

**PMC to Implement
Area Based Development**

Monthly Progress Report

Kochi Smart City

November 2019



Monthly Progress Report

1565/MPR- 21(21/30)/November 2019/R0

Project Management Consultant (PMC)
to implement Area Based Development

Smart City Kochi

Cochin Smart Mission Limited, CSML

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EXECUTIVE SUMMARY

The smart city proposal of Kochi submitted for Smart Cities Challenges aims at integrating the Fort Kochi & Mattancherry area with Central City Area through Water Metro. Thematic areas for interventions under smart cities mission in Kochi are

- Seamless Mobility
- Reconstitution of Urban Form
- World Class Urban Services & Inclusive Development
- Revival of Identity and Culture

The Smart City proposal of Kochi has adopted retrofitting as the strategy for development under the Mission. The vision for Kochi is to transform Kochi ABD, into a sustainable, inclusive and economically vibrant city of opportunities with efficient urban services, traditional hospitality and smart governance.

a) Area Based Development (ABD) projects

Area Based Development (ABD) as part of Smart City development consists of parts of five wards west Kochi (1,2,3,4 and 5) and parts of three wards of mainland of KMC (62,66 & 67), with a total area of 1024.16 acres. There are currently are 40 ABD projects under 18 modules worth a total cost of Rs. 951 Crores.

The overall status of ABD projects is as follows:

(Amount in INR Crore)

S. No.	ITEMS	No of projects	TOTAL COST	
			INR Cr.	%
1	Projects Awarded	17	582	61%
2	Funding support to KMC for housing project	2	34 (13+21)	4%
3	Projects in tender stage	9	71	7%
4	DPR Prepared	4	148	16%
5	To be awarded nomination	3	9.7	1%
6	Housing/Canals/other projects	5	107	11%
	Total Smart Cities Fund	40	951*	100%

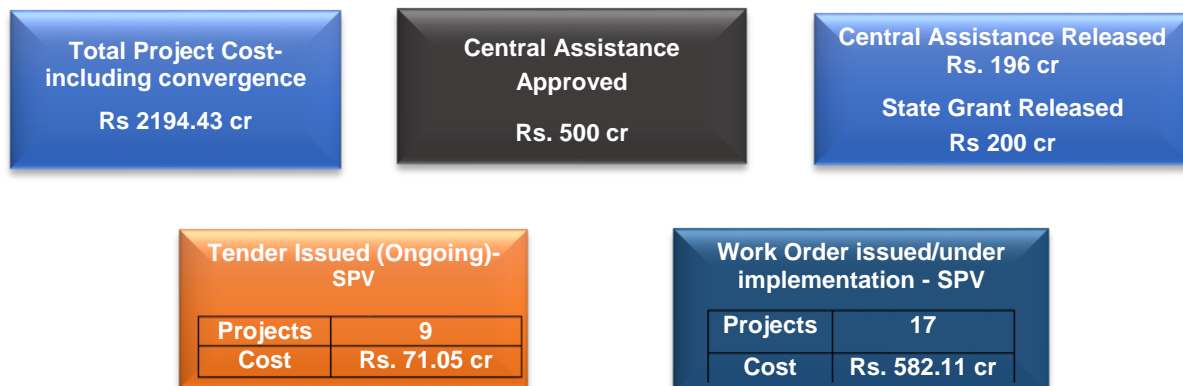
Pan City projects

Pan city projects are convergence projects and being implemented by stakeholders. As part of SCP two projects were proposed as Pan City projects. Smart Card - Kochi 1 is a PPP project and implemented by KMRL. 24 X 7 WATER SUPPLY is being taken up by KWA for implementation.

Source of Fund	No of Projects	Project Estimated Cost (If any) or SCP cost
PPP		
Project Completed	1	25
Other Sources		
DPR to be prepared	1	621
Grand Total	2	646

Note: * As data received from KWA

Status of Smart City Mission Kochi as on 30th November 2019



SUMMARY OF PROGRESS BY PMC IN THE MONTH OF NOVEMBER 2019

Monthly Progress Report (1 Report, Oct. 2019)	Tender /Re-Tendered (4 Projs.)	BOQ/Revised (4 Projs.)
Project (Stakeholder) meetings (8 Nos.)	Supervision - Site Visits (8 nos)	Site Visits (26 Nos)

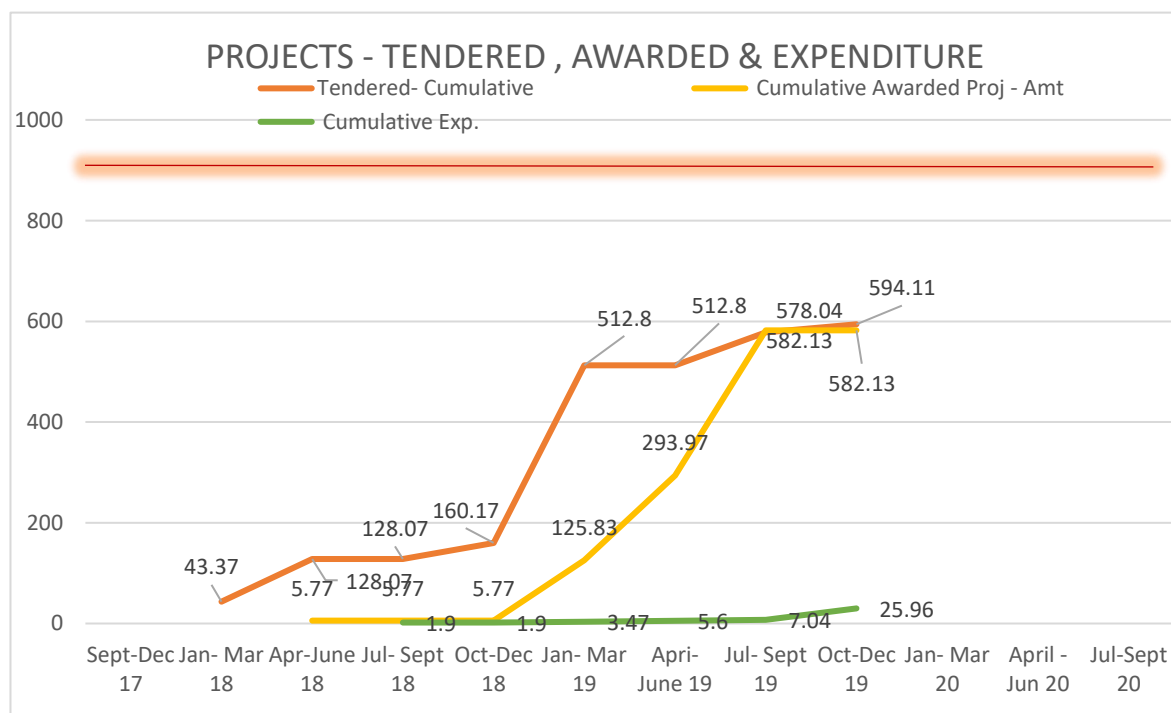
CUMMULATIVE DELIVERABLES SUBMITTED BY PMC AS ON 30th NOVEMBER

Situation Analysis Report (1 Report)	Monthly Progress Reports (24 Reports)	Feasibility Reports (39 Projects)
Detailed Project Reports (38 Projects)	Eol & related Reports (2 Projects)	RFP/Tender Submitted (31 Projects)
Tender Issued (29 Projects)	Draft BERs prepared (26 Projects)	Draft CERs prepared (17 Projects)
Concept Note (2 Projects)	EIA/EMP (15 Projects)	SHE Training (1 no)

1 STATUS AS ON 30TH NOVEMBER

In the month of November, the Smart City team worked on Technical Bid evaluation of the West Kochi Other Road projects, Public Toilets, Marine Drive walkway, Beach Front Upgradation at Vasco Square in Fort Kochi - Part A, Revised BoQ/estimates of minor bridges at Fort Kochi, Calvathy School and cost estimation of rehabilitation of Ernakulam Market. DPR of Ernakulam Market, Broadway and concept note on Cultural Street- PT Usha Road has been submitted. Revised DPR of Calvathy School and Intelligent Crime Surveillance system has been submitted. DPR for upgradation of Anganwadi project is being revised.

Status of the project given below:



1.1 STAKEHOLDER MEETINGS CONDUCTED

Stakeholder meetings conducted in the month of November are as follows:

Table 1-1: Summary on Stakeholder Consultations by PMC team during the month of November 2019

S. No	Date of Consultation	Module Content	Stakeholder Consultation	Concerned Person in the Department	Agenda Discussion by PMC Team	Remarks
1.	02-11-2019	Sewerage	Supreme pipe Co	KMRL	Knowledge centre visit	Inspected Supreme pipe company's knowledge centre and seen the different pipes & specials used for sewerage project
2.	05-11-2019	General	GIZ	GIZ Representatives	Presentation of the GIZ projects in Ernakulam and West Kochi	The presentation of the projects undertaken by GIZ was explained in the meeting

S. No	Date of Consultation	Module Content	Stakeholder Consultation	Concerned Person in the Department	Agenda Discussion by PMC Team	Remarks
3.	13-11-2019	Sewerage	Hon'ble MP	Hon'ble MP	Issue related to West Kochi STP area	Met the MP and appraised him on the present stage of STP problem and requested for his intervention for resolving the issue
4.	16-11-2019	IC4	Fire Department	Dist. Fire Officer	Integration with IC4	Discussion were held regarding the integration of fire services and sos with IC4 platform
5.	19-11-2019	IC4	Fire Department	Dist. Fire Officer	Integration with IC4	Discussion were held regarding the integration of fire services and sos with IC4 platform. Requested fire department to submit the SOPs of Fire department
6.	22-11-2019	Energy supply	KSEB	Superintending Engineer	For planning Schematic diagram for Park Avenue Road.	KSEB detailed about Feeders not shown in schematic diagram and variations in transformers rating
7.	22-11-2019	Smart Road-ITMS	DMRC	Chief- Engineer	Open Trenching at Manorama Junction and Kadavanthara Junction in S A Road for laying of G. I . pipes for cable laying	DMRC pointed out that the SA road is being restored by DMRC and profile correction works are underway, so the open trenching work across the roads, if any should be completed at the earliest in these locations, in coordination with DMRC contract staff on ground.
8.	29-11-2019	Smart Road-ITMS	GCDA	Superintending Engineer	GCDA - Kaloorkadavanthara road - Work on hold opening trenching ITMS	GCDA pointed out that only after the signing of Agreement document between CSML and GCDA, and deposit of assurance amount of Rs. 2 lakhs as security, ITMS work shall be allowed to proceed in Kaloorkadavanthara road.

1.2 SITE VISITS

In the month of November following site visits and supervision visits have been taken up by PMC:

Table 1-2 Summary of site visits conducted during the month of November 2019

S No	Date	Site Visited	Agenda for Site visit	Location	Notes from site visit
1.	04-11-2019	AGIS Office, Excise Building	Plant Inspection and Testing and	Ernakulam	Installation completed in the mentioned sites, Punch lists are prepared for complying requirements as per RFP documents

S No	Date	Site Visited	Agenda for Site visit	Location	Notes from site visit
2.	05-11-2019	Jayalakshmi Parking, KMRL Parking at Seematti, M. G. Road, Kacheripady - MLCP Sit	Re-evaluation of existing parking in and around Kacheripad	Ernakulam	Re-evaluation of existing parking in and around Kacheripady
3.	06-11-2019	PBS locations	Approval of proposed PBS locations	Ernakulam	The locations on AM road can be used for PBS after completion of the construction works. Kadavanthara Bus Stop - PBS location to be shifted to more visible location (near metro station)
4.	06-11-2019	KSEB Central Section Office, Panampully nagar School,	Plant Inspection and Testing and	Ernakulam	Installation completed in the mentioned sites, Punch lists are prepared for complying requirements as per RFP documents
5.	07-11-2019	PBS locations	Approval of proposed PBS locations	Ernakulam	Locations were approved. PBS Hexi Point near KMRL Parking recommended to be shifted to the beginning of Streetscape after consultation with KMRL.
6.	07-11-2019	Jos Junction	Site Inspection	Ernakulam	Erection of 5 m pole
7.	07-11-2019	Jos Junction	Verification of pole location	Ernakulam	Pole positions were checked with Keltron site engineers.
8.	08-11-2019	STP site	STP site inspection	West Kochi	Attended the CEO's site inspection and appraised him the progress of sewerage project in West Kochi and the present STP site issue and received instructions.
9.	08-11-2019	Jos Junction	ITMS pole erected - Cantilever Poles	Ernakulam	The locations were checked, attended CEO's inspection at Jos Junction
10.	08-11-2019	Old Age Home Thevara, Palluruthy School,	Plant Inspection and Testing and	Ernakulam, West Kochi	Installation completed in the mentioned sites, Punch lists are prepared for complying requirements as per RFP documents
11.	08-11-2019	MLCP Kacheripady, Lisie Hospital Automated Parking	Proposed MLCP site inspection	Ernakulam	To show the Proposed MLCP site to NHIDCL site and the existing automated car parking facility in the city
12.	12-11-2019	Jos Junction, pallimuku Junction	Verification of pole location	Ernakulam	Proposed pole positions were checked with Keltron site engineers.
13.	15-11-2019	AM Road	Site inspection	Ernakulam	Site inspection for cable joint of 11 KV HT Cable
14.	18-11-2019	North Police Station	ITMS Control Room	Ernakulam	Control Room site visit - assess the site conditions w.r.t proposed plan
15.	20-11-2019	General Hospital, Edakochi School, GGHSS Chittoor road, PWD Rest house	Plant Inspection and Testing and	Ernakulam, West Kochi	Installation completed in the mentioned sites, Punch lists are prepared for complying requirements as per RFP documents

S No	Date	Site Visited	Agenda for Site visit	Location	Notes from site visit
16.	21-11-2019	ITMS Sites	ITMS Site Inspection	Ernakulam	Site inspection - open trenching status, pole erection status
17.	22-11-2019	PBS Locations	Inspection/ Approval of proposed PBS locations	Ernakulam	Cusat - Administrative Office Road (Loc 1), Administrative Office Road (Loc 2), Students Amenities Centre CUSAT, St. Joseph's E.M.H. Secondary School, School of Engineering CUSAT, St. Paul's College, HMT Junction JLN Stadium Road
18.	22-11-2019	Manorama Jn.	Pole fixing location issue	Ernakulam	Location visited with Keltron and instructions were given to Keltron to remove the pole. Pole was removed the same night.
19.	22-11-2019	STP site	STP site inspection	West Kochi	Inspected the network survey works and made arrangement for scrutiny of the level with the PMC Surveyor and Utility Engineer
20.	25.11.2019	General Hospital	Installation of GPON Network	Review of Work progress.	Installation of Network Cable completed. Splicing of Network Cable ongoing
21.	26-11-2019	Karuvelipadi Hospital Fort Kochi Hospital	Plant Inspection and Testing and	Ernakulam, West Kochi	Installation completed in the mentioned sites, Punch lists are prepared for complying requirements as per RFP documents
22.	27-11-2019	Manorama Junction, Kadavanthara Junction, Shenoy's -Padma jn, North RoB - opposite Town Hall, Kaloor Jn, Changampuzha Park, Edapally	Approval and Concurrence from KMRL for metro median locations	Ernakulam	Location visited with KRML and Keltron. Instructions were given to Keltron to be cautious of the electric cables and the advertisement board connection cables laid across the median.
23.	27-11-2019	JLN Metro Station	IC4 Command and Control room	Ernakulam	The site was handed over to MSI on 18th October for construction of CCR. Till date there is no work progress recorded. CEO instructed to start the Work at the earliest.
24.	28-11-2019	North Police Station	ITMS Control Room	Ernakulam	Control Room layout finalization- visit with Keltron Team
25.	29-11-2019	Judged Avenue Junction, Madhava Pharmacy Jn.	Verification of pole location	Ernakulam	Proposed pole positions were checked with Keltron site engineers.
26.	30-11-2019	STP site	STP site inspection	West Kochi	STP site inspection made with LQEC team and assessed the environmental condition viz., smell, odour around the STP site. No smell - good response.

Table 1-3 Summary of sites supervision during the month of November

S No	Date	Site Visited	Agenda for Site visit	Location	Notes from site visit
1.	1/11/2019-2/11/2019	AM Road	Site Supervision	Ernakulam Smart Road	Earth work excavation and Drain laying in progress. Discussion regarding the height of drain at Bus bay near ABAD.
2.	1/11/2019-8/11/2019	Jos Junction	Site Supervision	Ernakulam Smart Road	Normal and mountable kerb laying at the RHS & LHS
3.	4/11/2019-09-11/2019	AM Road	Site Supervision	Ernakulam Smart Road	Drain laying in progress between chainage 720-740(LHS) & 1000-1050(RHS). CEO CSML visited the site on 08/11/19.
4.	9/11/2019-16/11/2019	Jos Junction	Site Supervision	Ernakulam Smart Road	Normal and mountable kerb laying at the RHS & LHS and lamp post concreting (2 No's), paver and hydraulic tile laying (RHS and LHS)
5.	11/11/2019-16/11/2019	AM Road	Site Supervision	Ernakulam Smart Road	Drain laying in progress between chainage 1050-1090(RHS). Trench laying started from chainage 1000 to 1020. KSEB Cable shifting completed at Pile location.
6.	18/11/2019-22/11/2019	AM Road	Site Supervision	Ernakulam Smart Road	Drain laying in progress between chainage 940-920(RHS). Trench laying in progress b/w chainage 1000 to 1020.
7.	25/11/2019-30/11/2019	AM Road	Site Supervision	Ernakulam Smart Road	Taluk Surveyor Marked the boundary of road near Lulu and Shobha Developers. Liner fixing started at Piling site. Drain laying in progress between chainage 900-870(RHS) & 710-760(LHS).
8.	18/11/2019-30/11/2019	Jos Junction	Site Supervision	Ernakulam Smart Road	Normal and mountable kerb laying at the LHS and lamp post concreting (4 No's), levelling and setting out at the LHS

Photographs for existing conditions of the sites visited.



Figure 1-1 Earth excavation and Drain placing work at Am Road



Figure 1-2 Drain placing work at AM Road



Figure 1-3 Normal and mountable kerb laying at Jos Jn.



Figure 1-4 Existing Parking Facility around Kacheripady Jn



Figure 1-5 Proposed PBS locations



Figure 1-6 Proposed PBS locations



Figure 1-7 Locations for placing for Traffic signals in ITMS Project

1.3 BRIEF SUMMARY OF KEY MEETINGS

1. Awareness Programme – Construction of Vacuum Sewer Network with House Connection and sewage Treatment Plant in West Kochi on 2nd November 2019

CSML and Kochi Municipal Corporation had conducted an awareness programme in west Kochi on Sewerage project. The proposed sewage collection system would cover 10,000 households along with commercial establishment. The sewerage scheme is proposed to be implemented in two phases. Phase I would cover divisions one and two. A sewage treatment plant with a capacity to treat 2.6 mld per day, will be constructed in first phase. In the second phase, the project will cover division 3 to 5.



Figure 1-8 Awareness Programme on Sewerage project at West Kochi

2. Proof of Concept (POC)- Integrated Command and Control Center o 21st November 2019.

A PoC for IC4 application had been presented by MSI Fluentgrid on 21st November, 2019. MSI has explained the application and services which is being integrated with IC4 application. MSI has informed that till date 4 services has already been integrated and integration process for other services is ongoing. MSI has also explained the GIS application which has been developed for Kochi. CEO, CSML has instructed to expedite the work and complete the work by at the end on December, 2019.



Figure 1-9 POC-IC4 Application

2 STATUS OF PROJECTS

2.1 PAN CITY

PAN City Project - 24x7 Water Supply

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
	24 X 7 WATER SUPPLY	62100		Being taken up by KWA. Has been included in 24 X 7 water supply proposal for which KWA has submitted a concept paper. The funding is yet to be decided (ADB / KIIFB) Detailed Project Report under progress.

This project has been classified as **convergence project** as the project is being implemented by KWA. CSML/PMC will continue taking status from KWA regarding the progress made for the project as project is part of overall projects identified under SCP project list. However, it is being proposed by MoHUA that as 24x7 is a huge project and its implementation timelines will not run in parallel with Smart City timelines hence same may be removed from central MIS.

2.2 STATUS OF ABD PROJECTS

This chapter provides an overview of all 80 projects listed in SCP for ABD. As envisioned in SCP only part funding is met from Smart cities mission fund. Remaining projects to be funded from various sources such as convergence, PPP, CSR, loans etc. The status of projects under convergence and under SPV are provided below. All costs provided are in INR lakhs in this section.

Module 1 Water supply

There were total of 14 projects identified under this module with serial number 1.1 to 1.14. Based on the meetings conducted with Kerala Water Authority in initial phase of the project it was suggested by the authority that KWA will implement all projects. Therefore, these projects are categorized as convergence projects. In the Stakeholder's meeting, KWA has requested to take up Smart Meter project for selected area as pilot basis. Hence only one project Smart Water Meter project is under scope of SPV implementation. KWA is to submit to CSML final scope for smart meter project to be taken up by CSML. Under AMRUT Rainwater Harvesting project has been taken up.

1.1 Karuvelipady Pump house – Pumping augmentation

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.1	Karuvelipady Pump house – Pumping augmentation	100		To be taken up by KWA only after the sump and pump house/pumping mains in Karuvelipady is completed under AMRUT scheme and TS committee constituted. The AMRUT work will be completed within 15 months

This project has been classified as **convergence project** as the project is being implemented by KWA. KWA as per meeting held in July 2019 to share status every month

with CSML. If the work is not tendered and awarded by March 2020 then CSML may request MoHUA/ board to remove the project from MIS.

1.2 West Kochi - Extension of pipelines from Maradu to Island to be extended to West Kochi to supply 12 MLD

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.2	West Kochi - Extension of pipelines from Maradu to Island to be extended to West Kochi to supply 12 MLD	55	85	Taken up under state plan and the works are completed. Work Completed. Work completed (State plan)

This project has been classified as **convergence project** as the project is being implemented by KWA. The KWA has reported that the project has been completed.

1.3 West Kochi - Replacement of pipelines from Perumanoor to Thevara and Thoppumpady bridge to Karuvelipady

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.3	West Kochi - Replacement of pipelines from Perumanoor to Thevara and Thoppumpady bridge to Karuvelipady	1100	725	Replacement of Pipelines from perumanoor pump house to Karuvelippady has been taken up under State plan.

This project is **convergence project** as the project is being implemented by KWA. KWA as per meeting held in July 2019 to share status every month with CSML.

1.4 West Kochi - Dedicated pumping main

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.4	West Kochi - Dedicated pumping main	350	350	Pumping main from Karuvelipadi pump house to Kovampadam OHT will be taken up under AMRUT and the works have been awarded during Feb 2018. The work will be completed within 15 months. Work under implementation.

This project is convergence project as the project is being implemented by KWA. KWA as per meeting held in July 2019 to share status every month with CSML.

1.5 West Kochi - Storage capacity augmentation in Karuvelipady sump by 1.5 million litres

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.5	West Kochi - Storage capacity augmentation in Karuvelipady sump by 1.5 million litres	800	1121	Taken up under AMRUT.

This project is convergence project as the project is being implemented by KWA. KWA as per meeting held in July 2019 to share status every month with CSML.

1.6 West Kochi - Rejuvenation of the Three OH Tanks in the region (Modibath, Fort Kochi and Koovapadam)

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.6	West Kochi - Rejuvenation of the Three OH Tanks in the region (Modibath, Fort Kochi and Koovapadam)	75		Work is to be taken up as part of augmentation of WSS (24 X 7 water supply) to Kochi

This project is convergence project as the project is being implemented by KWA. KWA as per meeting held in July 2019 to share status every month with CSML. .

1.7 West Kochi - Replacement of 20 kms of Distribution line with D.I. pipes including Road cutting charges

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.7	West Kochi - Replacement of 20 kms of Distribution line with D.I. pipes including Road cutting charges	3500		Work is to be taken up as part of augmentation of WSS (24 X 7 water supply) to Kochi

This project is convergence project as the project is being implemented by KWA. KWA as per meeting held in July 2019 to share status every month with CSML.

1.8 West Kochi - Replacement of Household connections (last mile) for across 10,000 HSCs with Smart Metering and isolation valves

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.8	West Kochi - Replacement of Household connections (last mile) for across 10,000 HSCs with Smart Metering and isolation valves	2500		Work is to be taken up as part of augmentation of WSS (24 X 7 water supply) to Kochi

This project is convergence project as the project is being implemented by KWA. KWA as per meeting held in July 2019 to share status every month with CSML.

1.9 West Kochi - Bulk Meters and Isolation valves with remote meter reading

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.9	West Kochi - Bulk Meters and Isolation valves with remote meter reading	100		Work is to be taken up as part of augmentation of WSS (24 X 7 water supply) to Kochi

This project is convergence project as the project is being implemented by KWA. KWA as per meeting held in July 2019 to share status every month with CSML

1.10 Mainland - Rider line for increased water supply

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.10	Mainland - Rider line for increased water supply	1000		Work is to be taken up as part of augmentation of WSS (24 X 7 water supply) to Kochi

This project is convergence project as the project is being implemented by KWA. KWA as per meeting held in July 2019 to share status every month with CSML

1.11 Mainland - Overhead Storage Reservoir + 1 Million Litre Sump + pump near Ernakulam Ground

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.11	Mainland - Overhead Storage Reservoir + 1 Million Litre Sump + pump near Ernakulam Ground	300		Work is to be taken up as part of augmentation of WSS (24 X 7 water supply) to Kochi

This project is convergence project as the project is being implemented by KWA. KWA as per meeting held in July 2019 to share status every month with CSML .

