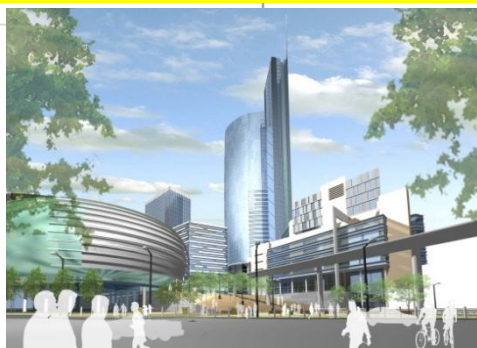




Relevance of NEXT CLASS Cities

Sustainability & Affordability

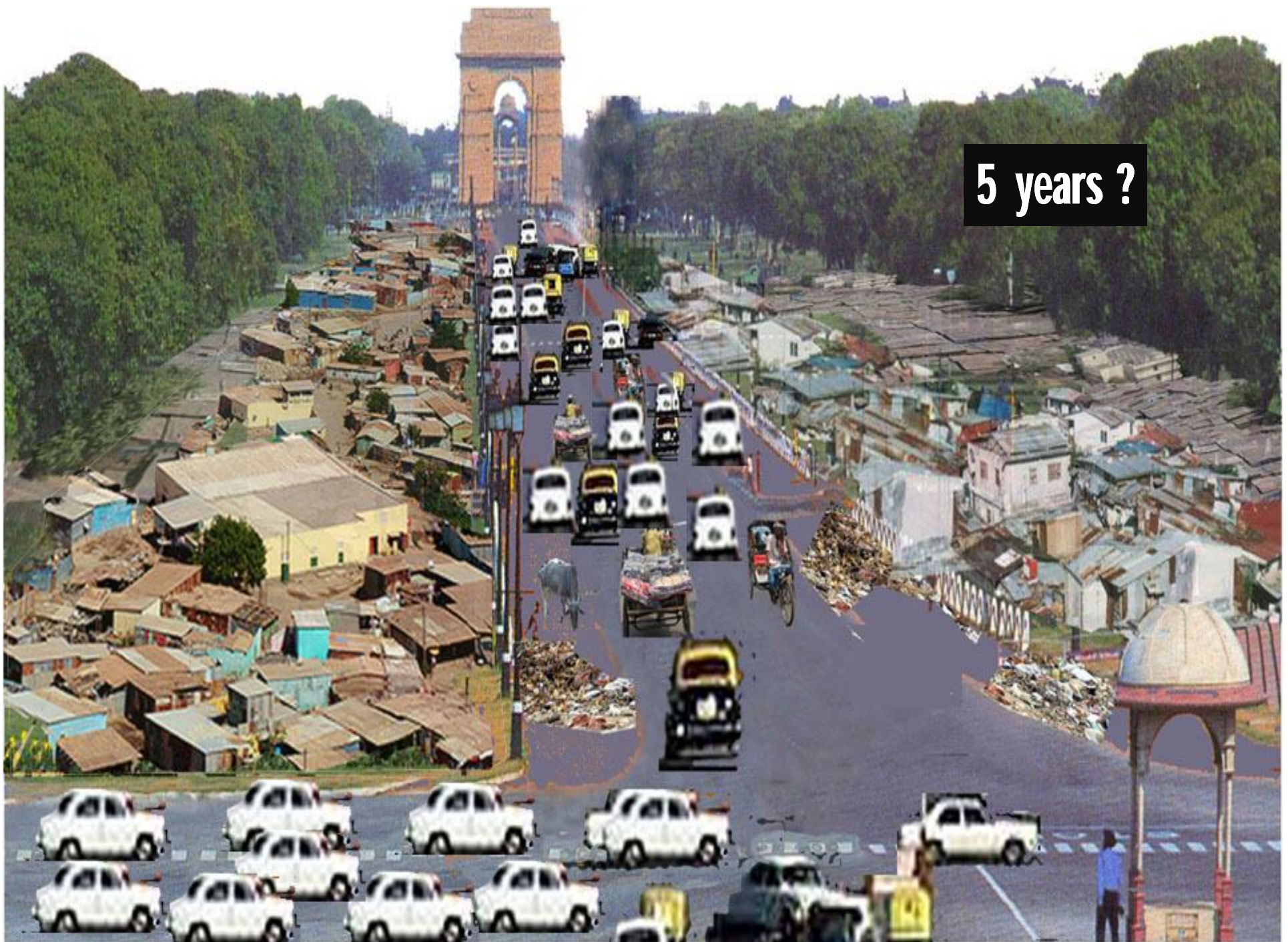


R.S.Das
Fairwood Consultants



**Today 1643 people will move to Delhi
from their villages.**

5 years ?

