

2017

CONCEPT & PRE-FEASIBILITY REPORT FOR REDEVELOPMENT OF CENTRAL MARKET AND FISH MARKET



PROJECT MANAGEMENT CONSULTANT
FOR MANGALURU SMART CITY PROJECT



ISSUE AND REVISION RECORD

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ABBREVIATIONS

ABD	Area Based Development
DBFOT	Design, Build, Finance, Operate and Transfer
MCC	Mangaluru City Corporation
MSCL	Mangaluru Smart City Limited
PPP	Public Private Partnership
GoI	Government of India
GoK	Government of Karnataka
SCM	Smart Cities Mission
SCP	Smart City Proposal
SPV	Special Purpose Vehicle

1. Existing Situation Analysis

1.1. Site Location

The Central Market or Kudla Central Market is in the Hampankatta area - the center of Mangaluru city. Its main entrance is situated at the junction of Market Road, Central Market Road and Bibi Alabi Road. The project site is easily accessible from all parts of the city and has excellent connectivity from the existing public transport routes. The site is strategically located within the central business district of Mangaluru and is in close proximity to all the important places like Lady Goschen Hospital, Wenlock District Hospital, Town Hall and Railway Station. The site is within the Hampankatta - Old Port - Bunder area selected for Area Based Development (ABD) under the Smart City Mission.

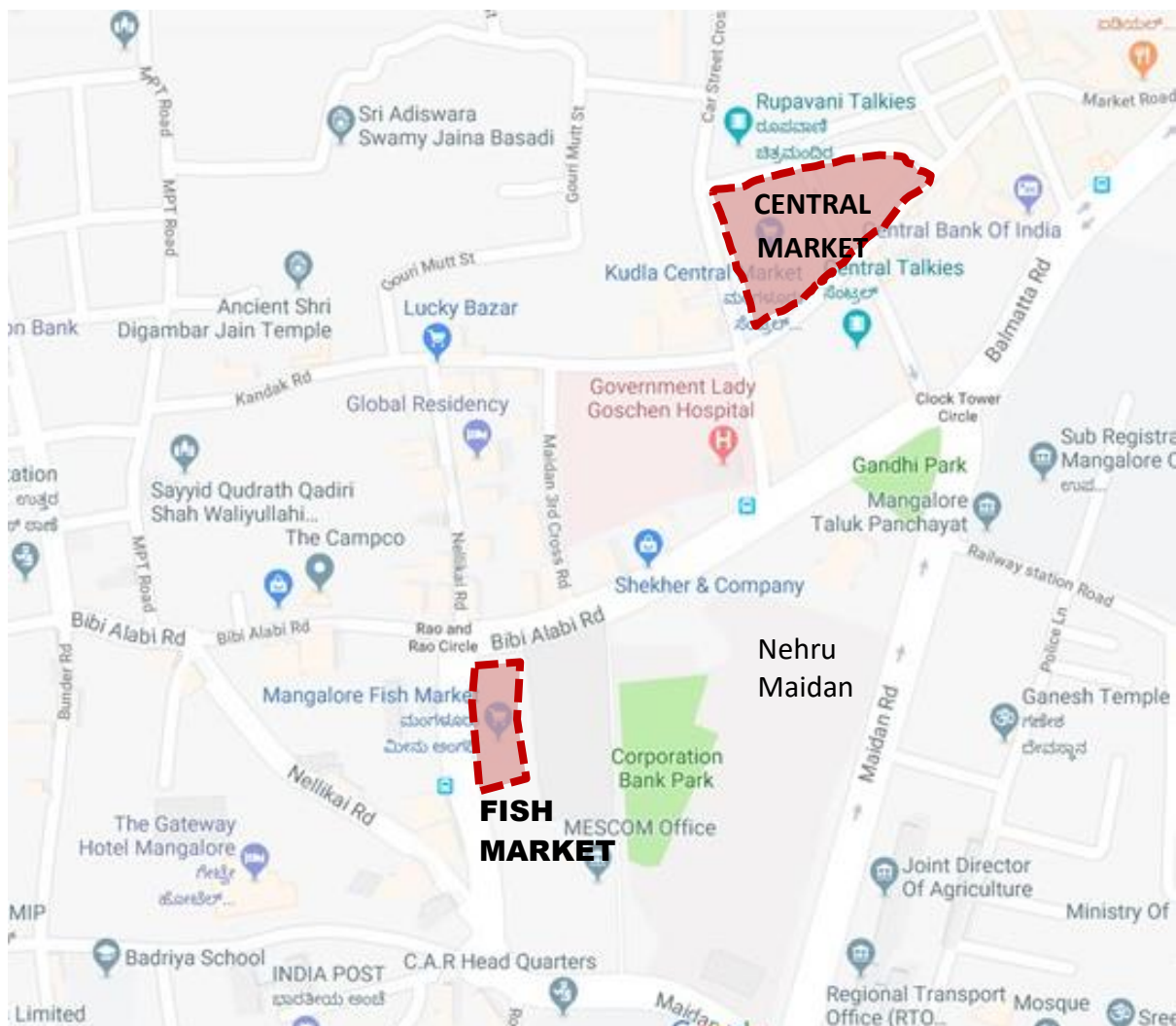


Figure 1: Location Map for Central Market and Fish Market

1.2. Characteristics of site








1.2.1 Central Market Site:

The Central Market of Mangaluru is located on a trapezoidal site between the Market Road and Central Market Road, in Hampankatta. It has its main entrance on the southwest tip (at the junction of Market Road and Central Market Road) and three additional entrances at the vertices. The combined plot area of Central Market and Meat Market is about 2.76 acres.

Figure 2 Satellite View and Activity Mapping:



Legend:

	Market Boundary		Parked Two Wheelers
	Entrance		Parked Auto Rickshaws
	Spillover Spaces		Parked Tempos
	Parked Trucks		Designated Parking Space

The Central Market building is a G+1 floor structure, which has a quadrilateral shaped footprint around a courtyard in center. The central space has vegetable and fruit stalls housed in sheds. The market building has shops on the periphery and stalls in the

center. Adjacent to the Central market is the Meat Market, situated in a G+2 floor rectangular building.

Figure 3 Front Elevation and Main Entrance of Central Market



The Central Market attract lots of visitors daily from Mangaluru and its surrounding areas and therefore the locality has a significant amount of floating population throughout the day.

Figure 4: View of Stalls in the market



Presently the Central market building is in need of repairs. The vegetable and fruit sections are filled to the capacity and overcrowded.

Figure 5: Storage under stalls



Figure 6: Secondary Entrances



Figure 7: Activity mapping at 7 a.m. in the morning



There are no proper loading unloading facilities in the Central Market.

Figure 8: Character of the place in morning hours from 4 a.m. to 8 a.m.



The built environment around the site is very commercial in character. The neighborhood of the Project Site is dominated by multistoried commercial buildings with retail shops on the ground floor.

