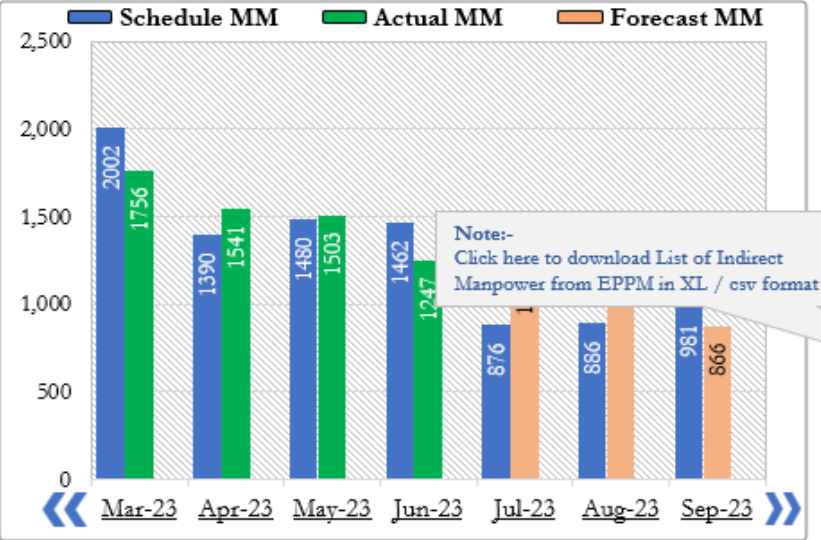
**Modules**

- Performance Management
- Schedule Management
- Cost Management
- Contract Management
- QA/QC Management
- HSSE Management
- Resource Management**
- Risk/Issue Management

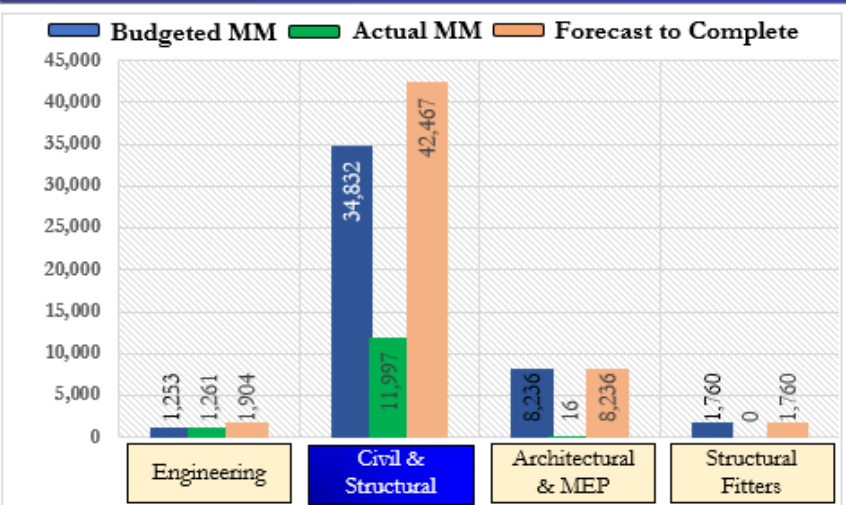
## 1. Plant & Machinery Performance



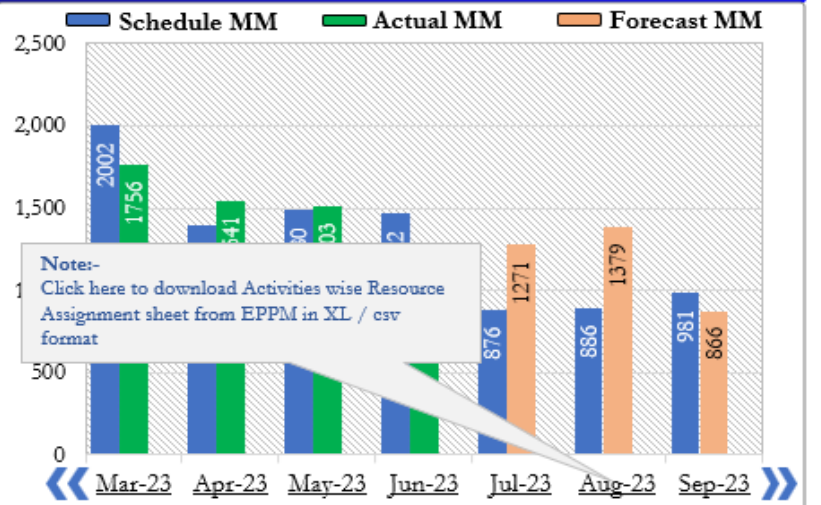
## 2. Plant & Machinery Deployment Status



