എന്റെ kochi

design the future city

EnteKochi Competition Brief

Implemented by

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

german cooperation DEUTSCHE ZUSAMMENARBEIT

Centre for Heritage, Environment and Development • (c-hed) •

urbz

Design Combine

urbanista

1. Introduction

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NOTE: This is a revised UDC brief and all revisions are made in **COLOUR**

OVERVIEW

The Kochi Municipal Corporation (KMC) and the GIZ (German Agency for International Cooperation) jointly call for all creative minds in the field of urbanism, architecture, landscape design as well as environmental and social science experts to participate in the next phase of EnteKochi (My Kochi) - the EnteKochi-Competition!

The EnteKochi-Competition is a national level Urban Design Competition (UDC) that aims to jointly 'design the future city' of Kochi. It is envisaged to plan and then facilitate the implementation of an integrated civic project that is of key relevance for the sustainable development of Kochi.

—WHAT AND WHY

The competition seeks to foster an integrated and participatory urban development process along the Mullassery Canal in Ernakulam, Kochi. It invites implementable ideas that are scalable, based on local needs and multisectoral in their approach. The idea is to facilitate Participatory Development by connecting various stakeholders, and at the same time, bridging technical, community and institutional gaps, thereby increasing the implementability of the winning entries by tapping existing funding possibilities. We are looking for creative and implementable ideas to design, develop and revitalize the site in a way that benefits the quality of life of the people. We are innovating with an integrated sustainable urban development process for this redevelopment site in Kochi.

Kochi Municipal Corporation and GIZ India had previously conducted 'EnteKochi' in 2019, a multi-stakeholder participatory visioning process that fostered creativity, innovation and the collation of local knowledge https://entekochi.net. An important theme identified from the EnteKochi exercise was the significance of Kochi's blue-green infrastructure as a key constituent of its identity of a coastal city, and its direct impact on the quality of public life in the city. The aim of this urban design competition is to facilitate the implementation of a civic project that recognises the centrality of this thematic. That is to say is of key relevance to the city's sustainable development, and is a participatory process. The EnteKochi-Competition spotlights this theme and envisions an integrated, implementable project that covers multiple sectors and engages diverse stakeholders in the city.

—WHERE

The site selected for the competition is the Mullassery Canal in Ernakulam, Kochi and its immediate surroundings. The Mullassery canal is a man-made canal centrally located on the mainland portion of Kochi, connecting to the larger Thevara-Perandoor Canal on the east, and flowing into the backwaters at its western end. Currently, most of the canal is covered and encroached on either side, displaying intermittent signs of poor water quality and reduced floodwater carrying capacity. In the present day, has come to be neglected despite having been an integral element of the city's historic water infrastructure. The EnteKochi-Competition aims to generate dynamic, climate responsive design interventions that reintegrate the canal into the urban fabric in a contextually sensitive and sustainable manner. Apart from the canal's re-imagination as a binding theme for this design competition, key sites have also been identified along the canal for more specific and integrated interventions that can revitalise this central location in the city of Kochi.

—WHO

We would like to encourage a multi-disciplinary team of professionals from diverse backgrounds (Social Sciences, Humanities, Ecology & Environmental Sciences, Spatial Planning, Architecture, Urban Design and allied fields) to participate in this competition. The team should be a firm/consortium comprising at least 1 registered architecture/urban design/landscape architecture/town planning practitioner. (refer Section 6 for detailed eligibility conditions).

The team leader/one team member, on be-

half of the winning team or a firm, should be capable of contractually engaging with GIZ as a legal entity (he/ she has to be part of a registered Indian company/firm to engage in a contract for him/herself and the other team members)* to carry forward the design competition ideas into complete and implementable Detailed Project Report (DPR) in parts or whole as may be required.

—ORGANIZERS

Kochi Municipal Corporation (KMC) in collaboration with GIZ India are conducting the Ente-Kochi-Competition, as part of the "Sustainable Urban Development - Smart Cities" (SUD-SC) project in alignment with Indo-German Bilateral Technical Cooperation. The project supports the national Ministry of Housing and Urban Affairs and the State Government of Kerala in policy formulation on housing for all, basic services, planning framework, and monitoring of the Sustainable Development Goals (SDG's). The SUD-SC project also supports the smart city of Kochi in implementing concepts of integrated urban development.

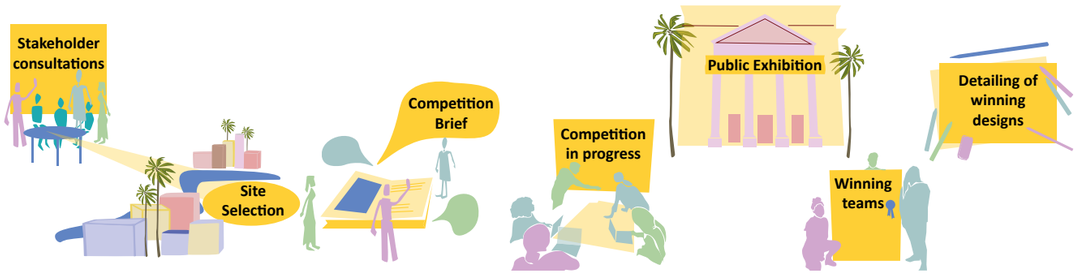
KMC and GIZ are supported by the Kochi collective, comprising urbz, Mumbai (specialists in participatory planning) and Design Combine, Kochi (a leading architectural and urban design practice), as well as by urbanista, a German participatory planning and design firm. This design brief has been generated through a participatory methodology under the guidance of the Centre for Heritage, Environment and Development (C-hed), a semi-autonomous institution that operates as the research and development wing of KMC. It has been prepared with the involvement of diverse stakeholders including government representatives and officials, urban practitioners as well as local residents.

A detailed site analysis involving residents, government officials and technical experts was conducted using participatory tools. These ranged from focus group discussions and field visits to in-depth on-site and off-site interviews, all of which were supported by additional secondary research. The urban challenges, opportunities and suggestions highlighted in this brief emerged from these diverse local engagements to ensure sourcing of innovative yet implementable competition entries.

*As Individual consultants contracted with GIZ cannot hire the services of another individual consultants and charge to GIZ.

WHEN

- Registration is open from **6th June – 25th June 2020 (REVISED)**
- The Deadline for Submission is the **9th of August 2020**
- Winners will be announced at the beginning of **September 2020**



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Urban design competition process diagram

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Backwaters at the mouth of the Canal

2. The City Vision

'An economically productive, effective and egalitarian metropolis which will provide to all sections of society the desired level of services and attract worldwide attention as a preferred destination for Health care, Heritage, Tourism, IT and Port based services' - City Development Plan, Kochi

The Vision is 'to transform Kochi into an inclusive, vibrant city of opportunities with efficient urban services sustainable growth and ease of living' - Cochin Smart City Mission Limited's Vision

In 2015, all United Nations member states adopted the 2030 Sustainable Development Goals (SDGs). Besides the city's existing development strategy, these goals should also be regarded as an overarching guideline for approaching this Urban Design Competition in Kochi.

