

AN **IN** FORMAL FRAME

INCORPORATING SOCIAL & ECONOMIC PRODUCTION OF SPACE IN REDEVELOPMENT OF INFORMAL SETTLEMENTS

Case study: Dharavi, Mumbai, India

Kritika Sha

Complex Cities | Inclusive Cities | International Planning and Developing Regions

04 July 2017



OUTLINE

PROJECT DEFINITION

PROJECT APPROACH

STRATEGIC FRAMEWORK

DESIGN FRAMEWORK

REFLECTION

Latin America &
the Caribbean

13%

Sub-Saharan
Africa

25%

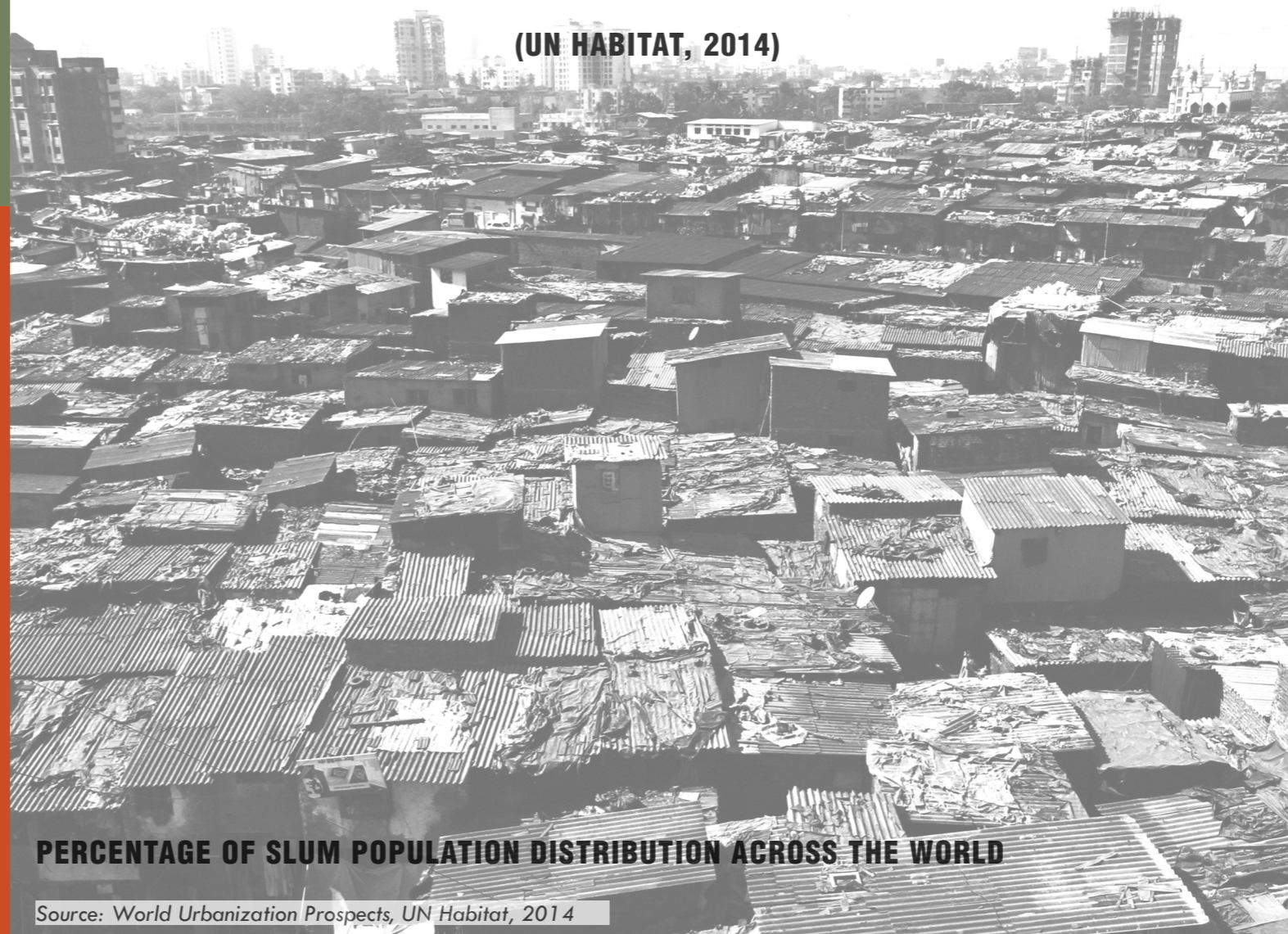
ASIA

61%

**MAJORITY OF THE URBAN SLUM POPULATIONS LIES IN THE
ECONOMIC CENTRE OF GRAVITY -**

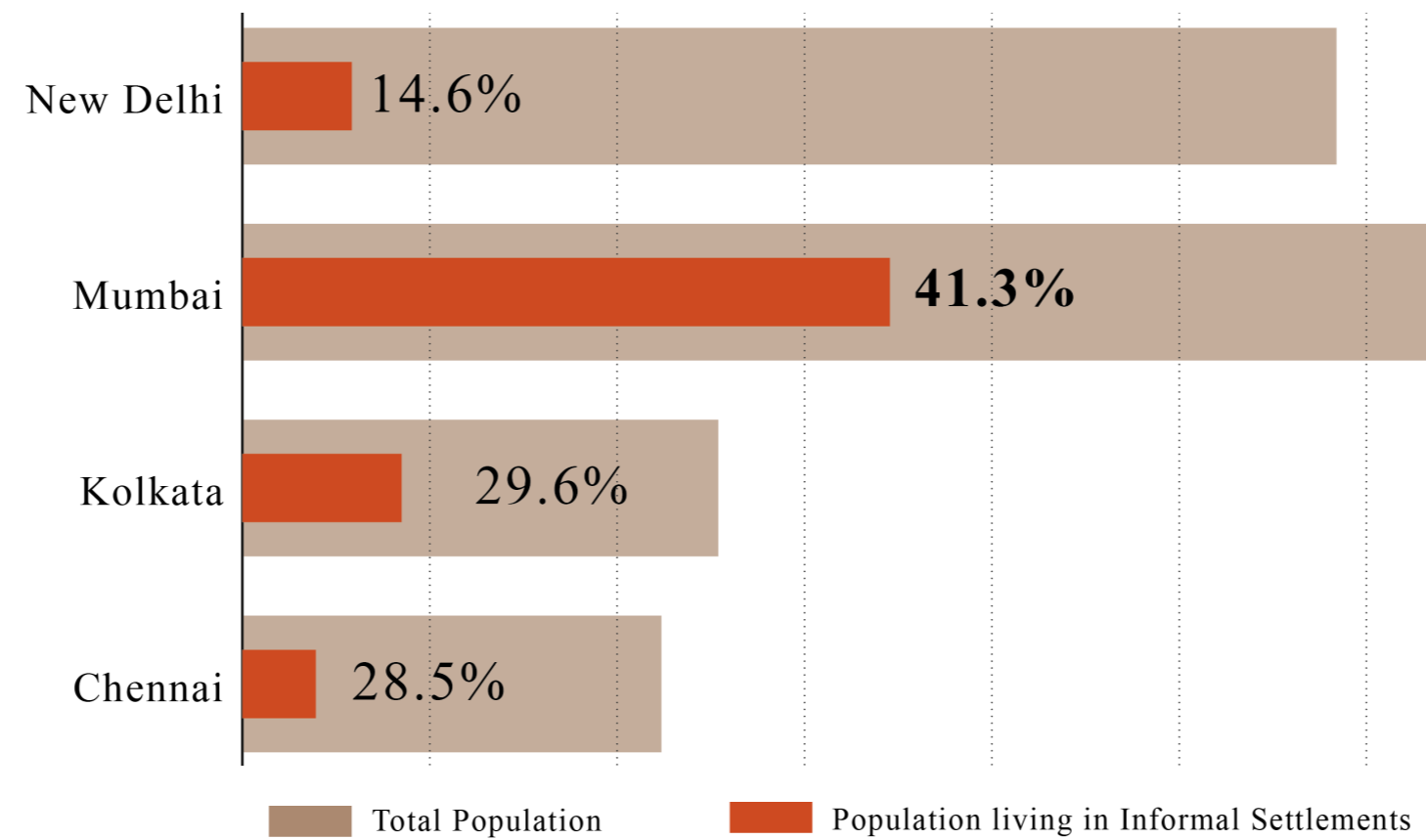
ASIA

(UN HABITAT, 2014)



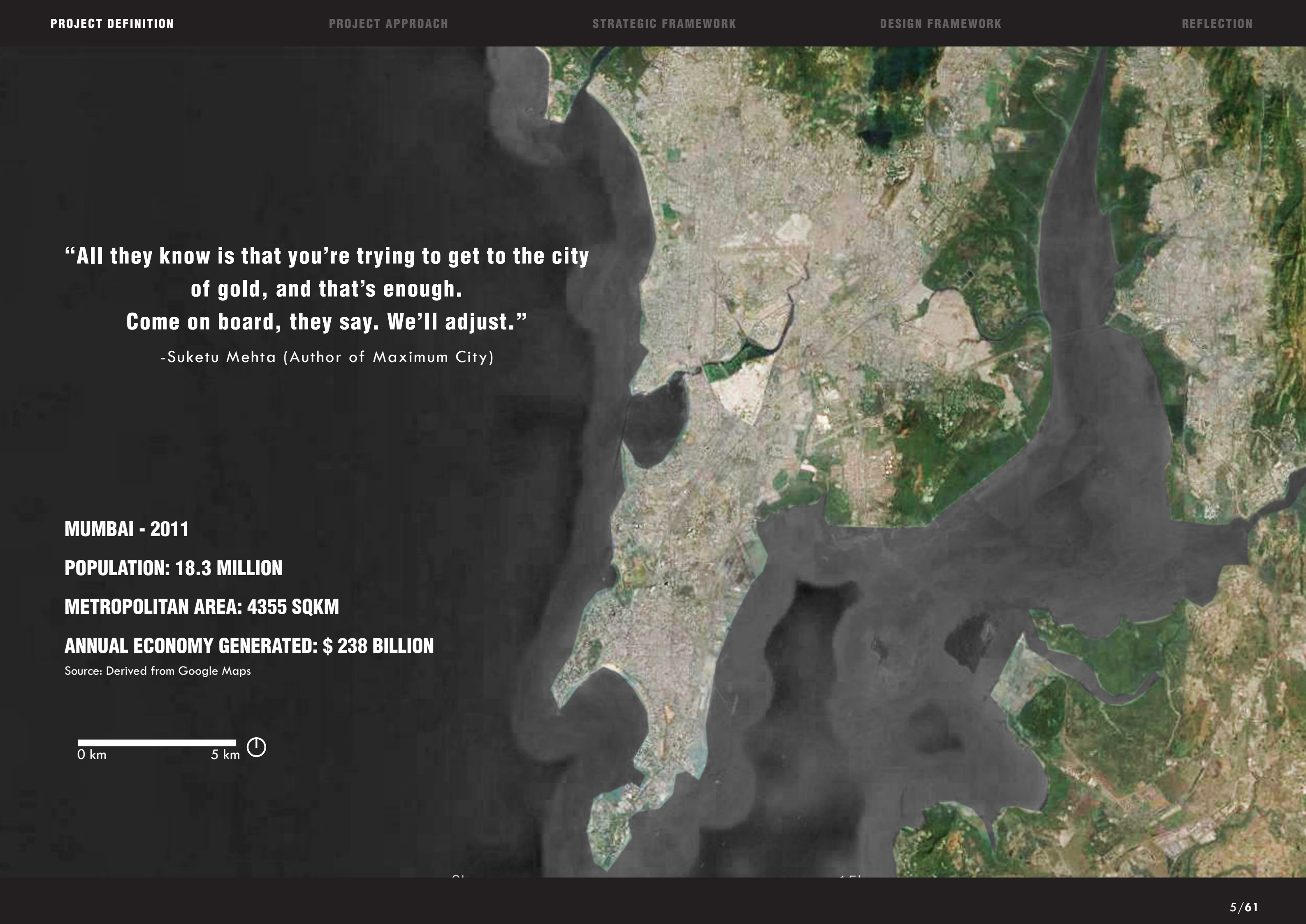
PERCENTAGE OF SLUM POPULATION DISTRIBUTION ACROSS THE WORLD

Source: World Urbanization Prospects, UN Habitat, 2014



Source: Indian Census, 2011

PERCENTAGE POPULATION OF INFORMAL SETTLEMENTS IN INDIAN METROPOLITAN CITIES



**“All they know is that you’re trying to get to the city
of gold, and that’s enough.
Come on board, they say. We’ll adjust.”**

-Suketu Mehta (Author of Maximum City)

MUMBAI - 2011

POPULATION: 18.3 MILLION

METROPOLITAN AREA: 4355 SQKM

ANNUAL ECONOMY GENERATED: \$ 238 BILLION

Source: Derived from Google Maps

0 km 5 km 







DHARAVI - 2011

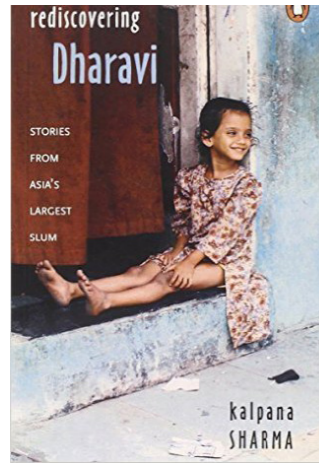
POPULATION: 1 MILLION (APPROX)

METROPOLITAN AREA: 2.39 SQKM

ECONOMY GENERATED: \$ 1 BILLION

Source: Derived from Google Maps

0 km 500 m 



THE BOOKS, MOVIES AND DOCUMENTARIES ON DHARAVI

theguardian
website of the year

Money, power and politics collide in the battle for Mumbai's slums

India
The Observer

A controversial project to bulldoze Dharavi, the giant shanty town that formed the backdrop to Slumdog Millionaire, is reviving the fortunes of extremist parties

Jason Burke in Mumbai

Saturday 5 March 2011 21:58 GMT

f t g+ in G+

This article is 5 years old

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 **The Indian EXPRESS**

Dharavi redevelopment project: Tender terms turn off developers, no bids

Last date to submit bids extended to May 5, officials say no terms, conditions to be changed.

Written by **MANASI PHADKE** | Mumbai | Updated: April 21, 2016 10:26 am



Dharavi slum's decades-old informal economy turnover of \$1 bn plus now threatened by development



REDEVELOPMENT SCHEMES HAVE FAILED TO RESPOND TO THE EXISTING SOCIAL TIES AND ECONOMIC NETWORKS

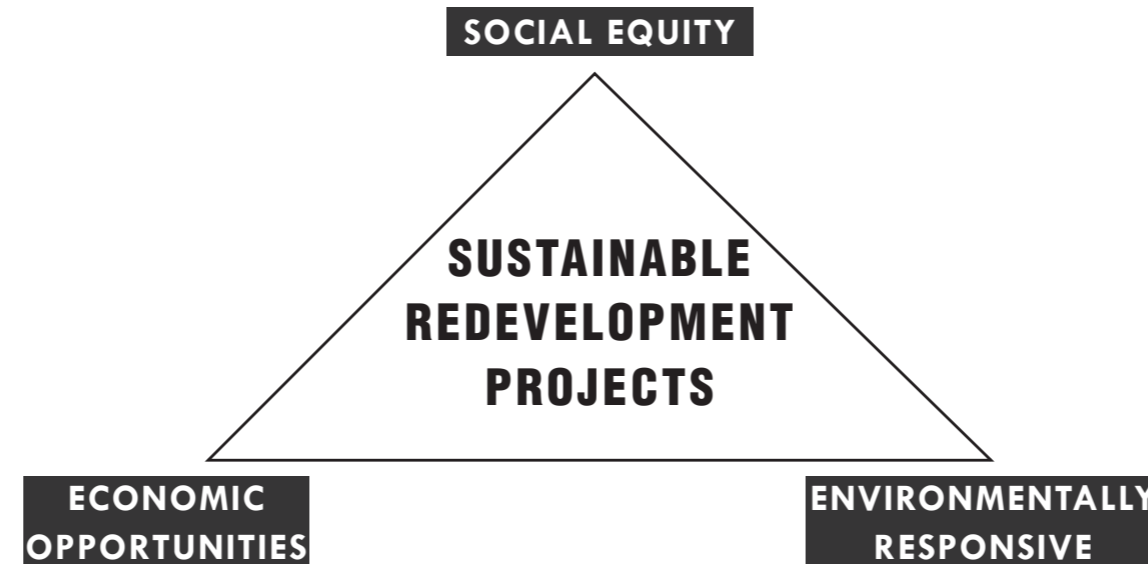


INDUSTRIAL SPACE AND NETWORKS IN COMBINATION FORM THE BASIS OF THE SPACE PRODUCED



A HEAVY RELIANCE ON COMMUNITY LIFE INFLUENCES THE QUALITY OF THE SPACE PRODUCED

PROBLEM STATEMENT



India's number of informal settlements have seen a meteoric rise of 25% in the last decade (Census, 2011), and the pressing need to rehabilitate its citizens is now a more important issue than ever before.

This is accredited mainly to an indifferent attitude of the policy makers, planners and developers towards existing social and economic mode of production of space with its associated values, leading to highly insensitive, unsustainable and unequal redevelopment & upgrading projects.