Figure 9: Terrain level and slope directions



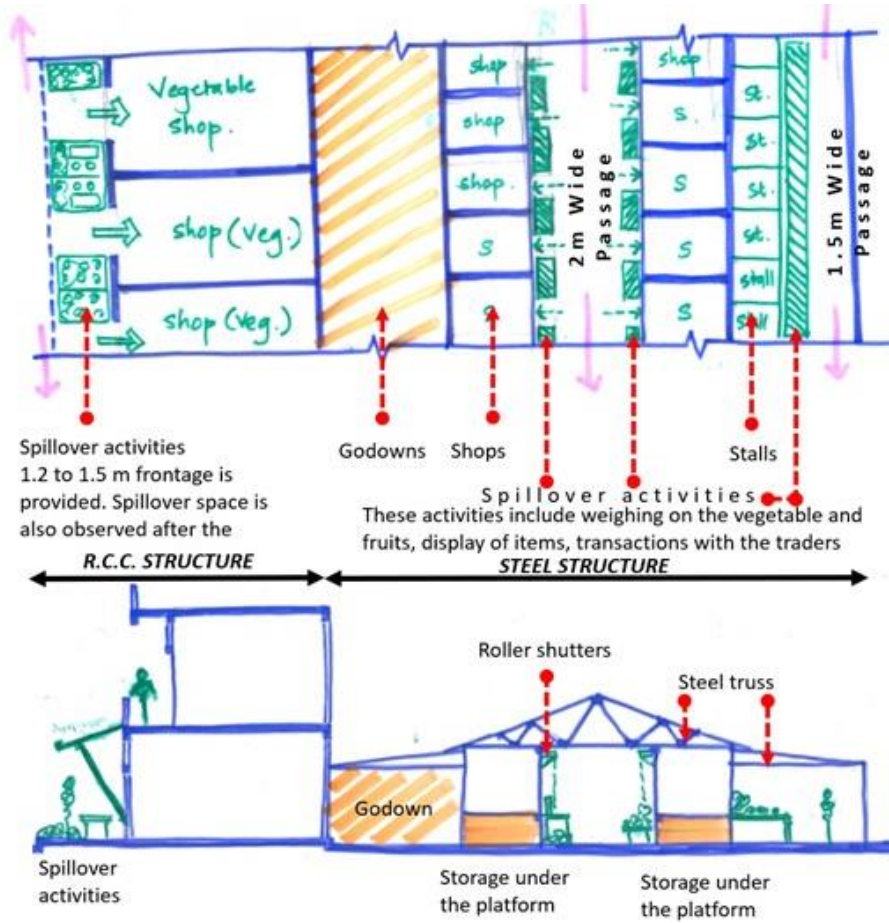
The slope of the site is towards northwest having a total drop of 5.5m. The slope difference gives the opportunity of having different floor levels, thus creating double number of frontages.

Figure 10: Shops having road frontage



Slipover spaces in front of shop frontages and the shading devices.

Figure 11: Typologies of the shops



1.2.1 Meat Market:

Figure 12: Front façade of Meat Market



Figure 13: Stalls in Meat Market



Figure 14: Retail on the Upper floors in Meat Market



1.2.1 Fish Market:



Dry Fish stalls



Other Fish Stalls





← Dry Fish Stalls Passage Dry Fish Stalls →



← Mixed Fish Stalls Main Entrances →

1.3. Existing Market Structure and Stakeholders:

The market consists of two buildings –the central market (for fruits vegetables and grocery) and a separate fish / meat market. However, it did not develop according to the initial plan envisaged. The current central market building consists of fruit and vegetable shops and stalls, electronics and hardware stores, garment stores, offices and storage spaces. The current meat market consists of meat stalls (beef, chicken, mutton and pork), vegetable and fruit shops, garment stores, hardware stores, general stores and storage spaces. The fish market, is presently situated in a separate location on the 4th Cross Road, approximately 600 m southwest of the Kudla Central Market. The table below elaborates this information:

Table 2: Existing Market Structure

Type	Number	
	Shops	Stalls
Central Market		
Vegetables	19	98
Fruits	5	111
Storage (Godowns)	3	Nil
Provisional Store	12	Nil
Electronics & Hardware	6	Nil
Garments/ Textile	8	Nil
Plastic/ Metal/Steel/ Glass	10	Nil
Office	2	Nil
Closed	68	Nil
Meat Market		
Electrical	9	Nil
General Store	13	Nil
Tailoring	4	Nil
Garments	10	Nil
Storage (Godowns)	14	Nil
Vegetable and Fruit	2	Nil
Hardware/ Steel/ Metal/ Plastic	9	Nil
Unoccupied	33	Nil

Type	Number	
	Shops	Stalls
Meat Market		
Beef	Nil	8
Chicken	Nil	7
Mutton	Nil	7
Pork	Nil	4
Fish Market		
Fish	Nil	135

Total	227	370
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1.4. Plot Area and Land use

Table 3: Baseline Numbers and Figures

Parameter	Central Market	Meat Market	Fish Market
Plot Area	11196.95 Sq.M		2297.37 Sq.M
Ground Cover	2782.71 Sq.M	1230.64 Sq.M	1326.03 Sq.M
Built-Up Area	5565.42 Sq.M	3691.92 Sq.M	1326.03 Sq.M
Total Built-Up Area	9257.34 Sq.M		1326.03 Sq.M