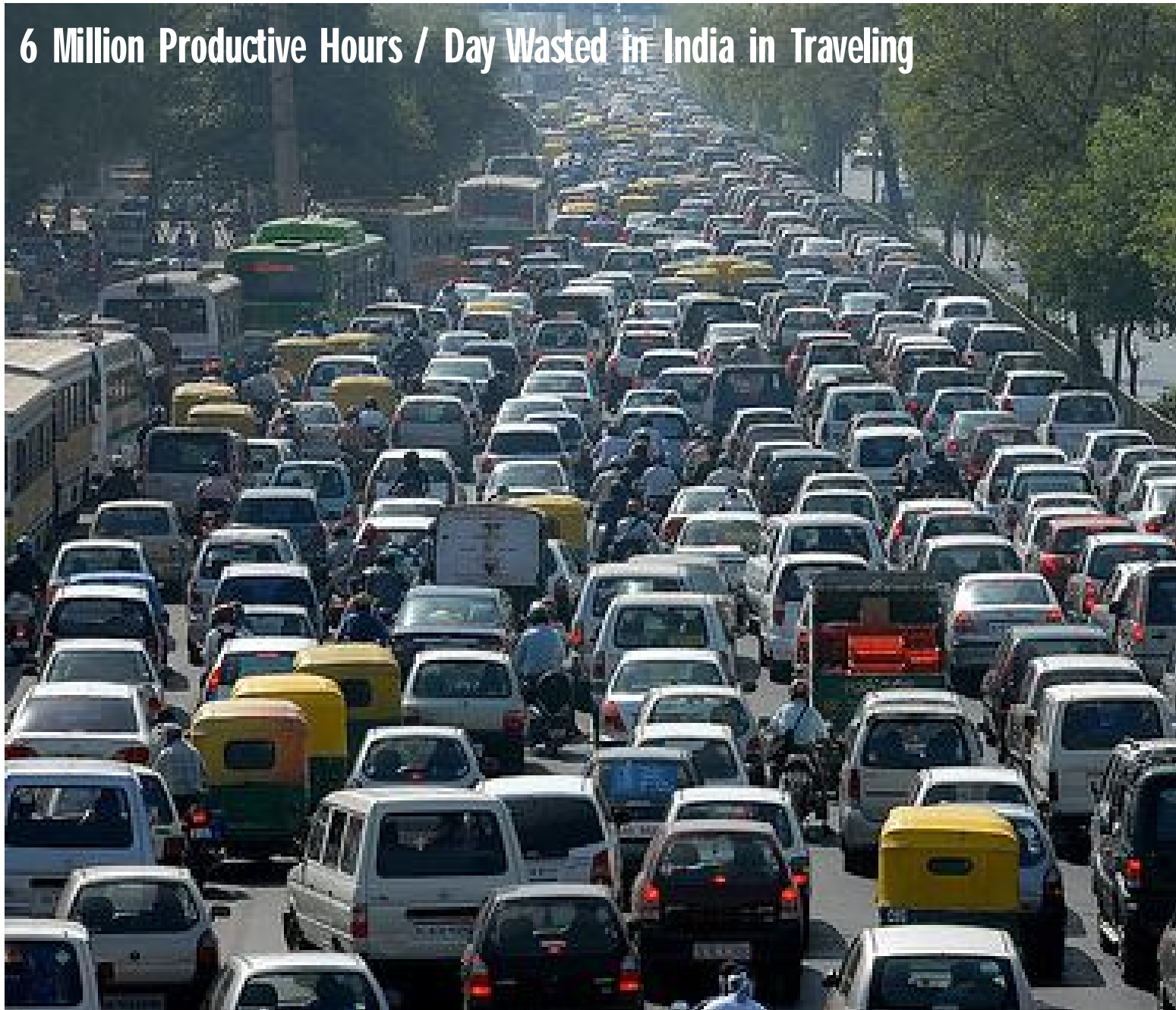


More than ever before , Cities are home to Humanities great expectations. . . .