The **EnteKochi** process in 2019 was undertaken in the format of an urban living lab, a participatory visioning and planning process that encouraged the participation of as many different people as possible in thinking creatively and freely about the future of Kochi. The underlying hypothesis was that only by focusing on the different functions of the city – and factoring its distinctive socio-cultural, economic and ecological aspects - will an approach for integrated urban development be possible and successful.

For this reason, the urban living lab came up with 7 key urban challenges that the city might want to solve and work on in the future. The identified challenges provide crucial guiding principles on the long-term development goals of Kochi. They also act as critical points of attention for the participants of this competition.

CHALLENGES

- The Coastal Climate Challenge
- Public Common Grounds & Environment
- The Mobility Factor
- Local Economy and Labour Space
- Basic Services and Welfare
- Neighbourhoods and Houses
- The Kochi Identity

* EnteKochi 2019 Report is available for download at entekochi-competition.org/design-brief

3. The Site

ABOUT MULLASSERY CANAL

The focus area for the Urban Design Competition is the Mullassery Canal Precinct in downtown Ernakulam, which is part of the Central Business District (CBD) of Kochi. Historically, the Mullassery canal was built for inland mobility, connecting the backwaters, in the west of Kochi, to the Perandoor Canal, in the east. The eastern end has the Kerala State Regional Transport Corporation (KSRTC) bus terminus that caters to intra and inter-city public transportation. Waterfront reclamation of the past, at the juncture where the canal meets the backwaters, has produced a linear public recreational avenue called Marine Drive, juxtaposed with housing towers and commercial buildings.

Over the years the canal seems to have been built upon by adjacent plots as its use for effective transportation faded into the past with the advent of other modes of personal and public transport and a road centric development. While the total length of the canal is 1.3 kms, more than half of it is presently covered by concrete slabs which are used for on-street parking and dedicated vending zones. The land use pattern, along the stretch of the canal, transforms as we move from east to west. It is lined with prominent educational institutions of the city, heritage sites, major shopping avenues, street markets, warehouses, formal and informal housing. The canal is surrounded by low-rise high-density development of the 80's that transformed the city of Kochi.

* Additional information and details of sub sites along with technical package would be shared with all registered contestants on 29th of June, post registration period.

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The mouth of the Mullassery Canal

OVERALL ASPIRATIONS FOR THE UDC

A reimagined identity for the Kochi City Centre along this waterway, respecting the existing and traditional environmental and contextual responses, yet embracing the Kochiites aspirations of a modern, bustling, globalised urban centre. The project aims to be a model for inclusive sustainable development with zero tolerance for development-induced-displacement of the people and their livelihoods. It also considers the relationship between urban planning and public health to be a crucial one especially in the context of epidemics.

The following core concerns need to be considered to develop a holistic vision.

—FLOOD MITIGATION

The downtown Ernakulam Zone is extremely sensitive to waterlogging. Mainland Kochi was historically built on rice paddy fields. Most of it falls into the Low-Elevation Coastal Zone, and some of the area is below sea level. The eastern end of the Mullassery canal lies in one of the low-lying areas of the city. Furthermore, the city experiences floods due to a combination of anthropogenic factors and unprecedented cloudbursts and rainfall patterns as a result of climate change. Urban flooding is a persistent problem that disrupts people's routines resulting in huge economic and health costs. Climate change adaptation will be an intrinsic part of developing flood mitigation measures.
Certain sections of the site are prone to water logging, as the existing urban interventions have failed to respect the natural water systems of the city. The canal has been heavily built over, leading to it being choked at various points. Floodplains of the canal have been encroached upon, as in the case of the present KSRTC intra state bus stand, resulting in massive waterlogging during heavy rainfall.

Preservation and regeneration of the canal also needs to show sensitivity to the ecological reality of the monsoons that is a vital part of the life of the city. Monsoon Planning needs to be integrated into the modern infrastructural design of the city in a manner that prevents flooding and creates a healthy ecosystem around the water bodies.

—RE-THINKING WASTE MANAGEMENT SYSTEMS

The issue of waste-management operates at different levels: the need for managing residential waste disposal – both liquid and solid-waste, managing special accumulated waste produced after festivities or events, disposing of construction rubble, commercial waste and effluents as well as others, such as medical, sanitary or electronic. Along with waste disposal, domestic drains are also connected to the network of canals and stormwater drains. The flow of water in the canal gets interrupted or limited due to dumping of different kinds of waste, which leads to the need for dredging and desilting of the canal more frequently.

Illegal waste dumping and direct discharge of untreated domestic wastewater has increased the organic matter in the canals leading the water bodies to experience eutrophic conditions. Furthermore, the dumping of wastewater transforms the canal into an open sewage channel leading to health issues that impacts the quality of life in the adjacent neighbourhoods.

—INTEGRATION OF SUSTAINABLE LOW-INCOME HOUSING

Several canals in Kochi are lined with housing settlements along their edges. Presently the relationship between these neighbourhoods and the canals is not always positive. Untreated sewage and solid waste dumped into the canals is making them breeding grounds for water borne diseases and threatening the health of the surrounding community. Also, it is the low-income settlements that are the most vulnerable during flash floods, characteristic of the city, resulting in losses to health and property, along with inconveniences in everyday life that force these communities to turn their back to these water bodies.

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Water treatment system over the canal

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Settlements along the canal

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MG Road from Mullassery Canal Road

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Water Hyacinth forming an obstructive layer on the canal waters

— IMPROVING MOBILITY & WALKABILITY

The challenges faced in the dense urbanism of the city is the imagination of an economic model which has lost connection with the waterways and could not adequately adapt to a road-based mobility system, because of the density and narrowness of connecting roads. Major portions of the city remain traffic logged through the day. This, combined with the lack of an integrated transport system with creative solutions for last mile connectivity, has made the city seem fragmented and disconnected. Improving walkability and other non-motorised movement methods are also important measures to mitigate the impact of climate change caused by emissions from motorised transport. The area witnesses a lack of healthy, barrier free and safe walkable connections, especially for users from the various institutions lining the zone effectively. Women using the area also note a feeling of being unsafe and disconnected, which makes them dread stepping out in the area post sundown. This results in empty, gender insensitive streets and struggling businesses with lowered footfalls. The lack of public spaces discourage vibrant and inclusive citizenship - contributing to the feeling of degeneration in the city centre.

