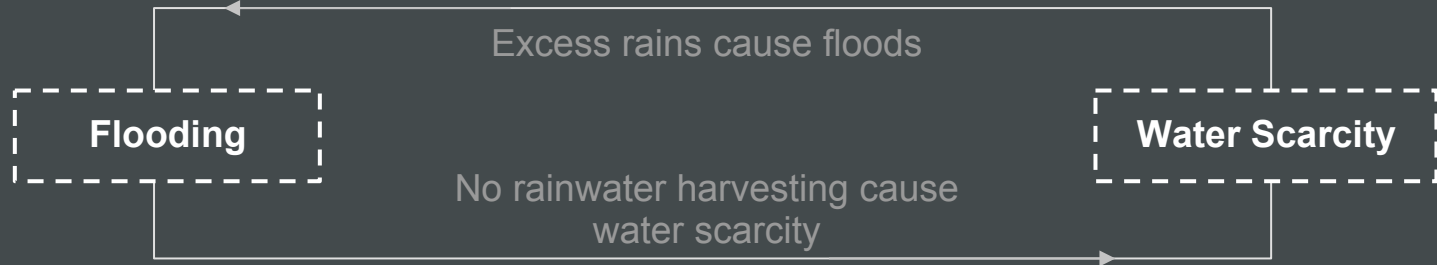


revive



The Approach Adopted



A need to address and approach flooding and water scarcity together, as often cities with severe water crises are the one being flooded such as Chennai, Delhi, Bangalore, Mumbai etc.

VISION: 5 PHASES STRATEGY

PHASE 1 Data Collection and Mapping

PHASE 2 Predictive Modelling

PHASE 3 Influence City Development Plan

PHASE 4 Green Infrastructure

PHASE 5 Maintenance of the system

INTEGRATED TOOL FOR URBAN WATER MANAGEMENT

- Aggregation of Water Sector Data
- Development of a DDSS
- Monitoring the water situation, efficiency, identify shortfalls
- Predictive Modelling: Flood Simulation, RWH, Smart Water
- Recommend Eco-DRR approaches to handle it

REPLICABLE

PHASE 1 Data Collection and Mapping

PHASE 2 Predictive Modelling

WATER REVIVAL MODEL

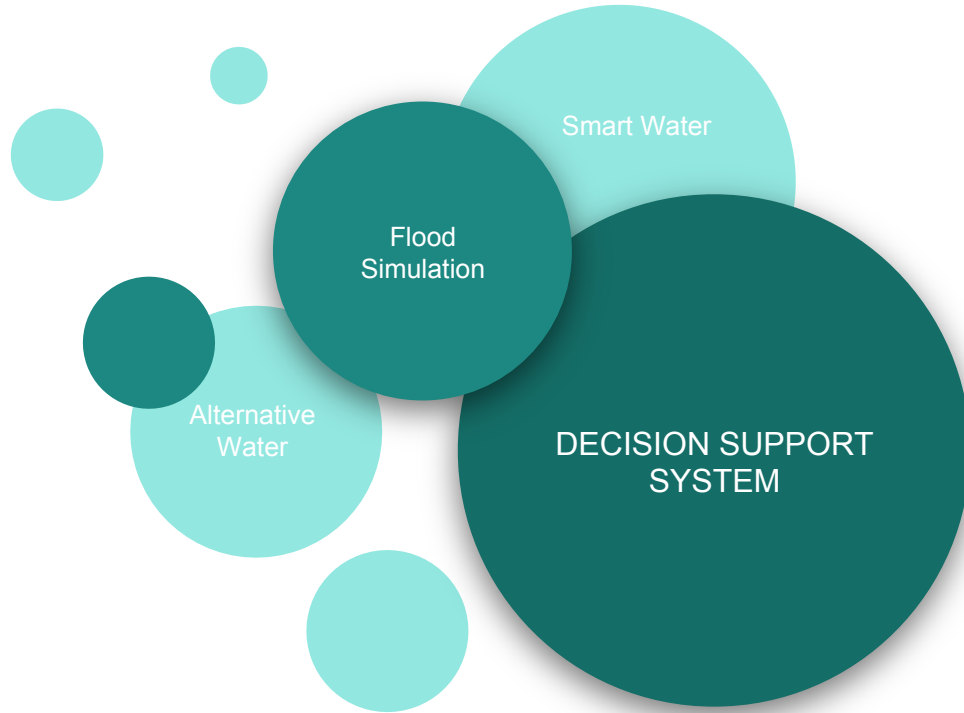
Execute Green infrastructures such as Eco-DRR interventions
Act as a buffer in case of flooding and boost groundwater recharge

