



കൊച്ചി നഗരസഭ



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Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

എന്റെ **kochi** imagine the future city

Ente **Kochi**

MULTI-STAKEHOLDER PARTICIPATORY
PLANNING AND PUBLIC AWARENESS
ACTIVITIES IN KOCHI TOWARDS ACHIEVING
SUSTAINABLE URBAN DEVELOPMENT

DOCUMENTATION REPORT



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Table of Abbreviations

AMRUT	Atal Mission for Rejuvenation and Urban Transformation
ASADI	Asian School of Architecture and Development Innovation
CITU	Centre of Indian Trade Unions
CRZ	Coastal Regulation Zone
CSML	Cochin Smart Mission Limited
DTCP	Department of Town and Country Planning
GCDA	Greater Cochin Development Authority
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ICT	Information and Communication Technology
IUD	Integrated Urban Development
KCA	Kerala Cricket Association
KILA	Kerala Institute of Local Administration
KMC	Kochi Municipal Corporation
KSRTC	Kerala State Road Transport Corporation
KWA	Kerala Water Authority
LSGD	Local Self Government Department
MoHUA	The Ministry of Housing and Urban Affairs
NCVT	National Council for Vocational Training
NSDC	National Skill Development corporation
RAY	National Skill Development corporation
RWA	Resident Welfare Associations
SDG	Sustainable development goals
SUD-SC	Sustainable Urban Development- Smart Cities
SUID	Sustainable Urban and Industrial Development, GIZ India Cluster

An aerial photograph of a coastal region, likely a bay or estuary, with various land parcels, roads, and waterways. A red dashed rectangular box is drawn in the upper right quadrant, enclosing a specific area. The number '1' is printed in red inside this box. The map shows a mix of developed areas with buildings and parking lots, and undeveloped land with vegetation and fields. A prominent road runs vertically through the center of the image. The water bodies are dark blue, and the surrounding land is a mix of green and brown tones.

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Executive Summary

Achieving sustainable urban development around the world is characterised by capitalizing on numerous unique opportunities, but also overcoming many contextual challenges. Physical and social infrastructure often proves to be inadequate or outdated. The availability of serviced land for adequate and affordable housing is limited as demand is often higher than supply. Moreover, complex settlement patterns, informality and close economic interdependencies between the quality of available infrastructure and the quality of life of citizens requires close coordination among a variety of stakeholders including different planning and development departments to achieve sustainable development.

In India, the state of Kerala, with its distinct rural-urban continuum and mature self-governance structures that empower both institutions and individuals, provides a fertile ground to jointly counter these challenges while embracing the opportunities that accompany sustainable growth and development patterns. In this framework of development challenges and opportunities, citizen participation and the effective translation of local knowledge is more and more recognised globally to effectively support an integrated and sustainable development approach, one that aims at leaving ‘no one behind’.

New forms of collaboration and co-creation of knowledge in urban spaces are undertaken to achieve such development. Different kinds of local and global knowledges are tested, recycled, replaced, and revised to often then anchor them within formal and informal planning processes. One new concept to catalyze citizen participation in this vein is known as the “Urban Lab” approach. Through an open-ended format, this laboratory approach to the development of the city provides space for experiments, it emphasizes new collaborations and

encourages new perspectives and ideas to develop while highlighting the potential in existing practices. Therefore, it encourages an integrated view of the city-level challenges and enables a search for synergies among stakeholders in coping with those.

It is in this background that the Kochi Municipal Corporation (KMC) jointly with the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) under their Sustainable Urban Development – Smart Cities (SUD-SC) project, initiated the Urban Lab known as EnteKochi (Malayalam for “My Kochi”), a multi-stakeholder participatory planning process that fostered creativity, innovation and public awareness on issues of sustainable urban development.

The main objectives of the process were:

- To collect experiences and spread awareness among the public about present and future urban development challenges and opportunities.
- To highlight existing urban development initiatives in the city and to promote new ones that can enable sustainable urban development, through new digital and offline formats of participation.
- To strengthen the concept of cross-sectoral cooperation and develop a joint understanding of Integrated Urban Development (IUD) in Kochi.
- To identify a set of potential locations for piloting IUD approaches in Kochi jointly with the SUD-SC project.

The EnteKochi methodology comprised a diverse set of participatory tools manifested in different events and activities that stretched over a period of four months. The below graphic provides an overview of the same.

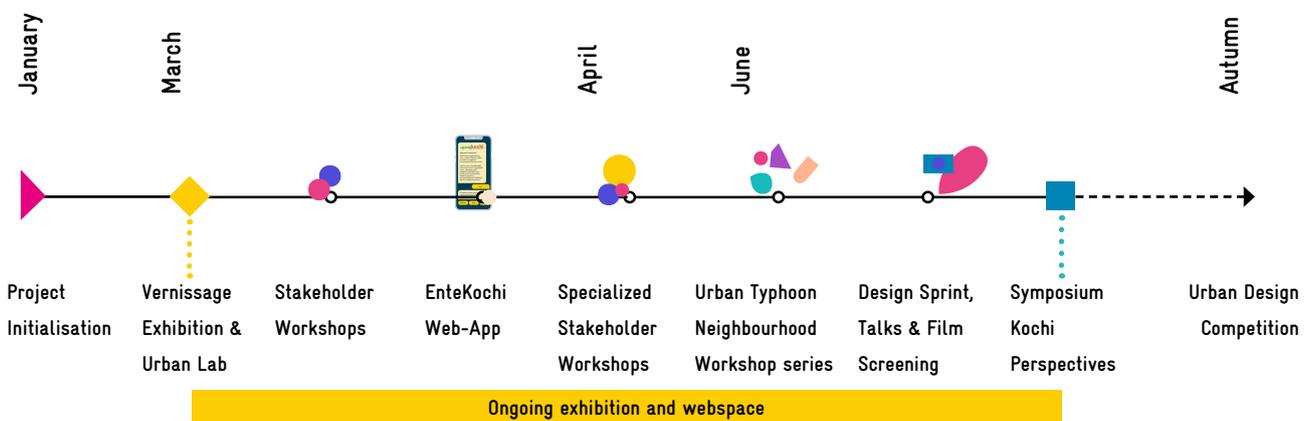


Fig. 01: Chronological overview of activities and milestones of EnteKochi

The process included, on the one hand, physical, and on the other hand, digital formats through which qualitative and quantitative data about the city was collected, discussed and displayed. A growing, interactive exhibition formed the central point for continuous daily interaction with the general public along with special interest stakeholder group interactions. The latter comprised of interactions with persons with disabilities, university students and school children from the city. Furthermore, workshops took place with representatives ranging from city government departments like KMC, CSML, GCDA, Kudumbashree etc. to civil society actors, members of academia and private sector representatives. Thereby, specifically the concept of IUD was discussed with the citizens, and locations for the next phase of neighborhood consultations were identified.

These detailed neighborhood consultations took place after the period of the general elections' 'code of conduct' in six different locations of the city. They were curated by a Mumbai-based experimental, cross-disciplinary collective of urban researchers and practitioners called Urbz. The workshops focused on jointly identified key challenges and built on existing or proposed initiatives. Thereby local inhabitants came together for a collective brainstorming with other stakeholders interested in urban issues and sustainable development.

The knowledge gained through the various stages of the EnteKochi process, including the interactive exhibition, the digital Web-App, the different workshops and neighborhood consultations etc. were summarized, analysed and converted into initial development impulses for the city. This happened in the frame of a week-long studio exercise called the 'Design Sprint', which focused on the following topics: Mobility and Economy; Public Spaces; Water Management and Climate Challenges; Housing and Basic Services; and the creation of integrated, vibrant Neighborhoods. The Design Sprint, as well as the overall curation of the EnteKochi process was led by Urbanista, an international office that specializes in the (co-) creation of action plans, studies and development concepts for urban change management, having experience in India and Germany.

The entire EnteKochi process concluded with a public Symposium and a comprehensive exhibition in the Ernakulum Town Hall. The Hon'ble Mayor invited all the stakeholders from a diverse set of backgrounds as well as the general public to discuss the results of the process. The symposium also focused on expanding local knowledge through international and national case-studies and to brainstorm about potential future activities and a feasible way forward. During the group work of the symposium, three initial project ideas for each of the six

neighborhoods were developed. Thereby a brainstorming took place concerning required means like potential involved stakeholders, own resources, support needed and an approximate timeline. All of these outputs are included in this summary report.

As the EnteKochi process followed an open-ended approach, encouraging experiments and the usage of a diverse set of partly new and innovative methods for citizen engagement and the use of participatory tools, the outcomes show promising interest from the city's side and also lay out some key aspects for further consideration while determining its sustainable future. Moreover, through the EnteKochi process the local need for Integrated Urban Development (IUD) was reinforced and some current existing approaches and developments were compared to national and global concepts. Thereby enabling tools and settings were discussed, introduced and tested, ranging from digital formats, like interactive web-apps and a digital urban-analysis table (CityScope) to physical formats like a design sprint and a wooden city model that encouraged a spatial allocation of identified challenges and potential solutions. Additionally, a diverse set of stakeholders was addressed, and a safe space was provided to think about, and express specific needs required by and for school children, university students and persons with disabilities to navigate through urban life in Kochi. Furthermore, local knowledge and unique local initiatives were captured through neighborhood-walks and discussions whereby residents were seen as grounded experts and future change agents.

Challenges encountered during the process, like delays caused through the 'model code of conduct' were despite limited resources, as far as possible, incorporated within the agile framework of the EnteKochi process. However, some challenges occurred, which could not be tackled within the given set-up, but could be looked at in future phases. This includes for example the aspect, that the main, permanent venue of the Urban Lab was the Folklore Cultural theater. This location was consciously chosen, as it is strategically positioned at the intersection of many different modes of transport stops and tourist places, and also close to the ongoing Kochi-Muziris Biennale in March, 2019. However, the fact that it is in the Fort Kochi area made it difficult to access for most people staying on the mainland. Therefore, a traveling exhibition or multiple locations across the city could be considered in the future for similar occasions. Secondly, the level of decentralization achieved in Kerala is unique for India. Through conversations with ward councilors and other key persons like Standing Committee Members, the EnteKochi process was able to capture some ideas about concepts and ideas developed through participatory budgeting and planning exercises (cf. "People's

Plan”). However, a deeper exchange and considerations of developed ideas, projects and priorities could have been considered that was integrated into the existing decentralized participatory planning process of the city.

Summarizing the entire process, EnteKochi was two processes occurring at once: the development of a concept of an innovative multi-stakeholder participatory planning process, and its real-time implementation and testing at the same time. Ideally, a follow-up process as proposed, the Urban Design Competition in one of the analysed neighbourhoods, or activities associated with the ‘People’s Plan’ or the civic society will continue to work on the impulses provided through this first phase of EnteKochi, to make them feasible and thereby see them as an inspiration or an acknowledgment if they match with other ideas already pointed out or developed in the past.

EnteKochi showed and encouraged the citizens to further follow their “Kochi-way”. A way that is characterized by participation and a high motivation to contribute through a diverse set of stakeholders, who strive for a liveable and sustainable development of “Nammude-Kochi” (Malayalam for Our Kochi).

എന്റെ കൊച്ചി, നമ്മുടെ കൊച്ചി

സുസ്ഥിര നഗരവികസനം എന്നത് കേവലം ഏകമുഖമായ പ്രവർത്തനത്തിലൂടെ കൈവരിക്കാൻ കഴിയുന്ന ഒന്നല്ല. ലഭ്യമായ തനതു വിഭവങ്ങളും സവിശേഷതകളും സാധ്യതകളും പ്രയോജനപ്പെടുത്തുന്നതിലൂടെ മാത്രം അത് സുസാധ്യമാവില്ല. മറിച്ച് നഗരജീവിതത്തിൽ നാം അനുഭവിക്കേണ്ടുന്ന അനേകം വെല്ലുവിളികളെ എങ്ങനെ അതിജീവിക്കുന്നു എന്നതിനെക്കുറിച്ച് ആശ്രയിച്ചിരിക്കുന്നു അതിന്റെ വിജയം. ലോകമെമ്പാടുമുള്ള അനുഭവങ്ങൾ തെളിയിക്കുന്നത് അതാണ്.

സാധാരണക്കാർക്ക് വീടു വയ്ക്കുന്നതിനനുയോജ്യവും പ്രാപ്യവുമായ ഭൂമിയുടെ ലഭ്യതയാണ് മുഖ്യ വെല്ലുവിളികളിലൊന്ന്. ആവശ്യത്തെക്കാൾ വളരെ കുറവാണ് ലഭ്യത. അതിലുപരി അതിസങ്കീർണ്ണമായ അധിവാസരീതികൾ, കൃത്യമായ വ്യവസ്ഥകളുടെ അഭാവം, ജനങ്ങളുടെ ജീവിതഗുണനിലവാരവും അതിനാവശ്യമായ അടിസ്ഥാന സൗകര്യങ്ങളുടെ ഗുണനിലവാരവും തമ്മിലുള്ള സാമ്പത്തിക പരസ്പരാശ്രിതത്വം, ആസൂത്രണ-വികസന വകുപ്പുകൾ ഉൾപ്പെടെയുള്ള വിവിധ പദ്ധതിപങ്കാളികൾ തമ്മിലുള്ള ഏകോപനത്തിന്റെ അഭാവം എന്നിങ്ങനെ പ്രശ്നങ്ങൾ നിരവധിയാണ്.

ഇന്ത്യയിൽ കേരളസംസ്ഥാനത്തിന്റെ ഒരു മുഖ്യ സവിശേഷത അതിന്റെ ഗ്രാമ-നഗര നൈരന്തര്യവും സുശക്തമായ തദ്ദേശഭരണ സംവിധാനവുമാണ്. അതുതന്നെയാണ് മേൽപ്പറഞ്ഞ വെല്ലുവിളികളെ കൂട്ടായി നേരിടാനും അനുകൂലസാഹചര്യങ്ങളെ പ്രയോജനപ്പെടുത്തി സുസ്ഥിരവളർച്ചയ്ക്ക് ആവശ്യമായ അടിത്തറയൊരുക്കാനും സ്ഥാപനങ്ങളെയും വ്യക്തികളെയും സുസജ്ജമാക്കുന്നതിന് വളക്കൂറുള്ള മണ്ണായി കേരളത്തെ നിലനിർത്തുന്നത്. വികസന വെല്ലുവിളികളും അവസരങ്ങളും ഉൾക്കൊണ്ട് വർദ്ധിച്ച പൗരപങ്കാളിത്തത്തോടെ പ്രാദേശിക അറിവുകളെയും കഴിവുകളെയും വികസനപരിപ്രേക്ഷ്യത്തിൽ സന്നിവേശിപ്പിക്കുന്നതിനുള്ള ഈ സവിശേഷ ശേഷിയാണ് ഒരാളെപ്പോലും ഒഴിവാക്കാതുള്ള സംയോജിത-സുസ്ഥിരവികസന സമീപനത്തിൽ മികച്ച മാതൃകയായി ആഗോളതലത്തിൽ അംഗീകരിക്കപ്പെട്ടിരിക്കുന്നത്. നഗരങ്ങളിൽ അത്തരത്തിലുള്ള വികസനം കൈവരിക്കുന്നതിനായി കൂട്ടായ പ്രവർത്തനത്തിലൂടെ പുതിയ അറിവുകൾ വികസിപ്പിച്ചെടുക്കുന്നതിനും സഹകരിച്ച് പ്രവർത്തിക്കുന്നതിനുമുള്ള പരിശ്രമങ്ങൾ നടന്നുവരുന്നു. പ്രാദേശിക-ആഗോള തലങ്ങളിലുള്ള വിവിധതരം അറിവുകളും അനുഭവങ്ങളും ഈ പ്രക്രിയയിൽ പരീക്ഷിക്കുകയും പരിഷ്കരിക്കുകയും പുനഃസ്ഥാപിക്കുകയും പുതുക്കുകയും അവയെ ഔദ്യോഗികവും അനൗദ്യോഗികവുമായ ആസൂത്രണ പ്രക്രിയയിൽ സന്നിവേശിപ്പിക്കുകയും ചെയ്യുന്നു.

പൗരപങ്കാളിത്തം വർദ്ധിപ്പിക്കുന്നതിന് ഇത്തരത്തിൽ രൂപം നൽകിയ ഒരു പുതിയ സങ്കല്പമാണ് ‘നഗരപരീക്ഷണശാലാ സമീപനം’ അഥവാ ‘അർബൻ ലാബ് അപ്രോച്ച്’. ഇതൊരു തുറന്ന സമീപനമാണ്. പുതിയ പരീക്ഷണങ്ങൾക്കും കൂട്ടായ പ്രവർത്തനങ്ങൾക്കും ഇത് വേദിയൊരുക്കുന്നു. നിലവിലുള്ള നല്ല പ്രവർത്തനങ്ങൾക്കും പ്രവണതകൾക്കും പ്രാധാന്യം നൽകിക്കൊണ്ടുതന്നെ പുതിയ

ആശയങ്ങൾക്കും കാഴ്ചപ്പാടുകൾക്കും പ്രോത്സാഹനം നൽകുന്നു. അതുകൊണ്ടു തന്നെ നഗരസമൂഹം ഇന്നു നേരിടുന്ന പ്രശ്നങ്ങളെ സമഗ്രവീക്ഷണത്തോടെ സമീപിക്കാനും വിവിധ പദ്ധതികളുടെയും സ്ഥാപനങ്ങളുടെയും ഭാഗഭാക്കുകുന്നവരുടെയും സംയോജിത പ്രവർത്തനങ്ങളിലൂടെ അവയ്ക്ക് ശാശ്വത പരിഹാരം കണ്ടെത്താനുള്ള അന്വേഷണങ്ങൾക്കു ഇത് ഉത്തേജനം പകരുന്നു. ഈ പശ്ചാത്തലത്തിലാണ് കൊച്ചി നഗരസഭ Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) എന്ന പ്രസ്ഥാനവുമായി കൈകോർത്ത് അതിന്റെ 'സുസ്ഥിര നഗര വികസന- സ്മാർട്ട് സിറ്റി (SUD-SC) പ്രോജക്റ്റിന്റെ ഭാഗമായി 'എൻകോച്ചി' എന്ന പേരിൽ 'അർബൻ ലാബ്' പദ്ധതിക്ക് രൂപം നൽകിയത്. വിവിധ പദ്ധതി പങ്കാളികളെ ഉൾപ്പെടുത്തിയുള്ള പങ്കാളിത്ത ആസൂത്രണ പ്രക്രിയയിലൂടെ സുസ്ഥിര നഗരവികസനം സംബന്ധിച്ച ഭാവനാത്മകവും നൂതനവുമായ ആശയങ്ങളും പൊതുജനാവബോധവും പരിപോഷിപ്പിക്കുകയാണ് ഇതിന്റെ ഉദ്ദേശ്യം. ഈ സംരംഭത്തിന്റെ പ്രധാന ലക്ഷ്യങ്ങൾ ഇവയായിരുന്നു:

- നഗരവികസനവുമായി ബന്ധപ്പെട്ട വർത്തമാന-ഭാവി കാല വെല്ലുവിളികളും അവസരങ്ങളും സംബന്ധിച്ച അനുഭവങ്ങൾ സമാഹരിച്ച് പൊതുജനങ്ങളിൽ അവബോധം സൃഷ്ടിക്കുക.
- നൂതന ഡിജിറ്റൽ സാങ്കേതിക വിദ്യകളും മറ്റു പങ്കാളിത്ത രീതികളും പ്രയോജനപ്പെടുത്തി നിലവിലുള്ള നഗരവികസനസംരംഭങ്ങളുടെ പ്രാധാന്യം ഉയർത്തിക്കാട്ടുകയും സുസ്ഥിര നഗരവികസനത്തിന് സഹായകമായ പുതിയ പദ്ധതികൾ പ്രോത്സാഹിപ്പിക്കുകയും ചെയ്യുക
- വിവിധ മേഖലകളുടെ സഹകരണം ശക്തിപ്പെടുത്തിക്കൊണ്ട് സംയോജിത നഗരവികസനത്തിനായി സംയുക്ത പദ്ധതികൾ രൂപകൽപ്പന ചെയ്യുക
- കൊച്ചിയിൽ SUD-SC പ്രോജക്ടുമായി ചേർന്ന് സംയോജിത നഗരവികസന സമീപനം പ്രാവർത്തികമാക്കുന്നതിന് സാധ്യതയുള്ള ഏതാനും സ്ഥലങ്ങൾ കണ്ടെത്തുക വൈവിധ്യമാർന്ന ഒരു കൂട്ടം പങ്കാളിത്ത ഉപാധികളുപയോഗിച്ചുള്ള വ്യത്യസ്ത പരിപാടികളും പ്രവർത്തനങ്ങളും ഉൾപ്പെടുത്തിയുണ്ടു നാലുമാസം നീണ്ട 'എൻകോച്ചി' സംരംഭത്തിന്റെ രീതിശാസ്ത്രം. അവയുടെ

ഏകദേശരൂപം ചുവടെചേർത്തിരിക്കുന്ന ചിത്രീകരണത്തിൽ കാണാം

Figure 1-Caption:
 ജനുവരി - പ്രോജക്ട് സമാരംഭം
 മാർച്ച്- സ്പഷ്യലൈസ്ഡ് പ്രദർശനം, അർബൻ ലാബ് വിവിധ പദ്ധതി പങ്കാളികളുടെ ശിൽപ്പശാലകൾ എന്റെ കൊച്ചി വെബ് ആപ്പ്
 ഏപ്രിൽ - നിശ്ചിത പദ്ധതി പങ്കാളികളുടെ ശിൽപ്പശാലകൾ ജൂൺ: അർബൻ ടൈംസ്- അയൽക്കൂട്ട ശിൽപ്പശാലാ പരമ്പര ഡിസൈൻസ്പ്രിന്റ്- പ്രഭാഷണങ്ങൾ, ചലച്ചിത്ര പ്രദർശനങ്ങൾ സിമ്പോസിയം - കൊച്ചി പരിപ്രേക്ഷ്യങ്ങൾ നഗര രൂപകൽപ്പന - മത്സരം (അർബൻ ഡിസയിൻ കൊമ്പട്ടീഷൻ)

തുടർച്ചയായ പ്രദർശനം, വെബ്സ്പെയ്സ് ചിത്രം ഒന്ന് - 'എൻകോച്ചി' പിന്നിട്ട നാഴികക്കല്ലുകൾ- പ്രവർത്തനങ്ങളുടെ കാലാനുക്രമമായ വിഹാഗ വീക്ഷണം

കൊച്ചി നഗരത്തെക്കുറിച്ചുള്ള ഗുണാത്മകവും പരിമാണസംബന്ധ വുമായ (qualitative and quantitative) വിവരങ്ങൾ ശേഖരിച്ച് ഭൗതിക-ഡിജിറ്റൽ രൂപങ്ങളിൽ ക്രോഡീകരിച്ച് ചർച്ച ചെയ്യുകയും പ്രദർശിപ്പിക്കുകയും ചെയ്യുന്നു ഈ പ്രക്രിയയുടെ പ്രഥമഘട്ടം. തുടർന്ന് സംവേദനാത്മകമായ ഒരു പ്രദർശനം തയ്യാറാക്കി അതിലൂടെ പൊതുജനങ്ങളുമായും പ്രത്യേക ഗണത്തിൽപ്പെട്ട ഗ്രൂപ്പുകളുമായും നിരന്തരം ആശയവിനിമയം നടത്തി. നഗരപരിധിയിൽ താമസിക്കുന്ന അംഗപരിമിതർ, സർവകലാശാലാ വിദ്യാർത്ഥികൾ, സ്കൂൾ കുട്ടികൾ എന്നിവരുൾപ്പെട്ടതാണ് രണ്ടാമത്തെ വിഭാഗം. അതിനുശേഷം കൊച്ചി നഗരസഭ, കൊച്ചി സ്മാർട്ട് മിഷൻ (CSML), വിശാല കൊച്ചി വികസന അഥോറിറ്റി (GCCA), കുടുംബശ്രീ തുടങ്ങി നഗരഭരണ സംവിധാനത്തിലെ വിവിധ വകുപ്പുകളുടെയും വിഭാഗങ്ങളുടെയും പ്രതിനിധികൾ മുതൽ പൗരസംഘടനാപ്രവർത്തകർ, അക്കാദമിക വിദഗ്ധർ, സ്വകാര്യമേഖലാ പ്രതിനിധികൾ വരെയുള്ളവരെ പങ്കെടുപ്പിച്ച് ശിൽപ്പശാലകൾ നടത്തി. അതിലൂടെ സംയോജിത നഗരവികസനം സംബന്ധിച്ച സങ്കൽപ്പനം ജനങ്ങളുമായി ചർച്ച ചെയ്യുകയും അടുത്ത ഘട്ടത്തിൽ നടത്തേണ്ട അയൽക്കൂട്ടചർച്ചകളുടെ സ്ഥലങ്ങൾ നിർണയിക്കുകയും ചെയ്തു.

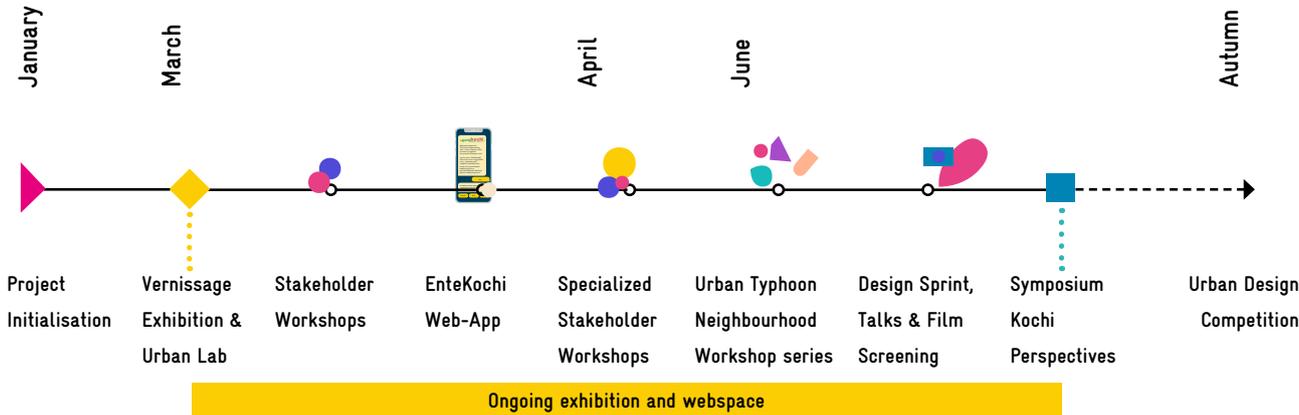


Fig. 01: Chronological overview of activities and milestones of EnteKochi

ഇതിനിടെ പൊതുതിരഞ്ഞെടുപ്പിന്റെ പെരുമാറ്റച്ചട്ടം നിലവിൽ വന്നു. അതു കഴിഞ്ഞ് നഗരത്തിലെ തിരഞ്ഞെടുത്ത ആറു സ്ഥലങ്ങളിൽ അടുത്തുപുട്ടും അയൽക്കൂട്ട ചർച്ചകൾ സംഘടിപ്പിച്ചു. നഗരവികസന സൂത്രണത്തിലും ഗവേഷണത്തിലും പരീക്ഷണങ്ങളിലും ഏർപ്പെട്ടിരിക്കുന്ന, മുൻപെ ആസ്ഥാനമായ URBZ എന്ന പ്രസ്ഥാനത്തിലെ വിദഗ്ധരാണ് ആ പ്രക്രിയയ്ക്ക് ചുക്കാൻ പിടിച്ചത്. പ്രധാന പ്രശ്നങ്ങൾ തിരിച്ചറിയുന്നതിനും നിലവിലുള്ള പദ്ധതികളുടെയും നിർദ്ദിഷ്ട സംരംഭങ്ങളുടെയും സാധ്യതകൾ വിശകലനം ചെയ്യുന്നതിനുമാണ് ശില്പശാലകളിൽ ഊന്നൽ നൽകിയത്. അതുവഴി തദ്ദേശീയർക്ക് നഗരപ്രശ്നങ്ങളിലും സുസ്ഥിര വികസനത്തിലും തൽപ്പരരായ മറ്റു കക്ഷികളുമായി ആശയവിനിമയം നടത്താൻ അവസരമുണ്ടാക്കി. പ്രദർശനം, അതിനെ അടിസ്ഥാനമാക്കിയുള്ള സംവാദങ്ങൾ, ഡിജിറ്റൽ വെബ് ആപ്ലി, വിവിധ ശിൽപ്പശാലകൾ, അയൽക്കൂട്ട ചർച്ചകൾ തുടങ്ങിയവ ഉൾപ്പെട്ട 'എന്റെ കൊച്ചി' പ്രക്രിയയിലൂടെ ശേഖരിച്ച അറിവും വിവരങ്ങളും സംഗ്രഹിച്ച്, വിശകലനം ചെയ്ത് അതിനെ നഗരത്തിന്റെ സമഗ്ര വികസനത്തിനുള്ള പ്രേരണാഘടകമായി പരിവർത്തനം ചെയ്യുകയായിരുന്നു അടുത്ത ഘട്ടം. ഒരാഴ്ച നീണ്ട, 'ഡിസൈൻ സ്പ്രിന്റ്' എന്നറിയപ്പെടുന്ന ഒരു 'സ്റ്റുഡിയോ ഉദ്യമ'ത്തിലൂടെയാണ് അത് രൂപകൽപ്പന ചെയ്തത്. പ്രധാനമായും താഴെപ്പറയുന്ന വിഷയങ്ങൾക്കാണ് അതിൽ ഊന്നൽ നൽകിയത്:

- ഗതാഗത ചലനക്ഷമതയും സമ്പദ്ഘടനയും,
- പൊതുഇടങ്ങൾ,
- ജലപരിപാലനവും കാലവാസ്ഥാവ്യതിയാനവും,
- പാർപ്പിടവും അടിസ്ഥാന സേവനങ്ങളും,
- ചലനാത്മകമായ അയൽക്കൂട്ട രൂപീകരണം.

നഗരപരിവർത്തന മാന്വേജ്മെന്റ്, സംയുക്ത കർമ്മപദ്ധതി രൂപീകരണം, നഗരവികസന പഠനം എന്നിവയിൽ വൈദഗ്ധ്യവും ഇന്ത്യയിലും ജർമ്മനിയിലും വിപുലമായ പ്രവർത്തനപരിചയവുമുള്ള URBANISTA എന്ന ന്താരാഷ്ട്ര സ്ഥാപനമാണ് 'ഡിസൈൻ സ്പ്രിന്റ്'നും 'എന്റെ കൊച്ചി' പ്രക്രിയയ്ക്കും മേൽനോട്ടം നിർവഹിച്ചത്.