RESEARCH QUESTION

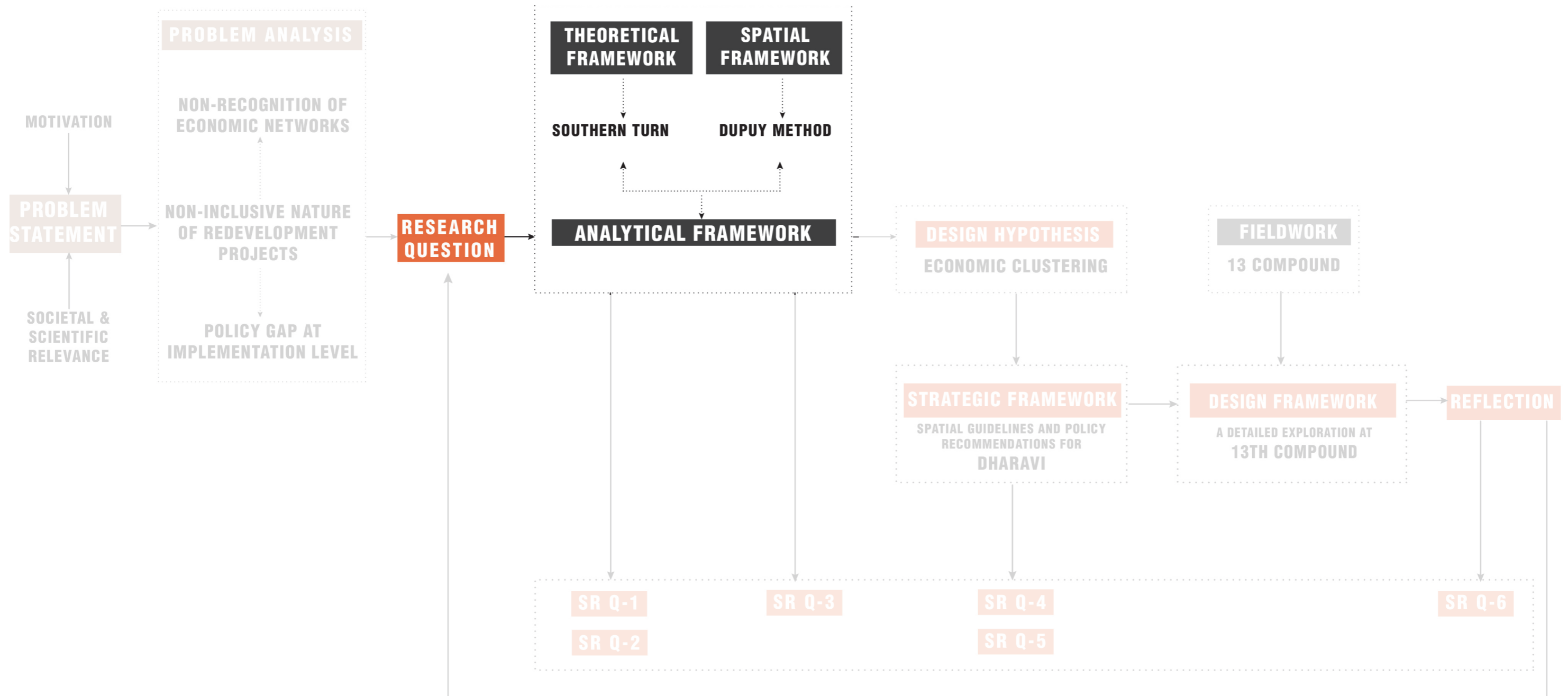
POSSIBLE PRODUCT

METHOD

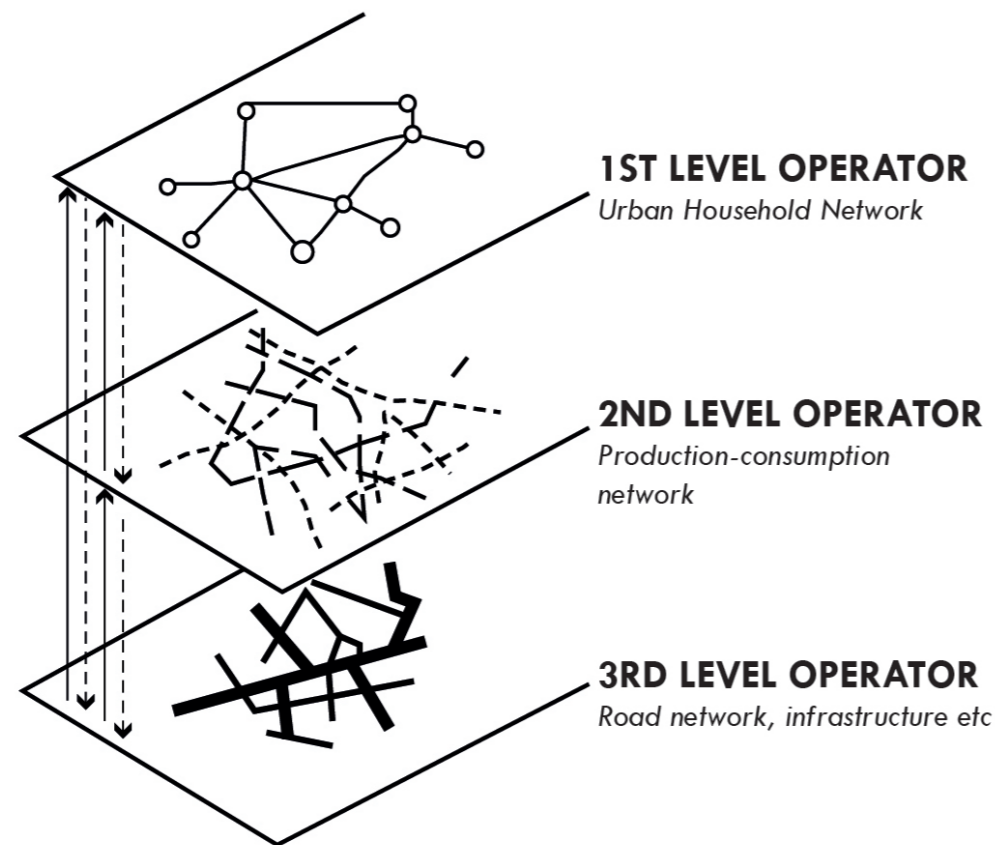
How can a strategic spatial framework incorporating the existing social-economic production of space in informal settlements linking it to the formal city, lead to long term inclusive and sustainable redevelopment projects?

GOAL

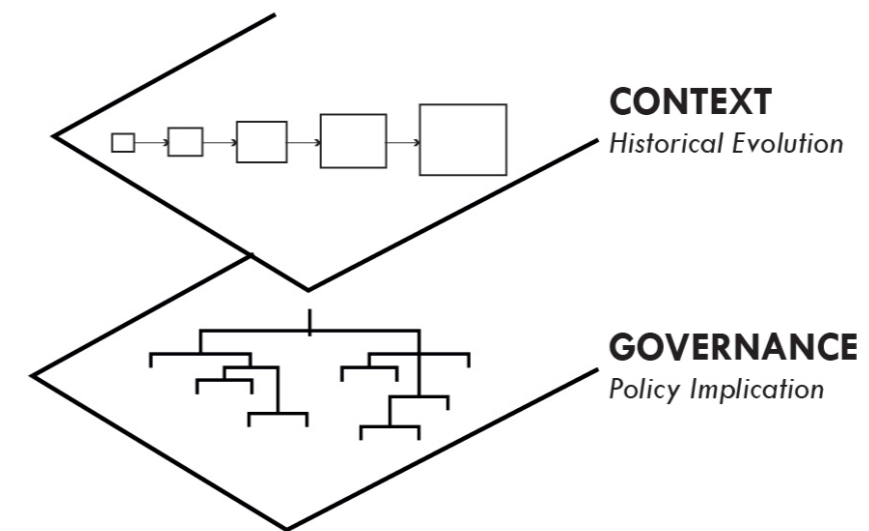
Case study: Dharavi, Mumbai, India



SPATIAL FRAMEWORK



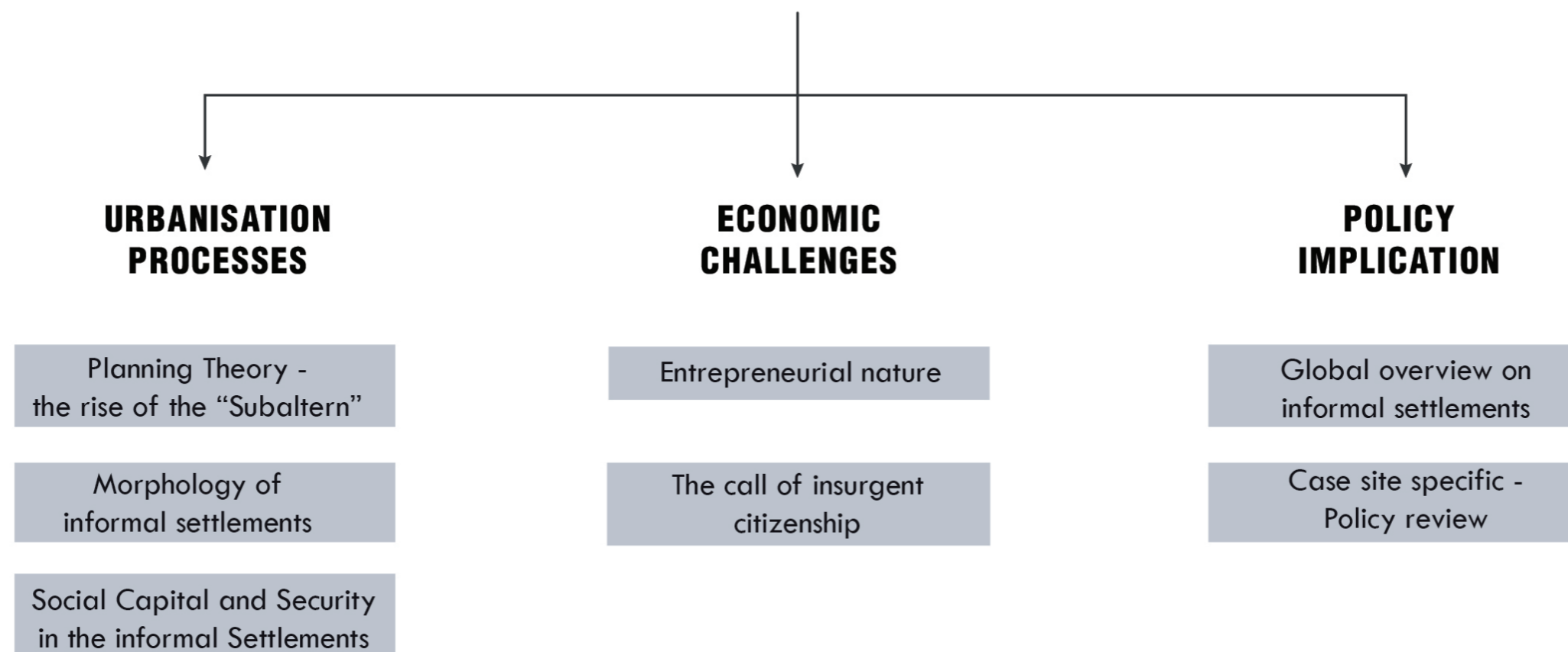
Dupuy Network City Model
 Source: Derived from (Dupuy, G., 2008)



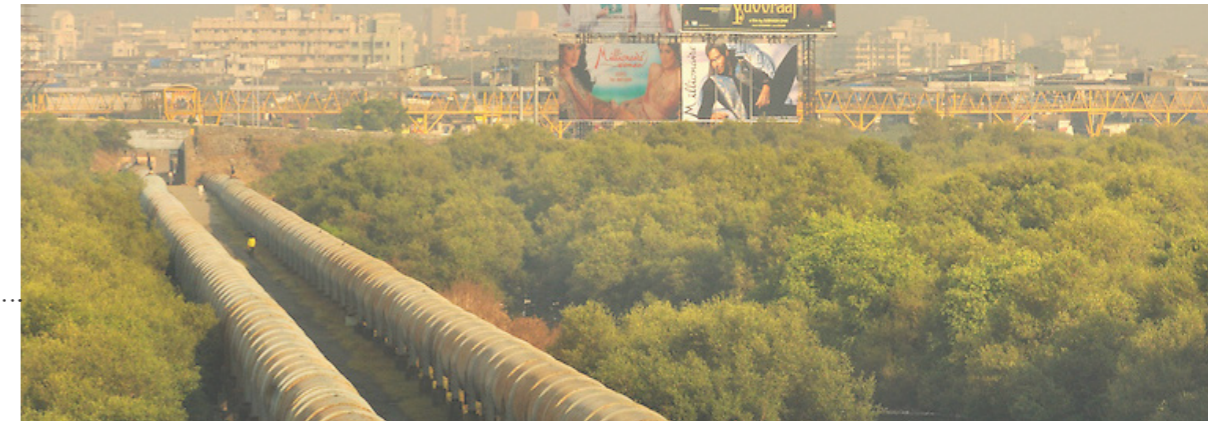
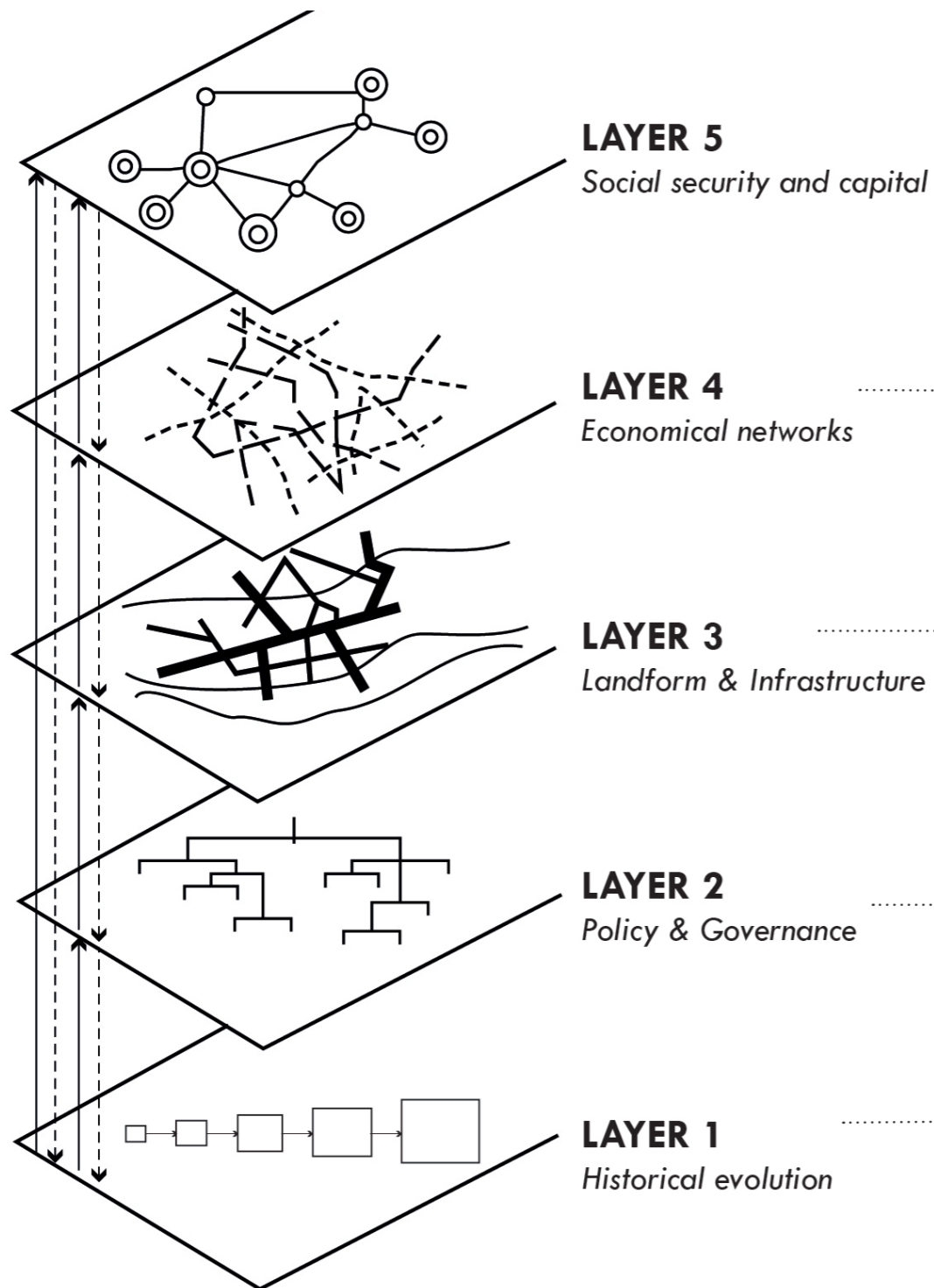
Additional layers added
 Source: Author