Despite the zone being intersected by three major transit nodes, the area remains ill-connected, unwalkable and also visibly unsafe, particularly for women and vulnerable groups. This is especially true for the zone behind and around the KSRTC bus stand, noted by the police as a law and order sensitive zone.

— PUBLIC PLACEMAKING

Being in the heart of the CBD area, the UDC site has ample opportunities for state-of-the-art public placemaking ideas that are inclusive and sustainable. Many fallow spaces as identified through the maps can be made accessible from the Canal to create a continuous and connected spatial expression through innovations in urban design. It can be an opportunity, for example, to re-imagine how a bus stand in the city centre can integrate holistically within urban placemaking efforts, giving rise to an eco friendly and citizen friendly public space. Overall, these placemaking activities could also increase footfall in these areas which can then further support and augment the degenerating economic activities of the CBD area. The open spaces of the city need to be reclaimed by its people in a healthy, sustainable and inclusive manner such that a vibrant heart of the city can be restored.

— AN ECOLOGICAL APPROACH

The site is located in an ecologically sensitive coastal area, and forms part of a larger estuarine landscape. It is important to address the fresh and saline water management systems of the canal which can help make the city resilient towards climate change. The eastern end of the canal is a large open space, possibly a remnant of the city's wetlands. Urban wetlands, forests and parks are part of a larger urban ecological network.

The potential ecological functions of the landscape, as well as the peculiar flora and fauna can be harnessed to provide long term resilience towards climate change, floods, contribute to local livelihoods and improve quality of life in the neighbourhood. The ecological dimension is also connected to the quality of life in the neighbourhood with a direct bearing on public health.

— SOCIO-ECONOMIC SENSITIVITY

Urbanism in Kochi, like all of India, needs to respond to the needs of the poorest and the most marginalised. Informal settlements and street vendors form the life blood of the city centre of Ernakulam, and any reimagination of the urbanism of a city must integrate an in-situ response to this sector of users, who almost always occupy the blind corner of any architectural, urban design or planning vision. Informal housing settlements need an improved service infrastructure as well as their integration with the city's public places, while road side vendors need creative placemaking to accommodate them in the heart of those spaces.

4. The Assignment

REIMAGINING THE MULLASSERY CANAL PRECINCT, ERNAKULAM

This design competition seeks to attract creative minds and experts from diverse fields to generate innovative and 'out of the box' ideas. These ideas should incorporate the principles of environmental, social and cultural sustainability, cross-sectoral departmental involvement and have financial and implementation viability. They should focus on participation and gender equity as well. Besides, the emphasis on an integrated planning approach, the general concept of sustainable development in an urban context is also a key focus of this exercise. In terms of realization, the contestants should be encouraged to think in multiple time frames such as, what are the long term development goals for the site? What is the future vision? How and where could short term implementations work to serve as a sign of change – how could maximum impact be achieved by quick, incremental and easy interventions?

OPPORTUNITIES FOR REIMAGINING KOCHI'S CITY CENTRE

The project includes, but is not limited to the following opportunities:

— RELEARNING AN URBAN ENVIRONMENT IN SYNC WITH ITS WATERWAYS

A complete urban design intervention on both sides of the canal, along with water edge development, cleaning of the canal, rejuvenating the experience of the canal and increasing its carrying (and expansion) capacity especially geared towards flood mitigation strategies.

— RESTORING ECOSYSTEM HEALTH

Addressing issues of waste, congestion, pollution and sewage in the waters with suitable waste and water management strategies using traditional and/ or innovative practices and a focus on socio-ecological restoration and rejuvenation as may be applicable.

— A WALKABLE CONNECTED CITY CENTRE: Facilitate pedestrian connections that integrate several nodes of public transport around the canal precinct. This pedestrian network can be envisioned as part of a larger civic design enterprise. Walkable, barrier free and well-connected transit nodes replenished by rejuvenated public spaces and activities that welcome citizens to enjoy a walk and 'hang out' is a core need for the city centre.

— RESPONDING TO THE URBAN POOR

To re-develop in-situ or retrofit low-income informal settlements responding to the ecosystem of the canal in a healthy symbiotic relationship. To reimagine the integration of street vendors and informal shopping zones within the core urban fabric to release the canal from encroachments and restore the zone back holistically.

— BRINGING BACK CONVIVIAL PUBLIC SPACES OF CITIZENSHIP

The canal should be made accessible to create a continuous and connected spatial expression. Placemaking should address good practices that encourage 24x7 safety measures for citizens, especially for all women, the sexual and gender minorities, children, and the elderly, and also ensure accessibility for all persons with disabilities. Waterlogging mitigation strategies can also converge with flexible public uses along the canal that are innovative, simple and incrementally implementable.

EXPECTED OUTCOMES

——Creative development plans/ideas for the new urban paradigm

——Conceptual design for the entire length of the canal **(scale 1:2000)** and detailed design for Sub Site A and one of the other two designated Sub sites

——Spatial analyses with effective graphical representations

——Spatial concepts for regeneration of the disconnected blue-green infrastructure

——Sustainable short- and long-term strategies and site-specific solutions

——Timeline: Phase wise implementation strategy of design interventions

——Selected teams will be expected to help realise the projects by bringing them to an implementable level in the form of **Detailed Project Reports** in parts or whole as the case may be.

EVALUATION CRITERIA

THE FOLLOWING GOALS ARE TO BE ADDRESSED IN THE DESIGN

— a. **Integrated urban development approaches** to problem solving, which brings together a holistic perspective using the core competencies of a multi disciplinary team in an integrated manner.
— b. Urban intervention which addresses the **core concerns** (refer to Section 3) identified through the public participatory process - like **flood mitigation, walkability and connectivity, safety, mobility, etc**. Thereby, effectively tack ling 3 or more of the suggested opportunities (refer to section 4)
— c. **Barrier-free** environments
— d. **Gender inclusive** designs
— e. **Inclusion** of the marginalised and the urban poor
— f. Participatory approach and **inclusive impact** aiming to improve the **quality of life for all inhabitants** in the area, and for citizens of Kochi as a whole - de monstrating a sound understanding of the needs of intended beneficiaries.
— g. Integrating **sustainability** within existing **informal housing settlement** (inte gration of **basic services** with existing housing infrastructure through problem solving to make them healthy, inclusive and sustainable) - applicable to sub-site.
— h. **Replicable** and **scalable** (to other parts of the city)
— i. **Climate-proof** and **energy saving** regenerating healthy life and living.
— j. Beneficial to **public health** and **safety**
— k. **Flexible, dynamic** and **adaptive** to the uncertainties of climate change and other future developments
— l. Contextualised, demonstrating a deep **understanding of the vulnerabilities** and the planning context of the city
— m. Adheres to all existing **local norms and regulations** of development, **CRZ regulations**, as well as the requirements of the National Green Tribunal
— n. **Innovative, practical** and **implementable**

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Informal settlement along the canal

5. The Process

DETAILED SCHEDULE

SATURDAY 6TH JUNE 2020
Registrations open.