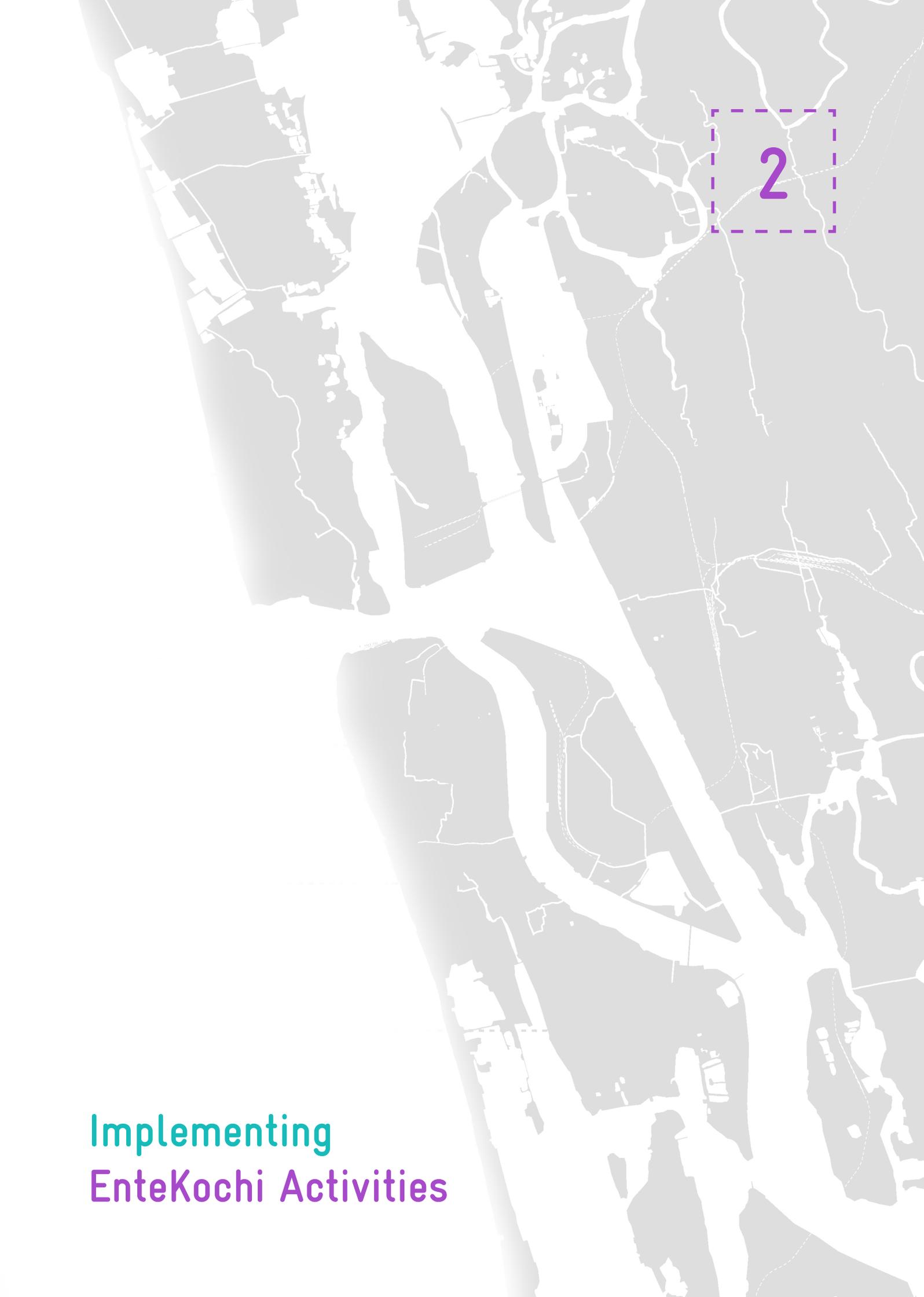
എറണാകുളം ടൗൺ ഹാളിൽ പൊതുജനപങ്കാളിത്തത്തോടെയുള്ള സിമ്പോസിയം, സമഗ്രമായ ഒരു പ്രദർശനം എന്നിവയോടെയാണ് 'എന്റെ കൊച്ചി' പ്രക്രിയ ക്രോഡീകരിച്ചത്. ഈ സംരംഭത്തിന്റെ ഫലങ്ങൾ വിലയിരുത്തുന്നതിന് ബഹു.മേയർ പൊതുജനങ്ങളെയും വിവിധ മേഖലകളിലുള്ള പദ്ധതിപങ്കാളികളെയും ക്ഷണിച്ചു. ദേശീയ-അന്തർദേശീയ തലങ്ങളിലുള്ള അനുഭവ പാഠങ്ങളുടെയും പഠനങ്ങളുടെയും അടിസ്ഥാനത്തിൽ പ്രാദേശിക പരിജ്ഞാനം എങ്ങനെ വിപുലീകരിക്കാമെന്നും ഭാവി പ്രവർത്തനങ്ങൾ എപ്രകാരം കരുപ്പിടിപ്പിക്കാമെന്നുള്ള ബൗദ്ധികവ്യായാമം ആയിരുന്നു ആ സിമ്പോസിയത്തിൽ പ്രധാനമായും നടന്നത്. അതോടനുബന്ധിച്ചു നടന്ന ഗ്രൂപ്പ് ചർച്ചയിലൂടെ ആറു അയൽക്കൂട്ടങ്ങൾക്ക് മൂന്നു വീതം പുതിയ പദ്ധതി ആശയങ്ങൾ ഉരുത്തിരിഞ്ഞുവന്നു. അവ പ്രാവർത്തികമാക്കാൻ ആവശ്യമായ വിഭവങ്ങൾ, പദ്ധതി പങ്കാളികൾ, വേണ്ടിവരുന്ന സഹായങ്ങൾ, സമയക്രമം എന്നിവയും ചർച്ചകളിൽ വിഷയമായി. അവയുടെയെല്ലാം ഫലം

ഈ സംക്ഷിപ്ത റിപ്പോർട്ടിൽ ഉൾപ്പെടുത്തിയിട്ടുണ്ട്. 'എന്റെകൊച്ചി' സംരംഭത്തിൽ ഉടനീളം സ്വീകരിച്ചു തുറന്ന സമീപനവും അനുഭവങ്ങൾ പങ്കുവയ്ക്കാൻ നല്കിയ അവസരങ്ങളും പരമാവധി ജനങ്ങളെ പങ്കാളികളാക്കാൻ ഉപയോഗപ്പെടുത്തിയ നൂതന പങ്കാളിത്ത ആശയവിനിമയോപാധികളും നഗരത്തിന്റെ സുസ്ഥിര ഭാവി ഉറപ്പുവരുത്തുന്നതിനുള്ള പദ്ധതികളുടെ കാര്യത്തിൽ എല്ലാവരിലും കൂടുതൽ ശ്രദ്ധയും താൽപ്പര്യവുമുണ്ടാക്കാൻ സഹായകമായിട്ടുണ്ടെന്നാണ് പ്രാഥമിക വിലയിരുത്തൽ ഫലങ്ങൾ വ്യക്തമാക്കുന്നത്. അതിലുപരിയായി സംയോജിത നഗരവികസനത്തിൽ പ്രാദേശികാവശ്യങ്ങളുടെ പ്രാധാന്യം ഉറപ്പിക്കാനും നിലവിലുള്ള ചില സമീപനങ്ങളെ ദേശീയ-അന്തർദേശീയ സങ്കൽപ്പങ്ങളുമായി താരതമ്യം ചെയ്യാനും ഈ പ്രക്രിയ അവസരമൊരുക്കി. സംയോജിത നഗരവികസന ശേഷി ഉയർത്തുന്നതിനുള്ള നിരവധി ഉപാധികളും സംവിധാനങ്ങളും സാധ്യതകളും പരീക്ഷിക്കപ്പെടുകയും ചർച്ച ചെയ്യുകയും ചെയ്തു. ഡിജിറ്റൽ സാങ്കേതികവിദ്യയുടെ സഹായത്തോടെയുള്ള നഗര-വിശകലന പട്ടിക (സിറ്റി സ്കോപ്പ്), ഡിസൈൻ പ്രിന്റിംഗ് മരത്തിലുണ്ടാക്കിയ നഗരമാതൃകയും പോലുള്ള ഭൗതിക രൂപരേഖകൾ തുടങ്ങിയവ നിലവിലുള്ള വെല്ലുവിളികൾ തിരിച്ചറിയാനും പരിഹാര സാധ്യതകൾ കണ്ടെത്താനും ഏറെ സഹായകമായി. ഇതിനു പുറമെ, വ്യത്യസ്തവിഭാഗം ജനങ്ങളുടെ പ്രശ്നങ്ങൾ കേൾക്കുന്നതിനും ആവശ്യങ്ങൾ ചർച്ച ചെയ്യുന്നതിനും ഈ സംരംഭം വേദിയൊരുക്കി. സ്കൂൾ-കോളേജ് വിദ്യാർത്ഥികൾക്കും അംഗപരിമിതികൾക്കും കൊച്ചിയിലെ നഗരജീവിതത്തിൽ നേരിടുന്ന പ്രശ്നങ്ങൾ ഒരുദാഹരണം. ഇതിനെല്ലാം പുറമെയാണ് അയൽക്കൂട്ടസഞ്ചാരങ്ങളിലൂടെയും ചർച്ചകളിലൂടെയും ഗ്രഹിക്കാൻ കഴിഞ്ഞ നാട്ടറിവുകളും കണ്ടെത്തിയ തനതു പ്രാദേശിക സംരംഭങ്ങളും. പരിണിതപ്രജ്ഞയും ഭാവിയുടെ വാഗ്ദാനങ്ങളുമായ നിരവധിപേരെ ഈ പ്രക്രിയയിലൂടെ തിരിച്ചറിയാൻ കഴിഞ്ഞു. വിഭവപരിമിതികളുണ്ടായിരുന്നുവെങ്കിലും തിരഞ്ഞെടുപ്പുകാലത്തെ മാതൃകാപെരുമാറ്റച്ചട്ടം മൂലമുണ്ടായ കാലതാമസം ഉൾപ്പെടെ ഈ പ്രക്രിയയ്ക്കിടയിലുണ്ടായ വെല്ലുവിളികളെ നഗരസഭയുടെ സജീവമായ ചട്ടക്കൂടിനുള്ളിൽ നിന്നു തന്നെ അതിജീവിക്കാൻ കഴിഞ്ഞു. എങ്കിലും നിലവിൽ ഉണ്ടായിരുന്ന സാഹചര്യത്തിൽ പരിഹരിക്കാൻ കഴിയാതെ വന്ന ചില പ്രശ്നങ്ങളും ഉണ്ടായിട്ടുണ്ട്. അവ ഇനിയുള്ള ഘട്ടങ്ങളിൽ കൈകാര്യം ചെയ്യാൻ കഴിയുമെന്നാണ് പ്രതീക്ഷ. ഉദാഹരണത്തിന് അർബൻ ലാബിന്റെ സ്ഥിരം വേദിയായി ഫോക്ക് ലോർ കൾച്ചറൽ തിയേറ്ററിൽ ആണ്. അത് അന്ന് ബോധപൂർവ്വം തിരഞ്ഞെടുത്തതാണ്. വിവിധതരം ഗതാഗത സംവിധാനങ്ങളുടെ സംഗമകേന്ദ്രം, മുഖ്യ വിനോദസഞ്ചാരകേന്ദ്രം, 'കൊച്ചി മുസിരിസ് ബിനാലെ 2019' ന്റെ വേദി എന്നിങ്ങനെ തന്ത്രപ്രധാനമായ പല കാരണങ്ങൾ ആ തീരുമാനത്തിനു പിന്നിലുണ്ടായിരുന്നു. എന്നാൽ അത് ഫോർട്ട് കൊച്ചി പ്രദേശത്താകയാൽ നഗരത്തിൽ താമസിക്കുന്ന ഭൂരിപക്ഷം പേർക്കും അവിടെ എത്തിച്ചേരാൻ പ്രയാസമായിമാറി. അതുകൊണ്ട് ഒരു സഞ്ചരിക്കുന്ന പ്രദർശനശാലയോ അധികമായി ഒരു വേദി കൂടിയോ ഒരുക്കുന്ന കാര്യം ഭാവിയിൽ പരിഗണിക്കേണ്ടതായിട്ടുണ്ട്. ഇന്ത്യയിൽ അധികാരവികേന്ദ്രീകരണത്തിൽ സവിശേഷ

മാതൃകകൾ സൃഷ്ടിച്ച സംസ്ഥാനമാണ് കേരളം. പങ്കാളിത്ത ബജറ്റിന്മേൽ, ജനകീയാസൂത്രണം തുടങ്ങിയ നൂതനാശയങ്ങളിലൂടെ വികസിപ്പിച്ചെടുത്ത പല പുതിയ സംരംഭങ്ങളെയും സങ്കല്പനങ്ങളെയും പദ്ധതികളെയും വികസന മുൻഗണനകളെയും പറ്റിയുള്ള ഒരേകദേശ ചിത്രം ഒപ്പിയെടുക്കാൻ നഗരസഭയിലെ വാർഡ് കൗൺസിലർമാർ, സ്റ്റാന്റിന്മേൽ കമ്മിറ്റിയംഗങ്ങൾ തുടങ്ങിയവരുമായി നടത്തിയ ചർച്ചകൾ സഹായകമായി. അതോടൊപ്പം അവയെപ്പറ്റി ആഴത്തിൽ ചിന്തിക്കാനും ആശയങ്ങൾ പങ്കുവയ്ക്കാനും നഗരത്തിന്റെ നിലവിലുള്ള വികേന്ദ്രീകൃത പങ്കാളിത്ത ആസൂത്രണപ്രക്രിയയിൽ അവയെ സന്നിവേശിപ്പിക്കാനും 'എന്റെ കൊച്ചി'യിലൂടെ കഴിഞ്ഞു.

ചുരുക്കത്തിൽ ഒരേസമയം രണ്ടു പ്രക്രിയകളാണ് 'എന്റെ കൊച്ചി'യിൽ സംഭവിച്ചത് - ഒന്ന്: വിവിധ വികസനപങ്കാളികളെ ഉൾപ്പെടുത്തിയുള്ള പങ്കാളിത്ത ആസൂത്രണപ്രക്രിയ സംബന്ധിച്ച നൂതന സങ്കേതം വികസിപ്പിച്ചെടുക്കുക. രണ്ട്: അതിന്റെ ശരിയായ പ്രയോഗക്ഷമത തൽ സമയം പരീക്ഷിച്ചറിയുക. തുടർപ്രവർത്തനങ്ങളിൽ വിഭാവനം ചെയ്തിരിക്കുന്നതു പോലെ, ഇതിൽ നിന്ന് പ്രചോദനം ഉൾക്കൊണ്ട്, പ്രഥമഘട്ടത്തിൽ വിശകലനവിധേയമാക്കിയ അയൽക്കൂട്ടങ്ങളിലൊന്നിലോ ജനകീയാസൂത്രണ പ്രവർത്തനങ്ങളിലോ പൗരസമൂഹ കൂട്ടായ്മകളിലോ മുൻ കാലത്ത് വികസിപ്പിച്ചെടുത്ത മറ്റാശയങ്ങളുമായി സമ്പന്നിപ്പിച്ച് നൂതനമായ അന്വേഷണ പരീക്ഷണങ്ങൾ തുടരുന്ന പക്ഷം അത് നഗരവികസന പ്രക്രിയയുടെ മുന്നോട്ടുള്ള പ്രയാണത്തിൽ പുതിയൊരു ദിശാബോധവും ആത്മവിശ്വാസവും പ്രദാനം ചെയ്യുമെന്ന കാര്യത്തിൽ സംശയമില്ല.

ചുരുക്കത്തിൽ, കൊച്ചി നിവാസികൾക്ക് അവരുടെ തനതായ ജീവിത സരണിയിൽ വർദ്ധിച്ച പ്രത്യാശയോടെ മുന്നോൻ പ്രചോദനമരുളുന്ന പുതിയൊരു പാത സജ്ജീകരിക്കുകയായിരുന്നു ഈ പ്രക്രിയയിലൂടെ 'എന്റെ കൊച്ചി'- കൂട്ടായ ചിന്തകളിലൂടെ, അന്വേഷണങ്ങളിലൂടെ, പരിശ്രമങ്ങളിലൂടെ, വർദ്ധിച്ച പങ്കാളിത്തത്തിലൂടെ, സുസ്ഥിര വികസനത്തിലൂടെ കൂടുതൽ വാസയോഗ്യമായ 'നമ്മുടെ കൊച്ചി'.



2

Implementing EnteKochi Activities

2.1 Context and Objectives

The current situation of many Indian cities is characterized by numerous challenges towards the achievement of sustainable urban development. To highlight a few: The infrastructure within such cities proves to be inadequate and outdated, as they struggle to keep up with the demands of rapid urbanization. Often there is a lack of coordination within planning departments and between different stakeholders leading to inefficient spatial or administrative planning procedures. Moreover, informality, economic interdependencies, complex settlement patterns and insecurity of tenure etc. are insufficiently addressed in the existing planning and development processes. This in turn further heightens the challenge for a sustainable urban transformation.

A means of countering the issues highlighted above is believed to be through citizen participation and the effective translation of local knowledge. Globally, there is a growing demand for, and implementation of, citizen participation to achieve better and more sustainable urban development outcomes.

Citizen participation can among others be catalyzed through the implementation of a concept known as an 'Urban Lab'. An Urban Lab or laboratory is an initiative, which can be defined as an experimental space where inhabitants and users are encouraged to participate in the making of their city. Such an experimental space can be hosted on both digital/online and offline platforms in order to foster collaboration in cities. It is considered imperative that local, national and international experts, from official, professional, academia and civil society backgrounds, as well as citizens (as experts of everyday life and their local context) meet and exchange their points of view within a structured process framework. The Urban Lab aspires to do this while addressing the most urgent future tasks for a city without any thematic delimitations. This means the Lab encourages an integrated view of the city-level challenges and enables a search for synergies in coping with those. However, such an open-ended approach also highlights the experimental nature of this process to foster creativity and innovation in the city.

In this background, EnteKochi, which translates to "My Kochi" from Malayalam, was conceived as a participatory planning process of the Kochi Municipal Corporation (KMC), jointly designed and implemented by GIZ, under the Sustainable Urban Development – Smart Cities (SUD-SC) project and supported in its implementation by international and national urban planning organizations, Urbanista and Urbz, respectively. The initiative encouraged the collective engagement of officials, professionals, civil

society, private sector, academia and citizens in thinking creatively and freely about the future of Kochi using both offline and online participatory tools. It acknowledged the unique existing culture of participation and self-governance in Kerala and Kochi, and therefore, saw Kochi as a perfect ground to implement an Urban Lab format, one that intended to build further on the existing spirit of collaboration, cooperation and grassroots-level awareness among the citizens of this city.

Participatory urban development processes in general aim to discuss divergent interests on a common platform, to share power and responsibilities between stakeholders to foster ownership, and to mobilize resources for visioning, promoting and ensuring the successful implementation of sustainable projects. These were all goals shared by the EnteKochi process in its implementation.

Objectives of EnteKochi:

The overarching aim of the SUD-SC project is to promote and apply long term sustainable concepts for integrated urban development and thereby, enhance the quality of life for the people living in, working in or visiting Kochi.

Therefore, the objectives of EnteKochi were:

1. To collect experiences and spread awareness among the public about present and future urban development challenges and opportunities.
2. To highlight existing urban development initiatives in the city and to promote new ones that can enable sustainable urban development.
3. To test and introduce new— digital and offline - forms of participatory leveraging on the existing culture of participation in the city.
4. To encourage the creative exchange of views and develop a joint responsibility and sense of community among stakeholders for the development of Kochi.
5. To strengthen or introduce the concept of cross-sectoral cooperation and develop a joint understanding of Integrated Urban Development (IUD).
6. To identify a set of potential locations for piloting IUD in Kochi with the support of GIZ SUD-SC project.

2.2. Organizing EnteKochi – Project Partners

EnteKochi as a process was organized and implemented by a team of organizations, bringing in different strengths to the overall participatory process, ensuring a wide spectrum of experience and expertise. The team included representatives of Kochi Municipal Corporation (KMC) who guided the overall process, based on their vast experience with participatory processes based on the introduction of local Self Government institutions and processes. The on-ground participatory initiatives were implemented by GIZ, Urbanista and Urbz. The background and role of each of these organizations involved in this endeavor are outlined below.

The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), is a government owned not-for-profit organization in charge of technical cooperation. For more than 60 years, Indo-German Development Cooperation has been successfully undertaken in the area of sustainable development, where GIZ works closely with its Indian partners to deliver technical, economic and organizational support for the achievement of developmental outcomes.

Since 2018, the Ministry of Housing and Urban Affairs (MoHUA) and GIZ India are jointly implementing the “Sustainable Urban Development - Smart Cities” (SUD-SC) project. The project supports the National Ministry and the State Governments (Odisha, Tamil Nadu, and Kerala) in the policy formulation on housing for all, basic services, planning framework, and monitoring of the Sustainable Development Goal (SDG) number 11. It also supports the three selected Smart Cities (Bhubaneswar, Coimbatore, and Kochi) in implementing concepts of integrated urban planning approaches.

The SUD-SC project team, in partnership with KMC conceptualized, coordinated, directed and implemented the EnteKochi participatory planning process.

Urbanista is a German participatory urban development consultancy, which focuses on co-creative urban design and spatial research. The office has been in the practice of urban development since 1998. Their portfolio ranges from integrated urban development concepts for leading municipalities and private actors, to process designs, to master plans and urban action plans to studies on urbanism and urban change management. Through their previous Urban Labs – namely, Nexthamburg and Nextbengaluru conducted in Hamburg and Bengaluru, respectively - Urbanista gained substantial experience in the format of

setting up interactive Urban Living Labs in Germany and India.

Urbanista was selected by GIZ as the consultancy firm responsible for the conceptualization and setting up of the Urban Lab in Kochi called EnteKochi.

Urbz is an experimental, cross-disciplinary collective working in urban spaces with associations, municipalities, and private clients around the world. Founded in Mumbai in 2008, it has now affiliated offices in Geneva, Bogota and Seoul. Urbz promotes individual expression, creative public projects, grassroots-level involvement and bottom-up development in the urban development space. Urbz’ work has been showcased and exhibited among other at the Dr. Bhau Daji Lad Museum (Mumbai) and the Museum of Modern Arts (New York).

The mandate of Urbz was to organize neighborhood-level consultations and participatory workshops all over Kochi based on their expertise in neighborhood sites and to support the associated EnteKochi public exhibition.

The above-mentioned project partners are just the initiating agencies. The whole concept of the Urban Lab EnteKochi, as a participatory urban development process, is to facilitate interaction and exchange of a completely diverse set of stakeholders, including those who had already the chance in the past to contribute or did not yet have the chance to contribute but want to influence the further development of Kochi in an integrated and sustainable manner. The below graphic shows a network of parties involved in the EnteKochi process.

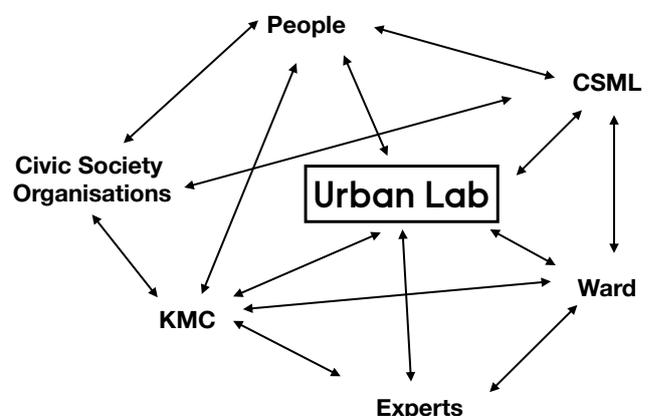


Fig. 02: Parties involved in EnteKochi

2.3 Methodology

Background: collaboration between Kochi and GIZ

For almost a decade now, GIZ has enjoyed a strong partnership with the state of Kerala, as well as the city officials in Kochi. Indo-German technical cooperation projects in the past like ‘Support to National Urban Sanitation Policy’ (SNUSP), ‘ASEM’ etc. have evolved a cooperative partnership that has continuously supported Kochi’s quest for sustainable and inclusive development. The nature of this relationship was further strengthened in January 2019 during the “Joint Planning Workshop for State of Kerala and Kochi on GIZ-supported Urban Projects”. Among other participants, the workshop comprised representatives of KMC, Cochin Smart Mission Limited (CSML), Kerala Water Authority (KWA), Kerala Institute of Local Administration (KILA), Greater Cochin Development Authority (GCDA), Department of Town & Country Planning (DTCP), Local Self Government Department (LSGD) and various civil society groups. A key outcome of this workshop was an agreement between GIZ and KMC to provide support in cross-sectoral cooperation procedures through a participatory planning approach in Kochi, which would also introduce digital tools for achieving integrated

urban development. This joint decision laid the foundation for what would later become the EnteKochi process.

Based on the outcomes of the January workshop, and following interactions, KMC and GIZ decided to set up the team responsible for implementing EnteKochi. This would allow access to a wider set of expertise in the domain of participatory urban development, from which further citizen engagement, using digital tools and innovative formats, could be encouraged and achieved. Therefore, urban practitioners with both international and domestic experience in participatory planning were brought on board.

EnteKochi = An Urban Lab

Urbanista was involved to develop and implement, with the support of KMC, GIZ and Urbz, the concept for the Urban Lab. As described in chapter 2.1, an Urban Lab is an initiative, which can be defined as an experimental space where inhabitants and users are encouraged to participate in the making of their city. The Urban Lab was conceptualized in two formats - one physical and the other digital.

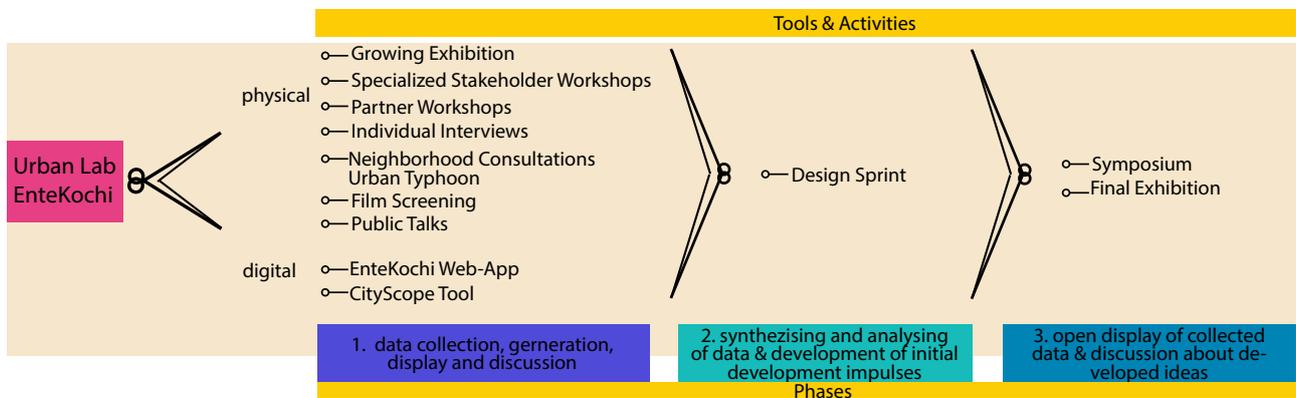


Fig. 03: Tools and Activities of Urban Lab EnteKochi

Both forms of the Urban Lab collated and generated qualitative and quantitative data during the first phase. The ‘Growing Exhibition’ was organized at the Folklore Cultural Theatre, which is located at a strategically engaging place, where a diverse set of people - arriving from the ferry terminal, visiting the Chinese fishing nets, taking a bus from the bus terminal; approaching the nearby municipal building and exploring the Kochi-Muziris Biennale activities – were natural passers-bys. The growing exhibition, which was open and functional between March 8th, 2019 and June 14th, 2019 was open to the public, regardless of their age, gender, professional expertise etc., in line with the core belief about the significance of local knowledge for sustainable urban development. The space was designed to be an interactive

exhibition for discussing and documenting key urban challenges and opportunities with Kochi’s citizens. Thereby, a range of qualitative and quantitative data was obtained from participants on a daily basis. Hereby two rooms offered the possibility of interaction through creative forms of surveys and a wooden city model along with a diverse set of sub-activities. Further data was generated and discussed in detail through ‘Specialized Stakeholder Workshops’. In this framework, special interest groups like differently-abled, school children and university students were invited to share their distinctive experiences, challenges and ideas as special urban user group.

Two partner workshops invited key stakeholders to understand, discuss and integrate the views and interests of

special city-level stakeholders like KMC (Hon'ble Mayor, ward councillors, Kudumbashree (unique state-wide poverty eradication and women empowerment programme etc.), CSML, GCDA etc. into the EnteKochi process and vice versa. Furthermore, the overall concept of participation and integrated urban development was discussed on a local and global level.

In preparation for the 'Neighborhood Consultations', referred to as the Urban Typhoon workshop series, 'Individual Interviews' with key stakeholders like the former mayor of Kochi, the director of the Centre for Heritage, Environment and Development (C-HED) and with representatives of the Kerala Water Authority (KWA), prominent urban practitioners of the city and RWAs were conducted. The neighborhood consultations themselves took place in six different locations spread across the city, selected after the respective interviews and interactions with official city representatives and participants of the various conducted workshops, and inputs from the visitors of the exhibition. As an integral part of the EnteKochi process, the neighbourhood workshops were designed to increase citizen participation and to generate further in-depth location-based qualitative information. The participants of the neighborhood consultations included both local residents, as well as interested local, national and international participants. The interactions in the different locations were divided into three sections:

1. Collective brainstorming to identify critical problems,
2. Walks through the neighborhood in thematic groups, and
3. Group discussions to identify knowledge, ideas and questions.

To reach further stakeholders and different interest groups, 'Public Talks' and 'Film Screenings' were also conducted. In this framework, information were exchanged and ideas discussed.

All the above described participatory tools and their allied activities were thoroughly documented. The growing exhibition, for example, comprising of the survey charts and the wooden model, was photographed after every exercise and transferred into digital tables and graphs. Furthermore, comments and drawings of participants of workshops and other key activities were documented through video recording, photos and written reports.

The complementary digital component was conceived as an online website (www.entekochi.net) which helped increase the outreach and scope of participation (acknowledging that not everyone could make it to the physical space in Fort Kochi). The website, which is designed as a web-app for smart phones, was also launched on March 8th

and will be active till the end of this year. As a second digital component, the digital tool called 'CityScope' was introduced and its application possibilities were discussed as part of this process. It is an innovative digital planning and participation tool, which has been used internationally for enabling Integrated Urban Development (IUD) efforts through modelling and analyzing urban relationships and simulating urban development scenarios.

Moreover, all the quantitative and qualitative data collected, generated and discussed in the first phase were synthesized and analyzed during the 'Design Sprint' and thereafter initial development impulses for the city of Kochi were developed.

The third and last phase comprised of the 'Symposium' and the 'Final Exhibition', both conducted at the Ernakulam Town Hall. During these events, the complete data collected was displayed to the public, and the ideas developed were discussed, along with a potential way forward.

All the different tools, processes and activities discussed above are further described in detail within the respective sections of chapter 2.4.

Limitations:

New concepts and approaches like the Urban Lab, even if embedded in existing structures of participation, like in Kochi, often face constraints in taking everyone on board. Often, it cannot be assured that all potentially relevant and interested stakeholders get informed and have at the end the possibility to interact with such a process.

As the time and financial resources were limited within EnteKochi, it was necessary to concentrate on consciously selected neighborhoods and on selected stakeholders and specific events. To balance these, emphasis was put on creating opportunities and offer spaces that were available and open for the general public at any time – via digital and physical formats. Through these, the EnteKochi process diversified the differently applied tools, activities and geographical locations to try and maximize the interaction among different stakeholder groups.

2.4 Phases and Activities

2.4.1 Overview

The EnteKochi process began with initial ideas, concepts and proposals conceived in late 2018. In the joint planning workshop of GIZ-supported urban projects with KMC, its need was officially corroborated and preparation for this initiative was begun.

From the outset, the Urban Lab was conceptualized as an interactive supplement to traditional participatory planning tools and procedures. As it was designed to interact directly with the users, the design of the lab was in the form of an interactive exhibition supplemented by an online platform, where ideas and wishes for the future of Kochi were collated. Here, the participants got introduced to-, and could discuss, the most urgent urban challenges that their city was facing. The implementation of these ideas in a suitably available location took place over February 2019 and EnteKochi as a process kicked off with its public opening on March 8th, 2019.

In preparation for the public opening and afterwards, stakeholder workshops with important city-level partners like KMC and CSML took place in February and March in order to link the Urban Lab with the formal planning and development agencies of the city and to discuss the concept of Integrated Urban Development (IUD).

In the context of new approaches and innovations, it was also recognised and anticipated that the process is an open-ended one, meaning that a fixed outcome cannot and was not intended to be arrived at. This form of catalysing innovation can also face challenges and make mistakes as it tries to facilitate the thinking and development of ideas that are considered “out of the box”. Thus, for these attempts to succeed, along with the requirement of open-minded stakeholders, there is also a need for the constant willingness of them to recalibrate and take up learnings and positive experiences, to pave way for the potential next steps to this process. It is expected that despite these limitations, EnteKochi as a process and as an outcome has many learnings for the city of Kochi towards its achievement of sustainable development.

Specialized workshops for select target groups at the Urban Lab ensured that special groups like students, children or persons with disabilities, that are often overlooked in urban planning processes also get involved.

The activities mainly conducted in one location and the complementary online presence was supplemented by a series of neighborhood-level participatory workshops called the Urban Typhoon workshop series which were conceptualized and implemented by Urbz. For this stage of the process, the Lab left its basecamp at the Folklore Cultural Theatre in Fort Kochi and hit the ground in six vibrant and geographically varied neighborhoods of Kochi. The aim of this participatory workshop series was to reach out to the citizens of Kochi directly in diverse contexts and address the potentials and challenges of their places with ideas and deliberations on site.

The following stage of the Design Sprint marked the phase when the knowledge learned through the various stages of this process was summarized and converted into initial development impulses for the city to carry forward. Within a week of intense design work, the EnteKochi Map was produced along with the extended exhibition.

At the EnteKochi Symposium, outcomes of the Urban Lab EnteKochi, along with the extended exhibition on various topics that this process brought up were showcased. A

preliminary discussion on how these initial ideas could be further developed into sustainable solutions for Kochi's future was also discussed. The following timeline illustrates the phases and activities of EnteKochi.

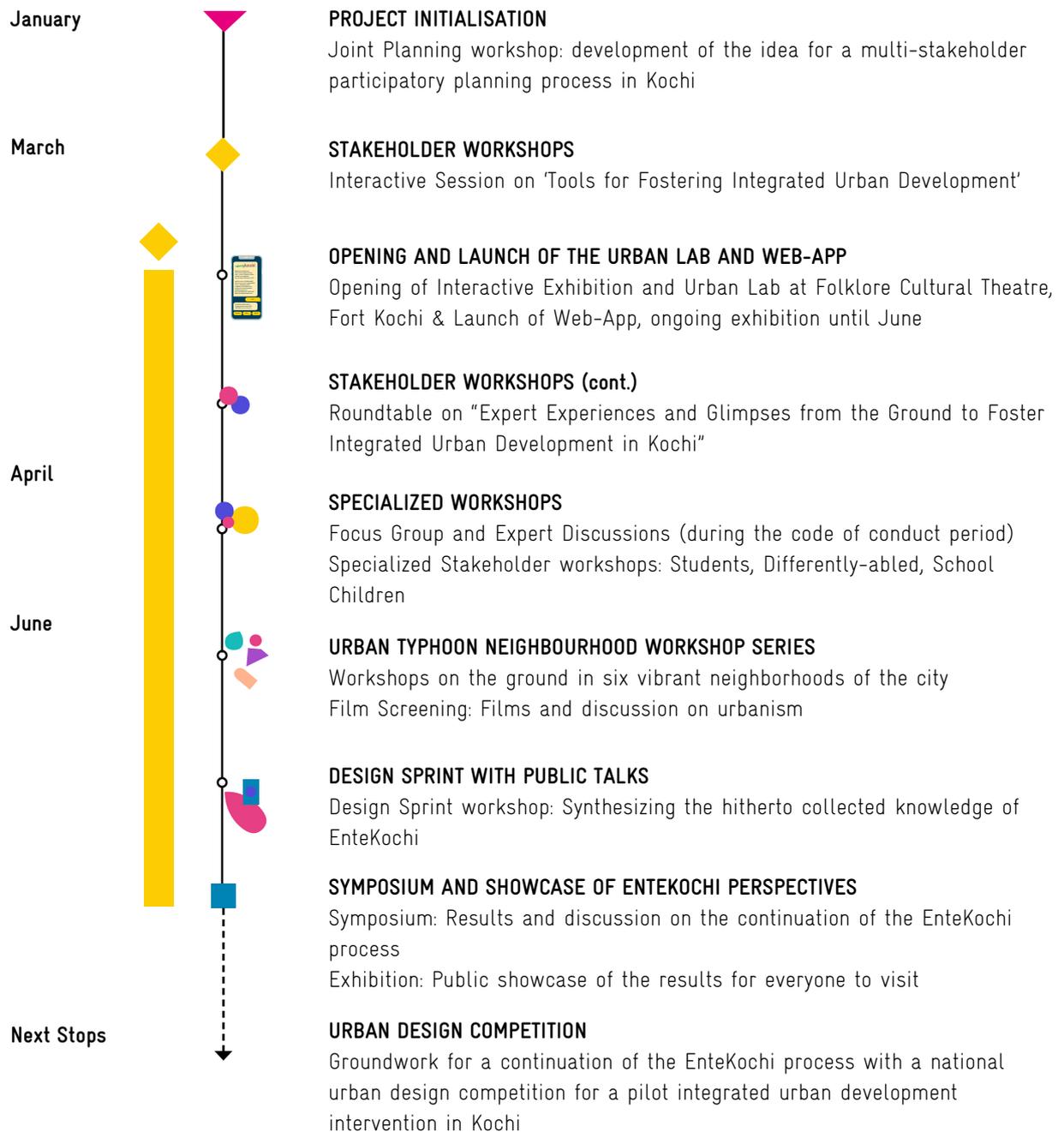


Fig. 04: Phases and Activities of EnteKochi

2.4.2 Initializing EnteKochi

Kick Off with Joint Planning workshop for GIZ supported urban projects in Kochi and Kerala

On 18th January 2019, a “Joint Planning Workshop for State of Kerala and Kochi city on GIZ- supported Urban Projects” was conducted by GIZ and Kochi Municipal Corporation. Thematic discussions on topics related to sustainable urban development were coordinated between participants from various governmental and non-governmental organizations such as KMC, CSML, KWA, DTCP, LSGD, GCDA etc. and key civil society organizations and academic institutions from the city. Working Groups on key topics, as solid waste management, housing, planning and integrated water management were formed whose discussions led to the development of broad plans and initiatives where GIZ support was requested to assist in the implementation of sustainable urban development projects.

One key outcome of this workshop was the agreement between KMC and GIZ to foster cross-sectoral and inter-departmental coordination by implementing a multi-stakeholder participatory planning process, which could also be used as a tool to foster Integrated Urban Development (IUD) efforts in Kochi. This decision was the foundation to initiate and prepare for the launch of the ‘EnteKochi’ process.



Fig. 05: Group activities in progress

2.4.3 Stakeholder Workshops

A series of stakeholder workshops with partners were held to integrate the views and interests of the special city-level stakeholders like KMC and CSML into the EnteKochi process while disseminating the same to a larger audience. Descriptions of these events are provided as follows.

1. Interactive Session on “Tools for Fostering Integrated Urban Development”

Introduction

The main objective of the workshop - ‘Tools for Fostering Integrated Urban Development’ held on 2nd March 2019 - was to understand and discuss the concept and main characteristics of Integrated Urban Development (IUD) in the global and Indian context. This effort helped to develop a joint understanding and agreement for the utilization of various contextualized tools, both offline and online (digital), for fostering future integrated planning in Kochi.

Proceedings

Mr Georg Jahnsen, Project Manager, SUD-SC, GIZ India, set the context for the workshop by explaining the essence of the SUD-SC project and its conceptual relationship with IUD. In this framework the interrelation and important interdependence of the three project verticals ‘governance and planning’, ‘housing and settlements’ and ‘basic services’ were also discussed, mainly in connection with the three key levels of governance: local, state and central.

Dr. Jörg Rainer Noennig, Professor of Digital City Science at the HafenCity University (HCU), Hamburg from Germany followed this introduction with his presentation on ‘CityScope’, an innovative digital planning and participation tool, which has been used internationally for enabling Integrated Urban Development (IUD) efforts. He listed the following functions of this tool:

1. Viewer (simply viewing maps)
2. Finder (undertaking spatial queries)
3. Analyser (undertaking spatial analysis)
4. Forecaster (modelling, scenario development and forecasting)

An open discussion followed, during which the Hon’ble Mayor of Kochi Municipal Corporation, Ms. Soumini Jain enquired about the effort and time that was needed to prepare comprehensive maps and how the sustainability of such a system could be ensured for Kochi. Prof. Noennig responded that sustainability could only be assured if decision-makers genuinely understood and took ownership

of the operation of such tools in their city and if the adequate staff is available. At a technical and technological level, the sustainability of the system is assured by its open-source nature which allows for the integration of all kinds of maps available or created.

