



*A better quality of life for all  
in an urbanizing world*







# Agenda

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**01** Challenges & Objectives

**02** Water Sensitive Urban Design  
(WSUD)

**03** Proposed Solutions

**04** Project Timeline

**05** Q&A

# Challenges & Objectives

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# Problem Statement

The Beirut Port explosions on the 4th of August 2020 caused devastating damages to both lives and built assets especially in nearby areas such as **Rmeil, Medawar and Saifi**. In addition to the blast, pre-existing challenges such as **political, financial, social and environmental** continue to impact access to **quality public/green spaces** as well as **adequate access to water and sanitation** as highlighted in **SDGs 6 and 11**.

The lack of green spaces in urban settings also contributes to increasing heat Island effect and limits possibilities for drainage. Therefore, swift action with long term value creation should be taken.



Beirut Port  
Explosion



Continued  
Gentrification



Poor  
Governance



Endangered  
Heritage



Lack of Public Space

Beirut existing:  
0.9 sqm/person  
WHO recommendation:  
9 sqm/person



Poor Water  
Drainage



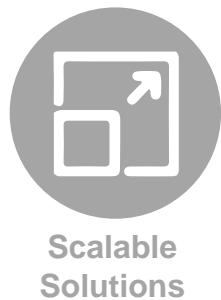
Increased Heat  
Island Effect

# Direct Impact Area

Lebanon



# Project Objectives & Focus Area





# Socio-Economic & Cultural Considerations



- Earlier post-disaster responses lacked community engagement, or even a people-focus framework.
- The proposed solutions should be supported by the end-users.
- Stakeholders needed for implementation should support the proposed solutions.
- Different interests (e.g. cars vs pedestrians, bar-owners vs. residents/pavement users).
- The design should include socio-economic considerations such as:
  - Can everyone use it?
  - Does it fit with people's behaviour?
  - Will it be used the way it was imagined? (e.g. are green spaces not used for trash disposal? And how can this be prevented?)



# Project: Community-driven water sensitive urban design guidelines for the affected areas of the Beirut Port blast

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**Overview:** Lebanon has been already facing many challenges namely political, financial, social and environmental. This project aims at offering a Building Back Better (BBB) approach to post-disaster recovery. The main objective is to give guidance on how to create climate resilient, safe and inclusive communal spaces for Beirut's most affected neighbourhoods of the August blast.

# Water Sensitive Urban Design (WSUD)

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# The Big Idea

**Water Sensitive Urban Design (WSUD)** is a multi-disciplinary planning approach, which aims at integrating effective water management within the boundaries of the urban built environment, considering all aspects of water cycles.