THURSDAY 25TH JUNE 2020 AT 23:59 (IST) (REVISED)
Registrations close

MONDAY 29TH JUNE 2020 (REVISED)
Detailed working material (digitised maps as well as in-depth background information and site impressions) will be available for download to registered teams

MONDAY 13TH JULY 2020 BY 23:59 (IST) (REVISED).
Deadline for receiving questions and clarifications concerning the brief

SUNDAY 9TH AUGUST 2020 AT 23:59 (IST)
Deadline for submission online

AUGUST & BEGINNING OF SEPTEMBER
Due to COVID-19 circumstances the following dates will be announced on the website: www.entekochi-competition.org

Announcement of shortlisted entries | Jury Meeting & Evaluation | Announcement of winning ideas | Award ceremony & exhibition opening | Workshop with the 3 winning teams | Closing of public exhibition.

SUBMISSION REQUIREMENTS

1. Submission must be legibly composed on 2 landscape oriented A1 sheets (59.4 cm height & 84.1 cm width).
2. Any technique of the team's choice – sketches, diagrams, 3D visualizations, physical model photos, CAD drawings, text, walk throughs/ videos etc. – is acceptable to convey their ideas.
3. Participating team's code name, which will be sent during the registration process must be clearly mentioned in the bottom right hand corner of each sheet.
4. Except for the code name, the submitted sheet must not include ANY information that could disclose the team's identity and lead to disqualification. Anonymity of the participants is key to this competition's process.
5. A working title for the proposal must be included in the A1 sheets.
6. A 1000-word (maximum word limit) summary text in English, explaining the project idea must be included along with the A1 sheets. The summary text must cover followingaspects of the proposal:

— a. Main concept, especially referring to the aspects of climate-proof integrated urban development
— b. The level of intervention which the proposal is focused on
— c. The opportunity areas that the proposal is aiming to tackle
— d. Target group/beneficiaries of the proposal
— e. Text must be written in English language.

SUBMISSION METHOD

The following 3 DELIVERABLES must be uploaded via a shared link with the Team Code Name in the subject line:

1.High-resolution **PDF** (suitable for printing) of the **two A1 sheets** showcasing the project idea. Both A1 sheets must be combined into one PDF file.
—a. Maximum file size of PDF: 20MB
—b. Name of the PDF file: *team code name*.pdf (e.g. 0001.pdf)

2.150 dpi resolution **JPEGs** (suitable for web page viewing) of the **two A1 sheets** showcasing the project idea.
—a. Maximum file size of JPEG: 1MB
—b. Name of the JPEG file: *team code name sheet number*.jpeg (e.g. 0001_1.jpeg)

3. The title and a **1000 word summary** of the proposal in a Word document
—a. Maximum file size of document: NA
—b. Name of the Word file: *team code name*.doc (e.g. 0001.doc)

The entire submission package must be **SUBMITTED BY SUNDAY 9TH OF AUGUST 2020, 23:59 (IST)** for the entry to be considered. Entries not adhering to even one of these submission rules will be **IMMEDIATELY DISQUALIFIED.**

Polluted canal water

6. Regulations

ELIGIBILITY (TEAM COMPOSITION)

— The competition is open for all Indian nationals above the age of 18 – to participate in teams having multidisciplinary backgrounds. Minimum size of the team is 3 members. **Teams must mandatorily comprise at least 1 member of stream 1.** Furthermore, it is highly recommended that the team includes members from the streams 2 and 3, to **ensure a multidisciplinary approach**. There are no qualification restrictions for any additional team members.

— The team member from stream 1 (Architect/Urban Designer/Spatial Planner/ Landscape Architect) must be **registered with the Council of Architecture (CoA) or Institute of Town Planners of India (ITPI).** The member will be asked to fill in required details at the time of registration for UDC. This is important for being able to have a legal contract with GIZ to carry on the fruition of the proposed design ideas to the level of a complete Detailed Project Report (DPR).

— We also encourage the involvement of a local practitioner from Kerala in the participating team to ensure contextually relevant solutions, a key criterion to be judged as a winning entry. However, this is not a mandatory requirement. Moreover, please note that the winners will be required to closely work for the next steps in co-ordination with the Kochi Municipal Corporation for implementation of a financially viable 'good for funding' DPR.

— Persons involved in the organising and judging of this competition, including members of their families and professional colleagues from their respective organisations are not eligible to participate in this competition.

REQUIRED
STREAM 1*
Registered professional qualifications in any of these streams.

- Architecture
- Urban Design
- Landscape Architecture
- Spatial Planning (Urban, Regional, Town, City, Housing, Environmental, Infrastructure etc.)

RECOMMENDED
STREAM 2**
Experience working closely with or in these streams will suffice

- Environmental science
- Ecology
- Public Health
- Hydrology
- Transport planning / Transit node designers
- Civil Engineering

RECOMMENDED
STREAM 3**
Experience working closely with or in these streams will suffice

- Sociology
- Anthropology
- Gender Studies
- Public Policy

*STREAM 1 REQUIRED: **Bachelor Degree** with min **6 years** of work experience or **Master degree** with min **3 years** of work experience and **a valid COA or ITPI registration.**

STREAM 2 & 3 RECOMMENDED: **Degree or Work experience (min. **2 years**).

REGISTRATION

1. Online registration can be completed on the official website: www.entekochi-competition.org until **THURSDAY 25TH JUNE 2020 AT 23:59 IST (REVISED).** As mentioned under sub-chapter 5, a confirmation email will be sent with a **code name** for the participating team within 48 hours of completing and submitting the registration form. **Forms without complete details will not be considered.**
For registration the participating team has to **upload CVs:**
— **Stream 1 - CV including 3 relevant projects** (upto 1MB PDF)
— **Stream 2 & 3- CV** (upto 1MB PDF)

2. Each registered competitor may submit questions via emails to **contact@entekochi-competition.org** until **MONDAY 13TH JULY 2020 BY 23:59 (IST) (REVISED).**

MATERIAL PROVIDED

General information will be available for the potential participants on the official website: entekochi-competition.org
For all registered competitors the following **materials will be available** from **29th of June (REVISED)** via direct-download from the competition website
— Base map (in AutoCAD file format) of the competition site
— Detailed information about the competition site's context
— Site photographs
— Aerial photographs

QUESTIONS & CLARIFICATIONS

In case of any questions related to the competition brief, please email us at: **contact@entekochi-competition.org** with COMBRIEF in the subject line.