1.12 Replacement of connections (last mile) for across 10,000 HSCs (Commercial and Domestic) with Smart Metering and isolation valves- Mainland

S. No		REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.12	Mainland - Replacement of connections (last mile) for across 10,000 HSCs (Commercial and Domestic) with Smart Metering and isolation valves	Replacement of connections (last mile) for across HSCs (Commercial and Domestic) with Smart Metering and isolation valves for selected Area	2000	100	KWA during meeting held on 29 July 19 had confirmed to share scope for implementing smart meter project on pilot basis. KWA confirmation awaited

This project is convergence project as the project is being implemented by KWA. KWA as per meeting held in July 2019 to share status every month with CSML

1.13 Mainland - Bulk Meters and Isolation valves with remote meter reading

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.13	Mainland - Bulk Meters and Isolation valves with remote meter reading	150		Smart metering by CMSL on pilot basis. KWA to confirm feasible locations to be taken up

KWA to provide confirmation on scope of smart meter project on pilot basis for integration with IC4.

1.14 General - Rainwater structures in ~5000 households

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
1.14	General Rainwater structures in ~5000 households	Rainwater harvesting structures in 13 Govt. buildings	1125	75	Initially KMC and other stakeholders suggested that the project may be done for Govt buildings instead of households Later it was informed CSML that RWH project is under implementation under AMRUT

Module 2 UGSS

There were total of 3 projects identified under this module with serial number 2.1 to 2.3. Based on the meetings conducted with Kerala Water Authority and Kochi Municipal Corporation 2 projects are under scope of SPV implementation. Further the project “Improvements to Elamkulam STP and collection system Mainland (JNNURM scheme)” has been segregated in two projects. The project “Improvement to Elamkulam STP” has been taken up by KWA.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
2.1	Decentralized Treatment and collection system for West Kochi under ADB (Mundamveli)	Sewerage System for West Kochi	2200	16600	The Sub Module 2.1 and 2.2 will be planned together as the small-bore sewer for on-site sanitation is part of sewer collection system. These two components will not be separated as two different works for design as well as execution. The project under the module would focus on ward nos. from 1 to 5 of Kochi Corporation The LoA has been issued to M/s LC Infra QUAVAC and ENVIRO Consortium
2.2	Small bore sewer/ Vacuum system for onsite sanitation - Includes storage facility for treated water use for landscaping		11000		
2.3	Improvements to Elamkulam STP and collection system Mainland (JNNURM scheme)	Improvements to sewer collection system for Mainland	7000	2230	Elamkulam STP INR 13.70 tendered by Kerala Water Authority (KWA). Remaining INR 22.30 Cr (from the module) yet to be initiated by KWA Sewerage in mainland approx. INR 22.30 Cr balance amount from the SCP estimate project not yet taken up by KWA. Based on the meeting held with MD, KWA project scope confirmation awaited from KWA if KWA proposes CSML to take up the project Project preparation will require time. Minimum 3-4 months for DPR & tender preparation depending on project scope. Hence to enable tendering and implementation within SCM duration confirmation on scope to be shared by KMA at the earliest. With limited SCM duration. Confirmation on scope needs to be expedited.
		Improvement to Elamkulam STP		1370	

2.2.1 Vacuum Sewer Network with House Connections and Sewage Treatment Plant under Cochin Smart City Mission

Project cost: INR 166.00 Crores

Duration: 18 Months

Project Start date: 12 Sept 2019

End date (expected): 12 March 2021

Contractor: M/s LC Infra QUAVAC and ENVIRO CONSORTIUM

Current status:

❖ Topographical survey completed – 73 km (100%) out of 73 km

- ❖ Household survey- Started on 23 Sept 2019 and 8816 numbers surveyed out of 9280 (95%)
- ❖ Submitted the baseline schedule
- ❖ Key staff Mobilisation under progress

Any Challenges to be discussed:

- ❖ Councillors to assist CSML in sanitation and awareness regarding project. Residents need to be made aware regarding the project and some disruption that it may cause during construction.
- ❖ Soil test stalled due to public protest. KMC & DC to take action.

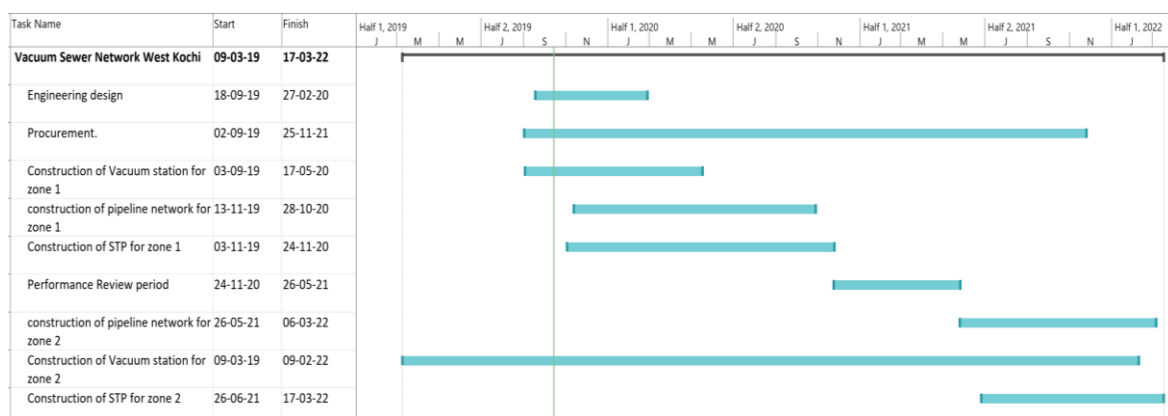


Figure 2-1 REVISED SCHEDULE

Module 3 NMT Roads and Pedestrianized areas

There were total of 4 projects identified under this module with serial number 3.1 to 3.4

Three projects Relaying of roads, Standard Footpaths including signages and Restoration/ Rehabilitation of Storm water drains in the proposed area have been combined as these components are part of right of way of the road itself and for coordinated implementation need to be done together.

S. No	Proposed Interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
3.1	Relaying of roads	Development of Other Roads in Ernakulam under Smart City Mission	4200	4360	LoA issued on 9th April, 2019 to M/s Deens Group Work under progress
3.2	Standard Footpaths including signages	Development of Other roads in West Kochi 1 & 2	2853	3473	LoA has been issued to M/s. K V Jacob & Sons on 06th September 2019.
3.3	Restoration/ Rehabilitation of Stormwater drains in the proposed area	Development of Other roads in West Kochi 3,4 & 5	2360	3249	RFP for ward 3,4 & 5 in Technical Bid evaluation process
3.4	MLCP and Commercial	MLCP at Kacheripady	5000	786	No bids received. Project to be re tendered

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
	complex at Kacheripady	MLCP at GCDA land at Marine Drive		10.0	Project scope to be confirmed by stakeholder. Post that DPR preparation to be taken up
		MLCP at KTDC complex at Maneka		7.0	Project scope to be confirmed by stakeholder. Post that DPR preparation to be taken up. Project essential to support Broadway street pedestrianisation
		Smart Parking solutions at various location in ABD		1.90	To be taken up based on fund availability

Progress of the Project:

2.2.2 DEVELOPMENT OF OTHER ROADS IN ERNAKULAM

Project cost: INR 43.60 Crores
Duration: 15 Months

Project Start date: 20 June 2019
End date (expected): 19 September 2020

Contractor: M/s Deens Group

Current status:

- ❖ Kuttappayi road 100 mm interlock tile laying completed.
- ❖ Saucer drain placing and mountable kerb laying completed at Ranimatha Road.
- ❖ Drain and trench placing completed at St. Alphonsa Road. Kerb laying work started
- ❖ Drain cleaning at Narakathara Road completed
- ❖ Joint inspection with KMRL, CSML, and contractor for Gopalaprabhu road, Kovilvattom road, Basin Road, and market road are completed.
- ❖ Survey for 10 other road has been completed

Concerns:

- ❖ Slow progress in mobilization and finalization of proposals by the contractor
- ❖ Exact locations of underground utilities such as water supply line, electric cables, data cables etc. are unknown.
- ❖ Mobilization of Manpower, equipment, Laboratory, Batching Plant, Casting Yard etc. took longer than expected.
- ❖ Survey and Submission of Working drawings by the Contractor are lagging behind the schedule.
- ❖ Interfacing issues with other contractors and various stakeholders.

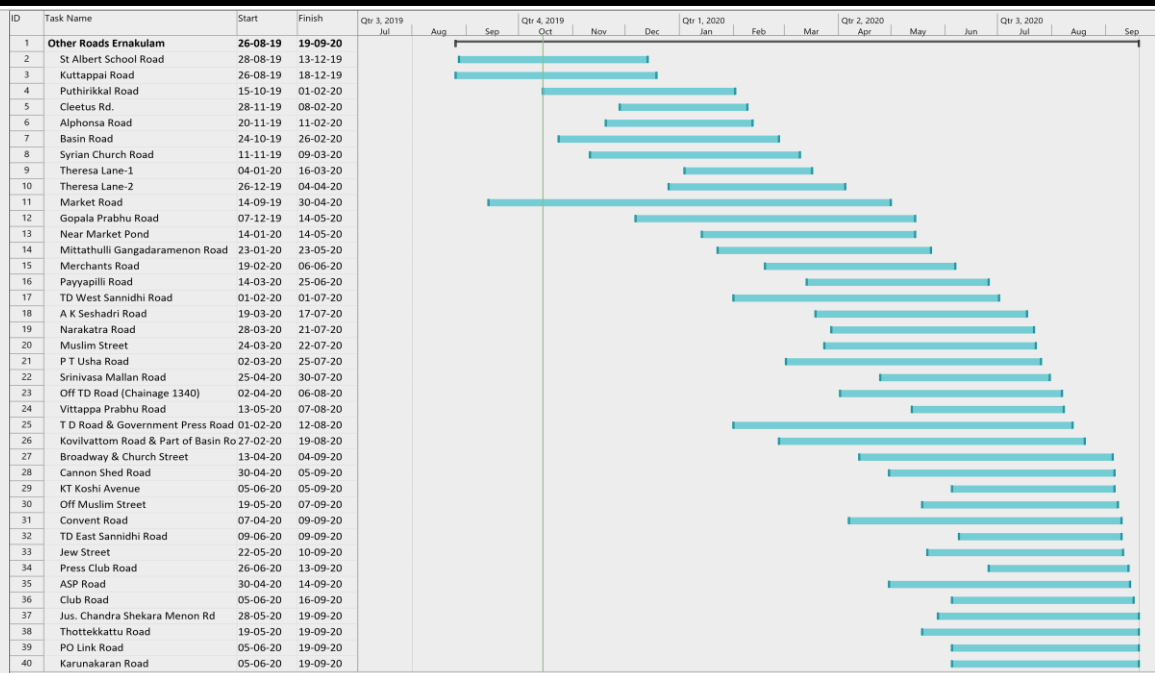


Figure 2-2 Implementation schedule



Figure 2-3 Tile laying at Kuttapayi Road



Figure 2-4 Drain cleaning work under progress at Narakhatra Road

List of Drawings issued to the Contractor

SI No.	Drawing Reference No.	Description of Drawing	Revision	Date
1	CSML/M4/DRA/EKM/PL-011	Ernakulam Drainage Plan - 1	R0	13-Jul-18
2	CSML/M4/DRA/EKM/PL-012	Ernakulam Drainage Plan - 2	R0	13-Jul-18
3	CSML/M4/DRA/EKM/PL-013	Ernakulam Drainage Plan - 3	R0	13-Jul-18
4	CSML/M4/DRA/EKM/PL-014	Ernakulam Drainage Plan - 4	R0	13-Jul-18
5	CSML/M4/ORD/EKM/PL-015	Other Roads EKM Plan - 1	R0	13-Jul-18
6	CSML/M4/ORD/EKM/PL-016	Other Roads EKM Plan - 2	R0	13-Jul-18
7	CSML/M4/ORD/EKM/PL-017	Other Roads EKM Plan - 3	R0	13-Jul-18
8	CSML/M4/ORD/EKM/PL-018	Other Roads EKM Plan - 4	R0	13-Jul-18
9	CSML/M4/ORD/EKM/TCS/019	Other Roads EKM TCS - 1	R0	13-Jul-18

SI No.	Drawing Reference No.	Description of Drawing	Revision	Date
10	CSML/M4/ORD/EKM/TCS/020	Other Roads EKM TCS - 2	R0	13-Jul-18
11	CSML/M4/ORD/EKM/TCS/021	Other Roads EKM TCS - 3	R0	13-Jul-18
12	CSML/M4/SMR/TAT-025	Typical Tabletop Crossing Details	R0	25-May-18
13	CSML/M4/SMR/CLV-026	Typical Culvert Drawings	R0	04-May-18
14	CSML/M4/SMR/DRA-027	Typical Drain Drawings	R0	04-Jul-18

2.2.3 DEVELOPMENT OF OTHER ROADS IN WEST KOCHI WARD 1 & 2

Project cost: INR 34.73 Crores

Duration: 15 Months

Project Start date: 06 September 2019

End date (expected): December 2020

Contractor: KV Jacob & Sons

Current status:

- ❖ LoA issued on 6th September, 2019
- ❖ Survey works under progress – 50% Completed

Any Challenges to be discussed:

- ❖ Slow progress in mobilization

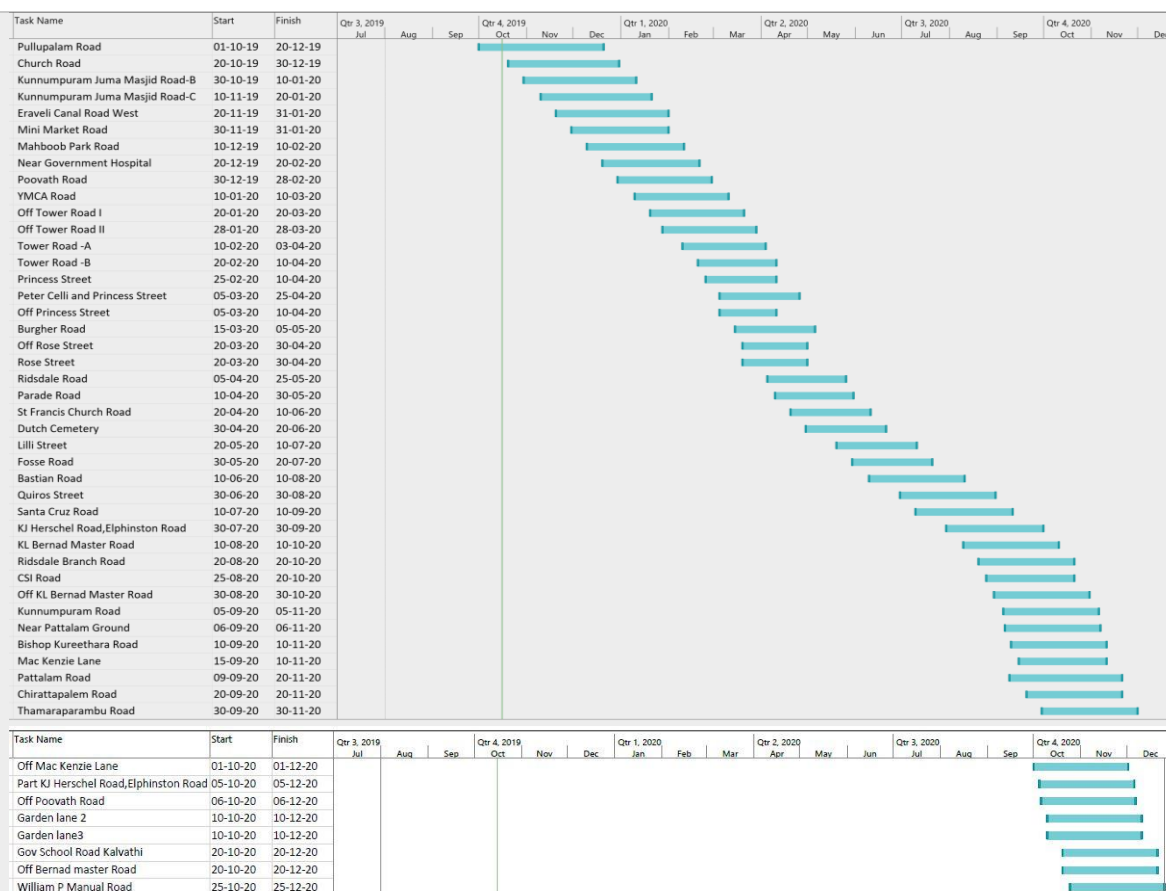


Figure 2-5 Implementation schedule

Module 4 Main roads

There were total of 5 projects identified under this module related to roads with serial number 4.1 to 4.3. Projects 4.4 & 4.5 will be separate project.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated / Estimated Cost	Remarks
4.1	World class Arterial roads -- KB Jacob & Amravati Road/ Bellar Road in West/ -- Avenue, MG Rd, DH Rd, Banerjee Rd, Abraham Madamakkal road in Central city	Development of Smart Roads Ernakulam	5,287	6153	LoA issued on 9th April, 2019 to M/s Deens Group in Consortium with Deens Constructions Work under progress
4.2	Relaying of roads, Aesthetic and improved Urban design Pedestrian facilities with Street furniture, Boulevards and urban greenery	Development of Smart Roads in West Kochi	1650	3031	LoA issued on 9th April, 2019 to M/s ABC Builders Work under progress
4.3	Utility ducting for SWD, Water supply, Sewerage, OFC etc		3300		
4.4	Signages, Junction improvement with Intelligent Traffic management	Signages	97	240	Segregated as signages & ITMS have separate projects. Junction improvement taken up under Roads combined project. DPR has been submitted for Approval.
		Integrated Traffic Management System		2690	Contract Agreement signed on 16th May, 2019. Work commenced
4.5	Construction of 3 Minor Bridges and 2 Foot over Bridges in West Kochi		240	1312	DPR prepared for FOBs in Thuruthy. Project tendered

Progress of the projects:

2.2.4 DEVELOPMENT OF SMART ROADS IN ERNAKULAM

Project cost: INR 61.53 Crores	Duration: 15 Months
Project Start date: 20 June 2019	End date (expected): 19 September 2020
Contractor: M/s Deens Group in Consortium with Deens Constructions	
Current status:	
<ul style="list-style-type: none"> ❖ Kerb laying at Left hand side started from Ch. 60 to 150 mtr at Swami Chinmyanad Road at Jos Jn. to east. ❖ Right hand side at Chittoor Road junction bell mouth kerb laying completed ❖ GSB levelling of RHS completed up to Chittoor Road. ❖ GSB levelling at LHS from Ch. 60 to 150 mtr completed up to Chittoor Road. ❖ Utility trench laying at RHS Ch. 950 to 1000 mtr completed at Jos Jn. ❖ LHS footpath completed at Jos Jn. ❖ Stage and Sitting work arrangement ongoing ❖ LHS drain placing work completed at DH Road. 	

- ❖ LHS precast drain laying completed from Ch. 950 to 1050 mtr. completed at AM Road.
- ❖ Two No of working piles completed at AM road
- ❖ RHS trench and drainage placing work ongoing

Challenges:

- ❖ Delay in contractor's mobilization.
- ❖ Delay in finalizing the proposals due to incomplete and improper submissions by the contractor.
- ❖ Delay in Utility shifting - from Contractor as well as from authorities such as KSEB, KWA etc.
- ❖ Interfacing between various contractors not in line yet.

Location map

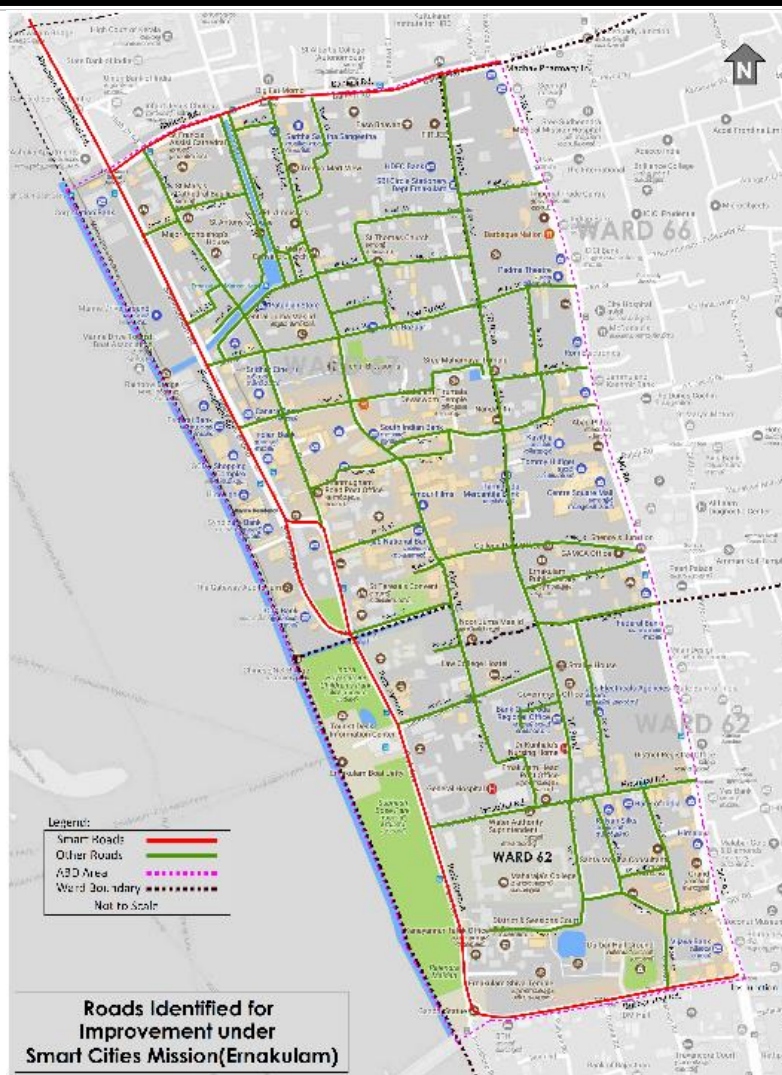


Figure 2-6 Location Map- Smart Road Ernakulam

Task Name	Start	Finish	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Smart Roads - Ernakulam	04-07-19	16-09-20																	
Park Avenue Road	21-10-19	29-05-20																	
Abraham Madamakal Road	04-07-19	04-07-20																	
Banerji Road	14-08-19	28-07-20																	
Durbar Hall Road	03-10-19	08-08-20																	
Shanmugham Road	22-11-19	12-08-20																	
Park Avenue Link Road	21-10-19	16-09-20																	

Figure 2-7 Implementation schedule

List of Drawings issued to the Contractor

SI No.	Drawing Reference No.	Description of Drawing	Revision	Date	Revision	Date	Revision	Date
1	RD/SR/EKM/JOS/SC-001	Jos Junction- Streetscape Part plan- Part 1	R3	25-Jun-19			R5	08-Aug-19
2	RD/SR/EKM/JOS/SC-002	Jos Junction- Streetscape Part plan- Part 2	R3	25-Jun-19	R4	12-Jul-19	R5	08-Aug-19
3	RD/SR/EKM/JOS/SC-003	Jos Junction- Streetscape Part plan- Part 3	R3	25-Jun-19	R4	12-Jul-19	R5	08-Aug-19
4	RD/SR/EKM/JOS/SE-001	Jos Junction- Streetscape Section	R3	25-Jun-19				
5	RD/DR/TYP-001	Typical RCC details of duct	R2	27-Jun-19				
6	CSML/M4/SRD/RD/ST/TE ST PILE-00	Dimesnsion and Reinforcement Detail of pile for Abutment	R1	01-Jun-19				
7	RD/SR/EKM/JOS/SWD-001	Jos Junction- Storm Water Drain detail-001	R4	08-Jul-19				
8	RD/SR/EKM/AM/SC-001-008	Abraham Madamakal - Road Layout Part Plan-01 (chaingage - 0+000 to 0+150meter	R0	02-Jul-19				
9	RD/SR/EKM/AM/SC-002-008	Abraham Madamakal - Road Layout Part Plan-02 (chaingage - 0+150 to 0+250meter	R0	02-Jul-19				
10	RD/SR/EKM/AM/SC-003-008	Abraham Madamakal - Road Layout Part Plan-03 (chaingage - 0+250 to 0+400meter	R0	02-Jul-19				
11	RD/SR/EKM/AM/SC-004-008	Abraham Madamakal - Road Layout Part Plan-04 (chaingage - 0+400 to 0+550meter	R0	02-Jul-19				
12	RD/SR/EKM/AM/SC-005-008	Abraham Madamakal - Road Layout Part Plan-05 (chaingage - 0+550 to 0+700meter	R0	02-Jul-19				