Mr Markus Ewald, Urban Planner, Urbanista, Hamburg, was the next to present. Mr. Ewald began his presentation by highlighting that there were no shortcuts to creating a sustainable urban future. Such a process could only be created through platforms of dialogue and discussion where the cross-sections of citizens, municipal departments, academia, private sector representatives and civil society members participate. To operationalize and test such a process in Kochi and to strengthen the existing culture of participation, certain pilot sites were earmarked in discussion with various experts and representatives of the city. The Folklore Cultural Theatre in Fort Kochi was confirmed as one essential location where a series of activities of the EnteKochi process were to be undertaken over the upcoming months to engage citizens in dialogue while ensuring the momentum of the ongoing Kochi Biennale could segue into this process.

In response to the above, the Hon'ble Mayor, KMC, acknowledged the potential of the participatory tools, both City Scope and EnteKochi as presented and discussed, in producing more effective IUD. Furthermore, the Hon'ble Mayor stressed that existing mechanism like Ward Sabha meetings could also be used and integrated with the digital and participatory tools presented.

The final presentation of the workshop was from Prof. Veena Garella, Senior Urban Planning Expert (former Head of the Department of Urban Planning at School of Planning and Architecture, New Delhi). The presentation emphasized on the enormous potential of Information and Communication Technology (ICT) measures and participatory planning in fostering IUD. She gave examples of interventions to create qualitative changes in the functioning of planning bodies. She emphasized that the triad of 'Technology, Human Resources, and Processes' plays the decisive role in realizing IUD implementation in cities.

Following the presentations, a wrap-up session was conducted in the form of group work. The group work was set up to prepare next steps and an initial road map for fostering Urban Development in Kochi. Partner's and stakeholder's inputs were taken in the form of suggestions for key intervention areas. Whilst many urban challenges in various intervention areas were discussed, including the 'Kochi identity', 'vibrant neighborhood and houses', 'basic services and welfare systems', 'public common grounds

and environment', 'the mobility factor', and 'coastal climate change', the participants stressed that it is not possible to depict a priority among these issues. This meant that all these urban challenges needed to be addressed in Kochi – proof of the need for an integrated urban development approach in the city.

To conclude the proceedings of the workshop, Mr Georg Jahnsen thanked all the participants for their presence and feedback during the interactive session. He talked about the steps that would be taken in the future to activate the IUD tools in the city, starting with the opening of the interactive exhibition at the Folklore Theatre.

Results and Learnings

- The concept of Integrated Urban Development (IUD) was confirmed as being a desirable and suitable way forward to strengthen further the sustainable, people-centered development of Kochi.
- Some participants stressed that the digital tool is very valuable as a spatial tool, to foster overlaying and combining data of different departments (GIS based plans, which have been prepared under AMRUT and RAY should be located and utilized).
- GIZ will support the technical teams in KMC through accompanying and handholding measures to acquire the capacity to own, operate and develop the digital tool 'City Scope' and associated participation tools.
- The possibility of connecting spatial, quantitative data with qualitative data eg. from processes like EnteKochi, was stressed upon.
- It was recognized that wards in many cities have started making ward level plans. This approach should be analyzed and considered if similar plans can be made for Kochi too.
- Consensus was reached that in future planning exercises should be undertaken at all spatial levels (ward, city and regional) 'zooming' in and out to concentrate on the details but not losing the overall picture. This could include the creation of a city-wide vision.
- The opening of the interactive exhibition of EnteKochi at the Folklore Cultural Theatre at Fort Kochi was announced for the upcoming week.

2. Roundtable on “Expert Experiences and Glimpses from the Ground to Foster Integrated Urban Development in



Fig. 06: Prof. Nikolaus Knebel presenting at the event

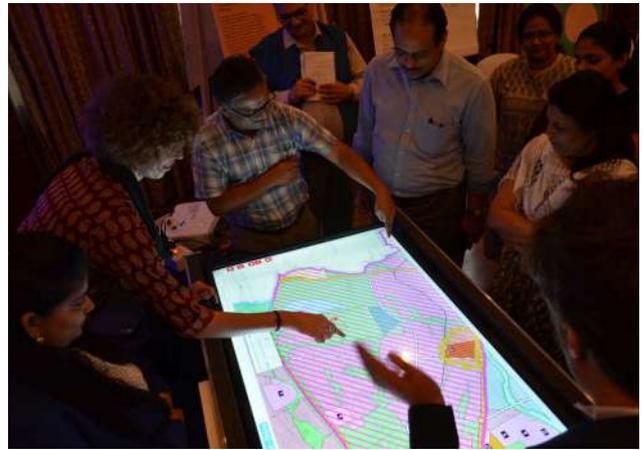


Fig. 07: CityScope applications on display at the event

Introduction to the Roundtable Discussion

The Roundtable on ‘Expert Experiences and Glimpses from the Ground to Foster Integrated Urban Development (IUD) in Kochi’, was conducted on 22nd of March with the purpose to have a discussion on putting IUD into practice. One of the objectives of the workshop was again, this time with a set of numerous stakeholders from the city, to understand the concepts of IUD in both the global and Indian context. Secondly, to develop an understanding for various tools for fostering integrated planning with a focus on diverse stakeholder involvement. Thirdly, to hold discussions on collected glimpses from the ground based on the data obtained from the ongoing EnteKochi process. And lastly, to use the data to establish a draft roadmap for Kochi’s cross-departmental cooperation and stakeholder involvement to identify locations where future projects could be developed.

Proceedings

The welcome address, by Friederike Thonke, Advisor, SUD-SC, was followed by a presentation of Prof. Nikolaus Knebel, Architect and Urban Planner, and Professor at German University of Technology, Muscat, Oman. Case studies from around the world were discussed connecting the ideas of responsibility, identity and efficiency:

- *Responsibility:* Addis Ababa, a dense low-rise city with one of the largest markets in Africa. The project implemented solutions at the human scale through participatory planning and not through top-down, disconnected, macro solutions. The idea focused on having moderate development in the city with the local people as the primary focus. A diverse project team was set up with representatives ranging from the local

residents, city officials and international experts. The participatory cross-sectoral approach, which included distribution of roles, responsibilities and decision-making power was successful, and stimulated a human-centered economic, cultural, social and environmental development. After a decade the participatory focus was diminishing in this urban development initiative leading to accelerated exclusionary development and gentrification. This could only be stopped when the city government embedded again a participatory approach, which managed to maintain the identity of the city and facilitated structural changes.

- *Efficiency and Identity:* A zero-energy building in Oman was used as a case study for showcasing efficient, healthy, fully recyclable systems for homes utilizing passive, low-tech design strategies. The project used decentralized solutions and constructed wetlands for sewage treatment, solar panels for energy, design for sustainability etc. Furthermore, it was emphasized that identity does not have to be fixated in the past. Identity also comes from looking into the future while imbibing past and proven passive strategies mixed with new contemporary solutions. Extending the focus from private to public spaces, it was emphasized that buildings should merge open and closed areas and rethink this relationship.

EnteKochi’s consultants, Urbanista and Urbz followed this key presentation. Urbanista emphasized that to find sustainable solutions for the city of the future, one must see that social, economic and ecological aspects are to be viewed in an integrated manner and that good design solutions often deliver multiple answers to more problems than just one aspect. The most current Indian cities have a lot of these vibrant urban multi-functional places, but they

are threatened by development of recent years that tend to separate functions and create mono- functional spaces. This is a concern that also needs to be addressed for achieving sustainable urban development.

Urbz added to these statements by saying that planning must be done and applied at the local level, allowing for more context-specific projects to emerge. The complex settlement patterns in Kerala imply that the state is neither completely

urban nor rural. To impose a rigid urban framework on this contiguity may not be appropriate. A flexible approach will lead to expanding the scope for possibilities of developing ecologically sensitive projects in Kerala, like urban forestry for example. To do this however, greater synchronization of technical, political and economic aspects of local and regional needs in the state must be paid due attention.



Fig. 08: Markus Ewald presenting from Urbanista



Fig. 09: Rahul Srivastava presenting from Urbz

Lastly, a session in a workshop format was held, where the participants used the data obtained from ongoing efforts of EnteKochi to identify locations where future projects could be developed and the neighborhood consultations should take place.

Results and Learnings

After the presentations, open discussions among participants took place. Below are some of the key ideas and statements discussed:

- The identity of Kochi was discussed in terms of lost connectivity with the water. More public spaces should be built along the water lines, which are central to the identity of Kochi.
- The connection to the sea has been cut off at some locations because of new high-rise developments, this needs to be considered in the future.
- The mismatch of the bylaws with the local context was pointed out. Schemes should be brought about in ways that can effect changes in the existing policies and bylaws for addressing the real issues on ground.
- Peripheral areas need to be considered in planning. This will help to reduce the density of the inner city and the increase in high-rise construction.
- Well planned transportation nodes are essential for a city. It was mentioned that some bus stands, like the KSRTC bus stand, are currently still neglected areas. Public transport, in general, needs well designed and maintained facilities

- The city is steadily losing its canals. 50 years ago, all the transportation in Kochi was via the water and the economy depended on this. Today Fort Kochi is just known as a tourist destination whose basic infrastructure and services are deficient.
- It was mentioned that planning interventions already exist in several pockets, but there is no effort to integrate these aspects.
- The following locations for potential interventions were highlighted: Fort Kochi, Mattancherry, Edakochi, Vathuruthy, South Railway Station, Vyttila, Market Canal, Kaloor, Edapally etc.



Fig. 10: CityScope's applications being displayed to CSML

2.4.4 EnteKochi at the Folklore Cultural Theatre

Official opening and launch of the Urban Lab EnteKochi

Interactive Introduction to “EnteKochi”: Multi-Stakeholder Participatory Planning and Public Awareness Activities towards achieving Sustainable Urban Development



Fig. 11: Chairperson of Town Planning Standing Committee representing KMC at the inauguration of EnteKochi exhibition



Fig. 12: Presentation about EnteKochi to the audience during the inaugural ceremony

Introduction

The ‘Interactive Introduction to EnteKochi’ event was held on 8th March 2019 to inaugurate the interactive exhibition space of the Urban Lab at the Folklore Cultural Theatre in Fort Kochi. This tool for enabling participation consisted of exhibition panels, that acted as information cum survey boards, and a wooden model of the cityscape, both accompanied by human interactions and discussions. Furthermore, City Scope, a digital tool (overlays, analyzes spatial and numeric information to foster evidence-based discussions in a participatory manner), which is envisaged to be used in the future by the city, was introduced to local stakeholders and citizens of the neighborhoods. The event was inaugurated by Ms. Shiny Mathew, Chairperson of Standing Committee on Town Planning, KMC as the guest of honor, through cutting of the ribbon that symbolized the launch of the exhibition space and the overall EnteKochi process.

Proceedings

After the inauguration, the overall concept of EnteKochi was presented, emphasizing the key aspect of bringing pressing topics such as housing, transportation, water, climate change, etc. to the forefront and then proceed according to the interests and inputs from the different stakeholders. Shiny Mathew, herself a resident of Fort Kochi and Ward councilor of one of the divisions in the

area, welcomed the implementation of EnteKochi and emphasized the wish to develop Kochi in an inclusive and accessible way. To ensure this, all relevant issues, including the maintenance of public spaces and public transportation, needed to be open for public suggestions and interactions. She requested the participants to begin thinking about the public spaces in the city and the services that they would need and how this process could contribute.

The urban practitioners from Urbanista and Urbz presented next, reinforcing the concept of EnteKochi as an open participatory process, which is clearly aiming to tackle challenges and opportunities for the city in a holistic manner. This is precisely the idea of Integrated Urban Development (IUD), the concept promoted by the SUD-SC project in Kochi.

Thereafter, seven identified urban challenges, which formed the basis of the interactive exhibition’s participatory process were introduced. They are elaborated as follows:

1. *The Kochi Identity:* Kochi’s multi-cultural history has allowed the city to develop a unique identity of its own. This is defined by tangible structures like historical buildings, religious spaces, port areas etc. as well as by the intangible elements of the city such as specific traditions, customs or the practice and use of different languages. These are considered as the cultural heritage of the city and they must be protected in different ways.
2. *Neighborhood and Houses:* There are various forms of

housing within the diverse neighborhoods of the city. Some people live in informal settlements like slums or unauthorized housing, while others live in traditional houses or isolated, high rise mono-structured settings. This imbalance leads to increasing inequalities, as well as fosters demand and supply gaps that continue to grow. This imbalance in the housing needs of Kochi need to be addressed.

3. *Basic Services and Welfare:* Existing inequalities increase in a city with a rapidly growing population. This often results in an unequal distribution of public goods and services and requires the equitable distribution of public infrastructure and basic services across the city. A future Kochi must establish a common standard of needs to provide its citizens with an adequate standard of living.
4. *Public Common Grounds and Environment:* In certain parts of Kochi, land use is mostly dedicated to built-up areas like residential, commercial, industrial or agricultural purposes; this isolates the people from their natural environment and their surrounding communities. To ensure inclusive, social and healthy communities, along with public engagement possibilities, it is necessary to promote on the one hand interaction between citizens and on the other between citizens and the natural environment by creating multifunctional spaces of recreation and activity
5. *The Mobility Factor:* Kochi's traffic is mainly consisting of motorized vehicles driving on roads that were not designed for such use or quantities, resulting in the city suffering from unpredictable fluctuations in its traffic flow. Promoting the initiated path of making Kochi a walkable and bikeable city with simple public transport systems that will explore potential routes (e.g. water) adapting to climate fluctuations is considered important, as the latter will be a significant challenge in its future.
6. *Coastal Climate Change:* Being a coastal city topographically situated close to the sea level with a number of significant water bodies in and around its area, Kochi constantly runs the risk to be affected by sea-level rise, floods and extreme weather conditions. To ensure a sustainable and resilient future development of the city, it is essential to adapt infrastructure, buildings and spaces to protect them and the inhabitants from severe climate events. This is an important aspect for the sustainable future of Kochi.
7. *Local Economy and labor Space:* The way we work has a substantial impact on the functions and structures of our cities. Through its port, an active fishing industry, factory hubs and a leading digital, tech/IT sector, Kochi's recent economic development is above the Indian national average. Through digitalisation and

mechanisation, new places of work will emerge while others will vanish. In an integrated city development, new workplaces should be chosen wisely and tailored to the needs of a future economy

After the presentations, open discussions among the attendees were encouraged. The main points of discussions that emerged are summarized in the results and leanings section below. The opening of the interactive exhibition ended with a vote of thanks and the invitation to participate actively in the upcoming events.

Results and Learnings:

- The participants appreciated the innovative format of displaying information and enabling the provision of own opinions and suggestions in a two- and three-dimensional manner.
- The participants were curious about further steps of the process and emphasized that they are interested to participate to reach tangible outcomes
- Another learning was that the residents are already quite aware and knowledgeable about many urban challenges Kochi is facing. Despite this awareness, they are partly unclear about viable solutions to these urban challenges but are willing to contribute and initiate and to look outward of their community for assistance. This includes looking to- ward organizations such as GIZ that can jointly with KMC support this transition to a sustainable future for Kochi.
- Many stakeholders are open to be a part of EnteKochi due to the existing culture of strong community participation in the city when dealing with issues of urban governance. Many participants said that they are already part of various resident's organizations or other NGOs besides their normal occupations.

Public Exhibition

Introduction

To facilitate the implementation of EnteKochi, an open-to-all exhibition space was set up in the Folklore Cultural Theatre as a public space in Fort Kochi. It was open for citizens to visit and voice their opinions about the city. This exhibition space was the foundation of all outreach activities under EnteKochi, and it was open from the start to finish of the overall participatory process i.e., from 8th March to 14th June 2019.

The Urban Lab EnteKochi used various participation tools in the Folklore Cultural Theatre, spread across two distinct spaces. These tools and their respective sub-tools ranged from briefs on ‘City Challenges’ and associated ‘Survey Questions’ to the use of a ‘City Model’ with assigned ‘Building Blocks’ and ‘Challenge Flags’ to obtain inputs from citizens through these diverse formats. The support team at the venue facilitated and encouraged the use of these tools and sub-tools. Their use and details are explained in the following sections.

Participation Tools and Sub-tools

1. ‘City Challenges’ and ‘Survey Question’ panels:

The inner hall of the theatre was used to introduce visitors to the identified urban challenges in Kochi. These included briefing panels on the Kochi identity, Neighborhoods and houses, basic services and welfare, public common grounds and environment, the mobility factor, local economy and labor space and coastal climate challenge.



Fig. 13: Model at the Folklore Theatre

A main component of the exhibition were the seven urban challenges. Here, visitors of the exhibition had the opportunity to highlight the most relevant and important topics for them through voting and discussions with the support teams present at the interactive exhibition.

The challenge on Basic Services and welfare (creating reliable structures and basic services for all) received the maximum votes, highlighting the priority of the visitors to the exhibition. Public common grounds & environment (creating spaces for interaction and recreation) and mobility issues also received numerous votes. However, all the challenges, were perceived as highly relevant and got nearly a similar number of votes. Consequently, the challenges cannot be considered individually, but must be thought of in an integrated way.

A series of questions pertaining to these challenges were presented on survey panels which the visitors could answer easily by using sticky dots. This method was quite successful and has been used thoroughly during the exhibition, with an average of 40 to 50 visitors per day throughout the duration of the exhibition.

Many panels were completely full of the participants’ votes after some time and were thus replaced by new ones to allow further voters to vote in an unbiased way.

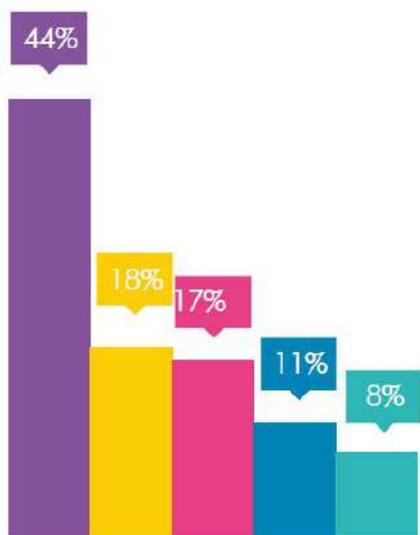


Fig. 14

An initial look at the evaluation of these participatory exhibition panels provided interesting results. Particular attention was paid to the question of how people would like to live. Many could imagine living in homegrown settlements, houseboats or bungalows, but most preferred the typology typical to the local architecture i.e., the courtyard house.

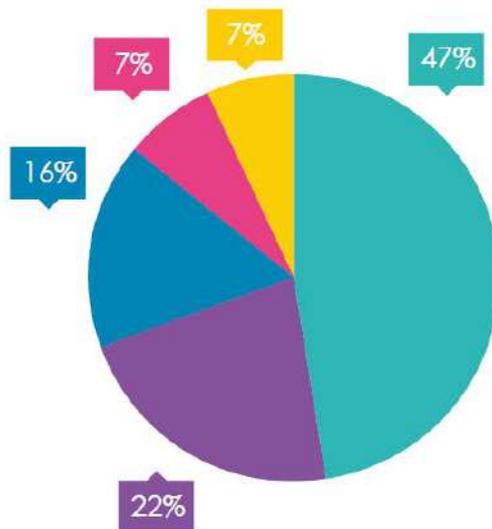
A further displayed question also reflected a similar result. Most respondents wanted to live in a traditional housing area, the homestead pattern prevalent throughout Kerala. Hardly anyone prefers the inner city with skyscrapers and gated communities. It also became clear that people in Kochi were concerned about climate change. In this regard, they first and foremost, noticed the rise in temperatures. Few associated the impacts of climate change with flooding or heavy rainfall. Only a few indicated that they are not concerned about climate change in general.

Fig 15: In what kind of neighborhood do you live?



- 44% Traditional housing area
- 18% Informal neighborhood
- 17% Independent bungalow
- 11% Gated community
- 8% City center with highrise buildings

Fig 16: Have you been aware of climate change?



- 47.6% Rise in temperature
- 22% Longer dry season
- 16% Heavy and unsteady rainfalls
- 7% Flooding from the ocean
- 7% No, I am not aware of any change in climate

Further detailed data of the exhibition results obtained from these sub-tools can be found in the Annexures attached at the end of this report.

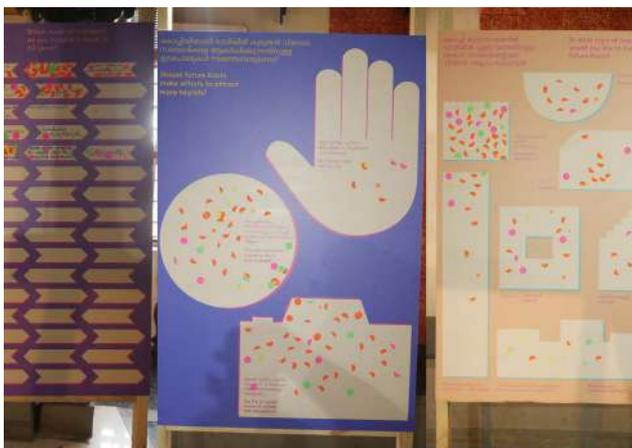


Fig. 17: Feedback of public on urban challenges



Fig. 18: Urban options placed at the model (flags on pegs)

2. 'City Model':

- Participation exercise with 'Challenge Flags' on the model: This exercise was designed to be an extension of the first exercise. It brought in a geospatial element to the challenges being discussed. A scaled wooden map of Kochi was placed in the foyer of the venue where key areas and landmarks were distinctly placed. Flags on pegs outlining the same challenges identified in the inner room were placed around the model. The idea of the exercise was to encourage participants to select challenges which they relate to and locate them on the map, where according to them, those said issues are most prevalent. Each flag also included a space on the back to write down more detail about each issue perceived in that specific location.
- Participation exercise with 'Building Blocks' on the model: This exercise consisted of using different colored wooden blocks and placing them on the model. Aspects relating to city density were experimented by using taller and shorter blocks. Aspects relating to land use utilized four different colors to represent different functions, giving the participants the opportunity to express what uses they thought neighborhood buildings should consist of in locations that were identified for specific urban issues.

- Participation exercise with 'Project Proposal Panels' on the model: The foyer was complemented with another set of panels displaying a series of cards with varied and innovative ideas for future project proposals. These ideas were isometrically drawn and labelled on these cards. Each card had multiple relationships with the challenges depicted in the inner room. Additionally, some cards were left blank, encouraging the participants to draw their own project ideas and then attach them to the challenge flags and place them on the map. This exercise took the process one step further from just identifying and locating challenges or problems to thinking about viable and innovative solutions.

3. Section Drawings:

Lastly, there was a dedicated panel with section drawings of transects across the city highlighting challenges in certain parts of the city. These challenges could range from flood level rise to congestion concerns, and these were publicly exhibited to encourage a detailed analysis and discussion on such issues, by not only seeing the city from the daily perspective of pedestrians, vehicle users and consumers but also from a cross-cutting technical and analytical perspective that was presented in simple terms for facilitating discussions on sustainable urban development.



Fig. 19

Results and Learnings

The information gathered through the public exhibition and the events were conveyed to the city officials, representatives of organizations the public in a final event – the EnteKochi Symposium held on the 17th of June 2019 at the Ernakulam Town Hall.

Furthermore, the data is currently used in the next steps of the SUD-SC project towards informing the future processes and support of GIZ locally. For example, this data directly feeds into informing the design competition process, which will be held in the following months after the complete documentation of the EnteKochi process. In this regard, the participation from the citizens of Kochi will lead to actionable suggestions and follow-up on their responses by the city towards the larger outcome of sustainable urban development from the EnteKochi process.

Learnings regarding the functionality of the exhibition space:

- Working in a different linguistic setting requires a distinguished set of local support staff to guarantee effective communication
- To accommodate this necessity, three local young graduates were contacted and involved to accompany the process
- Learnings for participatory design: There is a cumulative effect observed in some panels with visitors tending to pick the most popular answers in the multiple-choice questions, where sticky dots were asked to be placed.
- Accordingly, the decision was taken to reprint the same after half of the exhibition duration was over.

- The exercise involving the wooden model tended to be difficult to interact with for people with no-technical background in the arts, architecture or planning. Several visitors would participate mainly in the panel activity and would not contribute significantly to this component of the exhibition.
- The support team on the ground were constantly required to assist the visitors explaining the exercise, searching together for the targeted locations, discussing the challenges, etc.
- There were some concerns with the ‘public’ness of the chosen venue. Some participants felt that they didn’t have the permission to enter the exhibition space, while others were worried about potential entry fees.
- The support team, as a response, tried to involve people from all brackets of society directly through personal outreach in the immediate surroundings of the theatre.
- There were also instances that reveal that the local people tended to doubt the involvement of international agencies in development processes, while others were appreciative of the German support to the city.
- Thus, a thorough introduction of the agencies, their objectives and anchoring within the local system was done and is considered important for future collaboration.
- In the context of Kerala, there have already been a lot of projects which required the participants to fill out surveys, and to engage with future plans as part of the existing participatory culture in the state. The learning from this process however has been that limited action and poor implementation has followed thereafter, which has led to reduced levels of trust and willingness to participate in such initiatives.
- Therefore, it is advised that a long-term commitment with ongoing implementation on the side is of utmost importance for the sustainability of such a process.

4. *Film Screening:*

Introduction

The film screening was conceived as part of EnteKochi’s outreach phase, contributing to the diversification of participants included in the process. On 14 June 2019, two films were screened at The Children’s Park Theatre in Ernakulam. The intent of the film screenings was to provoke the audience’s thoughts on urban challenges that are pertinent to Kochi and cities in other countries and to generate conversations about future development initiatives within the city.

The Films

Two films were selected for the screening: one showcasing the local context of Kochi; and the other, presenting an international context. This was purposefully planned to allow the audience to draw parallels with other growing cities around the world facing similar or comparable challenges.

A local film called ‘The Island Diaries’ made by Jacob Paul, a Kochi resident, was chosen as the opening film. An excerpt from the film, concerning traditional industries and the effect of climate change in the village of Kumbalangi was played to the audience. Interestingly, Kumbalangi is one of the unique parts in the island areas outside of Kochi which has retained its rural nature. It showcases a part of the city that is at the cusp of rapid urbanization.

‘Urbanized’ was the second film screened during the event. The film is a critically acclaimed piece in the city design and planning circles, due to its foray into diverse urban development scenarios across many cities of the world. Architects, city planners, politicians and other stakeholders try to bring a fresh approach to dealing with the advantages and disadvantages of urban living. Moreover, the film explores the way inter-departmental cooperation takes place, particularly regarding the balancing of stakeholder interests and agendas when implementing various urban development schemes in different contexts.



Fig. 20

Results and Learnings

The audience responded to the screening of ‘The Island Diaries’ during the following discussion with their shock on seeing the impact that climate change was having on a community within their own city. Some went on to explain that although excessive flooding was prevalent in their neighborhoods, what they had seen in this film was far worse than their own realities. The other issue that resonated strongly with the audience was the depletion of local industry and the impact on livelihoods, specifically with regard to fishing. They mentioned that climate change, combined with the globalization of economies, is not only encroaching on both the employment and resources of the fishermen in Kumbalangi, but also in some of their own neighborhoods as well.

In relation to Urbanized, the audience mentioned that although some of the international examples were impressive to see, they were having trouble applying them to the local context of Kochi. The GIZ team, through one of the coordinators of the event, responded by acknowledging the difference in contexts. However, he continued to answer by stating that the solutions for urban sustainability are neither uniform nor monolithic, and rather than trying to apply solutions from one urban context to another, the film provides evidence that urban change is possible through concerted efforts and action. Therefore, the film functions more as a motivational tool than a strict recipe for responsible and sustainable urban development.

2.4.5 Digital components of EnteKochi

EnteKochi as a process was planned in both an offline and online format, where the local physical spaces of the Folklore theatre and the series of neighborhood workshops, as well as the virtual and digital spaces of the EnteKochi website (www.entekochi.net) and associated social media posts, were designed to maximize together with the engagement with the civic society of Kochi. The *EnteKochi website* was developed as a digital application that was accessible through a web browser or smartphone of any kind but would still behave more like an app popular in today’s smartphone-enabled environments. The display of content and interaction tools in this online user-friendly environment were designed to guarantee easy access and provide a certain “joy of use”. To reach both English and Malayalam speaking people the website worked bilingually – the core content and the interactive poll were available in both languages through concerted efforts and action. Therefore, the film functioned more as a motivational tool than a strict recipe for responsible and sustainable urban development.

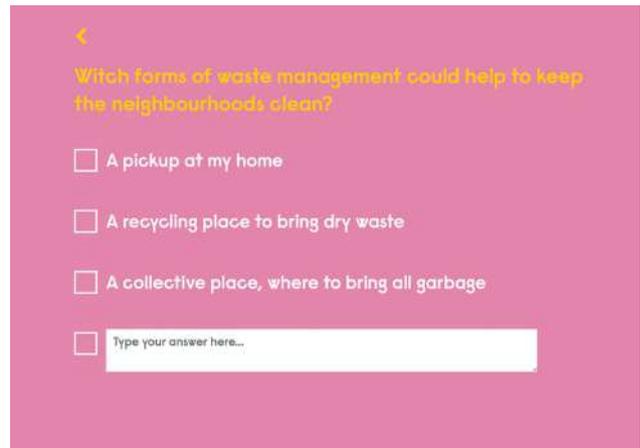


Fig. 21: Example of an interactive poll at the EnteKochi website (smartphone version)

Like the Exhibition at the Folklore theatre, the website also focused on an approach of participation around the defined urban challenges of Kochi. Firstly, participants were able to vote on how they see these challenges progressing in Kochi and what the best preventive measures could be in their opinion. All of these surveys were designed so that they could be done online in a short time – perfect for a little break or while waiting for a bus. After completing a poll, the user was given the possibility to see a live animated analysis of the votes collected so far as a form of immediate reward for participating.

Furthermore, the website was used for announcing updates and to document the various events going on during the process. News reports provided by the exhibition team transparently showed how the Urban Lab worked and what kind of results it was producing.

A third element was an experiment with social media across platforms. Since Instagram is widely popular in India, the EnteKochi webspace integrated all hashtags that were

tagged with #entekochi. Furthermore, it was decided to use this function actively within workshops and to establish a connection between the online and offline world. Moreover, other social media handles of GIZ and Urbz were used to publicize the process and associated events digitally during the outreach phase of the process.

The second digital tool, which was introduced and discussed during the EnteKochi process is the so called ‘CityScope’, an innovative multi-touch system, which foster Integrated Urban Planner worldwide. The tool is developed by the HafenCity University (Hamburg, Germany) in cooperation with the MIT Media Lab (Boston, USA). The tool offers, depending on the available data, four different levels of functions:

1. Viewer (Visualization of Maps and Data)
2. Finder (undertaking spatial queries)
3. Analyzer (undertaking spatial analysis)
4. Forecaster (modelling, scenario development and forecasting)

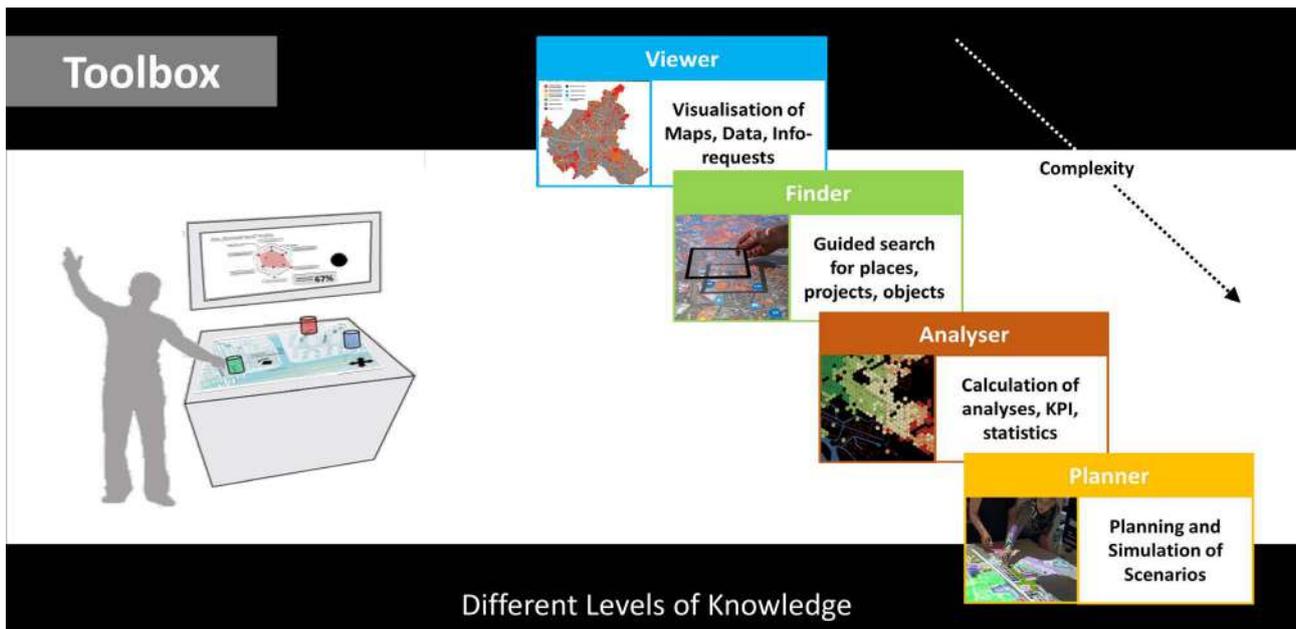


Fig. 22: Toolbox



Fig. 23: The Viewer enables the Visualizations of Maps and Data

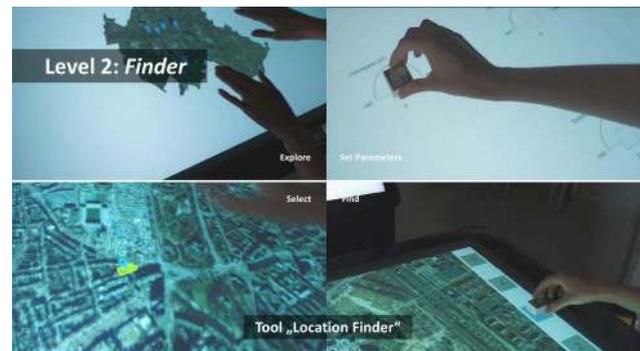


Fig. 24: The Finder enables guided search for places, projects and objects

The third and the fourth level – the Analyzer and Planner – allow for detailed analysis of urban data and the creation and simulation of different scenarios.

The CityScope especially facilitates Citizen participation of large stakeholder groups as well as expert decision making, both based on an evidence data base.

Open Source Toolkit



Fig. 25: Open Source Toolkit

Results and Learnings

- The website proved to be a useful communication tool and received good feedback among the people who used it.
- It also served as a documentation space of the process and received a high number of clicks throughout the process.
- The number of views of the website were tracked from May 23rd. An average of about 150 hits daily were recorded, which led to a total of 6748 hits from May 23rd until July 8th 2019. By estimating the numbers since March 8th one can say that more than 10000 people had visited the website by July 8th.
- Less successful were the numbers of completed polls. Until July 8th only 60 polls were completed. Thus, the number of responses was too small to draw precise conclusions – an export of the results can be viewed in the annexures. A possible explanation of the limited amount of completed polls was a constraint on our outreach and the length design of the polls. In hindsight, something simpler would have served the purpose better.
- In future projects, the developing time of web solutions and their design should not be underestimated, and even more special focus should be put on a communication strategy that adequately promotes it.
- An even stronger focus should be put on connecting offline activities with the online tool. For example,

The tool is based on an open source toolkit comprising a Building kit, a building manual, basis software and an interaction guide.

- during workshops and neighborhood discussions the online tool could be integrated to promote their usage.
- Participants of partner workshops stressed that the digital CityScope tool is very valuable as a spatial tool, to foster overlaying and combining data of different departments (GIS based plans, which have been prepared under AMRUT and RAY should be located and utilized).
- To ensure sustainability and the usage of tools like CityScope, it was acknowledged that this can only be achieved, if decision makers genuinely understand and take ownership of the operation of such tools and if adequate staff is available. Against this background, it was agreed to provide for the initiation phase constant handholding and a detailed development of a joint concept and use cases.