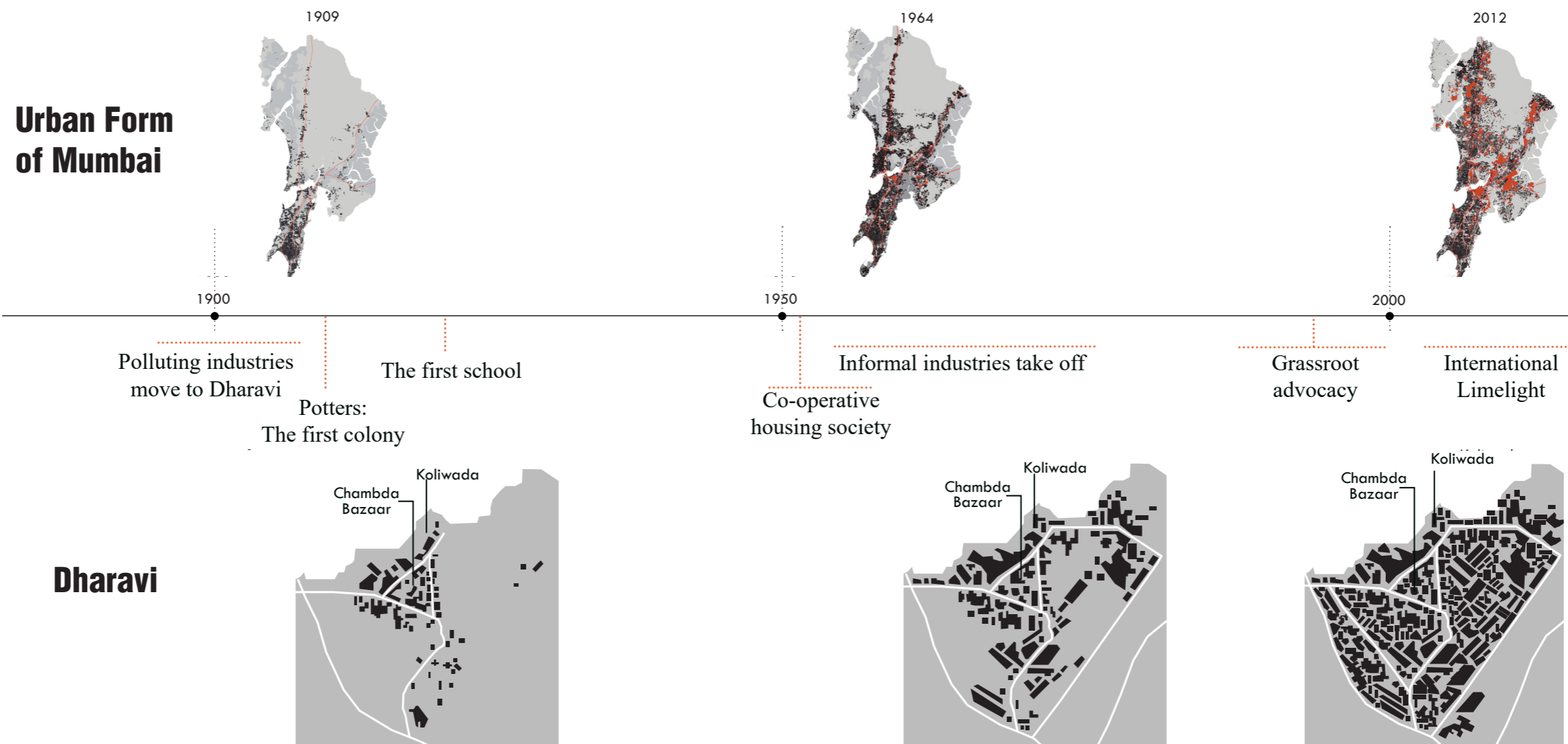
THEORETICAL FRAMEWORK

EXPLORATIONS IN THE GLOBAL SOUTH

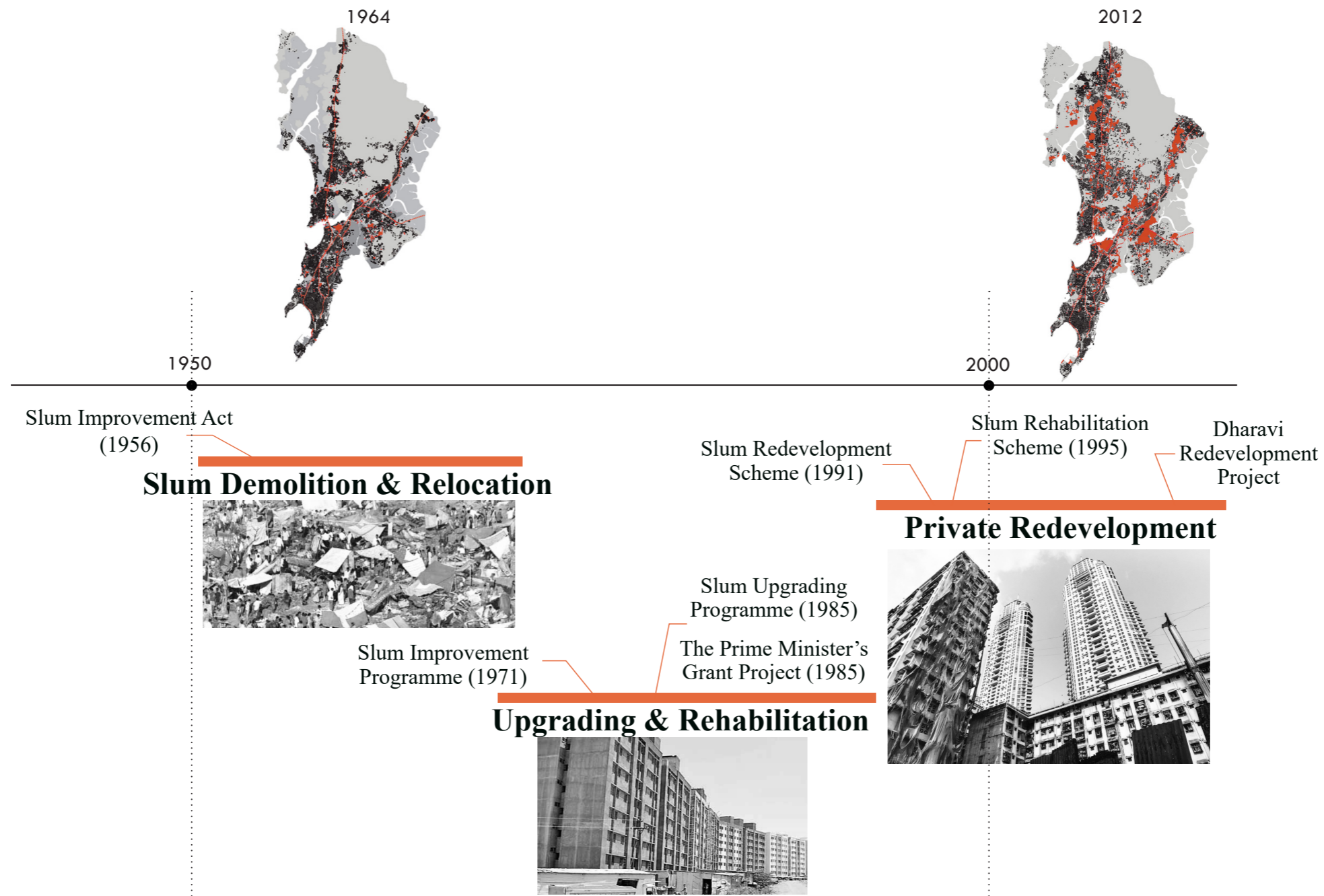


ANALYTICAL FRAMEWORK



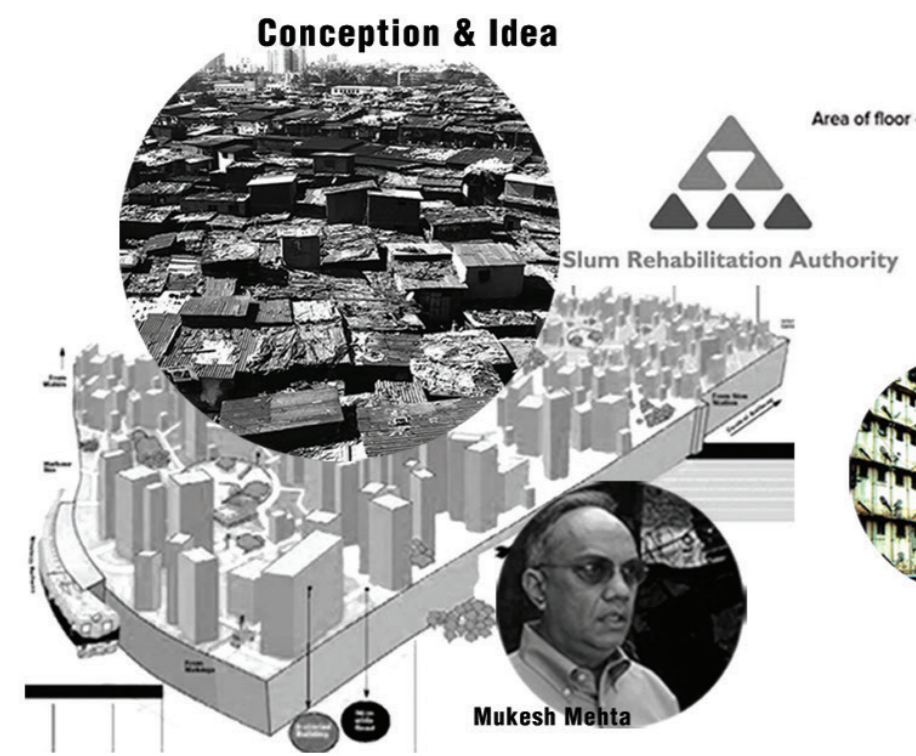


DHARAVI THROUGH ITS CONCEPTION



NATIONAL POLICY TOWARDS INFORMAL SETTLEMENTS

Conception & Idea



Slum Rehabilitation Authority

Features: HIKES
Health | Income | Knowledge | Environment | Socio-cultural

High FSI
4

Area of floor →
Area of plot

High-end real estate for profit + financing the low-income housing

NO TAKERS?
Dharavi Redevelopment Project

Residents
Where do we work?
Too small apartments!
what about the rest of us?

Parties of Interest (2100 million Euros)
Private developers + MHADA (Govt)

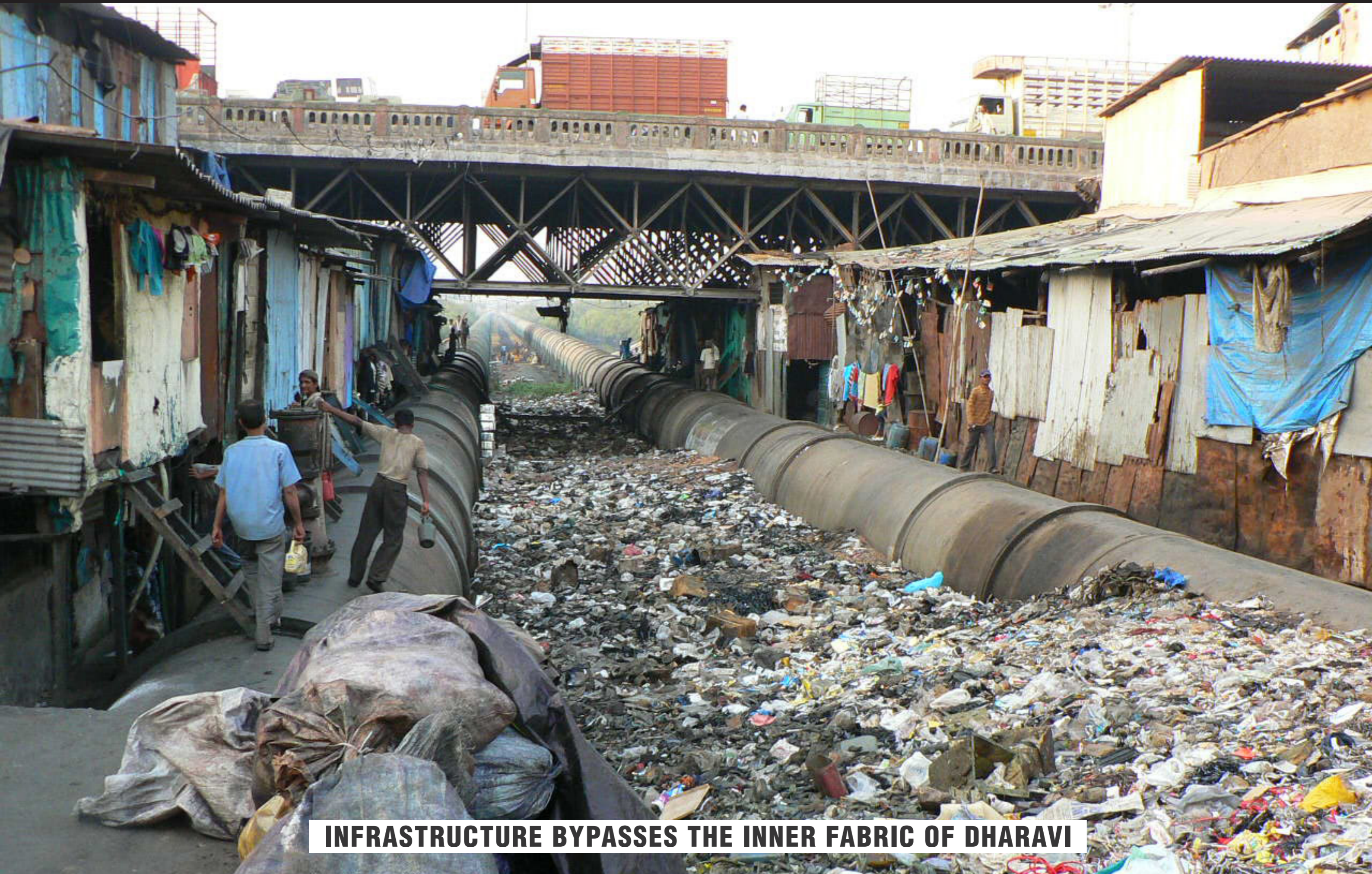
MHADA

Mukesh Mehta

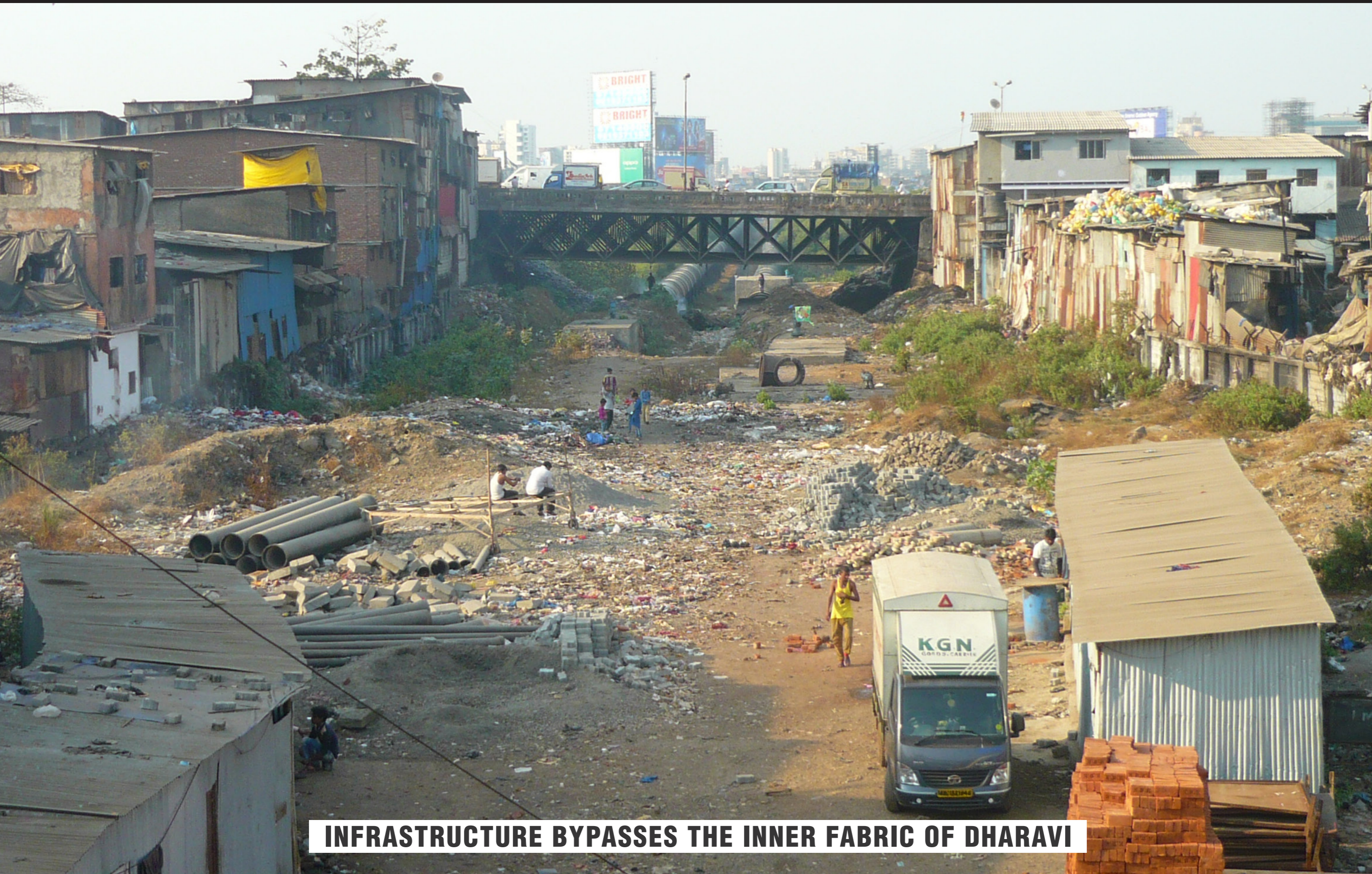
THE NEW LOOK

- Elevated walkways
- Gardens and open spaces
- Multi-storey residential and office complexes
- New Dharavi railway station between Sion and Mahim
- Multi-layer roads and car parks

THE 'LIMBO' STATE OF THE DHARAVI REDEVELOPMENT PROJECT



INFRASTRUCTURE BYPASSES THE INNER FABRIC OF DHARAVI

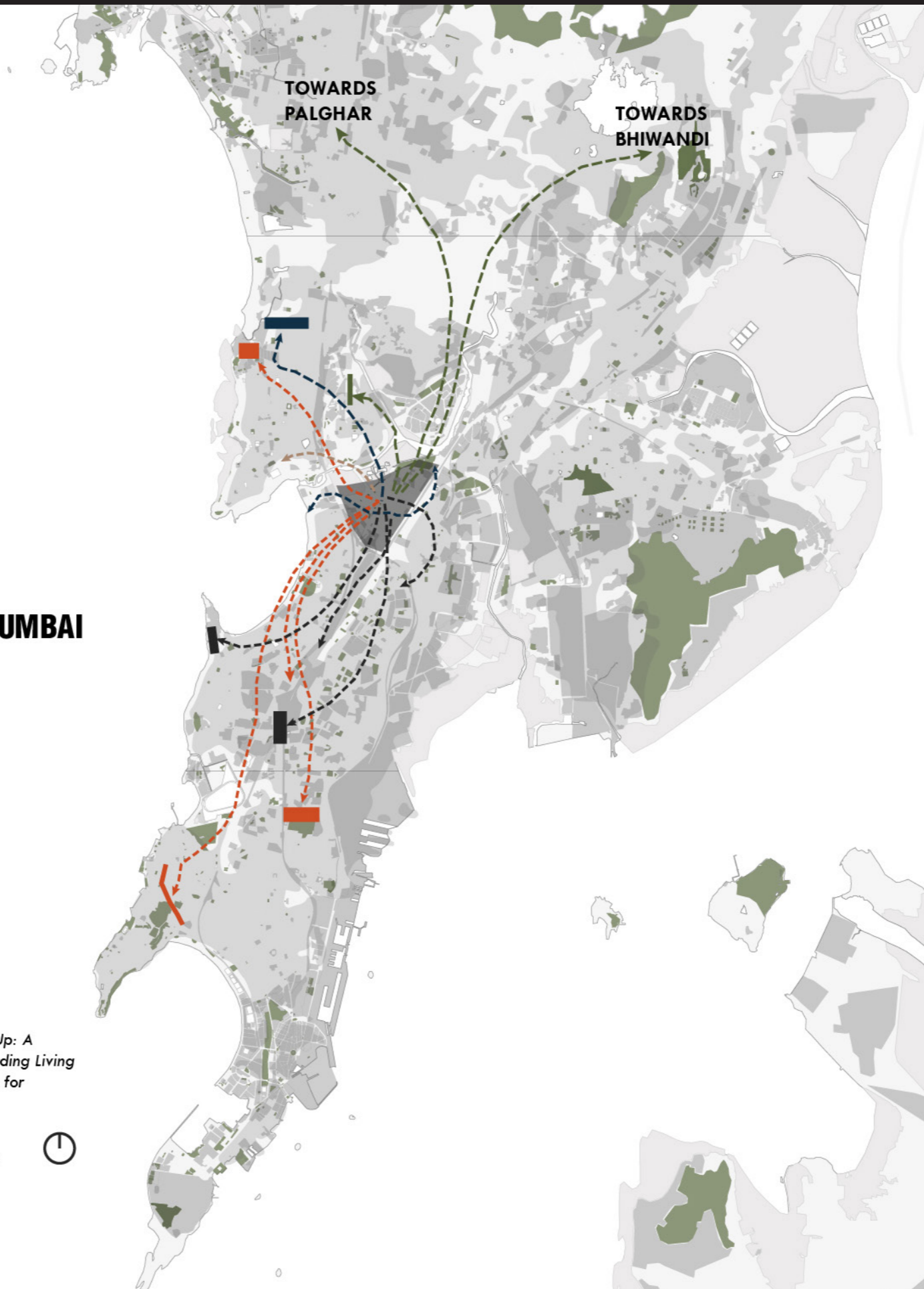
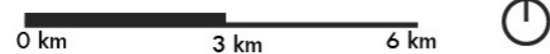