PHASE 3 Influence City Development Plan

PHASE 4 Green Infrastructure

PHASE 5 Maintenance of the system

CONTEXTUAL



Smart Water

Flood
Simulation

Alternative
Water

DECISION SUPPORT
SYSTEM

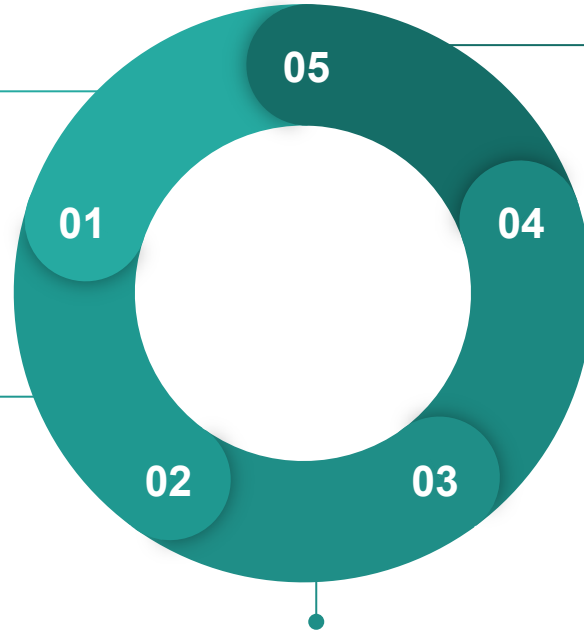
Parameters

Cross Sectoral Parameters

Services
Transport
Population
Water Stress Mapping

Water Supply and Sanitation

Seasonal Water Supply Demand Trend
Wastewater data
Stormwater Drainage Mapping



Climate

Rainfall | Rainfall Trend Analysis
Temperature | Evapotranspiration

Environment

Physical | Elevation and Topography
LULC
Natural Resource

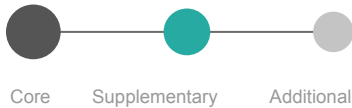
Mapping

Water | Water Resource Mapping
Ground Water

Assessment

Alternate Water Mapping

Water related Disasters | Flood Mapping and Zonation
Other Disasters



PARAMETERS

Toolkit Outcomes

ULB INTERFACE

Dynamic Water Status

Water Pipe Network

Water Stress

Water Source Mapping

Revive Model: Ideal locations, RWH Capacity,
Urban Sprawl, GI

Water Supply Demand Trend Analysis

Weather Trend Analysis

Water Quality Mapping

Wastewater Treatment Efficiency

Flood Warning System

Flood Modelling

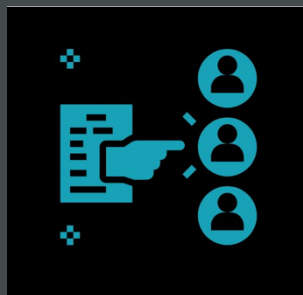
Change in Land Use

ULB + CITIZEN INTERFACE

Beneficiaries & Benefits

URBAN LOCAL BODIES

- Decision Support System → Environmental Sensitive Urban Planning and Water Management
- Mapping and Monitoring Water Resources → Water Conservation, Monitor Distribution of Water and Identify Black Spots
- Predictive Flood Modelling → Provide ULBs a head start in Mitigation Procedures for Flooding
- Assessment of Land Use and Land Cover → Estimating the shrink in Blue and Green Spaces