SI No.	Drawing Reference No.	Description of Drawing	Revision	Date	Revision	Date	Revision	Date
13	RD/SR/EKM/AM/SC-006-008	Abraham Madamakal - Road Layout Part Plan-06 (chainage - 0+700 to 0+850meter)	R0	02-Jul-19				
14	RD/SR/EKM/AM/SC-007-008	Abraham Madamakal - Road Layout Part Plan-07 (chainage - 0+850 to 1+000meter)	R0	02-Jul-19				
15	RD/SR/EKM/AM/SC-008-008	Abraham Madamakal - Road Layout Part Plan-08 (chainage - 1+112 to 1+000meter)	R0	02-Jul-19				
16	RD/SR/EKM/AM/SC-101	Abraham Madamakal - Streetscape Section -01 (chainage - 0+00 to 1+112meter)	R0	02-Jul-19				
17	RD/SR/EKM/JOS/SC-004	Jos Junction - Junction Improvement Plan - Part-1	R0	12-Jul-19				
18	RD/SR/EKM/JOS/SC-005	Jos Junction - Junction Improvement Plan - Part-2	R0	12-Jul-19				
19	RD/SR/EKM/JOS/SE-002	Jos Junction -Streetscape -Prpoerty Entry Section-001	R0	11-Jul-19				
20	RD/SR/EKM/JOS/SE-003	Jos Junction -Streetscape -Bike Parking Section-002	R0	11-Jul-19				
21	CSML/M4/SRD/RD/ST-001	Dimesnson and Reinforcement Detail of Pile for Abutment	R0	06-Aug-19				
22	RD/SR/EKM/AMR/SC-001	Abraham Madamakal Road -Part Plan 01&02-CH. +0.00M+340.00M	R1	27-Aug-19				
23	RD/SR/EKM/AMR/SC-002	Abraham Madamakal Road -Part Plan 03 &04-CH.+340.00M to +650.00M	R1	27-Aug-19				
24	RD/SR/EKM/AMR/SC-003	Abraham Madamakal Road -Part Plan 05&06-CH.+650.00M to 970.00M	R1	27-Aug-19				

SI No.	Drawing Reference No.	Description of Drawing	Revision	Date	Revision	Date	Revision	Date
25	RD/SR/EKM/AMR/SC-004	Abraham Madamakkal Road -Part Plan 07& Section-CH.+970.00M to 1112.00M	R1	27-Aug-19				

Details of Changes in Drawings in Jos Junction to Railway Station Road

SI No	Drawing Reference No.	Description of Drawing	Revision/ Date of Issue	Remarks	Revision/ Date of Issue	Remarks	Revision/ Date of Issue	Remarks
1	RD/SR/EKM/JOS/SC-001	Jos Junction- Streetscape Part plan- Part 1 (Ch +0.00 to +50.00)	R3/24-06-2019	Good for Construction Drawing of RHS Side Issued to Contractor		No changes	R5/08-08-2019	In Part 1: Private entry width/Light Pole position changed based on property owner's requirements and Clients Instruction. Kerb & Boundary setup dimensions incorporated. Tabletop crossing layout added. In Part 2: Private entry width/Light Pole Position changed based on site conditions. In part -3: Private entry width/ Light Pole Position changed based on site condition. Duct Bank detail incorporated. General Comments Things Incorporated: - Kerb & Boundary setup dimensions, Drain Inlet & Revised Light pole position, RMU & Feeder Pillar Locations/ Proposed Tree Locations.
2	RD/SR/EKM/JOS/SC-002	Jos Junction- Streetscape Part plan- Part 2 (Ch +50.00 to +120.00)			R4/12-07-2019	Based on site conditions drop off bay reduced		
3	RD/SR/EKM/JOS/SC-003	Jos Junction- Streetscape Part plan- Part 3 (Ch +120.00 to +180.00)			R4/12-07-2019	Based on site conditions Property entry incorporated		
4	RD/SR/EKM/JOS/SC-004	Jos Junction- Streetscape Section				No changes		



Figure 2-8 Drain placing work at AM Road



Figure 2-9 Footpath work under progress at Jos Jn

2.2.5 DEVELOPMENT OF SMART ROADS IN WEST KOCHI

Project cost: INR 30.31 Crores		Duration: 15 Months	
Project Start date: 20 June 2019		End date (expected): 19 September 2020	
Contractor: M/s ABC Builders			
Current status: <ul style="list-style-type: none">❖ Topographical Survey completed for 3.71 KM.❖ Drainage desilting completed – 1 Km❖ Casting yard development works under progress❖ Batching plant erection under progress❖ KB Jacob Road - Utility Duct Casted – 20Nos			
Challenges: <ul style="list-style-type: none">❖ Slow progress in mobilization and finalization of proposals by the contractor❖ Underground and overhead utilities (KSEB, KWA & BSNL)❖ Handing over roads by the stakeholders to the Contractor.			
Location map			



Figure 2-10 Smart Road - West Kochi



Figure 2-11 Implementation schedule

List of Drawings issued to the Contractors

Sl No.	Drawing Reference No.	Description of Drawing	Revision	Date
1	RD/SR/WK/GN-003	Layout of Bicycle Docking Station - Road 42	R0	01-Jul-19
2	RD/SR/WK/GN-002	Layout of Bicycle Docking Station - Santa Cruze Road	R0	01-Jul-19
3	CSML/M08/POS/WTP/AR-001	Paving Pattern Detail - Bicycle docking area	R0	01-Jul-19

2.2.5 INTELLIGENT TRAFFIC MANAGEMENT SYSTEM (ITMS)

Project cost: INR 26.90 Crores

Duration: 12 Months

Project Start date: 22 February 2019

End date (expected, excl. O&M): 21 February 2020

Contractor: M/s KELTRON

Current status:

- ❖ Agreement Signed, Bank Guarantee received, kick off meeting and Solution document submitted on 18th May 2019
- ❖ Road cutting locations, Signal pole locations, VMS locations, Control box locations and Camera pole locations, Pelican Signal locations, have been identified.
- ❖ Observation on Design Solution document submitted to KELTRON.
- ❖ At **8 Junctions** work under progress for **Road Cutting, Cable Laying and Pole Erection for installation of VA signals**

- ❖ Work under progress for erection of poles at 2 location for PTZ and RLVD cameras
- ❖ Command and Control room - Work progressed in North Police Station and then as per IG's instructions shifted to 12th Floor Revenue Tower.

Any Issues/ Challenges:

- ❖ Timely permissions from relevant stakeholders for ITMS components installation which will require tasks such as road cutting.
- ❖ Delay in submission of control room layout.
- ❖ Delay in response from KELTRON. Revision of solution document ongoing for more than 4 months.
- ❖ Detailed drawings to be submitted for approval for road cutting (only line diagram submitted)
- ❖ KELTRON to chase all stakeholders for road cutting permissions
- ❖ KELTRON to mobilise team
- ❖ **Road restoration**

Project components

Components of ITMS

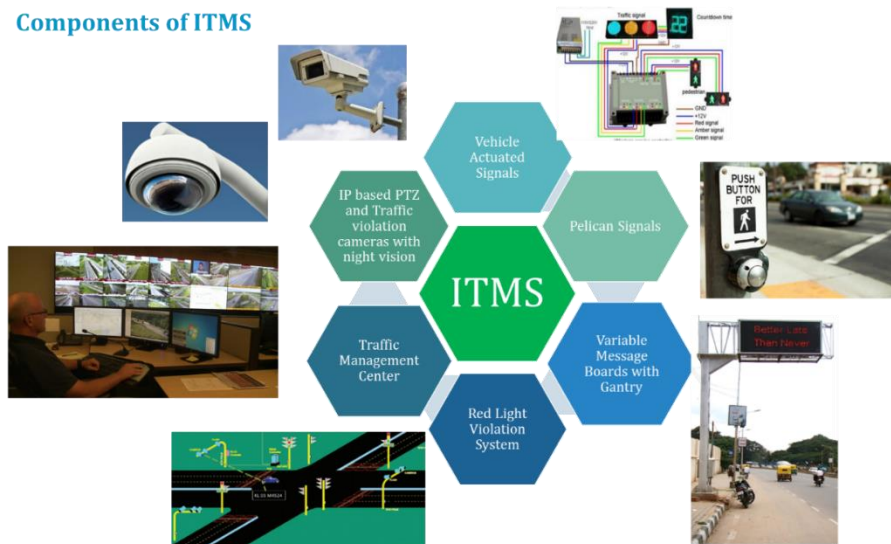


Figure 2-12 Ongoing work of Signal Placing and CCR

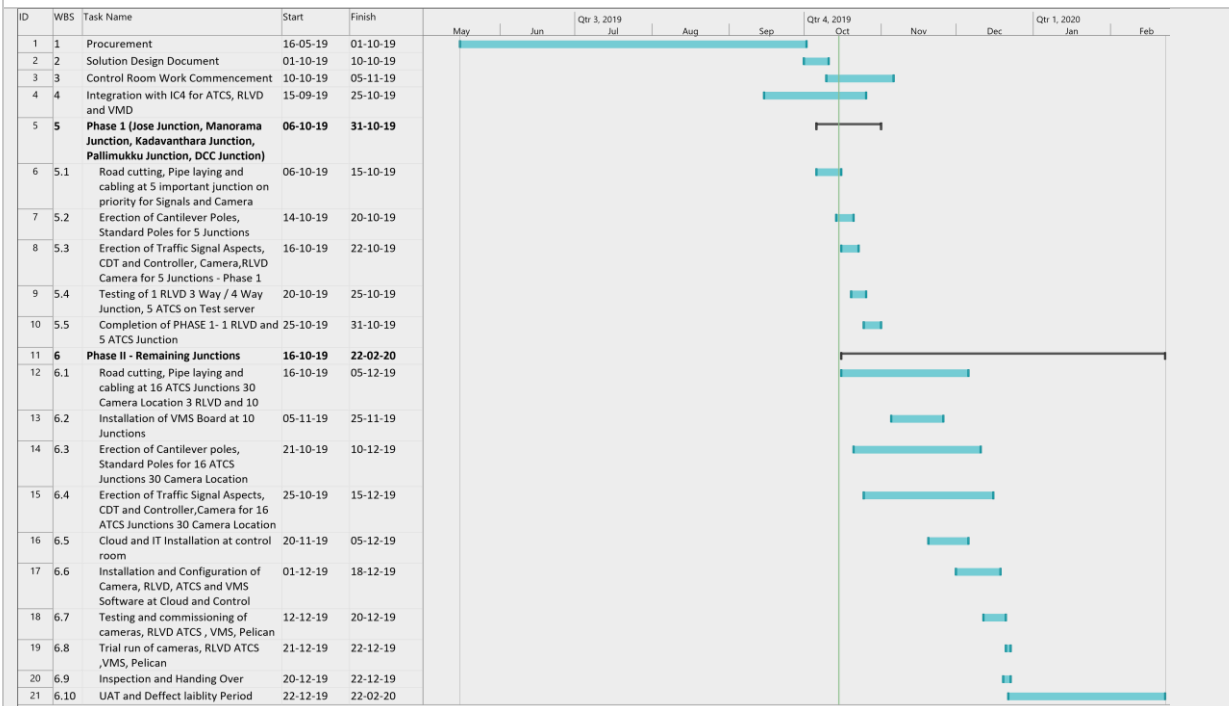


Figure 2-13 Implementation schedule

Module 5 Energy Supply

There were total of 16 projects identified under this module with serial number 5.1 to 5.16. Based on the meetings conducted with KMC, KSEB and PWD these all projects have been combined into one as it will be implemented along with Smart Roads.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
5.1 – 5.16	Compact Secondary Substation (990 KVA) Underground HT Line Underground LT Line LT UG for Streetlights AMR Metering - Single phase AMR Metering - Three phase AMR Metering - HT RMU with Remote terminal units Distribution panel board Installation of feeder pillars Underground Cabling - 11 KV LT UG Cabling Installation of Transformers (Compact Sub-stations) Installation of Ring Main Units with Remote terminal units Smart Meters (AMR) Installation of feeder pillars	Development of Electrical Infrastructure in ABD	12,253	7198	All projects have been clubbed LoA has been issued to M/s Polycab India Ltd.

The scope of projects is to implement System Improvement & Augmentation Scheme for existing Electrical Network in various Smart Road area. The contractor's scope of work includes but not limited to: Survey, network design, manufacturing, Working testing, inspection, packing, dispatching, loading, unloading and storage at site, transit/storage and construction insurance, assembly, erection, civil structural work, complete pre-commissioning checks, testing & commissioning at site, obtaining statutory clearance & certification from State Electrical Inspectorate, Kerala State Electricity Board, Kochi Municipal Corporation etc. and handing over to the Owner after satisfactory commissioning of complete augmentation of existing Electrical Network in Cochin Smart Mission Limited Project ABD.

2.2.6 DEVELOPMENT OF ELECTRICAL INFRASTRUCTURE AT ABD

Project cost: INR 71.97 Crores

Duration: 15 Months

Project Start date: 14th September

End date: 13th October, 2020

Contractor: M/s Polycab India Pvt Ltd.

Current status:

- ❖ LoA has been issued to M/s Polycab India Pvt Ltd on 17th August 2019.
- ❖ Kick off Meeting held on 20th September 2019.
- ❖ PBG has been submitted.
- ❖ **Joint Site visit with KSEB done for 5 Smart Roads**
- ❖ **Schematic Diagram of Jos Junction and AM Road submitted to PMC/CSML & KSEB for approval.**
- ❖ **GTP of 11kV Cable, Polycab Make approved by PMC.**

Concern:

- ❖ Contract Agreement yet to be signed.

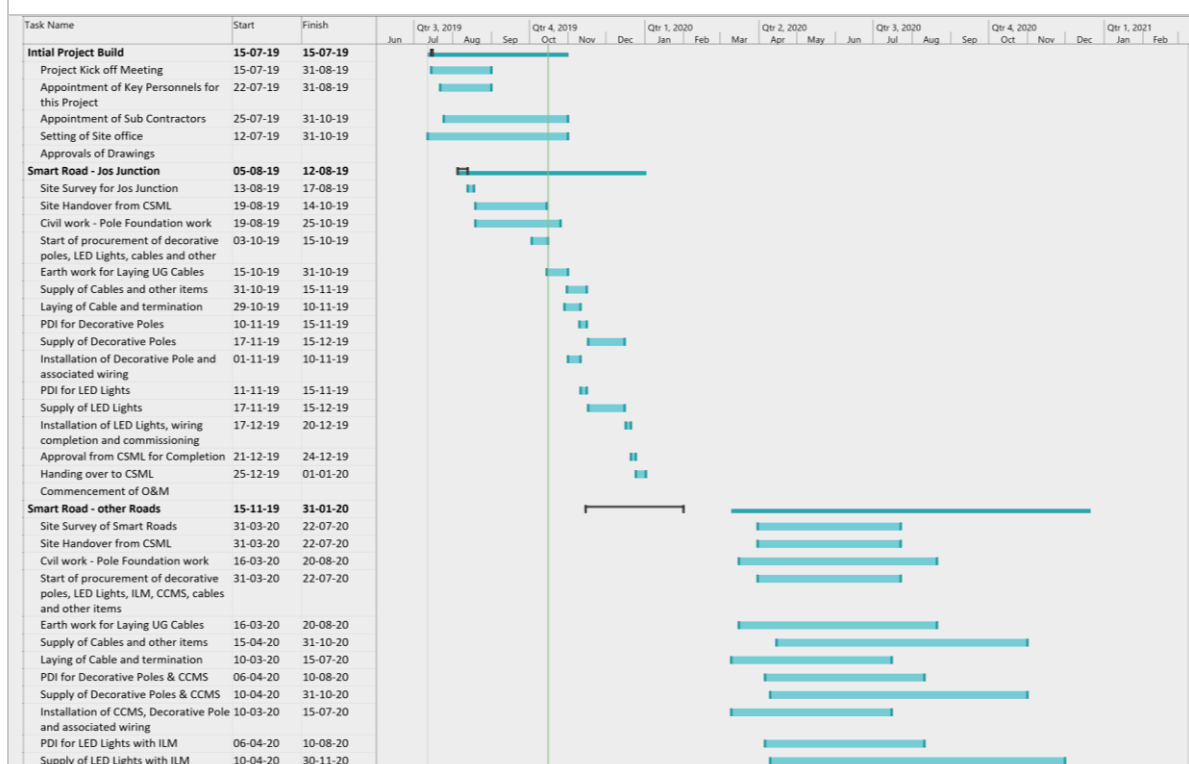




Figure 2-14 Implementation schedule

Module 6 Energy efficiency

There were total of 2 projects identified under this module with serial number 6.1 to 6.2. Based on the meetings conducted with Kerala State Electricity Board and Kochi Municipal Corporation all projects are under scope of SPV implementation.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
6.1	Solar based LED with Smart poles	Smart LED Lights in ABD area	1,250	3209	LoA issued to M/s Schnell Energy Equipment Private Limited on 27th June 2019.
		Intelligent Street Poles in Kochi		30158 (PPP)	DPR submitted Tender Cancelled.
6.2	Solar panels in Households and Institutions - Grid connected	Solar panels in Govt. buildings	1,758	570	Work awarded on Nomination basis to BHEL. Work under implementation.

In module 6: Solar based LED with Smart poles has been mentioned as one single project. Smart Pole & Solar LED are two different entities hence should be considered as two different projects. Smart poles are proposed to be implemented as a PPP project.

Smart pole project now proposed by CSML board to be taken up on EPC. It combines 2 projects together Safety and Security and smart poles.

Progress of the Projects

2.2.7 SOLAR ROOFTOP PROJECT IMPLEMENTATION PROGRESS

The Contract agreement for the implementation of the project has signed on 24th September 2018. The BHEL started site feasibility study and other paper works in the month

of December 2018. Clearance for installation of Solar panels has been given to BHEL for 26 buildings. The total capacity of solar panels in these buildings is 1000 KWp.

Project cost: INR 5.70 Crores

Duration: 6 months + 2 months EOT

Project Start date: 24 September 2018

End date (expected, excl. O&M): 30 September 2019

Contractor: M/s BHEL

Current status:

- ❖ Installation of Modules and inverter 100% completed.
- ❖ Solar system has been commissioned in Gandhinagar Fires station.
- ❖ Inspection of Court Complex and General Hospital by Electrical Inspectorate done.
- ❖ Inspection completed by KSEB for General Hospital and court complex. (pre commissioning check-up)
- ❖ Final Clearance Energisation Certificate obtained = 4 District court, Old age home, General Hospital
- ❖ Liaising works with KSEBL and Electrical Inspectorate under progress for the commissioning of the completed facilities.

Issues:

- ❖ Approval for Dwg and site inspection from Electrical Inspectorate (EI).
- ❖ Ladder with openable door installation for maintenance and EI inspection.
- ❖ Additional DB shall be installed for conversion of single phase to three phase system for Paramara and Perumbotta Ground Buildings as a variation item. Permanent electrical connection to be obtained by Excise Department for completion of Solar System.
- ❖ Inadequate site supervision/ frequent replacement of Site in charge by BHEL.
- ❖ For 14 buildings, the connected load is less than installed solar capacity. Hence Service wire need to be changed as extra item.

Way forward

- ❖ BHEL to increase the staff strength of the implementation team.
- ❖ BHEL to do rigorous follow-up with EI.
- ❖ Presence of BHEL's experienced Site in charge till the completion of the Project
- ❖ Monthly project review Meeting between senior management team of BHEL with CSML and PMC.

Project photographs



Figure 2-15 Govt School Edapally



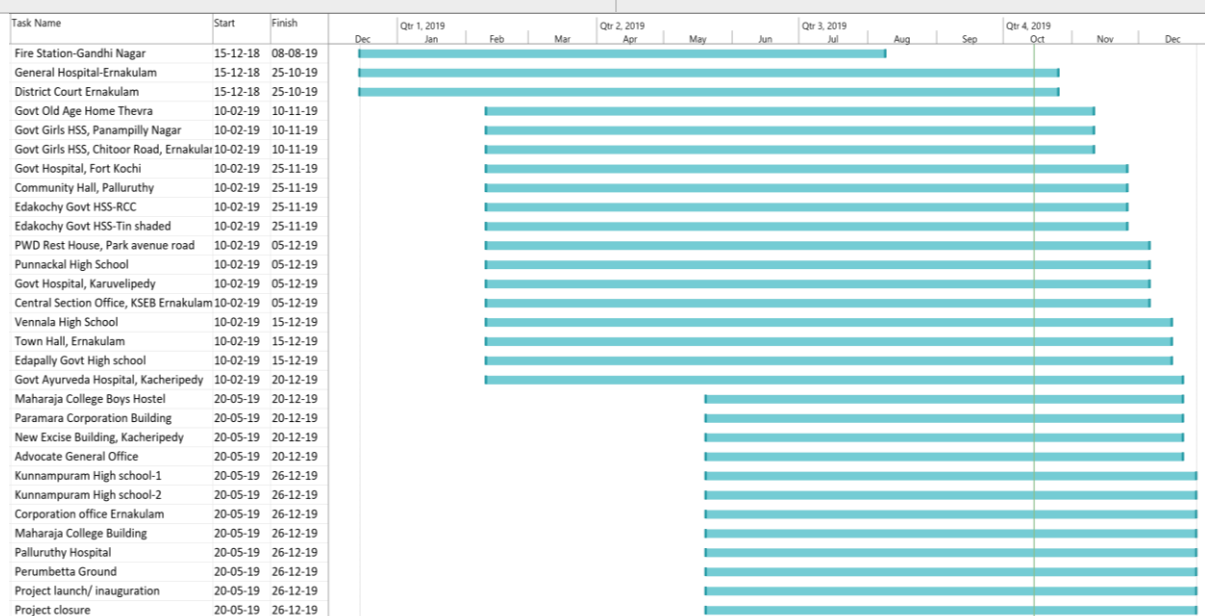
Figure 2-16 Installation at Kunnumpuram High School(20kW)



Figure 2-17 Kunnumpuram Higher Secondary School(20kW)



Figure 2-18 Kunnumpuram Higher Secondary School(20kW)



2.2.8 Implementation of Smart LED Lights in ABD

Project cost: Rs 32.06 crore

Duration: 15 Months

Project Start date: 01 August 2019

End date (expected): 01 February, 2021

Contractor: M/s. Schnell Energy Equipment Private Limited

Current status:

- ❖ Erection of 15 poles done at Jos Junction.
- ❖ AB Cabling- Submitted drawing of 8 Access Roads to KSEB for approval.
- ❖ Survey work of 32 Access roads completed.
- ❖ GTP of AB Cable, KEI Make submitted to PMC for Approval.

Issues

- ❖ HSE safety officer, electrical engineer, Civil engineer mobilized and Project manager to be mobilized.



Figure 2-20 Led Lights at Jos Jn.

Smart LED-Project Phasing		Months																	
		Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Jan-21
A	Site survey, Lighting scheme design Preliminary works, drawing submission etc... and scheme approval of AB Cabling from KSEB.																		
	B																		
1	Procurement																		
2	Manufacturing of LED Lights,Poles,AB Cables,LT Cables, Lighting Control Panels, etc.(Smart Road)																		
3	Manufacturing of LED Lights,Poles,AB Cables,LT Cables, Lighting Control Panels, etc.(Access Road)																		
4	Making foundation for LED Poles, Earth pits,Lighting Control Panels etc(Smart Road)																		
5	Making foundation for LED Poles, Earth pits,Lighting Control Panels etc(Access Road)																		
6	Factory Inspection of LED Lights ,Lighting control Panels, Poles, AB Cables and LT Cables by client(For Access Road)																		
7	Factory Inspection of LED Lights ,Lighting Control Panels, Poles AB Cables and LT Cables by client(For Smart Road)																		
8	Dispatch of LED Lights ,Poles and Lighting control Panels ,etc.. & storage at site																		
9	Installation of poles and light Fixtures																		
10	Supply and Laying of LT cables																		
11	Supply and Laying of AB cables																		
12	Pre commissioning test of system and trial run																		
13	Integration with IC4 (CSML)																		

Figure 2-21 Implementation schedule

Module 7 Solid waste and Sanitation

There were total of 4 projects identified under this module with serial number 7.1 to 7.4. Based on the meetings conducted with Kochi Municipal Corporation all projects are under scope of CSML implementation. Only one project was proposed to be dropped by KMC as it was not successful in earlier attempts made by Govt. Authorities.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
7.1	Equipment including Smart Street sweepers/ GPS enabled Vehicles/compactors		600		Segregated

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
		Supply, Operation and Maintenance of Portable Compactor for Secondary Storage & Transportation of Solid Waste		440	Tender Cancelled due to technical disqualification of bidder. Project to be retendered with new analysis.
		Smart & Improved Battery-Operated Tricycles for Primary Waste Collection at West Kochi & Ernakulam in ABD Area		100	DPR submitted KMC concurrence awaited to proceed with tendering
		Smart & Improved Mechanised Street Sweeping at West Kochi & Ernakulam in ABD area		320	Tender Cancelled due to technical disqualification of bidder. Project re-tendered. Bid evaluation on going
7.2	Bio-composting in all Government institutions		5		Dropped as based on previous experience KMC proposed not to take up the listed project as it was implemented at few locations and was not successful. CSML to request for formal confirmation from KMC
7.3	Household segregated bins for Organic and inorganic wastes		74	67	Bid Evaluation completed. LoA issued to M/s Nilkamal on 8th May, 2019. Work under progress
7.4	Public toilets with Fit-in Treatment facility for Decentralized STP in West Kochi	Renovation and Upgradation of existing Public Toilet Facilities in ABD area	10	180	DPR Submitted. Project now proposed by CSML to be taken up through CSR funding.