# General Guiding Principles

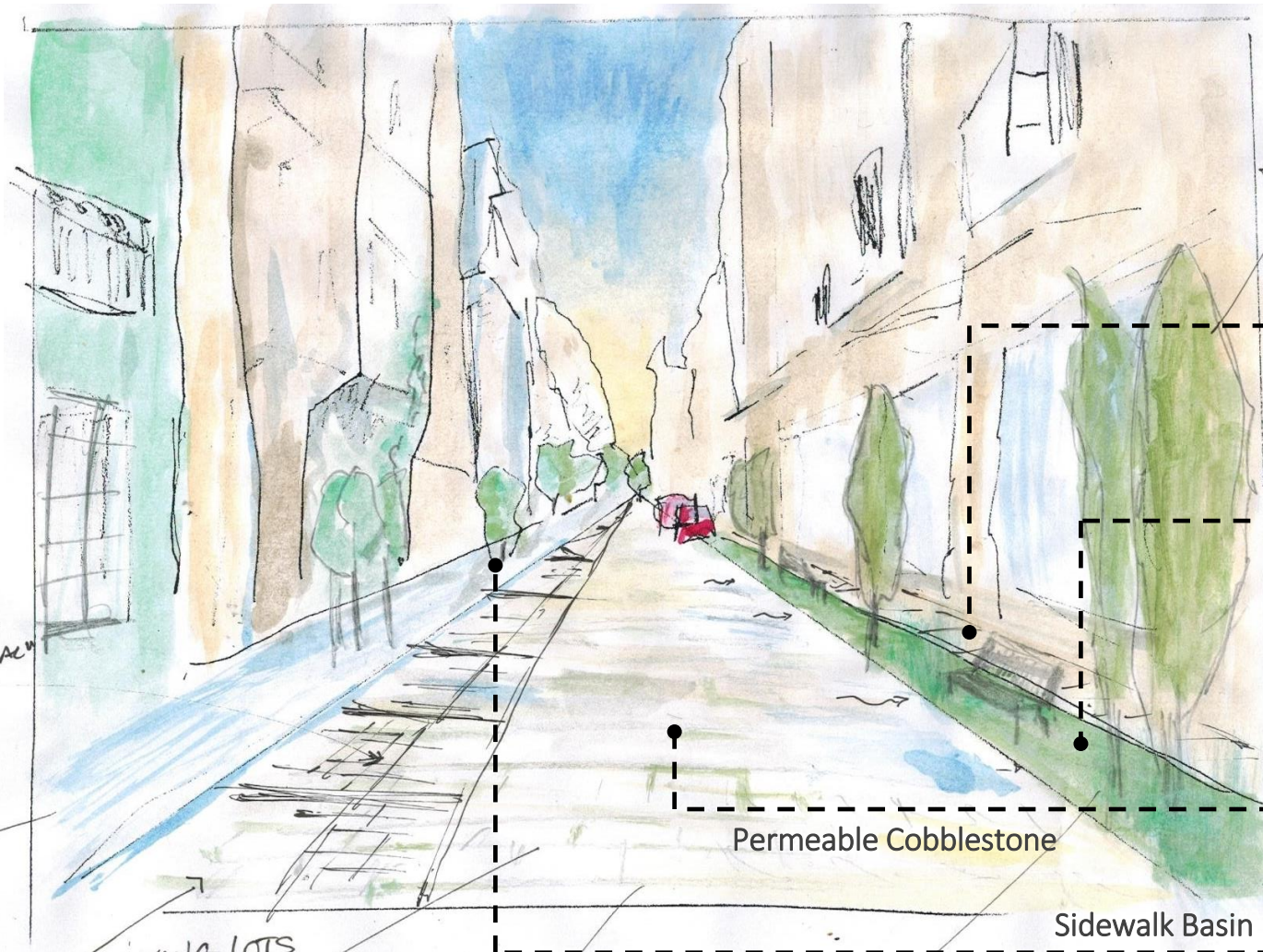


- Promoting conservation of water resources through reuse and system efficiency (distribution and disposal)
- Restoring the urban water balance by maximizing the reuse of storm water and recycled water
- Protecting and enhancing water bodies and their quality within urban environments
- Sustainable storm water management focusing on increasing city retention and adsorption.
- Integrating water into the landscape to enhance urban design as well as social, visual, cultural and ecological values; and
- Easy and cost-effective implementation of WSUD allowing for widespread application.

- define the scale to optimize the solution -

# Proposed Solutions

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PARKING LOT  
MADE IN MORE  
"OPEN MATERIAL"

Road  
can be  
further  
extended?

PARKING LOTS

ONE WAY  
STREET

Paved surface "open"

Green  
with  
little  
Baskette  
some parking lots

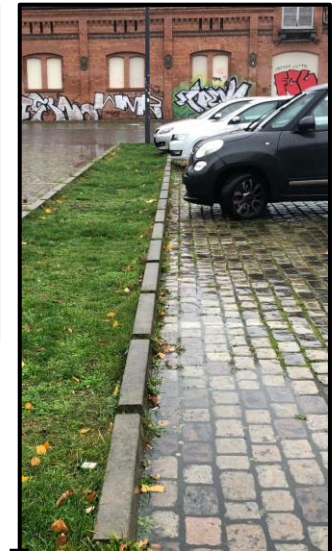
Permeable Cobblestone

Sidewalk Basin

more  
trees!