Last date for sending in questions is **MONDAY 13TH JULY 2020 BY 23:59 (IST) (REVISED).**

If considered relevant, questions received will be shared and answered together on the Frequently Asked Questions (FAQ) page of the competition website for the benefit of all participants. Participants are therefore advised to check the FAQ page of the website for additional information from time to time.

Answers to questions under FAQ are considered as additions or changes of competition regulations & guidelines. Further questions & clarification through email or otherwise are not official and the organising committee will not be in a position to answer any of these questions. The final decision and obligation to respond to any questions received as per due process lies with the organising committee.

Canal precinct at St. Teresa_s College junction

THE JURY

All competition entries will be reviewed by an esteemed jury. The list of the jury will be announced later on www.entekochi-competition.org . Due to COVID-19 circumstances the jury session might happen online.
The Jury will consist of 7-8 members:
—2 citizen delegates
—1 local government representative
—1 international expert
—1-2 National experts from specialised fields
—1 expert with extensive knowledge of local context
—1 representative from GIZ

AWARDS PROCEDURE

—The top 3 entries - as identified by the jury - will be provided contracts jointly worth INR 25,00,000. The break-up will be determined by the jury with a minimum contract value of 5,00,000
—The lead members (belonging to stream one: see section 6.1) representing the multidisciplinary teams of the top 3 entries will have to be engaged under contract. Each team will be contracted for a total amount of min. 120 person days to further evolve their ideas into tangible, implementable solutions in the form of a DPR over a minimum period of 3 months as per GIZ rules.
—The top three entries will get an opportunity to present, discuss and develop their ideas with international experts from Germany and India in a 2-day workshop following the exhibition opening. Within the public exhibition all shortlisted entries will be displayed.
—All three winning team will get an opportunity to present their ideas to the concerned authorities in Kochi.
—Apart from the award (in form of a contract), exhibition and publication opportunities to the winning teams, lead member of each of the three winning teams is invited for an exposure to Germany/ other country/ India (subject to COVID pandemic influence).
—This is not a simple open ideas competition, implementability is key during the whole process. In case a winning team is not willing to be contracted, no remuneration will be provided and the next ranked entry shall be considered.

AWARD CEREMONY & EXHIBITION

Due to COVID-19 circumstances the details and framework of the Award Ceremony & Exhibition will be announced at a later stage.

LEGAL FRAME – TERMS & CONDITIONS

This competition's aim is to generate a range of ideas that can be presented as alternate visions for the canal and its surroundings through a participatory approach. The submitted documents cannot be returned. The participants of the competition declare to agree by submitting the competition entry that the contributions can be published in different media. Shortlisted entries will be summarized in a public exhibition.

Authors retain a copyright for their work. However, all submissions become the property of the GIZ, which has the right to publish all or any part of the submitted material.

By entering the competition and ticking the box marked 'Submit' on the Website application form, Participants agree to be bound by the following Terms & Conditions:

1. Registration and submission of entries implies acceptance of the copyright conditions as follows:
Copyright in all submitted material remains with the authors of the submission, but submissions are made on the explicit understanding that the organizers are free to publish and exhibit the contents of the submission, and advocate, adapt/amalgamate any of the ideas in parts or full, provided the authorship of the ideas is at all times appropriately acknowledged, and in all cases without compensation, regardless of whether the authors have been declared as winners or not.
No compensation can be sought only by the virtue of participating in the said competition

2. GIZ reserve all the legal rights to reject any proposal. A proposal will be excluded from participation under following conditions:
—If it is not sent within the deadline.
—**This is an anonymous competition and the 6-character unique identity code is the only means of identification.** The name of participants should neither appear on the plates nor as part of the file names as this will result in disqualification and exclusion from the competition.
—Participants who try to contact members of the jury will be disqualified.
—For example, the documentation does not comply with the requirements;
—Entry is open to all persons except Jury panelists, Steering Committee, Technical Committee, the organizers, their immediate families or business partners.

3. The Submission Proposal must not infringe the intellectual property rights of any third party. This includes the use of third-party trademarks, images and/or copyright.

4. Participants accept that the Website is offered on an "as is" and "as available" basis. The Organizers do not warrant that the Website will be uninterrupted, timely, secure or error-free, that defects will be corrected, or that the Website or the server that makes it available are free of software viruses or bugs or other defects.

5. The organizers do not have full control over, and disclaims all responsibility or, any content which Participants may encounter, or events which may occur as a result of any Participant's use of the Website, to the fullest extent permitted by law, and the organizers shall not be liable for any damages or other losses of any type whatsoever incurred by Participants as a result of their use of the Website.

6. Implementation of the winning entries is the sole discretion of the authorities involved. There is no legal claim to contract value or corresponding assets.

7. The Organizers reserve the right to withdraw or amend the Competition and these Terms and Conditions in the event of any unforeseen circumstances arising outside their reasonable control.

7. About Kochi

URBANIZATION IN KOCHI

Kochi's urbanity is linked organically to its status as a global trade centre which establishes its modern foundations bringing in new ideas, technologies and human resources from inland regions and international destinations. It made Ernakulam the most urbanized district in the state. Its urban population (2,119,724)[1] and the percentage of urban to total district population (68.07 %)[2] makes its demographic officially qualify under national urban policy frameworks and this is one among many reasons why it is a part of the country's flagship Smart Cities Mission.

Kochi is an intrinsic part of Kerala's extensive water-ways. The region is an urban system which has high connectivity in terms of transport and trade - at global, regional and local levels. Its population is constantly on the move, and its migration flows to global centers bringing back capital, skills and resources all the time. It is important to recognize its urbanity. Its rich ecological landscape is an expression of a history of active engagement with economic activities and trading routes, infused by an old, global cosmopolitanism.

The Corporation of Kochi combines the erstwhile municipal areas of Fort Kochi, Mattancherry, Ernakulam and a few settlements adjoining Ernakulam. Demographic growth expanded the boundaries of the city mainly along the road traffic corridors. Today the Kochi water metro is making up for decades of marginalizing the historical river and back-water based mobility that characterised it in the past. This marginalization produced a mostly unplanned urban sprawl, stressing surrounding panchayats with increased construction activities and a continued inadequacy of its civic infrastructure.

ECONOMIC ACTIVITIES IN KOCHI

The city is the state's economic powerhouse with more than 60 percent[3] of state tax revenue coming from Kochi. Its industrial, port-based activities, international and domestic airport and national train stations contribute to its economic dynamism making it one of the most attractive investment destinations. It became an important IT hub after 2004. However, all this has not been accompanied by appropriate infrastructure development, and one that is in sync with the ecology and history of the city-region.