INFRASTRUCTURE BYPASSES THE INNER FABRIC OF DHARAVI

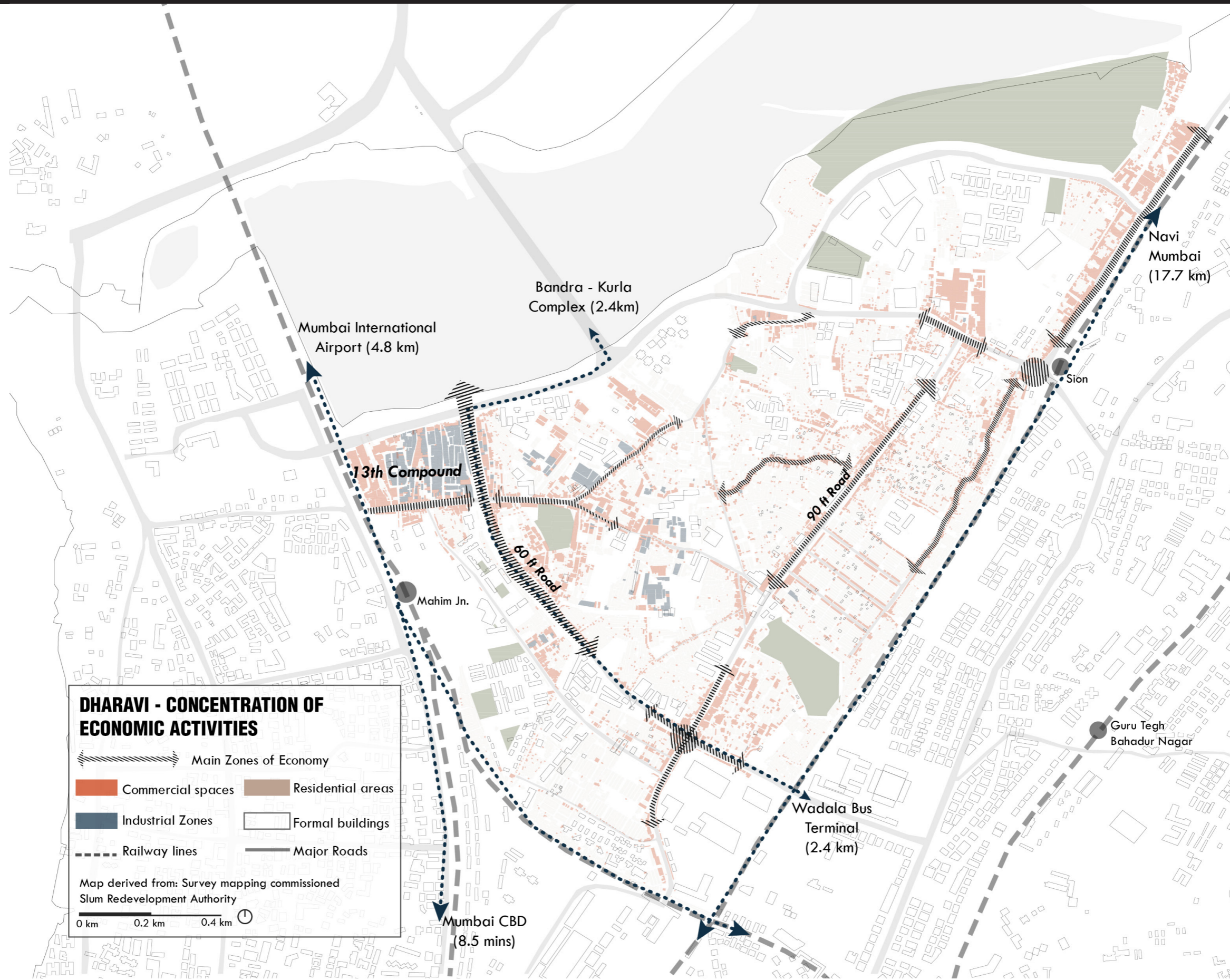
FROM DHARAVI TO MUMBAI ECONOMICAL NETWORKS

- Papadwala
- Delivery / collection
- Dhobi /Laundry
- Delivery / collection
- Recycling
- Delivery / collection
- Broommakers
- Delivery / collection

Map derived from: "Dharavi - Ground Up: A Dwellers-Focused Design Tool for Upgrading Living Space in Dharavi"; Mumbai Commission for development Studies; 2013



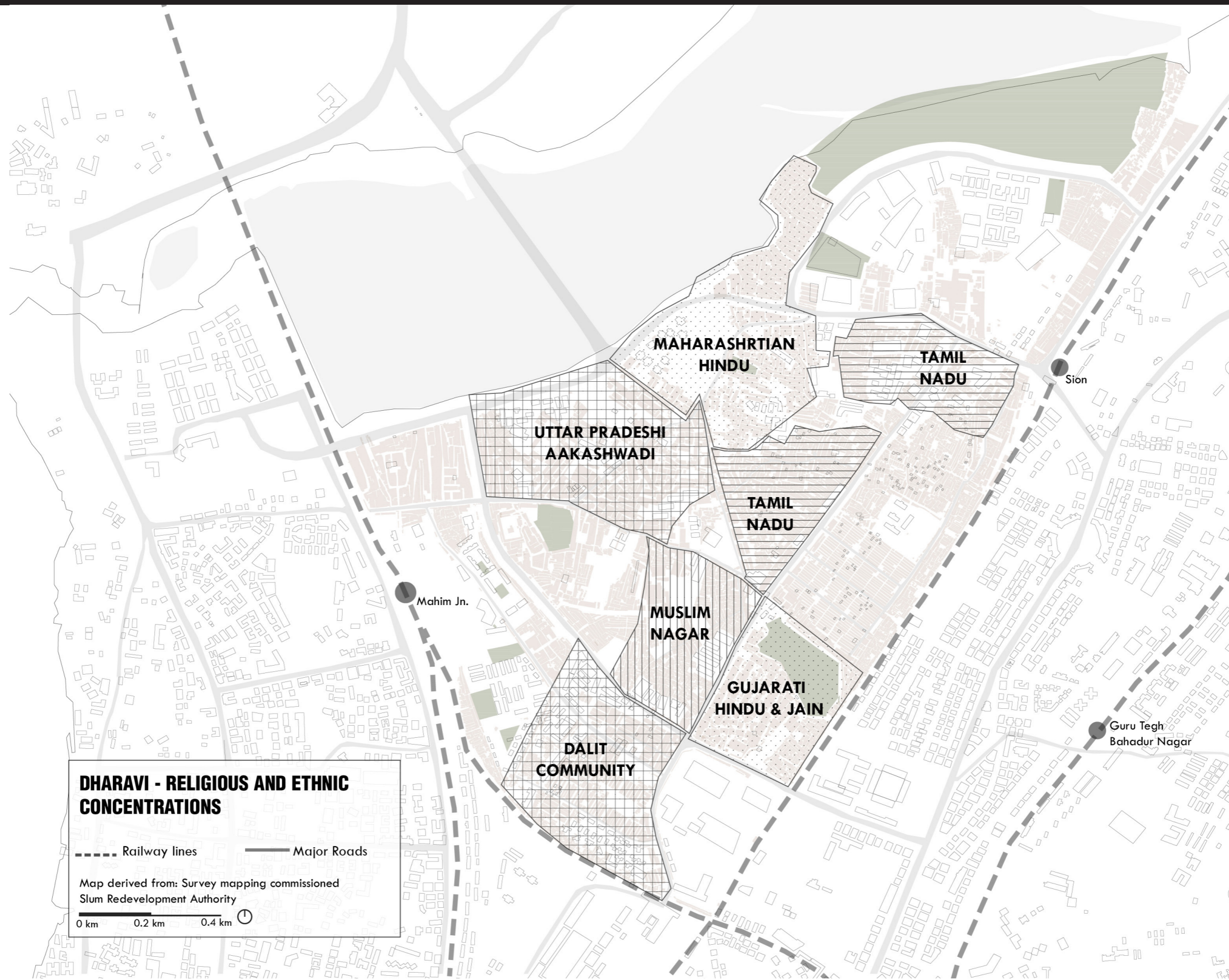
ECONOMY CONNECTS DHARAVI TO THE REST OF MUMBAI



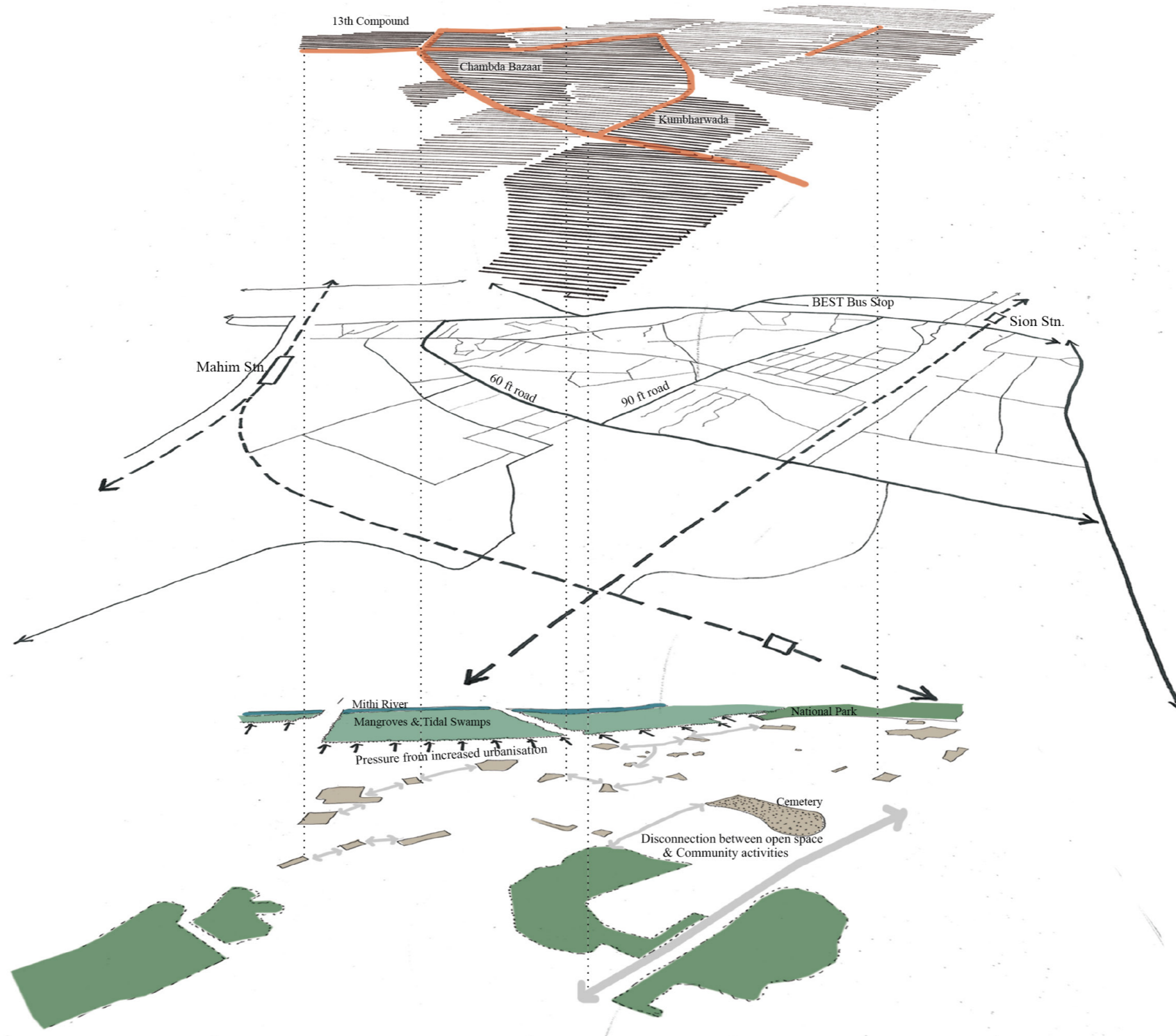
ECONOMIC CONNECTIONS & CLUSTERS IN DHARAVI



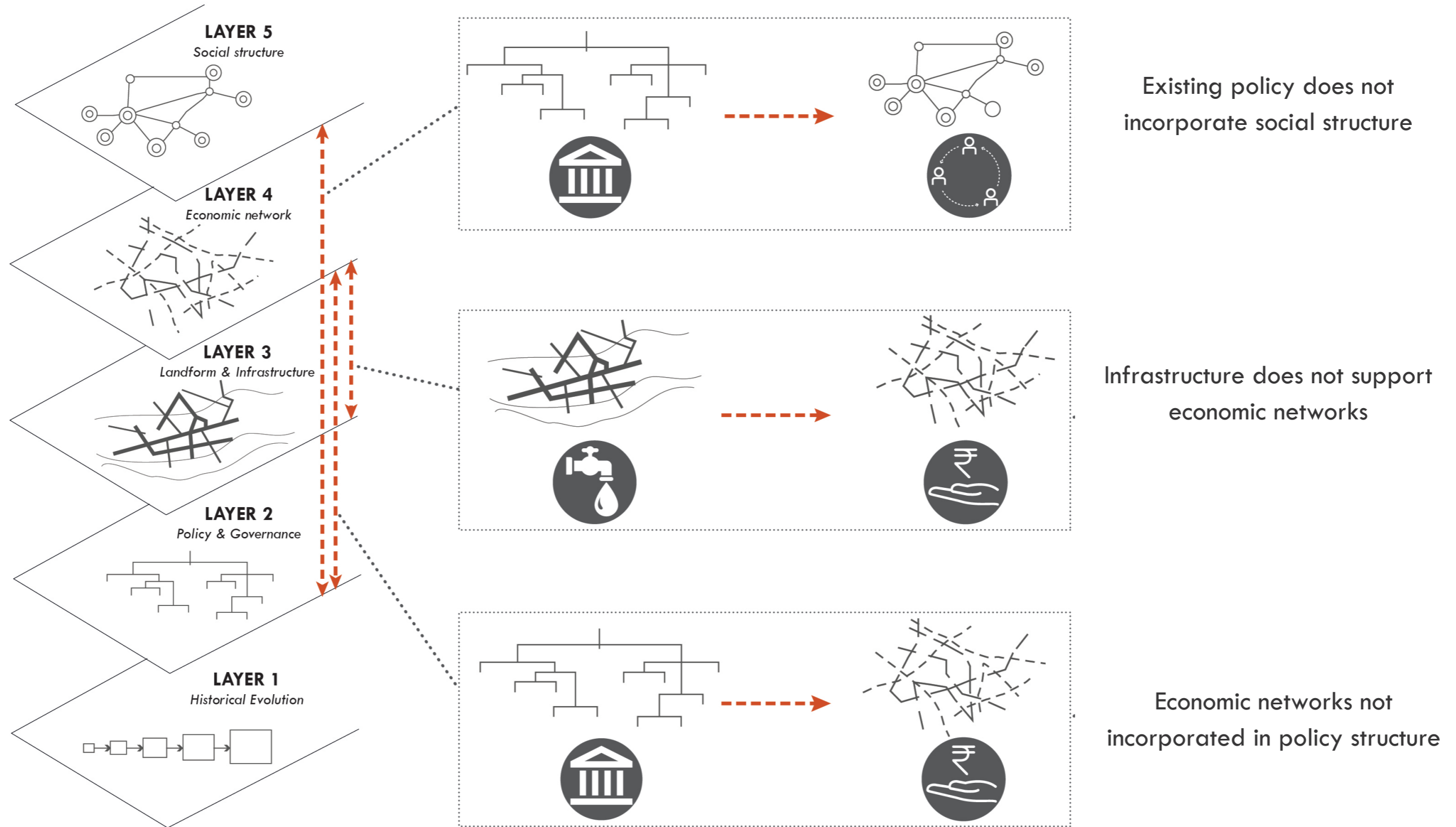




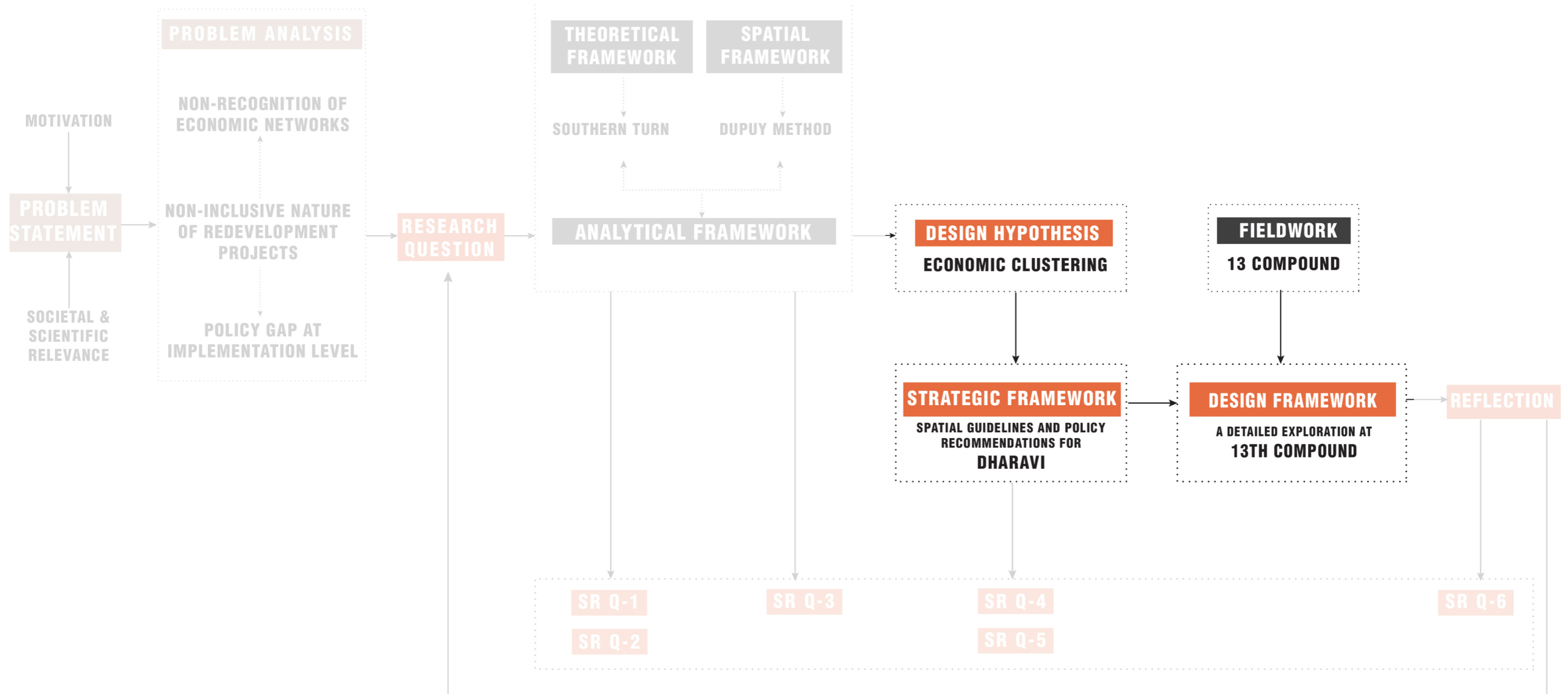
ECONOMIC CONNECTIONS & CLUSTERS IN DHARAVI



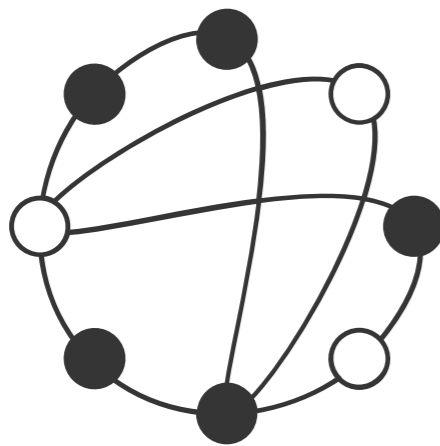
SYNTHESIS OF ANALYTICAL LAYERS AT DHARAVI