But they are also becoming the cause ofA Crisis of Resources

6 Million Productive Hours / Day Wasted in India in Traveling

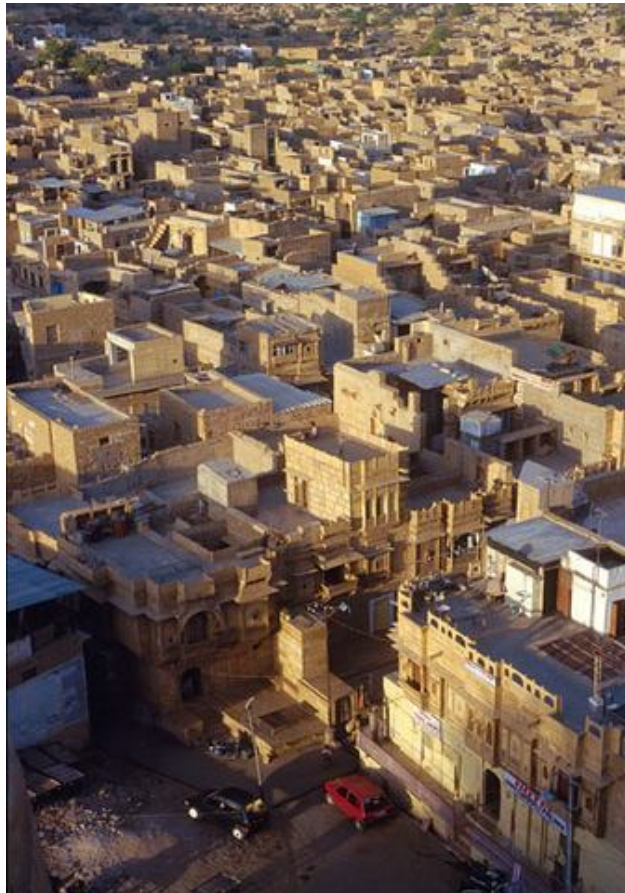


Urbanisation is inevitable.

**The potential benefits of urbanisation far outweigh the disadvantages.
The challenge lies in exploiting the possibilities.**

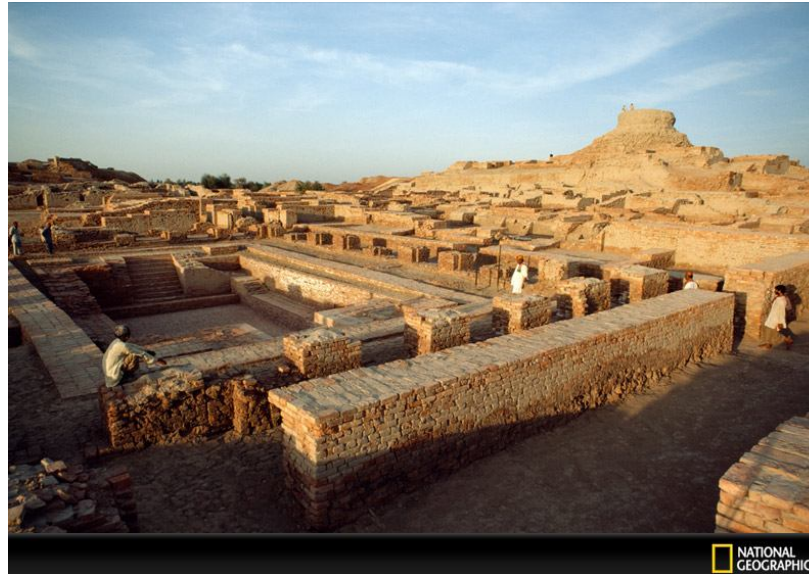
Cities - Evolution

OLD CITIES



Jaisalmer

They were definitely more
Energy Efficient than our
present Modern Cities



Old Delhi

CLIMATE FRIENDLY

WALKABLE

LIVEABLE

SECURE

COMMUNITY LIFE

Industrial Revolution Defined a New City

Technology and Transportation both have played a significant role in shaping the cities



