

Open Cities

World Bank Group

**Scaling up Open Data for Disaster &
Climate Resilience**



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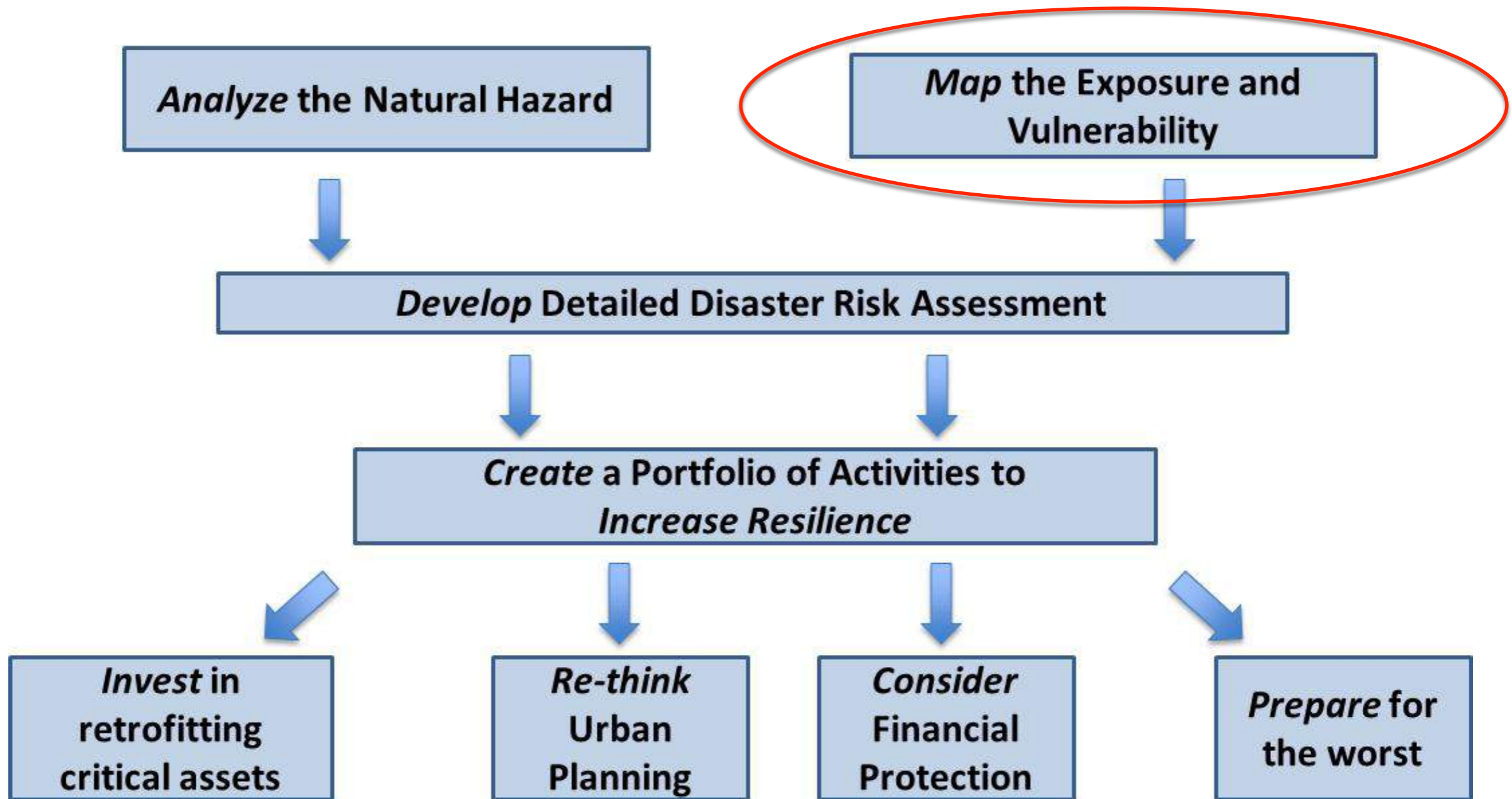
Overview

- Open Cities is a platform to collect building characteristics in order to identify opportunities for investment
- Exposure collection combined with hazard analysis provides risk assessment