SYNTHESIS OF ANALYTICAL LAYERS AT DHARAVI



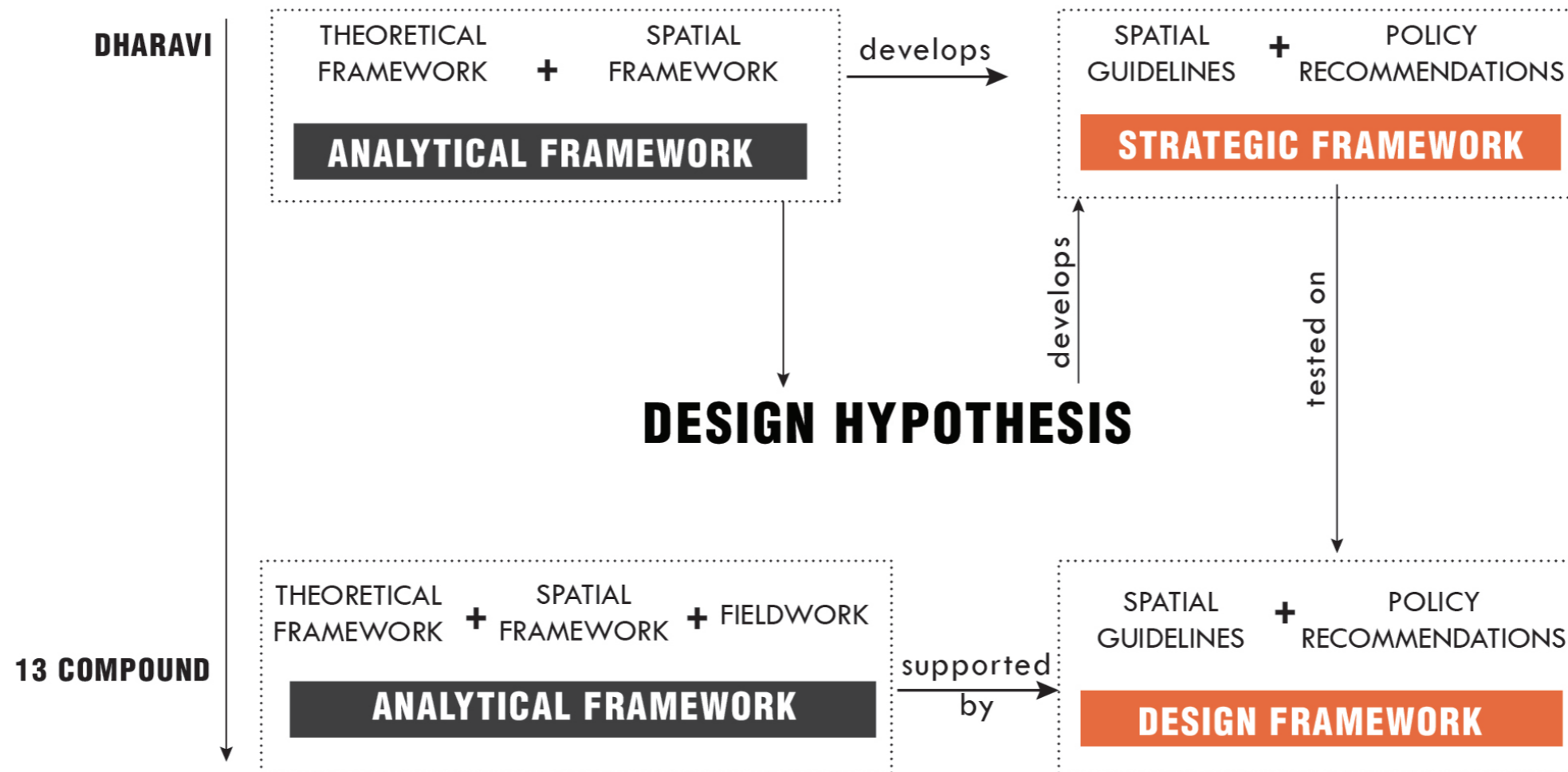
DESIGN HYPOTHESIS



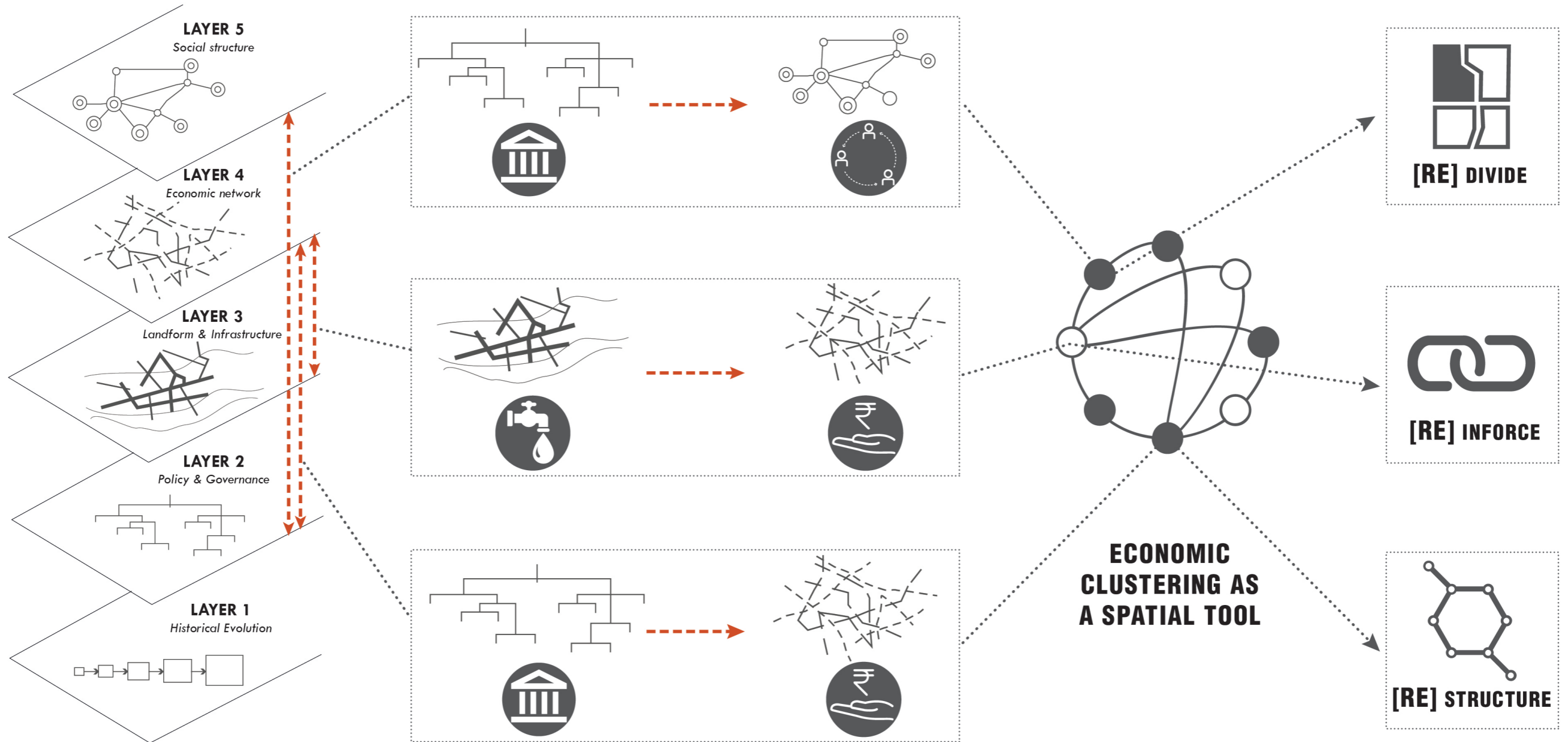
ECONOMIC CLUSTERING

and its spatial manifestation & organisation can act as a shorthand for the cultural and material spatial aspects in Dharavi.