Fig. 26: Daily numbers of views

2.4.6 Workshops - Special Interest Groups

To further diversify participation in the EnteKochi process, a series of outreach events were held with certain stakeholders and special interest groups. This included workshops with university students, differently-abled special interest groups, and children from a variety of neighborhoods and schools in Kochi.

All events followed a comparable structure of having an opening introduction section where a GIZ team member was invited to discuss concepts of IUD. Thereafter, a set of two sessions followed. The first involved participation in the questionnaire panels in the inner room, and an ensuing discussion and reflection session. Second session involved spatial analysis using model-based activities dealing with urban density, locations, availability of lands, perceived and experienced challenges and future possibilities in and for Kochi using the wooden model. The children's events, however, were more inorganic and simpler, based on physical exercises and art-related activities facilitated by an expert.

1. University Students Workshop 25|04|2019 Folklore Theatre, Fort Kochi

Introduction

The aim of the outreach event with the Asian School of Architecture and Development Innovation (ASADI) was to include a student demographic, specifically those educated in the built environment, into the overall interaction and data collection during EnteKochi. In order to achieve this objective, students and their tutors were invited to attend a workshop at the Folklore Theatre on 25th April 2019.



Fig. 27: Students from ASADI

Proceedings

The workshop began by welcoming the students into the exhibition space and explaining the context in which GIZ, and specifically the project SUD-SC, was working in Kochi. After this, the concept of EnteKochi was introduced and participatory planning was explained, unpacking technical

terms, such as 'multi-stakeholder' and "Integrated Urban Development". This was important because the students, despite being educated in the concepts of the built environment sector, had rarely been acquainted with such concepts or terms before. Because of this, the workshop acted as an exchange and education tool for the students, as well as a Lab, where data was generated, documented and synthesized.

After the introduction, the first activity was the participation exercise with 'City Challenges' and 'Survey Question' panels. Next was the exercise with the 'City Model' and 'Challenge Flags', followed by the exercise with 'Building Blocks' and finishing with the 'Isometric Drawings' exercise. These exercises are explained in more detail in the earlier sections of this chapter. The students responded positively to all the exercises, specifically all exercises associated with the map-based model of Kochi. Prior to this workshop, participants at Folklore had shown some discomfort regarding the map-based exercises. However, the students from ASADI demonstrated their adept abilities to geospatially contextualize their ideas associated with the urban challenges of Kochi.



Fig. 28: Students working with the city model

To ensure that the students reflected on their experiences collectively, a group discussion was conducted, where feedback and questions were encouraged. Some students made comments, saying that they enjoyed the evolution of the activities over the course of the event. They elaborated by saying that initially, the surveys conducted in 'Activity 1' were ambiguous and they wondered what such questions could lead to. However, when the model, the varying cards, and the building blocks were all incorporated together in the final task, emphasizing a geospatial element, the overall purpose and approach of the workshop became clearer to them.

Results

The main findings from the workshop are summarized below:

- In Ernakulam, the issue of mobility, traffic, connectivity and availability of green and public spaces was addressed. The areas that have been highlighted are the Vytilla Mobility Hub area, Edapally and the area around the South Railway station. These areas are posed with issues of long traffic jams, parking concerns, air pollution, etc.
- It is interesting to note that it was highlighted by the students that Kochi has a need for enhanced coordination among stakeholders and improved IUD, as the above areas face issues due to the limited management of roads and infrastructure concerns because of the ongoing Metro rail and flyover construction
- The main issues highlighted in the islands and peninsular areas like Willingdon island, Vypeen, Fort Kochi etc. dealt more with climate change, flooding and mitigation issues.
- Furthermore, the envisaged project ideas in the peninsular areas were green solutions to various climate and environmental risk related issues. The solutions, which were placed on the map in these areas by students included recycling stations, wetland coastal parks, canal extensions and coastal forests.
- Another interesting mobility element that emerged from the discussions was the ferry service between Vytilla (important trans- port hub) to Edapally (infopark and industrial area) that is not well- utilized as of now. Currently, there is no direct bus service between these two important hubs. Instead, the bus connections are operating via Palarivattom.
- The need for green areas, parks, public spaces, etc and para-transit facilities have been highlighted throughout the city.

2. Differently-Abled Stakeholders Workshop



Fig. 29: Introductory session by GIZ team during event



Fig. 30: Participants bonding with an introductory song

Introduction

On 16th May 2019, an outreach event was held with special interest groups representing the differently-abled. The aim of this event was to include the differently-abled demographic through a series of inclusive discussions on the challenges faced specifically by this special urban user group. The wide representation of disabilities in the forum including polio, autism, cerebral palsy, blindness, physical disabilities, mental disabilities and multiple disabilities helped to discuss and address challenges faced by each user group and focus on their unique and cross-sectoral nature of their challenges.

Proceedings

In the initial interactions with the guests, it was discovered that one of the participants was a music teacher who was also part of a band. This led to the impromptu decision to start the event with a small starting song. The participant sang 'Kuri varachalum kurishu varachalum' (referring to the varying methods of prayers in different religions, but at the end of the day, there is only one God), which set the tone of inclusion for the day.

Following this, the participants were introduced to the work of the SUD-SC project in Kochi. Furthermore, the concept of IUD was unpacked and its relationship with participatory planning was highlighted to the audience. This was supported through a series of photos and sketches, which were examples of how planning had considered the needs of all user groups. In this regard, the participants were encouraged to talk about the needs of their fields of interest and to talk about existing or desired solutions. This session laid the groundwork for thinking about the challenges and successes achieved in Kochi and was an appropriate bridge for group discussions. The outcomes of these discussions are summarized in the results section below.



Fig. 31: Exchanges between the diverse workshop participants



Fig. 32: Differently-abled participants taking the survey

Results

Based on the discussions and the mapping exercise, prominent qualitative data that was obtained is listed below:

- Unsurprisingly, accessibility was a major issue that many individuals of this stakeholder group face on a daily basis. An example of this was cited as the congestion on the footpaths in Panampilly Nagar, leaving little room for people with wheelchairs. Another example included the inaccessibility of the existing park in Jew

Town, which isolates differently abled people from green and public spaces.

- There was much emphasis throughout the discussions on taking advantage of underutilized space in the city and redesigning it with a strong concept of inclusivity.
- Awareness was one of the other popular topics of conversation. Awareness should mean a stronger public knowledge and understanding of how to behave, help and work with differently-abled people in everyday situations. Moreover, it meant awareness for teachers and parents of younger differently-abled people who constantly encountered the challenges discussed. This awareness would help in making sure differently-abled children didn't feel that they should hold themselves back from engaging with society, but rather learn how to better move around such obstacles and to expose the common citizens more to the difficulties faced by this section of their society.
- It was difficult to pinpoint a specific location where physical barriers were faced due to the numerous instances of the same. It was reported that problems are common to most areas of the city and requires a shift in perspective to address.
- Albeit there being many improvements necessary to make Kochi more inclusive for the differently-abled citizens, some participants highlighted that Kochi, when compared to other Indian cities, generally, is more differently-abled friendly. This is evident through planning and design interventions in the city along with specific initiatives such as the introduction of low floor buses, a bill for inclusive education, targeted remunerations through 'project pay', and certain public spaces like the Vytilla mobility hub and Subash park, which are completely accessible for physically challenged persons.
- Sport was identified as a tool to improve inclusion for the differently-abled. The wonderful example of blind-soccer teams (both boys and girls) playing in Kochi was provided. It was emphasized that sport can be the bridge of connection between normally-abled and differently-abled citizens and should be encouraged for improving inclusion in the city through public interventions in sports infrastructure for kids of a young age.
- Independence and self-reliance were topics that were raised repeatedly by several participants. Two participants who were wheelchair users pointed out that despite Kochi taking certain measures for the differently-abled, they couldn't function in a public space in a routine manner without relying on the assistance of another person. There is hope for a more inclusive Kochi to make it more sustainable.

3. Workshops with Children



Fig. 33: Participant group of schoolchildren



Fig. 34: Participant group of schoolchildren displaying their work

Introduction

EnteKochi implemented two children’s workshops on 03rd June 2019 and 07th June 2019 at Folklore Cultural Theatre in collaboration with Blaise Joseph, the Program Manager of Art by Children, an initiative of the recently concluded Kochi Muziris Biennale, and founder of the Art Room Concept operational in certain schools in Kochi and Thrissur. The participants of the first workshop did not represent any schools in general as they were from diverse neighborhoods, accompanied by their parents and many among them were also being home-schooled. However, the second workshop consisted of participants from Rajagiri School, Kalamassery; HEHMMHS, Mattanchery; Govt. GHSS and Calvathy schools.

The aim of the children’s workshops was to include a youthful demographic into the participation process of EnteKochi, where their opinions and ideas of Kochi and what they want for their city’s future could be captured through artistic and creative mediums. Children are inherently creative and imaginative, but they also have a sense of objectivity that adults lack. Hence, by providing

the children a safe space, free of inhibitions, to express their creative thoughts, the workshops became a platform for innovative thought and discussion about the city from the perspective of children.

Proceedings

On both workshop days the children were introduced to the exhibition space and the concept of participation was defined in basic terms. Furthermore, the importance of the participation of children in the EnteKochi process was highlighted, stating that they are the future generation of the city, so their opinions and actions should have significant weight when discussing their city’s future.

This was followed by some icebreaking activities, to allow the children to feel more comfortable in the space. One of the icebreaker games was called ‘Barangatte’, which is a Brazilian game designed to loosen up one’s body and mind. The game started when everyone formed a circle and placed their arms around each other. The workshop facilitator (and the leader of the game) then began to sing a phrase and do an action with his body, ranging from gently tugging someone’s ear, to dancing on one leg. The rest of the group would then sing the same phrase and copy the leader’s actions. By the end of the game, everyone was laughing, singing and dancing, immediately making the workshop space more comfortable for the participants.



Fig. 35: Participants engaging in icebreaker activities



Fig. 36: Participants engaging in group discussion

For the first art activity, the children were instructed to draw an impression of a part of their body, whether their hand, foot or head, onto an A3 sheet of paper. Within this impression, the children were instructed to draw their neighborhood surroundings, including their house, depicting how they viewed their urban environments and illustrating their likes and dislikes in this process.

The second activity was a meditative exercise, which was designed to allow the students to create a guided fantasy in their minds of what a sustainable and humane Kochi could look like. It was a process that encouraged the students to use their imaginations to mentally picture the Kochi they wanted to live in.

With the student's mental picture of 'their' Kochi fresh in mind, the children began the next exercise where they were to work in groups and draw their version of a future Kochi on an A1 sheet of paper. This activity was an opportunity for students to demonstrate how their creativity, when combined and discussed, could lead to innovative ideas for urban development in Kochi from the perspective of children and school students.



Fig. 37: Participants working on illustrating their future Kochi



Fig. 38: An output of the children's workshop

management and transport management. The improvement of physical health meant improving access to safe drinking water, reducing air pollution from rising motor vehicle ownerships, and having more open space for sports and exercise. Improving mental health meant preserving the socio-cultural atmosphere in Kochi, which nurtures the importance of mental health, as well as having access to more open spaces with vegetation to escape the 'suffocation' of the city.

- Much of the priority on waste management discussion was related to the treatment of the canals. There was a shared sadness from the children regarding the polluted state of the canals, which was undeniably due to the dumping of waste. The children wanted tougher penalties for those, both individuals and corporations (large factories etc.), who were contributing to this kind of pollution.
- Regarding transportation management, there was a major concern regarding the widening of roads. The nature of the concern was that it was promoting the excessive use of motor vehicles in the city, causing additional road congestion. Additionally, road widening was also associated with the encroachment of public areas for trees and footpaths, impacting the walkability of the city.
- Despite an overall agreement on key urban issues that Kochi faced, the children placed greater weight on the issues that were more prominent in their own neighborhoods. The varying neighborhoods of the children participating equated to differing socio-economic conditions and interests. For instance, the children who came from Ernakulam (mainland of Kochi) mainly belonged to more privileged economic and social contexts, whose parents were employed with medium to high income levels, attended higher standard of schools catering to similar socio-economic groups, and having access to privileges such as personal transport or accommodation in high-rise apartments or independent houses. On the other hand, on an average, children from Fort Kochi and Mattancherry areas (island and peninsular areas of Kochi) belonged to comparatively lower income households, where their access to privileged schools, transport options, basic services and suitable housing options were far lesser. Consequently, the children from these locations were more interested in discussing issues of housing, basic services and employment. On the other hand, the children from Ernakulam contributed to discussions on more generalized topics such as education, open and public spaces, and air quality. This revealed the significance of place and identity in the quest for a sustainable future of Kochi.

Results

- Children from both workshops emphasized on topics of health (both physical and mental), waste

2.4.7 Neighborhood Consultations - the Urban Typhoon Workshop series

Introduction

The series of neighborhood consultations conceived as part of the EnteKochi's participatory process were conducted by Urbz in their worldwide applied (eg. in India, Japan, Switzerland, China), and the always localized Urban Typhoon workshop format. The Urban Typhoon workshop concept uses the word "typhoon" intentionally, to evoke the imagery of a concentrated burst of energy that citizens of a neighborhood create by coming together and discussing urban challenges and solutions. This emerges when residents and inhabitants come together for a collective brainstorming with other stakeholders interested in urban issues. The latter stakeholders can range from people belonging to the fields of urban planning to civil engineering, from architecture to public administration, or from design to those concerned with the local economy.

Within the EnteKochi process six locations were selected and Urban Typhoon workshops were conducted.

Objective

1. To generate data and information about a locality, which could be further used by various stakeholders. This emerges from concentrated action in the neighborhood.
2. To develop recommendations and generate ideas to be acted upon by local administrations or the inhabitants themselves.

Methodology

The workshop participants included both local participants (residents) as well as invited participants (officials, representatives of civil society organizations, students, professionals), partly from other parts of the city and country. According to the methodology to facilitate participation, a typical neighborhood workshop day was divided into three segments.

As already mentioned in Chapter 2.3, following was the structure of each day-long workshop and participation tools:

1. Collective brainstorming to identify critical problematics
2. Walks through the neighborhood in thematic groups
3. Group discussion to identify knowledge, ideas and questions

In the morning, the participants gathered at the designated venue for a brief introduction followed by a brainstorming session between the interested local residents, representatives, students and professionals from other parts of the city and beyond.

Three essential themes were discussed in these sessions:

1. Positive aspects of the neighborhood,
2. Main problems within the neighborhood
3. Local initiatives to improve the neighborhood.

I. Brainstorming session:

The purpose of the brainstorm sessions was to identify and spatially locate these themes, which could then direct the



Fig. 39: Discussions with the residents and inhabitants to gather local situated knowledge



Fig. 40: Collective Brainstorming session to identify critical locations of interest in the neighborhood

II. Walks through the neighborhood:

The walks were conducted with smaller groups of 6 to 12 people, who could delve deeper into the outcomes of the collective brainstorming session. To evidence the problems, the participants guided the groups to the identified locations. During the walks in the neighborhood, the groups also interacted with passersby, visited homes and communities of fishermen, traders, etc. to understand the situation from as many perspectives as possible. The groups were asked to observe and note, first hand, the information gathered from the local communities.



Fig. 41: Interaction with the residents during the walk through



Fig. 42: Walking with local participants through Edakochi Neighborhood

III. Group discussion

The group discussion, the third and final segment, would commence by noon after the walks were completed. The outcome from this segment was in the form of notes made by the participants who were told to organize them according to the following themes: knowledge, questions, ideas, qualities and emotions related to their experience in the neighborhood, from the point of view of both, as a place to live (resident participants) and as first impressions (non-resident participants). The discussions between all the participants lasted for three to four hours and were intended to generate relevant, homegrown ideas to be processed by the Urbz team and conveyed to the next phase of EnteKochi and the concerned urban planning authorities.



Fig. 43: Collective discussions with the local residents and other participants to generate ideas for the critical urban issues of the neighborhood

Pre-workshop preparations

The fieldwork for the Urban Typhoons in Kochi was initiated on the 19th of May, 2019. The Urban Typhoon workshop sites were shortlisted through the previous conducted partner workshops and through consultations with the local GIZ team and the Mayor's office while keeping in mind the geographical spread and adequate representation of locations from the mainland and the islands of Kochi. The process started with a series of conversations, organized by the local GIZ team and hosted by Urbz. These took place with technical experts of Kochi that included the Director of the Centre for Heritage, Environment and Development (C-HED), the Former Mayor, the Kerala Water Authority's (KWA) Superintendent Engineer's Office as well as the representatives from the Health department of the Kochi Municipal Corporation (KMC), the Greater Cochin Development Authority (GCDA), and the Cochin Smart Mission Limited (CSML). Besides this, the team also met with popular private architectural offices such as Plural Architects and Design Combine to hear different viewpoints on the challenges of Kochi.

After the process of consultation with these experts, the following neighborhoods within the KMC jurisdiction emerged as possible sites: Fort Kochi, Mattancherry, EdaKochi, Vathuruthy (Willingdon Island), Market Canal, Ravipuram, Kaloor, Vyttila, Elamkulam and Vennala. These names featured in the conversations and were then visited by the Urbz team as a follow-up.

After a series of field trips, and ensuring to avoid a repeat of urban typologies, it was decided to focus on three very different sites on the western island of Kochi (Fort Kochi, Mattancherry, Edakochi) and three different sites on the mainland of Ernakulam (Market Canal, Kallor, Elamkulam). Additionally, it was decided not to include any neighborhoods that fell outside the municipal boundary at this stage. This was how the 6 neighborhoods for the Urban Typhoon workshops were selected.

In order to gain traction for the workshops, the Urbz team, met several stakeholders. First, to introduce the concept of the workshops, numerous meetings with the Municipal Councilors of the wards of the selected neighborhoods were organized. Second, aided by the councilors, the team met RWAs, Unions, Kudumbashree representatives and other stakeholders daily, to inform them about the workshops. Finally, people were contacted in person, telephone and through social media. Social media platforms, mostly Facebook and WhatsApp, helped to reach out, organize and communicate to the wider public both before, during and after the UT workshops. A social media event

floated by Urbz helped students and professionals from across the city, neighboring districts and other parts of the country to also be a part of the workshops. These meetings were intended to obtain a deeper understanding of the local issues, critical locations and initiatives taken by the people to make their neighborhoods more live-able.



Fig. 44: Pre-workshop field work in Kochi to introduce and disseminate the information about the Urban Typhoon Workshops

Important points of focus were identified in each site, even though the workshops were not restricted to these themes. For example, Fort Kochi became an ideal site to understand peoples' perception of the heritage landscape and the need to integrate it with modern infrastructure. Mattancherry, being stigmatized as dominated by informal settlements, was selected to understand its urban fabric and livelihood challenges in contrast with the rest of Kochi. Managing the exigencies of urbanization by maintaining the existing natural ecology was the reason for choosing Edakochi. The Market Canal area was selected due to its vibrant wholesale market, historical buildings, an abandoned canal but also the debates around a new proposal for its public market's re-development. The neighborhood of Kaloor was selected to study the relationship between the transport infrastructure, booming real estate and abandoned canals in that area. Elamkulam was selected to understand uncertainties around its sewage treatment plant and its central location in the larger urban agglomeration. Each site thus illustrated on the one hand some broader issues that emerged from the discussions while revealing on the other hand very distinctive features of its own – both are adding to the bigger picture, that creates the city of Kochi.

This preparatory phase lasted for fifteen days across the city, and thus yielded a first basic understanding of the spatial fabric, demography, infrastructure, natural environment, and economic base of the six selected neighborhoods. The fieldwork thus laid the foundation to mobilize participants within the selected neighborhoods. As Kerala has a high

degree of political awareness and organization, and an existing participatory culture, all the stakeholders are well connected to each other. This existing network proved advantageous to Urbz to help mobilize local participants for the workshops within limited time and resources.

The next step was to develop a relevant brief for each neighborhood workshop. The local networks developed helped to develop the same and also to identify and book suitable venues for the workshops.

The workshops kicked off on the morning of the 4th of June 2019 with an introductory session for the non-local participants at Folklore Cultural Theater, Fort Kochi. Spanning over six days, from 4th to 9th of June 2019 the team conducted workshops in the six selected neighborhoods shown below:

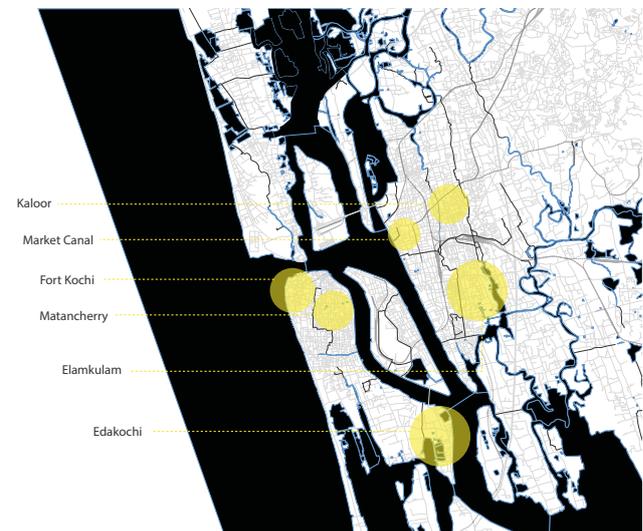


Fig. 45: Key map of Kochi showing selected neighborhoods for Urban Typhoon workshops

Neighborhoods and Core findings

The following part of the report will elaborate on all the neighborhoods and the topics of the workshops discussed in each one.

- Edakochi
- Kaloor
- Elamkulam
- Fort Kochi
- Mattancherry
- Market Canal



WORKSHOP VENUE ●

ROUTE 1 — proposed cricket stadium

ROUTE 2 — mangroves

ROUTE 3 — kannangattu bridge

ROUTE 4 — vembanad lake

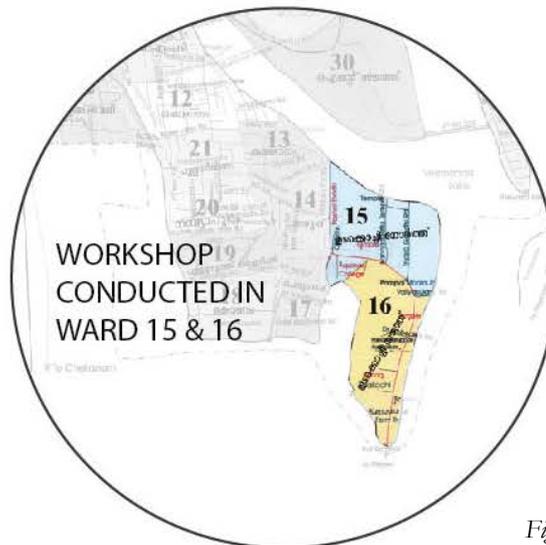


Fig. 46: Workshop walk through routes in Edakochi

EDAKOCHI

Edakochi is located on the island of Fort Kochi. The neighborhood is a natural peninsula of the island with mangroves, canals, fish farms, the Vembanad lake and backwaters. Fishing and paddy cultivation were traditionally the predominant sources of livelihood. This has not changed much compared to the rest of the city. The demography of the neighborhood is mostly low and middle-income groups. The neighborhood is sparsely developed with low rise, medium density settlements and has preserved much of the natural environment.

Date of workshop: 4th June 2019

Venue: Valikulan Open Air Auditorium, Valiyakulam Road, Edakochi

Total number of participants: 55



Fig. 47: The local context of Edakochi



Fig. 48: The local context of Edakochi

On 4th of June, 2019 after the morning introductory session at Folklore theatre, Fort Kochi, the EnteKochi team along with the non-local participants headed to the venue for the first workshop in Edakochi. The venue was an open-air auditorium by a pond where all the RWA residents, and other residents gathered for the workshop. About 35 residents and 20 non-residents were part of the workshop.

The collective brainstorming session in Edakochi helped identify 4 key concerns; 1) the newly proposed cricket stadium, 2) traffic linked to the new Kannangattu bridge, 3) the Vembanad Lake, and 4) the Mangrove lands of the neighborhood. Hence, four groups were formed to visit these four critical locations and understand the problems firsthand.

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Proposed Cricket Stadium

Walk through Route 1



Fig. 49: Edakochi Fisheries

Near the Kannangattu Bridge which connects Edakochi to Willington island, is the site proposed for the new cricket stadium developed by Greater Cochin Development Authority (GCDA), and managed by the Kerala Cricket Association (KCA). However, the stadium violates the Coastal Regulation Zone (CRZ), as the proposed site is close to the Vembanad Lake. Currently, the project is stalled due to the lack of coordination and negotiation between different tiers of the government. According to some residents, the project will cause degradation of the environment and for some others it promised to bring opportunities for economic development.

The Urban Typhoon workshop became a platform for the residents to express their opinions about the proposed cricket stadium. According to them they “welcome the project as it will bring new economic opportunities to the neighborhood and help to upgrade the socio-economic status of the people.” They also felt that “environmental degradation is used as an excuse rather than actual concern.” During the walk through, the local participants took the group to the proposed site for the cricket stadium which has now become a waste dumping ground for the nearby settlers. Because of its disuse, the demarcated area had turned into a wild mangrove forest in the last 15 years, leading to water stagnation, increase in rodents, mosquitos, etc.

Kannangattu Bridge

Walk through Route 3



Fig. 50: Kannangattu Bridge in Edakochi

Massive transit infrastructure is proposed to increase the connectivity between Edakochi and the mainland city. Currently, there are two bridges that were constructed to connect Eda- kochi:

1. Kannangattu bridge in the north, and
2. Aroor Edakochi bridge in the south.

However, during the walks within the neighborhood, the locals explained that “the bridge helps them but connecting roads can’t absorb the traffic”. The group studying this topic visited the site of Kannangattu bridge to understand the issue. After interacting with the local participants and assessing the situation it was clear that the bridge connectivity has caused an influx of vehicles but the road network within the neighborhood is sparsely developed to cater to the growing traffic. Challenges with acquiring land from large landowners, and acquisitions from smaller landowners, which led to changes in the initial design was also highlighted. During the workshop, the locals also stated that they require better connectivity, but they also want to protect their environment. Hence, the neighborhood

welcomes a well-managed development that will not damage the existing natural environment of Edakochi, which was recognized as a heritage from past generations and their best asset for the future. The traffic in the area has increased many-fold since the construction of the bridge, which is affecting people’s quality of life.

Vembanad Lake

Walk through Route 4

Vembanad lake was a main source of livelihood for the communities in Edakochi. In the past, the neighborhood had a dual economy in the form of fishing and paddy fields that was highly dependent on the lake. However, over the years, the siltation of the lake hampered all the economic activity dependent on it. The people lost their livelihood and are now dependent on fisheries which have proliferated within the neighborhood. As stated by a local participant, because of the construction activities at the Port Trust (island), excess deposits of clay has affected farming activities.



Fig. 51: Waste accumulation at the shores of Vembanad lake in Edakochi



Fig. 52: Traditional fishing activity in the ponds of Edakochi

During the walks in the neighborhood, the group visited the Vembanad lake and the fisheries and markets along its banks. The lake is deteriorating due to the waste that is discharged by the local settlements and industries. The waste from upstream also gets accumulated along the banks of the lake. The communities displayed a strong sense of connection with the lake and have been witness to its degradation. They expressed grave concern about the future of the lake and the livelihood that depend on it as depleting agricultural lands and increasing soil erosion is forcing people to move out of the villages for finding new livelihoods.

Mangroves

Walk through Route 2



Fig. 53: Housing conditions in Edakochi

Edakochi has a rich natural ecology of mangroves and estuaries. The locals took the mangrove group to the north of the fish farm, to show the scenic landscape of the neighborhood and emphasized its tourism potential. The coast of Edakochi is protected by the dense cover of mangroves. However, the mangroves are subjected to tidal dynamics and the siltation caused within them has blurred the lines between land and water. The saline water is also impacting coastal settlements.

The landscape dynamics have resulted in land subsidence and subsequent settling of the foundations of houses. The group visited a family who were constructing their new house as their old house was settling rapidly into the ground. However, due to unaffordable construction costs the family could not use the appropriate building technology. The local participants also explained the threats to their livelihood and how this is pushing the communities into poverty. Earlier, the neighborhood had several ponds which were used to store saline water for six months of fishing and six months of paddy farming thereafter. The estuaries and canals used to help have better yield of Pokkali (paddy) due to the mix of fresh and saline water. Today the community only concentrates on fish farming, as agriculture is a more labor-

intensive activity. But the community expressed the need to revive both activities that provide sources of livelihood for the entire year.

Summary- Reconnecting Nature & Mobility

Until recently the picturesque neighborhood of Edakochi retained its numerous paddy fields and ponds that were important parts of the social life and economy and lent a characteristically rural feel to this part of the city. This is slowly changing. Traditional occupations like farming and fishing no longer fit into the prevailing narrative of urbanization and are slowly dying. There is a feeling of loss of a certain relationship with nature, especially the water bodies. Out of fifteen ponds that were used for drinking, bathing and cleaning only three remain usable. The once productive paddy fields are now waste dumps and are breeding grounds for mosquitoes.

Accelerating this urbanization process is the newly constructed Kannangattu bridge. The benefits of being connected to the mainland are appreciated by the residents, however, Edakochi is unable to handle the added traffic brought in by the bridge. Additionally, this bridge is planned to be part of a thoroughfare connecting areas of north and south Kerala. Infrastructure projects such as the new cricket stadium are in the pipeline, but the land earmarked for the stadium is lying vacant and is overgrown with mangroves, breeding excessive rodents and reptiles.

Edakochi is quickly shifting from being a predominantly rural set up, to becoming an urban periphery. The spatial future of this neighborhood will depend on the depth of imagination of residents and urban planners who can together ensure ecologically conducive development. Residents propose a revival of the canal system and the economic activities that go with it, like fishing and water transport which can also ease the pressure on the road network. Some residents feel the need to either reactivate the paddy fields or adapt them to some other use. In the recent past, the direct link between economic production and the natural landscape was evident. There is still a desire to maintain that link and transform Edakochi into a sustainable, productive urban village.

Conclusion: The new developments in Edakochi could become a threat to the natural landscape and the fishing communities that are sustained by it. The construction of the Kannangattu bridge to the mainland and the national highway cutting through Edakochi, has made it a gateway to the adjacent districts. Owing to this, the traffic through Edakochi is rapidly on the rise. Improved accessibility due to the new infrastructure, like the stadium, has also escalated the development of real estate. New housing projects are being built along the waterways and the coast.

Climate change is directly affecting communities settled along the coast. The ingress of saline water, subsidence of land and modern construction materials and methods unsuitable for coastal landscape dynamics, are threats to the quality of the natural and built environment.



WORKSHOP VENUE 

ROUTE 1 
transportation & metro

ROUTE 2 
perandor & senathodu canals

ROUTE 3 
perandor & senathodu canals

ROUTE 4 
waste management

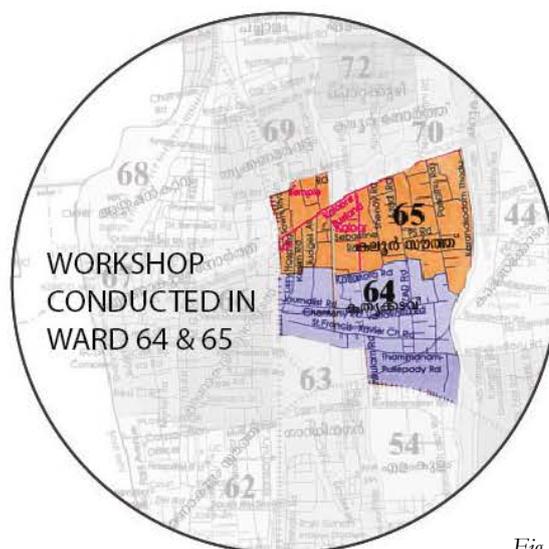


Fig. 54: Workshop walk through routes in Kaloor.

KALOOR

Kaloor is one of the rapidly transforming neighborhoods of Kochi. Owing to its central location between the historic and the modern city, Kaloor is well connected with railways, roads and the Kochi Metro. As a result, new housing colonies are emerging for migrant workers from the IT sectors of Kakkanad and Edappally. Kaloor also has a stadium resulting in a sudden inflow of people and activities during events.

Date of workshop: 5th June 2019

Venue: Vailoppilli Smarak Park, Kaloor

Total number of participants: 65

On 5th of June, the team met with the local and invited participants in the Vailoppilli Smarak Park in Kaloor for the second day of the workshop. For this workshop, along with the RWA representatives there was active participation of the Kudumbashree women as well. About 45 residents participated along with 20 non-resident participants. The collective brainstorming session in Kaloor helped identify five key topics; 1) Waste management, 2) Senathodu canal, 3) Perandoor Canal, 4) Transportation, and 5) Positive aspects of the neighborhood. Hence, five groups were formed to visit these five critical locations and understand the problems firsthand.

Waste management

Walk through Route 4



Fig. 55: Illegal waste dumping sites

In Kochi, waste management is a major concern for all the stakeholders. There is an existing system in place for waste collection with the appointment of Kudumbashree as waste collectors. Within the structure, waste must be segregated at the household level, this is collected by the Kudumbashree workers. There is a daily collection of organic waste and weekly collection of plastic waste. For this service individual households must pay Kudumbashree a fee ranging from 100

to 150 rupees per month depending on the neighborhood. This waste is brought to a common collection point from where it is handed over to the municipal workers to transfer it to the Bhrahmapuram waste management plant in the city. Despite this, residents felt that waste management is the least prioritized issue.



Fig. 56: The current condition of the canals



Fig. 57: Real estate encroachments along the canals

During the workshop, the residents explained that not all households are willing to pay the waste collection fee to Kudumbashree, and consequently this uncollected waste is dumped in vacant plots and the canals. The residents took the group to these illegal dumping pockets. Moreover, waste segregation is a crucial task which the households are unable to carry out. According to the local participants some households hide their non-segregated waste within the inorganic waste while handing it over to the Kudumbashree women. Furthermore, there are inconsistencies within the waste collection system thanks to the municipal waste collectors. The common points from where the waste is transferred to the municipal waste collectors are undemarcated open spaces without any designated trash bins. There is no accountability for the waste during the absence of municipal workers. Residents complained that vacant lands always turn into dumping sites.

The group also visited a local market developed by the Greater Cochin Development Authority (GCDA), to inquire about the waste. The shopkeepers explained that the market waste is directly collected by the municipality. Amongst the local participants, there were some who have also installed biogas plants and suggested that these should be recognized as Green initiatives and incentivized by the authorities. Exasperated with the broken waste system, some residents are of the opinion that the government should hire a private entity to collect and treat the waste.

Perandoor and Senathodu canals

Walk through Route 2 & 3



Fig. 58: Condition of the pedestrian pathways

These canals run north-south in the city, and cut through the neighborhood. Earlier, both the canals were used for transportation of goods and people. However, as the roads developed the canals lost their purpose. Today, they are a neglected civic infrastructure of the city. Two different groups attended to the canal issue and found similar results. The original width of the canal was 10 to 15 meters that was convenient for boats to navigate. Over time the canals were encroached to create land for the booming real estate. These newly developed buildings connected their drains to the canals to discard household waste and non-treated effluents. Clogging of water channels by solid waste and silt creates breeding grounds for mosquitoes. Furthermore, every year the municipality dredges the canals to remove the silt and sludge. This is deposited on the banks of the canal, since this activity is carried out just before the monsoons, the deposited matter washes back into the canals with the monsoon rains. Residents feel that the entire city is suffering because of the poor canal management.

The Senathodu canal group also visited a non-functioning sluice gate, which is supposed to protect the canals from flooding but “canal water overflows into the houses at least 10 times a year due to heavy rain” as stated by a resident.

Transportation and Metro

Walk through Route 1

Kaloor is transformed due to the massive transit infrastructure, however, it also has negative externalities such as traffic congestion. One of the groups visited the metro station, to understand the impact of the infrastructure on the neighborhood. Local participants appreciated the development of the metro and explained how the metro has influenced housing markets and liveability of the people. Another group, which was looking into traffic issues, expressed their concerns regarding the safety of pedestrians, especially the disabled and senior citizens. Residents questioned if the streets were inclusive enough. The development of roads, metros and rails has resulted in an increase in traffic making it difficult for pedestrians to maneuver the urban landscape. Additionally, the group found that the footpaths are poorly maintained and dangerous. Properly laid pedestrian streets can help reduce vehicle usage.