Figure 15: Property Map for Central Market

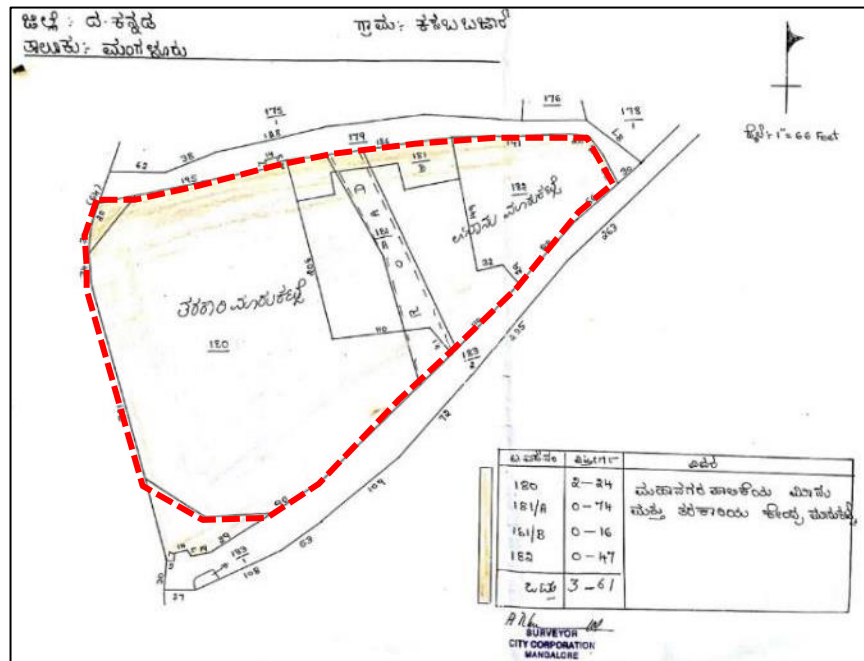


Figure 16: Survey Map for Fish Market

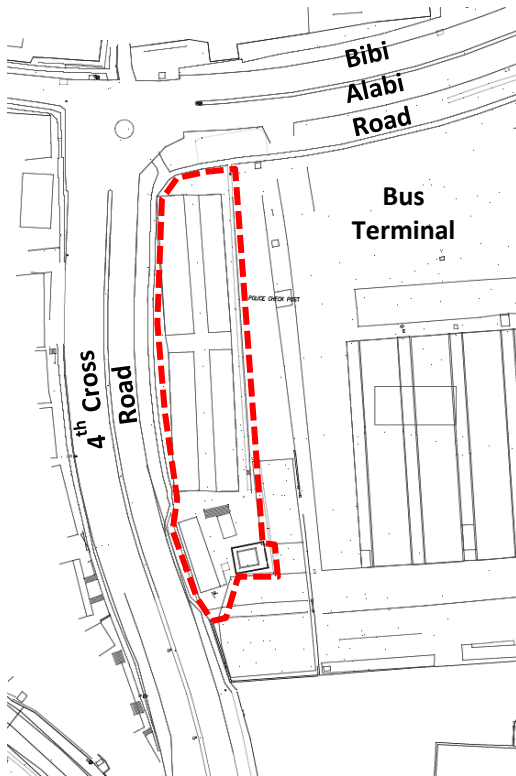
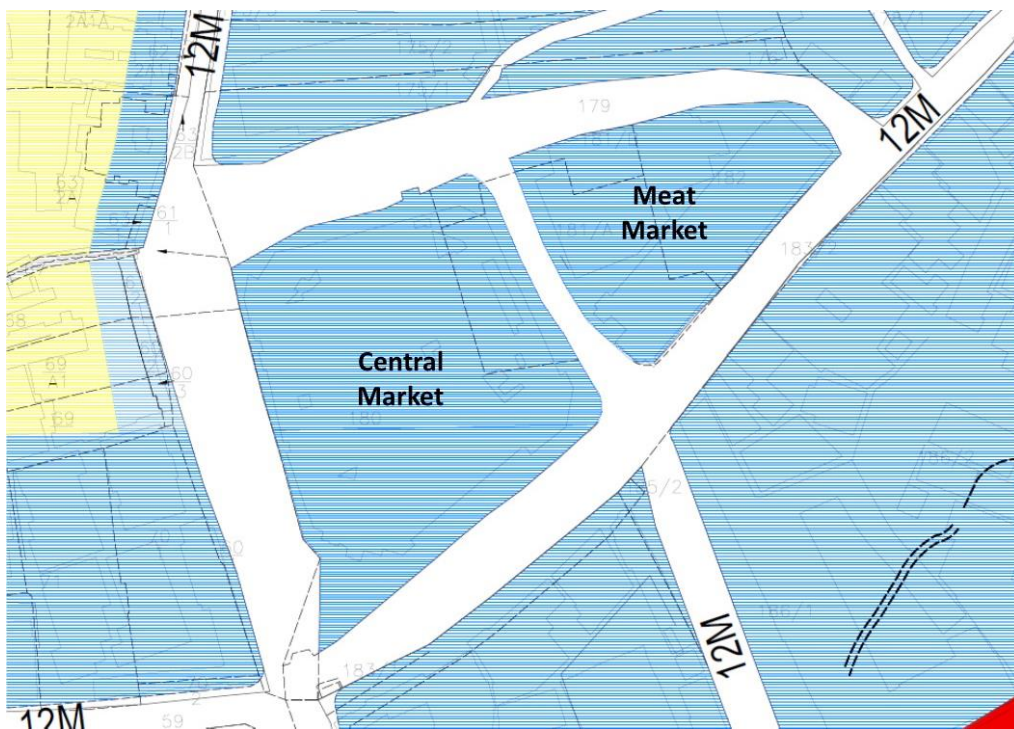


Figure 17: Road widths as per Development Plan



1.5. Existing Traffic Scenario:

The area in and around Central Market is chaotic due to different modes of transportation shared in the right of way. Various activities are randomly performed in the existing ROW. As per the Development Plan 12 m roads are proposed all around the Market area. The loading and unloading activities are found in morning hours 4a.m. to 8 a.m. Different modes of transportations like trucks, tempos, mini trucks, auto-rickshaws, two wheelers are observed on the streets which add to the congestion in the entire area around the market.

Figure 18: Traffic Movement and Intervention Area



2. Case Study of similar large Markets

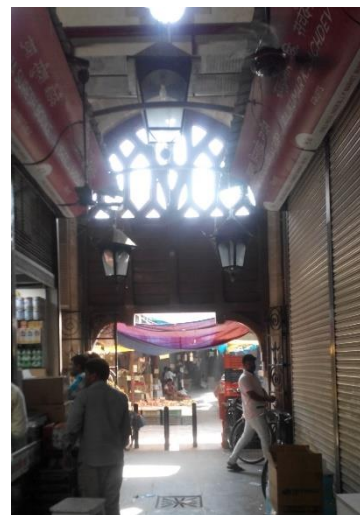
2.1. Crawford Market

Introduction:

Crawford Market is named after Arthur Crawford – the first Municipal Commissioner of the city. The market houses vegetables, fruits, dry fruits, cosmetics, sanitary accessories, house hold items etc. The market is designed in a grid-iron pattern with each lane dedicated to one type of shops. Abha Lambah is a conservation Architect who is appointed for redevelopment of Crawford Market.



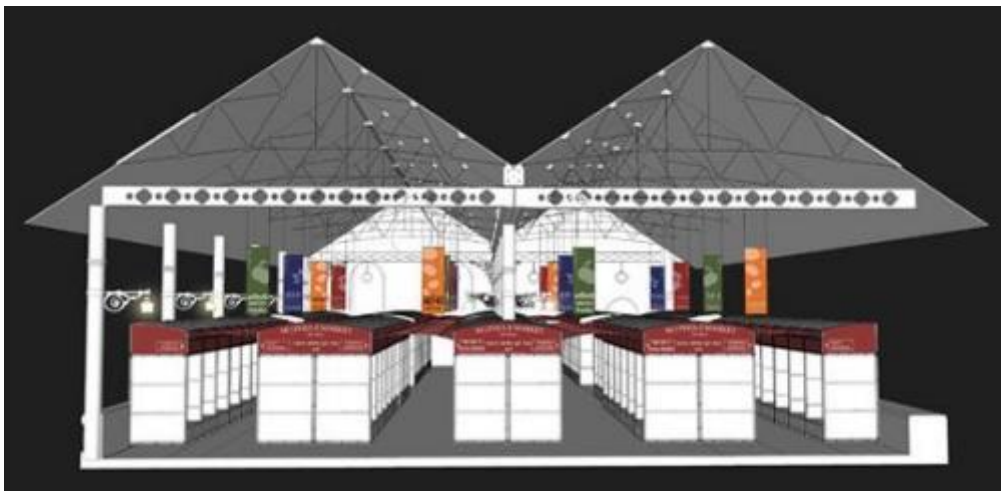
Main Entrance



Secondary Entrances

Design Philosophy:

Total area of plot is 2.25 ha. Grid iron pattern having each unit of 3m x 3m with each lane dedicated to each type of shop. One part of the market involves shops like vegetables, fruits, dry fruits, cosmetics, sanitary accessories etc. Other part of market houses chicken, meat, pork and mutton. Large vintage lights are hung on the main truss while at the shop level small vintage lights and fans are placed to retain its heritage identity and depict the colonial architecture. Huge long display boards are placed on the main truss while the shop signboards are also made uniform.