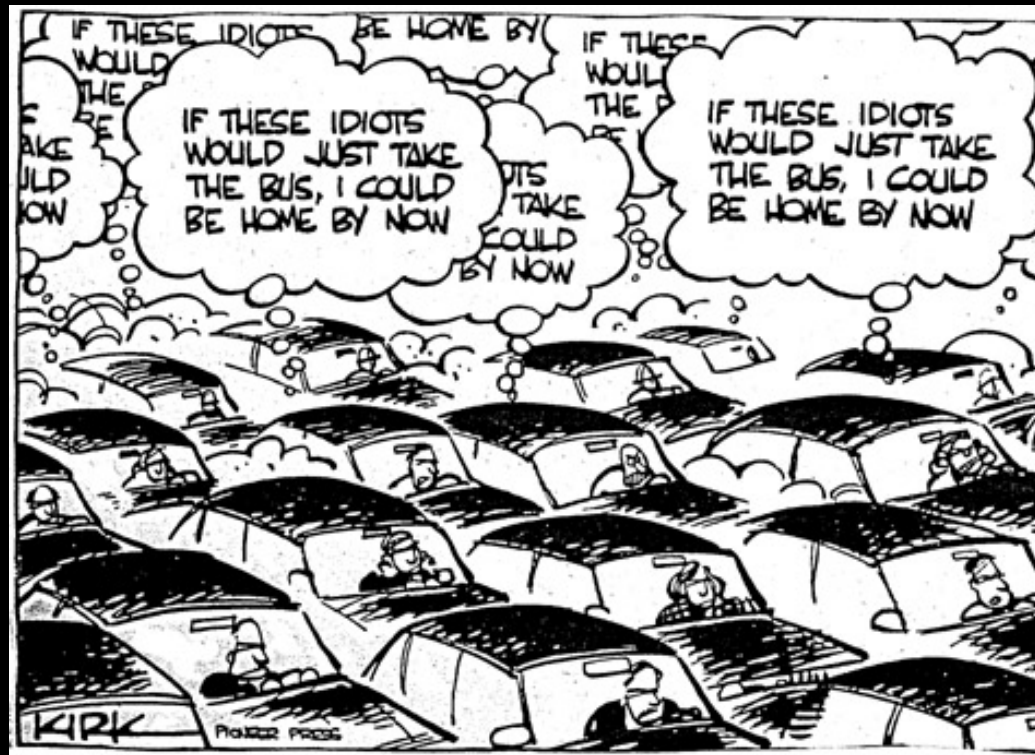
Manchester

Post 1945

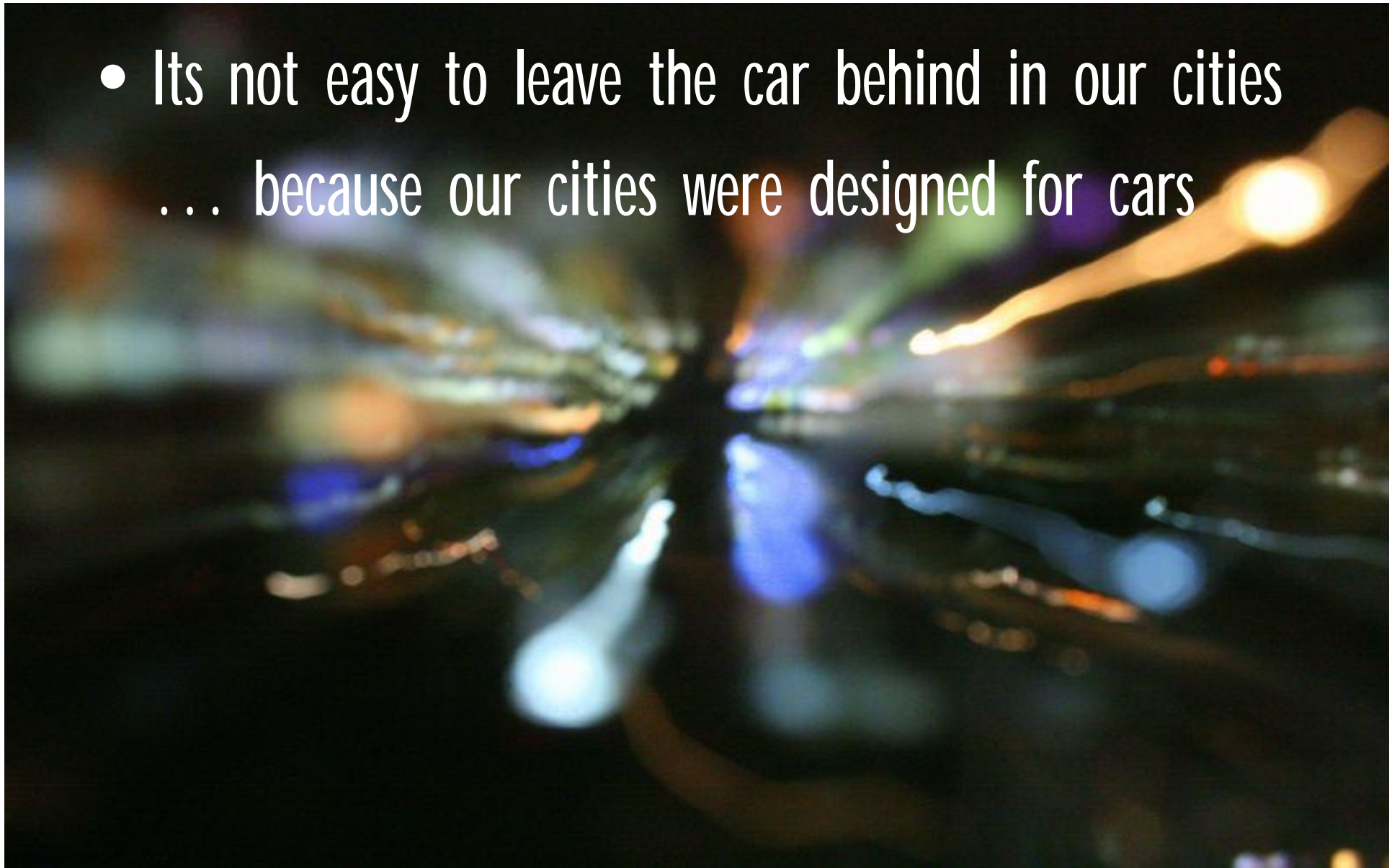
CARS.....CONSTRUCTION OF FREEWAYS.....LOANS FOR SUBURBS