## 3. Direct Manpower Performance



## 4. Direct Manpower Deployment Status



Status as of: **16-JUN-2023**

### Direct Manpower

Cum. Plan	Cum. Act.	Variance
1462 MM	1247 MM	-215 MM

### Direct Manpower

Budgeted Man-month	Actual Man-month	Forecast to Complete
3330	1200	4080

### Key Personal

Total Requirement	Actual Deployment	Balance Deployment
15 Nos	12 Nos	3 Nos

### Legends

- Periodic Plan
- Periodic Actual
- Periodic Forecast
- EM: Equipment Month
- MM: Man Month





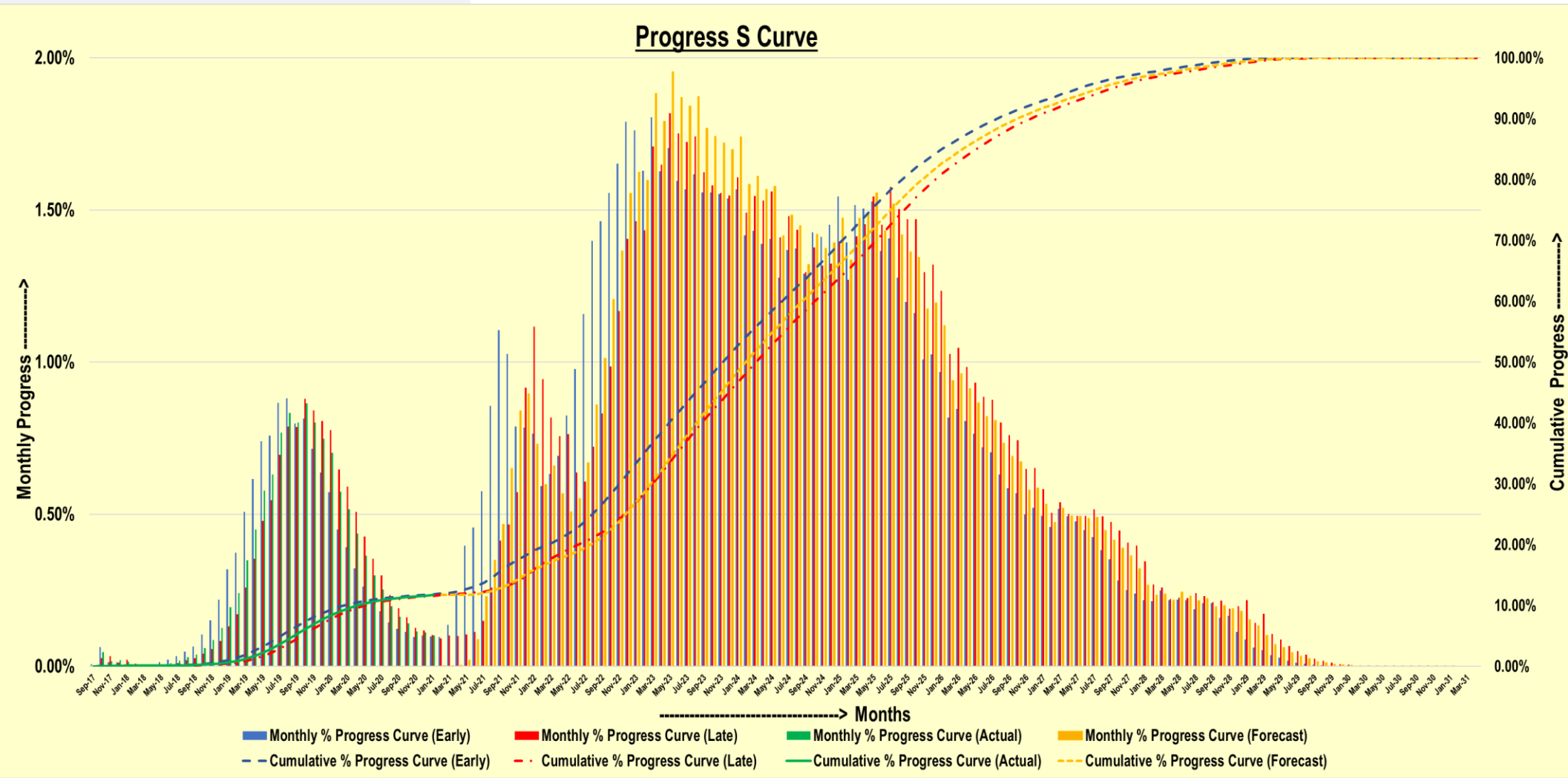


## Wow !!! Factor

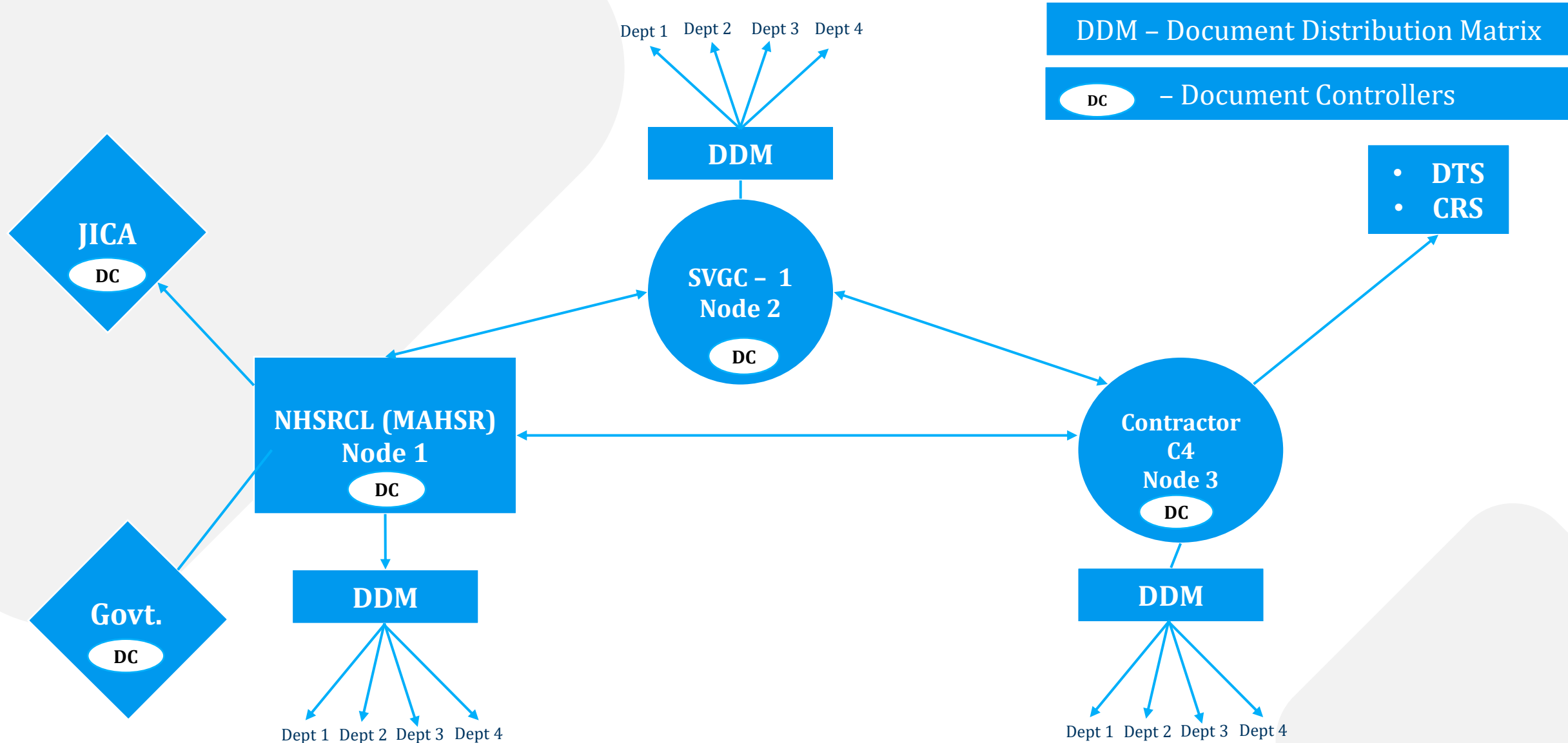
Status as of 31 Jan 2021

**Delay Based On Forecast**

- 21  
Delayed
- 6  
On Schedule
- 9  
Before Schedule



## Communication Management



DDM – Document Distribution Matrix

DC – Document Controllers

## Communication Management

### Communication Types

- Letters
- Technical Document Submissions through DTS
- Invoices
- NCRs
- RFIs
- RFCs
- Miscellaneous