Sectional perspective



Source: <http://www.anlassociates.com/>



Lane of General store



Lane of Fruits and Dry fruits



2.2. Redevelopment of Market in Panaji

Introduction:

The Panaji Municipal Market consists of basement with a built up area of 3089 m² for parking of 71 cars and 32 scooters. The ground floor has a built up area of 3176 m² with A, A1, B, C, D, D1 types of shops and also has a mezzanine area of 534.48 m². The first floor has a built-up area of 2490.01 m² with B, C, D, H, HC types of shops and 2nd floor with a built up area of 678.89 m².



Panaji Market after redevelopment



The newly developed stalls with storage



The lighting and the structure

2.3. Leicester Market

Introduction:

A key element of the plan was the construction of a brand new building to replace the current 1970's Indoor Market, which would aid in making the historic Corn Exchange the focal point of Leicester 700 year old market.

The market includes the food hall which has a strong connection to the rest of the market. It comprises of creation of new public toilet facilities, new retail lock ups, and market management offices.

New public realm will be created to provide better linkage from the old town into the market and City Centre. The square can potentially be used for a range of activities, helping to trigger new investment in areas currently suffering from a lack of footfall and creating potential for new development at the rear of the Corn Exchange and Molly O'Grady's.



Design Philosophy:

Within the masterplan, a destination food hall will promote quality produce in new bespoke premises on the currently vacant Market Corner site. New commercial opportunities will be realised, whilst the strong existing trade will be developed. The market's connection with the city centre will be strengthened via Cheapside, The Lanes, and the new public square. There will be a new recycling facility accommodated in a section of the retained basement, allowing the market to improve the recycling of waste materials that now go to landfill. New, attended public toilets will be provided that will be operational during market trading hours as is the case now. New 'lock-up' units will be provided to allow for the relocation of the dry goods traders from the current Market Hall, and for which the initial provision has been increased through early consultation.



Master Plan for Leicester Market

Proposed Food Hall, Public Realm and Corn Exchange Concept

The scale of the food hall increases to create a grander public façade which addresses the new public square, and the newly activated façade of the Corn Exchange. The demolition of the Indoor Market Centre will have an immediately positive impact on the atmosphere of the area, creating a significantly more accessible route into the market and at the same time showcasing the heritage assets within the market place. The orientation and scale of this new public realm space offers great opportunities for spill-over market events and other leisure activities. The removal of the Market Centre will create opportunities for perimeter shops, bars and restaurants that will face directly onto the new public square.



View of the plaza

View of New Public Square

An opportunity to activate the west façade of the Corn Exchange could be realised providing well orientated bar and restaurant space, with views over the new square and reinstated listed buildings. Further commercial opportunities could be realised across the square, framing the public space and increasing economic activity.

3. Proposed Intervention

3.1. Objective

The proposed intervention aims to achieve the following:

- Redevelop the Central Market into an integrated modern market complex with better civic facilities for the citizens of Managluru
- Reinvigorate the market area as a retail shopping destination for local residents
- Ensure improved parking and traffic management.
- Promote the small shops and marginal businesses which are essential to the functioning of the market.
- To create a state-of-the-art civic infrastructure facility through PPP mode

3.2. Development Strategy

Strategy1: Declutter the adjacent roads and organized it with proper parking spaces.

- Reorganize the roads with ROW 12m.
- Dedicated spaces for loading and unloading.
- Designated 4m footpath around the complex.



Figure 19 Strategy 1

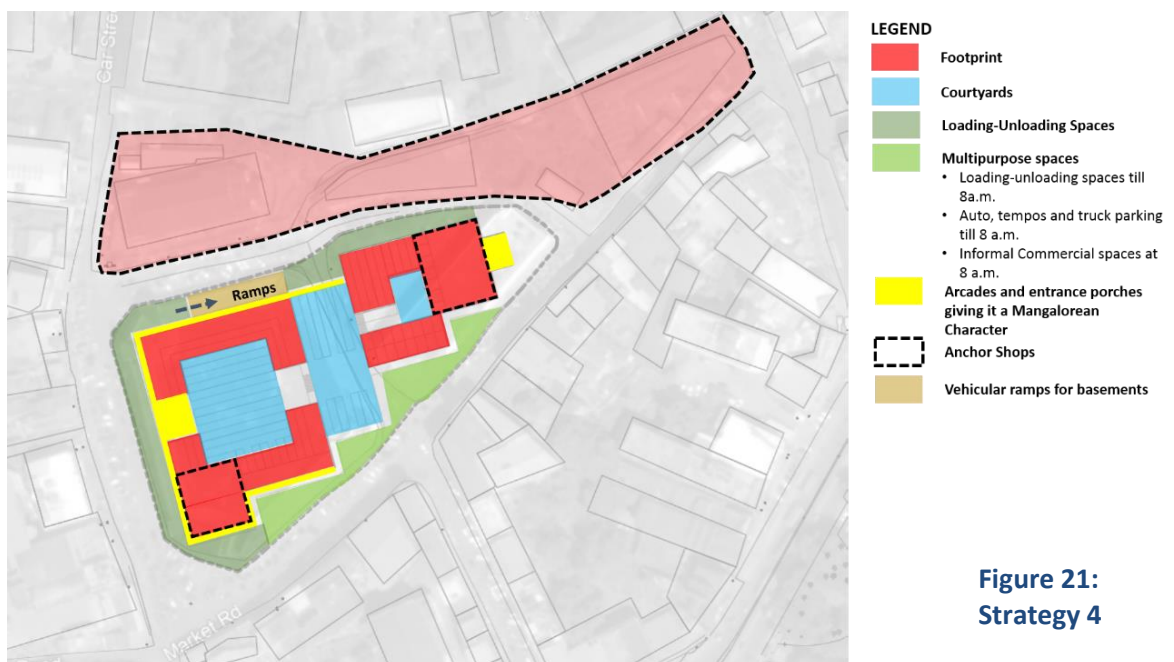
Strategy 2: Improve circulation; make the structure porous and better accessible to people.



Figure 20: Strategy 2

Strategy 3: Create courtyard spaces for the stalls to maintain an ‘open market’ theme. Courtyard can be enclosed with the skylight to protect it from adverse weather conditions in Mangalore.