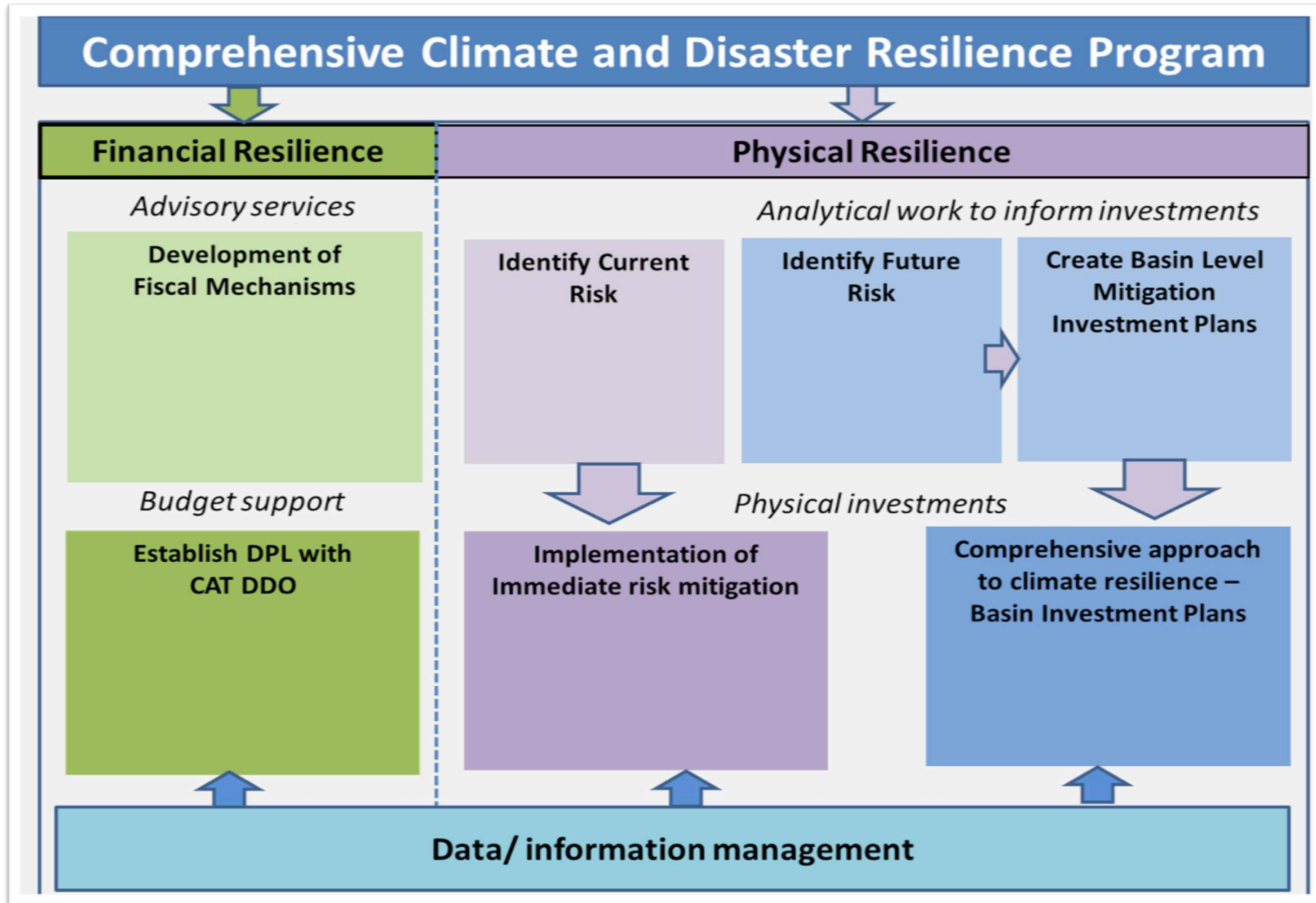
Building level precision required to visualize impact of risk reduction investments for decision makers