CITIZENS

- Flood Warning System → Enable citizens to find out potential flood zones in the city as per the severity
- Incident Reporting System → Will enable citizens to geotag locations of incidents
- Water Harvesting Calculation Tool → Enables citizens to calculate Amount and Total Area for Potential Water Harvesting
- Citizens Awareness and Involvement → Water conservation, Hygienic water use, Preservation of ecosystems

Extended Benefits



Potential Integration of Smart Water and Water Quality Mapping



Roadmap to ECO-DRR initiatives



Real time monitoring of Floods



Revival and Monitoring of Traditional Water Systems



Water Index and facilitation of performance comparisons

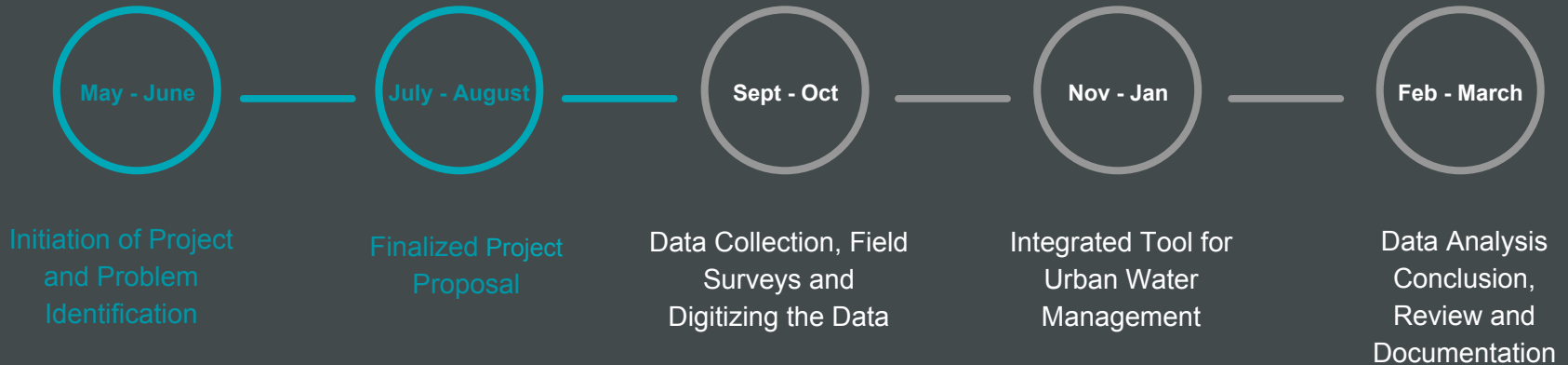


Climate Resilience: Adaptation & Mitigation benefits (Water Source Protection, Water Use Reduction and Mitigation towards Greenhouse Gasses)