According to the municipal corporation,[4] the city needs to further strengthen support systems to help core sectors like trade, information technology, port related activities, tourism services, hospitality, banking and financial services and offsite services for the Middle East - North Africa region. The aim is to encourage transit-oriented development along select multi-modal nodes and corridors. The corporation also feels it is important to do this by supplementing local economies and improving livelihood through involvement of local businesses and residents in the development of the areas..

HOUSING AND BASIC SERVICES

According to the 2011 census 9,10,200[5] households are located in the city-region. The panchayat level statistics indicate 3,83,600[6] households.

[1] https://www.census2011.co.in/census/city/459-kochi.html
[2] http://censusindia.gov.in/2011census/dchb/3208_PART_B_ERNAKULAM.pdf
[3] https://cochinmunicipalcorporation.kerala.gov.in/documents/10157/17825/Vol2_Development_Concepts%26Strategies.pdf?version=1.0
[4] https://cochinmunicipalcorporation.kerala.gov.in/documents/10157/17825/Vol3_Development_Proposals%26ControlRegulations.pdf?version=1.0
[5] https://censusindia.gov.in/2011census/dchb/3208_PART_B_ERNAKULAM.pdf
[6] https://censusindia.gov.in/2011census/dchb/3208_PART_B_ERNAKULAM.pdf

In spite of these figures there is a shortage of housing that is expressed in crowded tenements, shared rooms by migrant labour and the growth of slums. About 31 percent[7] of total population within the KMC region lives below the poverty line, out of which 1,27,872[8] people are said to be residing in slums. The coastal areas, with a majority of fishing communities, dominate the poverty data.

CLIMATE CHANGE - IMPACTS ON KOCHI

India's coastline is increasingly becoming vulnerable to climate change. Over the years, the changing climate has resulted in catastrophic events. Extreme climate change events such as floods, uneven rainfall and storm surges are becoming common around several coasts. These environmental changes will impede the social, cultural and economic patterns of the coasts. Moreover, partly inefficient disaster management and lack of mitigation and adaptation plans escalate the vulnerability of coastal communities. Coastal cities need to adopt an urban planning approach that can cope with the uncertainties of our times.

Kochi is part of the urban coastal cities network with over 1 million population on the coast. According to a study led by Cochin University of Science and technology (CUSAT) in 2003, the major effects of climate change are characterised by:

—Intense precipitation associated with more variability in seasonal and average increase in total volume.
—Gradual sea-level rise, combined with coastal land submergence, could be up to 30 - 50 cms in the next 30 years.
—Temperatures are likely to rise; combined with increased rainfall this could increase humidity level excessively at certain times of the year.
—Greater risk of flooding due to intense periods of rainfall.

In such a scenario, Kochi will have to find innovative solutions to protect its coastline while finding ways to incorporate its canals and backwaters within safe, reliable structures.

HYDRO-GEOGRAPHY

Kochi city is embedded in the Cochin metropolitan region which has been historically and geomorphologically shaped by its waterways and wetlands linked to the Vembanad estuary. The peculiar geographical character of Kerala and Kochi have for long created a unique relationship between its people and the waters; much of which were created and managed to allow easy drainage of internal waterways to the sea as well as network, transport and communication. For centuries, the economic dependency developed a healthy relationship between the people of Kochi and the surrounding water bodies. Water was an integral part of the city's development.

However, the course of urbanisation in the last two decades has disregarded the historical water systems as human dependency on them started to deteriorate. Developed linearly along major road networks, the city has largely ignored varying ecologically sensitive landscapes including the cultural canalscape. Furthermore, substantial portions of wetlands, paddy fields, eco-sensitive coastal zones and forests were appropriated in the past for the urbanising needs of the growing city-region.

This continued disregard for the floodplains and flood-waterways has left the city unprepared for the natural tendency of waters to expand and contract over the seasons, giving rise to floods and similar events that have resulted in immense loss of life and property. Increasing instances of urban water logging due to less effective stormwater drainage systems and global climate change have posed peculiar challenges for Kochi's citizens.

[7] https://cochinmunicipalcorporation.kerala.gov.in/web/guest/poverty-reduction
[8] https://cochinmunicipalcorporation.kerala.gov.in/web/guest/poverty-reduction

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Stone retaining wall along the canal edges

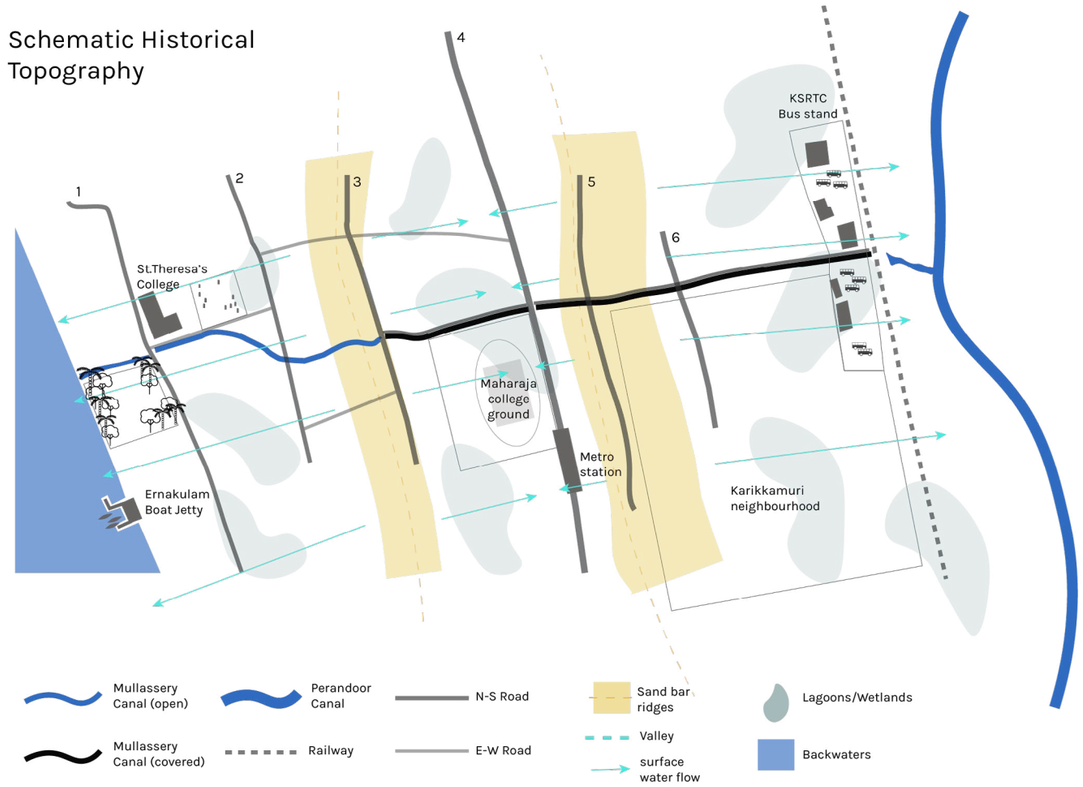
8. About the Site

The detailed site information/recommendations presented in this part of the brief have been derived in consultation with stakeholders from the local government, parastatal agencies and special purpose vehicles (SPV), educational institutes, residents welfare associations, street vendors association and professionals and practitioners based in Kochi.

