

BUILDING LEADERS IN URBAN TRANSPORT PLANNING AND MANAGEMENT -3RD BATCH, 2014-2015

-STATUS OF MENTORING PROJECT-

“ROAD MAP FOR REVAMPING KOCHI’S WATER TRANSPORT SYSTEM”

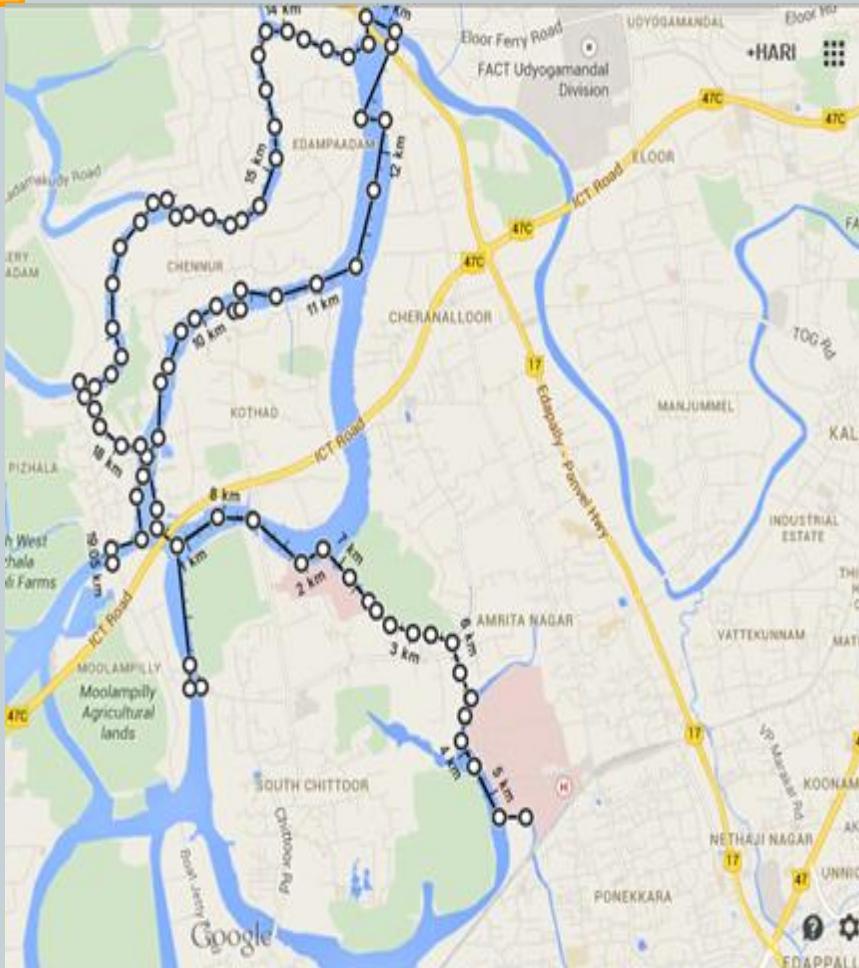
G.P.HARI

Addl.General Manager (Urban Transport)

Kochi Metro Rail Ltd.

