



Annexure D - Draft Functional Specifications for Works & Project Management Module

April 2020

About this Document

This document provides the draft functional specifications for the Works and Project Management Module that is part of the Guidance Office Processes Automation.

This is a draft document and the finalized functional specifications approved by Guidance will be provided to the successful bidder.

Overview

Guidance requires an IT system that helps in the management of various Investment promotion and facilitation activities. The system should have the following key features:

- A database of leads and proposals for effective management and monitoring of various projects on this single platform
- A provision to monitor the projects during its entire lifecycle i.e. from lead generation to commencement of commercial production by enterprise
- A link with the single window system to have visibility of the status of various permits/ clearances for the projects that have reached that stage
- A management dashboard that provides cumulative data and visually represents the leads/ projects present in the database across various criteria such as district, sector, project stage, investment size, employment potential etc.

Database Specifications

1. The database shall enable Guidance to collect, organize, update, analyse and thereby effectively manage information related to leads and proposals
2. The new system should allow for the migration the existing information on the current and historical projects stored on the current systems through an agreed method
3. There should be a provision for access governance and user rights management for the database
4. Users should have the ability to store information related to leads and proposals on the database through a web based form.
5. The leads and proposals for potential investments in the state of Tamil Nadu follow a process having several stages that enable effective monitoring. There can be scenarios where a particular project may skip one or more stages; hence, the system should provide flexibility for such cases. However, the user should also be asked to provide reasons in the available fields to maintain historical integrity. The stages, with their associated codes are present in the table below:

Phase	Stage	Code
Lead Management	Lead Generated	L1
	Lead Dropped	L2
	Lead Qualified	L3
	Lead Follow-ups	L4
	MOU discussions under process	L5
	MOU Signed	L6
Pre-establishment Approvals Stage	Land identification under process	A1
	GO issued	A2
	Land Allotment under process	A3
	Land Allotted	A4

	Project Proposal/ DPR submitted	A5
	Pre-establishment approvals under process	A6
	All pre-establishment approvals completed	A7
Construction Stage	Foundation Stone	C1
	Civil works commenced	C2
	Machines erected	C3
Pre-operational Approvals stage	Pre operational approvals under process	O1
	All pre-operational approvals completed	O2
Production Stage	Trial production	P1
	Commercial production commenced	P2

6. In addition to the above mentioned stages, the system should allow two additional stages – “**Project On-hold**” & “**Project Cancelled**”. These stages can be selected by the user in case a project goes on-hold or gets cancelled during any of the standard stages.

Phase	Stage	Code
Adhoc	Project On-hold	X1
	Project Cancelled	X2

7. Some stages shall have a connection with the single window system that allows the system pull information about single window progress, status so as to decide whether there is a delay.
8. The web based form shall have the following key fields:

Field Name	Description
Company	Name of the company
District	District in which the project is proposed
District Category	A/ B/ C (Based on Industrial Policy)
Sector	Sector name
Sub-Sector	Sub-Sector name
Product/ Line of Activity	Specify product or line of activity
Anchor Investor	Yes/ No
Investor Priority	High/ Normal
Investment	Committed investment*
Direct Employment	Committed employment*
Indirect Employment	Estimated indirect employment*
Investment type	Greenfield/ Brownfield
Project Description	Project brief (sub-sector, product/ service, plant type, district etc.)
Lead Source	Department or person from which the lead originated
Guidance SPOC	Name of Guidance SPOC

Guidance SPOC 2	Name of Guidance SPOC 2
Investor	Name of the main investor
Investor SPOC	Name of the investor's SPOC
Phone No	Phone number of the investor's SPOC
Email Id	Email id of the investor's SPOC
Website	Website of the company
HQ Address	Address of the company HQ
Stage	Stage as per the lead generation and investment grounding process (See point 5 for more details on the options)
Stage Comment (Multiple)	Free text field to allow user to input any updates or issues for each stage (see point 9)
Stage file(s) upload (Multiple)	Ability to upload files associates for each milestone
Other comments	Free text field for the user input any general comments/ issues/ updates
Investor grievance/ issue (Multiple)	Issue raised by investor (see point 12)
Investor grievance/ issue status (Multiple)	Open/ Closed (see point 12)

*Note: There should be provision to enter year-wise details.

9. User should be allowed to enter comments for any updates, delays or issue related to each stage in the "Stage Comment" field. If the milestone is changed to "Lead Dropped", a reason should be mandatory
10. Once the project moves to the "Commercial Production Commenced" stage, an Aftercare executive shall need to be assigned and their details shall need to be updated in the Guidance SPOC or Guidance SPOC 2 fields
11. During update of any field, the system needs to store the date and change history so that historical review and analysis is possible.
12. User should be able to input and track all the grievances/ issues raised by the investor during his journey. The system should allow for multiple issues to be entered and tracked through a status field and a there should be provision for a system generated date field for all issues.
13. In the view mode, the user should be able to view the all the fields mentioned in point 8. Furthermore, the view mode should also show the complete history of the project as it moves through various stages. The following additional system generated fields would also need to be shown:

Field Name	Description
Date created	Date when the lead/ proposal was created
Last update date	Date when the most recent update happened
Stage Status (Multiple)	On-time/ Delayed (Auto-populated field based on the defined timeline for a stage, see point 6). Present for each stage the project has passed
Stage update Date (Multiple)	Date auto-populated based on when a particular stage is updated. Present for each stage the project has passed

Single Window Status	Not started/ In Process/ Complete
Single Window Update	For proposals having single window status as “In Process”, this field shall specify the particular approval/ clearance in process
Single Window application date	Date when application entered single window

Management Dashboard Specifications

1. The database of leads and proposals shall underpin the management dashboard
2. The dashboard should display the summary data points on the top and the detailed break up should be available both in a tabular form and as a chart/ graph
3. The dashboard should have the following design features:
 - **Interactive:** User should be able to see data in a tabular form, segment the data based on various criteria, use-filtering options, visualize data on different chart types etc. This allows the user to tabulate and visualize the data in different ways and thus conduct the analysis as per their needs
 - **Personalized:** User should be able to personalize the dashboard as per their access rights and requirements. For example, a particular user might only be interested in district wise snapshot, another might only want to see Automotive sector projects or a senior management user may want to look only at delayed projects first.
 - **Analytical:** User should be able to calculate commonly used statistics such as sum, maximum, minimum, average, count, median and standard deviation. Furthermore, the user should be able calculate metrics such as ratios, growth/ decline percentages (YOY, CAGR etc.) and should be able to sort, filter and use pivots on the data. Additionally, there should be data visualization tool for the user.
 - **Collaborative:** User should be able to exchange notes regarding specific information on their dashboard. They should be able to put comments or highlight specific data snapshots and then share them within the organization through email as a link. Furthermore, it should be possible to download the data extracts and graphs into standard formats such as pdf, csv, excel, jpeg, xml etc.
 - **Historical availability:** User should be able to review historical data and conduct various time based analysis. For example, a user might want to compare the leads generated monthly in the last 24 months; another user might want to compare the lead conversion percentage among particular months.
 - **Pro-active:** The system should have the ability to auto generate reports periodically, based on the organization and user’s requirements. Furthermore, there should be a facility to generate an automatic email/ SMS alert in case certain events happen, e.g. overshooting of SLA for a permit.
 - **Data Visualization Tools:**

Illustrative examples of data extracts from the dashboard

1. Leads dataset (with status, district, sector, line of activity, committed investment* and committed employment*)

S No.	Status	District	Name of Lead	Sector	Line of Activity	Committed Investment (INR Cr.)	Committed Employment
1	L3	Chennai	ABC Industries Pvt Ltd UNIT-II	Textiles and Textile Related Industries	Garment manufacturing	44	1,500
2	L1	Nilgiris	YU Designs	Textiles and Textile Related Industries	Mega Sized Garmenting Unit	41	2,100
3	L1	Coimbatore	GHI Steels India Ltd.	Non Metallic Mineral	Pulverised Coal	79	500
4	L5	Theni	XYZ Ispat	Basic Metals & Alloy Industries	DI Pipes	400	2,800
5	A2	Salem	EDF Cement Industries Ltd.	Non Metallic Mineral	Cement plant	62.85	18
6	A4	Erode	AWE Design Exports	Textiles and Textile Related Industries	Garment Manufacturing	12.12	2,500
7	X1	Chennai	ABC Industries Pvt Ltd UNIT-II	Other Industries	Paints	496.5	1,425
8	O2	Nilgiris	YU Designs	Machinery and Equipment Manufactures	Machinery And Equipment Manufactures	45.9	45
9	L2	Coimbatore	GHI Steels India Ltd.	Food, Agro, Marine Products	Food Processing	70	300
10	L1	Theni	XYZ Ispat	Other Industries	Baby Diapers	250	150
11	C1	Salem	EDF Cement Industries Ltd.	Food, Agro, Marine Products	Ready to Eat cereals, Chocos, Oats	338	360
12	C2	Erode	AWE Design Exports	Textiles and Textile Related Industries	Garments	143	4,000

*The number displayed in the dashboard should be sum of the several years mentioned in the form.