TOPOGRAPHY

The canal cuts perpendicularly through the sand bars (ridges) and lagoons/wetlands (valleys) that were formed due to the natural movements of tides, rivers and wind. A typical formation of the coastal landscape. Today, these sandbars and lagoons are the major roads of the city that run north-south and are built perpendicular to the canal.

The major roads from east to west are Park Avenue Road (1), Market Road (2), TD Road (3), MG Road (4), Chittoor Road (5) and Karikkamuri Cross Road (6). The TD road and the Chittoor Road are developed over the ridges and MG Road in a valley. The Karikkamuri Cross Road is the starting point of a valley that slopes eastwards towards the Perandoor Canal. The eastern valley also has KSRTC (Kerala State Regional Transport Corporation) bus terminus. Major waterfront reclamation, where the canal meets the backwaters, has produced a linear public recreational avenue called Marine Drive juxtaposed with housing and commercial buildings.



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Schematic representation of historical topography of the UDC site

WATERLOGGING AND FLOODING

The localities of Karikkamuri and Kerala State Road Transport Corporation (KSRTC) bus terminus are low-lying areas prone to waterlogging. Interventions have been taken up to restore the flow of the various canals in Ernakulam, but the Mullassery canal has comparatively received very little attention. In a study conducted by KMC in 2004, it was recommended that the Mullassery Canal should be widened to eliminate water logging of the KSRTC bus stand and Karikkamuri neighbourhood.

Mullassery being a tidal canal will experience flooding not only during monsoon, but also during the dry season due to a phenomenon called "Vrischika veli", a tidal influx that occurs roughly in November-December. The pressing need of the time is to allow room for the water body to swell and create catchment areas along its path.

ECOLOGY, FLORA AND FAUNA

Even though the waters of the canal are highly polluted and possibly have low levels of dissolved oxygen supporting anaerobic environments, there still exist open spaces along several parts of the canal, including its very narrow banks which support several tree species.

Many of these are exotic species typically planted along avenues viz.:Rain tree (Samanea saman), Copper pod (Peltophorum pterocarpum), Gulmohar (Delonix regia) , Kapok tree (Ceiba pentandra) and

Native species include:Indian laburnum (Cassia fistula), Indian almond (Terminalia catappa), Mango (Mangifera indica), Jackfruit (Artocarpus integrifolia), Chandada (Macaranga peltata), Peepal (Ficus religiosa), Hairy Fig (Ficus hispida), Jamun (Syzygium cumini) Queen Crepe Myrtle (Lagerstromia speciosa)

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Vegetated Canal Banks

The connection with the backwaters has maintained the salinity of the Mullassery canal. However, illegal waste dumping and direct discharge of untreated domestic wastewater has increased the organic matter leading the water bodies to eutrophic situations. Stagnation in certain places and depletion of oxygen levels have also made the water more septic. The gases emanate due to anaerobic reactions and the lack of oxygen impacts the aquatic ecosystem of the receiving water bodies. Under Sustainable Development Goals, countries have agreed to reduce their annual emission in cities. Addressing Mullassery canal's anaerobic emission at the local level can be linked to the world goals towards climate change (SDG's and Paris Climate Agreement).

Native species that are characteristic of these wetlands include Cattails and tree species such as Terminalia arjuna, Syzygium cumini etc. Towards the Eastern end of the canal, near the railway tracks, where it joins the Perandur canal, it appears to be taken up by weeds - the dominant species is the water Hyacinth (Eichhornia crassipes). This is an invasive weed and is a type of floating vegetation which poses a threat to aquatic life as it depletes oxygen. It clogs waterways and impedes water transport.

LAND USE PATTERN

Mullassery canal is surrounded by a low-rise high-density development that was initiated in the 70's and 80's. Due to its location in the Central Business District (CBD) area of Ernakulam, diverse land use patterns have emerged along the canal. Starting from the western backwaters, the canal is lined with prominent educational institutions - St. Teresa's Girls College, Government Law College, and Maharaja's College. All the major roads - Market Road, M.G. Road and Chittoor Road have streetside markets, vending zones and shopping complexes which were major commercial areas for the city. Increasing tourism has also led to a rise in hospitality activities and homestays. There are two informal settlements on the banks of the canal in the vicinity of St.Teresa's and Government Law College. The Kochi Municipal Corporation Headquarters are located on Park Avenue road. The capital of Corporation has some unused land which can be diverted for the project.

The eastern end of the canal has a different land use pattern than the west. Apart from the KSRTC Bus Terminus, the area is predominantly residential along with a proportionate amount of commercial activities catering to the neighbourhoods. The immediate buildings opening up on the canal are warehouses, hostels, houses and shops. The combination of all these has made the stretch a mixed-use precinct.

SOCIO-ECONOMIC STRUCTURE/ECONOMIC ACTIVITIES

The socio-economic patterns along the canal determines the land use pattern. The stretch has various kinds of users that are categorised in two broad sections - residing and floating population. The eastern end of the canal predominantly has middle and upper middle-income residing population, along with few hostels for the migrant workers. During the day it also experiences an influx of daily wages workers to the warehouses for loading and unloading of the goods. The bus terminus brings daily commuters who are concentrated within the KSRTC boundaries and use adjacent streets including Mullassery Canal Road for accessibility.

The high concentration of commercial activity on the western end has determined the high proportion of floating population in juxtaposition with the resident population. The daytime population comprises street vendors, shopkeepers and buyers. The education institutions also bring a large number of student population, both as daily commuters as residents in the student hostels. The hotels and homestays accommodate tourists who contribute to the floating population. Among the residents, the neighbourhood has a low-income population within the informal settlements and middle-income population that has contributed to home based businesses.

MOBILITY

The area is intersected by 3 major transit zones - the Ernakulam Boat Jetty, the Maharajah's College Metro Station and the Kerala State Road Transportation Corporation (KSRTC) Bus terminus. All three nodes are located in the Mullassery Canal precinct and are at a walkable distance from each other, however, the precinct lacks pedestrian friendly infrastructure, as also a well designed bus stand integrated to the surrounding environments. It is imperative to look at not only connectivity of the transport nodes but also the way their access and functioning works to create holistic solutions for the area.