Summary - Revive Canals & Pedestrian networks

The most pressing issue in Kaloor is the poor condition of the canals. Domestic waste, both sewage and kitchen waste, finds its way into the canals. Additionally, there is a problem of encroachment, as the banks of the canal are built right up to or beyond the water's edge. Although currently a problem, the residents of Kaloor see the rejuvenation of the canals as an opportunity to improve their neighborhood.

Another concern is inadequate pedestrian infrastructure. While the metro has greatly helped commuters, the last mile connectivity from the metro station is made difficult and even dangerous by the damaged, pot-holed footpaths. Putting the pedestrian at the center of the transportation system, with shared electric autos to augment paratransit from the metro and bus stations is proposed.



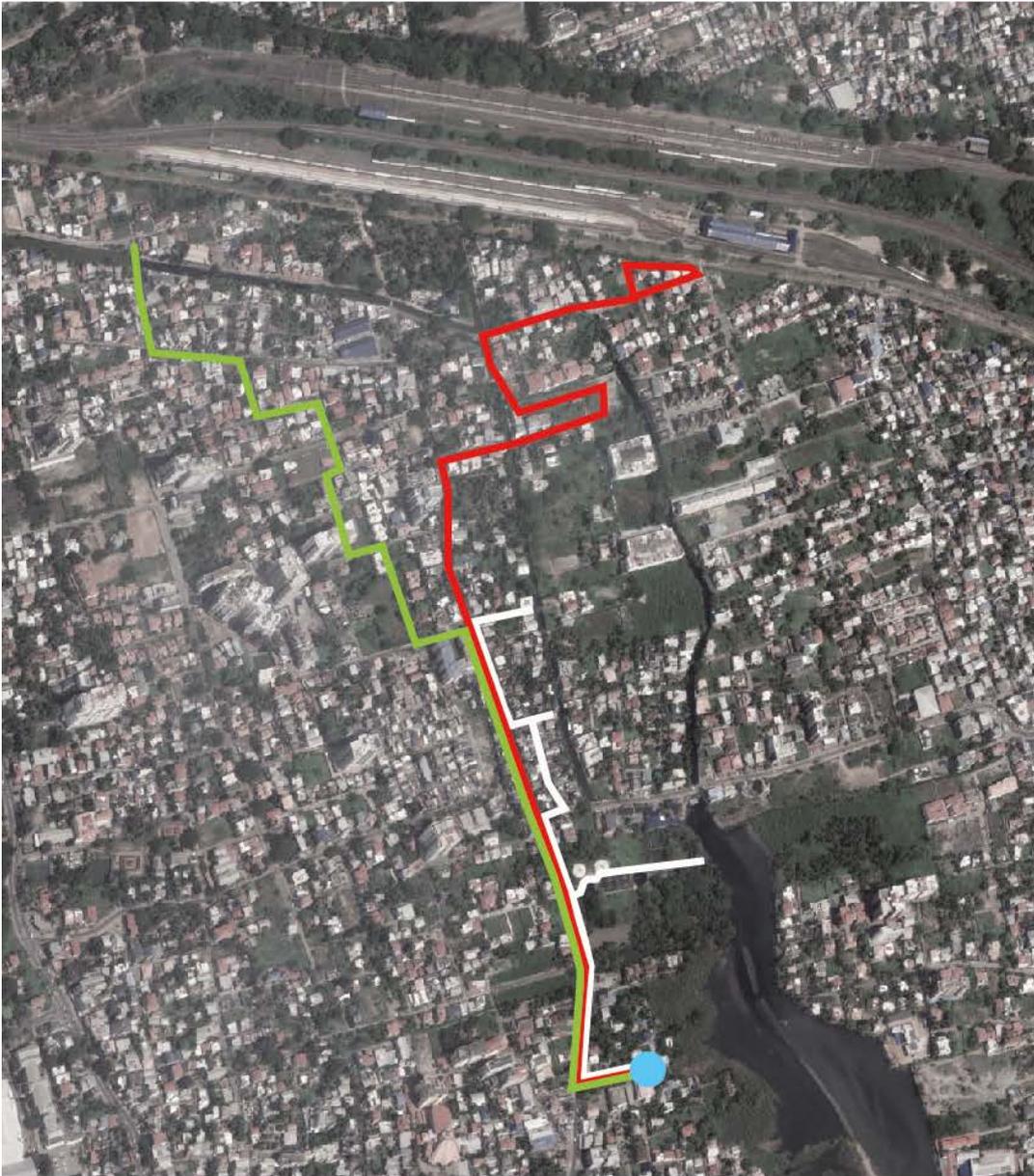
Fig. 59: Rapid development in Kaloor



Fig 60. : Rapid development in Kalamangalam

Conclusion

The improper waste management system is a serious concern for residents, with both domestic sewage and plastic waste finding its way into the two primary canals, Perandoor and Senathodu. The canals were originally developed for the transportation of goods and people, but they no longer serve this purpose. Partially or entirely encroached by insensitive construction, the neighborhood has turned its back onto the canals. Finally, Kalamangalam is well connected by various modes of transport, this has inadvertently led to rapid, unplanned urban development. However, it was evident that the development concentrated on motorized mobility and metro, and little efforts were made to make streets and sidewalks pedestrian friendly. Better paratransit infrastructure will reduce the dependency on private modes of transportation.



WORKSHOP VENUE 

ROUTE 1 
sewage treatment plant

ROUTE 2 
railway nagar

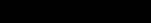
ROUTE 3 
waste management



Fig. 61: Workshop walk through routes in Elamkulam.

ELAMKULAM

Elamkulam is located in the south-central region of the KMC jurisdiction. Demographically, it comprises upper middle and middle-income communities. The key features of the neighborhood are a railway yard in the north, a network of canals, an estuary in the west and a sewage treatment plant. The Perandor and Senathodu canal runs through Elamkulam connecting the two estuarine landscapes in the north and south of the city. The neighborhood also has a ward which is under the direct governance of the Mayor, which made it a candidate for the workshops.

Date of workshop: 6th June 2019

Venue: Fatima Roman Catholic Church Parish Hall, Elamkulam

Total number of participants: 60

On the 6th of June, the workshop went to Elamkulam, where all the participants gathered in an event hall of the Fatima Roman Catholic Church. Along with the RWAs, the workshop was also attended by the waste collectors from the Kudumbashree team. About 40 residents participated along with the 20 non-residents.

The collective brainstorming session in Kaloor helped identify four key topics;

1. Waste management,
2. Sewage treatment plant,
3. Railway Nagar, and
4. Streets and roads.

Four groups were formed to visit these four critical locations to understand the problems firsthand.

Waste management

Walk through Route 4

In Elamkulam, the waste management group was guided by the waste collectors from the Kudumbashree groups. Unlike Kaloor where waste was discussed by the residents, the Kudumbashree workers narrated the challenges they face to collect everyday waste. They explained to the group that waste collection is the only livelihood, without any benefits and securities. They are part of unions such as CITU (Centre of Indian Trade Unions), unlike the corporation workers who have more secured livelihoods. They don't have any protective gear, rain gear or uniforms. Moreover, the residents are inconsistent or refuse to pay the service fee. The Kudumbashree workers reasoned that vacant plots become dumping grounds for this uncollected waste. The group witnessed this during the walk through. Additionally, even if the residents are to be fined for not segregating their waste, but, when the residents deceitfully hand over

unsegregated waste, it is the Kudumbashree workers who face the fines for collecting unsegregated waste. Lastly, there is a lack of coordination with the collection system of the municipal workers. When they fail to collect the waste, it is the Kudumbashree workers who take the blame.



Fig. 62: Household waste dumped illegally on vacant plots

Sewage treatment plant

Walk through Route 1

The sewage treatment plant in Elamkulam was installed by the authorities to cater to the neighborhood and the surrounding wards. The site is adjacent to a canal and natural wetland. During the discussions, local participants expressed their concerns about the efficiency and maintenance of the plant. It runs on obsolete technology, which is failing to treat the increasing sewage water that it receives. It was found that the sewage pipes transporting water to the plant were broken and mixed with clean tap water. Residents are unsure if the Sewage Treatment Plant cleans the water. Furthermore, the overflow pipe of the untreated sewage tank directly opens into the nearby canal and is adding to the pollution of the water. To address these issues, the local participants stressed that the authorities should take immediate measures to upgrade the technology of the system and modernize it for present and future needs and that the monitoring and systematic implementation by Kochi Municipal Corporation (KMC) is very important. The participants also proposed that there should be clear accountability and transparency in the entire process. The Kerala Water Authority, KMC and the RWAs should be the key stakeholders, who need to be involved in the management of the plant. This collaboration will help to bring transparency in the process.



Fig. 63: Sewage Treatment Plant in Elamkulam



Fig. 64: Waste water connections to the canals

Railway Nagar

Walk through Route 2

The area was developed in 1984 in the north in Elamkulam and now is surrounded by canals on all sides within the proximity of the railway yard. The residents claim that the canals are very important to the area. A lot of the land around the canals were paddy fields. As the area developed canals were built for transportation. However, the road intervention diminished the value of canals. On visiting the area, the group understood that it is relatively at a higher plain, however, due to the adjacent canals the area floods frequently. The encroachments along the stretch reduced the width of canals causing flooding and deteriorating the housing quality. The group attending this issue visited the colony with residents who participated in the workshop. The residents showed the various signs of the deteriorating condition of the colony due to the flooding. According to their description, the flood water back flows into the household drainage system. The canals are overgrown with water hyacinth due to which the flow of water is obstructed. Additionally, the low height of the foot over bridges crossing the canals escalates the clogging. All this subsequently leads to floods in the colony. According to the residents it is the negligence by the authorities that is

responsible for the seasonal flooding of the colony. They asserted that there was no help from government of any kind. Only the Ward Councilors helped at this time.



Fig. 65: Housing conditions in Railway Nagar in Elamkulam



Fig. 66: Canals covered with water hyacinths

Streets and roads

The residents took the group to visit the promenade, along the canal, built only a few years ago. They pointed out the poor quality of construction which had already begun to deteriorate. Residents blamed the lack of co-ordination between different municipal departments for some of the issues they were facing. For instance, a road which belonged to the Water Authority could not be paved because a large sewage pipe was running along it. Concreting the road would have meant elevating it above the pipe level, which would have caused flooding to the houses along it. Although residents are well organized and able to reach out to the municipal corporation, they found that their involvement in the identification of issues, elaboration of solutions, and their implementation would improve the speed and quality of public work.



Fig. 67: The construction quality of a promenade in Elamkulam



Fig. 68: Newly developed promenade near Elamkulam

stakeholders. Residents are keen to participate and organise themselves for the improvement of the neighbourhood. They propose initiatives to recycle plastic and organic waste at the local level. They would rather see the vacant plots being transformed into parks than being used as illegal dumping grounds. If developed wisely, Elamkulam could very well be a model neighbourhood for other parts of Kochi.

Conclusion

Waste management, both at the household and municipal level, is a big issue for Elamkulam. The existing sewage treatment plant is inadequate, and residents are doubtful about the quality of treated water. They would like better coordination between all stakeholders to improve the management and existing technology employed in the sewage treatment plant. The residents wish to see the problem of monsoonal flooding to be addressed by the authorities. Finally, the residents speak against the substandard construction and use of poor-quality materials in public infrastructure.

Summary - Improve Quality of life & Waste management

Elamkulam is transitioning into becoming one of the most sought after localities of Kochi. Waste management and a better quality of life are the primary concerns of the residents. It was found that septic tank sludge, collected by contractors, being directly dumped, untreated, into the canals. Household waste is dumped into both canals and vacant plots. This broken waste collection system diminishes the overall quality of life.

An attempt was made to remedy the situation by integrating a sewage treatment plant with the canal and a public promenade. Although the project was well intentioned the outcome is substandard and does not serve its purpose in the long term. The quality of water post treatment is questionable as dead fish have been found floating in the canal which receives the treated water. The promenade alongside the canal, constructed two years ago for the recreational use of the residents, is already showing signs of degradation

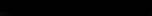
These problems are interconnected and must be addressed through multipartite meetings with the corporation and all

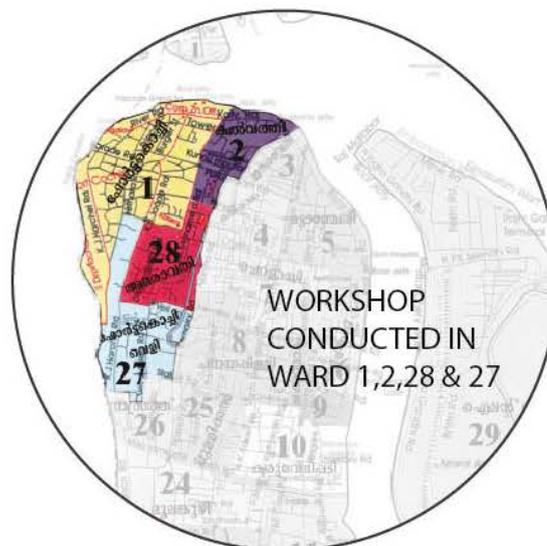


WORKSHOP VENUE 

ROUTE 1 
calvathy canal

ROUTE 2 
heritage & water metro

ROUTE 3 
waste management



9: Workshop walk routes in Fortkochi.

FORT KOCHI

Fort Kochi is known for its heritage landscape of trade and colonial history. The Port received merchants from different parts of the world who contributed to the diverse cultural and spatial fabric of the neighborhood. Today, it is one of the most cosmopolitan neighborhoods of the city comprising mostly of middle-income communities. Due to its location on an island, Fort Kochi depends a great deal on water transport to connect to the mainland. It also had a network of canals which were used for internal navigation. Overall the neighborhood has a low rise, high-density fabric, with several heritage narratives/places within it.

Date of workshop: 7th June 2019

Venue: Pallathu Raman Memorial Park, Fort Kochi

Total number of participants: 60

On the 7th of June, the EnteKochi team conducted the workshop in Fort Kochi. All the participants gathered in the Pallathu Raman Memorial Park. Along with the RWAs, the workshop was also attended by the Kudumbashree team. About 40 residents participated along with 20 invited participants.

The collective brainstorming session in Kaloor helped identify three key topics;

1. Waste management,
2. Heritage and Water Metro, and
3. Calvathy Canal.

Three groups were formed to visit these critical locations to understand the problems firsthand.

Waste management

Walk through Route 3

Like the rest of Kochi city, even Fort Kochi faces difficulties with management and disposal of waste, which is amplified by the tourism industry.



Fig. 70: Waste dumped behind the compound wall of water tank

The discussions addressed issues related to segregation, collection and disposal of waste. During the walks the groups witnessed illegal dumping grounds within the neighborhoods. Predominantly, the household waste finds its way to “hidden spaces behind compound walls which are the new garbage bins!”. One such site was the water tank near the Santacruz Cathedral of Fort Kochi. Moreover, the locals also explained that there was no system to dispose off leaf litter and other plant matter which are major contributors to the neighborhood waste.

During the discussion sessions, the existing broken waste collection system was a hot topic. According to the residents of Fort Kochi, the system fails due to:

1. Inconsistency in waste collection on a daily basis as they lack the capacity to cater to such a vast neighborhood;
2. Unwillingness of the residents to pay the service charges and the consequent blacklisting by Kudumbashree; and
3. Inconsistency of the municipal workers to collect the waste from the collection points.

The locals expressed their concerns regarding the absence of public waste bins and the waste generated by street vendors. There was strong opposition to the use of plastic, residents demanded a “plastic ban with political will!”. However, the residents were willing to discuss options which will not entirely eliminate the street vendors. The residents felt that the authorities should carry out mass cleanup missions to address the issue and “waste management must be on the local level. Each neighborhood must have local waste treatment facilities.”

Heritage and Water Metro

Walk through Route 2



Fig. 71: The current condition of the Chinese Fishing Nets on Fort Kochi island

The group attending the issue of heritage visited the famous site of the Chinese fishing nets. The merchants who came to the island left their cultural traces with the Chinese fishing nets, which now contribute to the heritage

value of the landscape. Till date, the nets are used by local fishermen. Hence, the nets are associated with living heritage, livelihood and a thriving local economy. However, due to the poor maintenance, the island has lost some of these nets, which also face new threats because of proposed development projects, such as the Water Metro jetty. Some of the locals mention that the winning entry for the Water Metro Terminal seems very alien to them. They stated that the project is “welcome but it should not destroy the fishnets.” Today, out of a total of 23 nets, about 11 remain, indicating the need for strong patronage by the local authorities. They should become worthy of civic interest and investment, by giving local communities more access to them to create a sense of ownership. The local participants also addressed the natural heritage (rain trees, canals, sea, biodiversity) as part of the identity of the neighborhood. For them, “the biennale has brought Kochi to a global stage”. They have brought back to life some heritage buildings by turning them into business. While the heritage identity of Fort Kochi is one of its prominent qualities, it cannot be taken for granted and must be maintained against all odds, and not only through private initiatives.



Fig. 72: Kochi Biennale



Fig. 73: Calvathy canal of Fort Kochi

Calvathy Canal

Walk through Route 1

Fort Kochi's network of canals has deteriorated. It has been built over and converted into a road network instead. In the past, the canals were used for navigation within the island, however, the development of roads reduced use of the canals and they were eventually neglected.

Some residents want to “have high speed boats back in action”. The municipal authorities covered the canals, to prevent waste dumping and clogging. Today, Calvathy canal is the only uncovered part of this historic network. But the condition of the canal is poor. According to the locals, the inflow of saline water was a natural deterrent to mosquito breeding. Presently, the mouth of the canal is restricted, causing the water to stagnate. This has turned it into a mosquito breeding ground. The locals lamented that “mosquito repellent has become a basic necessity.” Due to poor management, both the canal and the people are suffering.

Summary - Environment & Heritage

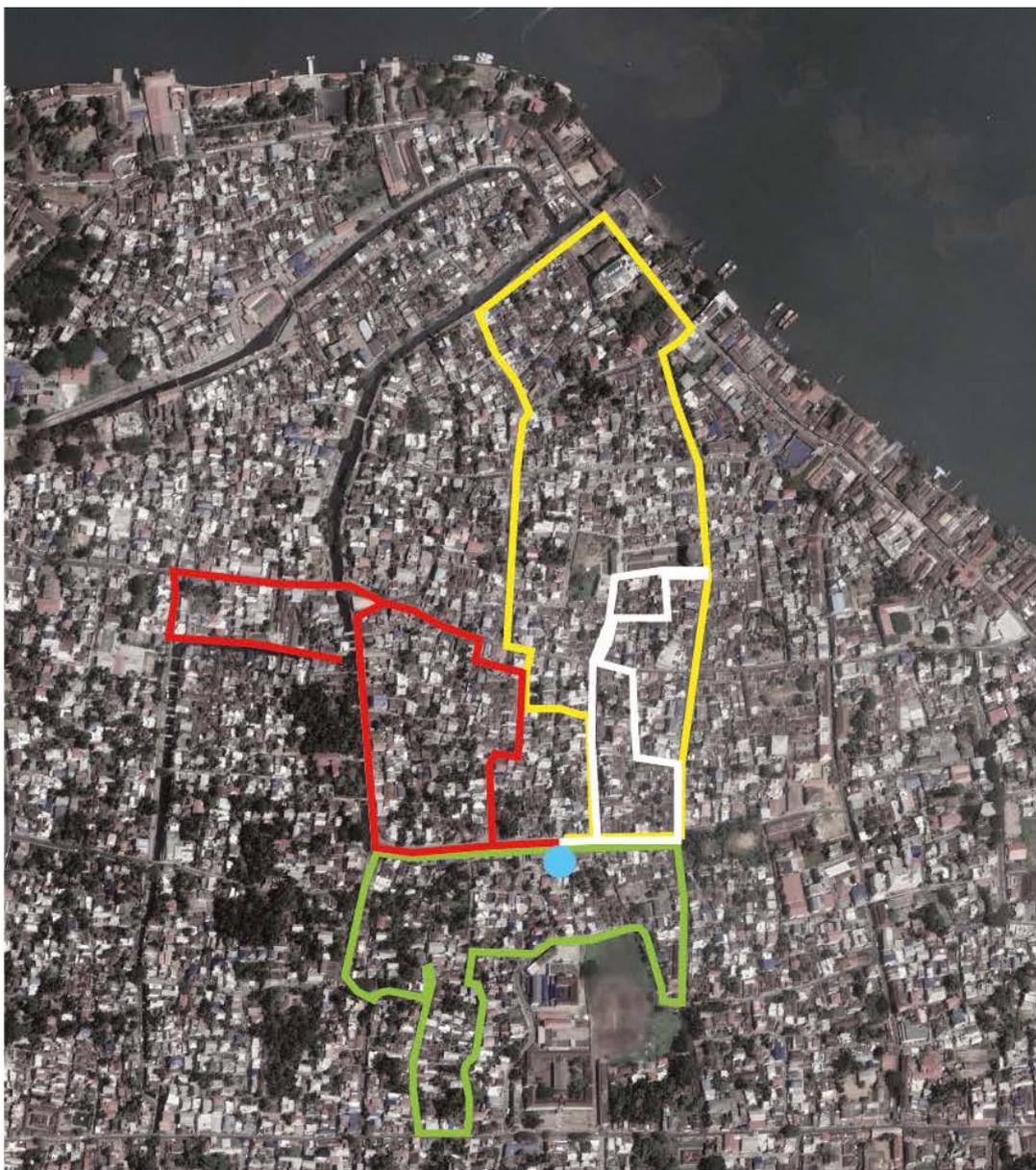
Fort Kochi is the heritage precinct of Kochi. It is crucial to recognize the natural heritage and the traditional activities it sustains as an integral part of the Fort Kochi identity. Residents view traditional activities as well as the natural and built environment as heritage and are keen to conserve it. Threats such as plastic wastes in the ocean which affects traditional fishing activities, the proposed water metro station which could displace the quintessential Chinese fishing nets and the timber mafias that are covertly chopping down age old rain trees were recognized.

Heritage is sustained by activity, and one such event has been the Kochi Muziris Biennale held in Fort Kochi. While residents are proud to host this art event, it also entails the adaptive reuse of heritage buildings for tourist-oriented businesses. Although this shift has been welcomed by the locals, there remains a feeling of loss in terms of use and accessibility to the reformed heritage structures.

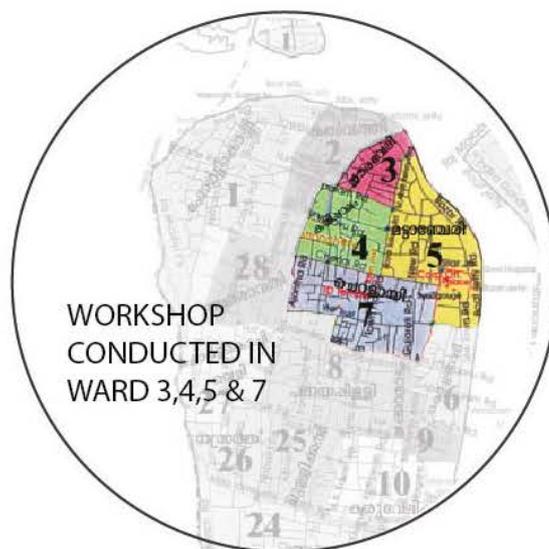
In conclusion, heritage should not be limited to architecture, but must include nature, vegetation, canals, coastline, the sea and overall biodiversity of Fort Kochi, as well as traditional activities. Keeping this in mind, fishing and the Dhobi Khana (clothes washing) activities must also be revalorized. Transforming vacant plots into public spaces are opportunities to integrate, extend and conserve the heritage of Fort Kochi in all its forms.

Conclusion

Once again, waste management came across as a major concern. The densely vegetated neighborhood also must find ways to deal with large amounts of leaf litter and dead branches. Tourism is the major economic driver due to the heritage value and scenic landscape of the neighborhood. Individual households have transformed into homestays, and heritage buildings are being converted into hotels and restaurants catering to the inflow of Indian and foreign tourists throughout the year. The Kochi-Muziris Biennale has further amplified the tourism economy. While tourism is welcome, it should not be at the cost of natural and built heritage. Finally, the canal system needs to be rejuvenated, like in other parts of Kochi, this move can address multiple issues of the neighborhood.



WORKSHOP VENUE	
ROUTE 1 housing	
ROUTE 2 canal	
ROUTE 3 scrap dealers	
ROUTE 4 unemployment	



4: Workshop walk 'es in Mattancherry.

MATTANCHERRY

Like Fort Kochi, Mattancherry was also marked by its role as a trading hub. Till today, there is a spice market, which in the past was part of the global trade network. Now the activity has dramatically reduced, as the trading which once made Bazaar road into a bustling centre, have shifted to Market Canal. Like the rest of Kochi, the canals in Mattancherry were used for transportation of goods and people within the neighborhood.

Date of workshop: 8th June 2019

Venue: Karippalam Ground, Karippalam Road, Mattancherry

Total number of participants: 45

On the 8th of June, the EnteKochi team conducted the UT workshop in Mattancherry, at the Karippalam Ground. About 30 residents participated along with the 15 invited participants.

The collective brainstorming session in Kaloor helped identify three key topics;

1. Unemployment,
2. Housing,
3. Canal, and
4. Waste management

Four groups were formed to visit the locations where these issues had manifested.



Fig. 75: Collective Brainstorming with the residents and inhabitants of Mattancherry



Fig. 76: Bazaar Road of Mattancherry

Unemployment

Walk through Route 4

For generations, the Port and the spice trade was the major economic activity. However, the relocation of the spice market to the Ernakulam Market and advancement of technology in the Port activity, caused loss of livelihoods for the local communities. The local participants took the group to the Bazaar Road of Mattancherry. Here, they explained to the group that “there is lots of unemployment on Bazaar Road” and since “Mattancherry is marginalized, it is difficult to get jobs”. According to the community, Mattancherry is historically rich however, “the Biennale hasn’t benefited the neighborhood much”. The community also felt that Mattancherry could benefit from developments such as the Biennale and the coastal road project. The neighborhood is also experiencing an increase in employment rates of women, who “don’t hesitate to work as housemaids, cleaning, packaging and waste collecting to earn money for the family”.

They are the new bread earners of their families. Young men were more likely to socialize in public spaces, and to take on seasonal or daily jobs. Many of them felt deeply attached to their neighborhood and community and were not willing to move out, despite the difficulties they were confronted with. A resident observed that “People have been living in communal harmony for more than 100 years; and they are very attached to their place”

Housing

Walk through Route 1



Fig. 77: Housing conditions in Mattancherry

Housing is a very important concern for many Mattancherry residents. For generations, many households have been on rental contracts and “cannot get loans to fix (their) houses”. The communities are unable to upgrade their socio-economic status. Others have been living as tenants on trust lands of the Waqf Board. However, the tenureship of this land has been a mixed blessing as the tenants can’t get access to loans to improve their home, since they don’t formally own it.

The neighborhood has maintained the original historic fabric with some alterations. Several families are residing on trust land such as the Wakf Board, who has given it on yearly lease. However, the tenant families must pay rent to the board, which increases every year with the renewal of lease. To avoid this increment, the families are in search of new housing options every year and “Due to rental housing, after every 11 months truck loads of people are on the move, which becomes difficult to manage”.

Due to this constant insecurity, the families expressed their need for “more rental options”.

Canal

Walk through Route 2



Fig. 78: The current condition of the canals in Mattancherry

In Mattancherry too, the condition of the canal is no different. The group attending this issue, visited the canal

site with the residents. Many canals were covered but residents felt that “nobody can remove the blockage in the canal drain because it is covered. They could do it easily earlier when they were open”. The group witnessed that effluents such as waste from slaughterhouses, are let into the canal without treatment. The canals are dredged but this happens before the monsoons and most of the sludge gets carried back into the canals. Some residents mentioned that due to the degrading condition of the canal it is “better to convert it into a road.” However, most residents believe that the canals can be revived, looking forward to “the smart city project, where there is a proposal to revive the canals and set up a sewage treatment plant adjacent to it”

Scrap dealers

Walk through Route 3

Mattancherry has a huge network of scrap dealers and “Scrap dealing is a major economy generator. Biennale etc. takes scrap from here”. The group that was studying the scrap dealer network visited the scrapyards within the neighborhood. The dealers deal with scrap such as plastic items, wooden furniture and waste from demolished buildings like doors and windows. Every year, the dealers experiences a huge influx of this waste as the tenants discard these items when they move from one area to the other within the neighborhood. They explained the difficulties the scrap dealing industry faces within their limited capacity. “Scrap dealers collect about 250 tons of scrap per month in Mattancherry area.” The dealers and the local participants expressed the desire for the local authorities to support their needs.



Fig. 79: Scrapyards of Mattancherry

Summary - Waste management and Livelihood

The development of Mattancherry is coeval with Fort Kochi. However, the socio-economic status of its residents is different. Although a lively neighborhood, Mattancherry is not as affluent a neighborhood as Fort Kochi. Most of the local men and youth are unemployed. It was evident that one of the major problems in Mattancherry was the failure to sustain and generate local jobs.

Within this narrative of male unemployment lies the contrary narrative of the hard-working women of Mattancherry who, unlike the men, do not shy away from taking up all kinds of odd jobs to keep their families afloat. As a result, most women are toiling away indoors and cannot even find respite and safety in public spaces, which are mostly occupied by groups of unemployed men. Regardless of these problems, the residents are very attached to their neighborhood and have a strong sense of community.

As a means of tackling the inadequate waste management issue in the neighborhood, there can be generation of economic activity for men and production of safe public spaces for women. Mattancherry has many scrap yards that collect up to 250 tons of scrap per month. This can be valorized and organized to provide jobs in the collecting, sorting, recycling and dealing of scrap. Residents complained about the inefficiency of municipal waste collection and are volunteering to do it themselves. This is another opportunity for generating employment in the waste collection and recycling sector. Another desire of the residents was to see the Biennale extend into Mattancherry, which has its own heritage value that can lend itself to co-hosting the event. This could inject a new economic and cultural vigor into the neighborhood.

Conclusion

In the past, the neighborhood was bustling with trade. However, today, the relocation of markets to Ernakulam and the advancement of technology in port-based activities, has led to soaring unemployment rates. Mattancherry is now a low-income community that does not even have secure housing. According to the locals, Fort Kochi and Mattancherry are two sisters divided by the Calvathy canal network. Today, these canals are either encroached or used for dumping waste - a result of the inefficient waste management system of the city. The scrap dealers of Mattancherry could benefit from better organization and formalization of their trade. Although Mattancherry has heritage attractions such as the Dutch Palace and Jew town, tourism did not benefit the neighborhood the way it did Fort Kochi.

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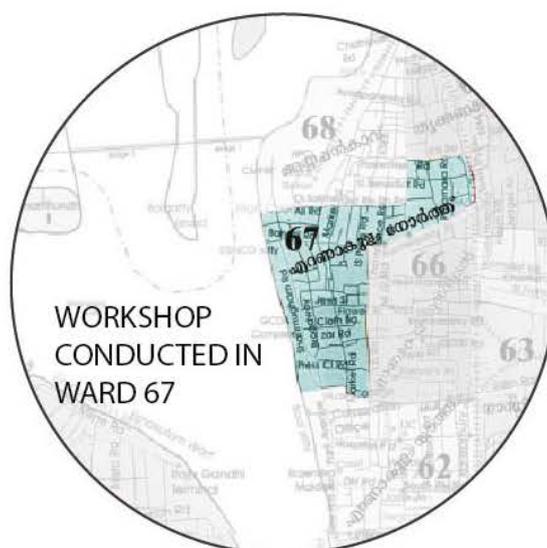


WORKSHOP VENUE 

ROUTE 1 
housing

ROUTE 2 
market development,
heritage & main canal

ROUTE 3 
market development,
heritage & main canal



0: Workshop walk
s in Market Canal

MARKET CANAL

Market Canal is located in the Ernakulam wholesale market, and has been a part of the regional trade activity for over 150 years. Like Fort Kochi, the extensive trade between different parts of the world resulted in a melting pot of cultures that influenced the physical fabric of the settlement. The relics of which can be seen in the form of the numerous churches, synagogues, mosques and the market itself.

Date of workshop: 9th June 2019

Venue: EPJ warehouse,

Total number of participants: 50

Market Canal workshop was the last one held on the 9th of June, 2019 as part of the Urban Typhoon workshop series. The EPJ warehouse on Market Road was the base for the workshop.

About 25 local participants including the local councilor, representatives of the Trade Unions, Street vendors associations and RWAs plus 20 invited participants including the Cochin Smart Mission Limited (CSML) team attended this workshop.



Fig. 81: Collective Brainstorming with the residents and the inhabitants of Market Canal

The collective brainstorming session in Kaloor helped identify four key topics;

1. Market redevelopment,
2. Heritage,
3. Main Canal and
4. Housing.

The four groups that were formed visited the locations where these issues were spatialized.

Market Redevelopment, Heritage, and Main Canal

Walk through Route 2 & 3

During the workshop in Market Canal, three groups were formed to address the issue of the redevelopment of the

market, the heritage and the main canal. The market became the converging point for all these issues. This also influenced the walk through routes which the three groups took within the neighborhood. All the three groups visited the market with the local participants who were concerned about these issues. Together they visited the fruit, fish and spice market to experience the bustling day to day activity.



Fig. 82: Traditional market activity along the canal



Fig. 83: Traditional commercial buildings in the market

The vendors associations and the trade union representatives explained the functioning of the market to the market redevelopment group. They explained the traditional market activity and how the spatial fabric is best suited for this activity. Currently, there are two storied commercial units which are approximately 150 years old, of which the ground floor is utilized as a warehouse and the first floor is used as an office space. The Cochin Smart Mission Limited (CSML) has floated a redevelopment project for the market, which has caused insecurities and ambiguities among the shop-keepers concerning the rent and “are worried that the price will increase”. The new development “is a three-story market on existing market site and will take two years to construct” while disregarding the traditional fabric of the market. The association representatives used the Urban Typhoon workshop to voice their concern “that the (redevelopment) project will

disintegrate the market and that it will never come back.” A representative of traders’ association argued that the redevelopment of the market would be better left to them, or that it should at the very least be done with them as core partners.

While the representatives from the associations were explaining the market activity, the heritage group was trying to understand the heritage value of the market. Some residents felt that “The market, along with the activities in it, are the heritage”. The activity and the physical form related to the activity have been around for almost two centuries. There are numerous historical buildings within the area like the warehouses, mosques, synagogues and Jewish quarters. According to the local inhabitants these buildings “must be integrated in the vision for the future of the market” and are presently “not accommodated in the heritage listing”.

The local participants spoke of the historicity of the canal - “400 year old heritage lying unused and deteriorated” Originally, the canal was built to facilitate the transportation of goods into the market. All the regional trade was carried out through this canal, which was essentially the heart of the market. However, due to the development of roads within the market, the canal became obsolete and neglected. Over time the canal started being used to dispose off the waste generated from the market. To avoid further pollution, the Municipality installed a fence along the canal and a “canal cleaning project 5 years ago from MLA fund, increased depth, installed wire nets, CCTV, solar street lights. But No maintenance” The local users expressed their feelings of disconnect with the canal post this intervention saying there was a “lack of relationship with the canal”. They suggested that the canal be revived to its original use to emphasize its importance and demanded that the municipality “empower local groups (..) to maintain the canal system and monitor the CCTV.”



Fig. 84: The current condition of the canal in the market



Fig. 85: Condition of the open dumping site for market waste.

The former intervention by the municipality also caused novel problems within the market. Barricading the canal created the need for a new site for waste disposal, for which the municipality provided an open plot within the market. However, poor management of this site has encompassed the market and the adjacent areas with malodors. The inhabitants of the neighborhood stated that the “residents are suffering from the waste” especially the school children due to the proximity of the disposal site and the school. Hence, the users of the neighborhood asserted the need for a comprehensive program to address all the issues related to the market and the activities should not be seen in isolation.