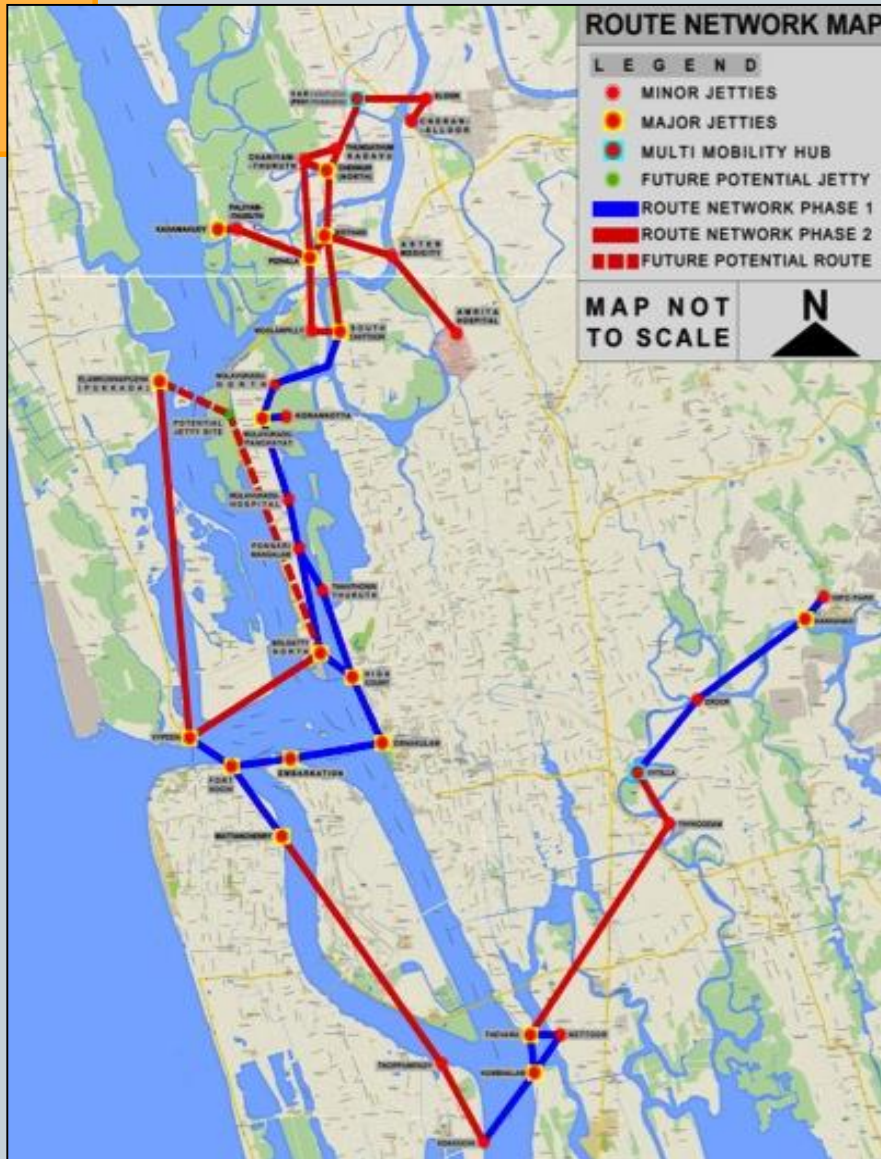
Mentoring Project

Road Map for Revamping Kochi's Water Transport System



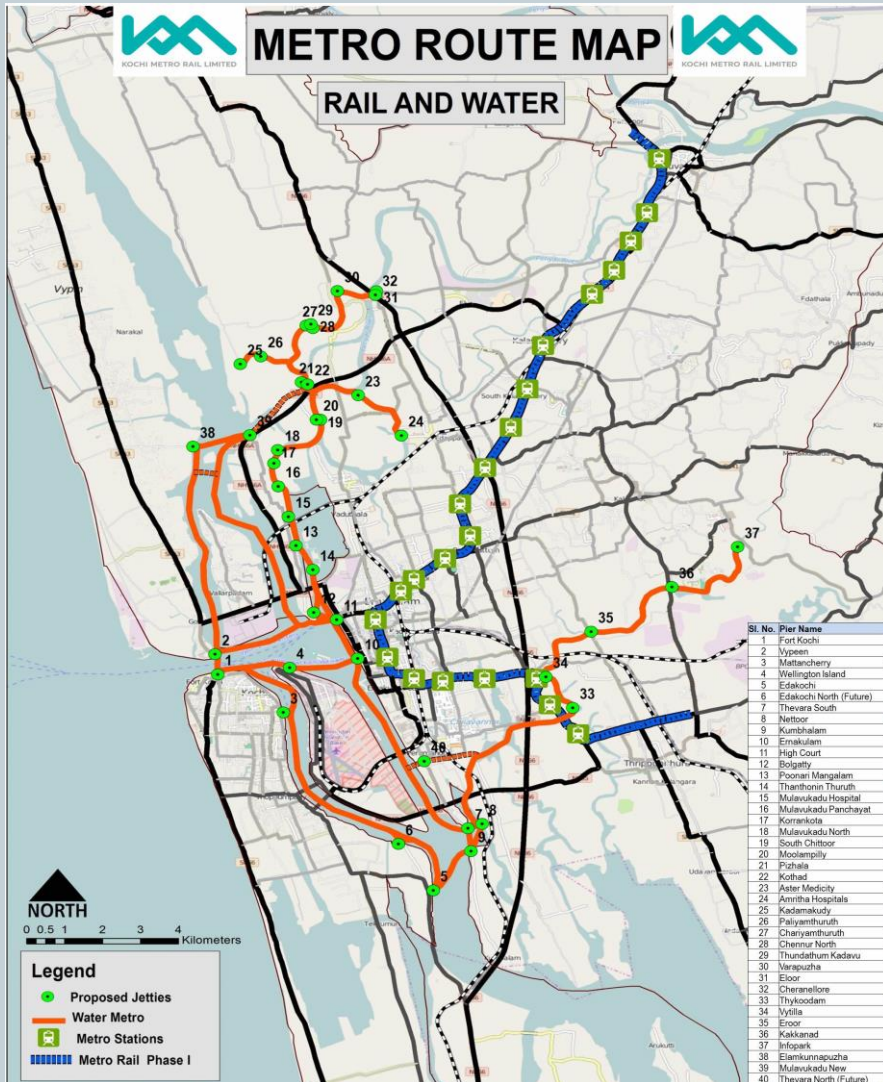
Potential Link Routes	No. of Jetties
<p><u>North East Link Route</u> Eloor-Cheranellur North-Edampadam- Cheranellur West-Chennur East-Kothad North-Kothad Church- Chennur South- Kanjirakkad- Pizhala East-Kothad South -Moolampilly East-Chittor.</p>	13
<p><u>North West Link Routes</u> Varapuzha-Chennur North- Thundathum Kadav-Cheriathuruth North-Cheriathuruth South-Pizhala North-Kadamakkudy Hospital-Chennur West- Pizhala East-Kothad South - Pizhala South-Moolampilly North. Valiya Kadamakkudi- Paliyam Thuruth.</p>	12
<p><u>New North West-South East Link Route (Proposed)</u> Pizhala East-Kothad South-Aster Medicity - Amritha Hospital, Edappilly.</p>	4

“Water Metro” – Abstract of DPR



- 110 million Euro project with 80% funding from KFW & balance funding from State government.
- Time – 4 years.
- 12 islands, 16 routes, 76 route km.
- 78 Diesel-Electric hybrid Hybrid Boats, 38 floating Piers, Electric/CNG Feeder buses.
- Access roads and street lighting.
- Same experience, look and feel of Metro.
- Integrated ticketing and timetable.
- Transportation and livelihood improvement for islanders.