The KSRTC Bus Stand, for example, is a major node in the design precinct, which needs a strong reimagination. It can be effective, not only as a bus stand, but also as a vibrant public space. It can contribute to health oriented and eco friendly public activities, like sports, on the one hand, as well as contribute to the flood mitigation of the zone and floodplain restoration process with urban forests and parks, on the other.

In the whole area, the narrow roads are plied by buses exploiting the maximum speed limit making the streets hazardous for pedestrians. According to Evangelical Social Action Forum's study on Walkability and Pedestrian Facilities in Kochi, 2016-2017, 60% of the respondents expressed fear while crossing roads.[9] The pedestrian footfall also has a proportionate amount of students, women and children who use the adjoining commercial and education hub. However, the zone lacks sufficient and continuous on-street activities with adequate lighting and street infrastructure, making it unsafe for women after sundown. Moreover, though some attempts at pavement designs suitable for persons with disabilities are being executed on the M. G. Road stretch, barrier free access is almost absent from the rest of the zone. There is a project underway to facilitate non-motorised transport along the railway line.

[9] https://healthbridge.ca/images/uploads/library/Walkability_Report_-_Kochi_2016-2017.pdf

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KSRTC bus terminus

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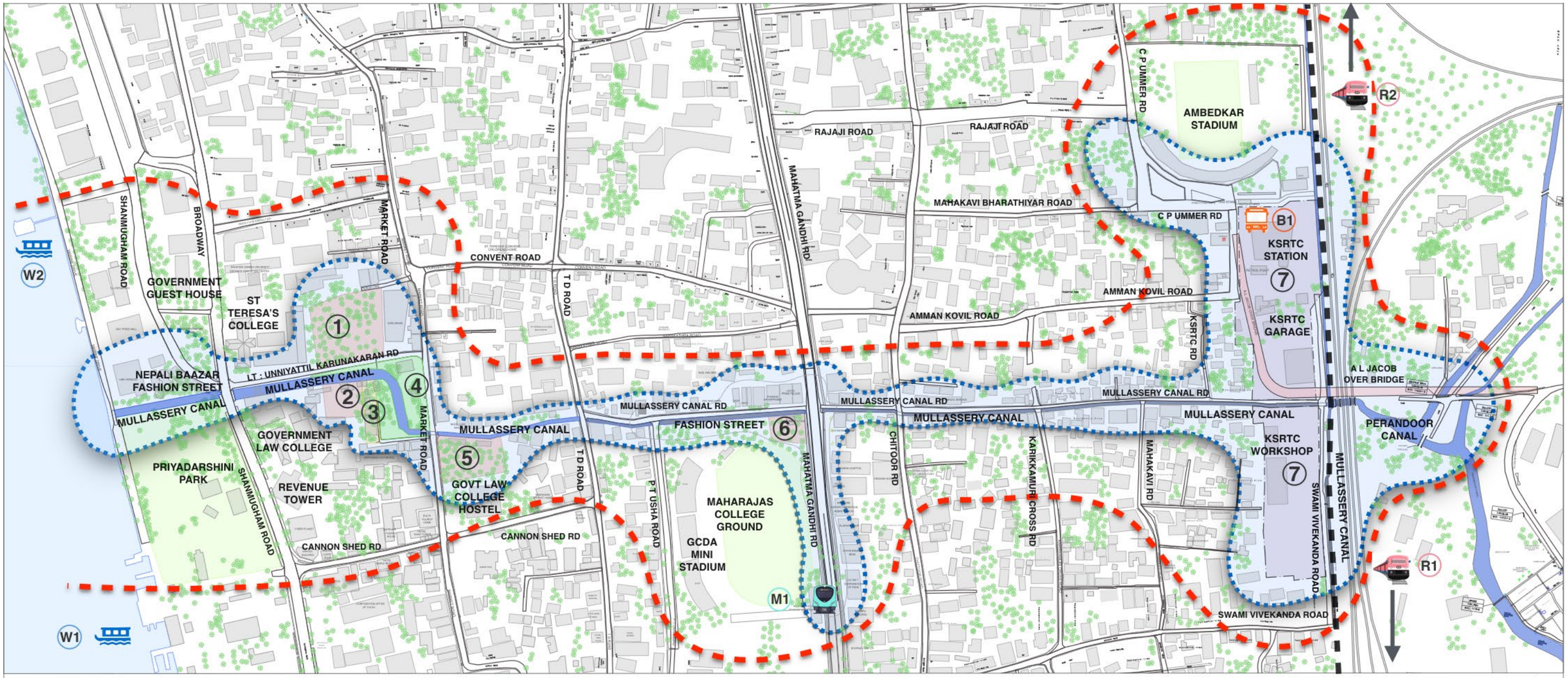
KSRTC Bus Terminus



LEGEND

- DESIGN ZONE BOUNDARY
- AREA UNDER MASTER PLAN DESIGN
- PROPOSED GREEN CORRIDOR PROJECT CONNECTING NORTH AND SOUTH RAILWAY STATION

SITES / LANDMARKS

1. OLD JEWISH CEMETERY
2. LAND BESIDE LAW COLLEGE
3. KMC HOUSING
4. KMC LAND
5. LAND BESIDES LAW COLLEGE HOSTEL
6. LAND BESIDES MAHARAJAS GROUND
7. PROPERTY OF KSRTC

TRANSPORT NODES

- W1 ERNAKULAM BOAT JETTY
- W2 TOURIST BOAT JETTY
- B1 KSRTC BUS TERMINAL
- M1 MAHARAJAS METRO STATION
- R1 TO EKM SOUTH RAILWAY STATION
- R2 TO EKM NORTH RAILWAY STATION

Project Under:	Project:	Drawing Name:	Drawing No:	Consultants:
Project By:	Mullassery Canal	Base Map	1.1	
	Sheet Title:	Scale: 1 :2000 (A1)	Revisions Date Scale 1 :2000 (A1) Dimensions CM Drawn by Checked by	

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Overview map of the UDC site

The overview map of the Mullassery canal showing the prominent landmarks along the canal.

Sustainable Urban Development - Smart Cities
The Ministry of Housing and Urban Affairs (MoHUA) and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH India are jointly implementing the "Sustainable Urban Development - Smart Cities" (SUD-SC) project, as part of Indo-German Bilateral Cooperation. The objective of the project is to support different levels of governments in achieving sustainable development in the background of India's rapidly growing cities. This is to be achieved through the implementation of a holistic and integrated approach to urban planning in the selected smart cities of Kochi, Coimbatore and Bhubaneswar.

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June 2020

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design the future city