### Submission Purpose

- II – Issued for Information
- IC – Issued for Comments
- IA – Issued for Approval

### Technical Document Types

- Drawings
- Reports
- Inspection Test Plans (ITP)
- Method Statements
- Progress Reports
- Schedules
- Test Reports
- Material Submittals

- DPR
- WPR
- MPR

### Category

- EOT Request
- PCNs
- Claims
- Disputes

### Approval Code

- A – NONO Approved
- B – NONOC Approved with comments
- C – NOO Rejected (Revised sub)
- D – Retained for Information

### Document Distribution Matrix

- Project
- Contract
- Planning
- HSE
- QA/QC
- Civil
- Structural
- Track
- Electrical
- S&T
- Finance

### Features

- DTS – Document Transmittal Sheets
- CRS – Comments Resolution Sheets
- Online Commenting / Viewing (Internal & External Commenting)
- Integration with Emailing System

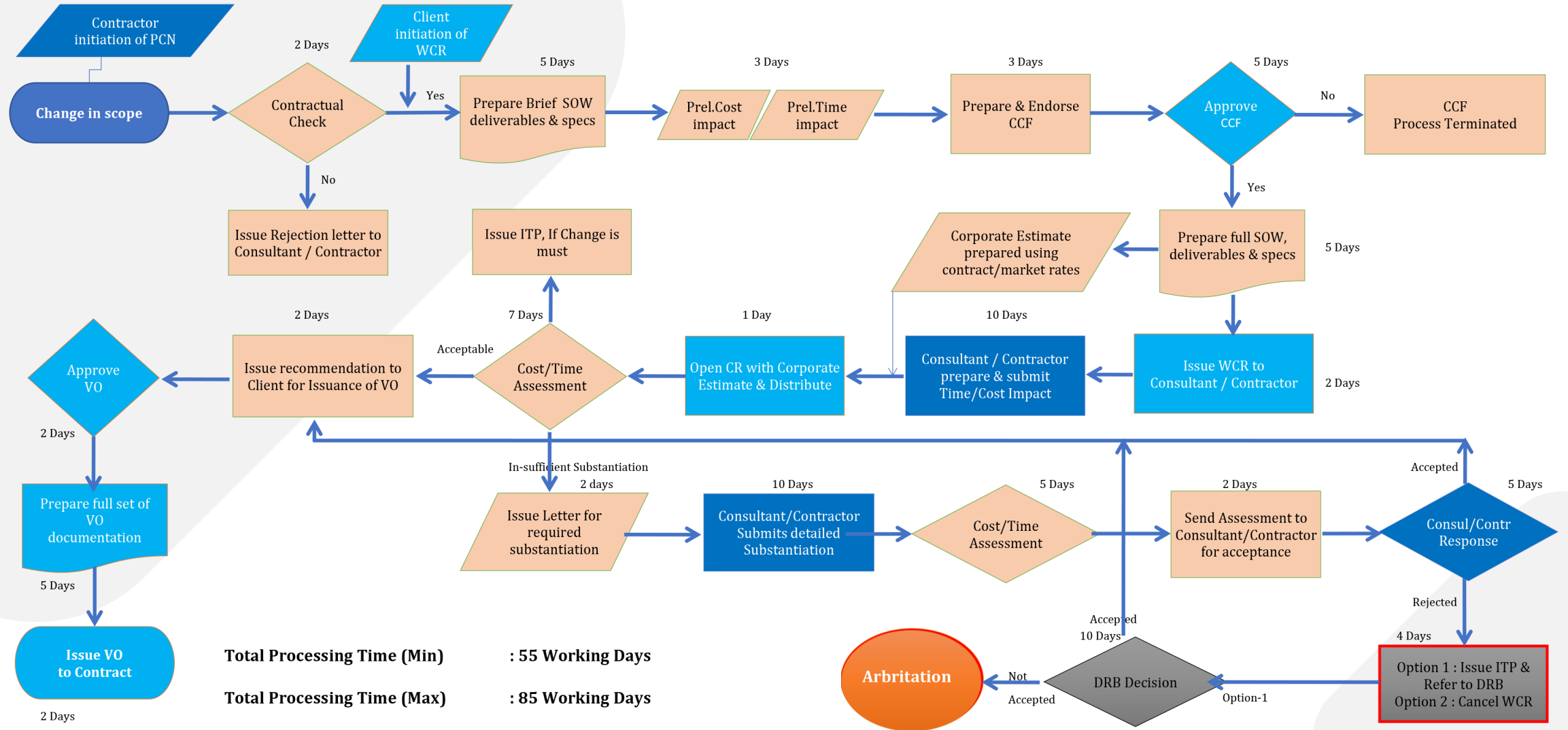
### Revision Control

- 1<sup>st</sup> Submission – 0
- 2<sup>nd</sup> Submission – 1
- 3<sup>rd</sup> Submission – 2
- 4<sup>th</sup> Submission – 3

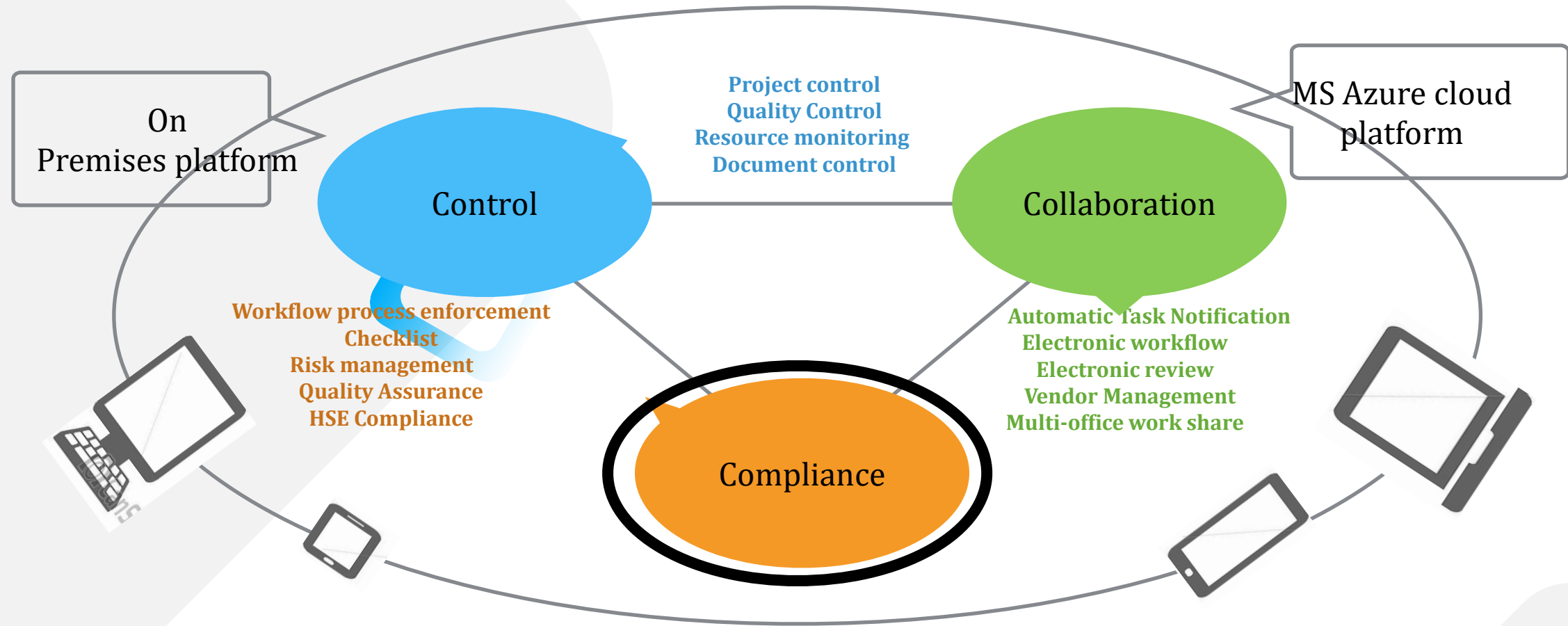




## Change Management Process



# Q & A Session ??



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 info@probtg.com

website: [www.probtg.com](http://www.probtg.com)

# Thank You



## *Bridging Success*

Let's Bridge The Gap Together