A MRTS through waterways– Water Metro

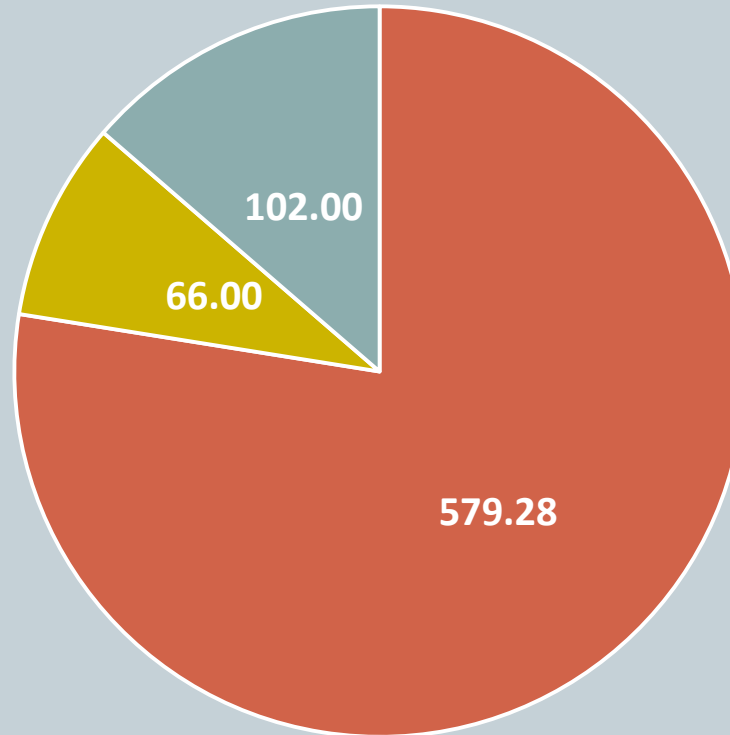


Cost Component of the Water Metro Project

Component Description	Phase I	Phase II	Total
A) Direct Infrastructure Costs			
• Jetty Infrastructure Cost	62.00	40.89	102.89
• Provision for Boat Yard	10.00	5.00	15.00
• Dredging of Waterways	10.00	15.00	25.00
• Commercial Complex	30.63	16.81	47.44
• Investment on Inland Navigation System & OCC	9.70	5.60	15.30
Total of above Civil Infrastructure Cost	122.33	83.30	205.63
Cost of Boats	109.59	86.22	195.81
B) Soft Costs			
• Set up/start up/development costs (2%) on A	4.62	3.39	8.03
• Contingency 5% on A	11.83	8.65	20.47
• Interest During Construction	3.23	2.20	5.44
Sub-Total (A+B)	251.61	183.76	435.37
C) Ancillary Infrastructure			
• Development of Access roads/island roads/non-motorised transport	161.00		161.00
• Development of Electric Feeders, Bicycle Sharing and Walkways	130.51		130.51
D) Setup/start up/development cost (2%) + Contingency (5%) on C	20.40		20.40
Sub-Total (C+D)	311.91		311.91
Grand Total			747.28

PROJECT FUNDING

Project is approved with investment of Rs. 747.28 Crore



■ Loan from KfW

■ Private Investment

■ Government of Kerala

Project Status

GoK administrative approval	Approved on 19 th Nov 2015
DEA approval for posing to KfW	Approved on 8 th Jan 2016
KfW Board approval	Approved
Loan Agreement Signing between Gol and KfW	Signed on 17th Jun 16
Project Agreement Signing between Gol, KfW and KMRL	Signed on 18th Jun 16
Expression of Interest (EOI) for General Consultant	Three consortia shortlisted, sent to KfW for approval
Request For Proposal (RFP) for General Consultant	<ul style="list-style-type: none">• Preparation in final stages; Clauses being checked for compliance with KfW's procurement guidelines• KfW for review and approval
EIA is in process	WAPCOS to give report in November

Kochi's Preparedness for Transforming Public Transport



METRO RAIL

- MRT-25 Km elevated **Metro Rail** System with 22 stations is under construction, first section for revenue operation by **March 2017**.



WATER METRO

- World's 2nd largest **Water Transport** system - Commenced revamping of Water Transport system of Kochi City, covering 78 route km and 38 piers.