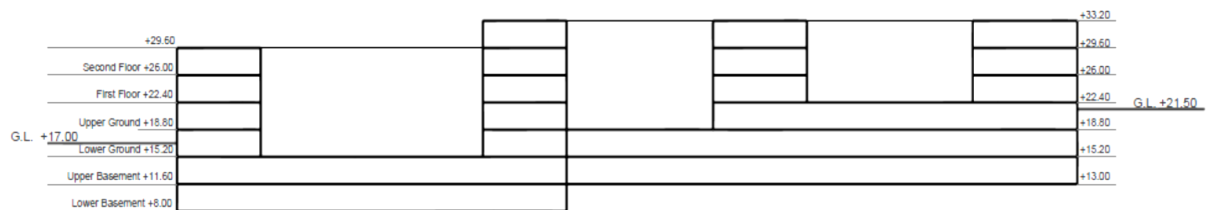
Strategy 4: Introduce anchor shops to attract new investment into the market.



**Figure 21:
Strategy 4**

Strategy 5: Utilizing the level difference for additional frontage

- The total level difference is 6m from east to west.
- Lower and Upper ground levels are proposed to increase the frontage of shops.
- Reflect the Mangalorian character in the elevation of the building



Section showing the level difference



Curbing random parking and disorganized hawking space around the central market were identified as areas of improvement. On the flipside, the market’s location in the heart of the city was a plus and attracted additional business.

Some of the unanimous stakeholder demands are as follows:

- Adequate Parking Facilities
- Organized Loading Unloading Spaces
- Efficient Lighting and Ventilation
- Uniform Ground Level
- Proper Storm Water Drainage
- Hygienic Environment

The proposal aims at creating a new and better environment for existing vendors and incorporating new entrants as well. The design includes different zones for 4 main items – vegetables, fruits, meat and fish. The main spine will connect all zones offering multiple access points for the visitors to enter the complex. The total east-west level difference of the site is 4.5m, which allows double the number of shops to have road frontage. The basement floors can occupy parking for cars and two-wheelers which will decongest the surrounding roads. The main structure will be punctured by courtyard spaces for better natural lighting and ventilation. The courtyard will incorporate all stalls, which maintains the traditional ‘open market’ feel. The shops at the periphery would be stores needing regular, frequent loading-unloading space.

3.3. Concept Design Proposal:

Option 1:



Land Parcels Considered

1. 4-9-180
2. 4-9-181/A
3. 4-9-181/B
4. 4-9-182

All ownership of all land parcels is with MCC

Key Plan



This scenario comprises of land parcels under the ownership of MCC. This option involves dividing the site into 2 parts having clear segregation of Vegetable –Fruit market and Meat-Fish Market. This option involves retail space on upper floors while the vegetables, fruits, meat and fish shops at the ground level. This design involves built spaces creating large courtyards to accommodate the stalls. This assures the feeling and character of open market.

Option 2:



Land Parcels Considered

1. 4-9-180
2. 4-9-181/A
3. 4-9-181/B
4. 4-9-182

Key Plan



This proposal addresses Retail space as one of the important revenue generation aspects and large and prime space is taken into consideration for its development. So the site is divided into 3 major zones:

1. Vegetable and Fruit Market
2. Meat and Fish Market
3. Retail and Entertainment Market

The central space is a transition space between the Market area and retail space which also act as an entrance plaza of the visitors.

Option 3:



Land Parcels Considered

1. 4-9-180	7. 4-9-176
2. 4-9-181/A	8. 4-9-178/1
3. 4-9-181/B	9. 4-9-178/2
4. 4-9-182	10. 4-9-178/3
5. 4-9-175/1	11. 4-9-177
6. 4-9-175/2	

Key Plan



This scenario considers land parcels which are to the north of the site. The surrounding plots are amalgamated for better buildability of the structures. The buildings have courtyards for better light and ventilation. Garden spaces and Public spaces are also incorporated in this scenario.

3.4. Proposed Project Components:

The project requirements entails development of 3 distinct components

1. **Market Development** (26%) = 10583.37 Sq. m. = 113918.44 sq.ft.
 2. **Retail and Entertainment Development** (64%) = 26198 sq. m. = 281992.93 sq.ft.
 3. **Commercial development** (10%) = 4030 sq. m. = 43378.56 sq.ft.
- A) Market Development further has below components:
- Vegetable and Fruit Market – 134 shops and 209 stalls
 - Meat and Fish Market – 91 shops and 163 stalls
- B) Retail and Entertainment Development has below components:
- Retail Space – 40% = 10479 sq.m. = 112795.02 sq.ft.
 - Entertainment – Multiplex (4 screens) – 20% = 5239.60 sq.m. = 56398.58 sq.ft.
 - Restaurant/ Food Courts and Plazas – 5% = 1309.90 sq.m. = 14099.64 sq.ft.
- C) Commercial Development has below components:
- Commercial offices – 10% = 4030 sq.m. = 43378.56 sq.ft.

Common and Service Areas:

1. Lift and core
2. Public Utility (Toilets, Drinking Water Chambers etc.)
3. Store Rooms
4. Service Utilities like HVAC room, Generator room etc.
5. Space for Loading-Unloading activities
6. Basement Parking space

As per the Market Assessment Report, the present Per Capita Mall Space index is 2.43 in Mangaluru having 15.2 lakh SqFt operational Mall space. Considering the same PCMS in 2021, there would be scope for additional 1.9 lacs sq.ft. of retail space in Mangalore. The total retail space proposed in Central Market is 1.12lacs sq.ft, which is well within the retail space absorption capacity of Mangaluru.

3.5. Project Implementation:

Integrated redevelopment Central and Fish Market into a single Redeveloped Central Market.

Site area for development:	2.76 acres (11,197 Sq.M)
Built-up Area potential (maximum potential FSI of 3.6) (Free FSI of 2.5 + Premium FSI)	40,305 Sq.M
Advantages	<ul style="list-style-type: none"> • Redeveloped market with modern facilities at the same site. • Faster implementation since the land belongs to MCC • Rehabilitation of the existing shops in the redeveloped market building. • Project will get maximum commercial potential due to city center location.
Challenges	<ul style="list-style-type: none"> • Existing shops to be temporarily relocated at an alternative location during the construction period.