The low dense suburbs....essentialising the ownership of cars



- Its not easy to leave the car behind in our cities
... because our cities were designed for cars





600 Million Cars on the Roads of India by 2050....

**= a cloud of CO₂ – 1 mtr thick - equal to half the area of Delhi
.....Everyday !**

Due to Air Pollution - 3million people die annually in the world

Not Even 1 % of solid waste in our country is processed



Have we reached the next Tipping Point?

Cities are not only about City Scapes or even just about homes.....

They are equally about Transport, Power, Water, Waste, Communication, Supply Chains, Economic drivers and most importantly, about LAND

Present Solutions to the City Problems

NEXT CLASS City Solutions

Road and Traffic

Building Flyovers and Widening Roads

Walkable Cities Intelligent transport

Is like Buying loose clothes on getting obese

Water Shortage

Rain Water Harvesting

Catch Water Before it flows into the

Marginal solution

Solid Waste

Composting

Producing Renewable Energy

Land intensive + emission of harmful gases

Power Shortage

Adding more Power Stations

Reducing the Demand — District Cooling

More energy + More greenhouse gases

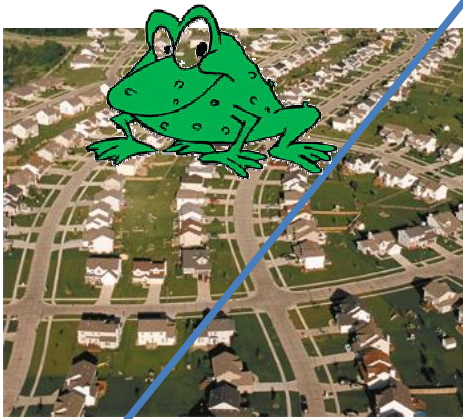
Housing Shortage

Redensification

Build Vertical

Infrastructural chaos

**Developed Cities which are already constructed might not have the incentives to carry out these solutions
But**



**India has a golden opportunity to Leap Frog all the stages of
Non Sustainable Development**

**NEXT
CLASS
CITY**

NEXT CLASS CITIES

'Building Vertical'

Not for Monuments
But for Habitats



Which is more Sustainable?