PROJECT APPROACH



PROJECT OUTLINE

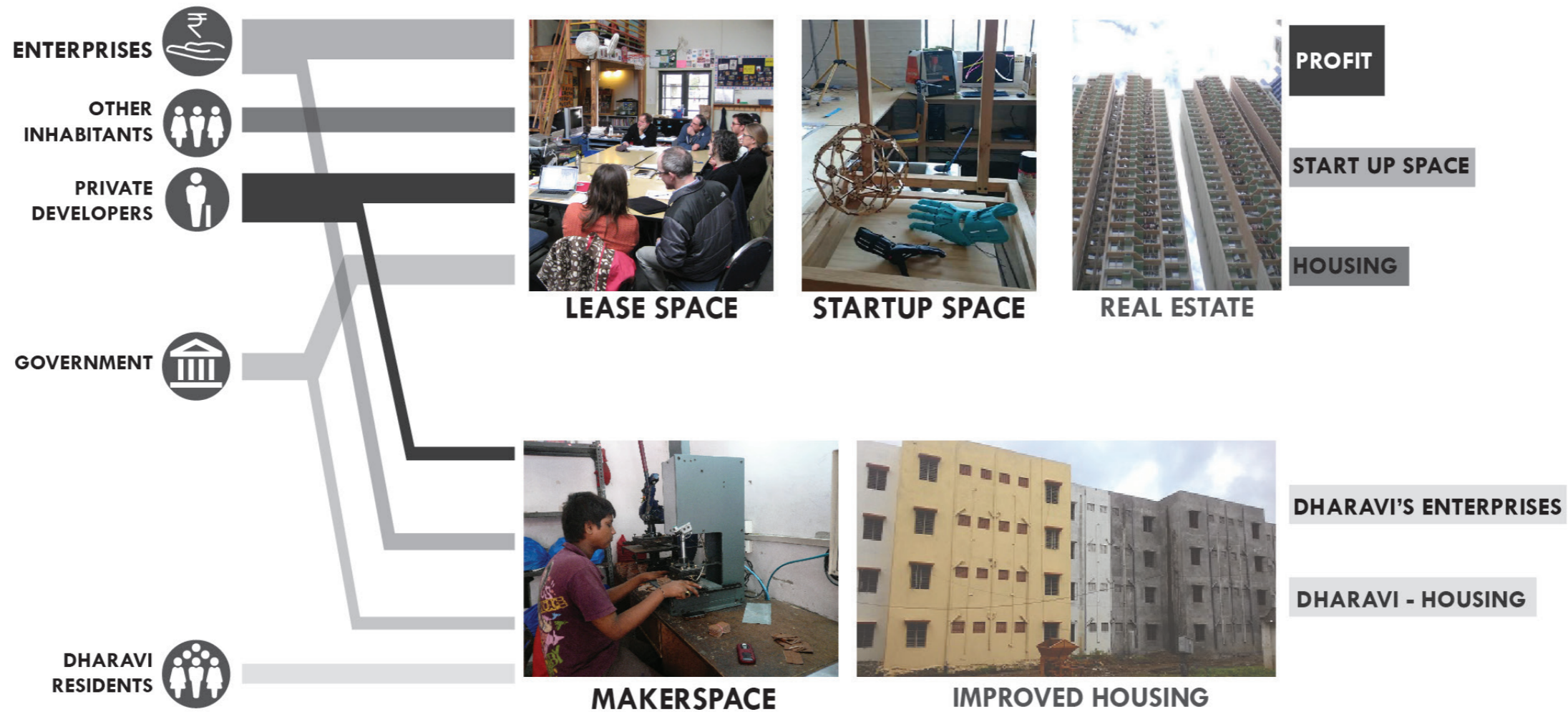




EXISTING ECONOMIC MODEL FOR REDEVELOPMENT



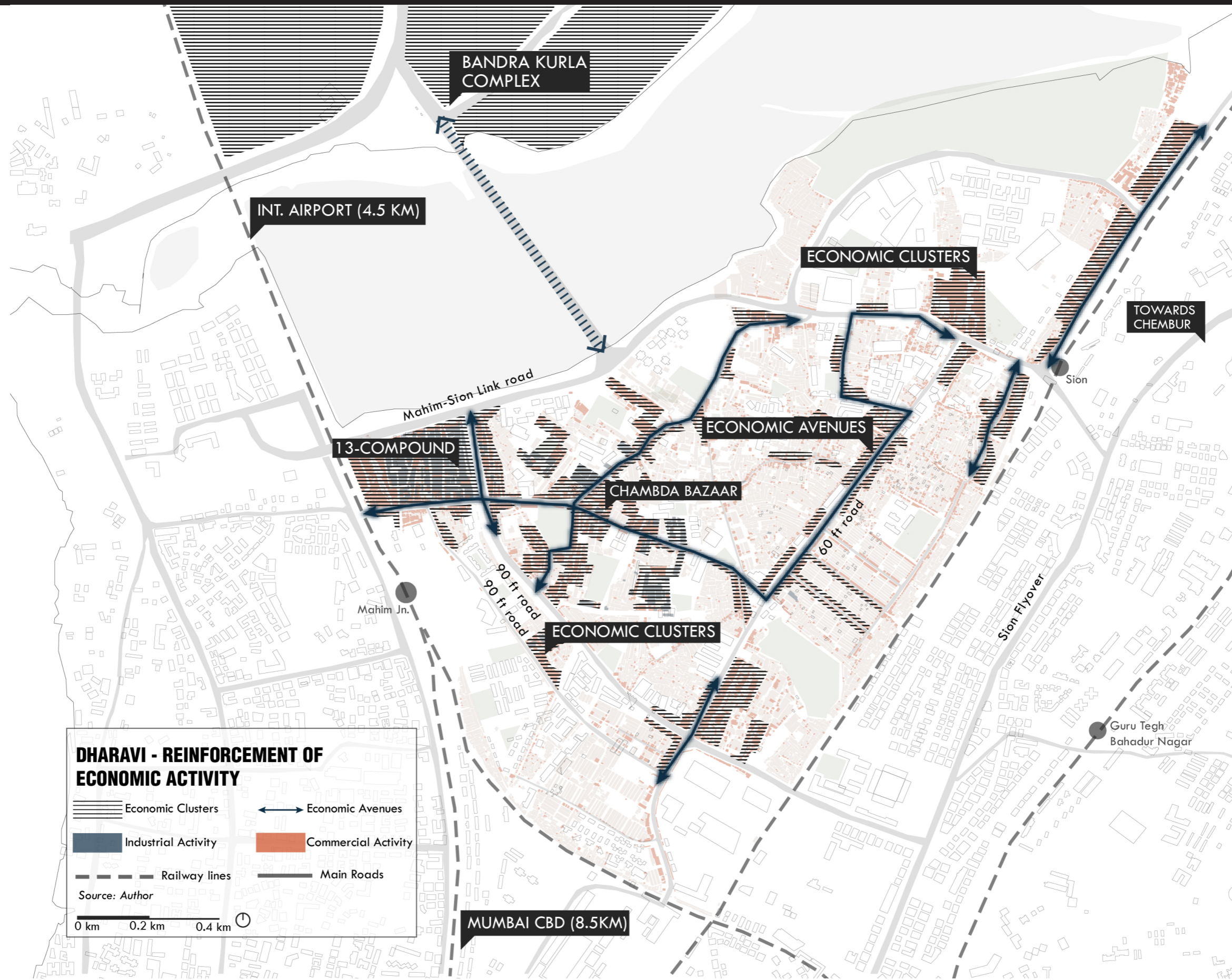
[RE]INFORCE



PROPOSED ECONOMIC MODEL FOR REDEVELOPMENT



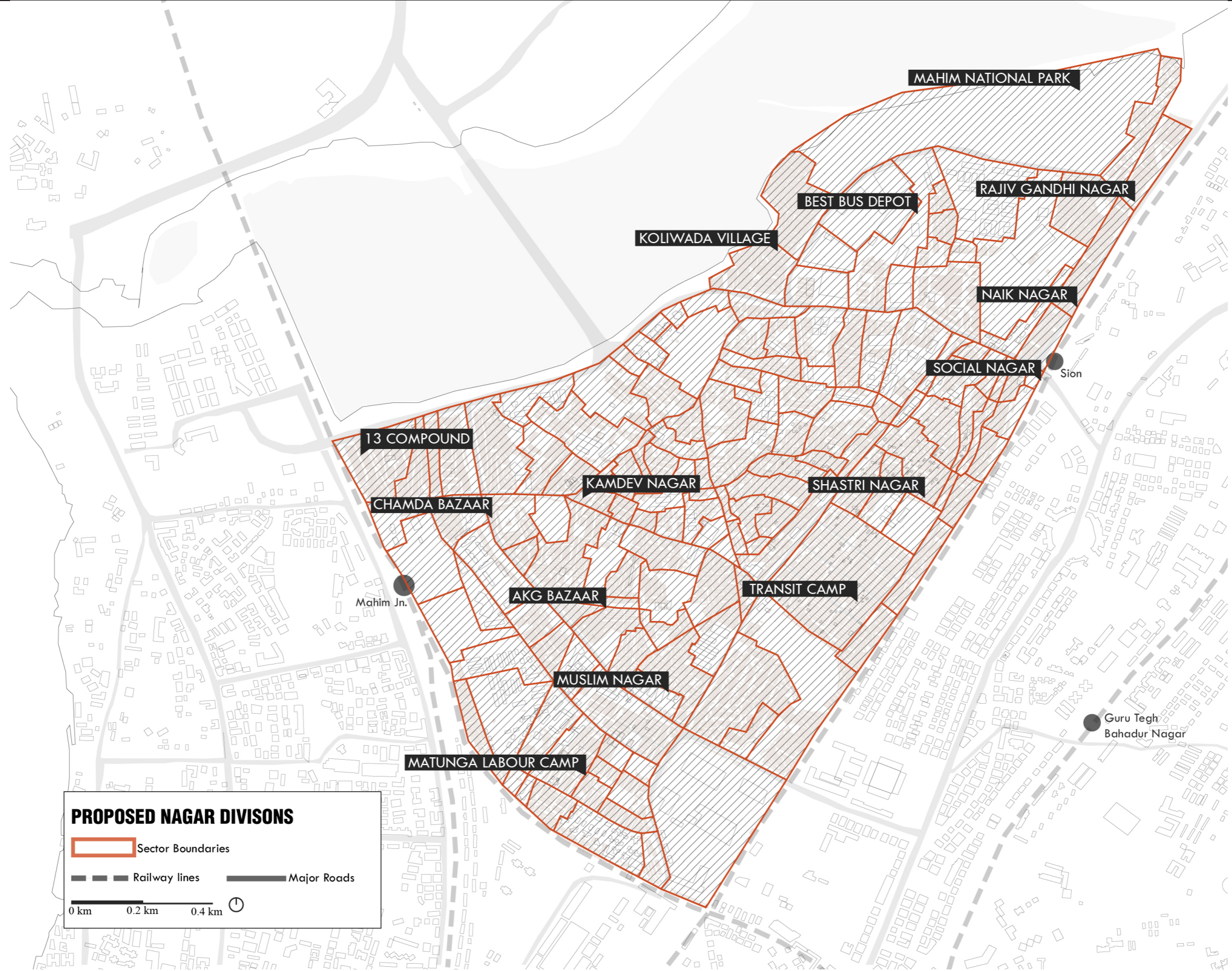
[RE]INFORCE



REINFORCEMENT OF ECONOMIC ACTIVITY IN DHARAVI



[RE]DIVIDE

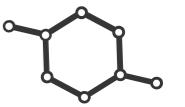


PROPOSED NAGAR DIVISIONS FOR REDEVELOPMENT

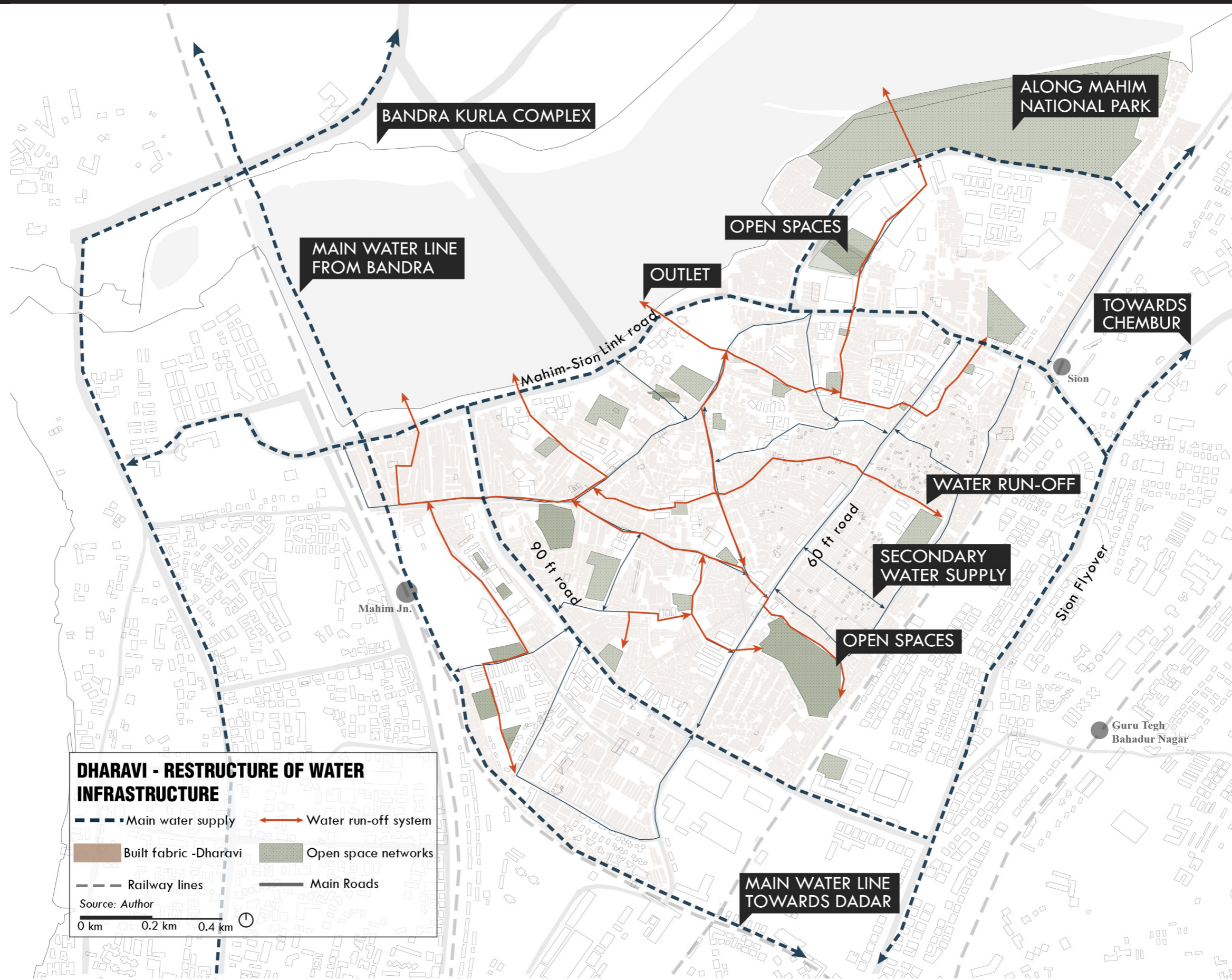


[RE]DIVIDE

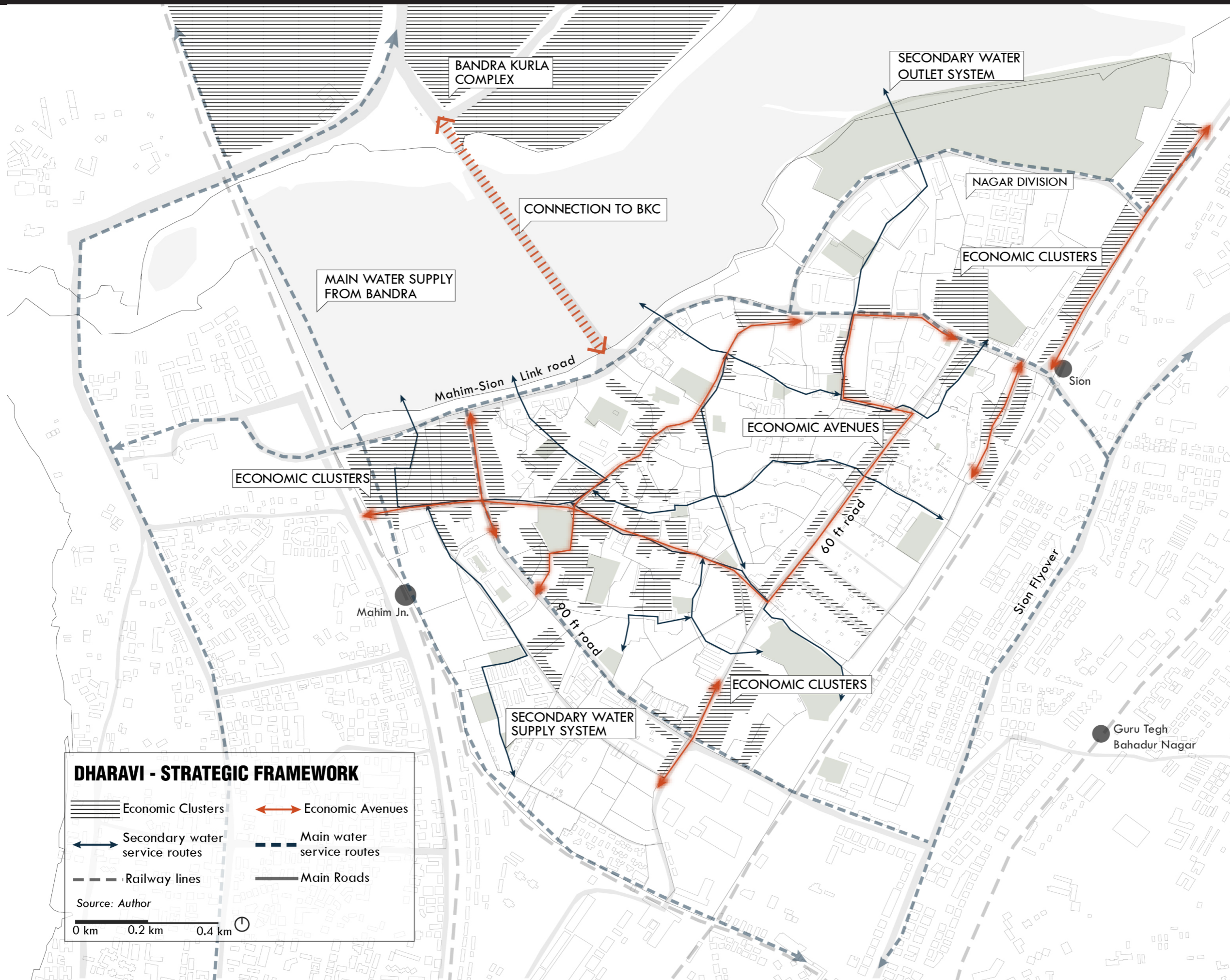




[RE]STRUCTURE



PROPOSED RESTRUCTURE OF THE WATER INFRASTRUCTURE



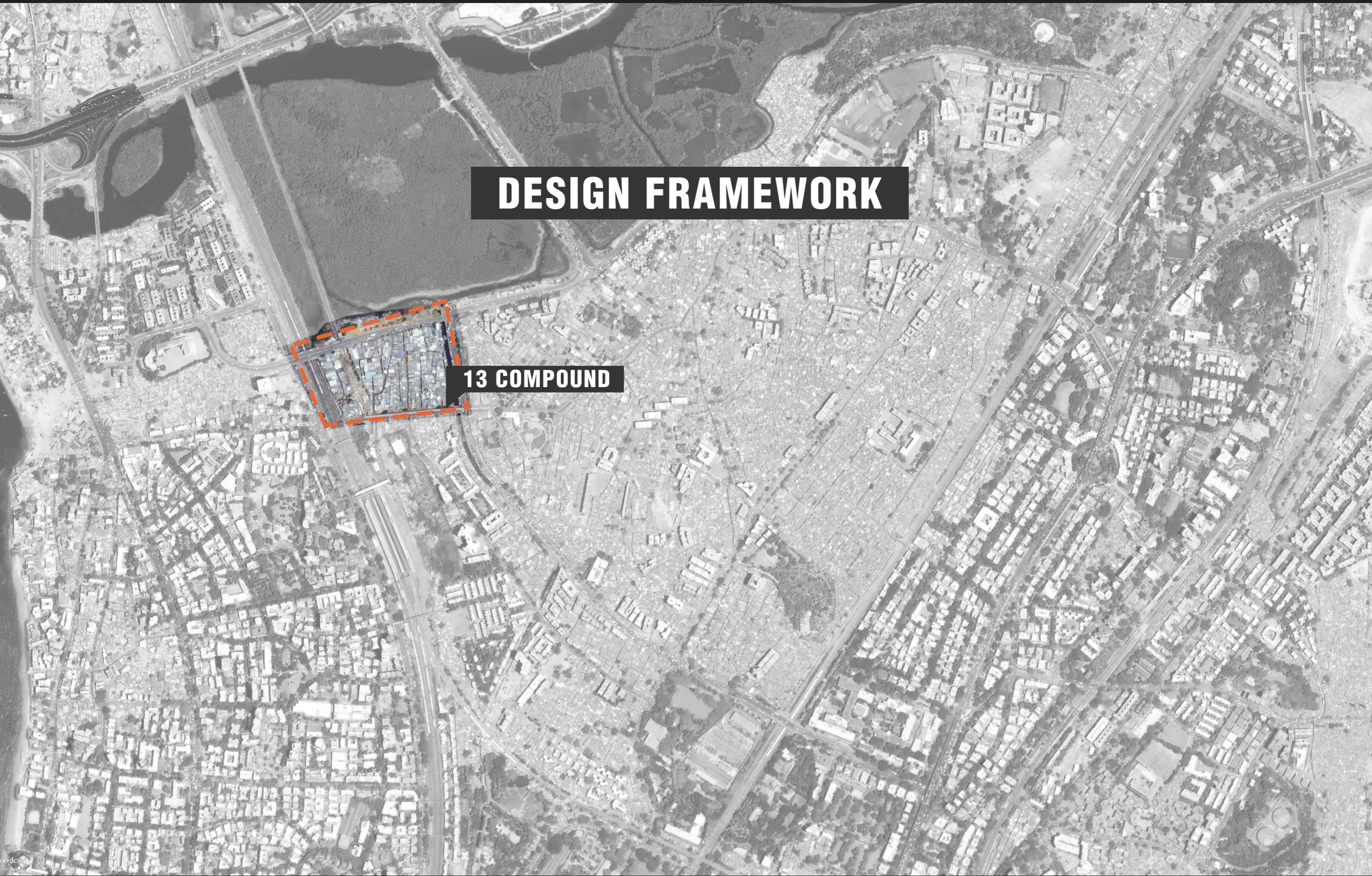
DHARAVI - STRATEGIC FRAMEWORK

	Economic Clusters		Economic Avenues
	Secondary water service routes		Main water service routes
	Railway lines		Main Roads