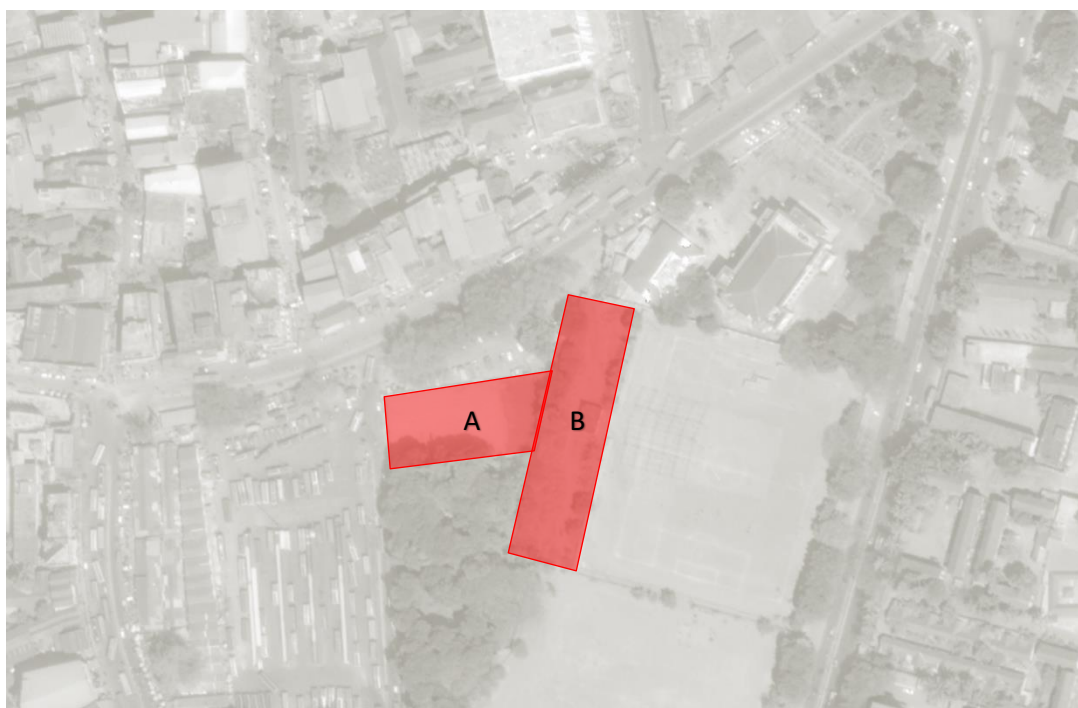
3.6. Rehabilitation of existing stalls during Construction Period:

A) Fish Market:

The fish market would continue to function in its existing location throughout the implementation phase of the project. Consequently, it would be shifted to a dedicated area of the redeveloped central market.

B) Central and Meat Market

The shops and stalls from the existing central and meat markets would be temporarily relocated to an area near the fish market. This area is demarcated by MCC as a hawking zone. Ideally, all shop and stall owners would be allotted spaces in the identified area during the project's implementation. However, should this not be feasible, the developer and MCC must have to unanimously agree on a means to financially compensate some owners during the construction period.



Total area for Rehabilitation:

- Area for Plot A = 2920 sq.m.
- Area for Plot B = 3818 sq.m.
- Total Area (A+B) = 6761 sq.m.



Site A: Hawkers Zone

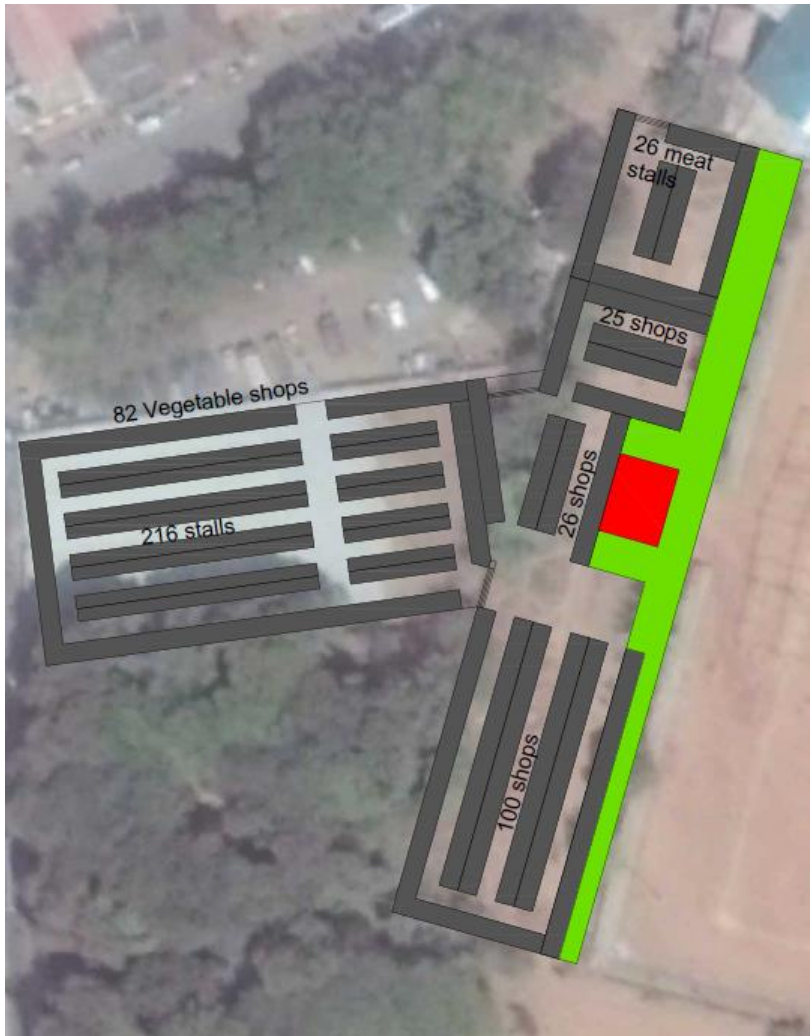


Site B: Vacant land near Nehru Maidan

	Central Market	Meat Market
Total No. of shops	133	94
Total No. of stalls	209	26
Total area required for shops (15% circulation)	2490 (10sq.m./shop)	940 (10sq.m./shop)
Total area required for stalls (15% circulation)	836 (4sq.m./stall)	260 (10sq.m./stall)
Total area required (shop + stall)	3326 sq.m.	1200 sq.m.
Total (Central Market + Meat Market)	4526 sq.m.	

The total area (A+B) = 6761 sq.m. So it is feasible to accommodate the Central Market and Meat Market in the above shown location.

Proposed Layout for Rehabilitation scheme:



Construction Cost for Rehabilitation Structure:
Total built up area = 6761 sq.m. = 72774 sq.ft.
Construction cost for M.S. Superstructure = Rs.800/sq.ft
Therefore, Total construction cost = Rs.5,82,19,200 = 5.82 Cr.

4. Estimated Budget and Pre-Feasibility

4.1. Budget as per SCP

The approved list of Smart City proposals for Mangaluru includes the following project cost and capital structure for the relevant projects:

Project SI No.	Project name	Cost (Rs in crores)	Project funding structure				
			GoI	GoK	MCC	PPP	Smart City Component
3	Retrofit of Fish Market	1.44	2.00	-	-	0.72	(1.28)
4	Redevelopment of Central Market	50.60	-	-	-	50.6	-

4.2. Preliminary Cost Estimate

Based on the technical assessment carried out by the PMC team, the preliminary Cost Estimation of the proposed project is given below