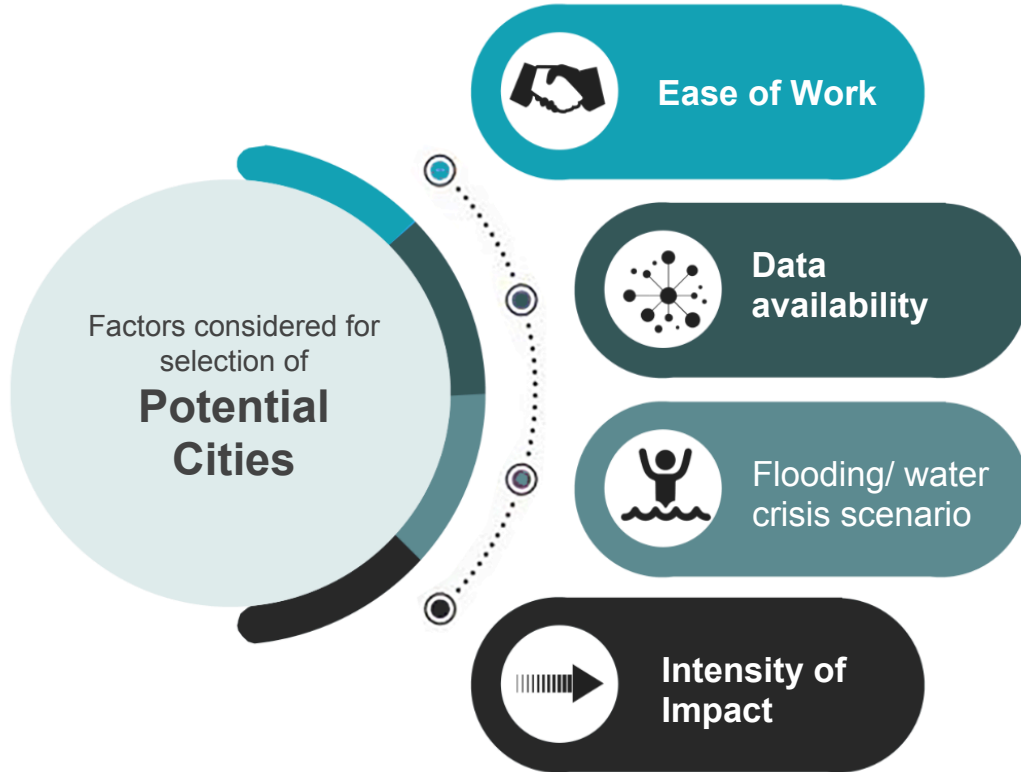


Knowledge Bank for sharing Best Practices

Project Timeline



City Selection and Potential Cities



Vadodara

Bengaluru

Surat

Mangaluru

Chandigarh

Vijayawada

Varanasi

Mysore

Coimbatore

Pune

Tiruchirappalli

Jaipur

Stakeholders



Smart City
Special
Purpose
Vehicle

Government
Agencies

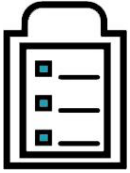
Private
Companies

NGOs

Educational/
Research
Institutions

Public

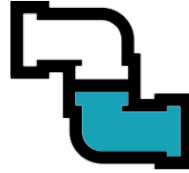
Expected Challenges



Data Collection



Lack of Availability of
GIS data



Lack of Physical Infrastructure



Technology

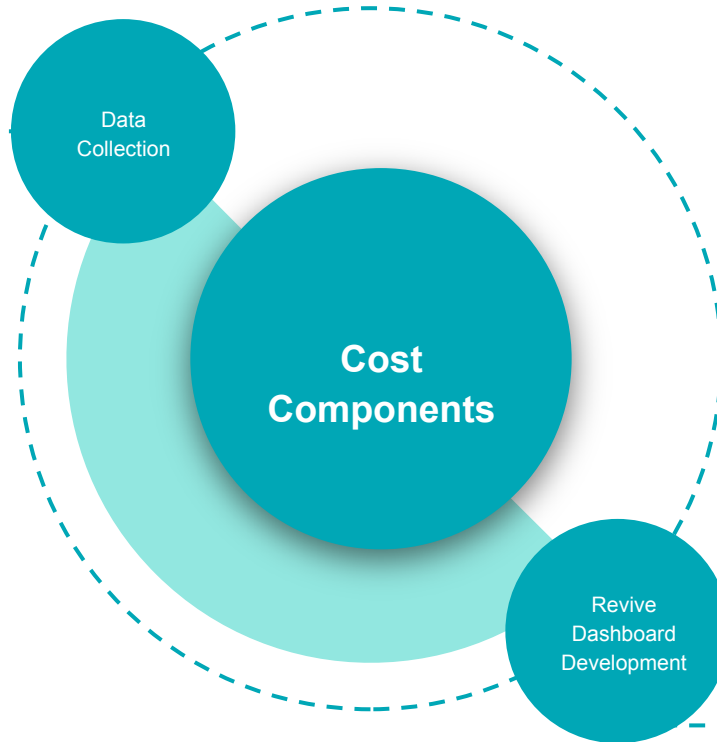


Administration Incoordination



Lack of Stormwater Network

Cost Components



- Digital Elevation Model
- Rainfall Data
- Land Use Land Cover
- Soil Map
- Water Resource Mapping
- Alternate Water Mapping
- Stormwater Drainage Mapping

- Dashboard Requirement
 - Admin dashboard
 - User dashboard
 - Public Feedback
- IT Infrastructure
 - Server/ Cloud
 - Database

TEAM
revive

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