Source: Author

0 km 0.2 km 0.4 km





DESIGN FRAMEWORK

13 COMPOUND



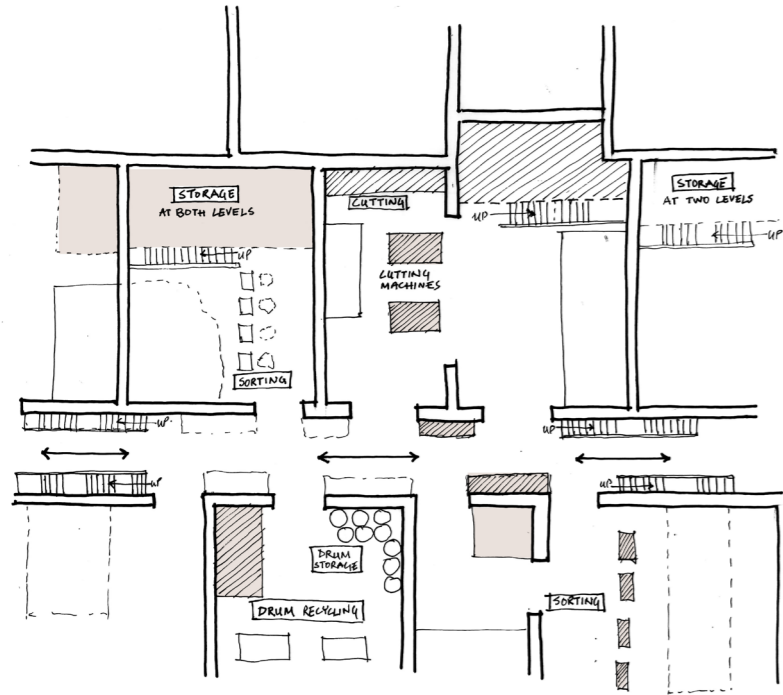
13 COMPOUND



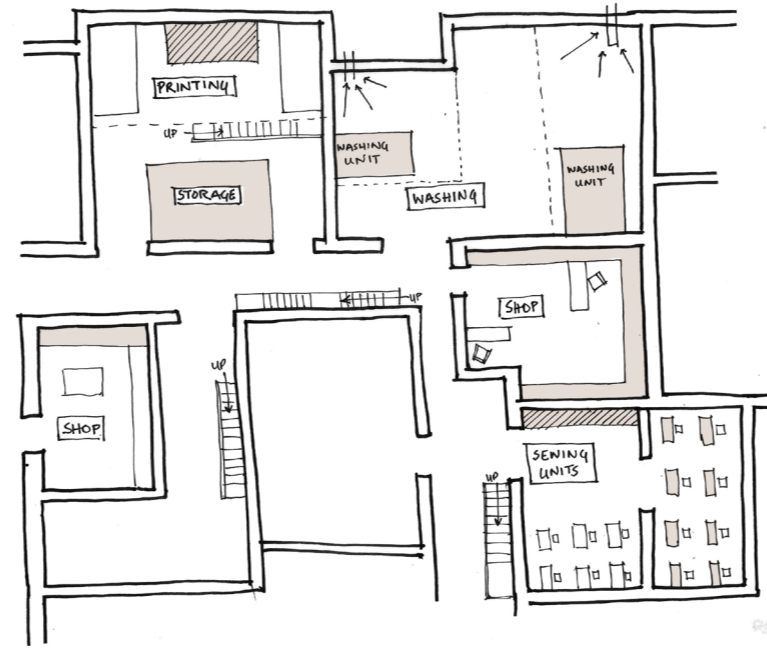




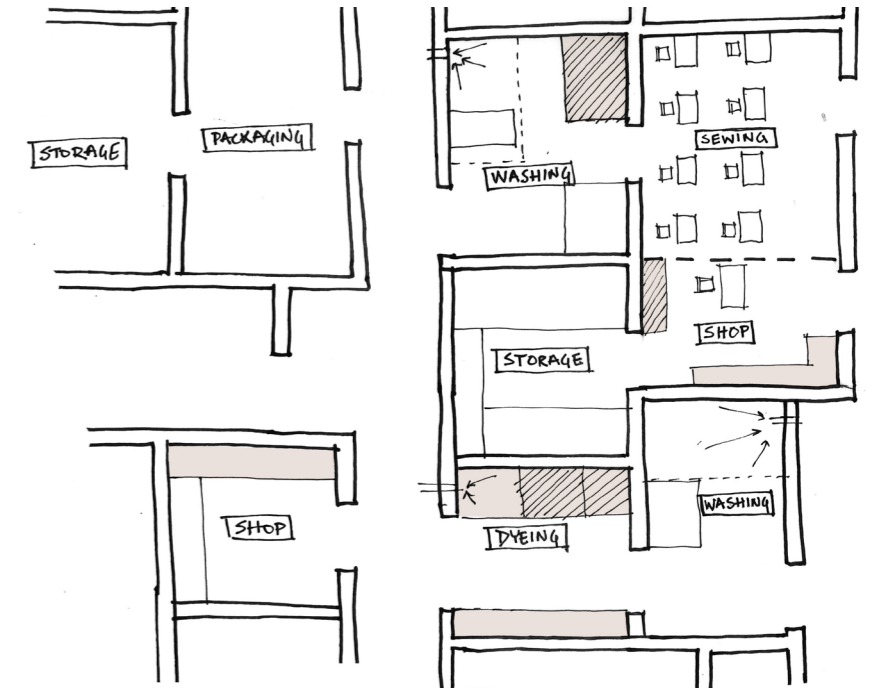
RECYCLING UNIT

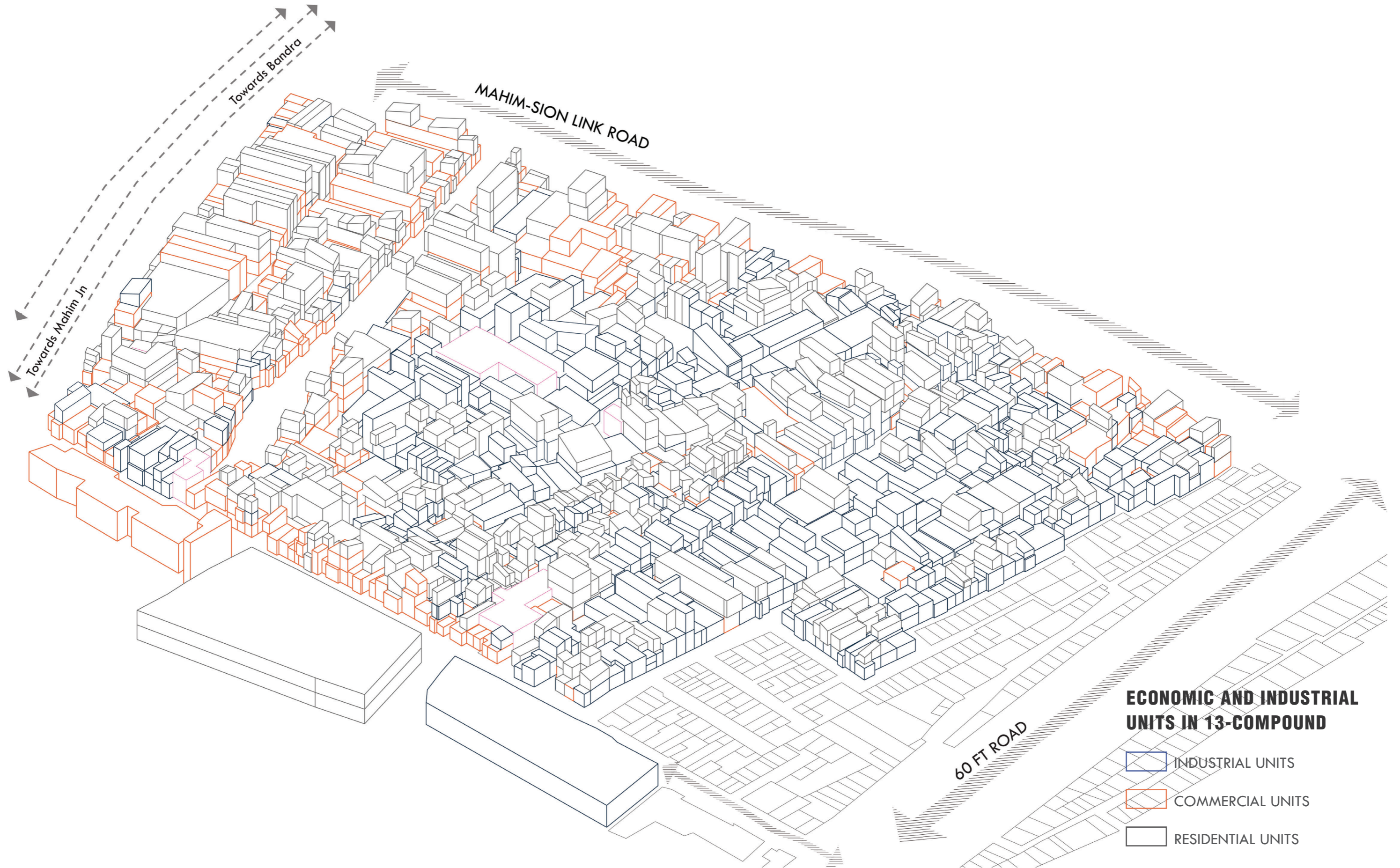


LEATHER UNIT



GARMENT UNIT







MAKER-SPACE



Gathering points for new and experienced makers connect to work on projects

Local Industry, cooperatives, industry experts



CO-WORKING SPACE



Shared working space between formal and informal creative industries

Private enterprises, local industry

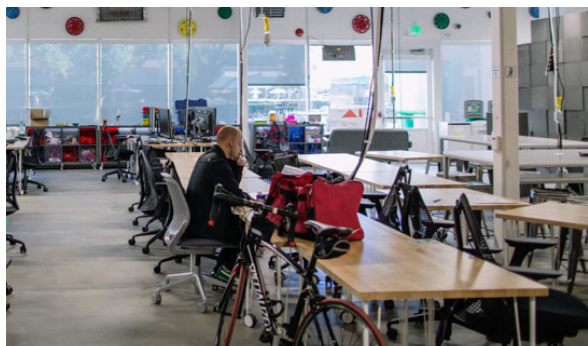


INCUBATOR HUB



Supporting systems & space for entrepreneurs, non-government organisations

Local Entrepreneurs, private industry, NGOs, Cooperatives



BUSINESS HUB



Business space for outside enterprises on lease with cheaper rental offered

Private industry, NGOs, Cooperatives

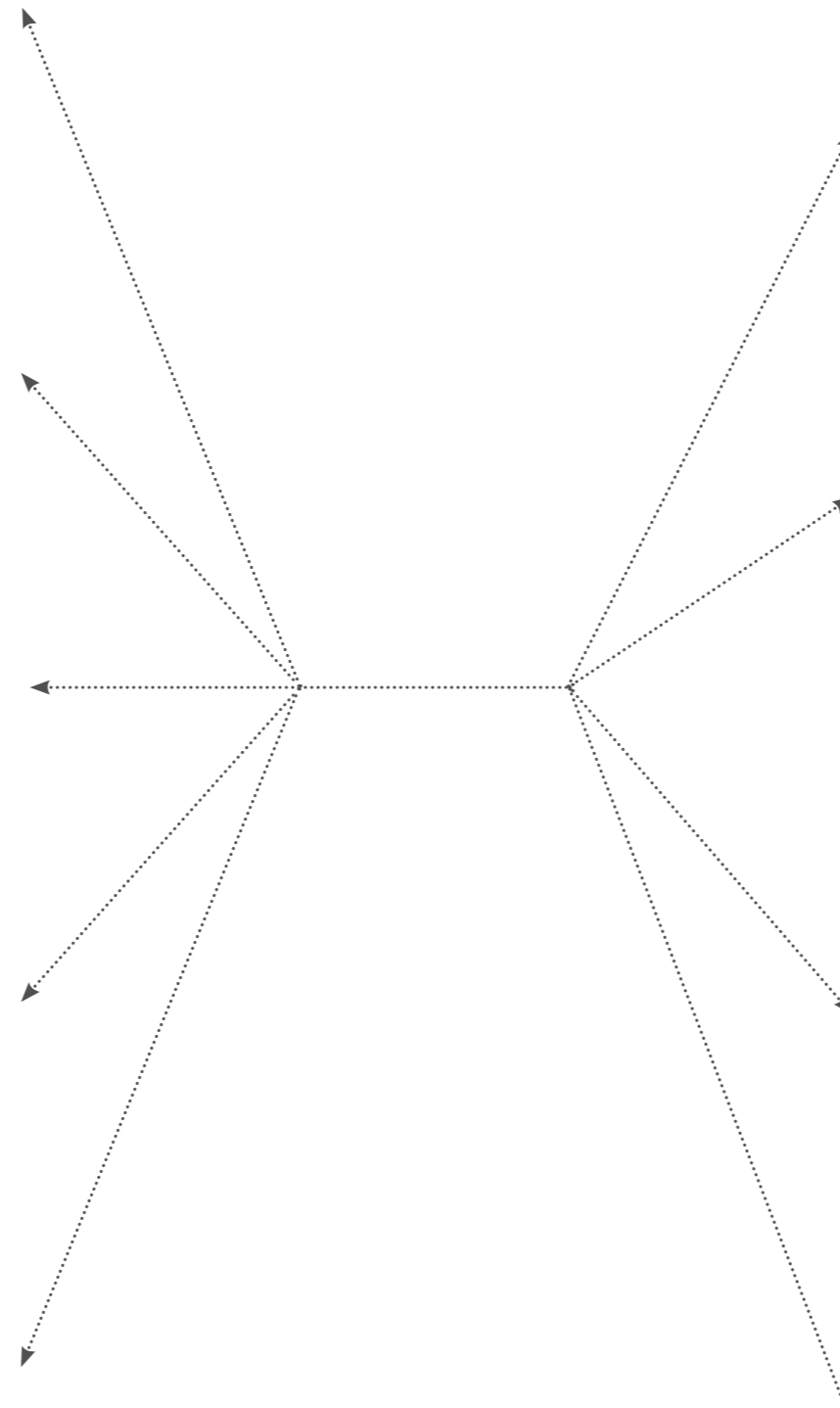


AFFORDABLE HOUSING



Low-income housing to the inhabitants with long-term lease rights

NGOs, Cooperatives



Rebranding of 13-compound, as an innovation hub, which provides recognition to the informal industries and also helps attract other entrepreneurs.



A Special Economic Zone in 13-compound, offering tax benefits for informal industries, that formalise themselves in the same location



E-commerce plays an important role in integrating the informal industry. Already a growing trend, 13-compound could encourage it amongst its existing industries as a means to operate.



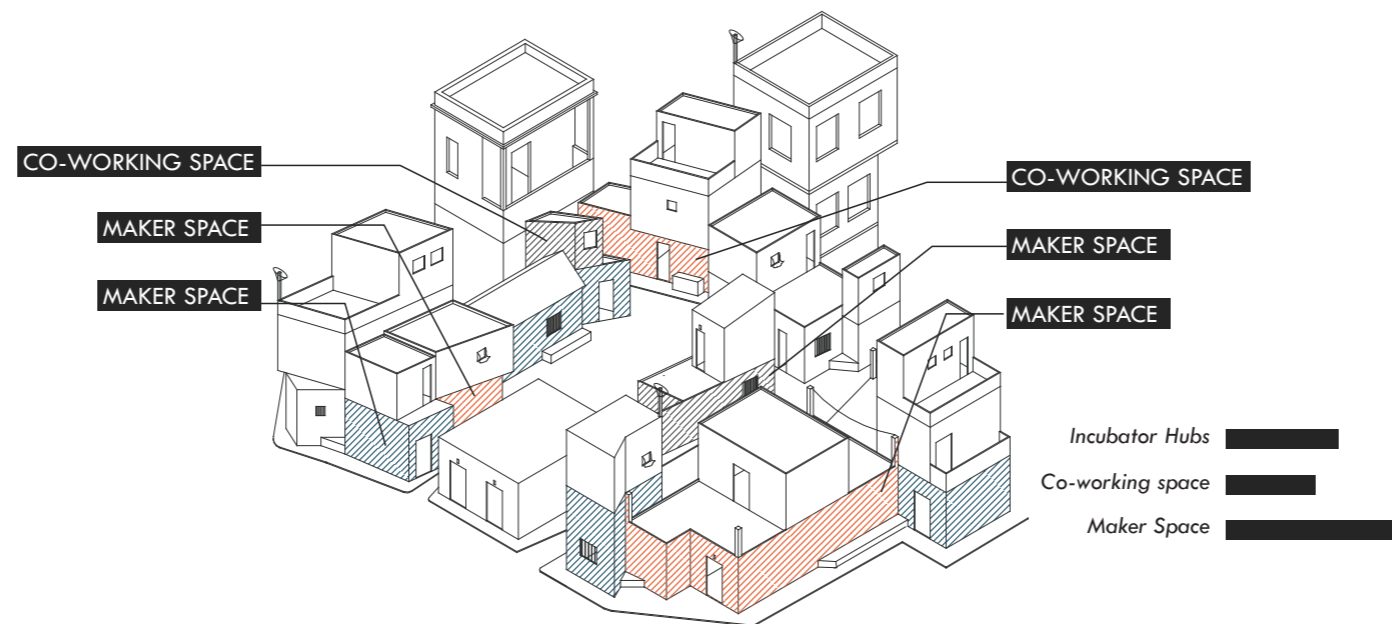
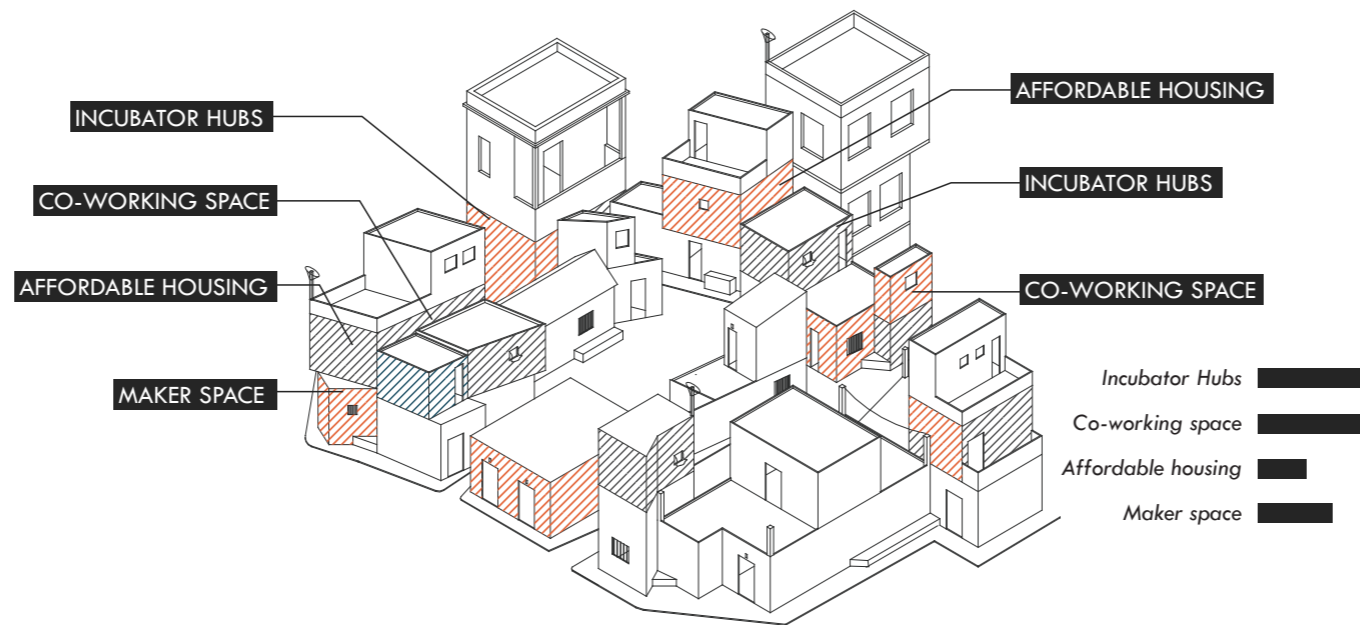
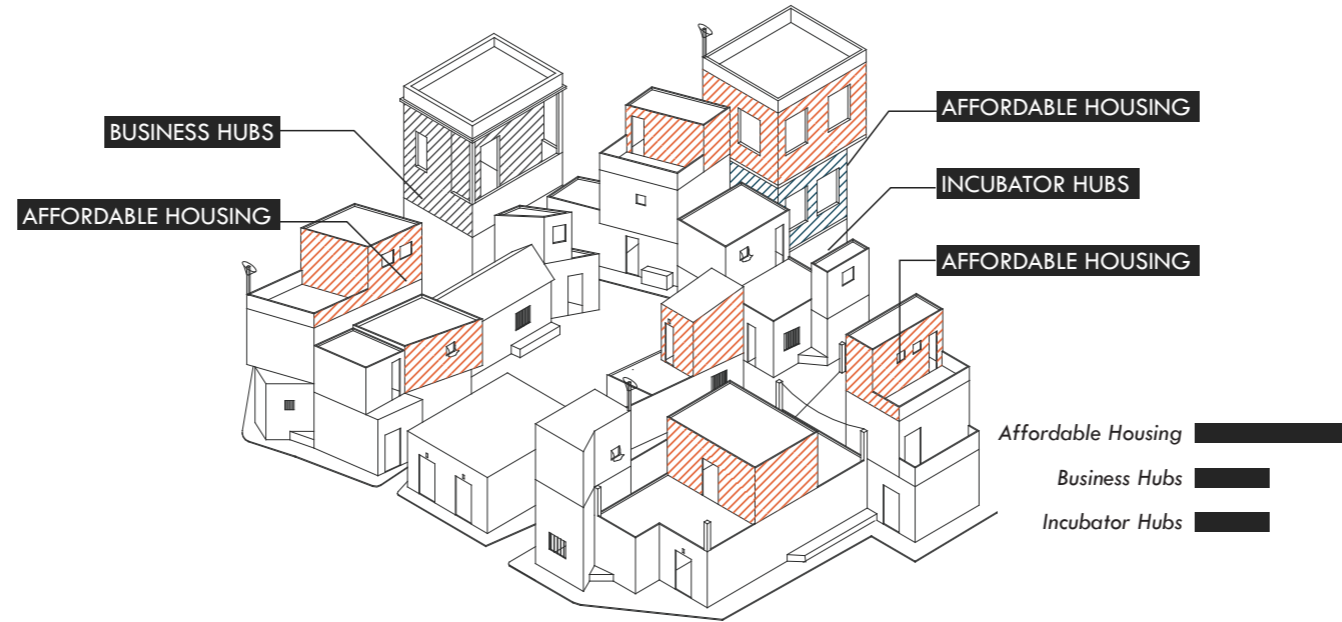
Occupancy rights could take various forms such as long term leaseholds, rentals, transferable leases on individual, plots etc.