Housing

Walk through Route 1

In the close precincts of the market, there are few housing settlements, where families “have been residing for three generations”. The RWA representatives who participated in the workshop took the housing group to these settlements to study the current conditions. Some of the houses within the settlements were well maintained whilst some were in a poor condition. Upon interacting with the locals it was understood that the ownership of these houses was ambiguous, residents said that “unknown land ownership is a big problem.” The houses were passed down for generations within the families. However, no proper documentation was maintained of these transfers. Compared to the average living standard of the city, the families have a low socio-economic background. Additionally, the ambiguous ownership of the houses has caused difficulties for the families to access microfinance policies, and residents “with unknown land ownership pay land tax to the government, but they don’t own the land” Moreover, the development project of the market has given rise to a speculative housing market within the settlement, where commercial buyers are occupying plots of houses within these settlements. As a result there is loss of sense of community within the area, which the families fear is at their

disadvantage.

and residents that mobility, rather than reconstruction, needed to be at the heart of the market development project.

Summary - Management, Redevelopment and Participation

Built around 150 years ago for the purpose of regional trade, Market Canal is now a market that has outgrown its infrastructure. The canal, which was the main route for goods to enter the market is now used only by fishing boats to deliver their daily catch. All other goods reach the market by road. For a market serviced mainly by a canal, the transition to roadways has taken its toll. Traffic congestion due to heavy duty vehicles is a huge issue for the residents and local schools. In addition to the waste from residences, the waste generated by the market itself is enormous. Needless to say this is the other pressing issue of Market Canal. Decentralized waste management tools like biogas plants could be one of the many recycling efforts to process all this waste.

The proposed redevelopment plan has not gone down well with local traders and shop owners. Having cultivated trade networks over three generations, they are worried for the continuity of these networks once the project has restructured and reorganized the market. They feel competent to improve the market themselves, but this is not encouraged by the authorities. It may be a solution to let the traders develop the market incrementally, with the full support of the corporation. Open communication and better coordination with the Municipal Corporation are key. The corporation can facilitate instead of orchestrating the redevelopment. Finally, Market canal could be recast as a mobility project rather than an architectural project, this would allow the corporation to play a more suitable role in planning, on a scale and subject that extends beyond the market, while leaving the development of the market itself to the merchants.

Conclusion

Over time, the road network within and beyond the market developed, leading to the disuse and subsequent misuse of the canal. The authorities have fenced the entire bank of the canal to prevent the dumping of waste. The roads also brought an influx of vehicular traffic into the compact settlement of the market which has become a nuisance to both the residents as well as the plethora of commercial activities. The market generates large amounts of waste. The neighborhood has a small dumping ground for all the biodegradable waste. This growing waste dump has become a health hazard and is a cause for concern. Furthermore, a redevelopment project is proposed for the market, which has made the shop-owners and residents insecure about the outcome and impact it would have on their lives and livelihoods. There were clear indications from local traders

RECOMMENDATIONS & CHALLENGES

The representatives of localities who participated in the workshops were the main voices that produced the visions and recommendations at every site that were recorded in the workshop (and have been detailed above in each location-based documentation). A graphical expression, of the major challenges and ideas for future interventions, were presented at the final Symposium and adjacent public exhibition.

What is listed below are the overall learnings from the process that contributed to the next step, the Design Sprint. In this section, we present them as a common civic vision as well as a set of overarching recommendations for local authorities/ groups and associations for a future course of action.

WATER AS COMMON CIVIC VISION

Water emerged as a unifying civic vision for the city in most of its neighborhoods and thus, became the most obvious ingredient for thinking about the city collectively.

Water is an intrinsic part of the city of Kochi, its most prevalent organizing system. It connects and links most of its spatial uses. People are ready to mobilize around water issues and the canal network and are very supportive of projects linked to these themes. From the cleaning of the canals, the development of the water metro project, the development of promenades along the canals, the connecting of waterways to other mobility systems like railways and roads and protecting the settlements and habitats from the inevitable impact of climate change; the need to work with water is felt and understood as very urgent at different levels. This is already being recognized by both, official authorities and the public. It will be the key to the future of Kochi. Water evokes responses and responsibilities at different levels – state-level, infrastructural, municipal, and at the level of citizens responsibilities.

Different functions connected to water systems have changed over a period creating some elements of dissonance that need to be addressed. For example, historically the water systems were more active as mobility systems. These got supplanted by newer modes such as air and surface transport. Which meant that the older habitats that were shaped by proximity to mobility hubs along waterways had to change their orientation and come to terms with a declining value of use – a process that is always disruptive. Also, neighborhoods that grew along river systems and canals found their growth or expansion limited by the geographical configurations of water boundaries. We see the stress of these factors, particularly habitat congestion, in

Mattancherry and the Market Canal neighborhoods and to a lesser extent as a stress on waste-management in Fort Kochi.

By using Water as the central thematic for infrastructural expansion and improvement, the participants in the workshop endorsed those efforts made by the government to revive the mobility function of water. Thus, the Kochi Water Metro came in for a lot of positive comments as it presented a modern strategy for water-based transport. There was some conflict mentioned about the creation of a water transport hub that would displace ancient Chinese Fishing Nets in Fort Kochi, but this was reportedly resolved.

Some neighborhoods have a closer interdependence to water than others. The Market Canal Neighborhood, which faces the issue of congestion due to adjusting to roadways as the prime transporter of goods, also suggested a revival of the water mode of mobility to help resolve some of its issues. The workshop participants suggested a hybridized set of civic issues – integrating heritage of buildings, water mobility, solid waste and traffic management as the key principles of revitalizing the neighborhood. This was opposed to the proposal of constructing a new building that is currently being planned.

Water as an integrated civic system also emerged in neighborhoods of Elamkulam and Kaloor– where the diminishing of the canal width, or their being covered up in concrete were seen to be matters of concern. Not only were the flows of water getting interrupted leading to increased risk for floods and overflowing drains during the monsoons, but also as becoming transformed into drains leading to health issues and declining quality of the neighborhood.

All these indicated how deeply connected water as part of civic infrastructure is to the several civic issues faced by Kochi – from heritage to transport, from waste management to tourism.

In this light, suggestions emerged that referred to the expansion and opening of canals by using them for transport where possible and as connecting points or parallel channels for walkways. An integrated set of walking pathways along canals, (some of which were already initiated in some neighborhoods), would be a good way of improving quality of life as well as ensuring that canals allow water to flow in a freer expanded way, protecting the city from flooding and while also providing a quality civic standard for leisure.

Preservation and regeneration of canals in Kochi also shows a sensitivity to the ecological reality of the monsoon that is a vital part of the life of the city. The monsoon must be

integrated into the modern infrastructural needs of the city in a manner that prevents flooding and creates a healthy ecosystem around the water bodies. In this light, along with canals, even the revival of old and traditional wells, older water bodies including canals, can together form the basis of thinking about the future of the city in terms of water as a central vision.

Another related concern was the pollution of water. This was observed to happen at every level, from garbage being disposed off into lakes, rivers and the sea as well as contamination of groundwater due to faulty waste-water management. This connected the theme of water to other pressing issues that most residents and inhabitants spoke about – waste management. And the suggestions that emerged as the most effective form of addressing this was centered around the residents and users themselves. This led to discussions about how people and users of a neighborhood were both the source of the problem and also the most effective solutions when it came to waste management.

PEOPLE AND PLACES AS RESOURCE

The issue of waste-management emerged as operating at different levels – the need for managing residential waste disposal, managing special accumulated waste produced after festivities or events, disposing of construction rubble and commercial waste and effluents. It was generally agreed that all of these would need dedicated strategies at the levels of local management as well as at the policy level with more official engagement. The workshops focused on local strategies that were more in the hands of local groups and the inhabitants themselves, even though there was an acknowledgement that bigger scale interventions are needed to manage land-fills and sewage treatment, which were connected to municipal responsibility and higher policy levels.

The connection between waste management and the health of the waters of canals was repeatedly emphasized. For this, recognizing, validating and rewarding the existing efforts is very important at the public, media and municipal forums. The role of the Kudumbashree groups, linked to neighborhood level initiatives was discussed in detail. Several RWAs and Kudumbashree groups have worked successfully on issues such as waste management. It was articulated several times that they needed to share and exchange their experiences with others so the good ideas can spread from one part of the city to another.

It was also pointed out that every neighborhood has its special issues, linked to waste management. A decentralized

system, which genuinely empowers residents, youth groups and Kudumbashree groups will go very far.

The idea that waste management could be addressed most effectively by local inhabitants was repeatedly articulated. They are the most effective support groups for the public administration. Doing even more to facilitate and empower them will be the most effective way of dealing with the issue.

Allowing special concessions for localized financial disbursement, from the municipal level to groups working at the ward level, for cleaning of canals and managing waste, can have a very concrete impact on the life of inhabitants in the city.

While existing protocols now work in a way that they do not consider it important to prioritize local, ward level groups to be recipients of contracts for cleaning canals, drains and managing special garbage (like construction rubble, commercial or marriage / festivity generated), maybe it would be worth discussing and evolving a policy that encourage local groups to be given contracts to do the same. This might strengthen local accountability and community pressure may result in an even more effective completion of tasks.

This point led us to the thematic of Active Neighborhoods – which coincides with our concept of the user-generated neighborhood outlined in the introduction. A place is itself a resource that needs to be harnessed by its inhabitants for its improvement and transformation in desired directions.

The workshops were an endorsement of the fact that Kochi is made up of many active neighborhoods. All of the different areas have very engaged inhabitants, residents and users. Residents are very aware and have already initiated many activities for their neighborhoods. Whether it is an RWA that has managed to create a zero-waste cycle in Kaloor, or local groups that have managed to organize initiatives to restrain pollution of the lake like in Edakochi, or even the Kochi-Muziris Art Biennale itself, they are all good examples of promoting economic, cultural and social activities at neighborhood levels.

Several workshop participants spoke about the need for expanding the scope of the Biennale to include more neighborhoods. Discussions lead to the possibility of making the Biennale the basis of organizing similar events and activities in other neighborhoods, based on their own special qualities, like local markets, public spaces, ecological landmarks or mobility hubs for example. It was pointed out that each neighborhood and ward has something special to

highlight, and can become the focus of the public at its own levels. Such a focus can be the basis, for example, of raising resources to develop a promenade in one case or a walkway in another. Elsewhere, it can be re-organized to enhance and value other distinctive values, from a cultural monument to an orchard. Whether it is international tourists or local visitors, school children or neighboring residents, each place has its own public dynamic that can be activated for enhancing activities in different neighborhoods.

Active Neighborhoods are those that make the existing place itself a form of capital that can be used by the residents for their own improvement and transformation. Even the smallest investment can have high returns. For example, as some youth suggested to us in Mattancherry – self-help groups like Kudumbashrees can also be created for the youth in different neighborhoods. These youth groups can start by working on local waste – management including getting contracts from the municipality in their own neighborhoods. They can gradually network with other existing recycling businesses to develop an economy around waste management. Other youth groups can get contracts for construction of pathways and roads especially along canals and water bodies. Eventually such groups can also play an active role in organizing events and activities including local markets or the creation of tourist attractions. Each neighborhood can thus create its own local economy that can be integrated into public projects for its own improvement and transformation. In this space, the existing Kudumbashree groups and similar self-help youth groups could become a huge resource towards fulfilling such objectives.

CONCLUDING REMARKS AND LEARNINGS

The site-specific workshops held in the six different locations thus provided detailed descriptions, suggestions and solutions which have been presented in the above sections of this report. From these, we derived a common civic vision based on the theme of water as a core infrastructural component for the city which also became the basis of the key Design Sprint output.

Along with this vision, the workshops also yielded recommendations and suggestions for action that have been presented in the section on 'People and Place as Resource'. The main finding was that existing local engagement needs to be supported at every level and that groups such as Kudumbashree can be adapted for other collectives, like the youth for example. Decentralized waste management and the cleaning of canals and drains can be institutionalized and coordinated with Municipal structures at ward levels in which such groups can play a major role. Existing effective

groups like RWAs and Kudumbashree groups that are working on local waste management should be empowered, their issues heard and addressed.

Finally, it was observed that there is an overlap between the idea of people and places as resource. Kochi's neighborhoods have residents who are extremely engaged with local civic issues and this needs to be supported in practical ways. Such support, either in the form of recognition, rewarding, funding or institutionalizing will help revitalize different neighborhoods at different scales. Each place has something that can be capitalized into a public asset. If the inhabitants themselves work on this capital as discussed above, several issues of the neighborhood, and eventually of the city itself can be effectively addressed from the local level.

2.4.8 Design Sprint



Fig. 86: Schedule of the Design Sprint week

Overview and Methodology

After collecting data, local knowledge, ideas and wishes through the various sources of the EnteKochi process, including the Urban Typhoon workshop series, the Design-sprint was the point at which these inputs were brought together. Within a limited time of five working days a set of first impulses for urban development were evolved from these various inputs.

The working week was structured into five thematic areas, one for each day. It started on Monday with a review of the EnteKochi process until now, identifying the “hot topics” and potential overall theme to work on during the week. Tuesday was set for the topics “Mobility & Economy“, Wednesday for “Public Spaces, Open Sites, Water Management and Climate Challenge“, Thursday for

“Housing, Neighborhoods & Basic Services“ and Friday was planned to bring all the topics together in the form of an integrated view of the city (see timetable graphic).

The Sprint week consisted of two daily sessions: The workday Session from 9:30 to 17.00 and the public session from 17:00 to 18:30..

An integral part of the sprint was a report each morning from Urbz on learnings from the Urban Typhoon workshop series to ensure that the workshop results were transferred along without the loss of information and knowledge. The support team from the interactive exhibition summed up the learnings from the exhibition in the morning session and the online poll’s results in order to provide a complete picture of the ideas obtained. In addition, depending on the topic, various stakeholders were invited to the morning sessions to contribute their knowledge.



Fig. 87: First sketches thoughts and ideas during Design Sprint



Fig. 88: The Folklore Theatre as creative studio

In the open work sessions participants actively joined in group discussions and engaged with the design team during the work sessions. The Design Sprint team along with representatives of Urbz produced maps, illustrations and collages to illustrate and communicate the results of the process. The aim was to produce a central exhibition, a “Finissage” as well as a publication in the form of a “map of the future”.

The Design sprint team was led by Urbanista with Markus Ewald (Urbanista), Sophie Naue (Urbanista) and Jana Gregorczyk (Urbanista) supported by Friederike Thonke (GIZ) and Vani Kunnappilly (GIZ).

Furthermore, international, national and local experts have enriched this process and actively joined the design tasks. To name just a few, Prof. Nikolaus Knebel, Professor for architecture and urban design at German University of Technology in Muscat, Oman and Prof. Jan Dieterle, Professor for landscape architecture from the University of Stuttgart in Germany also participated in this process and held impulse speeches during the week as part of the public sessions.

Outputs

Each working day of the design sprint brought up different topics for solving the urban challenges addressed by the EnteKochi process. Planners and designers with experience working on the said topics and some residents and locals joined in the brainstorming sessions. Some of the ideas developed were further detailed and displayed or illustrated on the EnteKochi Map and the EnteKochi Symposium held on 17th June 2019 in the Ernakulum Town Hall, Kochi. Other ideas could only be discussed but not further developed due to the limited time-frame and resources of this process.

DAY 1: Potential overall theme for Kochi

After a discussion based on a summary of the Urban Typhoon workshop series provided by Urbz, the results from the interactive exhibition at the Folklore Theatre (i.e. the urban options and suggestions on the interactive wooden model, etc). two concepts came into prominence:

1. The demands and wishes for future development are multi-layered - they consist of a mix of economic, ecological and social topics with certain focus areas depending on the specific sites in the city.
2. Water has been a connecting element on all workshop sites and an often-stated potential for various sites in the city.

Therefore, the Design Sprint proceeded by adopting “Water as the defining element of Kochi” and proceeded to explore its connection to the various integrated topics within the city. It was found that the concept could be adopted as a general city-wide theme and be connected to a range of different aspects:

- Water as working space (fishing, harbor and logistics etc.)
- Water for transportation of goods (is a renaissance of water-based transport possible?)
- Water for public transport (Can water transport be even further explored than the ongoing water metro project?)
- Water as social infrastructure (swimming library, activity or learning center etc.)
- Water as public space (reclaiming of the waterfront)
- Water as heritage (Water has played an important role in Kochi’s history)
- Water as local supply (swimming, shops and restaurants)
- Water for food production (Can the already strong water-intensive food production be further explored?)
- Water as recreation (swimming, boating, canoeing etc.)
- Water as identity (unique feature of Kochi)
- Water as pride (something that is accessible and “useable“ for everyone in the city)

DAY 2: Mobility & Economy

Mobility issues and possible solutions for improving the transportation in Kochi dominated the second day of the design sprint. Potentials of water transport and the water metro were discussed, especially focusing on the topics of affordability and accessibility for everyone. There should be a focus on well designed, functioning and accessible (also for the differently-abled people) mobility hubs, to foster the switch from one mobility system to another and the usage of public transport. Another crucial part in the mobility chain is the last mile connectivity, which refers to the connection between the house and the nearest point of public transport.

With regards to the topic of urban economy, the difficult situation of the Mattancherry area with regards to the economic impacts of the relocation of the harbor and port activities was discussed. The idea of an active and productive neighborhood was born, where the neighborhood was not only seen as a residential area but as an agglomeration of economic and social functions. In this concept of the neighborhood, by introducing a certain amount of paid or unpaid activity, the citizens play a productive role in the society. It was further discussed whether “active” citizen groups, who take over civic duties like cleaning or maintenance of public infrastructure, can be financially supported through innovative formats to generate employment for the youth in these areas.

Another discussion revolved around possibilities for the Market Canal area’s economy where a concept for the modular urban design of shops and trading places under a collective large-scale roof was envisioned, but not further detailed as part of this exercise.

DAY 3: Public Spaces, Open Sites, Water Management and Climate Challenge

The results of the EnteKochi interactive exhibition and the neighborhood workshops have shown that public space plays an increasingly important role in urban design. As building plots and housing areas have been getting increasingly smaller, the demand for public spaces have only increased. Historically, nature and ecology has been an important source of identity for the people of Kerala, and there is still a demand for the city to be greener and for water being brought back into the city as public space.

The EnteKochi exhibition also showed that the people of Kochi are aware of climate change, mostly because of a rise in temperature and longer dry seasons. Unseasonal and low frequency rainfall, and the recent natural calamity related to the flooding of rivers and canals had brought this topic in to focus.

The EnteKochi team together with the expertise of Prof. Dieterle paid tribute to these topics, by primarily focusing on water management in the city. The new ideas discussed were striving to be holistic and address multiple challenges in one design. For instance, the idea for improved street design proposed to provide not just paratransit access or inclusive design, but shading from the extreme heat, sunken roads which can act as water containers during extreme rains and direct the water to its appropriate end, properly designed boundaries of the water canals to control flooding, treatment of waste water flowing into it and provides spaces for recreation and paratransit. Additionally, solutions for protection of the coastline in the form of an active breakwater was proposed. This breakwater will create new ecosystems for corals and coastal fish, which in turn will give a boost to the fishing industry and create larger shorelines for the citizens and tourists.

DAY 4: Housing, Neighborhoods & Basic Services

The last day of the thematic work focused on neighbourhoods including housing and basic services. Starting with basic services the potential of compost and decentralized waste management was explored. The concept of “cradle to cradle”¹ was discussed and combined with the idea of learning communities. The consensus was that children are the most effective transmitters of lifestyle changes within the community. With the introduction of sustainable living principles at a young age, children will be better equipped in such a way of life, and also act as role models for the rest of the community. Discussions from the second day regarding civic groups taking over civic duties like waste disposal were rekindled. Process for financially facilitating such activities were deliberated upon. Another idea envisaged the redesign and upliftment of unused areas around community resources. For example, the spaces around and underneath public water tanks, that are often used as garbage dumps, could be redesigned as communally active spaces.



Fig. 89: Streets that adapt to climate change



Fig. 90: Water tanks as communal spaces

Following the discussions on wishes and potentials for different housing types, the focus was set on a concept of sensitive micro renewal in the Mattancherry area. The concept, which was developed together with Prof. Knebel, promoted the idea of reuse of existing construction materials and the addition of the necessary technical and infrastructural upgrades. Such measures can be added in a compact manner either in the foundation or the roof of the building, thus transforming local construction practices towards sustainable outcomes.



Fig. 91: Sketches for the sensitive micro renewal idea

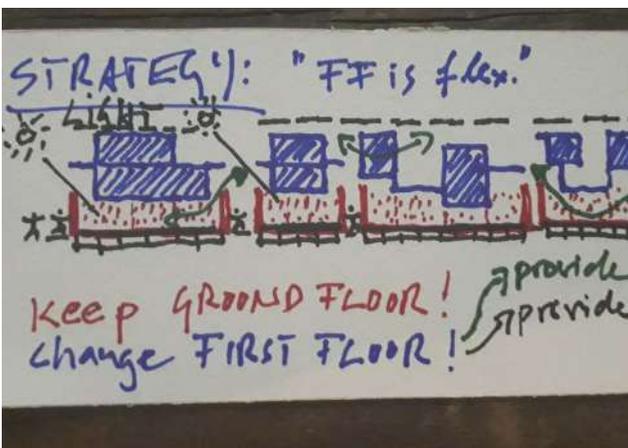


Fig. 92: Keeping the ground floor is a must!

DAY 5: Integrated view of the city

The fifth day of the design sprint was dedicated to the synthesis of all the data collected during the week. The ideas integrated the different topics discussed and most of them had aspects related to the topic of water. The design team set about illustrating the ideas in the best possible way for the Symposium. To show the connecting and replicable aspect of some ideas, a compilation of top concepts and impulses in the form of a “future map”, the EnteKochi map, was chosen to be the ideal medium for public communication.



Fig. 93: The EnteKochi map

During this day a foldable map design was worked out and used as metaphor to present the results of the design sprint at the final showcase at the EnteKochi symposium.

Outlook

During the Design Sprint, two objectives were achieved. Firstly, the entire process was comprehensively documented in a compact, publishable way in a very limited time span. This medium brings together integrated urban development ideas and provides a usable medium for interested stakeholders and the people of Kochi. Secondly, initial development impulses were produced in the form of an exhibition. Due to the limited timeframe of the Design Sprint, these impulses could not be comprehensively followed through, but they still gave a glimpse on future possibilities as they city follows these ideas. Additionally, ideas which couldn't be presented during the exhibition, were discussed in the public forum of the Design Sprint, and therefore could become impulses for future projects.

These impulses and the design outputs should transport the spirit of EnteKochi beyond the process, generating interest, instigating dialogue, starting a debate and exploring possibilities on what is desirable and feasible for the city to take on and further up. Only through an open and innovative participatory process like EnteKochi, which

brought in the use of digital tools and innovative formats to Kochi's participatory culture, can one have broad debates in which most people are able to participate beyond the institutional design for public participation in Kerala. This further shifts the focus from debates among experts - or technical knowledge that only represents a certain section of society – to citizens and local knowledge that can truly represent the context and the needs of cities to make them more sustainable.

Learnings

The core concept of the Design Sprint proved to be quite successful in its implementation. Within a very limited time, the targeted goals of a publication and elements for a public exhibition were accomplished. The EnteKochi team contributed with their different competences and knowledge to the outcome of the product. The integration of the two additional international experts Prof. Knebel and Prof. Dieterle and relevant local stakeholders like architects and urban planners proved to be very successful as they played an active role during the process and enriched its outputs with their knowledge and expertise.

Without the attention of a big event like the Biennale collaborating with EnteKochi (as the same terminated), and due to the team's limited capacity for outreach and public communication, the public interest in this process was limited, but the doors were kept open and all sessions held to demonstrate the transparent process and spirit of EnteKochi.

2.4.9 The EnteKochi Symposium & Exhibition

Introduction

After the conclusion of the Design Sprint and the completion of its outputs, the EnteKochi Symposium was organized by KMC with the support of GIZ on 17th June 2019 at the Kochi Municipal Corporation Town Hall in Ernakulam. This event was intended as the closing event for the EnteKochi process, and was followed by a public exhibition for display and dissemination of the outputs of this process.

The symposium was attended by officials from Kochi Municipal Corporation (KMC), Cochin Smart Mission Limited (CSML), Greater Cochin Development Authority (GCDA), representatives from Kudumbashree, as well as participants of the neighborhood consultations. Councilors and key stakeholders from different wards of the city were invited as primary stakeholders in contact with the neighborhoods. GIZ staff and consultants from the Smart City projects in Bhubaneswar and Coimbatore also attended to assess the inter-city transferability of the participatory methods used in EnteKochi.



Fig. 94: The EnteKochi model at town-hall



Fig. 95: Opening ceremony of the Symposium

Proceedings

The symposium was inaugurated with a lamp-lighting ceremony by the Hon'ble Mayor of Kochi, Ms. Soumini Jain, the Chairpersons of the respective Standing Committees of KMC, Ms. Matthew, Ms. Joseph, Mr. Harris, Mr. Sabu; by the Opposition leader Mr. Antony and Ms. Feldmann, Director, Sustainable Urban and Industrial Development (SUID) Cluster, GIZ India.

After the lighting of the lamp, Ms. Friederike Thonke, Advisor, GIZ SUD- SC, the moderator of the event, highlighted that urban areas are changing: the way we live, the way we work, the way we move. Worldwide, change is happening - but the question is how sustainable is that change.

In this light, the main objectives of the symposium were presented:

- Understand the outcomes and review the learnings from the participatory EnteKochi process
- Discuss the local, national and worldwide need for IUD and its enabling tools
- Explore the possibilities and formats for developing a road map to upscale multi-stakeholder participatory planning processes in Kochi and beyond

These objectives aimed at establishing and reviewing existing, and newly gained ideas – to further reflect on: how a Kochi-way of change could happen and look like, who the involved stakeholders would be, what their responsibilities and roles are and how to “imagine the future city” together.

Ms. Tanja Feldmann, Director, SUID Cluster, GIZ

India, further elaborated on the current urbanization trends of India, and Kochi more specifically. She thanked KMC for organizing the symposium and for the wider context of continued collaboration between KMC and GIZ, which has lasted for over a decade. She introduced the current SUD-SC project supporting the Ministry of Housing and Urban Affairs on the national level, and Kerala at the state and Kochi on the local level. Ms. Feldmann congratulated Kochi, to be one of the first cities in India to use beside physical as well digitally inspired multi-stakeholder participatory planning tools to foster integrated urban development. She emphasized that the aspects presented in the exhibition are not the final outcome of EnteKochi, neither are they the exact or only projects that GIZ will be supporting in the city. Instead, they capture some of the most pressing issues and opportunities in Kochi from a grassroots perspective and reveal the needs of the city for its further sustainable development that everyone has to collectively address. She closed with the comment that this symposium will provide a platform for fruitful and constructive discussions and will

help chart the course for further joint actions for GIZ and KMC to achieve a sustainable and integrated development of Kochi.

In her inaugural address, Ms. Soumini Jain, Hon'ble Mayor, KMC, expressed her gratitude for the fruitful partnership between KMC and GIZ, emphasizing that KMC is looking forward to the continued technical support in future projects. Thereafter, she recalled the joint planning workshop, organized in January 2019 for GIZ-supported urban projects in Kochi, explaining that one of the major outcomes of this workshop was the implementation of EnteKochi, a novel, multi-stakeholder participatory planning initiative using digital tools and innovative formats. She highlighted that a variety of mediums, including neighborhood consultations, design workshops, targeted stakeholder group discussions, public film screening and an online web portal were used. She concluded by urging all the citizens and further stakeholders, who participated during the EnteKochi process, to continue their participation and involvement and expressed her appreciation towards the diverse and valuable inputs, as these could guide the co-determination of the next steps toward a sustainable future for Kochi, applying Integrated Urban Development (IUD) tools and strategies.



Fig. 96: Ms. Soumini Jain, Hon'ble Mayor, KMC



Fig. 97: Prof. Nikolaus Knebel

The next session unfolded a variety of tools, strategies and definitions of IUD and participation.

Prof. Nikolaus Knebel, Architecture & Urban Design Department, Germany University of Technology, Oman emphasized the following aspects:

- No urban vision should be developed without putting the people in the center, as the 'city' = 'people';
- The urgency of the question of who contributes in which way to the development of cities is tantamount to its sustainable development;
- Critique concerning the very perception of imagining the 'city' as a company, of which citizens become the customers;
- Citizens as the creators of their urban environments, and the need for building the 'city' through integrative and participatory approaches.

To reflect on both participatory and integrative attributes to urban planning, which are relevant to the context of Kochi, he drew on parallels from a case study of Addis Ababa, Ethiopia. He described the approaches and goals of the project:

Overcoming a sectoral planning approach and embrace an integrative one to overcome stagnation of a market area in Addis Ababa

- Testing a new set-up: changing the traditional planning process, which typically kept dialogue within the confines of traditional experts. Rather, change must include various stakeholders from various different departments, residents, representatives from the business community, neighborhood initiatives and the informal sector to revise the city's masterplan and to pioneer a local development plan for one specific market area.

Approach - Change of Perspective
Disruption of planning perspective to gain fresh insights from street level

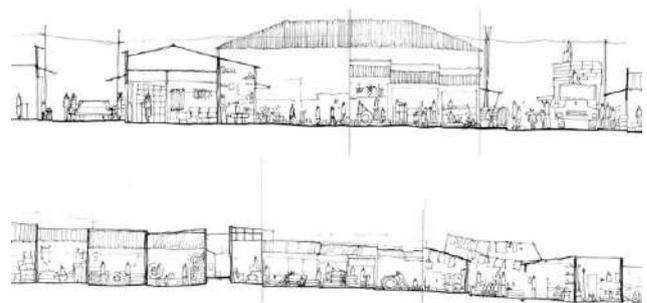


Fig. 98: Section of the market area in Addis Ababa

- Overcoming the stagnation of the area, caused by the mismatch of expectations of the city (building externally financed high-rise) and the citizens (building self-financed moderate development) and an overall misinterpretation of what the real needs of the residents are, through new forms of communication and planning, enabled through cross sectoral and participatory exchange
- Avoiding developer-driven extreme land value increase, which would lead to out of scale development and socio-economic disruption
- Establishing a new ‘planning culture’, by establishing participatory and integrative urban planning processes over long term-period, to move from being an initiative towards becoming an established system, which can react to the city as living organism

The first input was followed by a presentation of Prof. Dr-Ing Jan-Dieterle, Institute of Landscape Planning & Ecology, University of Stuttgart, Germany. Main aspects highlighted comprise:

- Kochi, the ‘queen of Arabian Sea’, is formed by its waterbodies, humidity and rain, which devise a comprehensive circular system, setting a unique urban character and way of life
- To unlock potentials and challenges of this unique aquatic character, it is highly advised to create multifunctional socially and ecologically valuable infrastructure
- To protect e.g. the shoreline, the development of active offshore break- waters is proposed, which simultaneously would create new marine habitats, recreational sites, as well as providing coastal protection (reference example: urban design competition conducted under the U.S. departments of Housing and urban Development’s ‘Rebuild by Design Initiative’ for the Staten Island.
- To achieve a rejuvenation of the canals for reclaiming the same as public space and transportation routes, the purification of household wastewater might be achieved through a flexible, efficient and cost-effective system like on-site small-scale DEWATS (Decentralized Waste- water Treatment Systems). This will enable the possibility to think canals and waste water within one approach, which enables the creation of healthy public spaces.

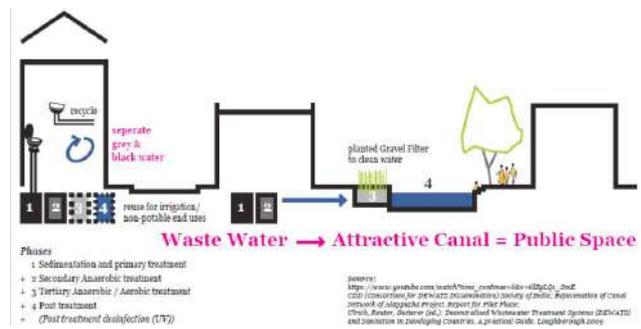


Fig. 99: Integrated thinking of canals and waste water

He emphasized that to reach change it is recommendable and essential to aim for real-world-experiments in the form of pilots. Eg. temporary structure might be used to discuss possible changes and adaptation processes.

To adopt general guidelines for participation, enabling a triological process with an equal representation of administration, local politics and citizens. He mentioned the example of the participatory development of the ‘Integrated Urban Development Strategy Wiesbaden 2030+’. The main objectives were first, the inclusion of people that do not attend official events, e.g. administrators go to the people where they work and live, and second, to break up official meeting set-ups.

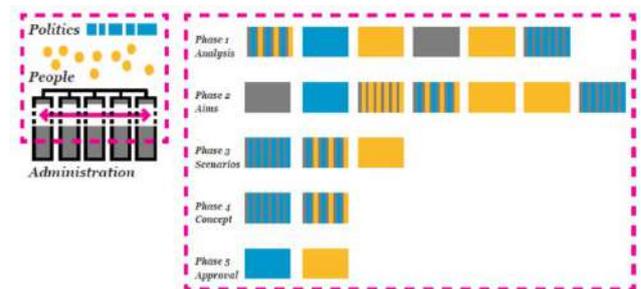


Fig. 100: Break up of the ‘silo thinking’

Mr. Markus Ewald, an urban planner from Urbanista, Hamburg, Germany, who also played the key role in conceptualizing and driving the EnteKochi process gave specific examples for answering the question ‘how can we plan and develop the best possible city of the future’.

The following points were discussed:

- Focusing on the mixed-use concept for spatial development enhanced by mixed income, mixed cultural and mixed age levels facilitates a more human city
- Improvement of existing buildings and densification
- Bringing nature into the urban fabric
- Designing streets which are multimodal and focus on non-motorized transport
- So how do we get to the city of the future? ‘We believe there’s only one way - by doing it together in a

participative way. Through increasing the spaces for public online- and offline dialogue at the beginning among citizens, which can lead to changes by collaborative planning through an open and transparent process, which gains acceptance among citizens.

After the theory and example-based presentations and discussions, the ‘Understanding and Reviewing’ of the EnteKochi process followed.

Mr. Sahil Sasidharan, Technical Expert (City Level), GIZ, presented on the involved stakeholders and the working spirit of the team:

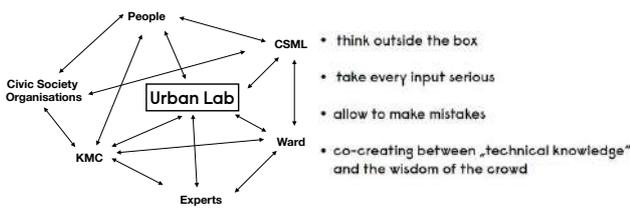


Fig. 101: How the EnteKochi process worked

Furthermore, he mentioned the timeline of the different events conducted (including the interactive public exhibition, neighborhood consultations, design sprint, interactive sessions with students, persons with disabilities and children, as well as a film screening), highlighting that in the overall process a large number of citizens and stakeholder organisations were involved.

A short film produced by GIZ showcasing the entirety of the process shed light over the various events and workshops held during the past four months. It showcased the journey of “EnteKochi”, as a multi-stakeholder participatory planning process. It also gave a sneak peek into the soul of the city and the challenges it faces in the present day.

Mr. Rahul Srivastava, Co-Founder, Urbz and Ms. Samidha Patil, Urbz discussed the experiences of the neighborhood consultations, called “Urban Typhoon’ through providing some insight from the ground. Below are some of the key points they touched on:

- 6 workshops in 6 different Kochi neighborhoods were conducted. During these workshops, participants such as architects, planners and urban practitioners from other parts of the city, country and the world, worked closely with the real experts, the local people, councilors, Residents Welfare Associations, Kudumbashree groups, unions and volunteers.
- The challenges, initiatives and ideas that emerged were further organized and discussed and the need for ‘active neighborhoods’ and ‘local empowerment’ was established.