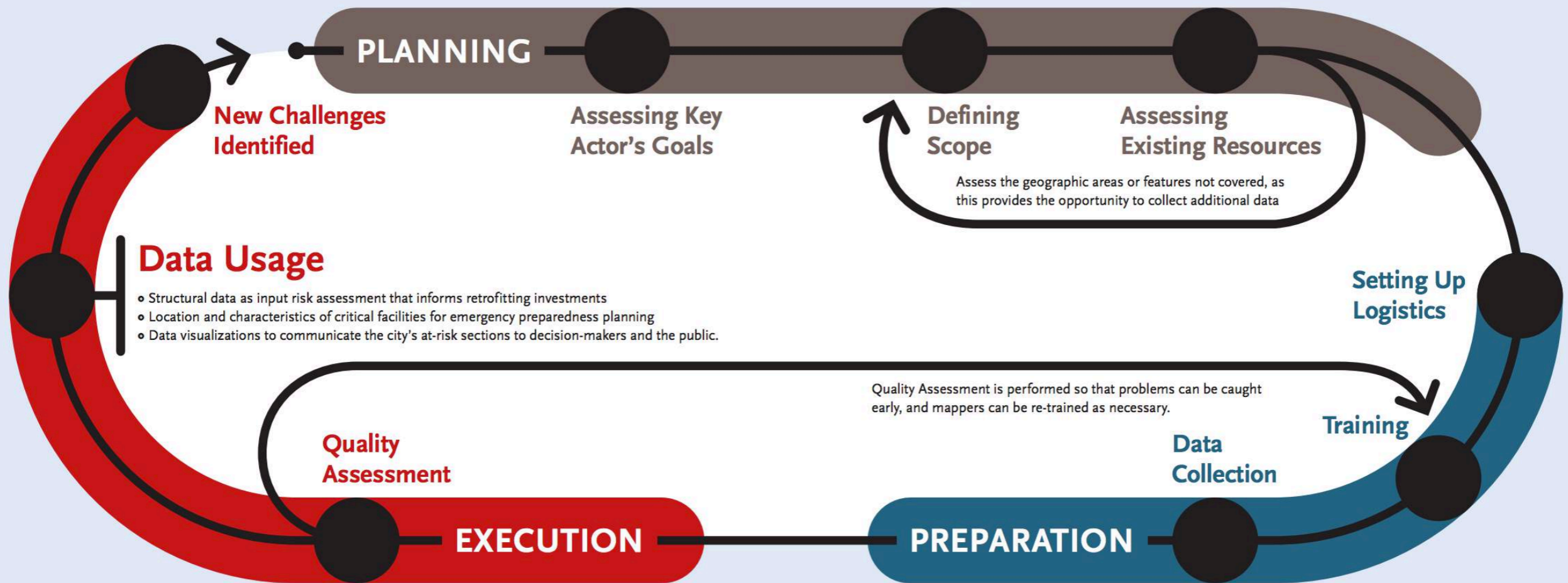
Overview



Open Cities Sri Lanka Case



Open Cities Manual – Cycle



Open Cities – Case Studies

- Planning - Key Actor's Goal



Open Cities – Case Studies

- Planning – Scope



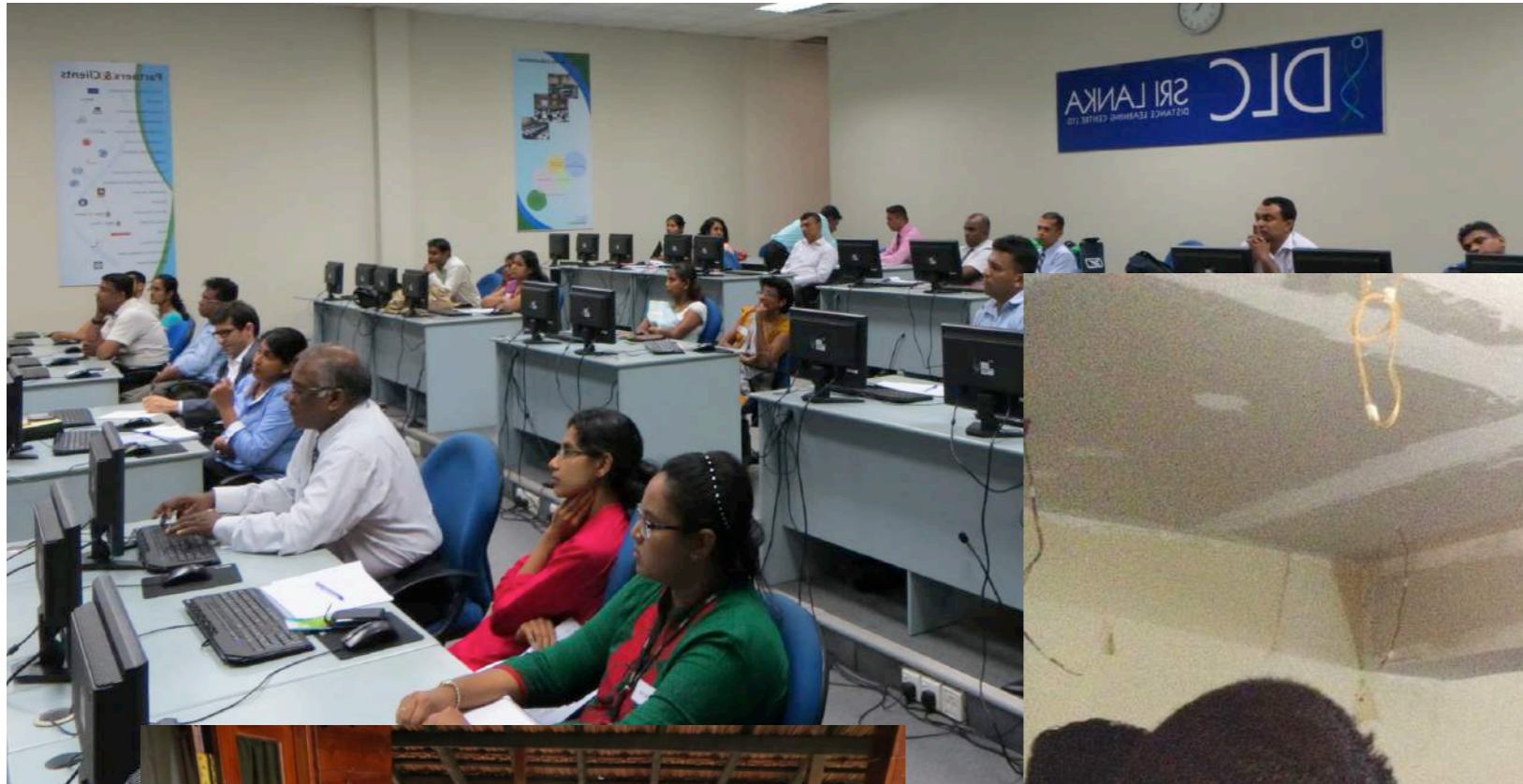