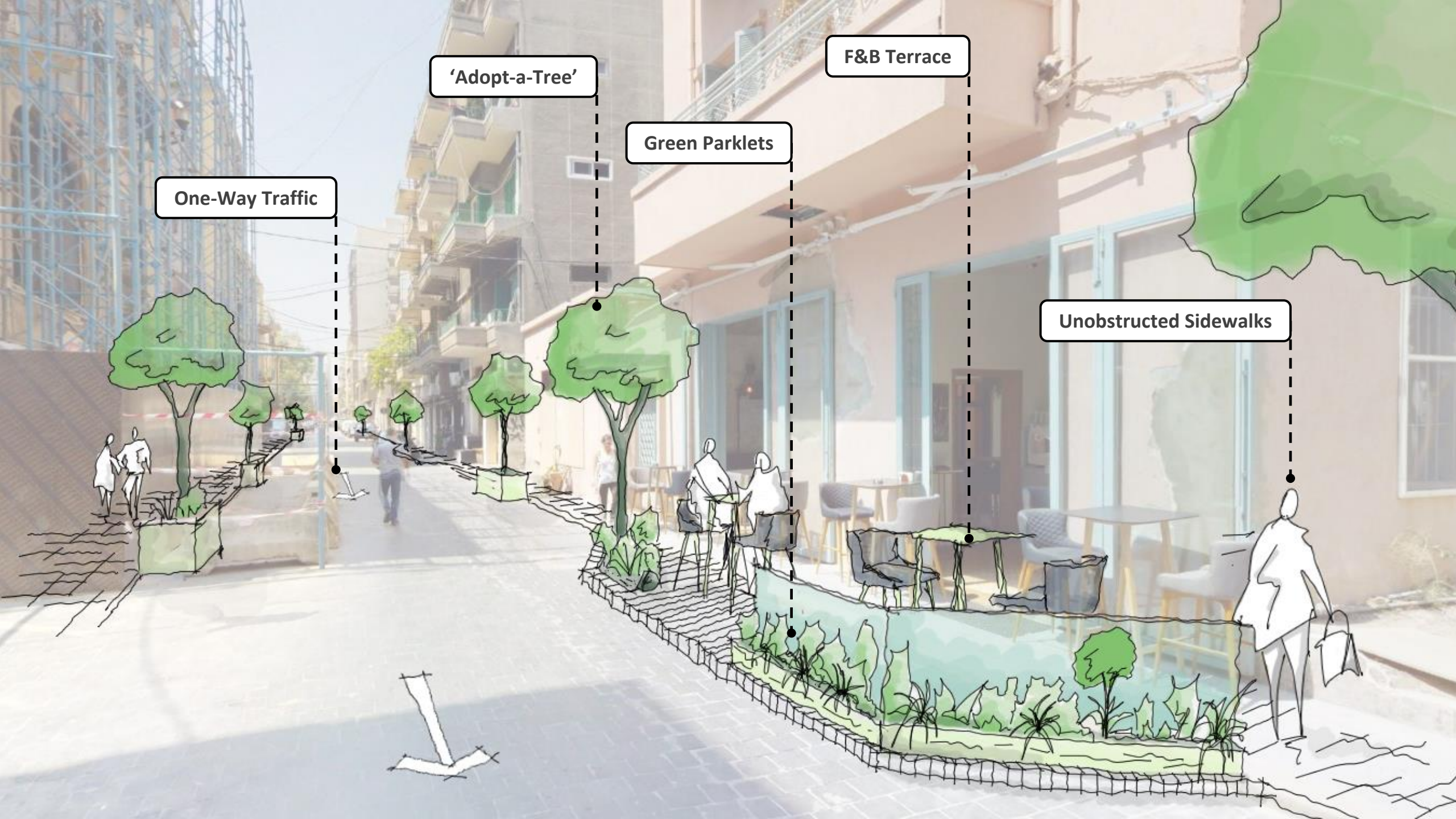
Pedestrian-Friendly  
Gutters