Mr. Markus Ewald, explained then the further conducted process:

- All information from the activities and the neighborhood consultations were then processed in the Design Sprint, transforming a substantial amount of qualitative data into visual outcomes and a first set of proposals
- Water was established as a central theme, emphasizing that Kochi needs to capitalize on its intricate canal systems and sea shore, by applying a holistic approach to the re-development of the canals and the coast, in connection with adequate smart low-tech infrastructure, transportation, public space, tourism, housing, and cultural heritage

As an outlook, the need for brave ‘advocates’ in administrative and political roles was highlighted, providing the examples of Enrique Penalosa, the former mayor of Bogota, Colombia, who revolutionized the mass transit system and Amanda Burden from the NYC department of City Planning, who helped to radically transform public spaces.



Fig. 102: Markus Ewald from Urbanista

For more details about the Neighborhood consultations and the Design Sprint, please see relevant sections above in report (page xxxff and xxxff).

Development of a road map to implement IUD in Kochi - Group Work and Wrap up

After a walk through the exhibition and after the lunch, the development of a road map to further strengthen the implementation of IUD in Kochi was initiated through group-work. The audience was briefed about the details and the format of the group activity.

The group work consisted of dividing all the attendants into a total of seven groups, six of which were focusing on the previously selected neighborhoods, while there was an additional city level discussion group who focused on the central theme of water.

The participants, partly inhabitants from the respective areas, were asked to discuss amongst themselves the critical issues and existing/proposed initiatives in the neighborhood, drawing from experiences and information provided during the neighborhood consultations and interactions with specific user urban user groups, which were displayed on seven panels around the room .



Fig. 103: Working session at the symposium

After identifying these issues, the groups were encouraged to develop some initial action plans for three project ideas, that could contribute toward tackling the identified issue/s.

The exercise aimed at identifying the main stakeholders, potential resources (external and internal); support needed and a proposed timeline for implementing the project proposal. At the end of the designated time period, each group presented their project ideas and action plans, followed by a Q & A session with the rest of the participants. Guided by Mr. Sohan, the former mayor and representatives from CSML, possible project ideas were further reconciled, in an initial manner, with existing and planned projects.

The outcomes and learnings from Group 1, focusing on

Edakochi, are summarized in the table and text below. The remaining ones, discussing Kaloor, Elamkulam, Fort Kochi, Mattancherry and the Market canal area, can be found in the annexures.

Group 1: Edakochi

Name of Area	MATTANCHERRY		
	Project Idea 01	Project Idea 02	Project Idea 03
Selected topic/idea/initiative	Road Infrastructure/Mobility	Canal Rejuvenation	Economic Activities/Livelihood generation/Skill development
Exact Location	Kanankatu Island Bridge to Aroor Bridge	Edakochi to Thevera (Kumbalam Ferry Road)	Jnanodhan Public School
Main Stakeholder	PWD	KMC, KMRL	NSDC, NCVT, Industrial technical institutes
Other Involved Stakeholder	KMC	PWD, Revenue department	State Technical Education Dept, Youth Associations
Own Resources	1km Wetland and 2km land acquisition	State level authorities	Industrial workers union, Student Union, Labour Unions
What kind of support is needed	All Stakeholders must participate with full cooperation	Financial support, Surveys of the area, DPRs and approvals from various government departments	Financial, Infrastructural and institutional support is required i.e. access to loans for start-ups, etc.
Timeline	1 year	1 year	3 years

Fig. 104: Summary of group work on Edakochi location

PROJECT IDEA 1: Road Infrastructure
EXACT LOCATION: Kanankatu Island Bridge to Aroor Bridge.

Description: The area finds itself in the midst of exponential development and important pan-Kerala transport links. The most critical issue that came up during the round table discussion was regarding the condition and maintenance of existing road infrastructure and traffic congestion. Dismantling the issue further, it was found that the traffic congestion is a disruptive occurrence on the road stretch from Kanankatu Island Bridge to Aroor Bridge.

The main causes of this issue are an insufficient row of sub-arterial and collector roads. Another is the absence of bus stands and depots, despite roughly 30 public transport buses plying daily through this area. The project idea proposed the development of sufficient road infrastructure along the mentioned stretch with a clear objective of increasing the right of way via road widening. The main stakeholders identified for this project idea are PWD, who must be supported by other stakeholders such as KMC. The resources required for this project idea execution include land owned by the residents along the stated stretch (2 km) and part of the wetlands in the area (1 km). The implementation of the project requires complete

cooperation between the PWD, KMC and local residents, only after which the project can be completed in a envisaged time-line of 1 year.

PROJECT IDEA 2: Canal Rejuvenation
EXACT LOCATION: Edakochi to Thevera (Kumbalam Ferry road)

Description: The area is surrounded by a dense network of backwater canals and in the recent past not much attention has been given to it by the responsible authorities. During the round table discussions this emerged to be the second most concerning issue among the residents. Improper solid waste management and dumping accompanied by unauthorized construction along the canals have transformed the canals into unusable and unpleasant locations. The effects suffered by the residents due to this include flooding during monsoons and health hazards, such as malaria and dengue. The project idea proposed by the residents at the table discussion aims at rejuvenating the network, beginning with the dredging of canals and a proposition of water metro station at Edakochi. This will not only bring a sense of utility to the canals but also strengthen the mobility aspect of the area, thereby relieving the burden of traffic on the roads. The main stakeholders for this project would be KMC/ KMRL supported by other

stakeholders such as PWD and the irrigation department. The resources and the financial support for this project might be provided by the state government. Other requirements include technical support, such as surveys of the area, DPR preparation and approvals from various govt. departments in order to complete the project within the desired time-line of 1.5 years.

PROJECT IDEA 3: Economic Activities/Livelihood generation/Skill development

EXACT LOCATION: Jnanodhan Public School

Description: Many people in Edakochi are engaged in agriculture and fishing related economic activities. Agriculture has been deeply affected by the rise in salinity in the soil. In order to make up for the losses, a growing number of people now depend on fishing as a source of steady income. However, their situation has continued to worsen due to extensive fishing, which has led to a low yield in the past two years. Edakochi also has a high unemployment rate, which is indicative of the need for skill development. The area lacks an institution that can facilitate such programs to help the youth develop a vital skill set and help in bringing a positive shift in the economy of this area. The project idea proposed at the table was to introduce skill development programs for the youth in Edakochi such as vocational and technical training. The main stakeholders identified for this project are Industrial Training Centre (ITI) and State Technical Education Department supported by other stakeholders such as National Skill Development Corporation (NSDC) and National Council for Vocational Training (NCVT). The major bodies that can initiate, as

well as help this project, including the involvement of the Industrial Workers Union, Students Union, and Labor Unions etc. The requirements for this project consist of financial support, infrastructure, institutional support, access to loans and banking support. These initiatives are envisaged to be implemented within a time-line of 3 years of their inception in order to achieve visible and measurable impacts in the area.

WAY-FORWARD

When the group activities concluded, possible ways for upscaling multi-stakeholder participatory planning processes were discussed. Mr. Georg Jahnsen, Project Manager, SUD-SC, GIZ India presented a potential next step. Drawing from the immense learnings and information accumulated during the EnteKochi process, it was proposed to conduct an Urban Design Competition to pilot IUD in the city. The latter, shall include the following aspects:

- The seven proposed steps shall be carried out in three phases, facilitated jointly by KMC and GIZ.
- The Symposium was part of the first phase (Phase 0). The outcomes displayed and discussed at the Symposium will be used as the basis for developing a design brief for one location
- Phase 1 would consist of two segments. The first, identifying appropriate intervention sites and the respective design brief (i.e. broad description and explanation for the applying firms what to do and where to do). The second, a segment consisting of the selection of a jury, event facilitation, review and

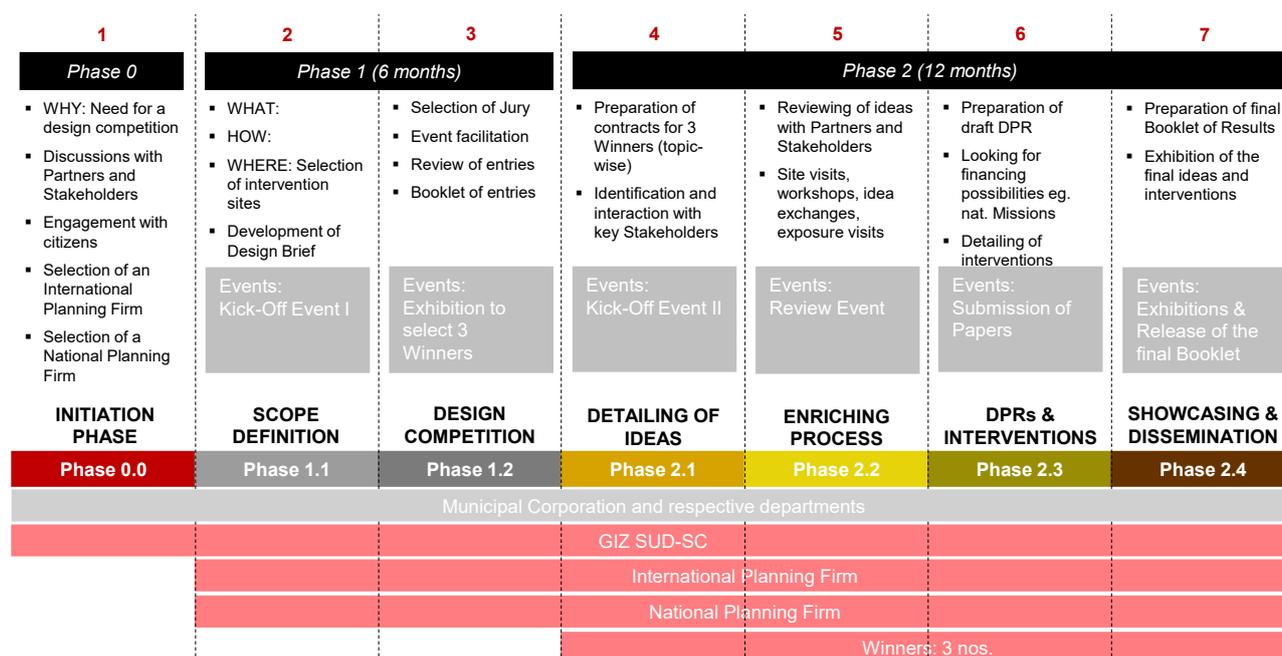


Fig. 105: Proposed phases of an IUD Urban Design competition in Kochi

publishing of entries and preparation of tender documents etc. There would be a public exhibition of all the shortlisted entries to select three winners.

- The final Phase (Phase 2) would start after contracting the three winners (theme-wise). It comprises of the further detailing out of the winning ideas, exposure visits, draft DPR development and pilot project implementation, all conducted in a participatory manner, involving the main stakeholders and the local residents.

Mr. Georg Jahnsen, came to the podium one last time to deliver the vote of thanks. He thanked the Hon'ble Mayor, Ms. Soumini Jain for her invaluable presence and support throughout the whole EnteKochi process. He also acknowledged the presence of former Mayor, Mr. K.J. Sohan and the officials from Kochi Municipal Corporation (KMC), Cochin Smart Mission Limited (CSML) and Greater Cochin Development Authority (GCDA) for attending and participating in the symposium. Lastly, he expressed his gratitude towards the residents, representatives from SHGs, NGOs and workshop participants who helped make the EnteKochi participatory planning process a huge success.

Participation creates ownership of the people for their city – therefore, the EnteKochi team is looking forward to working further together towards a participatory city of Kochi in the next phase of the proposed urban design



Fig. 106: Group picture of participants to the EnteKochi Symposium

PUBLIC EXHIBITION: FINAL PHASE OF ENTEKOCHI

Participation exercises in the form of an exhibition which was open to the public was running in the Ernakulam Town Hall on the 18th and 19th of June, 2019 after the conclusion of the EnteKochi Symposium. The participatory planning tools employed in the Folklore Cultural Theatre were reallocated in the lobby and main hall spaces of the Town Hall. The lobby exhibited the wooden model of Kochi and the 'challenge flags' and the isometric idea drawings. The main room of the public building was used to introduce visitors to the urban challenges in Kochi, and the series of questions pertaining to these to which the visitors has

responded until now using sticky dots. In addition, six new panels were exhibited showcasing qualitative data from the neighborhood workshops conducted by Urbz in Kaloor, Mattancherry, Fort Kochi, Edakochi, Market Canal and Elamkulam from the 4th to the 9th of June, 2019. A seventh panel exhibited a synthesis of the special events conducted in the Folklore Cultural Theatre with students, differently-abled people and school children. Two further giant panels exhibited the design solutions developed during the Design Sprint organized by Urbanista from the 10th to 14th of June, 2019 where the public were invited for discussion and interaction.



Fig. 107



Fig. 108: Public exhibition on display at Town Hall



Fig. 109: Participants viewing the public exhibition

A map of a coastal area, likely a bay or estuary, showing various land parcels, water bodies, and infrastructure. A red dashed rectangular box highlights a specific region in the upper right quadrant of the map. The number '3' is placed inside this box.

3

Conclusions and the Way Forward

3.1 Learnings from the EnteKochi Process

Promising and affirmative Outcomes:

1. Introduction and Experimentation with new participatory formats:

- Discussed the local, national and global need and formats for Integrated Urban Development approaches.
- Disseminated and introduced enabling tools and formats relevant for the participatory context of Kochi (Urban Lab, incl. neighborhood walks, film screening, design sprint, symposium, CityScope, etc).
- Introduced and promoted the use of digital tools and innovative methods to recognize available potential and existing resources and build trust among various stakeholders involved in the pursuit of sustainable urban development.

2. Collaboration and Attraction of a diverse set of stakeholders:

- Provided a platform for various stakeholders to exchange knowledge and opinions and diverging interests in a dialogue format.
- Established citizens as local knowledge experts and also as change agents for their own neighborhood and city, building further on the unique participatory legacy of Kerala and Kochi.
- Engaged a diverse set of stakeholders like differently-abled groups, who tend to be left out in traditional urban planning processes by encouraging their collaboration through the process.
- Encouraged graduate students and school children to reflect on and understand their valuable role as ‘prioritization experts’ in urban development and associated decision-making processes.
- Reached out to a vast number of citizens and stakeholder organisations in the city.

3. Coping with upcoming challenges:

- Despite unforeseen consequences of aspects like the ‘model code of conduct’ and resulting changes to time and personnel resource allocation, along with logistical challenges, the whole EnteKochi team and partners, including KMC, CSML, GIZ, Urbanista, Urbz and several international, national and local experts, as well as special urban user group representatives were committed to conduct and deliver an innovative participatory process in Kochi.

4. Development of potential next steps towards Integrated Urban Development approaches:

- Formulated impulses and initial road maps for potential urban development strategies in different parts of the city as tangible outcomes of the process.
- Initiated the groundwork to pave the next steps i.e., an urban design competition to pilot an integrated urban development approach in Kochi under the SUD-SC project.

Aspects for consideration and improvement with rationale:

1. Attracting stakeholders and participants in the given timeline and locations:

During the phase of preparing first ideas and a concept note for the participatory Urban Lab, great potential was seen in the city of Kochi with its existing culture of participation, and a potential linkage to the ongoing Kochi-Muziris Biennale.

- Biennale: For the international planning consultancy Urbanista, contracted for the concept and the “set-up” of EnteKochi, an event like the Biennale with a certain amount of public and media attention was seen as ideal, in order to create a “momentum” required for an Urban Lab that fosters creative thinking for the city’s future, liberated from often stalled structures and processes. Despite initial discussions, an official Biennale link could not be established due to various reasons, and EnteKochi had mostly to function as a gravitational point in itself.
- Timeline: The time schedule of the project was highly ambitious, as it was envisaged in January to align to the ongoing Biennale being scheduled till end of March 2019. Thus, within less than one month a detailed concept had to be prepared, different project partners had to be onboarded, synchronized and the Urban Lab, with its spatial manifestation at Folklore Theatre, to be implemented before the end of the Biennale. Without connection to such a high frequency event, a completely different outreach strategy would be needed to be developed.

The EnteKochi Urban Lab could open its doors on March 8th, 2019 in the redesigned Folklore Cultural theatre in Fort Kochi. The interactive exhibition space was duly inaugurated by Ms. Shiny Mathew,

Chairperson of Standing Committee on Town Planning in KMC and Ward Councilor of a Fort Kochi ward. Model “code of conduct”: Another unexpected challenge to this process was posed due to the model “Code of Conduct”, which hampered the public nature of EnteKochi significantly. The whole process had to be extended by about three months within the limited resource, as it was decided that no extensive interaction in neighborhoods could be conducted. Furthermore, during the time the “code of conduct” was active, it limited the team, to a minimum of outreach communication which led to yet another challenge in order to communicate the physical lab and its interactive digital counterpart - the website.

- **Outreach:** During the time of the Model “code of conduct”, the outreach strategy was revised and due to the active role of GIZ members, enhanced interactions within the Folklore Cultural Theatre could take place. In this framework, manifold special interest groups like children or differently-abled people could be welcomed for workshops. The interactive web-tool was not able to be promoted as desired despite some physical (in form of flyers) and social media outreach. Thus, it did not achieve such a large number of clicks. However, it did receive good feedback from many people who used it and interacted on it. Therefore, in future, emphasis should be put on a more elaborate public outreach strategy, backed with adequate resources.
- **Location:** The Folklore Cultural Theater was selected due to its strategical location. It is positioned in direct proximity to a ferry terminal, a bus terminal, a municipal building, main exhibition places of the Biennale and the Chinese Fishing Nets. Thus, a high windfall of visitors was expected. The closed façade of the Theatre however created some difficulties. Therefore, big banners were printed, information boards were placed in front of the theatre, both supported via verbal interaction on the street between EnteKochi team members and the people passing by. Same challenges could be observed during the final exhibition at the town hall. The location was not completely centrally located in Ernakulam, and furthermore the building had quite a wide set-back from the street. Thus, the number of visitors was not as high as expected. The latter aspects lead to the learning that the concept could have been supported by a more mobile exhibition, that was presented in several open, good visible spaces, which automatically attracted more visitors. The

Subhash Bose Park or Rajendra Maidan could have formed suitable spaces, however the rain and heat conditions have to be taken into consideration.

2. Embracing existing processes:

The level of decentralization reached in Kerala is unique for India. Through the Kerala Municipality Act 1994, ULBs were empowered to function as institutions of self-governments by transferring power, finance and functions.

Through conversations with ward councilors and other key persons like Standing Committee Members the EnteKochi process was able to capture some ideas about concepts and ideas developed through the participatory budget and planning exercises. However, a deeper exchange and considerations of concrete projects and priorities, highlighted by the people and further developed among others by working groups (Watershed Management; Poverty Reduction; Water Supply and Sanitation; etc.) could have been considered. Given the time incl. election period and resource circumstances, this was not pursued enough. This shortcoming should be overcome and clearly prioritized in the proposed next phase of the Urban Design competition – this is essential in order to absorb the knowledge, the people’s priorities, creative energy and expertise which is already existing through the unique system, known as ‘People’s Plan’.

3. Coordination between project partners:

Another challenge was the cooperation of the multiple organizations involved in organizing and operating the lab itself. Besides the role of Urbanista and Urbz, as a conceptualizing and implementing entity, GIZ was involved as the party responsible for initiating and leading this process in close coordination with the local government of Kochi (mainly KMC and other partner agencies). Dependencies between GIZ and the city administration of Kochi (KMC) and the contracted agencies, made preparations and decision-making complex, which partly led to delays, that had to be then compensated under the limited time-frame of the process.

3.2 Conclusion and Outlook

Summarizing the entire process again, EnteKochi was two processes happening at once: the development of a concept of an innovative participatory planning process for the city, and its real-time implementation and testing at the same time. The open, free and independent working methods of the Urban Lab, the facilitatory role played by GIZ and the positive agenda and due responsibilities of the KMC towards its citizens contributed to an innovative participatory process at different levels.

As with all new and innovative formats, there was the need of engagement internally (among project partners) and externally (among involved citizens and participants) to shape and develop it within one's own abilities. Just as in the field of future forecast, there is not a general recipe on how to set up an Urban Lab, each city and each ecosystem of city stakeholders are different, and thus the design of their City Lab also has to be different. While initiating such a new process, achievements and challenges occur, and fields for new learning emerge. All of these possibilities have to be considered in a potential extension, next phase or up-scaling of this approach.

One extraordinary learning from the neighborhood interaction was that there are many initiatives, which have significant positive influence on the quality of life in their surroundings. Furthermore, new ideas came up, like the establishment of a formalized youth organization (a system comparable to the Kudumbashree model for the young unemployed adults in the city), who could be hired to do regular tasks like canal maintenance or trained for specialised objectives like canal rejuvenation. This would even enhance the high level of ownership and connectivity that people currently feel towards their neighborhood and at the same time it could provide income possibilities for young, motivated members of the community. Furthermore, during the group work of the symposium, three initial project ideas for the six neighborhoods were developed stating requirement like stakeholders to be involved, resources required, support needed and an approximate timeline for achievement of those proposals.

Ideally, a follow-up process like an Urban Design Competition, activities associated with the 'People's Plan' or the civic society will continue to work on these impulses provided through the EnteKochi process, to make them feasible, see them as inspiration or acknowledgment if they match with other ideas already pointed out or developed in the past.

To be realistic, the next part and the subsequent steps are even more difficult than the last; developing projects out of these ideas will need ambition and the formation or utilization of existing or new alliances between different city

administrative structures, the citizens and local collectives. This is a process that has already begun in the city. A group of city-level activists and persons with disabilities who participated in the EnteKochi special interest group workshops have united to form an informal alliance to continue campaigning and advocating for barrier-free environments in Kochi. But the core concept of the Urban Lab may be applicable here as well: If different city actors including the government, citizens and civil society actors sit around one table and discuss, treating themselves with respect and trust, even the most ambitious projects can be possible, and this will benefit the overall quality of life for the people of Kochi through a more sustainable development in the future.

Although the process had to deal with some unforeseen challenges, like the 'model code of conduct', all involved parties kept being motivated and maintained the spirit of the lab, the agile working methods of it and the overall philosophy of acknowledging that: "how the future would exactly be like, we do not know, neither do we have a fixed recipe to develop it – *but we're on our way together to strive for an even more liveable and sustainable 'Nammude-Kochi' (Malayalam for Our Kochi).*"

An aerial photograph of a coastal region, likely a bay or estuary, with various land parcels, roads, and waterways. A red dashed rectangular box is drawn in the upper right quadrant, enclosing a specific area. The number '4' is printed in red inside this box. The map shows a mix of developed areas with buildings and parking lots, and undeveloped land with vegetation and fields. A prominent road runs vertically through the center of the map, and several smaller roads branch off from it. The water bodies are dark blue, and the surrounding land is a mix of green and brown tones.

4

Annexures

ANNEXURE 01: Location-wise Group work Summary Tables from EnteKochi Symposium

Group 2: KALOOR

Name of Area	KALOOR	
	Project Idea 01	Project Idea 02
Selected topic/idea/initiative	Canal Rejuvenation	Community-level Waste Management
Exact Location	Perandoor Feeder Canals	Kaloor Market/Manappatti Parambu, Judges Avenue (GCDA Land).
Main Stakeholder	KMC & RWA	KMC and local residents
Other Involved Stakeholder	PWD & RWA	RWA, Ward Counsellors, Kudubashree and the Health Department.
Own Resources	-	Work force of residents
What kind of support is needed	Accountability for cleaning and maintenance of canals, awareness building, data dissemination.	Residents' remuneration from KMC and subtle land acquisition.
Timeline	3-5 years	1-2 years

PROJECT IDEA 01: Canal Rejuvenation

EXACT LOCATION: Perandoor feeder canals

DESCRIPTION: Several programs exist which try and address the issue of cleaning major canals in the city. The KMC undertakes this work at least two or three times a year. However, the major issue is not solved by cleaning the main canal. Several feeder canals and smaller water channels flow into these main canals, and there are no programs to clean them. These small canals therefore have water stagnating in them. Moreover, since different sections of these canals have been tendered out to different parties and have not been planned in an integrated manner, the slopes are wrong which lead to water stagnation. Without ensuring proper flow of water which can flush the canals out, this issue cannot be solved. Waste, debris have also reduced the depth of the canals, and during the monsoons, water from them floods the neighboring low-lying houses.

Bio swales along the banks of the canals, wherever space is available can help reduce the pollution. This is similar to the idea developed during the Design Sprint.

A multi-tiered approach with the cooperation of a variety of stakeholders is necessary for proper rejuvenation. This program is not just for cyclical cleaning, but long-term maintenance of the structures.

- **CONNECTING AND RECONNECTING:** To create a project which can connect existing branches of the canals and reconnect parts which have been encroached/filled in. A well-connected canal network

will ensure continuous water flow which will avoid stagnation of water and prevent its associated issues.

- **CLEANING:** KMC/private Company engaged in cyclical cleaning of the main canal and its feeder tributaries.
- **SENSE OF OWNERSHIP:** Canal to be symbolically segregated into sections which surrounding residences can claim ownership to. Such a scheme is aimed to build a sense of ownership towards the section of the canal, and consequently create community vigilance about its maintenance.
- **CANAL ENGINEERING:** Proper engineering drawings to be made for canal construction and extensions. Integrated planning and management is required for the same. This will ensure proper slopes, flow, requisite connections, etc.
- **BIOSWALES:** cleaning water before they flow into the canals.

The most important stakeholders are the KMC, which is responsible for cleaning and maintenance, and the RWA, which can be the resource that can be used for awareness building, data dissemination, etc. in the area. The RWA will also play a major role in management of the different residential quarters responsible for each section of the canal. Several other stakeholders like the PWD, KWA, etc. should be involved in the process. Since the canal is open and easy to access, several services currently run through the canal. For example, the KWA has laid out many water pipelines through them as an easy solution.

PROJECT IDEA 02: Community level Waste Management

EXACT LOCATION: Kaloor Market/Manappatti Parambu, Judges Avenue (GCDA LAND)

DESCRIPTION: Kochi has been dealing with its waste issue improperly for several years. A system of waste collection exists, but it is intermittent and unreliable. Moreover, there is no proper mechanism for waste dumping/disposal. The main plant at Brahmapuram is partly dysfunctional, mismanaged and prone to fires, etc. Money and resources are spent in collection in different neighborhoods, transportation to the waste management plant and disposal in such a system. Instead, community level waste management could be a more effective solution. Neighborhood level plants can be set up in GCDA land locally. The space occupied by such a system for 100 households is quite less. Instead of charging the residents, they should be given incentives for waste collection and management. If residents are taking up the waste processing

which was supposed to be done for the KMC, RWAs should be given incentives. Such schemes will not only save money for the KMC, but potentially lead to better waste management and also eventually generate revenue.

Important stakeholders in such a scheme are the RWA, Counsellors of the wards, Kudumbashree and the Health Officer. The Kudumbashree members which is already managing waste collection duties can be transferred to take up activities relating to neighborhood management, segregation, recycling and running of the local waste plants. The health workers in the area can also play relevant roles in spreading information and ensuring safe handling of different waste.

BKRG, the Better Kochi Response Group and CREDAI (Builder group) are already involved in handling waste management in apartments. A similar collaboration to be formed with another party.

SUPPORT REQUIRED: Residents remuneration from KMC; land acquisition

Group 3: MARKET CANAL

Name of Area	MARKET CANAL		
	Project Idea 01	Project Idea 02	Project Idea 03
Selected topic/idea/initiative	Market Management	Public Space Design	Redesigning Market Space
Exact Location	The Broadway Market	The market area along the canal	Ernakulam Public Market
Main Stakeholder	KMC	KMC, PWD	Local merchants & traders
Other Involved Stakeholder	Local merchants & traders	State Irrigation department, local businessmen and informal shop-owners	KMC, PWD, CSML
Own Resources	Existing Built Environment (less resistance to any interventions)	The public squares and spaces, streets, shops along the canal	Built space in the market area
What kind of support is needed	Resources and Financial support can be provided by the state government	Financial support, institutional coordination, better designs	Financial and technical support from the KMC or public works department in the state. Integrated aspirations of the neighbourhood residents.
Timeline	1-2 years	2-3 years	5-6 years

Being one of the oldest market areas in Ernakulam, the Market Canal area has a rich cultural and economic heritage owing to the character of Kochi being a historically important port city. The place is a congregation of both the wholesale and retail shops consisting of a wide range of goods and materials sold at affordable prices. The market has extended over an area between Marine drive and MG

road beyond the public Ernakulam market. The market canal passes through this area intersecting with the narrow streets in this area.

The group work at the table began with a brief discussion on the various illustrated observations that emerged from the area during the neighbourhood workshop. The major issues covered in the conversation started with the city-wide

concern over waste management and treatment along with the deterioration of the existing canal. The government has already installed a fence along the canal to reduce direct waste disposal in the waterway. Some other major issues discussed were traffic congestion, storm-water drainage, land tenure concerns and rental issues concerning residential premises, lack of green spaces and public infrastructure in the vicinity of the market.

Another key concern expressed by the local traders was regarding their participation in key decisions pertaining to the future of this market given their involvement in the commercial activities for over three generations. These views were mainly emerging from the leaseholders of the Ernakulam public market, whose ownership lies with the KMC, and with plans to renovate this market through redevelopment, there was a collective fear of disintegration of the market's commercial potential after any large-scale intervention. This group thus backed the idea of incentivized renovation at the site where the historical structures of the market could also be conserved. On the other hand, the problems of residents in this area were mostly about the traffic congestion due to the various informal encroachments of footpaths in the market space and poor waste disposal practices that resulted in poor sanitary conditions. These issues they felt could only be addressed with a serious intervention that would change the status quo. The majority of the inhabitants in the neighborhood consist of tenants who face these issues on a daily basis. The home owners in this area are least interested in initiating any kind of intervention. The severity of these issues even influence some of the residents to move to a different neighborhood. The market area also has a Synagogue at Jew Street, a mosque and a church in its vicinity and these cultural landmarks also need to be integrated in the vision for the future of this market. The final project initiatives for the Market Canal area that were discussed are the following:

PROJECT IDEA 01: Market Management

EXACT LOCATION: The Broadway Market

DESCRIPTION: The area is a market space with high footfall, situated at the heart of the city. The higher footfall is due to the availability of most of the household goods and materials at affordable prices. The market has mix of old historical structures as well as the modern built structure. During the round table discussions, it was found that the place lacks to function at full potential due to the heterogeneity in the type of services it provides within limited resources. This problem is further coupled by the lack of efficient and accessible public infrastructure in the concerned area. This emerged to be one of the most

concerning issues among the citizens. There are other affiliated issues of such dense commercial zone like the traffic congestion, waste disposal and collection, etc. The first initiative can be taken at the market level in terms of its management. It can get going from the processes like waste segregation and collection from site, introducing only pedestrian movement lanes to decongest the roads, specific days for specific sales, color coding of public infrastructure to improve accessibility, etc. These simple market management techniques can be incorporated at preliminary stage of any long-term change as such spatial scale shows less resistance to any changes in the market environment. The main stakeholders for this project would be KMC supported by the local merchants and traders. The resources and the financial support for this project can be provided by the state government.

PROJECT IDEA 02: Public Space Design

EXACT LOCATION: The market area along canal banks

DESCRIPTION: The area taken for this proposal will be majorly the space used to navigate the market, i.e., the streets, footpaths, canal banks, plazas, squares, etc. There are again common problems as in the lack of public infrastructure and green areas, parking and congestion issues, drainage and waste disposal problems. The second initiative includes the development of concepts like public space design within the market premises. This intervention can include canal-front development, pedestrian walkways, introducing more of greener spaces along the canal, public plazas along the canal, etc. This calls for sound steps like the reclamation of actual right of way overt the narrow encroached market streets, cleaning of canals along with water treatment process, efficient storm-water drainage, resolved waste disposal and collection mechanism, etc. The main stakeholder of the process will be KMC with the support of the State Irrigation department, local businessmen and informal shop-owners.

PROJECT IDEA 03: Redesigning Market Space

EXACT LOCATION: The whole Broadway market

DESCRIPTION: The area identified for the project is the whole Broadway market. The intent is to transform the character of the whole area with a large-scale spatial transformation. Specifically, the third initiative would be the redesigning of the whole market space including the public market as well as the informal establishments. This can be done keeping in view the existing resources of the built space in the market area. Another potential of this intervention can be the introduction of new land-use in

the case area in correspondence with the adjoining uses. However, before implementing such concept, first the main stakeholders of the area such as local traders and merchants need to be assured of improved or at least the same commercial potential of the market. The technical support

would be availed from the KMC, CSML or public works department in the state. In order to carry out such large scale initiatives, we also have to integrate the aspirations of the neighborhood residents, existing religious centers and the Smart City Mission.

Group 4: MATTANCHERRY

Name of Area	MATTANCHERRY		
	Project Idea 01	Project Idea 02	Project Idea 03
Selected topic/idea/initiative	In-situ Housing Upgradation: Plot based micro renewal.	In-situ Housing Upgradation: Improvement of the situation of renters.	Synchronized/Connected Waste Collection.
Exact Location	Complete Neighbourhood	Complete Neighbourhood	Complete Neighbourhood
Main Stakeholder	Local landowners, renters/occupants.	Local landowners, renters/occupants.	KMC
Other Involved Stakeholder	KMC as well as the state level authorities.	KMC as well as the state level authorities.	Kudumbashree and Local scrap dealers.
Own Resources	Beneficiary-led Construction component under PMAY.	Local landowners, renters/occupants.	The Kudumbashree system of waste collection.
What kind of support is needed	Complex readjustment of land ownership/titling, changed financing via governmental subsidies and extended leases agreements.	Changed financing via governmental subsidies and extended leases agreements.	Collaboration of the Kudumbashree waste collectors and the scrap dealers. Technical and financial support from KMC.
Timeline	4-5 years	4-5 years	Kudumbashree and Local scrap dealers.

IN-SITU HOUSING UPGRADATION

EXACT LOCATION: Complete Neighborhood Mattancherry, being with Fort Kochi together the old hub for merchants and spice traders and workers, is a vibrant neighborhood. It has a high density and houses currently the majority of informal settlers in Kochi. From discussions, it emerged that over 50% of the inhabitants live in rental accommodations (with the majority having to shift regularly every 11 months) and others face unclear land tenure situations. These aspects lead to congested living situations where deteriorated houses are prevalent. Against this backdrop two proposals were developed.

PROJECT IDEA 01: Plot based micro renewal

For deteriorated houses, where the land ownership is unclear, it is proposed to explore the possibility of community titling approaches. The occupants do not receive an individual, but communal title and thus get the opportunity to receive gov. subsidies. In this framework, schemes, which require some form of tenure security like the Beneficiary Led-Construction component under PMAY, could offer subsidies (perhaps on a reduced rate). The latter should focus on improving/ providing a solid foundation and roof of the house ("smart high-tech"), with decentralized infrastructure measures like sewerage water treatment tank, tanks for fresh water and rain water and if applicable an e-battery storage. The wall incl. windows can be build incrementally from locally available, reused material.

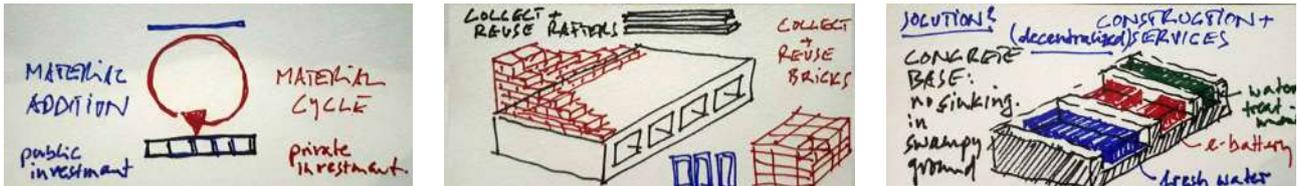


Fig. 110: Micro renewal : Reference Sketches, done by Nikolaus Knebel during the Design Sprint

PROJECT IDEA 02: Improvement of the situation of renters

The frequent required moving, burdens renters to lead a kind of nomadic life. Often the building quality in these short-term accommodations is substandard and necessary renovations are not executed. Current renters expressed their sincere willingness to contribute their own savings and labor to conduct renovations, which are currently often objected or not implemented by the owners.