Progress of the Projects

2.2.9 HOUSEHOLD BINS AND BINS IN PUBLIC PLACES

Project cost: INR 0.67 Crores	Duration: 3 Months
Project Start date: 06 May 2019	End date (expected): 30 October 2019
Contractor: M/s Nilkamal Limited	
Current status:	
<ul style="list-style-type: none"> ❖ 40,162 (100%) household bins have been supplied ❖ Distribution completed in Ward 1-5, 25,000 bins have been distributed ❖ Awareness campaign by CSML & KMC was conducted. ❖ Distribution initiated in Mainland wards 	
Photograph	



Figure 2-22 Household Bins

Figure 2-23 Smart Waste Management Awareness Session for Kudumbasree volunteers of Ward 1, 2 and 3

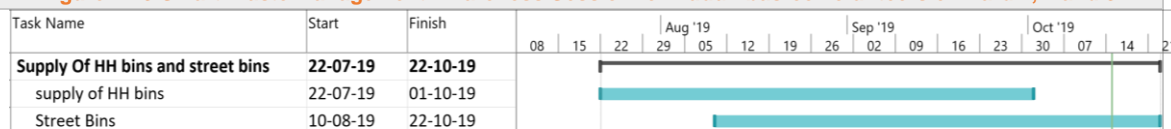


Figure 2-24 Implementation schedule

Module 8 Parks and Open spaces

There were total of 4 projects identified under this module with serial number 8.1 to 8.4. Based on the meetings conducted with Kochi Municipal Corporation, Tourism Department and forest Department all projects are under scope of SPV implementation except 8.1 which is already taken up for implementation by Tourism Dept.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Remarks
8.1	Upgradation of Nehru Park		200		Convergence - project undertaken by Tourism Department. The project is under implementation by Tourism Department.
8.2	Development of open spaces		30	250	Feasibility report submitted on 26th March 2019. DPR Submitted on 18.06.2019. Project tendered.
8.3	Open space corridor linking DH Ground to Mangalavanam		90	710	Feasibility Report is submitted on 3 rd November 2018. Revised DPR has been submitted on 4th Feb and 28th March 2019 Project re-tendered second time. Evaluation on going
	Marine Drive walkway phase II			690	Combined DPR has been submitted on 8th November 2018. For Phase II DPR will be revised after stakeholder's consultation.
8.4	Mangalavanam Eco-restoration project		100		Proposed concept shared with KMC & Forest Dept. Concurrence awaited on concept proposed

Module 9 Canal Restoration

There were total of 4 projects identified under this module with serial number 9.1 to 9.4. Based on the meetings conducted with Kochi Municipal Corporation all projects are under scope of SPV implementation.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Status
9.1	Restoration of Mullassery canal - including linking of standardized area drains		100		Feasibility report submitted on 2nd March, 2019 Stakeholders to confirm length of canal to be covered. CSML to carry out surveys for additional length. Feasibility to be revised by based on revised length.
9.2	Restoration of Market canal - Walkways and Market square around the canal pond, Solar panelled roofs, LED Lighting, Light posts		500		Stakeholders to confirm scope
9.3	Restoration of Kalvathy canal and area drain improvement - Open spaces, Street furniture and landscaping features		2,000		Feasibility report submitted on 2nd March 2019 Only one canal to be taken up by CSML based on meeting held with LSGD Minister on 20 August 2019
9.4	Restoration of Rameswaram-Kalvathy canal - Up to Cochin college – Walkways and Linking the Canal Bank Road		1,500		

The meeting chaired by the Honourable Minister for Local Self-Government, at his chamber on 20.08.2019 has resolved to take up any one of the canal by CSML preferably Market canal as entire stretch is within ABD. CSML to confirm the same. However, it is noted that all canals are under IUWRTS project as well. Hence final confirmation is awaited regarding implementing agency for canal and which one.

Module 10 Urban mobility

There were total of 9 projects identified under this module with serial number 10.1 to 10.9. Based on the meetings conducted with Kochi Metro Rail Limited and Kochi Municipal Corporation 5 projects are under scope of SPV implementation and remaining 4 with KMRL – Water Metro project.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Estimated Cost	Status
10.1	Water transport infrastructure (around 12 100 Pax boats)		4,200	13156	Convergence - Project under implementation by Water Metro. M/s Cochin Shipyard for 23 boats (100pax) INR 178 Cr for two routes 1. Vyatilla-Kakanad (6 boats) & 2. High Court-Fort Kochi-Mattancherry (17 boats). Cost of one boat is

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Estimated Cost	Status
					INR 7.34Cr. Hence for boats in ABD cost is INR 131.56 Cr.
10.2	Electric Feeders, Bicycle Sharing, Elevated Walkways and Travellators		1,148		Segregated
		Electric Feeders		32	Convergence undertaken by KMRL. Feeders also proposed as part of Broadway Street pedestrianisation.
		Bicycle Sharing		1000 (PPP)	Locations approved by KMC.
		Elevated Walkways and Travellators			Part of Ernakulam market project
10.3	Walkway from Ekm Jetty to Metro station		900	470	Under implementation
10.4	Jetty improvement		800	7250	Convergence - Being undertaken by Water Metro. Tendered awarded for 5 boat jetties Vypin, Bolgaty, Fort Kochi, Mattancherry, High Court total cost INR 72.5 Cr to M/s Mary mata on 11 June 2019 for a duration of 18 months. Cost of Boat jetties in ABD (Fort Kochi, Mattancherry, High Court) is approx. INR 50 Cr
10.5	Property development along jetties		720		
10.6	Boatyard and Command & Control Centre	Boatyard	2,000		
10.7	Dredging cost				
10.8	Extend 'Smart Wi-Fi bus shelters' with LED bulbs, FM radio, USB drive slots, magazine/newspaper kiosks, mobile charger units		60		Prateeksha has been given the project of bus shelters on a 15-year lease (duration to be confirmed by stakeholder) for PWD roads. West Kochi bus shelters have not been covered. In West Kochi bus shelters are sponsored for improvement by various stakeholders. Currently the bus shelters are not wifi enabled. In order to develop these as smart bus shelters CSML to write to relevant authorities for confirmation on project scope/call for combined meeting.
10.9	Standard Wifi Enabled Bus Stands with Commercial space development		300		Discussed during meeting with MLA KJ Maxi, War councillors of west Kochi in meeting held on 3 August 2019. Project proposal in principal agreed to. CSML to submit to KMC for approval.

Progress of the Project

2.1.7 PUBLIC BIKE SHARING IMPLEMENTATION PROGRESS

Project cost: INR 10.00 Crores **Duration:** 3 months (PPP)

Project Start date: 14 March 2019

End date (expected, excl. O&M): 14 November 2019

Contractor: M/s Hero Youn Pvt. Ltd. (JV of Hero Cycles Ltd & Youn Technology Pvt. Ltd.)

Current status:

- ❖ M/s Hero Cycles & Youn Cycles has completed installation of 16 docking stations of 50 planned docking stations (Phase I)
- ❖ Active Mobile application for identification and management of the cycle locations.
- ❖ Stations Approved by the Respective Authorities = 28 of the 50 locations
- ❖ Pilot launched on 29th September 2019
- ❖ Cyclathon conducted in association with the launch event.
- ❖ Identification of 205 locations for Phase II

Any Issues/ Challenges to be discussed:

- ❖ Implementation duration was expected to be 3 months. However, considering all approvals required project is expected to be completed by November 2019
- ❖ Integration with ongoing projects.
- ❖ Management of operations of phase I locations
- ❖ Timely Approval from the concerned authorities for station location

Location map/ project maps/project design/ pictures

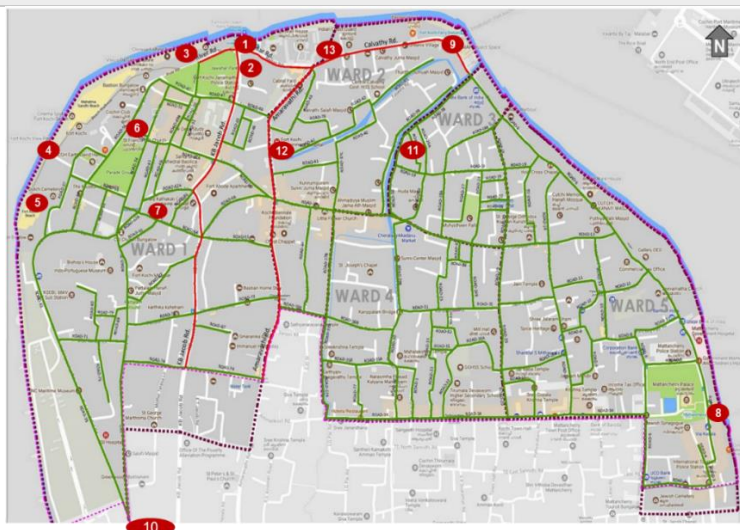



Figure 2-25 PBS locations (Base map by PMC and locations plotted by Smart-SUT)

Figure 2-26 Bikes at Lissie Metro Station

Figure 2-27 Bikes at Ernakulam Boat Jetty

Module 11 Housing

There were total of 3 projects identified under this module with serial number 11.1 to 11.3. Based on the meetings conducted with Kochi Municipal Corporation and other stakeholders below mentioned projects are under scope of SPV implementation. KMC has proposed to take up some other project in place of Upgradation of infrastructure in Housing through Credit linked schemes. The fund available under housing module is INR 100 Crores.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Revised Estimated Cost	Status
11.1	Integrated redevelopment of Slum housing		14,140	6285	KMC to provide final list of beneficiaries and slums to be taken up under SCM. KMC presently conducting surveys. Once household surveys are completed scope for the project shall be confirmed by KKMC. Project preparation will require time. Minimum 3-4 months for DPR & tender preparation depending on project scope. Hence to enable tendering and

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Revised Estimated Cost	Status
					implementation within SCM duration confirmation on scope to be shared by KMC at the earliest. R&R will require additional time. With limited SCM duration. Confirmation on scope needs to be expedited by KMC.
11.2	Upgradation of infrastructure in Housing through Credit linked schemes	Beneficiary Led Housing	2,435	1300	KMC proposing to revise the scope of component to "Beneficiary Led housing". CSML has allocated Rs 13 cr. out of which Rs 1.02 Cr has been disbursed.
11.3	Construction & upgradation of 755 DUs in Thuruthy, Kalvathy & Konchery colony	Construction of first tower at Thuruthy	7,424	2100	As per discussion held on 26 th Dec 2018 for CSML to assist KMC in completing the construction of tower 1 under RAY scheme by Gap funding only. Gap funding to be disbursed by CSML only after KMC provides revised administrative sanction from LSGD and tender out the sewage treatment facilities and waste management
11.4		Construction & upgradation of 755 DUs in Thuruthy, Kalvathy & Konchery colony -KMC		6729	Convergence – Project Under Implementation by KMC

Module 12 Economy and Employment

There were total of 2 projects identified under this module with serial number 12.1 & 12.2. Based on the meetings conducted with Kochi Municipal Corporation, KMCC, Market association and other stakeholders all projects are under scope of SPV implementation.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Estimated Cost	Status
12.1	Broadway Market and Ernakulam market Redevelopment and Mattancherry spice market		11,000		
		Broadway Street pedestrianisation	1000	870	Feasibility report submitted on 15 th October 2018 DPR Stage. KMC to share list of approved licensed hawkers to be accommodated along multi utility zone proposed.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Estimated Cost	Status
					DPR has been submitted on 3.10.2019 and under revision based on comments received
		Ernakulam Market Redevelopment	10000	10000	Feasibility report submitted. DPR Stage. KMC to approve initiate R&R asap. DPR has been submitted on 16.10.2019 and under revision based on comments received
		Mattancherry spice market Redevelopment			Segregated - Streetscape improvement covered under road project
12.2	Standard Hawker zones in Fort Kochi	Standard Hawker zones in Fort Kochi + Standardize structures for "Petti Kada"	500	560	Segregated - Hawker zone included as part of Fort Kochi Beach upgradation. Provision for licensed Street vendors in multi utility zones where feasible

Pedestrianisation of Broadway Street & other improvements: The proposal:

Pedestrianisation of Broadway Street for approx. 500m stretch.

Broadway Street Upgradation proposals proposes for a time bound Pedestrianization of 500m stretch at an estimated cost of INR 8.70 Crores with other supporting projects including pick up/drop off facility e-vehicles from Bus stops, metro, water metro and MLCPs to offer smooth transition from parking to no parking zone.

Project proposal includes Pedestrianization of the Broadway street stretch in a time bound manner from 12.00 pm to 8.00 pm allowing only E-rickshaw & emergency vehicle movement. Pedestrian oriented street with partial canopy covering with regulated vehicular access. **Street is proposed as no parking zone.**

Assistance required from KMC:

KMC to share final list of eligible hawkers to enable Smart City team to accommodate the licensed hawkers along multi utility zone with cart size requirement. Approval of traffic management plan from beneficiaries, Co-ordination with all beneficiaries.

- Final approved list of hawkers to be shared with smart city team at the earliest to enable Smart city team to do detailing of the designs that include allocation of hawkers in Multi utility zone.

- ii. KMC to hold public consultation with the shop keepers along Broadway and take formal approval for the proposed project and finalize design detail such as the canopy and road design.

Ernakulam Market redevelopment: The proposal

- a) Ground + 2 storey building with terrace, surface parking and 1 basement parking. Foreseeing opportunity for further development of complex to G+3 structure in future, foundation requirement for the same is considered.
 - i. Proposed building complex has total plinth area of 16147 sq.m (1.74 lakh sq. ft.)
 - ii. FAR 1.78.
 - iii. Building has carpet area of 5356 sq.m.
- b) Designated spaces for loading and unloading of goods and their movement.
- c) Design is inclusive to all category of market users with all necessary infrastructure provisions.
- d) Development of the commercial complex will include rehabilitation and resettlement of existing shop keepers associated with the existing Ernakulam Market on the ground and first floors of the building.
- e) Remaining area and the second floor of the building would be utilized to recover the operation and maintenance expense of the building.
- f) Skywalk and MLCP to be taken up in phase II

Assistance required from KMC:

Smart City team presented that as first step KMC is to enter into an agreement with landowner for rehabilitation site and handover the land to CSML for construction work post demolition of minor structures existing on the proposed plot proposed for transit period. Thereafter there need to be agreements with each individual licensed vendors that they agree to shift to proposed transit site for rehabilitation for construction phase (including demolition). Tenants to pay rent as agreed with KMC for construction phase and thereafter revised rent as per market rates for the new building. The rent agreement must have stall number both for rehabilitation & new building along with the rent.

Figure 2-28 Ernakulam Market Redevelopment – Project Planning

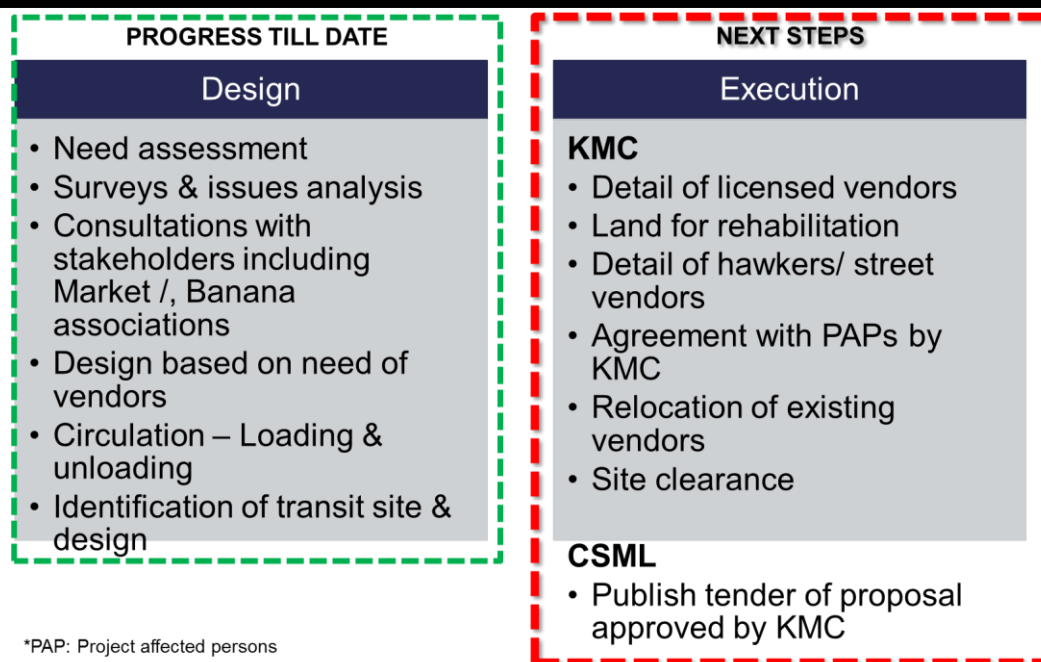
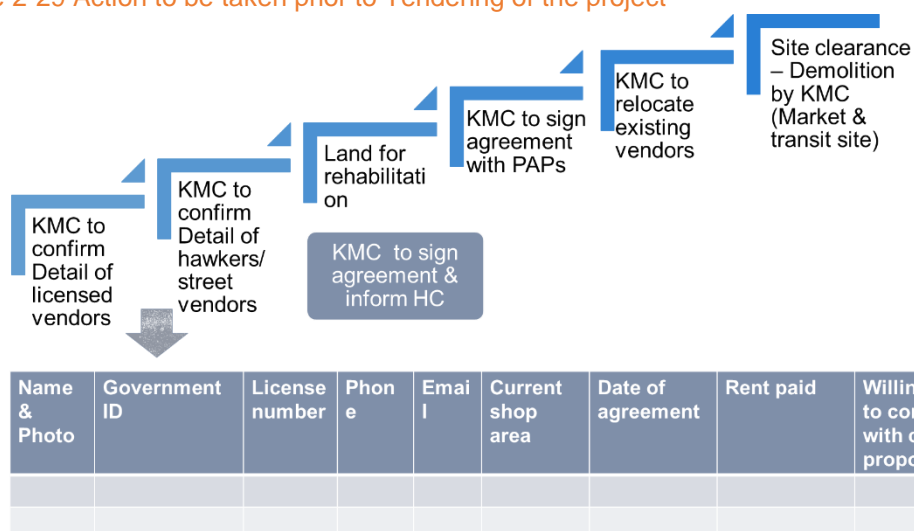


Figure 2-29 Action to be taken prior to Tendering of the project



Source: PMC

Table 2-1: Action for KMC to enable tendering by end of December 2019

TASK	August	Sept	Oct	Nov	Dec	Jan	Feb	
Final list of vendors & consultations	Not received							
Finalization of proposal by KMC								
Land for rehabilitation	Confirmed							
Agreements with vendors by KMC		Not initiated						
Relocation & rehabilitation			Not initiated					

TASK	August	Sept	Oct	Nov	Dec	Jan	Feb	
Tender by CSML						Jan second week		
Site clearance by KMC & handover to CSML								
Contract award by CSML								
Construction period begins								18 months

Source: PMC

Timelines dependant on R&R completion.

Ernakulam Market Redevelopment – Relocation & Rehabilitation

KMC to form Implementation Committee with representatives of relevant stakeholders. Responsibility of Implementation Committee:

- Conduct regular meetings and coordinate with stakeholders to ensure smooth relocation to temporary facility
- Committee to address all concerns related to rehabilitation
- **Assist in the rehabilitation** process including - the agreement between willing vendors and documentation before the start of the project.

Module 13 Health

There were total of 2 projects identified under this module with serial number 13.1 & 13.2. Based on the meetings conducted with Kochi Municipal Corporation, DMO and other keyholders all projects are under scope of SPV implementation and have been segregated into 4 projects

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Estimated Cost	Status
13.1	Scale up of GH into a Super-speciality care centres	Cancer Extension Block, General Hospital.	2500	2500 (Phase I)	LoA to INKEL has been issued. INKEL has tendered the project awarded the project to M/s Mansion for Civil works
		E-health solution for Hospital General		371	Segregated - Revised DPR has been submitted on 7 th February. LoA has been issued. to M/s Keltron. Work under implementation
13.2	Integrated development of 4 Hospitals in West Kochi - Excellence in Secondary care	Outpatient & Admin block, Fort Kochi taluk Hospital	1,000	465	Revised DPR, Detailed Estimate and Drawings submitted. LoA issued

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Estimated Cost	Status
		Outpatient & Admin block, Women & Child Hospital, Mattancherry		457	Revised DPR submitted on 13 th November 2108. Revised BoQ and drawings have been submitted. LoA issued.

Progress of Projects:**2.2.13 CANCER BLOCK- GENERAL HOSPITAL**

Project cost: INR 25.0 Crores	Duration: 12 months
Project Start date: 11 October 2019	End date (expected): 21 April 2021
Contractor: M/s INKEL Limited	
Current status: <ul style="list-style-type: none"> ❖ Awarded to M/s INKEL on design & build basis ❖ Agreement signed with M/s Mansion for Civil works ❖ Building permit application submitted to KMC 	
Issues <ul style="list-style-type: none"> ❖ No SPOC from INKEL. Implementation schedule not yet shared 	
Location map	



Figure 2-30 Location of proposed Cancer Block

S.No.	Milestone / sub milestone	Status
	Total Duration	24 Months
a.	Demolition of Existing buildings	2 Months
b.	Excavation & Foundation works	6 Months
c.	Superstructure civil construction	10 Months
d.	MEP and Medical equipments works	3 Months
c.	Finishing works	3 Months

Figure 2-31 Implementation schedule

2.2.14 E-HEALTH SOLUTION FOR GENERAL HOSPITAL

Project cost: INR 3.71 Crores **Duration:** 4 Months

Project date: 14 June, 2019 **Start** **End date (expected, excl. O&M):** 30 December 2019

Contractor: M/s KELTRON

Current status:

- ❖ The work for installation of GPON Network has been awarded to BSNL on 7th June, 2019.

- ❖ Survey of installation for Network has been completed. Total 460 network nodes along with 182 (including 50 IP Phones) voice nodes have been identified.
- ❖ Installation of Network Cable Completed. Testing of GPON Network under progress
- ❖ Keltron has finalised the tender for procurement of Computer Hardware and other equipment's.
- ❖ Computer hardware is being delivered at General Hospital

Issues/ Challenges:

- ❖ Delay in installation of Computer Hardware.
- ❖ Delay from Keltron in taking timely action

Project design

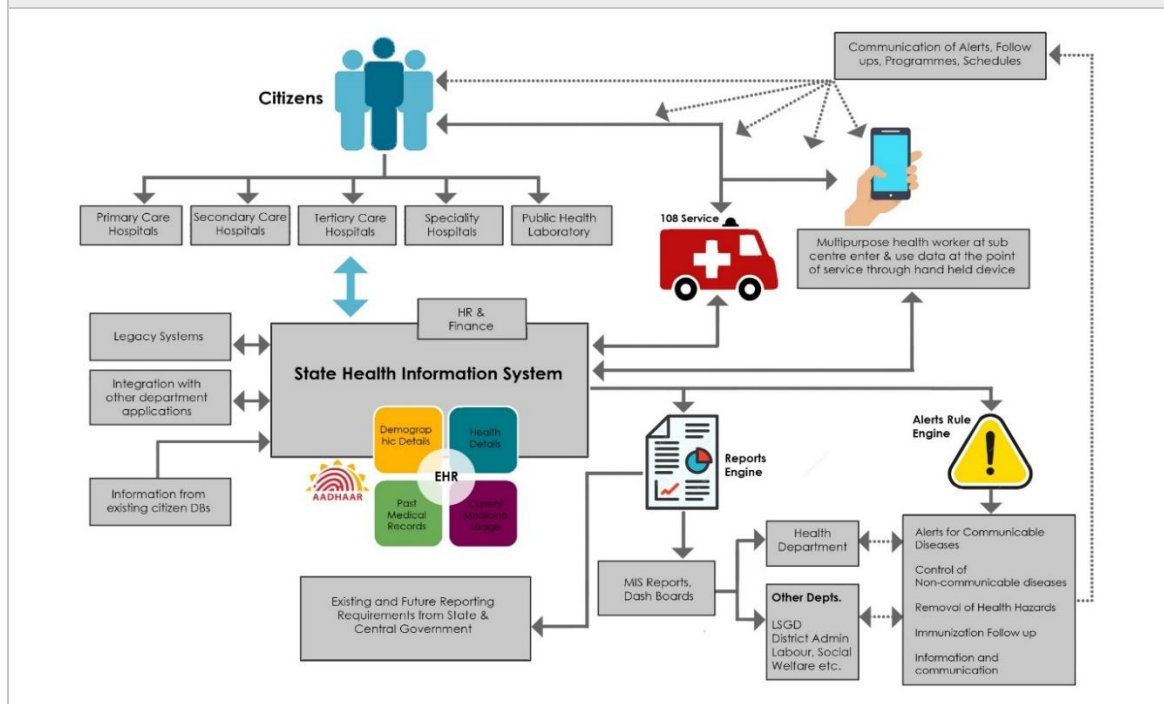


Figure 2-32 Structural outline of e-Health Solution

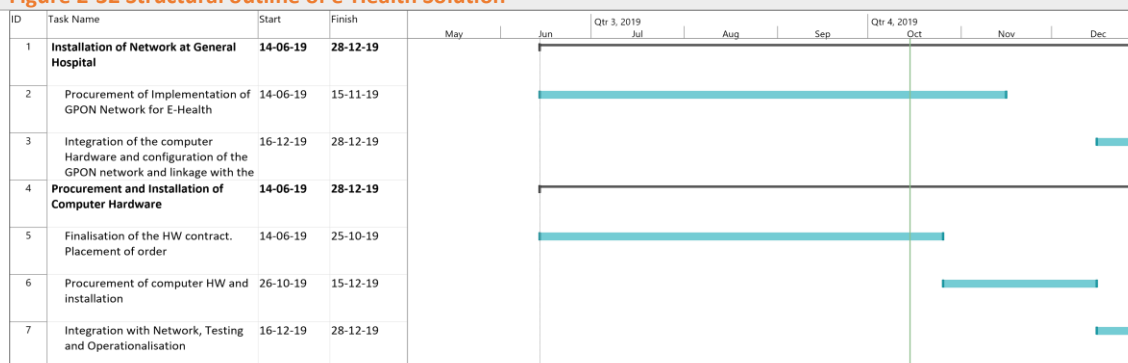


Figure 2-33 Implementation schedule

2.2.15 CONSTRUCTION OF NEW BLOCK AT FORT KOCHI HOSPITAL

Project cost: INR 4.82 Crores

Duration: 10 Months

Project Start date: 21 October, 2019

End date: 20 August 2020

Contractor: M/s TDLCCS

Current status:

- ❖ LOA issued on 11-07-2019.
- ❖ Agreement Submitted on 27-09-2019
- ❖ TDLCCS requesting for mobilization advance against FDR
- ❖ **Structural drawings vetted by KMRL and proof consultants**
- ❖ Test pile work started.