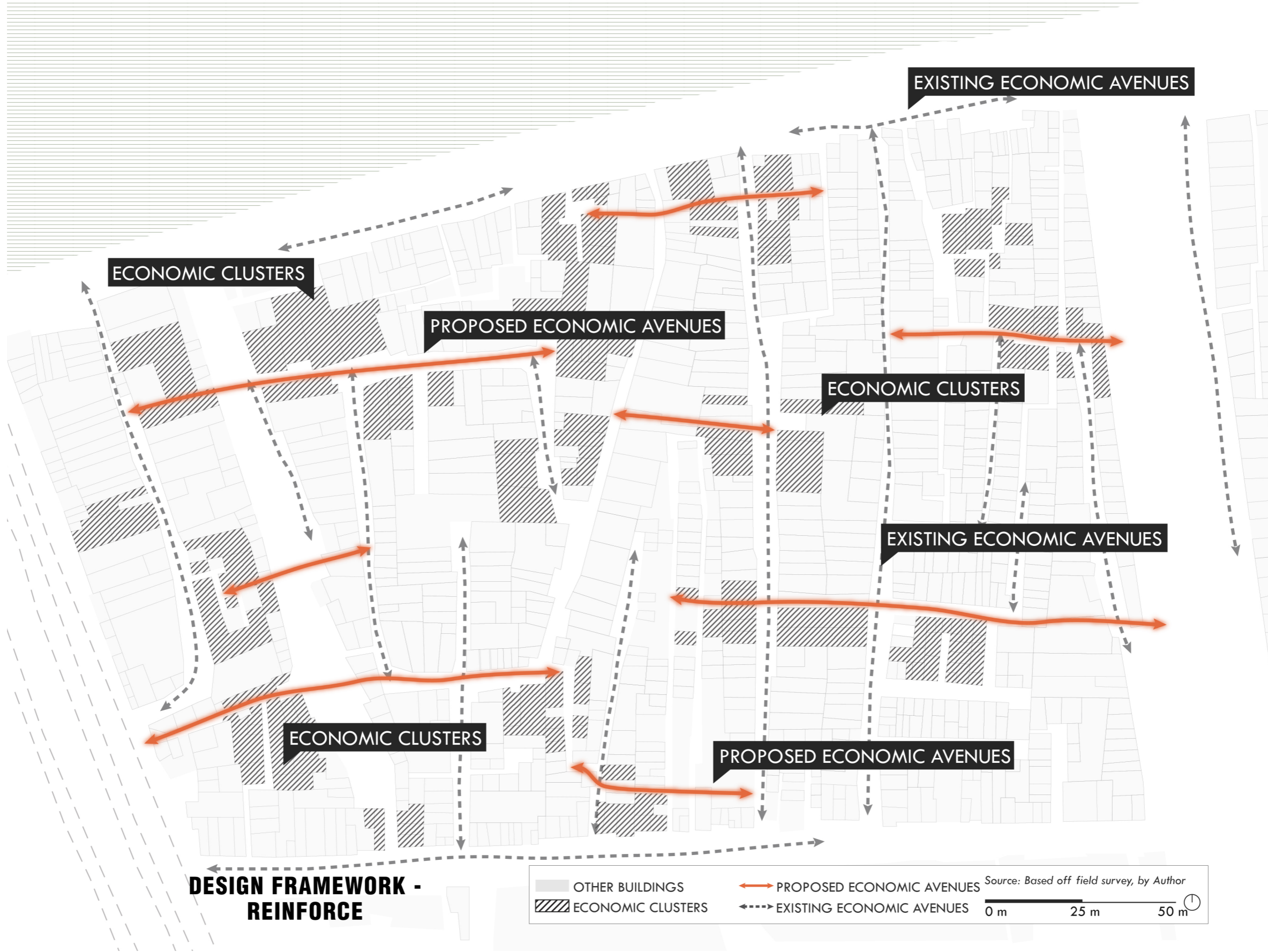


Special Economic Zones in India

Ministry of Commerce & Industry
Department of Commerce

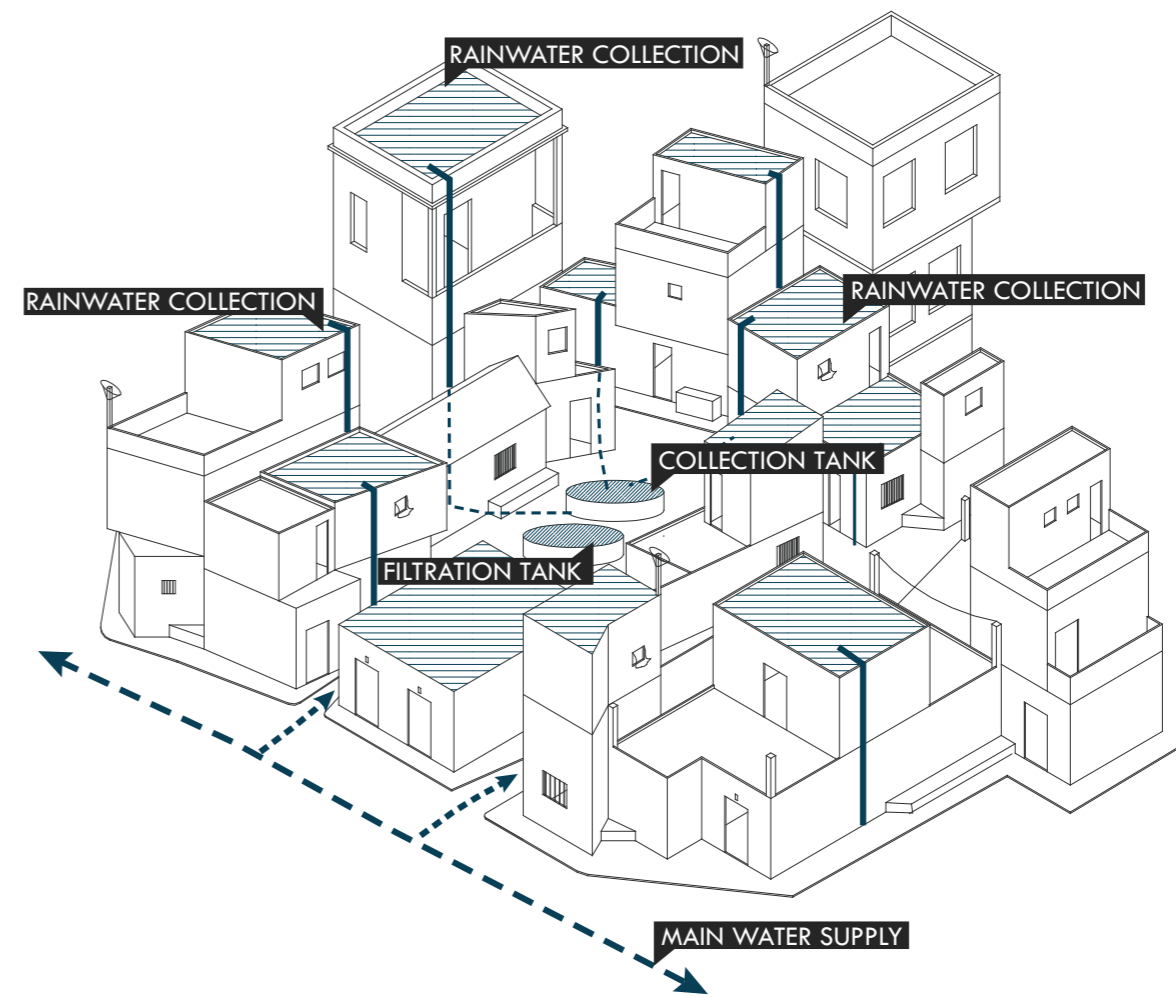
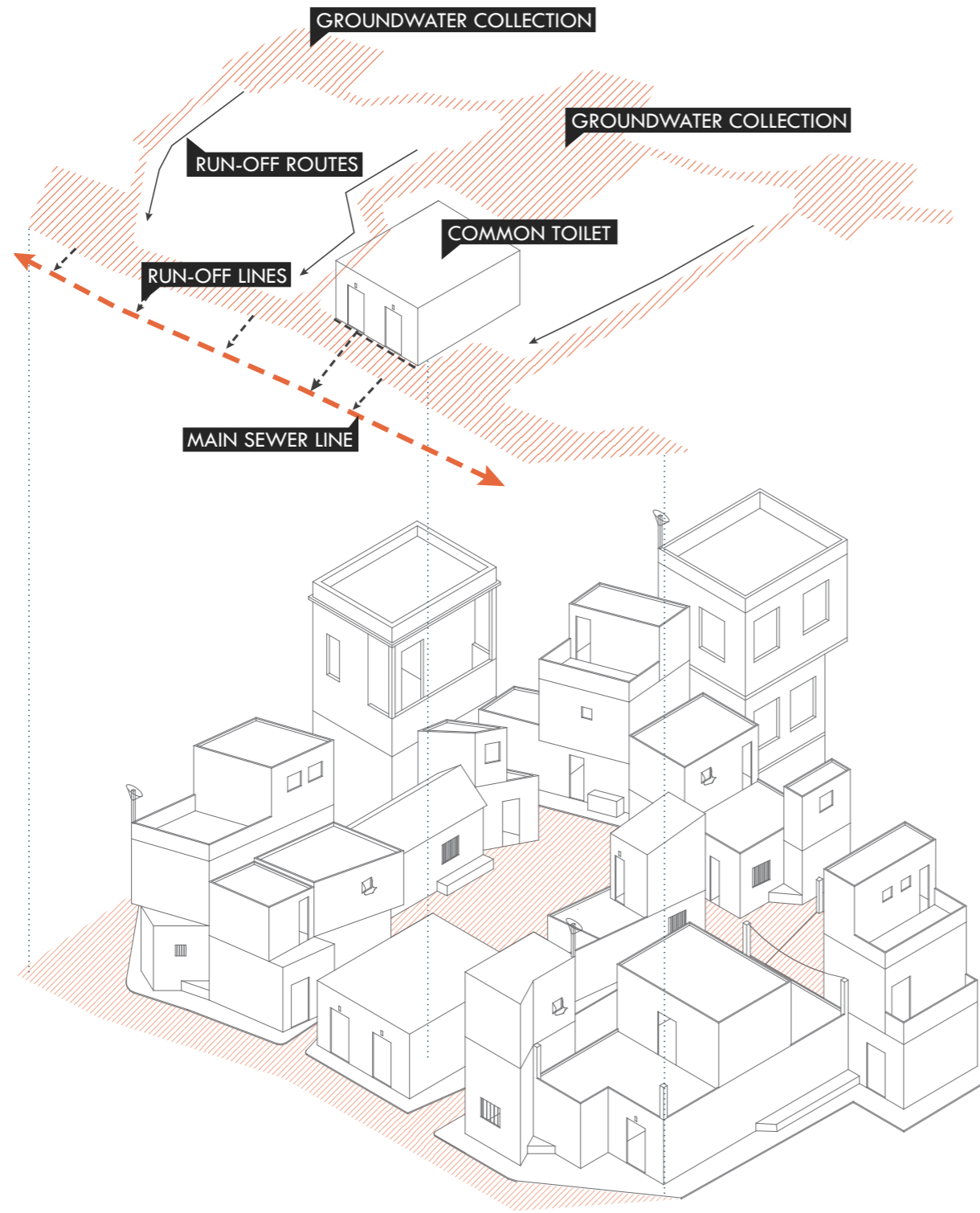






IDENTIFYING ECONOMIC CLUSTERS AND AVENUES IN 13-COMPOUND

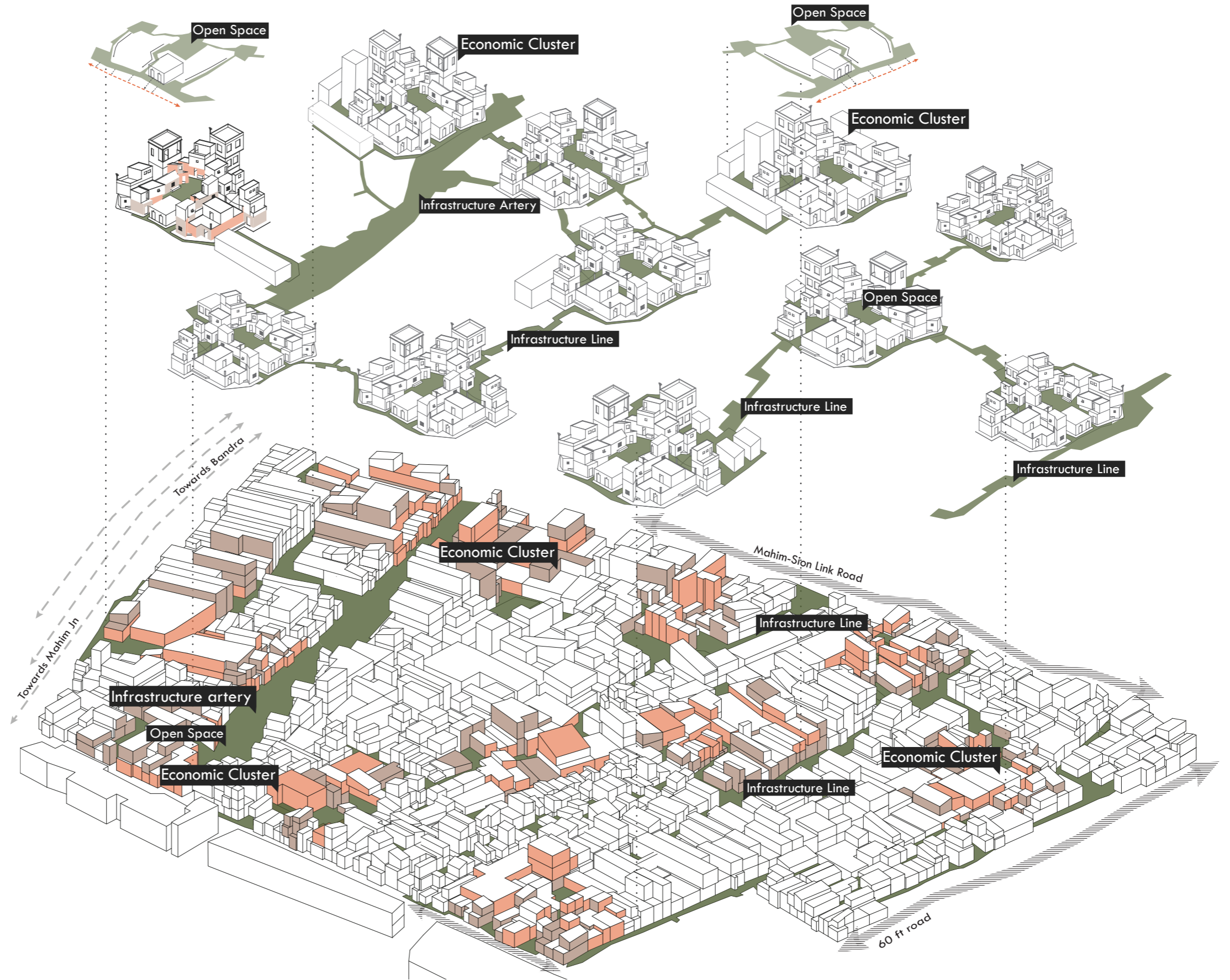




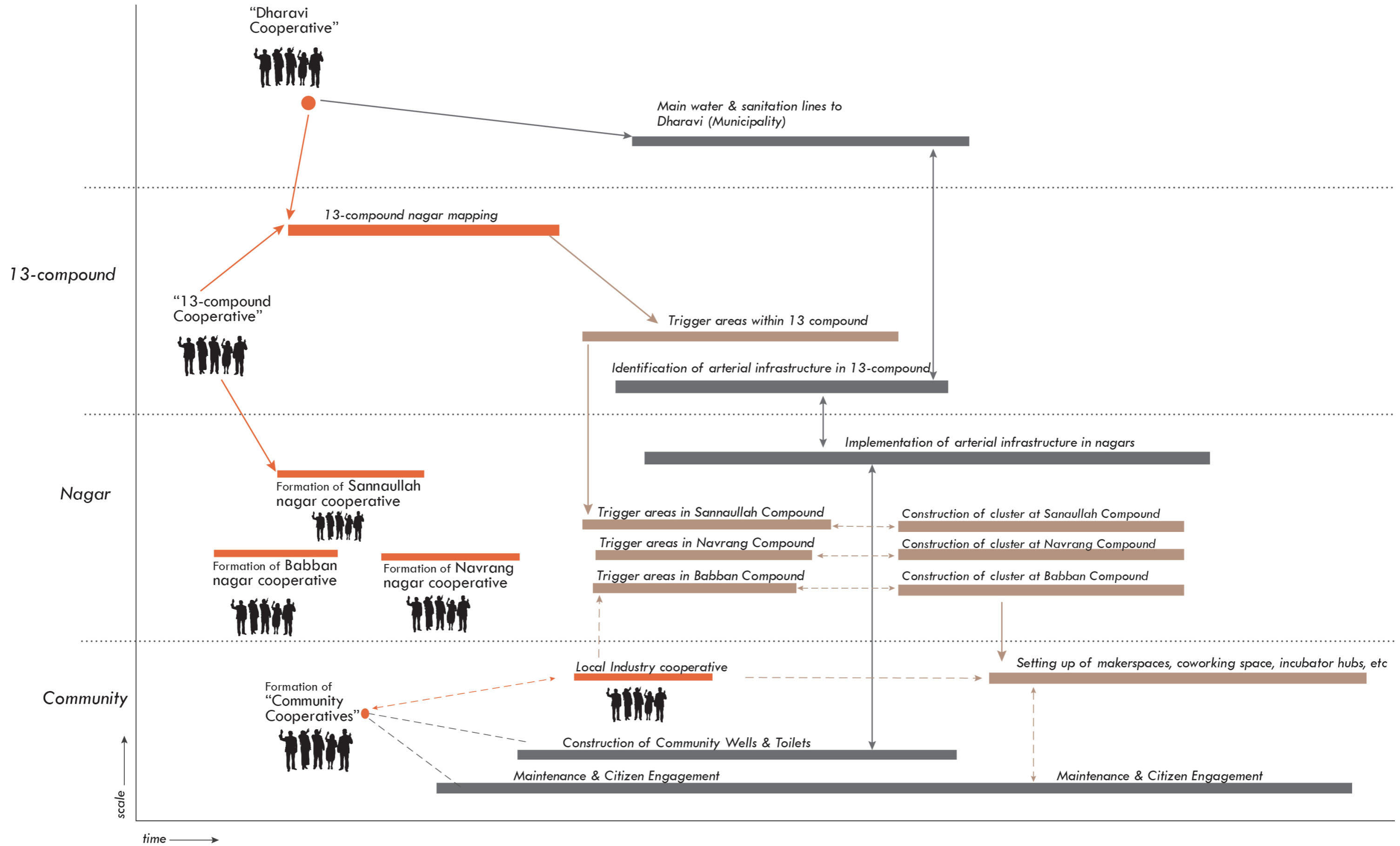


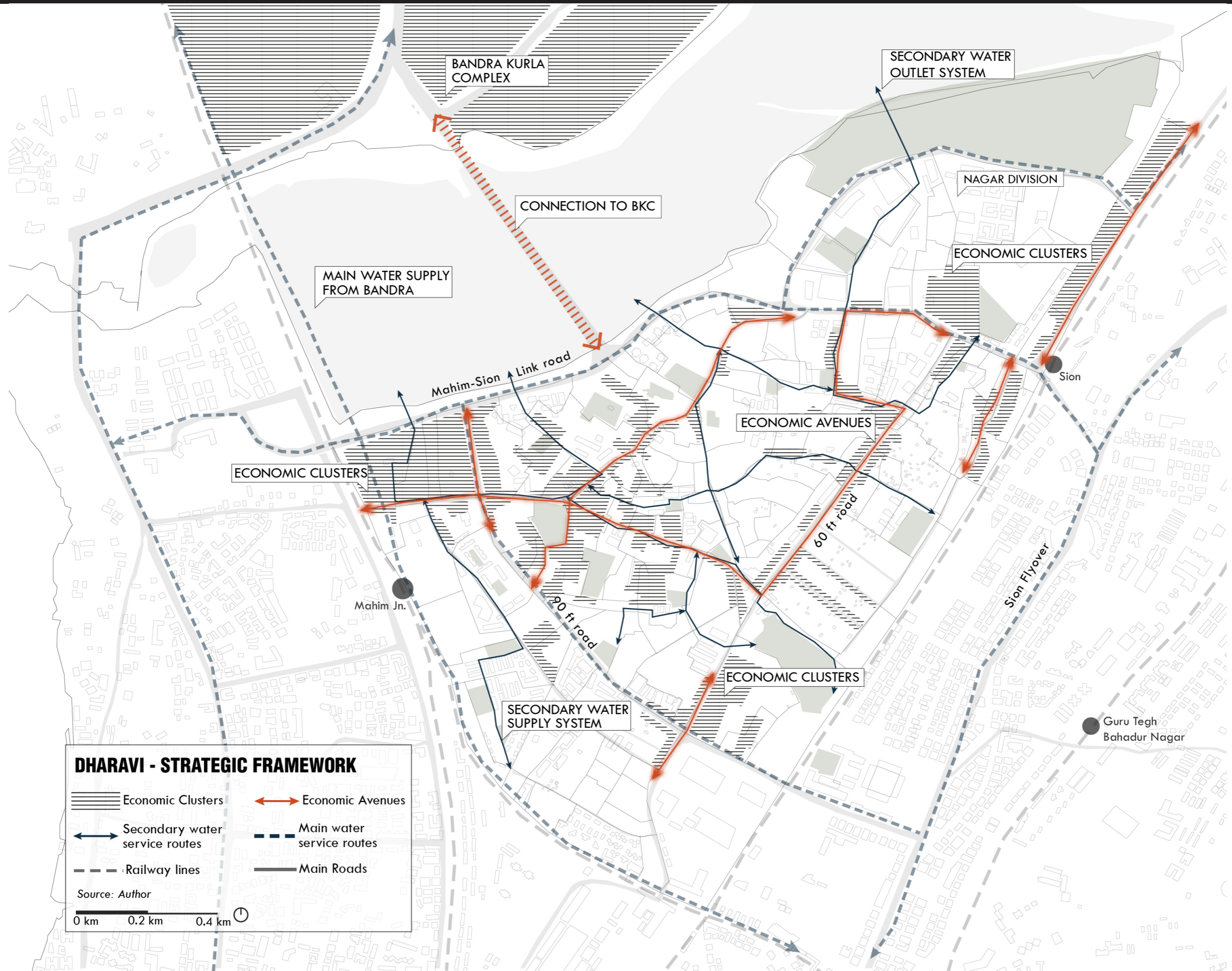
RESTRUCTURING THE PROPOSED WATER INFRASTRUCTURE











DHARAVI - STRATEGIC FRAMEWORK

	Economic Clusters		Economic Avenues
	Secondary water service routes		Main water service routes
	Railway lines		Main Roads

Source: Author

0 km 0.2 km 0.4 km