Open Cities – Case Studies

- Planning



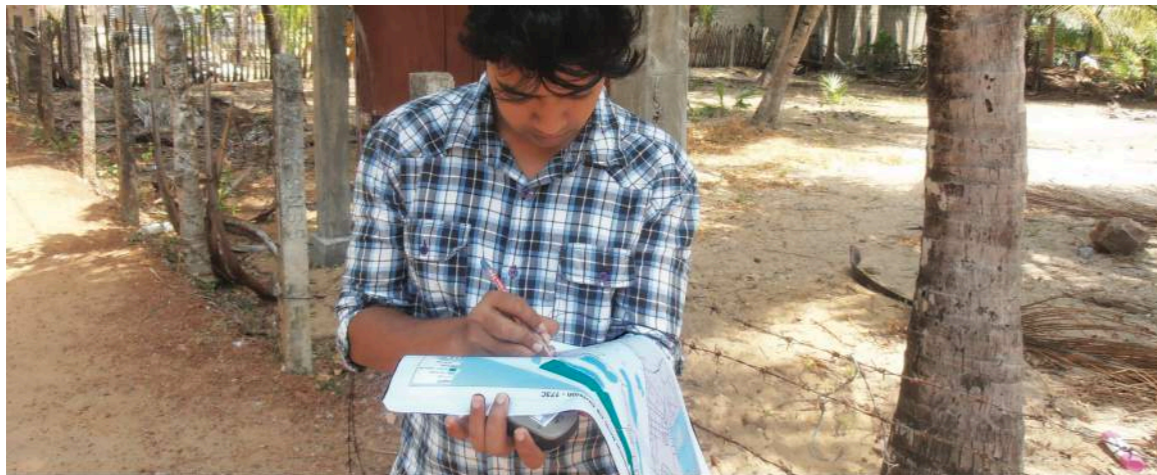
Open Cities – Case Studies

- Training



Open Cities – Case Studies

- Execution



Building Characteristics Survey

Ds Division Name: Manmunai North

GN name:

1. General information:

1.1 References

Map Building ID: _____ House Address Number (if visible): _____ House number per voters list: _____

1.2 Building usage

Residential	<input type="checkbox"/>	School	<input type="checkbox"/>
Commercial	<input type="checkbox"/>	Hospital	<input type="checkbox"/>
Industrial	<input type="checkbox"/>	Religious	<input type="checkbox"/>
Utility	<input type="checkbox"/>	Government	<input type="checkbox"/>

Other specify:

1.3 Number of Stories

1	<input type="checkbox"/>	4	<input type="checkbox"/>
2	<input type="checkbox"/>	5	<input type="checkbox"/>
3	<input type="checkbox"/>	If more:	<input type="checkbox"/>

1.4 Type of usage (do not collect for regular houses):

1.5 Name of the building (do not collect for regular houses):

2. Building characteristics:

2.1 Check only if applicable:

Roof without wall (hut)	<input type="checkbox"/>	Under construction	<input type="checkbox"/>	Abandoned	<input type="checkbox"/>
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2.2 Principal material of construction of the walls:

Plastered	<input type="checkbox"/>	Tin Sheet	<input type="checkbox"/>
Exposed Brick	<input type="checkbox"/>	Clay wall / Mud	<input type="checkbox"/>
Exposed Cement Block	<input type="checkbox"/>	Cadian / Palmyrah	<input type="checkbox"/>

Other specify: ...

2.3 Foundation height:

Normal (1 foot or less)	<input type="checkbox"/>	Knee high (1.5 feet)	<input type="checkbox"/>	Waist high (3 feet)	<input type="checkbox"/>	Higher than 3 feet	<input type="checkbox"/>
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3. Principal material of construction of the roof:

Clay/ Ciment Tile	<input type="checkbox"/>	Permanent Zink Sheet	<input type="checkbox"/>
Asbestos	<input type="checkbox"/>	Tin Sheet/Temporary Zink	<input type="checkbox"/>
Concrete slab	<input type="checkbox"/>	Cadian/Palmyrah/Straw	<input type="checkbox"/>

Other specify: ...