8090 sq.m. of land per capita
Lutyens Delhi

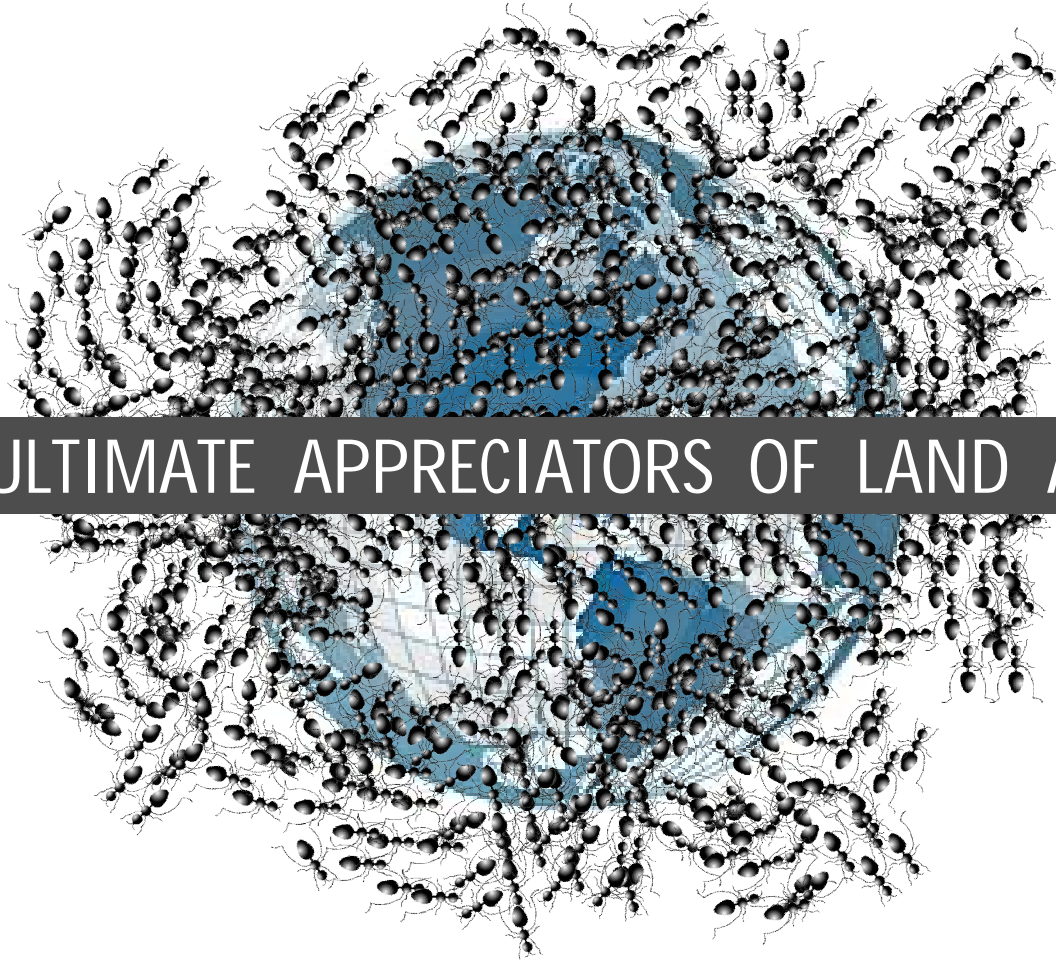
**40 sq.m of land
per capita**



Vertical Cities – Over , & Under, the Ground



IF ANTS WERE TO MAKE HORIZONTAL HABITATS ON EARTH