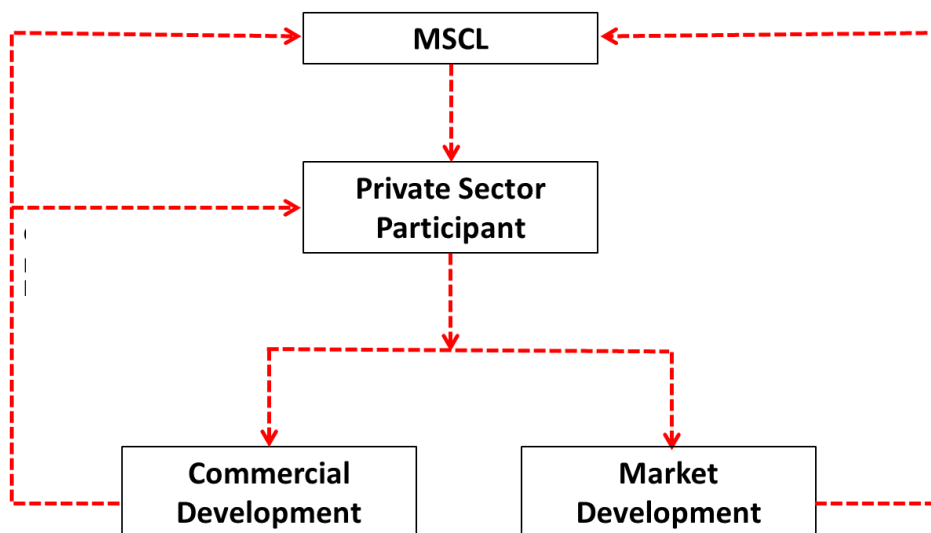
Sr. No.	Component	Value
1	Plot Area of Central and Meat Markets	11196.95 Sq.M
	Built-Up Area of Central and Meat Markets	9257.34 Sq.M
2	Plot Area of Fish Market	2297.37 Sq.M
	Built-Up Area of Fish Market	1326.03 Sq.M
3	Total Existing Built-Up Area	10583.37 Sq.M
4	Maximum Permissible FSI	3.6
	Maximum Permissible Built-Up Area	40305.6 Sq.M
5	Saleable Built-Up Area Available to Developer	29722.23 Sq.M
	Total Built-up Area including Basement	49305.6 Sq.M
6	Assumed Rate of Construction	INR 2500/ ft ²
7	Total Civil Construction Cost	INR 123 crores
8	Interim Rehabilitation cost during construction	INR 5.82 crores

4.3. Proposed Contractual Structure

The Central Market project is proposed to be developed on Public Private Partnership (PPP) basis on the Design-Build-Finance-Operate and Transfer (DBFOT) format. The Concessionaire would be permitted to redevelop the Central Market as per his plan on the existing plot and use his ingenuity to maximize the value from the property and factor the same in the proposal submitted. The proposed development shall be subject to the Concessionaire obtaining the requisite approvals under the applicable law including the local building by-laws.

The Concessionaire shall handover the redeveloped Market space to the MCC. In return, the Concessionaire would get the right to operate the additional retail/ commercial space developed for a period of 30 years. The Developer can earn revenue by charging the lease rentals on the additional space and from advertising rights and any other user charges.

4.4. Revenue Streams from the Project

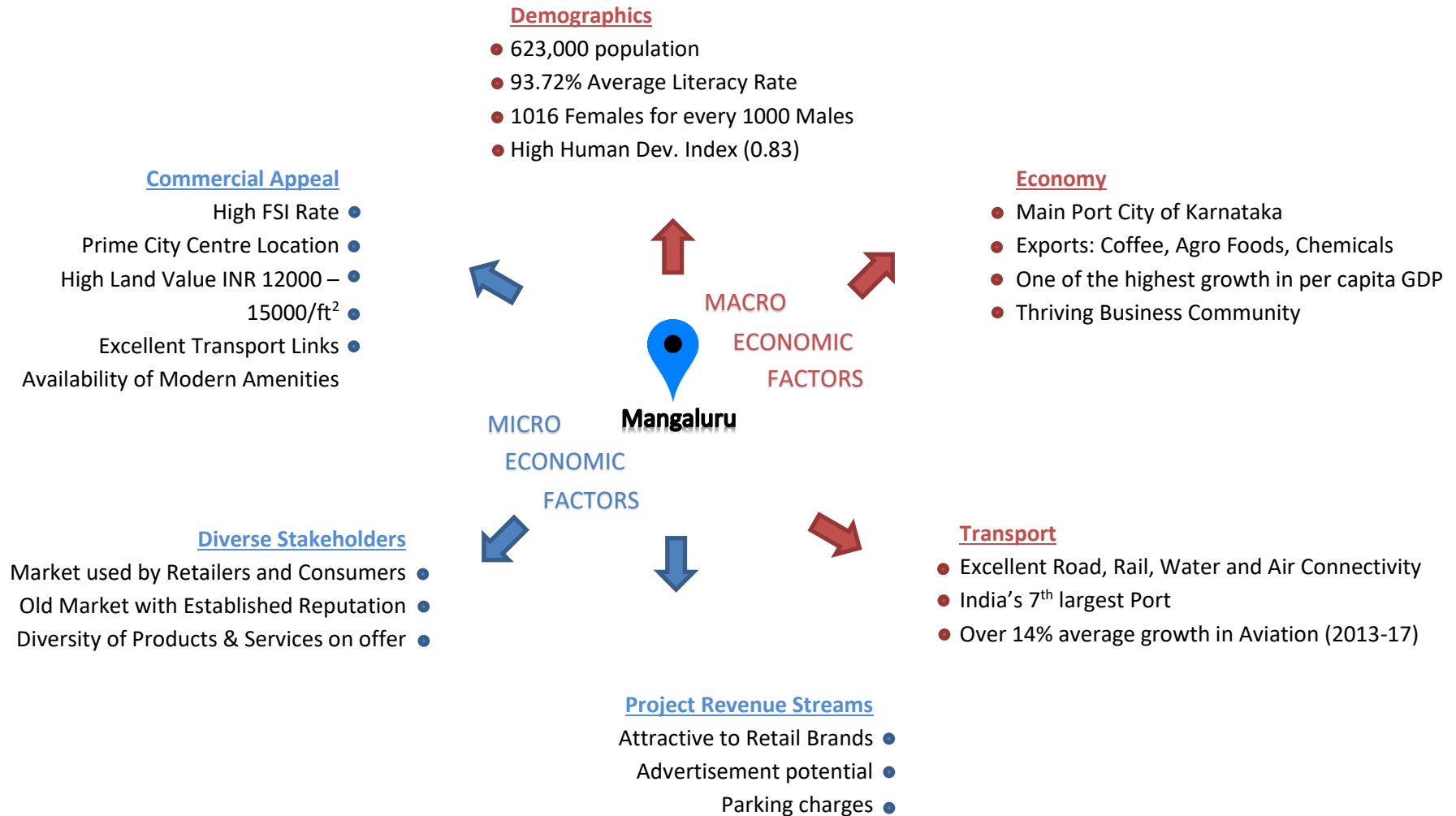


Revenue Streams from the Central Market Project:

- 1) **Leasing Redeveloped Built-Up Area:** The Concessionaire shall have the obligation to allot built-up spaces to existing vendors from the central, meat and fish markets. However, he shall have the right to lease the residual space to new vendors, stores, or other stakeholders at attractive market rates in the city centre area and maximize his revenue. So he have to broadly consider the following areas for development.
 - a. Market Spaces
 - b. Retail Space
 - c. Entertainment Space

- 2) **Parking Fee:** The Concessionaire shall have the right to collect the parking fee from the vehicles parked in the basement parking area of the redeveloped building.
- 3) **Advertisement Rights:** The Concessionaire shall have the right to generate revenue from advertising through hoardings, backlit panels, etc on the external façade and within the building as per the applicable rules, regulations and standards. Advertisement space at this location would be in demand considering the large daily footfall in the Central Market. Accordingly the Concessionaire can convert this into a significant revenue stream.
- 4) **Other revenue sources:** The Concessionaire shall have the freedom to identify and establish a revenue stream additional to those mentioned above while complying to all central, state and municipal regulations.