Green Patches







One-Way Traffic

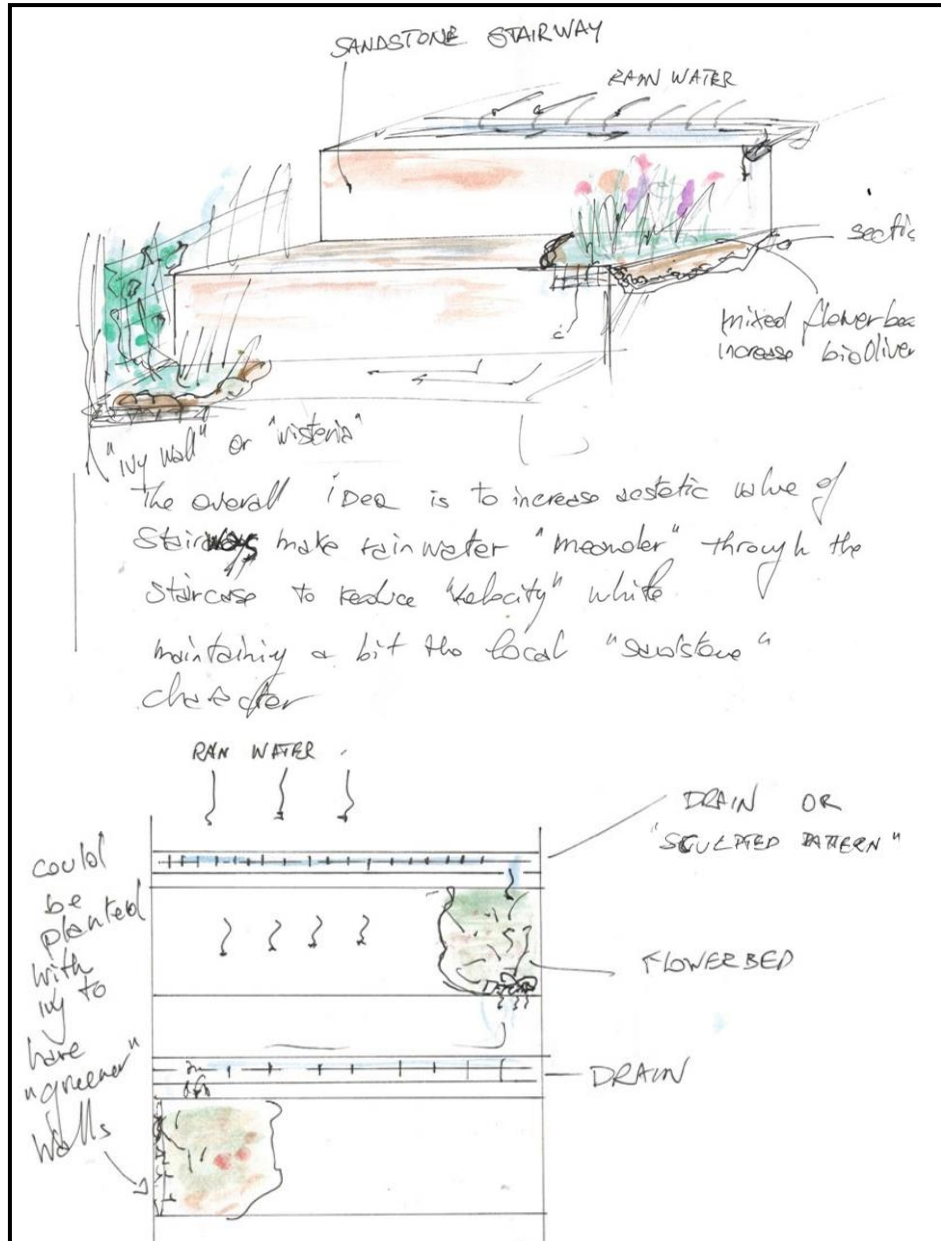
'Adopt-a-Tree'