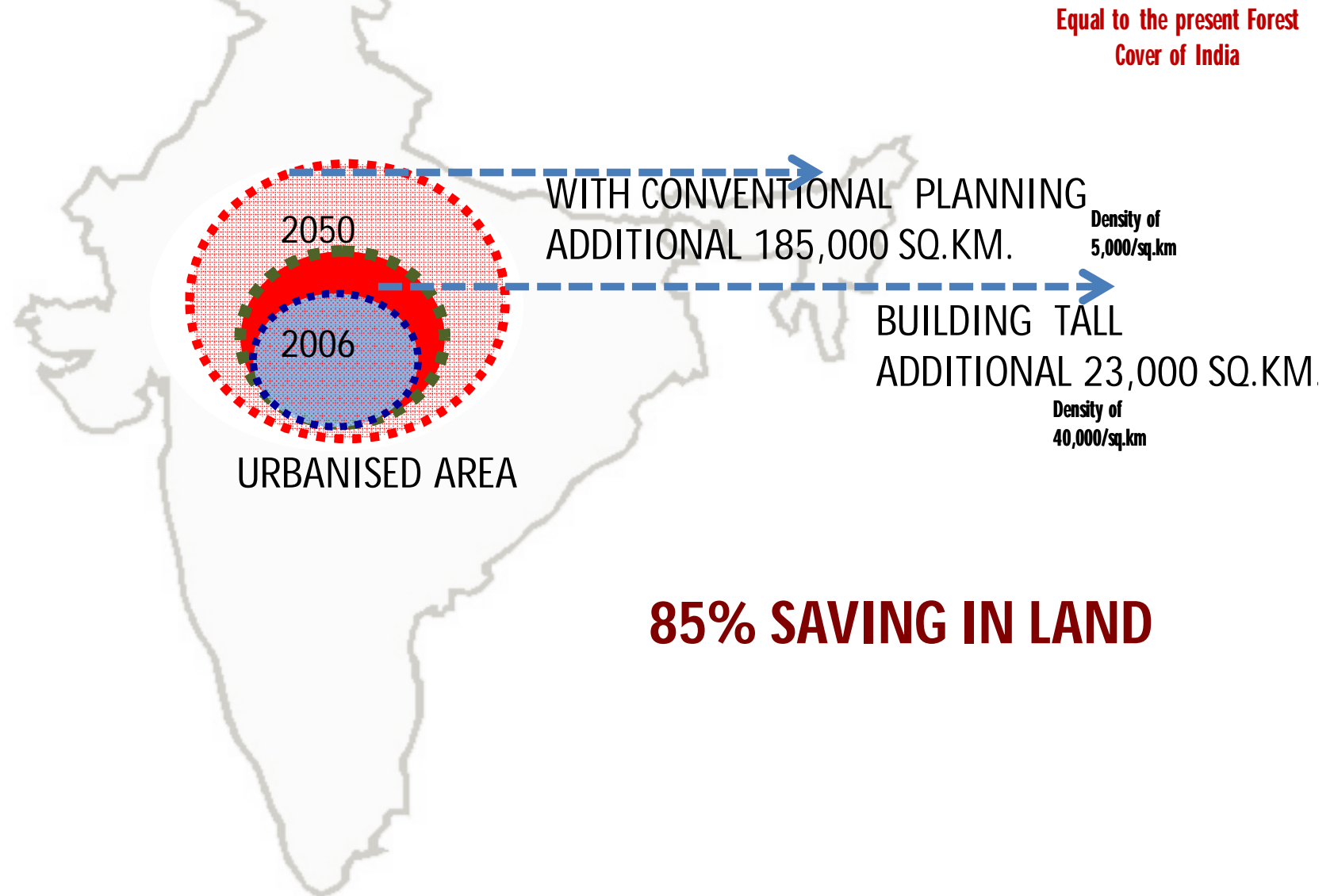


ANTS - AN ULTIMATE APPRECIATORS OF LAND AS A RESOURCE

THEY WOULD REQUIRE 20 TIMES THE LAND AREA OF EARTH

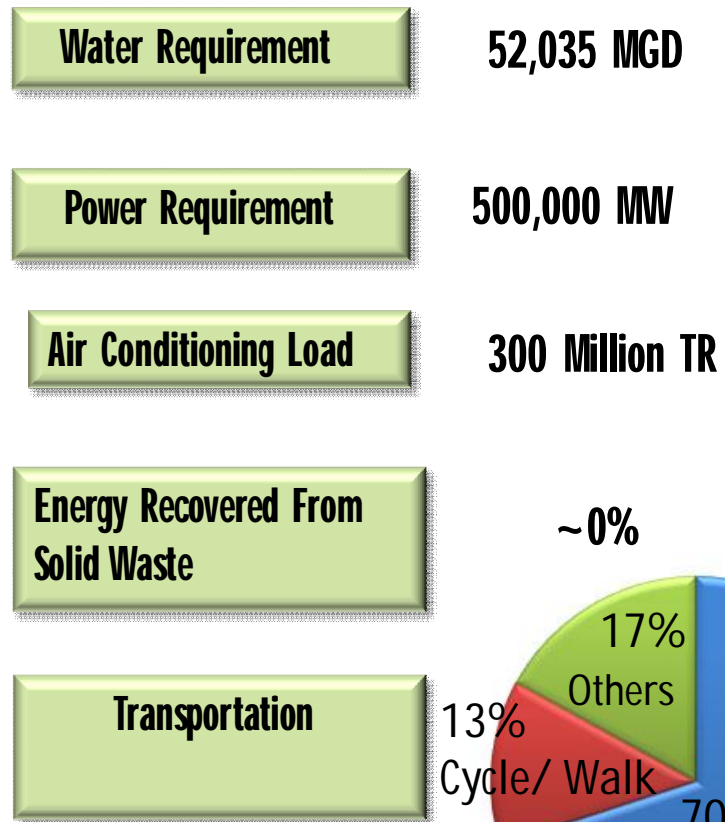
900 Million People Being Added To Urban India By 2050