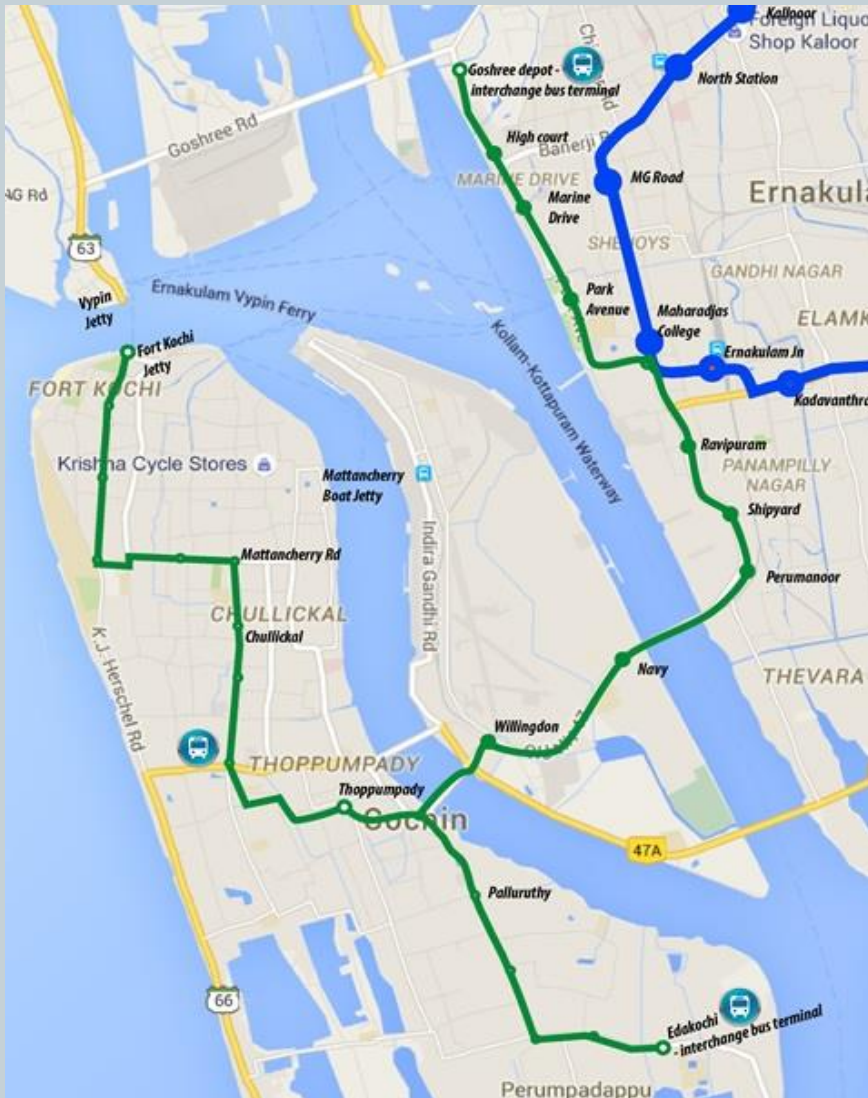
URBAN TRANSPORT STUDIES

- **Comprehensive Mobility Plan (CMP)** - Commissioned studies including Integrated Public Transport Plan, including trunk and feeder routes mapped to Mobility Hubs, Non-Motorised Transport Plan (around metro), Integrated time table, Journey Planner, Intelligent Transport System(ITS), Urban Traffic Control System(UTC), Place making and GIS Mapping of Kochi Transport Network

METROPOLITAN TRANSPORT AUTHORITY

- Creation of Umbrella body for Seamless Transport, through new legislation of law - "**Metropolitan Transport Authority (MTA)- Kochi**", Which shall be set up as a Single agency responsible for planning, coordination, integration, management and regulation of Kochi's transit system.

Light Rail Transit (LRT) to West Kochi Islands



- Total – 20.1km
- Three bus interchange terminals.
- One interchange with Kochi Metro.
- Three interchange points with water metro.

Kochi Metro Rail System

Getting ready for commencement of operations by March 2017



A CLEAN, GREEN, SAFE AND HEALTHLY CITY

Reconstituted urban form



Rejuvenation of city canals

Redevelopment of existing parks and open spaces

Protection of green cover

Creation of green walkways, plazas, etc

Compactness: Mixed land use – Transit Oriented Development along all major roads

Seamless Mobility for Kochi – Kochi 1 App

Transport service

- Live train schedule
- Route map & Journey Planner
- Fare details
- Integrated mobile ticketing
- Location sharing