If applicable, number of faces for the main roof: _____

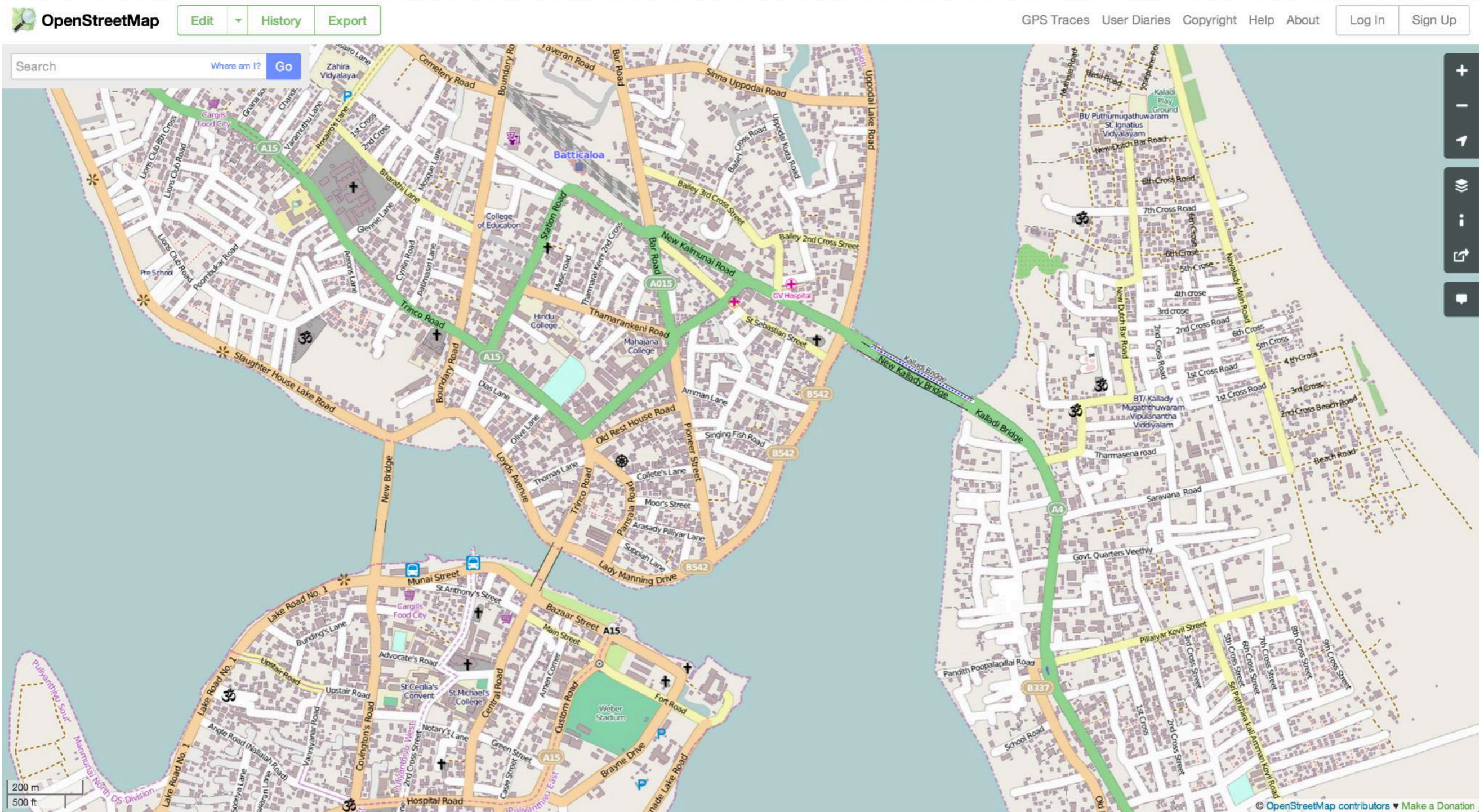
Open Cities – Case Studies

- Execution



Open Cities – Case Studies

- Output



Open Cities Sri Lanka Case

- Output



Open Cities – Case Studies

- Output

OPEN CITIES in Kathmandu

[All Cities](#) | [About](#)

Educational Facilities Critical Educational Sector Infrastructure

As detailed in the context of **Kathmandu**, one aspect of the the Open Cities Project engagement is the collection of asset and exposure data in urban areas in order to create a robust asset inventory. The Open Cities Project collects data through open and participatory methods in partnership with local government agencies, universities, technical communities, and the private sector. Open Cities Kathmandu has to date mapped over 100,000 buildings and collected exposure data for 2256 educational and 350 health facilities within Kathmandu Valley.

[Download the data](#)

Structural Survey	
Number of schools surveyed	2,256
Number of health facilities surveyed	350
Total number of individual buildings surveyed	7,353
General Mapping	
Buildings digitized	126,105
Number of features mapped e.g. restaurant, shop, temple, bridge, park	131,768
Road network mapped	3,716 km
Community Building	
Number of mapping parties	26
Number of introductory presentations	27
Total number of attendees	2,252

- Educational buildings surveyed during Open Cities activities (see the attribute collected here)
- School areas