Green Parklets

F&B Terrace

Unobstructed Sidewalks





Detailed Sketch



St. Nicholas Stairs Sketch



Water Features/Channels

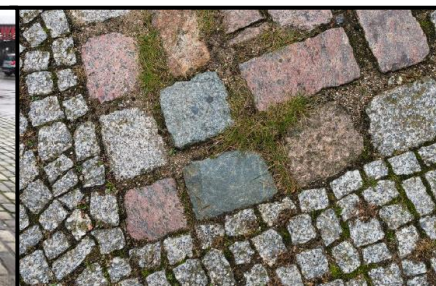
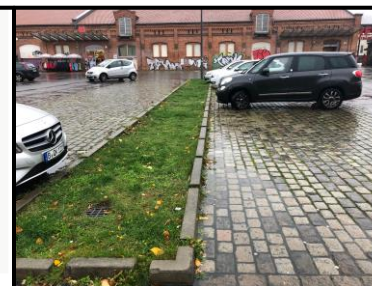
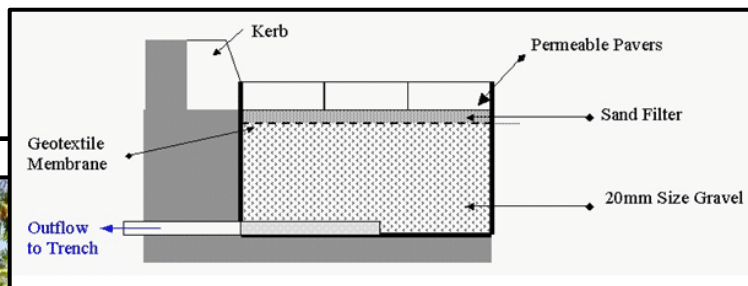