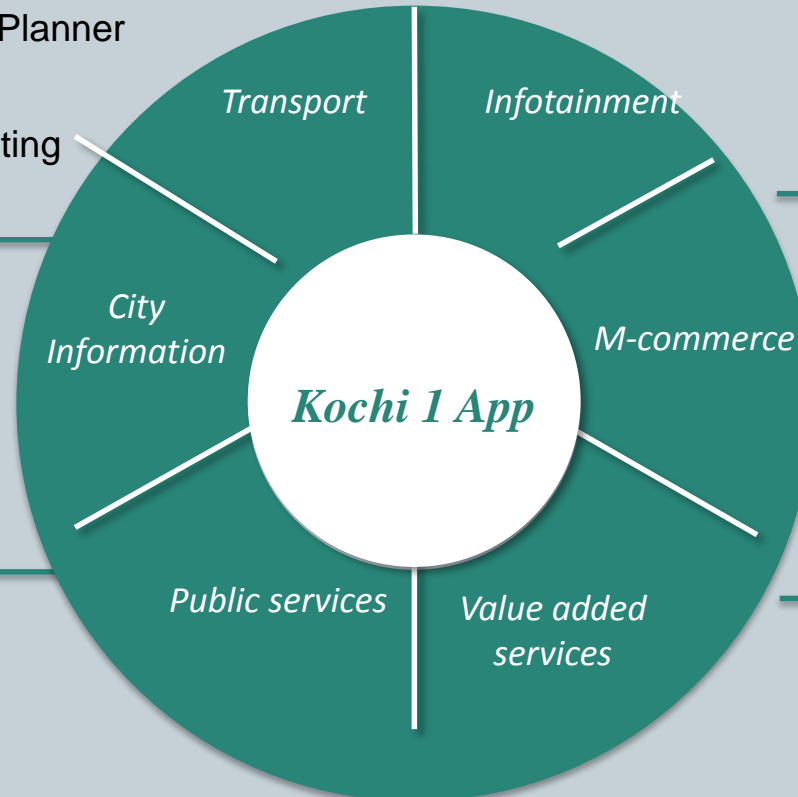
Connecting the Non-Digital world as well

Infotainment

- Free Wi-Fi
- Music / video streaming
- Live Cricket Score
- Restaurant Search

City Information

- City calendar
- Weather forecast
- Tourist destinations
- Merchant Directory



M-Commerce

- Cab Booking
- Click & Collect
- Mobile recharge
- Bus/train ticketing
- Hyper Local