Both proposals require the involvement of the municipality, the land owners, renters/ occupants as well as the state level, as changed financing via governmental subsidies and extended leases agreements are part of the proposed ideas. Thus, the duration of the proposal to be implemented might take several years.

PROJECT IDEA 03: Synchronized/ Connected Waste Collection

EXACT LOCATION: complete neighborhood

DESCRIPTION: The Kudumbashree system of waste

collection is well established in Mattancherry. Furthermore, many scrap dealers are located in the area. However, the current system does not provide for a collaboration of the Kudumbashree waste collectors and the scrap dealers. All waste and material collected by the Kudumbashree workers is brought to the Brahmapuram waste plant. To initiate a local more circular system, joint collection routes with slightly redesigned collection carts are proposed. Partly the collected material could then be monetized, and in-situ reuse could be promoted. Furthermore, the separate collection of biodegradable waste is proposed, to reduce the amount of the waste and to increase the recyclability of the then dry waste. The main stakeholders involved in the proposal are KMC, the scrap dealers and the Kudumbashree workers. The current mandate of the Kudumbashree workers would need to be extended, negotiations facilitated, and a decentralized re-use model promoted. The setting-up process is expected to take up to 6 months.

Group 5: FORT KOCHI

PROJECT IDEA 01: Fishing nets as living heritage

EXACT LOCATION: Vasco Square

DESCRIPTION: Fort Kochi is known for its trade history. The merchants who came to the island left their cultural traces, which now are contributing to the heritage landscape. The Chinese fishing nets are one such example. Till date, the nets are used by local fishermen. Hence, the nets are associated with heritage, livelihood and a living local economy. However, due limited gain and a resulting poor maintenance, the island has lost some of these nets. Many of the still existing ones are also under constant new threats e.g. due to proposed development projects, such as the water metro jetty. In the discussion, it was proposed that the nets should be officially considered as heritage which will essentially be maintained by individual fisherman with

the financial support of the Port Trust and the Tourism Ministry. Today, out of a total of 23 nets, about 11 remain. These need strong patronage by the local authorities and inhabitants, with strengthened political interest and investment. The interventions mentioned above are envisaged to create a strong sense of ownership and help to preserve the unique cultural heritage.

Name of Area	FORT KOCHI		
	Project Idea 01	Project Idea 02	Project Idea 03
Selected topic/idea/initiative	Fishing net as a living heritage	Revival of public open spaces	Waste disposal
Exact Location	Vasco square	Area around the public bus terminal	Lanes and by lanes of Fort Kochi
Main Stakeholder	Individual fisherman (not a very profitable profession currently)	Transport Authority, KMC	KMC
Other Involved Stakeholder	Port Trust, Tourism authority, Street vendors	KMRL, Port trust, Revenue dept., Tourism dept.	State government, Voluntary organizations
Own Resources	20-23 fishing nets now	Water Metro Project underway	Voluntary organizational framework for incentives, Current segregation
What kind of support is needed	Synchronizing with Govt. initiatives, Pedestrian infrastructure and increasing patronage, Political interest	Linkages to NMT, Reorganizing vending areas	Composting leaves and organic waste bins, Plastic containers for wet waste (@home/community level), Capitalizing institutions for waste management
Timeline	Not sure	1-2 years	1 year

PROJECT IDEA 02: Revival of Public open space

EXACT LOCATION: Public bus terminal

DESCRIPTION: The island also has certain open spaces which are underutilized, and hence need attention. The public bus terminal is one such space. This terminal is used for intracity and intercity transport. However, the activities around the space do not cater to the users of the space. It is proposed that stakeholders such as KMRL, Port Trust, Tourism Department, City and State transport authorities should collaborate to manage the space and activities around the terminals. The surrounding area also attracts tourists due to its heritage value and the Biennale. Hence, a cross-sectoral approach should be taken to manage the space. The assumed timeline for this proposal is two years, which should be effective by the time for the next Biennale.

by voluntary organizations (like the Clean Fort Kochi Foundation) and should be recognized and supported by the local authorities, where KMC is in charge of the management and the Kerala State Government provides the funding. The project will also need support in the form of resources such as composting leaves and plastic containers for wet bins from the level of private household to public street levels. The waste can also be the base for revenue generation for which appropriate plans should be worked out amongst all the stakeholders.

PROJECT IDEA 03: Waste Disposal

EXACT LOCATION: Lanes and By-Lanes of Fort Kochi

DESCRIPTION: Like the rest of Kochi city, even Fort Kochi faces difficulties with management and disposal of waste, that is accentuated due to tourism. The discussions addressed issues related to segregation, collection and disposal of waste. The proposal that was made during the discussions, highlights the current initiatives that are taken

Group 6: ELAMKULAM

Name of Area	ELAMKULAM	
	Project Idea 01	Project Idea 02
Selected topic/idea/initiative	Sewage treatment plant	Solid waste Management
Exact Location	Same as for previous STP	Decentralized System
Main Stakeholder	RWA & residents	Kudumbashree & residents
Other Involved Stakeholder	KMC	KMC
Own Resources	Existing STP can be utilized	Existing Collection system
What kind of support is needed	Updating and Maintenance of Existing Plant	Introduction of Monetary accountability and incentives for Kudumbashree workers
Timeline	1 year	6 months

PROJECT IDEA 01: Sewage Treatment Plant - Accountability and Functionality

EXACT LOCATION: Sewage Treatment Plant on Fatima Church Road, Elamkulam.

DESCRIPTION: The sewage treatment plant in Elamkulam was installed by the authorities to cater to the neighborhood and the surrounding wards. The site is adjacent to a canal and natural wetlands. During the discussions, participants expressed their concerns about the accountability and maintenance of the plant. According to their understanding it is running on an obsolete technology, which fails to treat the increasing sewage water that it receives. Furthermore, the outlet of the overflow pipe of the non-treated sewage tank directly opens into the nearby canal that is adding to the pollution of the water. To address these issues, the participants stressed on the point that authorities should take immediate measures to upgrade the technology of the system and make it functional for present and future needs. The discussion also addressed the project that is proposed by the authorities for the same. However, the participants also proposed that there should be clear accountability and transparency in the entire process. The Kerala Water Authority, KMC and the RWAs should be the key stakeholders, who need to be involved in the management of the plant. This collaboration will help to bring transparency in the process.

PROJECT IDEA 02: Solid Waste Handling

EXACT LOCATION: Pan city

DESCRIPTION: Waste is a prominent issue for all stakeholders. However, according to them, the measures taken by existing authorities are partly inefficient. What emerged from the discussion was that a decentralized system should be adopted to manage waste. The current waste collection system (through Kudumbashree groups) should be made even more efficient and accountable. Segregation at the household level should be mandatory and efficiently implemented. The authorities can collect the Kudumbashree fees from households as a separate tax, to resolve the issue of inconsistent payments. Moreover, the city should experiment with other waste management systems which have been successful in other municipalities of Kerala.

Group 7: CITYWIDE DEVELOPMENT STRATEGIES

The group consisted among others of members of CSML and the former mayor of Kochi and representatives from other agencies.

- Mr. Sohan, explained that Kochi was historically an area of manmade land, meaning that the land was artificially formed and wrested from the water. So, thinking of further modelling of the land for better flood protection should be part of the water strategy
- Different aspects of waterfront were discussed with the aim to “Reclaim the waterfront” citywide, whether it be the waterfront, coastline, canals or the backwater. CSML reported on their efforts and ideas to redevelop a central canal in Ernakulam.
- The potential of water transport was positively shared by the group.
- As an intermediate solution until the water quality of the Kochi Bay meets the requirements, a swimming ship (harbour bath) could be installed that travels to different parts of the town.

ANNEXURE 02: Results from the folklore exhibition from the Folklore Exhibition

1	Should future Kochi make efforts to attract more tourists									
	No, tourism could ruin the city	Only the limitations to protect Kochi and its people.	Yes, this is a good source of income and employment.							
	32	163	218							
2	What is missing in your neighborhood for it to be vibrant?									
	My neighborhood is already very vibrant.	Public space	Schools	Workplaces, jobs	Religious sites	Gastronomy (Options for food)	Shops			
	80	204	30	39	30	25	44			
3	In what type of housing would you like to live in future Kochi?									
	Houseboat	Homegrown Settlements	Bungalow	Courtyard building	Row housing	Skyscraper	Street typology			
	46	68	47	173	25	35	65			
4	In what kind of neighborhood do you live?									
	City centre with highrise buildings	Gated Community	Independent bungalow	Informal neighborhood	Traditional Housing Area					
	37	49	72	77	185					
5	Which kind of public spaces should be part of a future Kochi?									
	Land water spaces	Commercial centres	Natural green area	Public space for daily encounters						
	113	34	269	86						

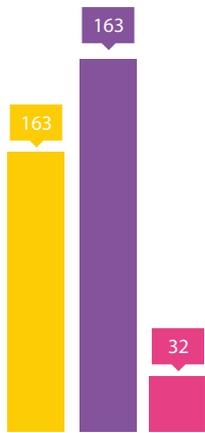
6	Have you been aware of climate change? If so, in what context?				
	Rise of temperature	Longer dry season	Heavy and unsteady rainfall	Flooding from the ocean	No, I am not aware of any change in climate.
	229	106	79	34	33
7	What actions are most important to reduce the effects of flooding through monsoon and bad weather in the future?				
	Waterfront development to prevent the sea level from reaching the city?	Change canals and drainage systems, to drain off water more efficiently.	Development of emergency plans, sections and zones.	Increase pre-monsoon and post monsoon safety inspections.	
	69	275	58	118	
8	Are you aware of where your wastewater goes?				
	Yes, it goes to the ocean/canals.	Yes, it will be treated and cleaned the right way.	No, I have no idea.		
	215	67			
9	how is waste disposal working in your neighborhood?				
	Great {6}	{5}	{4}	{3}	Poor {1}
	18	36	64	68	49
10	What could the city of Kochi and its people do to reduce the pollution of the coastline in the future?				
	Proper waste management	Proper liquid waste management	Recycling plastic	Deposit system on plastic bottles	Ban plastic bags, cups and other things that could be made out of other material.
	274	77	118	29	148

To address the most relevant topics and generate useful results, MyKochi focuses on 7 urban challenges. [prioritize the urban challenges according to the most importance they have for you.]							
11	Public commons grounds & environment (creating spaces for interaction and recreation)	Local economy and labour space (Creating future structures for sustainable income)	Neighborhood and houses (providing quality and safe housing in a vibrant environment)	The Kochi identity (maintaining and respecting the cultural identity)	Basic services and welfare (creating reliable structures and basic services for all)	The coastal climate challenge (preparing Kochi and its people for floods and severe weather conditions)	the mobility factor (Providing easy and accessible transport)
	89	65	44	61	112	40	67
12	Name your favourite ritual or cultural festival in Kochi.						
	Biennale	73					
	New year	59					
	Christmas	51					
	Kochi Carnival	51					
	Perunna Ravu	17					
	Korean Music Festival	17					
	El Classico	12					
	Holi	11					
	Kunramnur fest	9					
	Bacardi house party	9					
	Kerala blasters match	8					
	Street race	8					
	Onam	7					
	Krithi Literature festival	5					

	Palli	3						
	Mudrace	3						
	Rafi night	3						
	Eid-ul-Fitr	2						
	Vishu	2						
	Bamboo Festival	2						
	Makar Sankranthi	1						
	Kannamally Church	1						
	Pravu parathal	1						
13	Which mode of transport do you imagine in Kochi in 30 years.							
	Metro (upgraded)	61						
	Bicycles/ walkways	59						
	Water transport	42						
	Electric vehicle	28						
	Flying car/ Flying boat	21						
	Water Metro	20						
	Time machine/ teleportation	16						
	Air ambulance	14						
	Solar transportation (energy oriented)	13						
	Bullet train	9						
	Skywalk	8						
	Jetpack	5						
	Ropeway	4						
	Subway (rail)	4						
	Monorail	2						

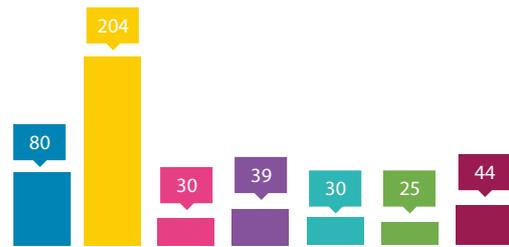
ANNEXURE 03: Results from the folklore exhibition (Visual Analysis)

1 Should future Kochi make efforts to attract more tourists?



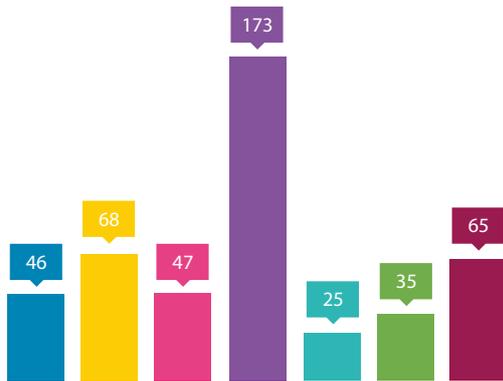
Only the limitations to protect Kochi and its people.
 Yes, this is a good source of income and employment.
 No, tourism could ruin the city.

2 What is missing in your neighbourhood for it to be vibrant?



Public space
 My neighborhood is already very vibrant.
 Workplaces, jobs
 Schools
 Religious sites
 Gastronomy (Options for food)
 Shops

3 In what type of housing would you like to live in future Kochi?



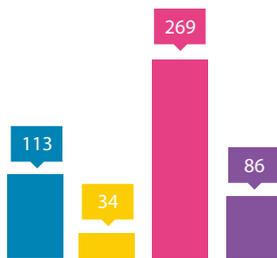
Houseboat
 homegrown Settlements
 Bungalow
 Courtyard building
 Row housing
 Skyscraper
 Street typology

4 In what kind of neighborhood do you live?



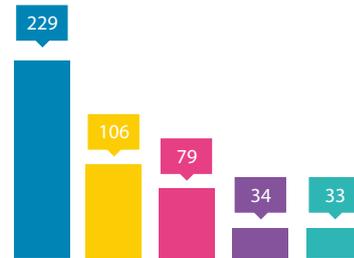
City centre with highrise buildings
 Gated Community
 Independent bungalow
 Informal neighborhood
 Tradiional Housing Area

5 Which kind of public spaces should be part of a future Kochi?



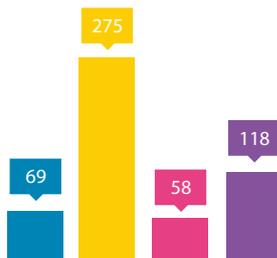
Land water spaces
 Commercial centres
 Natural green area
 Public space of daily encounters

6 Have you been aware of climate change? If so, in what context?



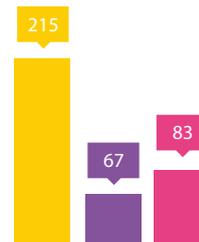
Raise of temperature
 Longer dry season
 Heavy and unsteady rainfall
 Flooding from the ocean
 No, I am not aware of any change in climate.

7 What actions are most important to reduce the effects of flooding through monsoon and bad weather in the future?



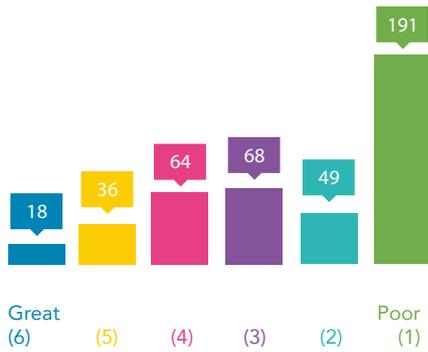
Waterfront development to prevent the sea level from reaching the city?
 Change canals and drainage systems, to drain off water more efficiently.
 Development of emergency plans, sections and zones.
 Increase pre-monsoon and post monsoon safety inspections.

8 Are you aware of where your wastewater goes?

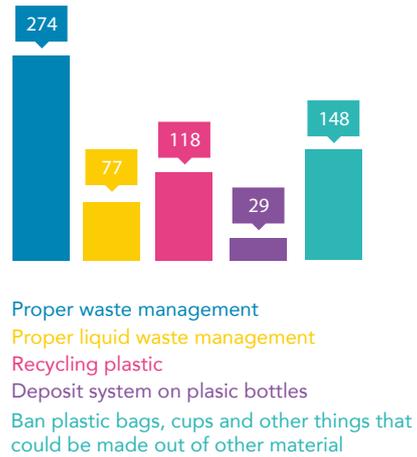


Yes, it goes to the ocean / canals.
 Yes, it will be treated and cleaned the right way.
 No, I have no idea.

9 How is waste disposal working in your neighborhood?



10 What could the city of Kochi and its people do to reduce the pollution of the coastline in the future?



11 To address the most relevant topics and generate useful results, MyKochi focuses on 7 urban challenges. (prioritize the urban challenges according to the most importance they have for you.)



- Public commongrounds & environment (creating spaces for interaction and recreation)
- Local economy and labour space (Creating future structures for sustainable income)
- Neighborhood and houses (providing quality and safe housing in a vibrant environment)
- The Kochi identity (maintaining and respecting the cultural identity)
- Basic services and welfare (creating reliable structures and basic services for all)
- The coastal climate challenge (preparing Kochi and its people for floods and severe weather conditions)
- the mobility factor (Providing easy and accessible transport)

ANNEXURE 04: Results from EnteKochi Website

Online Votes

	QUESTION	ANSWER	NUMBERS
1	Which forms of waste management could help to keep the neighbourhoods clean?	A pickup at my home	2
		A recycling place to bring dry waste	4
		A collective space to bring all the garbage	4
2	Which traditional sites and elements define the cultural identity of Kochi and should therefore be protected?	Arts and Crafts	8
		Language	6
		Native Communities	7
		Natural and ecological features	7
		Local traditions and rituals	5
		Religious spaces	2
		Spiritual foundations	4
		Historical sites	5
3	Which mode of transport do you use most frequently?	Canals, coastline, back waters	7
		Bike	3
		Motorbike	4
		Car	3
		Taxi	1
		Bus	3
		Auto Rickshaw	1
		Metro	1
4	Which kind of public spaces should be part of future Kochi?	Walking	2
		Land-water spaces	1
		Natural green areas	2
		Commercial Centres	2
		Public space for daily encounters	1
5	Which actions are most important to reduce the effects of flooding through monsoon and bad weather in the future?	Others	1
		Waterfront development to prevent the sea level from reaching the city	1
		Change canals and drainage systems, to drain off the water more effectively	6
		Devt of emergency plans, stations & zones	4
		Increase pre- and post-monsoon safety inspections	2
6	What is missing in your neighbourhood, for it to be vibrant?	My neighbourhood is already very vibrant	3
		Shops	5
		Schools	1
		Public Space	5
		Gastronomy	1
		Workplaces and jobs	4
7	What could the city of Kochi and its people do to reduce the pollution of coastline in the future?	Proper waste management	3
		Proper liquid waste management	4
		Recycling plastic	1

7	What could the city of Kochi and its people do to reduce the pollution of coastline in the future?	Deposit system on plastic bottles	3
		Ban plastic bags, cups and other things that could be made out of other material	2
8	Throughout Kochi, there are many canals and waterways. What has to be done to use them as public spaces in the future?	They have to be accessible by the public	1
		They have to be cleaned and prevented from being used as garbage dumps.	2
9	Should historical sites and buildings in Kochi be protected?	Yes, existing historical sites and buildings should be protected from destruction	13
		No, existing historical sites and buildings no longer play any decisive role	7
		Future developments should involve traditional construction methods and styles	8
		New buildings should follow a modern design	5
10	Should future Kochi make efforts to attract more tourists?	Only with limitations to protect Kochi and its people	4
		Yes, this is a good source of income and employment	2
11	In what type of housing would you like to live in future Kochi?	Homegrown settlements	1
		Houseboat	2
		Skyscraper	2
		Bungalow	1
		Courtyard building	2
		Street typology(mixed-use houses)	2
12	In what sector do you work?	Fishing industry	3
		Trade and service	3
		Production and logistics	4
		Government	4
		Tourism	4
		Building and construction industry	2
		Port and harbour industry	2
		Navy	3
13	In what kind of neighbourhood do you live?	Gated community - fenced complex	2
		City centre - high rise buildings	2
		Informal neighbourhood	1
		Traditional housing area	3
		Independent bungalow - residential area	2
14	If you could build your public space, what would be your primary objective?	Commercial offers: markets, shops, etc.	2
		Cultural possibilities: museums, libraries, cinemas, etc.	4
		Public services: toilets, ghats, etc.	1
		Green spaces: grass, trees, plants, playgrounds, seating facilities, etc.	3
		No cars, motorbikes, etc.	3
		Tourist attractions	2

15	How far is your work from home?	I work from home	2
		Very close - I can walk	3
		I have a short commute (less than 30 mins)	1
		I have a long commute (above 30 mins)	1
16	Have you been aware of climate change? If so, in what context?	Heavy and unsteady rainfall	8
		Flooding from the ocean	5
		Longer dry season	6
		No, I'm not aware of any change in climate	1
		Rise of temperature	5
17	Do you feel safe when travelling through Kochi?	Always	2
		Usually, but it depends on where I am and which mode of transport I am using	4
		Rarely, only in certain parts of the city	1
18	Do you feel a lack of space to meet people publicly in your neighbourhood?	Yes	5
		No	5
19	Below is a list of basic services. Please mark the ones you do not have access to.	Clean water	1
		Electricity	1
		Sanitation	1
		Education	2
		Medical treatment	1
		Security	1
20	Are you aware of where your wastewater goes?	Yes, it goes to the oceans/canals	4
		No, I have no idea	3
21	The whole Kochi area is pretty scattered. I wish there were more connections between the different parts of the city	Yes, the city is much divided, and I wish the different parts of Kochi would be more connected	3
		No, the city is already well connected	2
22	Where do you meet people in Kochi?	On the street	6
		At the beach/coastline	1
		In a specific locality (cafe, restaurant, etc)	2
		In parks	4
		At home	4

The EnteKochi Map

What will define the city of Kochi in the future? What kind of projects will ensure that quality of life will be great for the children and grandchildren of today's inhabitants? During the EnteKochi process, a lot of discussions arose on both small short-term interventions, as well as strategies for empowering various city initiatives and long-term city development goals. Participants of the Design sprint established water as the connecting element and developed a set of initial project ideas.

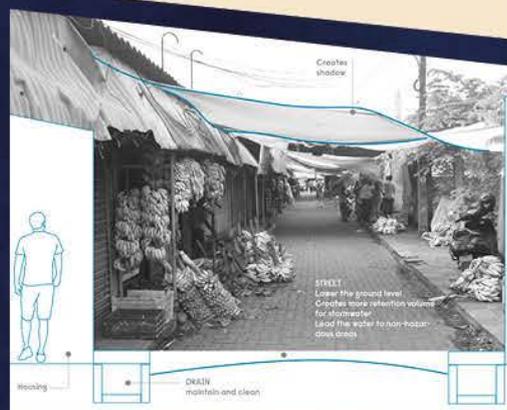
Water as the defining element of Kochi

- ~ Water as working space
- ~ Water for transporting of goods
- ~ Water for public transport
- ~ Water as social infrastructure
- ~ Water as public space
- ~ Water as heritage
- ~ Water as local supply
- ~ Water for food production
- ~ Water as recreation
- ~ Water as identity
- ~ Water as pride



Monsoon Street and Neighborhood

During the monsoon in particular, Kochi's water pipes have to deal with large quantities of water. Therefore, it is proposed that in the future, all urban surfaces, especially public spaces are recognized and designed as multifunctional spaces to hold back rainwater. Roads as connecting elements will have a gradient on both sides that transports the water in channels to the above mentioned open spaces and to the canals. In this way, the roads and houses will remain accessible as far as possible, despite heavy rain.



Energized water tank

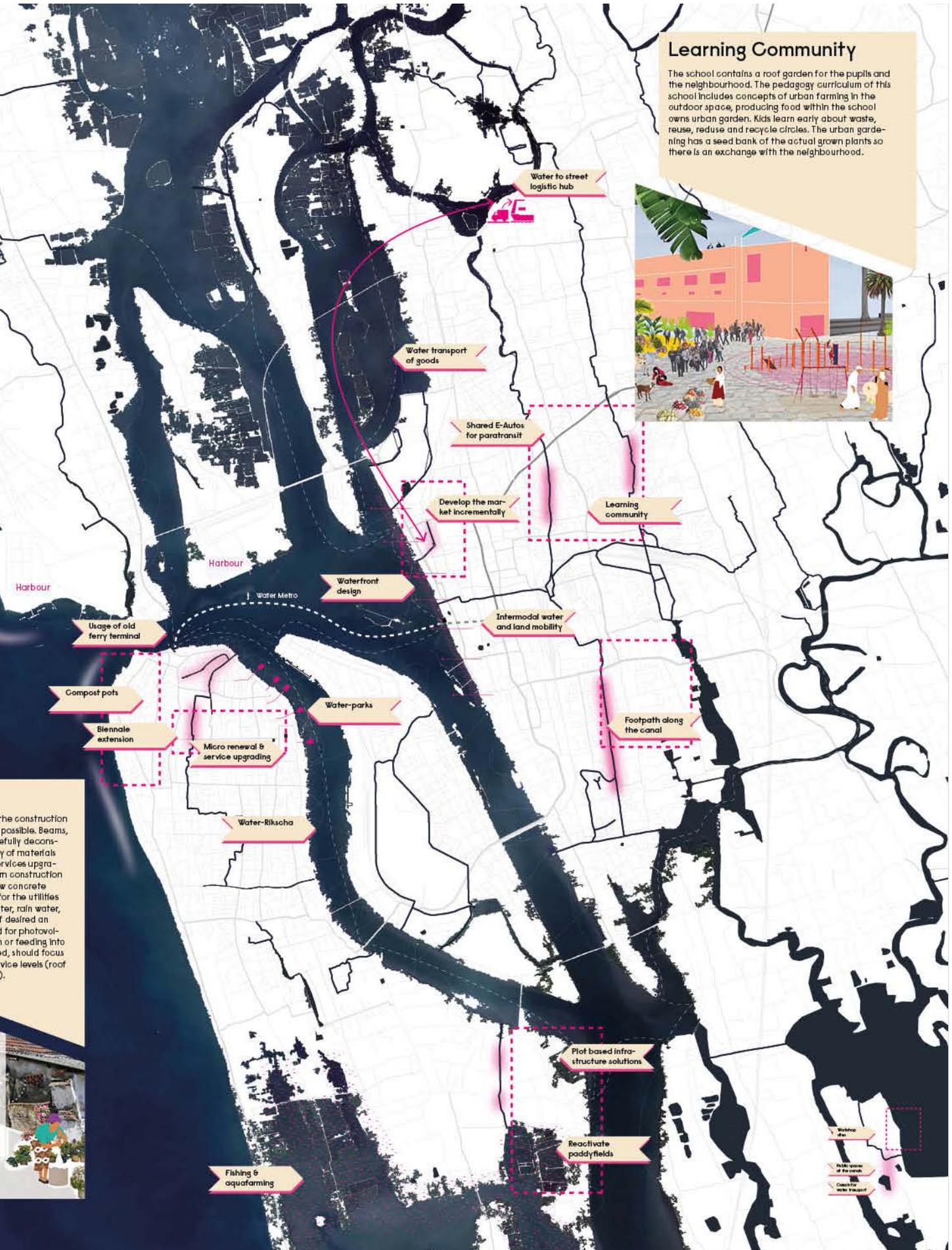
The infrastructure and space under and around water tanks is proposed to be re-used. The neighboring community will be empowered and encouraged to upgrade the area as public space with e.g. recreation area, seating possibilities, urban gardening fields and playground. This new-usages will additionally encourage people to refrain from using abandoned spaces as garbage dropping-points.



Micro renewal

Micro renewal is an approach to reuse the material of the existing buildings where bricks, tiles, windows and doors are constructed and fed into a circular economy in the neighbourhood. Decentralized seeding is an approach to introduce modern materials only where necessary. The new foundations contain a layer of storage for the house, such as tanks for fresh water, a sewerage water treatment tank and an electric battery. The roof could be used as solar panels for energy self-consumption on the local grid. Subsidies, if required, on the decentralised seeding and foundation.





Learning Community

The school contains a roof garden for the pupils and the neighbourhood. The pedagogy curriculum of this school includes concepts of urban farming in the outdoor space, producing food within the school owns urban garden. Kids learn early about waste, reuse, reduce and recycle circles. The urban gardening has a seed bank of the actual grown plants so there is an exchange with the neighbourhood.



the construction possible. Beams, carefully deconstruct of materials services upgrade construction concrete for the utilities water, rain water, of desired and for photovoltaic or feeding into and, should focus vice levels (roof ...)



Why an urban lab?

The future is approaching fast and we need to discuss how our city will be like. There are a lot of choices to be made.

EnteKochi encourages the participation of as many different people as possible in thinking creatively and freely about the future of Kochi. By combining crowd-sourcing and co-creative working methods we tried to showcase how an 'urban lab' can involve citizens as local experts in finding perspectives for the urban future of the city. Because only if we use the knowledge of all people and a diverse set of stakeholders we are able to combine science and practice to make wise decisions and develop smart solutions. The urban lab shall foster this process of thinking and discussing together. Thereby it is allowed to make mistakes, to think and develop "out of the box ideas". We have to allow us to try things out, explore alternatives and challenge the boundaries in order to make Kochi the best place possible.

Who is part of my Kochi? EnteKochi is jointly accompanied and designed by the Kochi Municipal Corporation, GIZ India, supported by urbanista and urbz.



Implemented by
giz

urbanista urbz

The EnteKochi process



Our approach is an open process based on online and offline formats. During more than three months people were able to join the open studio at Folklore Cultural Theatre (in Fort Kochi), to interact during workshop sessions, to enrich the exhibition or use the web app to state and solve the challenges and give feedback 24/7. An integral part of the process was the outreach into six different neighbourhoods, to get in touch

and work together with communities. In the Design Sprint the EnteKochi team produced maps, illustrations, and collages to illustrate and communicate the results of the neighbourhood workshop series, the specialised stakeholder workshops and the EnteKochi exhibition. The public as well as local, national and international, experts enriched the process and actively joined the design tasks.



Urban Challenges

Only if we focus on the different functions of the city –considering social, economic and ecological aspects– an approach for integrated urban development will be possible and successful. For this reason, the EnteKochi process defined the "Urban challenges" that the city has to solve and work on in the future.

The Kochi Identity

Maintaining and respecting cultural identity

Kochi's multi-cultural, trading history has allowed to develop a unique identity of the city. This is defined by tangible structures like historical buildings, religious spaces, but as well by intangible elements such as specific traditions, customs or the practise of different languages. It is vital that these elements will be respected in future developments, to allow the city to maintain its unique characteristics. While until today most of the historical sites and buildings of Kochi's cultural identity have been preserved, there are few systematic sets of regulations that define what shall be protected long-term, and how to do so.

Public Common Grounds and Environment

Creating vibrant spaces for interaction and recreation

In certain parts of Kochi, land use is mostly dedicated to structural, residential, commercial or agricultural purposes; this tends to isolate inhabitants from the natural environment and communities. To ensure inclusive and social communities, it is necessary to promote interaction between citizens and to create spaces for recreation and for protecting and enjoying the environment. It is essential to provide collective public spaces for all people of a society to gather, meet and exchange ideas. By disrupting borders and opening up areas within existing structures, there is immense potential for more recreational and social opportunities for interaction.

Basic Services and Welfare

Creating reliable structures and basic services for all

Existing inequalities increase with a growing population. This results in a further unequal distribution of public goods and require the proportional adaption of public infrastructure and basic services. While today certain neighbourhoods suffer a restricted access to various social and technical resources, a future Kochi must establish a common standard of needs to provide its citizens with an adequate standard of living. This will demand improved structural developments for sustainable waste management and long-term water management systems, among other factors.

Neighbourhoods and Houses

Providing quality and safe housing in a vibrant environment

The population of Kochi is increasing constantly. There are various forms of housing within the diverse neighbourhoods of the city and the region. Some people live in informal structures, while others live in traditional houses or isolated, mono-functional settings. As demand and supply gaps are likely to grow, inequalities might increase. In a future vision, Kochi offers a high quality of life through different, adequate and safe housing options within lively and mixed-use neighbourhoods in an affordable, inclusive city for all.

Local Economy and Labour Space

Creating future structures for sustainable income

The way we work has a substantial impact on the functions and structures of our cities. Through its port, an active fishing industry, factory hubs and a leading digital, tech/IT sector, Kochi's recent economic development is above the Indian national average. Through digitalisation and mechanisation, new places of work will emerge while others will vanish. In an integrated city development, new workplaces should be chosen wisely and tailored to the needs of a future economy.

The Mobility Factor

Providing easy and accessible transport

Kochi's traffic is mainly filled with engine-driven cars on roads that were not designed for their size, suffering from unpredictable contextual fluctuations. To create a walkable and bikeable city with simple transport options, we will explore potential routes (e.g. water) and adapt to fluctuations, which will be a significant challenge in the future. In which commuters will combine different forms of transport to make the city itself a walkable environment, efficiently and reducing congestion.

The Coastal Climate Challenge

Preparing Kochi and its people for flooding and severe weather conditions

Being a coastal city with many backwaters, Kochi constantly runs the risk to be affected by severe weather conditions. In 2018 Kerala suffered from one of the most impactful floods in recent history. In the face of flooding and the increasing monsoon rainfall, the question of what can be done to avoid this is a high priority. To ensure a sustainable and resilient future development and its community, it is essential to adapt strategies to protect it from severe damages. With rising sea level and the acceleration of climate change, Kochi will have to find solutions to protect its coastline while finding ways to adapt its canals and backwaters within safe,

Urban Typhoon

For six days, local residents worked together with participants from other locations, cities and countries. The workshops explored the challenges faced by six different locations in the Cochin Municipal Corporation area. However, they also sought to highlight the residents' attachment to their neighbourhoods as well as local initiatives and ideas to address issues ranging from the particular to the universal. These included housing, heritage, environment and water, waste collection, economic and cultural activities as well as connectivity and mobility. The workshops were a first step towards a comprehensive effort to put citizens at the heart of urban planning and development.



Planning with the residents



Many problems can be better solved at the local level!



HOUSING

We love our neighbourhood and never want to leave it!



WASTE

Vacant plots become dumping grounds!



MOBILITY

The pathway to the metro is nonexistent, broken or dangerous!



WATER

Our city turned its back on the canals as it grew!



HERITAGE

The Water Metro is welcome but it should not destroy the fishnets!



ACTIVITY

We need to be producers rather than consumers!

At Folklore Theatre

COLLEGE STUDENTS JOINED ENTEKOCHI to contribute and learn as future urban professionals. Their overall findings indicated that mainland Ernakulam is faced with issues of mobility, traffic, connectivity and availability of green spaces, and the island areas deal with climate change, flooding, etc.



CHILDREN'S THINKING THE FUTURE KOCHI - Workshops were conducted with children from varying schools. Art and team building activities were used as the medium of the workshop. The children were knowledgeable, informed and positive about the future. They shared innovative ways of dealing with challenges. In the interactions between the children, a sense of shared responsibility and a consensus on future actions emerged whereby each student committed to make a small step towards sustainability.

ENTEKOCHI A CITY FOR ALL! - The differently abled population is an essential stakeholder in the design and planning of cities. A diverse participation from the differently abled spectrum helped to address challenges, which are both unique and commonly experienced. Independence and self-reliance were topics that were raised repeatedly by several participants. Future developments should address inclusion and universal accessibility of all spaces.



The learnings from all participatory efforts of the EnteKochi Process, including the exhibition, the Typhoon neighbourhood series and the specialized events are synthesized in the Design Sprint as future collaborative perspectives and initial design ideas for the city of Kochi.

Purifying Canal Landscape

The pollution of the sewer water is one of the biggest challenges in Kochi. It is proposed that houses have to be equipped with low-tech additional wastewater treatment measures on an individual or neighbourhood level. Additionally, canal water and rain water purifying layers might be integrated into the landscape along the canal.

See more of these future collaborative perspectives on the backside →



EnteKochi



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