Identity / Communal Space

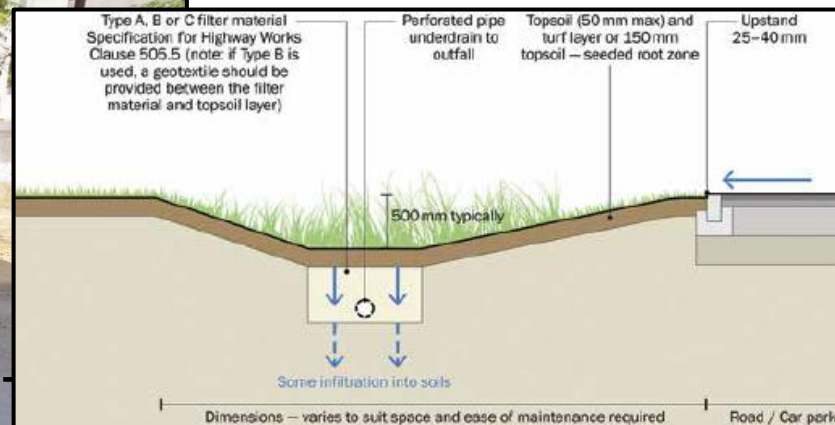


Landscape Basins/Seats





Permeable Cobblestone



Swales

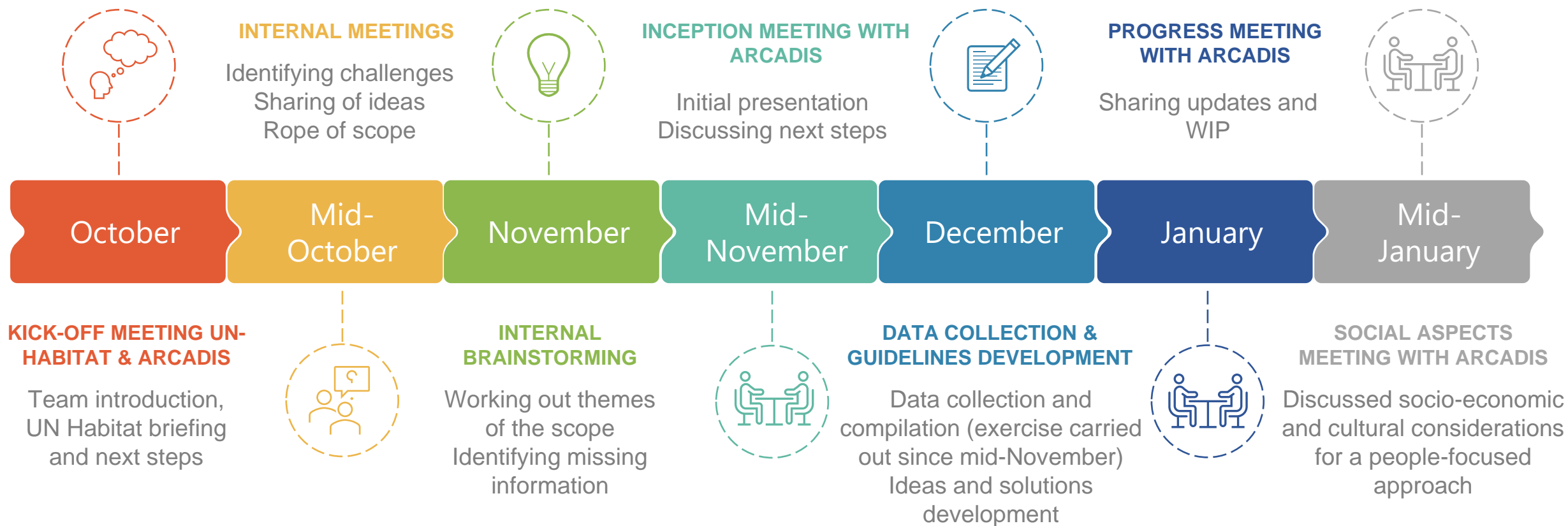


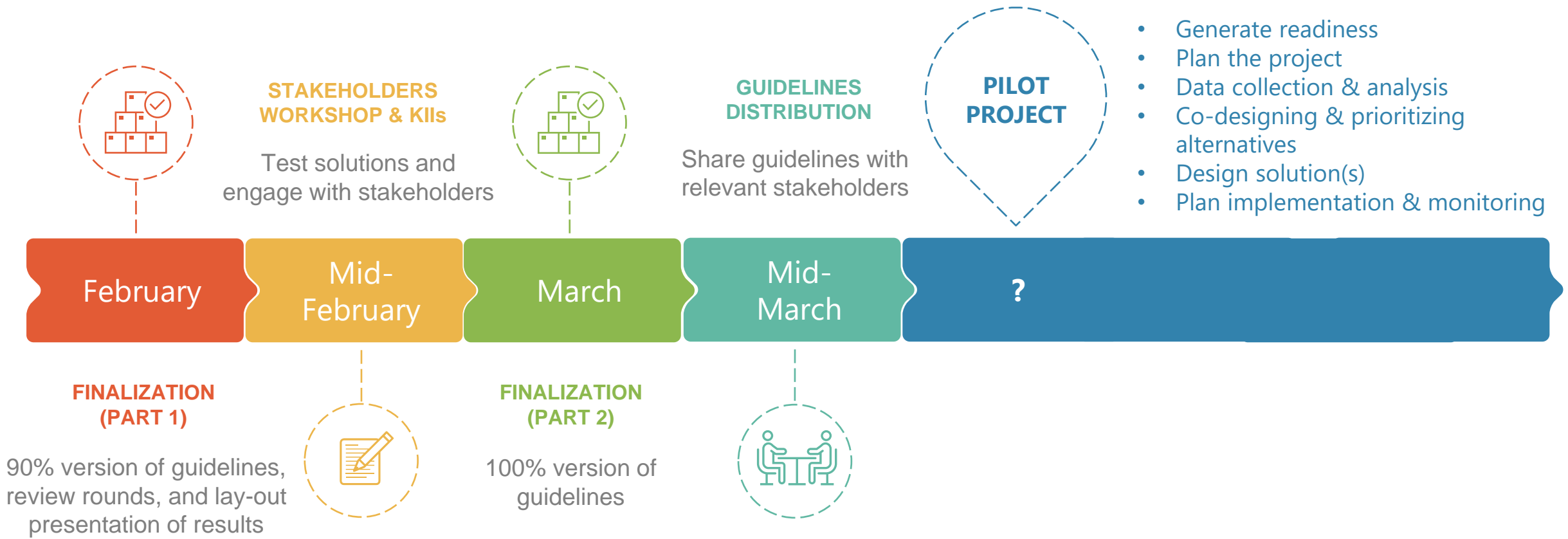
Underground Water Detention Tanks



# Project Timeline

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# Q&A



# Thank you

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FOR A BETTER URBAN FUTURE



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