Concern:

- ❖ Delay in contract signing & work initiation by contractor. Point regarding BG to be discussed by CSML with contractor.

Project design

Figure 2-34 Location of Proposed block- Fort Kochi Hospital



Figure 2-35 Test Pile Fort Kochi Hospital

Sl. No.	Milestone / sub milestone	Status	Remarks/Action plan
1	LOA issued	Completed	11-07-2019
2	Time allowed for execution of agreement	Awaited	18-10-2019
3	Structural drawings vetting by KMRL and proof consultants	Completed	
4	Duration of construction		10 months (Aug -2020)
	a. Excavation & Foundation works upto plinth level		3 months
	b. Superstructure civil construction		4 months
	c. Finishing works		3 months

Figure 2-36 Implementation schedule

2.2.16 CONSTRUCTION OF NEW BLOCK AT MATTANCHERRY HOSPITAL

Project cost: INR 4.67 Crores	Duration: 10 Months
Project Start date: 21 October, 2019	End date: 20 August 2020

Contractor: M/s TDLCCS

Current status:

- ❖ LOA Issued on 11-07-2019
- ❖ Resubmitted the drawings (incorporated comments) for ASI approval in Trivandrum
- ❖ Agreement Submitted on 27-09-2019 yet to be signed
- ❖ TDLCCS requesting for mobilization advance against FDR
- ❖ Structural drawings vetted by KMRL and proof consultants
- ❖ Test pile work started.

Concern:

- ❖ Delay in contract signing & work initiation by contractor. Point regarding BG to be discussed by CSML with contractor.

Project design



Figure 2-37 location of Proposed block- Mattancherry Hospital



Figure 2-38 Design Mattancherry Hospital

Sl. No.	Milestone / sub milestone	Status	Remarks/Action plan
1	LOA issued	Completed	11-07-2019
2	Time allowed for execution of agreement	Awaited	18-10-2019
3	Structural drawings vetted by KMRL and proof consultants	Completed	
4	ASI have requested resubmission of the application for NOC of building.	Awaited	
5	Duration of construction		10 months
	a. Excavation & Foundation works upto plinth level		3 months
	b. Superstructure civil construction		4 months
	c. Finishing works		3 months

Figure 2-39 Implementation schedule

Module 14 Education

There were total of 3 projects identified under this module with serial number 14.1 & 14.2. Tenders were floated, and bids received from the bidders for the Smart class room project. However, KITE Mission of Government of Kerala informed that a similar project is being implemented by them on State Level thus the SPV should not continue with the selection process. Therefore, the project is now cancelled and revised number of projects I 2.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Status
14.1	Upgradation of Anganwadis		100	91	Feasibility Report submitted on 06-04-2019. DPR Submitted on 26th June 2019 Comments received from CSML & KMRL on 21 Nov 2019 accordingly changes are done CSML has taken up existing work with
14.2	Upgradation of facilities - Basic services, Digital classrooms, Libraries, Eco-toilets, Sports kits, Biogas plant, Urban farming etc Higher Educational institutions	Higher secondary block, Central Calvathy GHSS, Fort Kochi	450	467	DPR Submitted on 13.11.2108. Project re-tendered
		Furniture for school		0.05	Furniture order placed to FIT, Kerala
		Smart Classroom for 100 classrooms PAN city		490	Segregated. Tender has been cancelled by the authority.

The project will include rejuvenation of AWC in Fort Kochi & Mattancherry with state-of-the-art facility for Preschool training with Mother & Child care. List of 52 AWC identified in Fort Kochi & Mattancherry from CDPO. The proposal includes following components:

- Tangible (physical) upgradation in quality of environment for AWC functioning in Govt premises,
- IT infrastructure for Smart class rooms at AWCs.

Calvathy School project intends to provide a higher secondary block for about 240 pupils along with the labs and ancillary facilities required. The building would also provide admin office required for lower primary section.

- The proposal includes following components:
 - 4 classrooms of 60 capacity each and one digital classroom
 - Chemistry, Physics and computer labs
 - Staff rooms, admin rooms, for higher secondary & lower primary section.
 - Auditorium of 250 capacity.
- Building would be a 4-story structure of total area of 1500 sq.mt built after demolishing an existing single story old structure which is currently used as a common activity area.

The Smart education project aims to bring in state of the art education to students through classroom revolution which is to innovate education, teaching and evaluation methods, and educational environments using information Technology.

Module 15 Safety and Security

There were total of 2 projects identified under this module with serial number 15.1 & 15.2. Based on the meetings conducted with Kochi Municipal Corporation and other stakeholders, all projects are under scope of SPV implementation.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Status
15.1	5 Rapid response boats for water transport safety	Water Ambulance	50	1100	Convergence. Project has been taken by Water Metro. To be re-rendered
15.2	Drone Surveillance	Intelligent surveillance System for Kochi	30	3876	Feasibility report for CCTV has been submitted on 21 st January 2019. DPR submitted. Revised DPR has been revised along with Smart Pole

Module 16 Other Social Infrastructure

There were total of 2 projects identified under this module with serial number 16.1 & 16.2. Based on the meetings conducted with Kochi Municipal Corporation, all projects are under scope of SPV implementation.

S. No	Proposed interventions	SCP Cost	Clubbed / Segregated/ Estimated Cost	Status
16.1	Upgradation of Community Centre at Mattancherry with indoor sports facilities	100		Discussed with KMC various times. As there is no Community centre available in Mattancherry for upgradation KMC to confirm dropping of the project
16.2	Standardize structures for "Petti Kada"	60		Clubbed - with Hawker zone.

The scope of project at 16.1 is yet to be clarified by KMC.

Project 16.2 has been clubbed with project number 12.2 as petti kadas will be provided for Hawker Zones identified. Broad designs have been made. After the hawkers are identified, implementation of this project will be taken up accordingly.

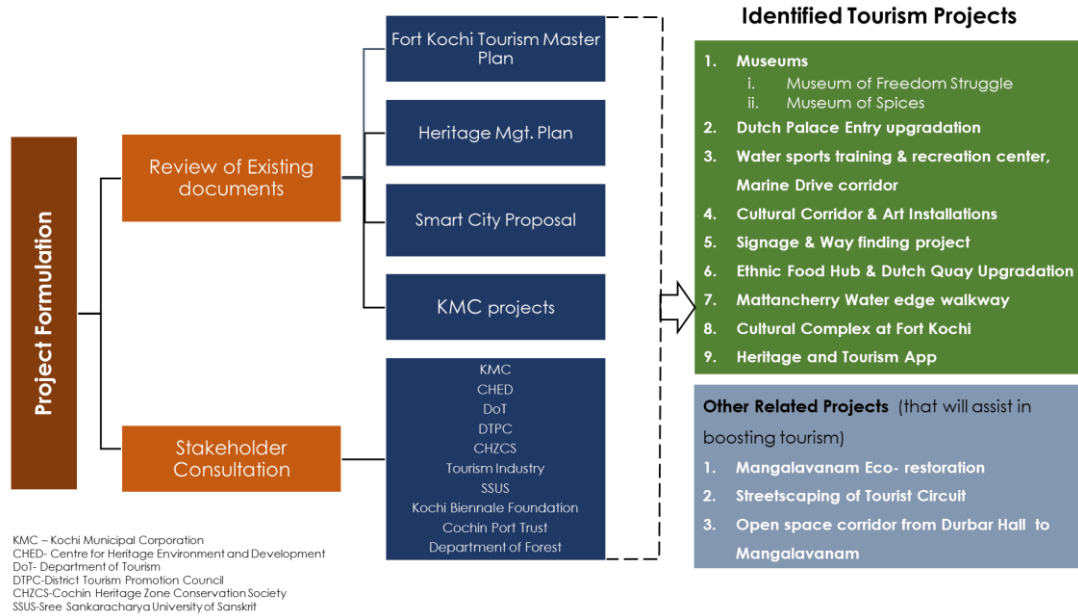
Module 17 Identity and Culture

1 project identified under this module with serial number 17.1.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Status
17.1	Fort Kochi and Mattancherry region Master plan for Tourism		3,000		Project not preparation of Master plan as its already prepared. Project is to implement individual tourism projects
		Open Air Theatre (OAT) at Fort Kochi Zonal office		110	Project re-tendered
		Development of Dutch palace node parking area and palace street entry		121	LoA issued
		Fort Kochi Beach Front improvements - Part A Vasco Square		158	Technical Bid under evaluation
		Development of Ethnic Food Hub & Dutch Quay Upgradation		100(PPP)	DPR Submitted
		Museum of Freedom Struggle		44	Feasibility report submitted on 20 th December 2018. DPR submitted on 21.06.2019 Project Tendered.
		Museum of Spices history		150	Feasibility report submitted on 20 th December 2018
		Fort Kochi Beach Front improvements - Part B Walkway & Beach		800	
		Mattancherry Walkway		1100	
		Cultural Corridor – PT Usha Road		100	Concept shared with CSML. Project to be taken up post completion of road works on proposed road.

The project mentioned in the SCP project list is Master plan for Tourism. Tourism Project will be taken up individually identified in the Tourism Master plan. Based on the meetings conducted with Department of Tourism, KMC and other stakeholders the projects have been identified.

Figure 2-40 Identification of Tourism Projects



Source: PMC

2.2.17 UPGRADEMENT OF DUTCH PALACE ENTRY AREA

Project cost: INR 1.21 Crores

Duration: 4 Months

Project Start date: 31 August, 2019

End date : 28 February 2020

Contractor: Mr. Babu Joseph

Current status:

- ❖ LoA has been issued on 2nd August, 2019.
- ❖ Agreement has been signed on 31st August, 2019
- ❖ Survey drawing of Dutch Palace entry area has been submitted.

Project design



Figure 2-41 Upgradation of Dutch place entry area

Sl. No.	Milestone / sub milestone	Status	Remarks/Action plan
	LOA issued	Completed	02-08-2019
	Agreement Signed date		30-08-2019
	Duration of construction		6 months
1	Survey Drawing of Dutch place entry area	Submitted	
2	Review the additional (Drain Construction) Work	Preparing	
4	Mobilization and construction of drainage		2.5 months
5	Procurement of Electrical items, Laying of Stone Blocks		2.5 months
6	Landscaping ,finishing works, commissioning		1 month

Figure 2-42 Implementation schedule

Module 18 Others

There was 1 project identified under this module with serial number 18.1. Based on the meetings conducted with MoHUA, KMC, Town Planning Dept and other stakeholders the project is under scope of SPV implementation. This project will be integrated with IC4 project.

S. No	Proposed interventions	REVISED Name of Project	SCP Cost	Clubbed / Segregated/ Estimated Cost	Status
18.1	Spatial Mapping of assets and SCADA systems for Information gathering with monitoring centres	Base Map update for ABD Areas	1,500	40	DPR have been submitted on 20 th December 2018. scope submitted to enable KMC to tender at the earliest
18.2		Integrated Command, Control and Communication Centre (IC4)		6450	LoA issued. Work under progress

Base Map Updation: The main objective of the project is to develop an updated detailed GIS Base map on a scale of 1:1,000 for the Project area. The preliminary interpreted map should be ground verified and the final map is to be prepared by incorporating the ground truth data. These detailed maps consisting of the planimetric details, Plot boundaries micro level Land use and utility services underground utilities as available from line departments need to be generated by contact ground truth collection, updating of map and data linking.

Available data at CSML will be integrated with the Base Map in GIS during the survey preparation of base map. The data will be collected in proper field data sheet format. The base map prepared through on-screen digitization of imagery will be used for survey for the updating purpose and finalization of layer wise Base Map with the attributes.

Final base map is to be prepared incorporating the data collected from survey and the data for different entities. Hard copy base maps are to be prepared at 1: 1000 scale ward wise/ ABD area wise. The base maps will be prepared in various layers for ease of operation in

GIS. Layer and data structures can be modified depending on the local requirements of CSML.

KMC has proposed to implement the project. Scope of work based on DPR prepared by CSML has been shared with KMC & Town Planning department for further action. KMC to tender the project at the earliest. CSML to chase KMC to take up the project asap. Or else CSML may take it up as this project as it will be very beneficial for IC4 project

Progress of the Project

2.2.18 INTEGRATED COMMAND CONTROL & COMMUNICATION CENTER (IC4)

Project cost: INR 64.50 Crores	Duration: 8 Months
Project Start date: 28- February- 2019	End date (expected, excl. O&M): 31st-October-2019
Contractor: M/s Fluentgrid Limited in consortium with Bharat Electronics Limited (BEL)	
Current status: <ul style="list-style-type: none"> ❖ Inception report, Technical Architecture and Functional Requirement Specifications have been submitted. ❖ CSP has been made ready for hosting applications. ❖ IC4 base platform on Cloud environment with available services is loaded and ready for integration with applications and services. ❖ Integration of 5 smart applications (ATCS, Public Bike Sharing, RLVD, VMD and Street Lighting) are completed ❖ Grievance module is ready (available KMC data is updated, KSEB & KWA departments work is in progress). The application is being tested. ❖ Citizen portal – Prototype is ready, and development is in final stage ❖ Mobile app – Has been developed the mobile app features with User, Grievance registration and working on other SOS features under testing. ❖ Command Center Layout has been finalized and submitted to CSML. Work has started on command control Operational centre. ❖ GIS Portal updated with various boundaries, transportation network, attributes of Police and various utilities. ❖ GIS Map has been incorporated with IC4 platform with features such as PAN, Zoom In, Zoom Out, and Zoom to Previous, Zoom Next, Area, and Length, Go to Coordinate, Cursor Control, Swipe Layer etc. ❖ Site for Command and Control room has been hand over to MSI. 	
Any Issues/ Challenges to be discussed: <ul style="list-style-type: none"> ❖ MSI to identify all SPOCs and share Identification of SPOC by stakeholders with CMSL for confirmation ❖ Delay mobilization. More experienced full-time staff required on site than off site ❖ Need to expedite the Integration process for Go live 	
Project features	

Integration Architecture

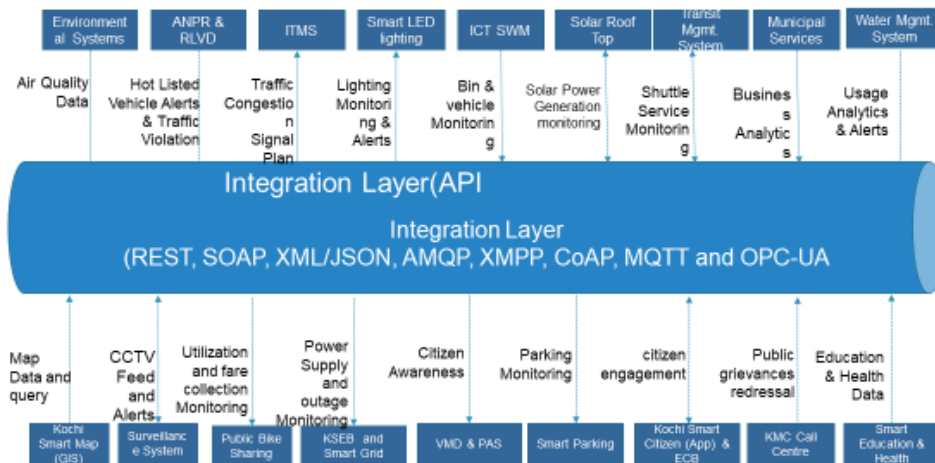


Figure 2-43 Integration of Smart Solutions with IC4

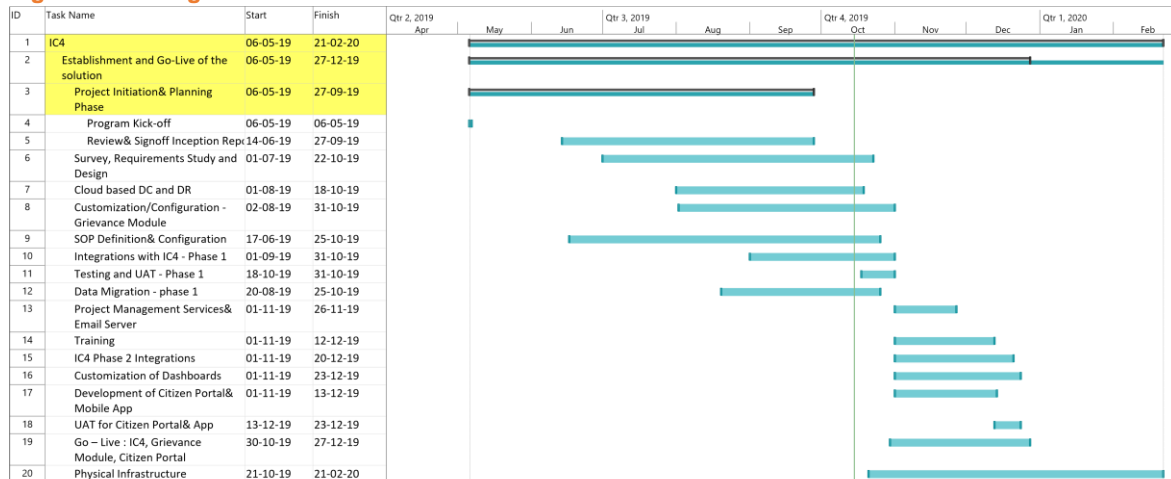


Figure 2-44 Implementation schedule

2.3 UPDATED INTEGRATED PROJECTIVISATION

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
1	KER-KOC-008	1	Water Supply	1.1	West Kochi - Karuvelipady Pump house – Pumping augmentation	Convergence			100		Concept stage
2	KER-KOC-009	1	Water Supply	1.2	West Kochi - Extension of pipelines from Maradu to Island to be extended to West Kochi to supply 12 MLD	Convergence			55	85	Work completed
3	KER-KOC-010	1	Water Supply	1.3	West Kochi - Replacement of pipe lines from Perumanoor to Thevara and Thoppumpady bridge to Karuvelipady	Convergence			1100	725	Project under implementation
4	KER-KOC-011	1	Water Supply	1.4	West Kochi - Dedicated pumping main	Convergence			350		The project is taken up under AMRUT and under implementation.
5	KER-KOC-012	1	Water Supply	1.5	West Kochi - Storage capacity augmentation in Karuvelipady sump by 1.5 million litres	Convergence			800	1121	Taken up under AMRUT. 95% work 15 LL GLSR has been completed
6	KER-KOC-013	1	Water Supply	1.6	West Kochi - Rejuvenation of the Three OH Tanks in the region (Modibath, Fort Kochi and Koovapadam);	Convergence			75		DPR Stage (part of 24x7 Water supply project)
7	KER-KOC-014	1	Water Supply	1.7	West Kochi - Replacement of 20 kms of Distribution line with D.I. pipes including Road cutting charges	Convergence			3500		

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
8	KER-KOC-015	1	Water Supply	1.8	West Kochi - Replacement of Household connections (last mile) for across 10,000 HSCs with Smart Metering and isolation valves	Convergence			2500		
9	KER-KOC-016	1	Water Supply	1.9	West Kochi - Bulk Meters and Isolation valves with remote meter reading	Convergence			100		
10	KER-KOC-017	1	Water Supply	1.1	Mainland - Rider line for increased water supply	Convergence			1000		
11	KER-KOC-018	1	Water Supply	1.11	Mainland - Overhead Storage Reservoir + 1 Million Litre Sump + pump near Ernakulam Ground	Convergence			300		DPR Stage (part of 24x7 Water supply project)
12	KER-KOC-019	1	Water Supply	1.12	Mainland - Replacement of connections (last mile) for across 10,000 HSCs (Commercial and Domestic) with Smart Metering and isolation valves	Smart Water	1	Mainland - Replacement of connections (last mile) for across 10,000 HSCs (Commercial and Domestic) with Smart Metering and isolation valves	2000	100	Project scope for project being finalised in consultation with KWA. Concept prepared. CSML to fix a meeting with KWA to finalise scope. Also issue a letter in this regard.
13	KER-KOC-020	1	Water Supply	1.13	Mainland - Bulk Meters and Isolation valves with remote meter reading	Convergence			150		DPR Stage
14	KER-KOC-021	1	Water Supply	1.14	General - Rainwater structures in ~5000 households	Convergence		Rainwater harvesting structures in 13 Govt bldgs & Institutions	1125	75	Feasibility report submitted. Project has been taken up by KWA under Convergence

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
15	KER-KOC-022	2	UGSS	2.1	Decentralized Treatment and collection system for West Kochi under ADB (Mundamveli)	WasteWater & Reuse	2	Construction of vacuum sewer network with house connections and sewage treatment plant in West Kochi (WARD 1-5)	2200	16600	LoA has been issued on 17th August, 2019
16	KER-KOC-023	2	UGSS	2.2	Small bore sewer/ Vacuum system for onsite sanitation - Includes storage facility for treated water use for landscaping				11000		
17	KER-KOC-024	2	UGSS	2.3	Improvements to Elamkulam STP and collection system Mainland (JNNURM scheme)	Waste Water & Reuse		Improvements to Sewer collection system for Mainland	7000	3450	Project scope to be confirmed by stakeholders (KWA)
						Convergence		Elamkulam STP		1370	Project has been taken up by KWA. To be retendered
18	KER-KOC-025	3	NMT Roads and Pedestrianized areas	3.1	Relaying of roads	Improvement of Roads	3	Development of Other Roads in Ernakulam	4200	4360	Project awarded. Work under implementation
19	KER-KOC-026	3	NMT Roads and Pedestrianized areas	3.2	Standard Footpaths including signages		4	Development of Other Roads in West Kochi Ward 1-2	2853	2795	LoA has been issued on 6th September 2019
20	KER-KOC-027	3	NMT Roads and Pedestrianized areas	3.3	Restoration/ Rehabilitation of Stormwater drains in the proposed area		5	Development of Other Roads in West Kochi in Ward 3 4 5	2360	3249	Project re-tendered Technical Bid evaluation under progress
21	KER-KOC-028	3	NMT Roads and Pedestrianized areas	3.4	MLCP and Commercial complex at Kacheripady	Transport	6	Parking management plan for ABD area & Development of Multi Level Car Parking at Kacheripady	5000	786	EOI Published. No EOI received. Retendered. 2 nd time again no bid received. Project to be re-tendered

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
			NMT Roads and Pedestrianized areas			Transport		MLCP at GCDA land at Marine Drive		19.9	Feasibility report prepared. CSML Board & stakeholders approval required for DPR preparation to be taken up.
						Transport		MLCP at KTDC complex at Maneka			
						Transport		Smart Parking solutions at various location in ABD area			
						Transport		Commercial complex at Kacheripady		500	
22	KER-KOC-029	4	Main Roads	4.1	World class Arterial roads -- KB Jacob & Amravati Road/ Bazaar Road in West/ -- Avenue, MG Rd, DH Rd, Banerjee Rd in Central city	Smart Street Features	7	Development of Smart Roads in Ernakulam under Smart City Mission	5287	6153	Project Awarded. Work under progress
23	KER-KOC-030	4	Main Roads	4.2	Relaying of roads, Aesthetic and improved Urban design Pedestrian facilities with Street furniture, Boulevards and urban greenery		8	Development of Smart Roads in West Kochi under Smart City Mission	1650	3031	Project Awarded. Work under progress
24	KER-KOC-031	4	Main Roads	4.3	Utility ducting for SWD, Water supply, Sewerage, OFC etc				3300		
25	KER-KOC-032	4	Main Roads	4.4	Signages, Junction improvement with Intelligent Traffic management		9	Integrated Traffic Management Systems (ITMS)	97	2690	Project Awarded to Keltron, Work under progress
	KER-KOC-086						10	Road Signages		240	DPR submitted. To be tendered post initiation of road construction work
26	KER-KOC-033	4	Main Roads	4.5	Escalator FOBs	Smart Street Features	11	Construction of 3 Minor Bridges and 2 Foot over Bridges in West Kochi	240	1312	DPR submitted. Project tendered