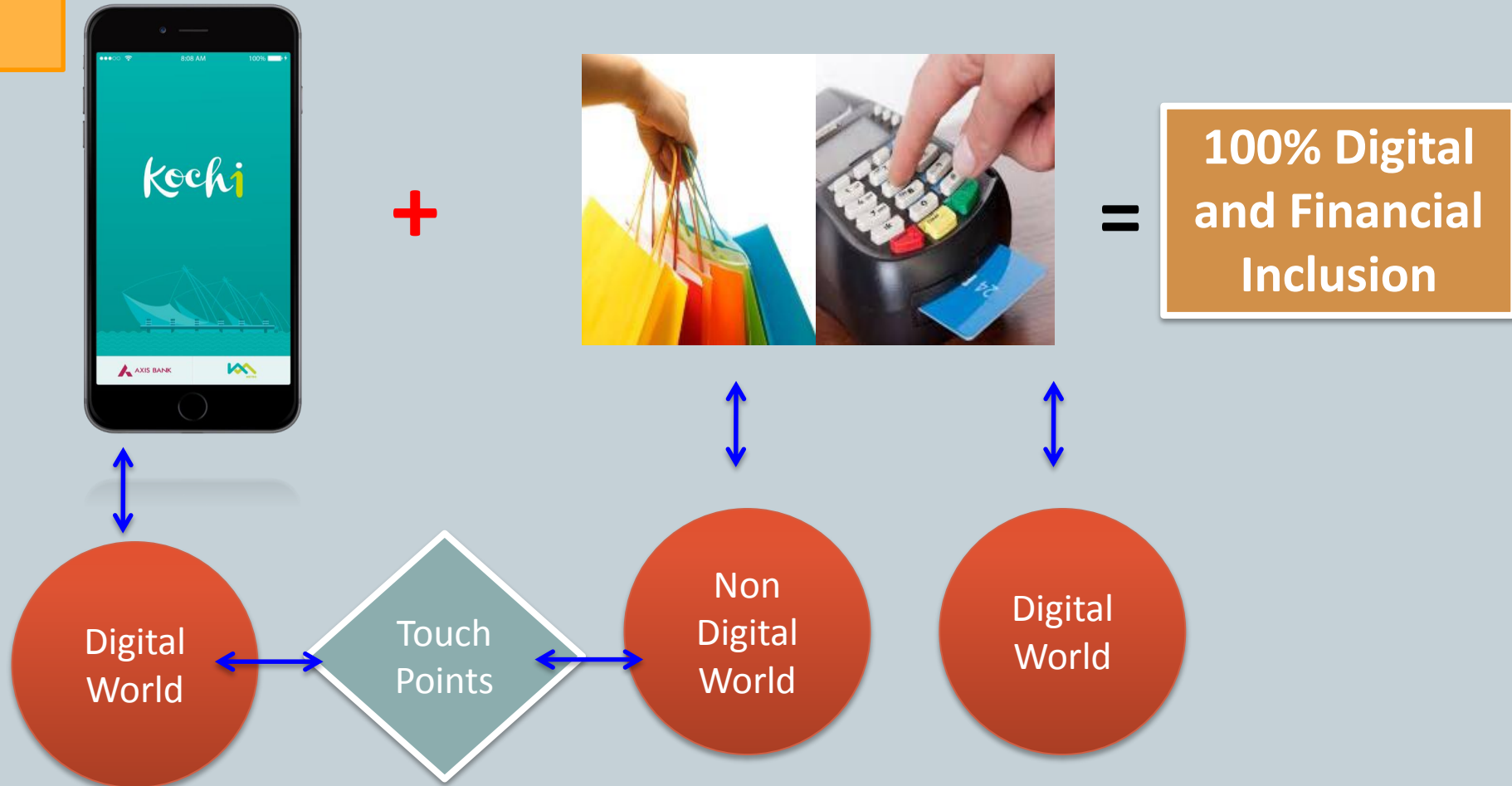
Public services

- Emergency alerts
- Hospital speed dials
- Utility bill payments
- Suspicious activity reporting

Value added service

- Wallet services
- Concierge services
- Cab sharing
- Tourism services

Smart solutions- Implementation strategy



Connecting the non-digital world to opportunities in the digital world

PAYMENT SOLUTIONS



EMV enabled SMART Card payment solutions to all citizen services.

Water & Electricity Bills, Building/Land Taxes.



EMV Smart Card based Payments



Mobile based Payments



Buses



Metro Trains



Ferries

Fare purchases for Kochi Public Transit



Parking



E-Commerce



Retail Payments

Non-Transit payments enablement

Key Learnings-Leaders programme

- A Holistic approach is required for addressing 'Transport Solutions' of a city.
- Never jump in to quick solutions, without going for a city specific 'Comprehensive Mobility Plan', followed with dovetailed 'Integrated Public Transportation/NMT Plan' and Master Parking Plan for the city.
- Must plan for a seamless and truly integrated transport solutions, rather than going for a stand-alone 'Metro Rail', 'Mono Rail', LRT, BRT....systems, as these solutions may not address the core issues. Lower Life Cycle Cost should have adequate weightage, in addition to FIRR & EIRR benchmarks.
- Public Transport solutions are always capital extensive and there are risks even to the meet the O&M cost. Therefore city specific transport solutions needs to be evolved, rather than a prejudice approach in selection of transport systems & solutions.

Key Learnings-Leaders programme

- Suitable Business models (including non-fare box revenue) should be part of the transport Solution DPRs and the PPP model solutions should be explored wherever possible, to reduce the State/Central's financial burden and also to ensure the transport eco systems are self sustainable at least to the extent of meeting the O&M cost.
- Enactment of city specific MTA Bill is essential for common command and control of City Transportation systems.
- Identification of Revenue streams for Urban Transport Fund of each MTA.
- Must take the IT as a tool to enhance the efficiency of the transportation systems and also to attain lower life cycle cost and lower O&M cost.
- The transport solution plans prepared by SPVs should be 'Outward Looking' and deliver what the citizens wants! , not what the Operator wants!. The system should be able to capture the user experience and responses.

Sometimes you meet people who change your life.....
Sometimes you meet cities which transform you and your life.....

Now its our turn to make Kochi as one of such cities.....



THANK YOU...