2. Investment and job creation by district

District	Investment (INR Cr.)	% of Total Investment	Job Creation	% of Total Created Job
Tiruvallur	23119.62	3.5%	44025	4.5%
Chennai	16145.39	2.4%	59023	6.0%
Vellore	2784.34	0.4%	14913	1.5%
Kanchipuram	79975.33	11.9%	125402	12.7%
Tiruvannamalai	9282.46	1.4%	4912	0.5%
Dharmapuri	5530.57	0.8%	33309	3.4%
Viluppuram	28389.81	4.2%	15895	1.6%
Chengalpeta	6298	0.9%	2070	0.2%
Kallakurichi	37330	5.6%	10380	1.0%
Tirupattur	1252.31	0.2%	12183	1.2%
Ranipet	14694.16	2.2%	23411	2.4%
Salem	9734.36	1.5%	5469	0.6%
Namakkal	41460.44	6.2%	52754	5.3%
Erode	997.47	0.1%	17009	1.7%
Nilgiris	3264.72	0.5%	8711	0.9%
Coimbatore	23119.62	3.5%	44025	4.5%
Tirupur	16145.39	2.4%	59023	6.0%
Karur	2784.34	0.4%	14913	1.5%
Dindigul	79975.33	11.9%	125402	12.7%
Krishnagiri	9282.46	1.4%	4912	0.5%
Cuddalore	5530.57	0.8%	33309	3.4%
Perambalur	28389.81	4.2%	15895	1.6%
Ariyalur	6298	0.9%	2070	0.2%
Tiruchirappalli	37330	5.6%	10380	1.0%
Thanjavur	1252.31	0.2%	12183	1.2%
Tiruvarur	14694.16	2.2%	23411	2.4%
Nagapattinam	9734.36	1.5%	5469	0.6%
Pudukkottai	41460.44	6.2%	52754	5.3%
Theni	997.47	0.1%	17009	1.7%
Madurai	3264.72	0.5%	8711	0.9%
Sivaganga	37330	5.6%	10380	1.0%
Virudhunagar	1252.31	0.2%	12183	1.2%
Ramanathapuram	14694.16	2.2%	23411	2.4%
Thoothukudi	9734.36	1.5%	5469	0.6%
Tirunelveli	41460.44	6.2%	52754	5.3%
Kanyakumari	997.47	0.1%	17009	1.7%
Tenkasi	3264.72	0.5%	8711	0.9%
Total	669251.42		988849	

3. Investment and job creation by sector

Focus Sector	Investment (INR Cr.)	% of Total Investment	Job Creation	% of Total Created Job
Aerospace & Defence	2,935	1%	2,850	1%
Agriculture & Food Processing	24,546	9%	83,679	19%
Auto & Auto Components	17,505	6%	16,190	4%
Chemicals & Petrochemicals	21,746	8%	14,043	3%
Electronics & IT	3,496	1%	39,861	9%
Energy	94,696	34%	29,763	7%
Infrastructure and Urban Development	37,054	13%	25,780	6%
Healthcare & Lifesciences	28,007	10%	46,325	11%
Textile & Apparel	4,082	1%	51,697	12%
Others	46,192	16%	1,19,278	28%
Total	2,80,259		4,29,466	

4. Employment generated in focus sectors by district

Districts	Aerospace & Defence	Agriculture & Food Processing	Auto & Auto Components	Chemicals & Petrochemicals	Electronics & IT	Energy	Healthcare & Lifesciences	Infrastructure and Urban Development	Others	Textile & Apparel	Grand Total
Tiruvallur	400	1,305	11,000	4,225	-	4,277	400	250	2,268	19,900	44,025
Chennai	-	25,102	5,190	90	9,790	1,746	409	851	6,625	9,220	59,023
Vellore	-	9,403	-	3,000	150	60	-	1,100	1,160	40	14,913
Kanchipuram	-	541	-	-	5,570	12	22,830	11,219	80,635	4,595	1,25,402
Tiruvannamalai	-	1,648	-	-	-	2,493	100	23	648	-	4,912
Dharmapuri	300	7,847	-	30	5,109	2	4,530	2,710	3,365	9,416	33,309
Viluppuram	-	9,225	-	260	500	3,385	-	395	2,130	-	15,895
Chengalpet	-	-	-	-	-	1,790	-	-	280	-	2,070
Kallakurichi	-	-	-	-	-	10,380	-	-	-	-	10,380
Tirupattur	-	7,322	-	-	-	42	-	29	1,590	3,200	12,183
Ranipet	-	7,712	-	2,028	-	3,181	500	4,610	2,927	2,453	23,411
Salem	-	1,874	-	-	-	1,620	1,975	-	-	-	5,469
Namakkal	-	3,759	-	4,350	18,742	714	15,581	4,293	3,115	2,200	52,754
Erode	-	2,298	-	60	-	36	-	300	14,315	-	17,009
Nilgiris	2,150	5,643	-	-	-	25	-	-	220	673	8,711
Grand Total	2,850	83,679	16,190	14,043	39,861	29,763	46,325	25,780	1,19,278	51,697	4,29,466

5. Investment committed at various project stages by district

Districts	Status				
	G1	G2	G3	G4	Y
Tiruvallur	7892.44	108	17.5	14731.68	370
Chennai	10082.33	523.02	1313.54	1326.5	2900
Vellore	739.54	507	778.5	415.3	344
Kanchipuram	24426	26.03	145	44723.3	10655
Tiruvannamalai	1760.07	22.39			7500
Dharmapuri	1856.57	0	345	2334	995
Viluppuram	11859.81	35	40	2838	13617
Chengalpet	6258				40
Kallakurichi	37330				
Tirupattur	718.73		1	532.58	
Ranipet	10886.43	374.03	300	2796.7	337
Salem	893.94		9.05	8831.37	
Namakkal	9961.74	884.41	469	29507.49	637.8
Erode	782.47		15	200	
Nilgiris	945.17	2.65	62.7	2254.2	
Grand Total	126393.24	2482.53	3496.29	110491.1	37395.8