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
27	KER-KOC-049	5	Energy Supply	5.1	Compact Secondary Substation (990 KVA)	Smart Street Features	12	Development of Roads electrical infrastructure in Ernakulam & West Kochi	180	7198	LoA issued to M/s Polycab India Ltd.
43	KER-KOC-050	6	Energy Efficiency	6.1	Solar based LED with Smart poles	Smart Street Features	13	Implementation of Smart LED lighting	1250	3206	LOA issued to M/s Schnell Energy Enterprises limited
	KER-KOC-088					Smart Telecom	14	Intelligent Street Poles Project now Smart Poles		30160 (PPP)	Tender Cancelled DPR being prepared for Smart poles project with safety and security.
44	KER-KOC-051	6	Energy Efficiency	6.2	Solar panels in Households and Institutions - Grid connected	Solar	15	Solar panels in Govt. buildings	1758	570	Contract Awarded. Work on-going
						Solar		Solar panels in public places (Canals, parks etc)			Concept Stage. May be clubbed with Canals project.
45	KER-KOC-052	7	Solid waste and Sanitation	7.1	Equipments including Smart Street sweepers/ GPS enabled Vehicles/compactors			Equipments including Smart Street sweepers/ GPS enabled Vehicles/compactors	600		
						Solid Waste Management	16	Smart & Improved Secondary Storage & Transportation of Solid Waste using Portable Compactor Technology		440	To be retendered post discussions with KMC
						Solid Waste Management		Smart & Improved Battery Operated Tricycles for Primary Waste Collection at West Kochi & Ernakulam in ABD Area		100	DPR submitted. To be tendered post KMC approval

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
	KER-KOC-087					Solid Waste Management	17	Smart & Improved Mechanised Street Sweeping at West Kochi & Ernakulum in ABD area		320	Project re-tendered. Bid under evaluation
46	KER-KOC-053	7	Solid waste and Sanitation	7.2	Bio-composting in all Government institutions	Solid Waste Management			5		
47	KER-KOC-054	7	Solid waste and Sanitation	7.3	Household segregated bins for Organic and inorganic wastes	Solid Waste Management	18	Distribution of Household Bins & Street Litter Bins for improvement of waste segregation in ABD	74	67	Project Awarded Work under progress
48	KER-KOC-055	7	Solid waste and Sanitation	7.4	Public toilets with Fit-in Treatment facility for Decentralized STP in West kochi	Other social Infrastructure	19	Renovation and Upgradation of Existing Public Toilet Facilities in West Kochi & Ernakulam Market.	10	180	DPR Submitted. Project now proposed by CSML to be taken up through CSR funding
49	KER-KOC-056	8	Parks and Open spaces	8.1	Upgradation of Nehru Park	Convergence			200	200	Under implementation
50	KER-KOC-057	8	Parks and Open spaces	8.2	Development of open spaces and playgrounds	Smart Placemaking	20	Development of Open spaces and playgrounds	30	275	Project Tendered
51	KER-KOC-058	8	Parks and Open spaces	8.3	Open space corridor linking DH Ground to Mangalavanam (depends on ecological sensitivity)	Smart Placemaking	21	Improvements to Marine Drive walkway phase I	90	710	Project re-tendered. Technical Bid evaluation under progress
52	KER-KOC-059	8	Parks and Open spaces	8.4	Mangalavanam Eco-restoration project	Smart Placemaking		Mangalavanam Eco-restoration project	100	100	Concept shared with forest department. Multiple discussions held. Confirmation awaited from stakeholder on scope of work to

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
											start work on Feasibility report.
53	KER-KOC-060	9	Canal Restoration	9.1	Restoration of Mullassery canal - including linking of standardized area drains	Smart Placemaking		Restoration of Mullassery canal - including linking of standardized area drains	100	100	All Canal projects now to be taken up under convergence. Stakeholders to confirm the same.
54	KER-KOC-061	9	Canal Restoration	9.2	Restoration of Market canal - Walkways and Market square around the canal pond, Solar paneled roofs, LED Lighting, Light posts	Smart Placemaking		Restoration of Market canal - Walkways and Market square around the canal pond, Solar paneled roofs, LED Lighting, Light posts	500	500	
55	KER-KOC-062	9	Canal Restoration	9.3	Restoration of Kalvathy canal and area drain improvement - Open spaces, Street furniture and landscaping features	Smart Placemaking		Restoration of Kalvathy canal and area drain improvement - Open spaces, Street furniture and landscaping features	2000	2000	
56	KER-KOC-063	9	Canal Restoration	9.4	Restoration of Rameswaram-Kalvathy canal - Upto Cochin college – Walkways and Linking the Canal Bank Road	Smart Placemaking		Restoration of Rameswaram-Kalvathy canal - Upto Cochin college – Walkways and Linking the Canal Bank Road	1500	1500	
57	KER-KOC-064	10	Urban mobility (Multi Modal Transport)	10.1	Water transport infrastructure (around 12 100 pax boats)	Convergence			4200	13156	M/s Cochin Shipyard for 23 boats (100pax) INR 178 Cr for two routes 1. Vyatilla-Kakanad (6 boats) & 2. High Court-Fort Kochi-Mattancherry (17 boats). Cost of one boat is INR 7.34Cr. Hence for boats in ABD cost is INR 131.56 Cr

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
58	KER-KOC-065	10	Urban mobility (Multi Modal Transport)	10.2	Electric Feeders, Bicycle Sharing , Elevated Walkways and Travelators	Convergence		Electric Feeders	1148	32	Taken up by KMRL. Also proposed as part of Broadway project
	KER-KOC-003					Transport	22	Public Bicycle Sharing		1000	Contract Awarded. Work on-going
											Elevated Walkways and Travelators clubbed with Ernakulam Market. Scope to be finalised by stakeholders
59	KER-KOC-002	10	Urban mobility (Multi Modal Transport)	10.3	Walkway from Ekm Jetty to Metro station	Smart Street Features	23	Walkway from Ekm Jetty to Metro station	900	470	Under Implementation
60	KER-KOC-007	10	Urban mobility (Multi Modal Transport)	10.4	Jetty improvement	Convergence			800	7250	Awarded by Kochi Metro Rail Ltd. Water metro division. Tender awarded for 5 boat jetties total cost INR 72.5 Cr to M/s Mary Mata on 11 June 2019 for a duration of 18 months.
61	KER-KOC-066	10	Urban mobility (Multi Modal Transport)	10.5	Property development along jetties	Convergence			720		
62	KER-KOC-067	10	Urban mobility (Multi Modal Transport)	10.6	Boatyard and Command & Control Centre	Convergence			2000		
63	KER-KOC-068	10	Urban mobility (Multi Modal Transport)	10.7	Dredging cost	Convergence			1000		
64	KER-KOC-069	10	Urban mobility (Multi Modal Transport)	10.8	Extend 'Smart Wi-Fi bus shelters' with LED bulbs, FM radio, USB drive slots, magazine/newspaper kiosks, mobile charger units	Integrated Command and Control Centre/ Master Integrator		Extend 'Smart Wi-Fi bus shelters' with LED bulbs, FM radio, USB drive slots, magazine/newspaper kiosks, mobile charger units	60	60	Combined stakeholder meeting & letter to stakeholders for confirmation on project to be

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
											taken up under Smart City or not
65	KER-KOC-070	10	Urban mobility (Multi Modal Transport)	10.9	Standard Wifi Enabled Bus Stands With Commercial space development	Integrated Command and Control Centre/ Master Integrator	24	Standard Wifi Enabled Bus Stands With Commercial space development	300	300	Combined stakeholder meeting & letter to stakeholders for confirmation on project to be taken up under Smart City or not
66	KER-KOC-071	11	Housing (Urban Planning)	11.1	Integrated redevelopment of Slum housing	Affordable Housing	25	Integrated redevelopment of Slum housing	14140	6285*	Letter to KMC to be sent from CSML Project preparation will require time. Minimum 3-4 months for DPR & tender preparation depending on project scope. Hence to enable tendering and implementation within SCM duration confirmation on scope to be shared by KMC at the earliest. R&R will require additional time. With limited SCM duration. Confirmation on

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
											scope needs to be expedited.
67	KER-KOC-072	11	Housing (Urban Planning)	11.2	Upgradation of infrastructure in Housing through Credit linked schemes	Affordable Housing	26	Beneficiary Led housing scheme	2435	1300	CSML Transferring funds to KMC
68	KER-KOC-073	11	Housing (Urban Planning)	11.3	Construction & upgradation of 755 DUs in Thuruthy, Kalvathy & Konchery colony	Affordable Housing	27	Improvement of connectivity for Thuruthy through construction of Bridges & FOBs	7424	4791	Only part work envisaged under RAY DPR has been awarded. Remaining DU construction will be taken up by Corporation and remaining projects identified in the approved slum redevelopment DPR will be taken up under SCM. They are Bridges, roads improvement.
							28	Construction of Second tower at Thuruthy			TBC by KMC.*
							29	Construction of First tower at Thuruthy		2100	CSML Transferring funds to KMC
69	KER-KOC-074	12	Economy and Employment	12.1	Broadway Market and Ernakulam market Redevelopment and Mattancherry spice market	Smart Placemaking & PPP	30	Broadway Street	1000	1000	Feasibility report submitted. DPR submitted and under revision
							31	Ernakulam Market Redevelopment+Escalator FOBs+Elevated Walkways and Travelators	10000	10240	Feasibility report submitted. DPR submitted on 16th October,

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
											2019 and under revision. KMC to approve initiate R&R asap. KMC to share final list of eligible shopkeepers with shop size requirement. Suggest on Transit shelter strategy including confirmation on alternate land for relocation, expenditure during relocation period, revision of rental rates for new building and negotiations, approval of revised traffic management plan from beneficiaries, Co-ordination with all beneficiaries. i. KMC to verify and compile final list of vendors and hawkers and share with smart city team at the earliest to enable

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
											Smart city team to do detailing of the designs ii. Confirmation for land for transit shelters at the earliest. iii. KMC to confirm allotment of shops by zoning. Smart city to design accordingly
						Smart Placemaking		Mattancherry spice market Redevelopment			Taken under streetscape improvement as part of road project
70	KER-KOC-075	12	Economy and Employment (Central City Urban Renewal & Mkt Dev)	12.2	Standard Hawker zones in Fort Kochi	Smart Placemaking		Standard Hawker zones in Fort Kochi + Standardize structures for "Petti Kada"	500	560	Project scope to be confirmed by stakeholders. Approval of DTP awaited.
71	KER-KOC-076	13	Health	13.1	Scale up of GH into a Super-speciality care centres	Health	32	Extension of Cancer Speciality Block for General Hospital.	3000	2500	Project Awarded
	KER-KOC-090					E-Health	33	E-health solutions for selected hospitals		371	Project Awarded. Work under implementation
72	KER-KOC-077	13	Health	13.2	Integrated development of 4 Hospitals in West Kochi - Excellence in Secondary care	Health	34	Out Patient & Admin block, Fort Kochi taluk Hospital	1000	482	LoA Issued
	KER-KOC-089					Health	35	Out Patient & Admin block, Women & Child Hospital, Mattancherry		467	LoA issued

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
73	KER-KOC-079	14	Education	14.1	Anganwadis and public schools Upgradation of facilities - Basic services, Digital classrooms, Libraries, Eco-toilets, Sports kits , Biogas plant, Urban farming etc	Education	36	CIVIL – upgradation of Anganwadies	450	90	DPR Submitted
74	KER-KOC-080	14	Education	14.2	Higher Educational institutions Upgradation of facilities - Basic services, Digital classrooms, Libraries, Eco-toilets, Sports kits , Biogas plant, Urban farming etc	Education	37	Higher secondary block, Central Calvathy GHSS, Fort Kochi	100	467	Project retendered
						E- Learning		Smart Classroom for 100 classrooms PAN city		490	Tendered. Cancelled
75	KER-KOC-081	15	Safety and Security	15.1	5 Rapid response boats for water transport safety	Convergence			50		CSML to confirm with KMRL
76	KER-KOC-082	15	Safety and Security	15.2	Drone Surveillance	Integrated Command and Control Centre/ Master Integrator	38	Safety & Security CCTV Surveillance	30	3876	DPR is being Revised along with Smart Pole
77		16	Other Social Infrastructure	16.1	Upgradation of Community Centre at Mattancherry with indoor sports facilities	Other Social Infrastructure		Upgradation of Community Centre at Mattancherry with indoor sports facilities	100	100	As per KMC no community centre available for improvement. KMC to confirm the same formally
78		16	Other Social Infrastructure	16.2	Standardize structures for "Petti Kada"				60		
79	KER-KOC-083	17	Identity and Culture (Heritage & Tourism Development)	17.1	Fortkochi and Mattanchery region Master plan for Tourism	Smart Placemaking		Implementation of identified Tourism related projects in Fort Kochi & Mattancherry	3000	3000	
							39	Open Air Theatre at Fort Kochi Zonal office		110	Project Re-Tendered
							40	Museum of Freedom Struggle		55	Project tendered

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
								Museum of Spices history		150	Formal confirmation on location required from KMC
							41	Development of Ethnic Food Hub			DPR prepared. To be auctioned post implementation of Vasco project
	KER-KOC-092						42	Development of Dutch palace node parking area and palace street entry		110	LoA issued
	KER-KOC-091						43	Fort Kochi Beach Front improvements - Vasco Square		171	Project re-tendered
							44	Fort Kochi Beach Front improvements - Phase II		829	DPR stage
								Mattancherry Walkway		1100	Put on hold by CSML till required approvals are received
								Developing a Water & Adventure sports center at Marine drive		110	Put on hold by CSML
								Cultural Corridor PT Usha Road		100	Concept prepared. To be taken up post implementation of roads project
						17.1.9		Multimedia based Light & Sound show			Put on hold by CSML till required approvals are received
80	KER-KOC-084	18	Others	18.1	Spatial Mapping of assets and SCADA systems for	Convergence		Base map upgradation for ABD area	1500	50	DPR submitted and scope submitted to

SCP S. No.	Project Code as per Central MIS	Module No.	Module Name	SCP Project No.	SCP Project Name	Category (as per MoHUA)	Revised S. No.	Revised Name of Project	Original Project Cost as per SCP	Estimated Cost (if any)	Stage of project (for Convergence projects status has been provided by respective stakeholder)
					Information gathering with monitoring centres						enable KMC to tender at the earliest
	KER-KOC-004					Integrated Command and Control Centre/ Master Integrator	45	Integrated Command, Control and Communication Centre (IC4)		6450	Project Awarded

The number of projects to be done by CSML will keep varying until 1. Fund availability is confirmed and 2. Scope of projects is confirmed by other stakeholders.

2.4 OVERALL PROGRESS

SI No	Source of Funds	No of Projects as per SCP	Cost as Per SCP (Rs in Cr)	No of Revised Projects	Revised Cost (Rs in Cr)	No of As Issued	As issued-Amount	No. of TS Issued	Amount of TS issued	No of Tendered Projects*	Amount of Tendere d	No of Work Awarded	Amount of Work Awarded	No of Work Completed	Expenditure
1	SPV	80	1347.5	45	935.29	29	570.23	27	610.22	24	578.87	17.00	582.09		25.96
2	PPP			4	314.48	2	311.58	2	311.58	2	311.58	1.00	10.00		2.05
3	Convergence	2	209.500	22	399.58	0	0.00	9	242.59	9	242.91	7.00	189.47	2	6.70
4	Pan City	2	646	2	646.00	1	25.00	1	25.00	1	25.00	1.00	25.00	1	25.00

Note * Total - Tendered Number & Amount: Projects not included which are awarded on nomination basis

2.5 SECTOR PROGRESS

SI No	Name of the Sector	No of Projects as per SCP	Cost as Per SCP (Rs in Cr)	No of Revised Projects under SCP	Revised Cost (Rs in Cr)	No. of Technical Sanction Issued	Technical Sanction Issued - Amount	Total Tendered (Number) *	Total - Tendered Amount (Rs in Crore)*	Work Awarded - Number	Work Awarded - Amount (Rs in cr)	Work Completed	Total Expenditure (Rs in crore)
A. ABD AREA PROJECTS SPV & PPP													

SI No	Name of the Sector	No of Projects as per SCP	Cost as Per SCP (Rs in Cr)	No of Revised Projects under SCP	Revised Cost (Rs in Cr)	No. of Technical Sanction Issued	Technical Sanction Issued - Amount	Total Tendered (Number) *	Total - Tendered Amount (Rs in Crore)*	Work Awarded - Number	Work Awarded - Amount (Rs in cr)	Work Completed	Total Expenditure (Rs in crore)
1	Water Supply	1	11.25	1	1	0	0	0	0.0	0.0	0.0		
2	UGSS	3	202.00	2	167	1	143.3	1	143.3	1.0	166.0		3.40
3	NMT Roads	4	44.13	5	118.87	4	103.24	4	103.2	2.0	78.3		
4	Main Roads	5	106.04	4	121.15	3	103.9	3	106.9	3.0	118.7		
5	Energy Supply	16	122.44	1	71.98	1	63.4	1	63.4	1.0	72.0		
6	Energy Efficiency	2	30.08	3	38.26	2	41.7	1	32.1	2.0	37.8		4.28
7	Solid Waste and Sanitation	4	6.89	4	10.07	4	10.37	4	10.4	1.0	0.7		0.38
8	Park & Open Space	4	2.20	2	9.85	1	7.1	1	7.1	0.0	0.0		
9	Canal Restoration	4	41.00	1	5	0	0	0	0	0	0		
10	Urban Mobility	4	24.08	3	17.7	2	19	2	14.7	2	14.7		4.56
11	Housing	3	239.99	4	100	0	0	0	0	0	0		5.18
12	Economy and Employment	2	115.00	2	143.2	0	0	0	0	0	0		
13	Health	2	40.00	4	38.2	4	30.17	2	9.22	4	38.2		1.99
14	Education	2	5.50	3	10.48	2	9.57	1	4.67	0	0		
15	Safety and Security	2	0.80	1	20	0	0	0	0	0	0		
16	Other Social Infrastructure	2	1.60	0	0	0	0	0	0	0	0		
17	Identity and Culture	1	30.00	7	10.94	4	16.88	4	4.33	1	1.21		
18	Others	1	15.00	2	366.08	2	386.27	2	386.28	1	64.5		7.90
	Total -A	62	1138	49	1249.77	30	934.9	26	885.55	18	592.09	0	27.69
B- Project Under Convergence													
19	Water Supply	13	120.3	12	88.41	3	7.68	3	7.68	3	7.68	2	5.04
20	UGSS			1	13.00	1	13	1	13	0	0		
21	Park & Open Space	1	2.00	1	2.00	1	2	1	2	1	2		1.66
22	Urban Mobility	4	87.2	3	181.88	3	172	3	172.32	2	131.88		
23	Housing			1	67.29	1	47.91	1	47.91	1	47.91		
24	Safety & Security			1	11.00	0	0	0	0	0	0		
25	Canal restoration			3	36.00	0	0	0	0	0	0		
	Total- B	18	209.5	19	399.58	9.00	242.59	9.00	242.91	7.00	189.47	2.00	6.70

SI No	Name of the Sector	No of Projects as per SCP	Cost as Per SCP (Rs in Cr)	No of Revised Projects under SCP	Revised Cost (Rs in Cr)	No. of Technical Sanction Issued	Technical Sanction Issued - Amount	Total Tendered (Number) *	Total - Tendered Amount (Rs in Crore)*	Work Awarded - Number	Work Awarded - Amount (Rs in cr)	Work Completed	Total Expenditure (Rs in crore)
C- PAN City Project													
25	Water Supply	1	621	1	621								
26	INTEGRATED CITY APP	1	25	1	25	1	25	1	25	1	25.00	1	25.00
	Total -C	2	646	2	646	1	25	1	25	1	25.00	1	25.00
	Grand Total - (A+B+C)	82	1993.5	70	2295.35	40	1202.49	36	1153.46	26	806.56	3	59.39

Note * Total - Tendered Number & Amount: Projects not included which are awarded on nomination

3 WAY FORWARD

3.1 IMMEDIATE AISSITANCE REQUIRED

S.NO	Organisation / Department	SUPPORT REQUIRED
1.	KMC	1. Selection of slum for improvement 2. Site for setting up STP 3. E governance module to be activated and SWM systems 4. Concurrence from owners for Solar Projects 5. Ernakulam Market Project–Land for transit rehabilitation of shops
2.	E I	6. Priority approval from Electrical Inspectorate for solar projects
3.	KSEBL	7. Priority clearance for project drawings/process utility shifting 8. Temporary shifting of electrical utilities interfering with the road works 9. Support for integrating SCADA, G2C services and metering application with IC4 and smart meters
4.	KWA	10. Support for Utility shifting, Smart Water metering 11. Data integration with IC4
5.	PWD	12. Coordination support for Road cutting and Restoration - Road Projects and ITMS 13. Road network drawings for IC4
6.	Health Department	14. G.O for removing the discarded ambulances from GH premises

3.2 OVERALL ISSUES AND CONCERNS

- Roads:
 1. Difficulty in getting contractors for road project (tenders ongoing for more than 10 months). Roads projects were initially 2 packages which were segregated into 6 separate packages (5 civil and one electrical)
 2. Contractors progress initially slow. Now progress is picking up
 3. Since multiple agencies are involved coordination work has increased
- West Kochi Sewerage: Land yet to be transferred from KMC
- Intelligent Traffic Management Systems (ITMS): Road cutting permissions from stakeholders
- Solar Project: Approvals from Electrical inspectorate is taking time and most of the existing electrical infrastructure is in poor condition and needs to be replaced

Finalisation of project scope. We need to expedite project scope with stakeholders at the earliest. List of projects requiring CSML assistance in finalizing the scope and conducting stakeholder meetings

Table 3-1: Projects requiring stakeholder assistance

Project name	Approx. Broad cost INR CR.	Assistance required
PROJECTS UNDER PROGRESS (FEASIBILITY REPORT / DPRS UNDER PREAPRATION)		
Smart water solutions - smart metering and smart valves for all connections in ABD	1.00	CSML to chase KWA for confirmation on scope for smart metering
Restoration of Mullassery Canal - including linking of standardized area drains	1.00	It has been confirmed all Canal projects are under convergence. Regulatory Gate construction Taken up by DMRC. Stakeholders to confirm the same formally and share status of projects from time to time with CSML
Restoration of Market Canal - walkways and market square around the canal pond, solar paneled roofs, led lighting, light posts	5.00	Taken up under Integrated Urban Rejuvenation and Water Transport Systems (IURWTS)
Restoration of Kalvathy Canal and area drain improvement - open spaces, street furniture and landscaping features	20.00	Proposed by CMSL to State Govt. to be considered under IURWTS as full stretch not under ABD. Only a minor part of the canal is. Part of the canal under AMRUT (KMC) CSML to chase relevant authorities for approval.
Restoration of Rameswaram-Kalvathy canal - upto cochin college – walkways and linking the canal bank road	15.00	
Broadway street upgradation	10.00	CSML to chase KMC/EMOSA/KMCC regarding committee formation and confirmation on project
Ernakulam market redevelopment	100.00	CSML conducting various meetings. KMC to initiate R&R CSML to chase KMC/EMOSA/KMCC regarding committee formation
Standard hawker zones in Fort Kochi + standardize structures for "petti kada"	5.60	Combined stakeholder meeting based on draft Feasibility report. Post meeting final Feasibility report will be submitted
MLCP at KTDC	7.00	Letter and meetings with stakeholders to finalise locations for tendering
Museum of freedom struggle	1.20	Letter to KMC & Stakeholders regarding scope of project formulated by CSML
Museum of spices history	1.50	Letter to KMC requesting for confirmation on space.
Mattancherry walkway	11.00	Combined stakeholder meeting for confirmation on project to be taken up
Cultural corridor - PT Usha road	0.50	Letter to KMC regarding scope of project formulated by CSML
Fort Kochi beach front improvements - part B walkway & beach	5.00	Combined stakeholder meeting & letter to stakeholders for sea wall.
Development of open spaces	2.50	Letter to KMC for confirmation and approval of open spaces and parks selected and proposals
Anganwadis	3.00	Letter to KMC & ICDS

		Combined stakeholder meeting for confirmation and approval of selected Anganwadis and proposals.
PROJECTS REQUIRING STAKEHOLDER MEETINGS & CONFIRMATION ON SCOPE FOR FURTHER ACTION (PREPARATION OF REPORTS UNDER SCM)		
Standard wifi enabled bus stands with commercial space development	TBC	Discussed during meeting with MLA KJ Maxi, War councillors of west Kochi in meeting held on 3 August 2019. Project proposal in principal agreed to. CSML to submit to KMC for approval.
Spatial mapping of assets	0.35 (ABD)	Letter to KMC. DPR shared, scope shared. KMC to tender the project at the earliest. CSML to follow up.
Smart & improved battery-operated tricycles for primary waste collection at West Kochi & Ernakulam in ABD area	1.00	Letter to KMC on further action required
Improvements to sewer collection system for mainland	TBC	Reminder Letter to KWA Project preparation will require time. Minimum 3-4 months for DPR & tender preparation depending on project scope. Hence to enable tendering and implementation within SCM duration confirmation on scope to be shared by KMC at the earliest. With limited SCM duration. Confirmation on scope needs to be expedited.
Mangalavanam eco-restoration project	1.00	Combined stakeholder meeting & letter to stakeholders & reminder letter to stakeholder.
Extend 'Smart wi-fi bus shelters' with led bulbs, FM radio, USB drive slots, magazine/newspaper kiosks, mobile charger units	0.60	Combined stakeholder meeting & letter to stakeholders

CSML to provide way forward on projects to be taken up based on funds available.