Open Cities – Case Studies

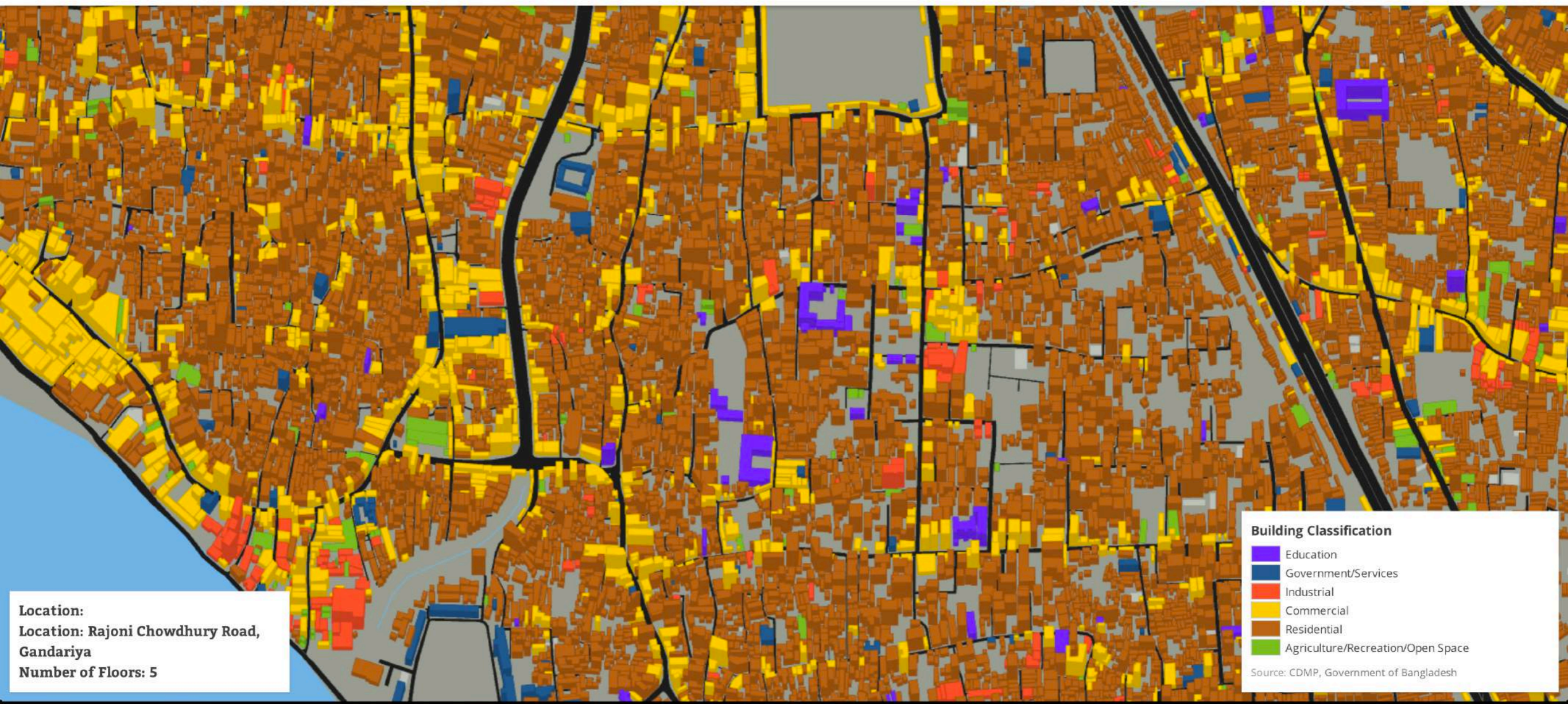
- Output

OPEN CITIES in Dhaka

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Building Use 3D Dhaka buildings showing primary building use

The 3D model of the city of Dhaka allows planners to visualize the location of various buildings based on their primary use: education, government/services, industrial, commercial, residential, or agricultural / open space. Such building data can assist in the design of new zoning regulations, the allocation of open space, the construction of industrial parks, and new capital improvement projects in locations that promote equitable economic development.



Location:
Location: Rajoni Chowdhury Road,
Gandariya
Number of Floors: 5

Case Comparison

Kathmandu Model

- Volunteers and civil society host mapping parties, reach out to universities and build momentum
- In six months, over 2,500 schools, 300 health centers and 200 public buildings
- Mapping activities continue and community still growing after project conclusion

Sri Lanka Model

- Government trains their junior staff to collect exposure and building attributes
- In 2 months, over 30,000 buildings mapped with strong government ownership
- Mapping activities ceased at the end of the project
- Enabled data sharing platform through Ministry of ICT



Open Cities Manual – Detailed ToC

A Recipe guide for non-technical managers

- Introduction
- Project Design and Preparation
 - Key Partnerships
 - Defining Scope of Work
 - Building the Core Team
 - Assessing Existing Mapping Resources



Open Cities Manual – Detailed ToC

A Recipe guide for non-technical managers

- Getting Started
- Implementation Supervision
 - Collecting the Data
 - Common Challenges
 - Quality Control
 - Reporting
- Lessons Learned



Open Cities Manual – Detailed ToC

A Recipe guide for non-technical managers

- Appendices
 - Data Model Design
 - Sample Survey Form
 - Sample Project Report
 - Sample ToRs
 - Case Study: Kathmandu
 - Case Study: Sri Lanka
 - Case Study: Jakarta
 - Case Study: Haiti