5. Market Assessment



6. Expected Benefits

A redeveloped Central Market would provide the following benefits to Mangaluru city:

- A planned, organised Central Market would convenience buyers and sellers alike. The market accommodates several wholesalers who supply to goods to retailers within Mangaluru and the city's surrounding areas. Therefore, the benefits will trickle down to a large section of Dakshina Kannada's population.
- The designated public parking space created will benefit people visiting the central market and numerous nearby destinations in the city centre area.
- The project will address the traffic congestion problem currently prevalent in the area.
- The additional built-up area would add state-of-the-art retail and office space in the central business area of Mangaluru.

7. Target Beneficiaries

The proposed redevelopment project would primarily benefit the following stakeholders:

- **Existing Market Stakeholders:** The existing market vendors face several problems in conducting their daily activities – inconvenience during loading/unloading, traffic congestion, poor circulation, lack of amenities and facilities, unhygienic environment, et cetera. All existing vendors from the central, meat and fish market will be allotted equal/additional redeveloped space with modern amenities and facilities. This will have a positive impact on their business.
- **Citizens:** Retailers and consumers who purchase goods from the market will also be advantaged in multiple ways. The redeveloped central market will incorporate all existing shops and stalls along with additional stores, offices, commercial space. These will increase the market's cumulative appeal and offer buyers more choice.
- **Local Authority/ MCC:** The municipal corporation would own an asset with modern facilities and amenities. The project would directly contribute towards their agenda of providing citizens with better infrastructure. The project would help in reducing the traffic congestion in the Hampankatta area by eliminating on-street parking and planned loading/unloading activities. The project would also add state-of-the-art retail and office space in the central business area of Mangaluru attracting additional tax revenue.

8. Stakeholders/ Organizations involved

1. Citizens of Mangaluru and surrounding areas
2. Mangaluru City Corporation
3. Existing Stakeholders (Shop/Stall Owners) from the Central, Meat and Fish Market
4. Mangaluru Smart City Limited (SPV)
5. PPP Concessionaire/ Developer selected for the project
6. Mangaluru Smart City PMC

9. Monitoring and Evaluation

MSCL supported by the PMC is responsible for monitoring the implementation of Smart City projects in Mangaluru. In view of the foregoing the Central Market redevelopment project would also be monitored in accordance with the Smart City Mission guidelines:

The performance parameters to be monitored are listed below:

- a) **Physical Deliverables:** The redeveloped Central Market facility with the agreed amount of built-up space to existing stakeholders and designated as per the approved design.
- b) **Statutory Clearances:** The PPP Concessionaire will be required to adhere to the development control norms as per the prevailing Building Bye-laws. The Concessionaire shall, at its cost, obtain the applicable clearances and sanctions from competent statutory authorities for building plans, utilities, firefighting, electric connection/ sub-station etc.
- c) **PPP Performance Parameters:** (a) Compliance of the conditions precedent and achievement of financial close within the period specified in the concession agreement; (b) adherence to the mandatory milestones and other obligations specified in the concession agreement; (c) streamlining of, and adherence to, the reporting procedures between the concessionaire and the project authority, which may also include an MIS; (d) assessment of performance against laid down standards.
- d) **Risk Assessment and Mitigation Strategy:** Every infrastructure development project is averse to various types of risks during the life cycle of the project. Identifying these risks and allocating them to the stakeholders who are able to address them the best is the most acceptable form of mitigation.

In this context, key risks associated with the project along with the assessment are presented below:

Table 4: Risk Identification and Mitigation matrix

Sr. No.	Risk Type	Risk Level	Description and Mitigation Strategy	Mitigated Risk Level
Construction Phase Risks				
1	Temporary Market Relocation Risk	High	<p>The existing central and meat markets will have to be temporarily relocated to clear the plot for construction. The cumulative economic cost of this move would have to be borne by the concessionaire.</p> <p>This risk would be mitigated through efficient stakeholder engagement and timely implementation.</p>	Moderate
2	Promoter Risk	Low	<p>The Concessionaire must have sufficient technical expertise and financial muscle to successfully implement all elements of the project.</p> <p>This risk would be mitigated through meticulous evaluation during the RFP, pre-bid and bidding stages.</p>	Very Low
3	Timely Implementation Risk	Moderate	<p>There may be a delay in implementing the project and resuming business in the redeveloped market.</p> <p>This risk would be mitigated by the PMC's continuous monitoring of project progress.</p>	Low
4	Statutory Clearances	Low	<p>The project includes several statutory clearances, compliance to which will be a condition precedent in the Concession Agreement.</p> <p>MSCL and MCC can aid the Concessionaire in obtaining the necessary approvals for the project.</p>	Very Low
Financial or Revenue Stream Risks				
5	Price Realization Risk	High	<p>The Concessionaire bears the risk of realizing the entire commercial potential of the project and financially justify his investment decision.</p> <p>This risk would be mitigated by conducting a thorough market assessment and modelling the project's cash flows.</p>	Moderate

Sr. No.	Risk Type	Risk Level	Description and Mitigation Strategy	Mitigated Risk Level
Regulatory Risk				
6	Change in Law/Policy	Moderate	<p>Changes in policies may adversely impact on urban infrastructure projects.</p> <p>However, this redevelopment is a component of the MSCP. The current policies are expected to pave the way for more public private partnerships over the long term.</p>	Low
Force Majeure				
7	Calamities/ Act of God (earthquakes, fires, etc)	Low	These risks shall be mitigated through insurance cover. The Concessionaire would be obligated purchase insurance covering all project assets during the construction and operation phases for insurable events.	Very Low

10. Timelines

Milestone	Date
Submission of Concept and Pre-feasibility report	23 December 2017
Approval of Concept/ pre-feasibility report	T ₀
Submission of draft RFP	T ₀ + 2 weeks
Finalisation of RFP with MCC consultation	T ₀ + 3 weeks
Submission of REIA and SIA reports	T ₀ + 4 weeks
Submission of Concession Agreement	T ₀ + 4 weeks
Approval of Concession Agreement	T ₁
RFP/ Tender Floating	T ₁ + 2 weeks
Bid Process including Evaluation	T ₁ + 12 weeks
Signing of Concession Agreement	T ₁ +16 weeks
Project Implementation	T ₁ +20 weeks onwards