3.3 NEXT STEPS

- ▶ CSML to discuss KMC for formation of committee to expedite R&R for Ernakulam market project
- ▶ CSML to discuss in board meeting and with stallholders regarding projects where scope is not clear and probably have been suggested to be dropped. SCM time period is limited. Hence such confirmation is very important.
- ▶ CSML to discuss status of projects with KMC

3.4 WAY FORWARD FOR FEW PROJECTS

Following convergence & SCM projects are proposed to be dropped from Central MIS maintained by MoHUA as per suggestion received from MoHUA on 13 June 2019

Table 3-2: Projects proposed to be dropped from CENTRAL MIS

Project name	SCP cost INR CR.	Suggestion
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24 X 7 WATER SUPPLY - PAN CITY	621	Based on input received from MoHUA during Video conference held for 100 Smart Cities, it is proposed that as implementation duration for 24x7 water supply project will not be in sync with Smart City implementation duration hence the project may be dropped and formal approval may be taken from all associated stakeholders.
Water supply projects in ABD proposed to be implemented by KWA under 24x7 water supply project	Approx. 90 Cr.	Water supply projects in ABD proposed to be implemented by KWA under 24x7 water supply project

3.5 OVERALL STAKEHOLDER ROLES & RESPONSIBILITIES

S. No.	Stakeholder	Responsibility
1.	Kochi Municipal Corporation (KMC)	<ul style="list-style-type: none"> ► Council approval including review and suggestion on proposal ► Provision of rehabilitation land ► Conduct public consultations ► Relocation & rehabilitation (R&R) of existing vendors ► Carry out O&M post construction ► Event management ► Appointment of Nodal Officer for the Project
2.	Cochin Port Trust	<ul style="list-style-type: none"> ► Approval for the navigational area, as it should not interfere with inland water routes etc. ► Approval for the projects within the jurisdiction of Cochin Port Trust
3.	District Collector	<ul style="list-style-type: none"> ► Suggestions and approval of related projects
4.	Police Department	<ul style="list-style-type: none"> ► Suggestions and approval of related projects
5.	Kerala Water Authority	<ul style="list-style-type: none"> ► Integrating the proposed water metering & Sewerage system with KWA SCADA software
6.	Kerala State Electricity Board	<ul style="list-style-type: none"> ► Approval of projects as applicable ► Approval and support in integrating the KSEB control room (APIs) with IC4 project ► Inspection during implementation of net meters
7.	RTO – Transport Department	<ul style="list-style-type: none"> ► Sanctioning of permit and intermediate inspections
8.	District Tourism Promotion Council	<ul style="list-style-type: none"> ► Promotion of tourism projects and open spaces projects
9.	State Water Transport Department	<ul style="list-style-type: none"> ► Permission to go ahead with the pedestrian link between Ernakulam Jetty and Subhash Park
10.	Revenue Department	<ul style="list-style-type: none"> ► Suggestions and approval of related projects within the jurisdiction of Department
11.	KMRL - Water Metro	<ul style="list-style-type: none"> ► To incorporate continuous walkway through proposed boat jetties
12.	Kerala Irrigation Department	<ul style="list-style-type: none"> ► Approval for utilizing canal surface for pumping stations ► Approval for discharging treated water into canal
13.	Cochin Heritage Zone Conservation Society	<ul style="list-style-type: none"> ► Suggestion and approvals as required

S. No.	Stakeholder	Responsibility
14.	Fire & Rescue Department	► Sanctioning of permit and intermediate inspections
15.	Public, Residential Welfare Associations, NGOs, Social workers	► Public Participation in events organized.
16.	Food Safety and Standards Authority of India (FSSAI)	► Sanctioning of permit and intermediate inspections
17.	District Child Welfare Society	► Permission to go ahead with construction activity in Indira Priyadarshini Children's Park
18.	Vendor Associations	► Assistance with relocation & rehabilitation

4 PMC TEAM MOBILISED


4.1 STAFF DEPLOYMENT

Currently mobilised S.No	Designation	Name	Input Months as per contract	Total Man months deployed	Total Man months remaining	Nov-19
Facilitation and Implementation Professionals - Key Experts / Specialists						
1	Team Leader	Ajay Kumar	36	23.5	12.5	1.0
2	Infrastructure Specialist-Sanitation	S Ganesan/Dr. N. Balasubramanian	36	21.0	15.0	1.0
3	Procurement Specialist	Usha Jyothi G/Saubhagya	12	28.1	-16.1	0.1
4	Monitoring and Evaluation Specialist	Surabhi Kureel	36	25.2	10.8	1.0
5	Transport Planner	Vinoba Sunder Singh/M.Imtiaz Ahm	18	9.6	8.4	0.2
6	Energy Management Specialist	M Karunakaran	12	24.4	-12.4	1.0
Development Professionals						
7	Urban Planner	Arun Savi	18	19.1	-1.1	0.9
8	Structural Engineer	Vinod Sharma / Bhau Narayan Sade	12	12.2	-0.2	1.0
9	Construction Manager	Renuka S./V Jayaprakasan	24	21.2	2.8	1.0
10	Assistant Construction Manager	Jishnu K	24	20.8	3.2	1.0
11	Support Engineer	Bitha Chandran	24	21.7	2.3	1.0
12	Water Supply Expert	Kamal Mehandiratta/Rajendra Kum	3	0.2	2.8	0.0
13	Wastewater Expert	Vegesna Venkateshwara Raju/Kam	6	2.9	3.1	0.0
14	Utility Engineer	Sanjay Kumar Jha	12	6.0	6.0	0.8
15	Urban Designer	Abhishek Xavier	6	17.4	-11.4	0.2
16	Landscape / pavement design Architect	Ramanujam Sankaran	3	22.3	-19.3	1.0
17	Environment Management expert	Syed Farogh Ahmad Jami	6	4.4	1.6	0.0
18	GIS & Remote Sensing Expert	G Chandrashekhhar	6	1.7	4.3	0.0
19	PPP Expert	G Setu	6	2.1	3.9	0.0
20	E Governance Specialist	Korath V Mathew	12	13.4	-1.4	0.3
21	Networking & IT Infrastructure Specialist	Praveen Harea	6	0.1	5.9	0.0
22	MIS Specialist	Manish	24	17.3	6.7	1.0
23	Communication Specialist	Varaprasada Rao PV	12			0.0
Support Staff						
24	Office Manager	Smitha V. Pai	36	26.2	9.8	1.0
25	Research Associate - 1	Anu K Soman	24	22.4	1.6	0.0
26	Research Associate - 2	Shabna S/Shefeena K S	24	24.9	-0.9	1.0
27	Junior Engineer - 2	Vaisakh K. S	24	21.1	2.9	1.0
28	Junior Engineer - 3	Jothish Kumar M	24	19.4	4.6	1.0
29	Junior Engineer - 4	Reva Dileep	24	19.4	4.6	1.0
30	Quantity Surveyor - 1	Philomena M J	24	22.1	1.9	1.0
31	Quantity Surveyor - 2	Mohanan S	24	21.6	2.4	1.0
32	Draughtsman - 1	Unni Krishnanan	24	23.7	0.3	1.0
33	Draughtsman - 3	Soumya Poovakkatil	24	13.9	10.1	1.0
34	Draughtsman - 4	Harisankar N H	24	6.8	17.2	1.0
Additional Expert Mobilised						
35	Solid Waste Management (SWM) Expert	Dr. Bharat Nagar Bhushan	0	2.9		0.0
36	Road Engineer	K.K.Paily	0	16.1		1.0
Additional Support team						
37	Document Controller - Additional	Soumya V.Pai	0	18.0		0.0
38	Junior Engineer (additional)	Satyajith Shetty	0	1.5		0.0
39	Surveyor	Melvin.M.Thomas	0	6.4		1.3
40	Site Engineer - Electrical	Saood.P	0	5.0		1.0
41	Site Engineer - Civil	Diya Jagadish	0	4.6		1.0
42	Material Engineer	Anoop T G	0	2.6		0.0
				733.6		26.6


5 SMART CITY PROJECTS IN MEDIA COVERAGE

Following table provides an overview of projects and locations in ABD covered in media.

SI No	Date	News Paper	Headlines	Link	Screenshot
1.	3.11.2019	Times of India	Kochi: Sewage treatment plant proposed for five divisions	https://timesofindia.indiatimes.com/city/kochi/sewage-treatment-plant-proposed-for-five-divisions/articleshow/71872030.cms	<p>Printed from THE TIMES OF INDIA</p> <hr/> <h3>Kochi: Sewage treatment plant proposed for five divisions</h3> <p>TNN Nov 3, 2019, 04:49 AM IST</p> <p>KOCHI: The Cochin Smart Mission Limited (CSML) and Kochi municipal corporation jointly conducted an awareness campaign on construction of Vacuum Sewer Network and Sewerage Treatment Plant to be implemented in divisions 1 to 5 of the corporation.</p> <p>The sewerage scheme is proposed to be implemented in two phases. Phase I would cover divisions one and two. A sewage treatment plant (STP) with a capacity to treat 2.6 million litre a day (MLD) will be constructed in the first phase. In the second phase, the project will cover divisions three to five thereby taking the total capacity of the plant to 6.5 MLD. The total cost of the project is estimated at Rs 166 crore, including 5 years of operation and maintenance.</p> <p>M/s L C Infra Quavac and Enviro consortium is the agency selected for the implementation of the project. The proposed sewage collection system would cover 10,000 households along with commercial establishments and the floating population under the west Kochi region. The project is scheduled to be completed in 2021.</p>

2.	11.11.2019	Times of India	Kerala: Broadway begins long-due makeover	http://timesofindia.indiatimes.com/arts/show/71998645.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst	<p>THE TIMES OF INDIA</p> <p>Kerala: Broadway begins long-due makeover</p> <p>TNN Nov 11, 2019, 04:07 AM IST</p>  <p>KOCHI: The Cochin Smart City Ltd (CSML) has begun rolling out its much-awaited project to renovate the Ernakulam Broadway. CSML officials said its consultant has submitted a detailed project report (DPR) and that tenders will be issued this month after the CSML approves the DPR. "The tenders will be invited once the process is completed," said Raji R, general manager of CSML.</p> <p>The renovation will focus on improving basic infrastructure facilities along the Broadway street from the CSI Church to the Basil Street, which is hardly half-a-km long. The project's aim is to improve pedestrianisation of the street. According to officials, the primary focus will be to make the street walkable.</p> <p>The renovation project is estimated to cost around Rs 10 crore. "The footpaths will be cleared and the traffic system will be improved. Discussions will be held with traffic police to check whether it is possible to have a one-way system. There is a need to regulate the timings of loading and unloading of goods. The loading and unloading of goods should be done without causing inconvenience to shoppers," said Raji.</p> <p>Traffic movement and inadequate parking facilities have been identified as the main challenges in Broadway development. Though debates have been taking place about completely preventing the entry of vehicles and converting the area as a pedestrian shopping region, the idea has not received much support. Earlier, it was planned to develop multi-level parking facilities in the vicinity. It also visualised re-development of the market area and the market square, which comes to around one-and-a-half acres and making the market canal navigable. As land is required for such large-scale developments, they could be taken up only at a later stage.</p> <p>As part of the renovation project, all utility lines will be shifted and installed underground. The drains will be relayed. Adequate streetlights will be provided. Street furniture will be installed wherever space is available. "The availability of land for development activities is a main issue. We can work only within the limited land available," she said.</p> <p>Regarding the promotion of night life and hosting of events, which will help to encourage more shoppers to come down to Broadway, the CSML said its task is restricted to development of basic infrastructure. However, the agency can extend support to hosting of such activities. "It is primarily the merchants and traders on Broadway who have to come forward to take decisions regarding hosting of events that will promote Broadway as a shopping and entertainment destination," she said.</p> <p>Commercial hub loses old charm</p> <p>Kochi: The festive season rush at Broadway has become a thing of the past thanks to the lacklustre attitude of authorities towards the Broadway renovation project. On most Sundays, street vendors add life to the city's commercial hub, with migrant labourers being their main customers.</p> <p>"Over the years the traders here have been reading and discussing about plans to renovate Broadway. But no such plan has materialized yet. The state government and Kochi corporation should intervene to revive the business outside shopping malls. Something needs to be done to encourage people to come to Broadway for shopping," said Venkitesh Naik, a hardware dealer.</p> <p>Both customers and traders insist on the need to decongest the footpaths. Vehicles plying through these streets add to the congestion. Often footpaths are seen occupied by stalls on carts placed by shopkeepers.</p> <p>Rajeswari Amma, who enjoys being on Broadway for its old-world charm, said: "I like shopping at Broadway. There are some</p>
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SI No	Date	News Paper	Headlines	Link	Screenshot
3.	12.11.2019	The Hindu	70 city roads to be upgraded	https://www.thehindu.com/news/cities/Kochi/70-city-roads-to-be-upgraded/article29948292.ece	<p>KOCHI</p> <h2>70 city roads to be upgraded</h2> <p>John L. Paul</p> <p>KOCHI, NOVEMBER 12, 2019 00:56 IST UPDATED: NOVEMBER 12, 2019 00:56 IST</p> <h3>Smart Cities Mission to redesign roads under ₹105.13-crore project</h3> <p>Around 70 big and small roads in Kochi having a total length of 51.54 km will be upgraded by September 2020, under a ₹105.13-crore project of the Centre's Smart Cities Mission.</p> <p>Of this, 8.15 km of mostly arterial roads in the city will be upgraded as Smart Roads, at a cost of ₹43.60 crore. Dedicated utility ducts would be laid alongside, for laying cables and pipelines, alleviating the need to dig them up, said sources in Cochin Smart Mission Limited (CSML).</p> <p>The roads slated to become smart in the city include the 1.11-km Abraham Madamakka Road, 0.91-km of Banerji Road, 0.89 km of Shanmugham Road, the 1.47-km Park Avenue Road, 0.5-km of DH Road and the South Railway Station Road. In West Kochi, the KB Jacob Road (1.08 km), Amaravathi Road (1.09 km), Bellar Road and River Road (0.43 km) and Kalavathy Road (0.64 km) will be made 'smart'.</p>

SI No	Date	News Paper	Headlines	Link	Screenshot
4.	13.11.2019	The Hindu	Grimy and black flow canals of West Kochi	https://www.thehindu.com/news/cities/Kochi/grimy-and-black-flow-canals-of-west-kochi/article29957158.ece	<p>KOCHI</p> <h3>Grimy and black flow canals of West Kochi</h3>  <p>Abhinaya Harigovind <small>KOCHI, NOVEMBER 13, 2019 01:21 IST UPDATED: NOVEMBER 13, 2019 01:22 IST</small></p> <p>Cleaning and desilting works not undertaken in some canals; only small sections included under Amrut project</p> <p>P.D. Xavier prays for a boat. The resident of Tharebhagam, near Thoppumpady, does not need it for a voyage of the seas but to navigate the path in front of his house.</p> <p>The road sometimes became one with the canal beside it at high tide, said Mr. Xavier. The nightmarish combination of heavy rain and high tide on October 21 forced Mr. Xavier and around 70 people living along the Pallichalthodu in Tharebhagam to wade through knee-deep water to an anganwadi and community hall nearby, where they waited for the water to recede.</p>

ANNEXURES

ANNEXURE 1: LIST OF PROJECTS UNDER IMPLEMENTATION BY SPV

S NO	MODUL E NO.	MODULE	FUND	PROJECT NAME	PROJECT COST (IF ANY) OR SCP COST	FEASIBI LITY REPOR T	DPR PREPA RED	Status
1	10	Urban Mobility	SCM	Walkway from Ekm Jetty to Metro station	4.70			Projects Awarded/Under Implementation
2	6	Energy Efficiency	SCM	Solar panels in Govt. buildings	5.70	Y	Y	Projects Awarded/Under Implementation
3	10	Urban Mobility	PPP	Public Bicycle Sharing	10.00		Y	Projects Awarded/Under Implementation
4	4	Main Roads	SCM	Intelligent Traffic Management Systems (ITMS)	26.90	Y	Y	Projects Awarded/Under Implementation
5	13	Health	SCM	E-health solution for General Hospital	3.71	Y	Y	Projects Awarded/Under Implementation
6	13	Health	SCM	Cancer Extension Block, General Hospital	25.00	Y	Y	Projects Awarded/Under Implementation
7	18	Others	SCM	Integrated Command, Control and Communication Centre (IC4)	64.50	Y	Y	Projects Awarded/Under Implementation
8	4	Main Roads	SCM	Development of Smart Roads in Ernakulam ABD	61.53	Y	Y	Projects Awarded/Under Implementation
9	3	NMT Roads	SCM	Development of Other Roads in Ernakulam ABD	43.60	Y	Y	Projects Awarded/Under Implementation
10	4	Main Roads	SCM	Development of Smart Roads in West Kochi in ABD	30.31	Y	Y	Projects Awarded/Under Implementation
11	7	Solid Waste and Sanitation	SCM	Household and Street Bins for Segregation of Organic and Inorganic wastes	0.67	Y	Y	Projects Awarded/Under Implementation
12	6	Energy Efficiency	SCM	Implementation of Smart LED lighting	32.06	Y	Y	Projects Awarded/Under Implementation
13	13	Health	SCM	New Block at Fort Kochi Taluk Hospital	4.82	Y	Y	Projects Awarded/Under Implementation
14	13	Health	SCM	New Block of Mattancherry Women & Children Hospital	4.67	Y	Y	Projects Awarded/Under Implementation
15	17	Identity and Culture	SCM	Upgradation of Dutch Palace Entry Area	1.21	Y	Y	Projects Awarded/Under Implementation
16	2	UGSS	SCM	Construction of Vacuum Sewer Network with House Connections and Sewer Treatment Plant	166.00	Y	Y	Projects Awarded/Under Implementation
17	5	Energy Supply	SCM	Development of Electrical Infrastructure in ABD	71.98	Y	Y	Projects Awarded/Under Implementation
18	3	NMT Roads	SCM	Development of Other Roads in West Kochi Ward 1-2	34.73	Y	Y	Projects Awarded/Under Implementation

S NO	MODUL E NO.	MODULE	FUND	PROJECT NAME	PROJECT COST (IF ANY) OR SCP COST	FEASIBI LITY REPOR T	DPR PREPA RED	Status
19	11	Housing	SCM	Beneficiary led housing	13.00	NA	NA	Convergence Housing
20	11	Housing	SCM	Construction of First tower at Thuruthy	21.00	NA	NA	Convergence Housing
21	3	NMT Roads	SCM	Development of Other Roads in West Kochi in Ward 3 4 5	32.49	Y	Y	Projects under Tender Evaluation
22	8	Park and Open Space	SCM	Improvements to Marine Drive walkway - Phase I	7.10	Y	Y	Projects under Tender Evaluation
23	17	Identity and Culture	SCM	Open Air Theatre (OAT) at Fort Kochi	1.10	Y	Y	Projects under Tender Evaluation
24	17	Identity and Culture	SCM	Beach Front Upgradation at Vasco Square in Fort Kochi - Part A	1.58	Y	Y	Projects under Tender Evaluation
25	7	Solid Waste and Sanitation	SCM	Smart & Improved Mechanised Street Sweeping at West Kochi & Ernakulum in ABD area	4.56	Y	Y	Tendered
26	3	NMT Roads	SCM	Development of Multi Level Car Parking at Kacheripady	6.15	Y	Y	To be re-tendered
27	7	Solid Waste and Sanitation	SCM	Public Toilets in ABD	1.39	Y	Y	To be re-tendered
28	18	Others	PPP	Intelligent Street Pole	301.58	Y	Y	To be re-tendered
29	7	Solid Waste and Sanitation	SCM	Smart & Improved Secondary Storage & Transportation of Solid Waste using Portable Compactor Technology	4.40	Y	Y	Project retendered
30	4	Main Roads		FOBs - West Kochi (3 Nos)	13.12	Y	Y	Project Tendered
31	14	Education	SCM	Higher Secondary Block, Central Calvathy GHSS, Fort Kochi	4.67	Y	Y	Project retendered
32	14	Education	SCM	Smart Classroom for 100 classrooms PAN city	4.90	Y	Y	Tender Cancelled
33	4	Main Roads	SCM	Road Signages for ABD	2.40	Y	Y	To be tendered
34	15	Safety and Security	SCM	Smart Poles & Safety & security - Intelligent Crime Surveillance System	20.00	Y	Y	To be tendered
35	8	Park and Open Space	SCM	Development of Open spaces	2.75	Y	Y	To be tendered
36	17	Identity and Culture	SCM	Museum of Freedom Struggle	0.55	Y	Y	To be tendered
37	14	Education	SCM	Anganwadis	0.91	Y	Y	To be tendered
38	12	Economy and Employment	SCM	Broadway Street Upgradation	8.20	Y	Y	To be tendered after pilot traffic enforcement implementation
39	11	Housing	SCM	Construction of Bridges in West Kochi	3.15	Y	N	DPR Under Preparation

S NO	MODUL E NO.	MODULE	FUND	PROJECT NAME		PROJECT COST (IF ANY) OR SCP COST	FEASIBI LITY REPOR T	DPR PREPA RED	Status
40	12	Economy and Employment	SCM	Ernakulam Redevelopment	Market	135.00	Y	Y	DPR Prepared
41	17	Identity and Culture	SCM	Cultural Corridor - PT Usha Road		0.50	Y	Y	DPR submitted
42	18	Others		Spatial Mapping of assets		0.50	N	Y	DPR Prepared
43	7	Solid Waste and Sanitation		Smart & Improved Battery Operated Tricycles for Primary Waste Collection at West Kochi & Ernakulam in ABD Area		1.00	Y	Y	DPR Prepared
44	17	Identity and Culture	PPP	Development of Food Hub	Ethnic	0.00	Y	Y	DPR Prepared
45	9	Canal Restoration	SCM	Restoration of Market canal - Walkways and Market square around the canal pond, Solar paneled roofs, LED Lighting, Light posts		5.00	Y	N	DPR Under Preparation
46	17	Identity and Culture	SCM	Fort Kochi Beach Front improvements - Part B Walkway & Beach		5.00	Y	N	DPR Under Preparation
47	10	Urban Mobility	SCM	Standard Wifi Enabled Bus Stands with Commercial space development		3.00	N	N	Feasibility stage
48	11	Housing	SCM	Integrated redevelopment of Slum housing		62.85	N	N	Project scope to be confirmed by stakeholders
49	1	Water Supply	SCM	Smart Water solutions - Smart Metering and smart valves for all connections in ABD		1.00	N	N	Project scope to be confirmed by stakeholders
50	2	UGSS	SCM	Improvements to sewer collection system for Mainland		1.00	N	N	Project scope to be confirmed by stakeholders
51	10	Urban Mobility		Extend 'Smart Wi-Fi bus shelters' with LED bulbs, FM radio, USB drive slots, magazine/newspaper kiosks, mobile charger units		0.60	N	N	Project scope to be confirmed by stakeholders along with funding
52	17	Identity and Culture		Museum of Spices history		1.50	Y	N	To be taken up based on fund availability & scope confirmation by stakeholders
53	17	Identity and Culture		Mattancherry Walkway		11.00	Y	N	To be taken up based on fund availability & scope confirmation by stakeholders
54	3	NMT Roads		Smart Parking Solutions in ABD		1.90	Y	N	To be taken up based on fund availability & scope confirmation by stakeholders
55	3	NMT Roads		MLCP at GCDA		10.00	Y	N	To be taken up based on fund availability & scope

S NO	MODUL E NO.	MODULE	FUND	PROJECT NAME	PROJECT COST (IF ANY) OR SCP COST	FEASIBI LITY REPOR T	DPR PREPA RED	Status
								confirmation by stakeholders
56	3	NMT Roads		MLCP at KTDC	4.00	Y	N	To be taken up based on fund availability
57	12	Economy and Employment		Standard Hawker zones in Fort Kochi + Standardize structures for "Petti Kada"	5.60	Y	N	Project scope to be confirmed by stakeholders along with funding
58	8	Park and Open Space		Mangalavanam Eco-restoration project	1.00	N	N	Project scope to be confirmed by stakeholders along with funding

ANNEXURE 3: TENDER DETAIL

Sl. No.	Tender Reference Number:	Tender ID:	Project Name:	Project duration	Estimated Cost of the work	Earnest Money Deposit (EMD)	Tender submission fee (Rs.)	Bid Validity	NIT / CORRIGENDUM	No. and date	Bid Document Downloading Start Date	Last date for sending pre-bid queries	Date, Time of Pre-bid Meeting	Start Date of Online Submission of Bids (Required for BOQ Revision)	Last date for Online Purchase of Tender Document	Last date of Online Submission of Bids	Last date of EMD + Hard Copy POA	Date & Time for Opening of Bids
1.	CSML/SWM/RFP/002-2 Date: 09/09/2019		Supply, Operation and Maintenance of Mechanized Street Sweeping Machines	4 months (Supply, Installation & Commissioning) + O & M of 3 years (after supply)	Rs. 4.56 Crores	Rs. 4,56,000 lakhs	Rs. 11,800/-	180 days	As per NIT	CSML/SWM/RFP/002-2 Date: 09/09/2019	9th September 2019	16th September 2019 till 17:00 hrs.	17th September 2019 at 15:00 hrs.		1st October 2019, till 17:30 hrs.	1st October 2019, till 17:30 hrs.	3rd October 2019, at 15:00 hrs.	3rd October 2019, at 16:00 hrs.
									As per Corrigendum-1	TnD No.: CSML/ TND / 2019 /64 /031 Date: 16/09/2019			9th September 2019 at 15:00 hrs.		3rd October 2019, till 17:30 hr	3rd October 2019, till 17:30 hr	5th October 2019, till 15:30 hrs.	5th October 2019, at 16:00 hrs.
									As per Corrigendum-2	TnD No.: CSML/ TND / 2019 /64 /035 Date: 01/10/2019						14th October 2019, till 17:30 hrs.	17th October 2019, till 15:30 hrs.	17th October 2019, till 16:00 hrs.
									Prebid Minutes, Corrigendum and Addendum	TnD No.: CSML/ TND / 2019 /64 /036 Dt: 05/10/2019						14th October 2019, till 17:30 hrs.	17th October 2019, till 15:30 hrs.	17th October 2019, till 16:00 hrs.
									As per Corrigendum-3	TnD No.: CSML/ TND / 2019 /64 /037 Date: 15/10/2019						31st October 2019, till 17:30 hrs.	4th November 2019, till 15:30 hrs.	4th November 2019, till 16:00 hrs.
2.	CSML/TORISM/VASCO	2019_KM_RL_2	RFP for Beach Front	12 months + Defect	Rs. 1.58	Rs. 1,58,000 lakhs	Rs. 11,800/-	180 days	As per NIT	CSML/SWM/RFP/002-2	9th September 2019	16th September	17th September		1st October	1st October 2019, till	3rd October	3rd October 2019, at

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Sl. No.	Tender Reference Number:	Tender ID:	Project Name:	Project duration	Estimated Cost of the work	Earnest Money Deposit (EMD)	Tender submission fee (Rs.)	Bid Validity	NIT / CORRIGENDUM	No. and date	Bid Document Downloading Start Date	Last date for sending pre-bid queries	Date, Time of Pre-bid Meeting	Start Date of Online Submission of Bids (Required for BOQ Revision)	Last date for Online Purchase of Tender Document	Last date of Online Submission of Bids	Last date of EMD + Hard Copy POA	Date & Time for Opening of Bids
	SQUARE /RFP/002 -3 Date: 27/08/201	9736_6_1	Upgradation at Vasco Square in Fort Kochi	Liability Period of 24 months for Electrical works & 12 months for other works	Crores					Date: 09/09/2019		2019 till 17:00 hrs.	2019 at 15:00 hrs.		2019, till 17:30 hrs.	17:30 hrs.	2019, at 15:00 hrs.	16:00 hrs.
									As per Corrigendum-1	TnD No.: CSML/ TND / 2019 /64 /031 Date: 16/09/2019			19th September 2019 at 15:00 hrs.		3rd October 2019, till 17:30 hrs.	3rd October 2019, till 17:30 hrs.	5th October 2019, till 17:30 hrs.	5th October 2019, at 16:00 hrs.
									As per Corrigendum-2	TnD No.: CSML/ TND / 2019 /64 /035 Date: 01/10/2019						14th October 2019, till 17:30 hrs.	17th October 2019, till 17:30 hrs.	17th October 2019, at 16:00 hrs.
									Prebid Minutes, Corrigendum and Addendum	TnD No.: CSML/ TND / 2019 /64 /036 Dt: 05/10/2019						14th October 2019, till 17:30 hrs.	17th October 2019, till 17:30 hrs.	17th October 2019, at 16:00 hrs.
									Tender Opened on 30th September	TnD No.: CSML/ TND / 2019 /64 /037 Date: 15/10/2019						31st October 2019, till 17:30 hrs.	4th November 2019, till 17:30 hrs.	4th November 2019, at 16:00 hrs.
3.	CSML/ Roads /RFP/008 Date: 04/07/2019		RFP for Development of Roads for Divisions 3,4 & 5 under Smart City Mission, Kochi	15 months (including monsoon period)	Rs. 32.49 Crores	Rs. 32,49,000 lakhs	Rs 59,000/	180 days	As per NIT	No. CSML/ Roads /RFP/007 Date: 04/07/2019	4th July 2019	15th July 2019 till 17:00 hrs.	16th July 2019 at 15:00 hrs.		31st July 2019, till 17:30 hrs.	31st July 2019, till 17:30 hrs.	2nd August 2019, till 14:00 hrs.	2nd August 2019, at 15:00 hrs.
									As per Corrigendum-1	TnD No.: CSML/ TND / 2019 /64 /027 Date: 30/07/2019					2nd August 2019, till 17:30 hrs.	2nd August 2019, till 17:30 hrs.	5th August 2019, till 17:30 hrs.	5th August 2019, at 15:00 hrs.

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Sl. No.	Tender Reference Number:	Tender ID:	Project Name:	Project duration	Estimated Cost of the work	Earnest Money Deposit (EMD)	Tender submission fee (Rs.)	Bid Validity	NIT / CORRIGENDUM	No. and date	Bid Document Downloading Start Date	Last date for sending pre-bid queries	Date, Time of Pre-bid Meeting	Start Date of Online Submission of Bids (Required for BOQ Revision)	Last date for Online Purchase of Tender Document	Last date of Online Submission of Bids	Last date of EMD + Hard Copy POA	Date & Time for Opening of Bids
																	14:00 hrs.	
									As per Corrigendum-2	TnD No.: CSML/ TND / 2019 /64 /029 Date: 02/08/2019					3rd August 2019, till 17:30 hrs.	3rd August 2019, till 17:30 hrs.	6th August 2019, till 14:00 hrs.	6th August 2019, at 15:00 hrs.
									2 bids Received 1) NOBLE TECH ENGINEERING (P) LTD 2) Inkel Limited	Technical bids were opened and evaluation report submitted to BEC for financial opening recommendation								
4.	CSML/PARK & OS/CLDH M/RFP/002 Date:22/08/2019		RFP for Open Space Corridor Linking from DH Ground to Mangalavanam	12 months + Defect Liability Period of 24 months	Rs. 6,58,48,415.00 Crores	Rs. 6,60,000 lakhs	Rs 23,600/-	180 days	As per NIT As per Corrigendum-1 Tender Opened 16th September 2019	No. CSML/PARK & OS/CLDH M/RFP/002 Date:22/08/2019	22nd August 2019				7th September 2019, till 17:30 hrs.	7th September 2019, till 17:30 hrs.	10th September 2019, till 15:00 hrs.	10th September 2019, at 16:00 hrs.
										TnD No.: CSML/ TND / 2019 /64 /030 Date: 09/09/2019					13th September 2019, till 17:30 hrs.	13th September 2019, till 17:30 hrs.	16th September 2019, till 15:00 hrs.	16th September 2019, at 16:00 hrs.
										3 bid received Under Evaluation -	BEC Meeting requested for 16/10/2019-							

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Sl. No.	Tender Reference Number:	Tender ID:	Project Name:	Project duration	Estimated Cost of the work	Earnest Money Deposit (EMD)	Tender submission fee (Rs.)	Bid Validity	NIT / CORRIGENDUM	No. and date	Bid Document Downloading Start Date	Last date for sending pre-bid queries	Date, Time of Pre-bid Meeting	Start Date of Online Submission of Bids (Required for BOQ Revision)	Last date for Online Purchase of Tender Document	Last date of Online Submission of Bids	Last date of EMD + Hard Copy POA	Date & Time for Opening of Bids
										Bid submitted by 1) P J AVARACHAN 2) M/s. M.D. ESTHAPPAN INFRASTRUCTURES PVT. LTD. 3) M/s. TBAS CONSTRUCTIONS								
5.	CSML/TORISM/OT/RFP/01-2 dated 28/08/2019		RFP for Construction of Open-Air Theatre in Fort Kochi	12 months + Defect Liability Period of 12 months	Rs. 83 Lakhs	Rs. 1,00,000 lakhs	Rs. 11,800/-	180 days	As per NIT	No. CSML/PARK & OS/CLDHM/RFP/002 Date:22/08/2019	28th August 2019					18th September 2019, till 17:30 hrs.	20th September 2019, till 15:00 hrs.	20th September, at 16:00 hrs..
									Tender Opened 20th September 2019 (Technical)	3 bid received Under Evaluation - Bid submitted by 1) M/s. Carmel Builders and Fibrotech Industries Pvt. Ltd. 2) M/s. COASTAL ENGINEERING 3) CUBE INDIA	BEC Meeting requested for 16/10/2019- Cube India not considered for evaluation, due to MOM recommendation of first tender							

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Sl. No.	Tender Reference Number:	Tender ID:	Project Name:	Project duration	Estimated Cost of the work	Earnest Money Deposit (EMD)	Tender submission fee (Rs.)	Bid Validity	NIT / CORRIGENDUM	No. and date	Bid Document Downloading Start Date	Last date for sending pre-bid queries	Date, Time of Pre-bid Meeting	Start Date of Online Submission of Bids (Required for BOQ Revision)	Last date for Online Purchase of Tender Document	Last date of Online Submission of Bids	Last date of EMD + Hard Copy POA	Date & Time for Opening of Bids
										ENGINEERING								
6.	CSML/S WMP/TOILET/RFP/004-2 Date: 09/09/2019		Construction of Public Toilet Facilities in Kochi (Second call) (Second call)	8 months + Defect Liability Period of 12 months	Rs. 1.39 Crores	Rs. 1.39 lakhs	Rs. 11,800/-	180 days	As per NIT	CSML/SWP/TOILET/RFP/004-2 Date: 09/09/2019	9th September 2019					30th September, till 17:30 hrs.	03rd October 2019, till 15:00 hrs.	03rd October 2019, at 16:00 hrs.
									As per Corrigendum-1	TnD No.: CSML/ TND / 2019 /64 /036 Date: 01/10/2019						9th October 2019, till 17:30 hrs.	11th October 2019, till 15:00 hrs.	11th October 2019, at 16:00 hrs.
									Tender Opened 11th October 2019 (Technical)	1 bid received Under Evaluation - Bid submitted by 1) M/s. Carmel Builders and Fibrotech Industries Pvt. Ltd.	bid submitted by bidder is from 1st tender which is not valid							
7.	Ref Number: CSML/EDUCATION/CCHS/RFP/002		Upgradation of new Central Calvathy HSS under Cochin smart Mission Limited	8 months (including monsoon period)	Rs 5.60 cr	Rs 5.60 laksh	Rs 20,000 Plus GST	180 days	As per NIT	CSML/EDUCATION/CCHS/RFP/002	3rd December 2019	9th December 2019	9th December 2019			23rd December 2019, till 17:30 hrs	25th December 2019, till 14:00 hrs.	25th December 2019, till 15:00 hrs.

Sl. No.	Tender Reference Number:	Tender ID:	Project Name:	Project duration	Estimated Cost of the work	Earnest Money Deposit (EMD)	Tender submission fee (Rs.)	Bid Validity	NIT / CORRIGENDUM	No. and date	Bid Document Downloading Start Date	Last date for sending pre-bid queries	Date, Time of Pre-bid Meeting	Start Date of Online Submission of Bids (Required for BOQ Revision)	Last date for Online Purchase of Tender Document	Last date of Online Submission of Bids	Last date of EMD + Hard Copy POA	Date & Time for Opening of Bids
8.	Ref Number: CSML/EDUCATION/CCHSS/RFP/002																	

ANNEXURE 5: PROJECT PROGRESS – INSTALLATION OF SOLAR PANELS IN GOVT. BUILDINGS

- Detail physical progress of solar panels in govt. Buildings

1MWp Solar rooftop project The Contractor has mobilized 1010 KW panels complete by the month of April 2019. BHEL completed the Solar Panel (Module) installation of 1000 KW.. The work status is as follows.

Monthly Progress Report

Sl. No.	Site Name	Roof type	Feasible capacity (KW p)	Electrical Inspectorate (EI) application number	EI File number	Electric al Inspectorate Scheme Approval Status/ Defects	Date of comment by EI for defects	Defects reply	Site visit by EI official	EI SCHEME APPROVAL	Final Energization certificate Status / Defects	KSEB / EI section office	KSEBL Plant registration	KSEB Net meter supply and installation	Testing and commissioning clearance from KSEB	Remarks	EI Energization Certificates	RELAY TESTING TEAM INSPECTION	NET METER INSTALLATION & COMMISSIONING	Remarks
A	Inspected Sites-07 Nos.																			
1	Fire Station Gandhi Nagar	RCC	40	082 002 202 201 9	B3-018 37/1 9/EI E	Scheme / Drg approved by EI on 20.03.19			20-05-2019. 2nd inspection completed on 31.05.2019.	20.03.19	Completed	Giri Nagar	Document submitted	CSML/KSEB scope	14.07.19	With EI final clearance, KSEB activity will commence	13.06.19	14.07.19	9.8.2019	Commissioned
2	General Hospital, Ernakulam	Tin sheet	70	082 002 401 201 9	B3-018 36/1 9/EI E	Scheme / Drg approved by EI on 20.03.19			Scheduled on 13.06.2019.	20.03.19	Completed	College Road	Document submitted	CSML/KSEB scope		With EI final clearance, KSEB activity will commence	26.08.19	14.10.19		Net Meter Installation pending

3	District court complex, Ernakulam	RCC	40	082-002-202-2019	B3-029-39/19/EI E	Scheme / Drg approved by EI on 20.03.19			Scheduled on 20.06.2019.	20.03.19	Completed	College Road	Document submitted	CSML/KS EB scope		With EI final clearance, KSEB activity will commence	29.08.19	14.10.19 (Completed)		Net Meter Installation pending & CT & PT installation pending.
4	Government Old age home Thevara	Tin sheet	20	082-001-603-2019	B3-042-35/19/EI E	Scheme / Drg approved by EI on 10.06.19			Scheduled on 20.06.2019.	10.06.19	Inspection done on 07.11.2019	Thevara	Document submitted	CSML/KS EB scope		With EI final clearance, KSEB activity will commence	Awaited from EI			Energisation approval obtained from EI. Annexure III submitted to KMC on 30.11.2019. Signature from Corporation is awaiting.

5	Government Girls Higher Secondary School, Panampilly Nagar	Tin sheet	25	0820048032019	B3-04233/19/EI E	Scheme / Drg approved by EI in June	29.05.19	1) security Fee Rs. 285/- 2) sign & stamp of owner	20th July'19	10.06.19	Defects: 1. Access ladder with man guard 2. Lockable grills required around ACDB, D CDB, INV) Inspection done on 7.11.19, nov 2019 defect reported on 21.11.19	Giri Nagar	Document submitted	CSML/KS EB scope		With EI final clearance, KSEB activity will commence	Access and safety related defect after inspection			Defects notified by EI. Protection cover need to be provided on electrical Equipment.
6	Community Town Hall, Palluruthy	Tin sheet	20	0820039052019	B3-06766/19/EI E	Scheme / Drg approved by EI on 19 oct	29.05.19	1) security Fee Rs. 1170/-	30th July'19	19.10.19	EI inspection done on 25.11.19	Palluruthy	Document submitted	CSML/KS EB scope		With EI final clearance, KSEB activity will commence	Awaited from EI			EI inspection Completed on 25.11.2019. Defect notified. Minor defects.

7	Government Hospital, Karuveli paddy	Tin shee t	40	082 010 705 201 9	B3-067 76/1 9/EI E	Scheme / Drg approved by EI on 15 Oct	26.05.19	1) security Fee Rs. 3330/- 2) Approval of X ray machine not taken by hospital authority	30th July'19	15.10.19	EI inspection done on 25.11.19	Thopum paddy	Document submitted	CSML/KS EB scope		With EI final clearance, KSEB activity will commence	Awaited from EI			EI inspection Completed 25.11.2019. Comments received to be completed. Reply to be submitted.
B	Scheme Approved but Inspection Pending-06 sites																			
8	Government Girl HSS, Chitoor road, Ernakulam South	Tin shee t	30	082 004 703 201 9	B3-042 34/1 9/EI E	Scheme / Drg approved by EI in June completion Report submitted on 22.10.19	29.05.19	1) security Fee Rs. 945/-	30th July'19	10.06.19	Inspection pending. completion certificate submitted to EI for inspection on 22.10.19	College Road	Document submitted	CSML/KSEB scope		With EI final clearance, KSEB activity will commence				EI Inspection Completed on 3.12.2019. Minor changes in drawings.

9	PWD Rest House, Park Avenue Road.	Tin sheet	60	082 002 305 201 9	B3-067 79/19/EI E	Scheme / Drg approved by EI on 17 Oct completion Report submitted on 12.11.19	29.05.19	1) security Fee Rs. 2050/- 2) sign & stamp of owner	20th July'19	17.10.19	Inspection pending. completion certificate submitted to EI for inspection 12.11.19	College Road	Document submitted	CSML/K SEB scope		With EI final clearance, KSEB activity will commence				Inspection request submitted to EI on 12.11.19. Yet hear the inspection date from EI.
10	Edakochi Government Higher Secondary School. 20 KWp	Tin sheet	25	082 011 506 201 9	B3-067 54/19/EI E	Scheme / Drg approved by EI on 25 Oct CR To be Submitted	26.05.19	1) security Fee Rs. 515/- 2) Sign of building owner	30th July'19	25.10.19	Inspection pending. completion certificate to be submitted to EI for inspection	Palluruthy	Document submitted	CSML/K SEB scope		With EI final clearance, KSEB activity will commence				KSEB testing and Net meter installation will start after EI clearance.
11	Vennala High School	Tin sheet	40	082 010 805 201 9	B3-067 78/19/EI E	Scheme / Drg approved by EI on 28 Oct CR To be Submitted	22.05.19	1) security Fee Rs. 1305/- 2) sign & stamp of owner	30th July'19	28.10.19	Inspection pending. completion certificate to be submitted to EI for inspection	Vennala	Document submitted	CSML/K SEB scope		With EI final clearance, KSEB activity will commence				Completion report to be submitted to EI.

12	Punnackal High School	Tin sheet	40	0820038052019	B3-06775/19/EI E	Scheme Approved by EI on 15 Nov CR To be Submitted	26.05.19	1) security Fee Rs. 1745/- 2) sign & stamp of owner	30th July'19	15.11.19	Inspection pending. completion certificate to be submitted to EI for inspection	Edapally	Document submitted	CSML/KSEB scope		With EI final clearance, KSEB activity will commence				Completion report to be submitted to EI.
13	Central Section office, KSEBL, Semithiri mukku, Ernakulam	RCC	20	0820019052019	B3-06774/19/EI E	last defect on 03.09.19 and again not submitted to EI on 4.10.19 and approved on 19.11.19 CR To be Submitted	30.05.19	1) security Fee Rs. 115/-	20th July'19	19.11.19	Inspection pending. completion certificate to be submitted to EI for inspection	Central section	Document submitted	CSML/KSEB scope		With EI final clearance, KSEB activity will commence				Completion report to be submitted to EI.
C	Scheme Not Approved but defect reply submitted to EI-08 sites																			

14	Government Hospital Fort Kochi	Tin sheet	30	082 004 403 2019	B3-042 32/19/EI E	Defects: only fees Last defect on 20.08.19 and again submitted to EI on 25.8.19 again they reported that Fees Chalan is missing by EI so a Copy of again is again resubmitted on 22.11.19	29.05.19	1) security Fee Rs. 515/-	30th July'19		scheme approval pending	Kunnupuram	Document submitted	CSML/K SEB scope		With EI final clearance, KSEB activity will commence				Defects submitted. Challan resubmitted to EI. Inspection pending from EI.
15	Edakochi Government Higher Secondary School. 20 KWp RCC	RCC	20	082 003 005 2019	B3-067 61/19/EI E	Last defect on 02.09.19 and again submitted to EI on 07.09.19	26.05.19	1) security Fee Rs. 515/- 2) Sign of building owner	30th July'19		scheme approval pending	Palluruthy	Document submitted	CSML/K SEB scope		With EI final clearance, KSEB activity will commence				Completion report to be submitted to EI.

16	Edappally Government High School	Tin sheet	35	0820109052019	B3-06765/19/EI E	Submitted to EI on 28.11.19	28.05.19		30th July'19		scheme approval pending	Pallarivattam	Document submitted	CSML/KSEB scope		With EI final clearance, KSEB activity will commence				Defects submitted to EI
17	New Excise Building, Kacheripady	RCC	40	0820033092019	B3-15836/19/EI E	Defects: 1. 2. 3. Submitted to EI on 14.11.19			20th Aug'19		scheme approval pending	Central section		CSML/KSEB scope						Defect received from EI. KSEB permanent connection is the obtained.
18	Paramara building	Tin sheet	60	0820031092019	B3-15838/19/EI E	Resubmitted to EI On 14.11.19			20th Aug'19		scheme approval pending	Central section		CSML/KSEB scope						Defects submitted to EI. Minor defects. Feasibility certificate resubmitted.

19	Town Hall, Ernakulam	Tin sheet	80	082 003 705 2019	B3-067 73/19/EI E	Compliance drawing Submitted to Corporation for sign on 13th Nov (Received on 25Nov) Submitted to EI on 28 Nov	25.05.19	1) security Fee Rs. 359/- Approved drg of existing 125 KVA shall be submitted.	30th July'19		scheme approval pending	Central section	Document submitted	CSML/K SEB scope		With EI final clearance, KSEB activity will commence				
20	Palluruthy hospital	Tin sheet	70	082 004 110 2019	B3-177 39/19/EI E	1. Defects: Periodical Inspection fees As informed by clipson sir this fees is paid by vols and defects drawing resubmitted to EI on 27.11.19			10th Aug'19		scheme approval pending	Palluruthy		CSML/K SEB scope		With EI final clearance, KSEB activity will commence				Defects submitted on 27.11.2019. Challan resubmitted to EI. Inspection pending from EI.

21	Kunnum puram High school-2	RCC	20	082 004 310 201 9	B3-177 41/1 9/EI E	Defects: 1. DC Fuse in Negative Circuit 1st Drg Submitted on 17.10.19 - Defects reported on 31.10.19 and resubmitted on 28.11.19			10th Aug'19		scheme approval pending	Edapally		CSML/K SEB scope		With EI final clearance, KSEB activity will commence				Defects received on . Minor defects.
D	Scheme Not Approved and Compliance drawings needs to be submitted-06 sites																			
22	Advocate General office	RCC	20	820 034 092 019	B3-158 37/1 9/EI E	Submitted to EI on 14.11.19 , again lnd defects reported on 30.11.19			20th Aug'19		scheme approval pending	Central section		CSML/K SEB scope						Defects list received from EI on 29.11.2019 . Fee (Rs. 17015 for annual inspection fee is to be remitted.

23	Government Ayurveda Hospital Kacheripady	Tin sheett	15	0820017032019	B3-04236/19/EI E	Defects: 1. SPV plant cannot be approved as SPV is not yet approved from EI Office Submitted to EI on 31.10.19 and defect reported on 15.11.19			30th July'19		scheme approval pending	Central section	Document submitted	CSML/KSEB scope		With EI final clearance, KSEB activity will commence				submitted to EI 15.11.2019. Scheme for complete system shall be submitted.
24	Kunnum puram High school-1	Tin sheett	20	0820053102019	B3-17744/19/EI E	Defects: 1. copy of KSEB bill Shall be Submitted 1st drawing submitted on 17.10.19, Defects reported on 18.11.19 Defects drawings corrected and submitted to EI			10th Aug'19		scheme approval pending	Edapally		CSML/KSEB scope		With EI final clearance, KSEB activity will commence				First defect submitted to EI on 28.11.2019. Minor defects on drawings.

						on														
25	Perumbotta ground building	Tin sheet	30	0820107102019	B3-17738/19/EI E	<p>Defects:</p> <ol style="list-style-type: none"> 1. DC Fuse shall be provided in Negative circuit 2. Copy of KSEB shall be submitted 3. Copy of Feasibility required Compliance drawing Submitted to Corporation for sign on 13th Nov(received on 25Nov). 			20th Aug'19		scheme approval pending	Edapally		CSML/KSEB scope						Single phase to three conversion from KSEB is to be done. Feasibility to be obtained after that.

						Can't be submitted to EI without feasibility.															
26	Corporation office, Ernakulam	Tin sheet	20	0820044102019	B3-17743/19/EI	Defects: 1. DG Drawing s required 2. RPR relay shall be connected in DG Circuit 3. DC side isolation before Inverter 4. Building approved drawing and Saction order 5. Elevation drawing of canteen building shall be submitted			10th Aug'19		scheme approval pending	College Road		CSML/KSEB scope		With EI final clearance, KSEB activity will commence					EI defects received from 17.10.2019. Copy of approved drawing and sanction order shall be submitted. Rating of DG shall be mentioned in the drawing.

						d 1ST Drg Submitte d on 17.10.19 - Defects reported on 19.11.19 and Resubmi tted on____ _____ _____ -														
27	Maharaja college boys hostel	Tin sheett	50	082 003 709 201 9	B3-158 35/1 9/EI E	Submitte d to EI on 12.11.19 ...re defect on 30.11.19			20th Aug'19	only Fee defect	scheme approval pending	College Road		CSML/K SEB scope						submitte d to EI on defects to be notified by EI.
E	First time submission done																			

28	Maharaja college building -1	Tin sheet	20	0820109102019	B3-17736/19/EI E	Its more than 1 and half month there is no defects or approval from EI 1st defect yet to receive, drawing submitted to EI on 17.10.2019			10th Aug'19		scheme approval pending	College Road		CSML/KSEB scope		With EI final clearance, KSEB activity will commence				submitted to EI on defects to be notified by EI.
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