Source : WDI



City Infrastructure needed in India – 2050

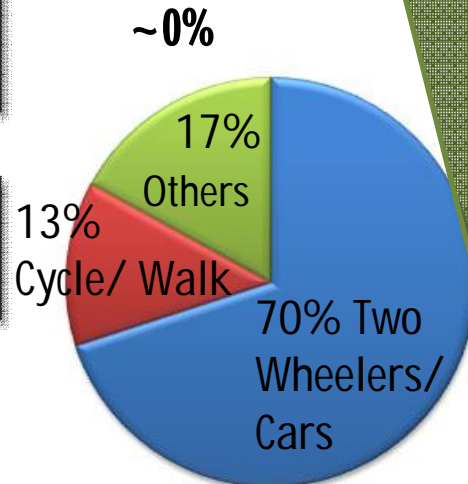
Planning Conventional way



NEXT CLASS CITIES

31,223 MGD

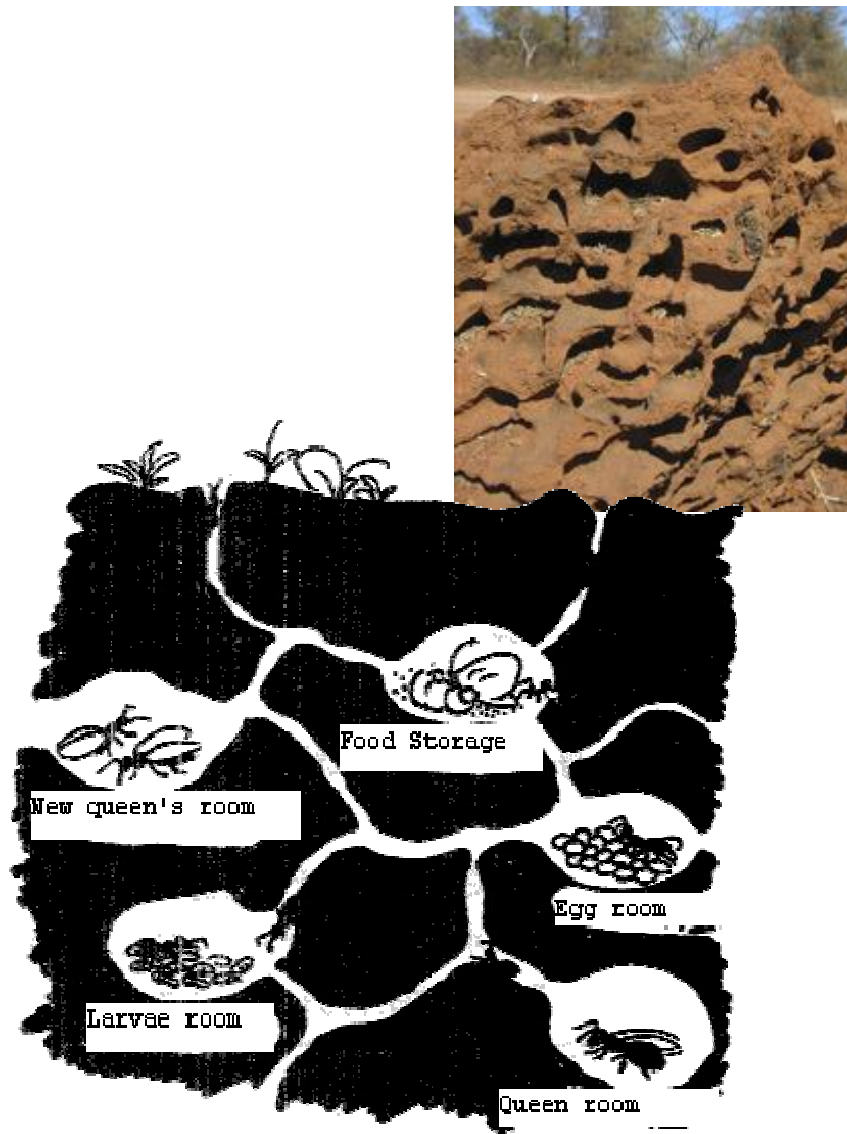
- Huge Savings in Resources
 - Lesser Carbon Emissions
 - Affordable
-
- | Resource | Saving |
|-------------------|------------------------------|
| Water | 40% Saving |
| Power | 30% Saving |
| Energy | 20% Energy Saving |
| Power requirement | 20% of the Power requirement |
| Energy Saving | 65% Energy Saving |



SMALL Solutions are Beautiful

.....but BIG Solutions are Imperative

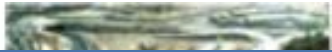
Ants live in Colonies / Cities



ONE SINGLE ORGANISM WITH MULTISYSTEMS

"A META SYSTEM"

A City needs to be like an organism where all the functions are well coordinated - META CITIES



Ubiquitous Cities

Intelligent City Management

Intelligent Management of Infrastructure

Crisis Management

Shorten Congestion hours

Enhance Traffic Speed and Safety

Rapid Work Process

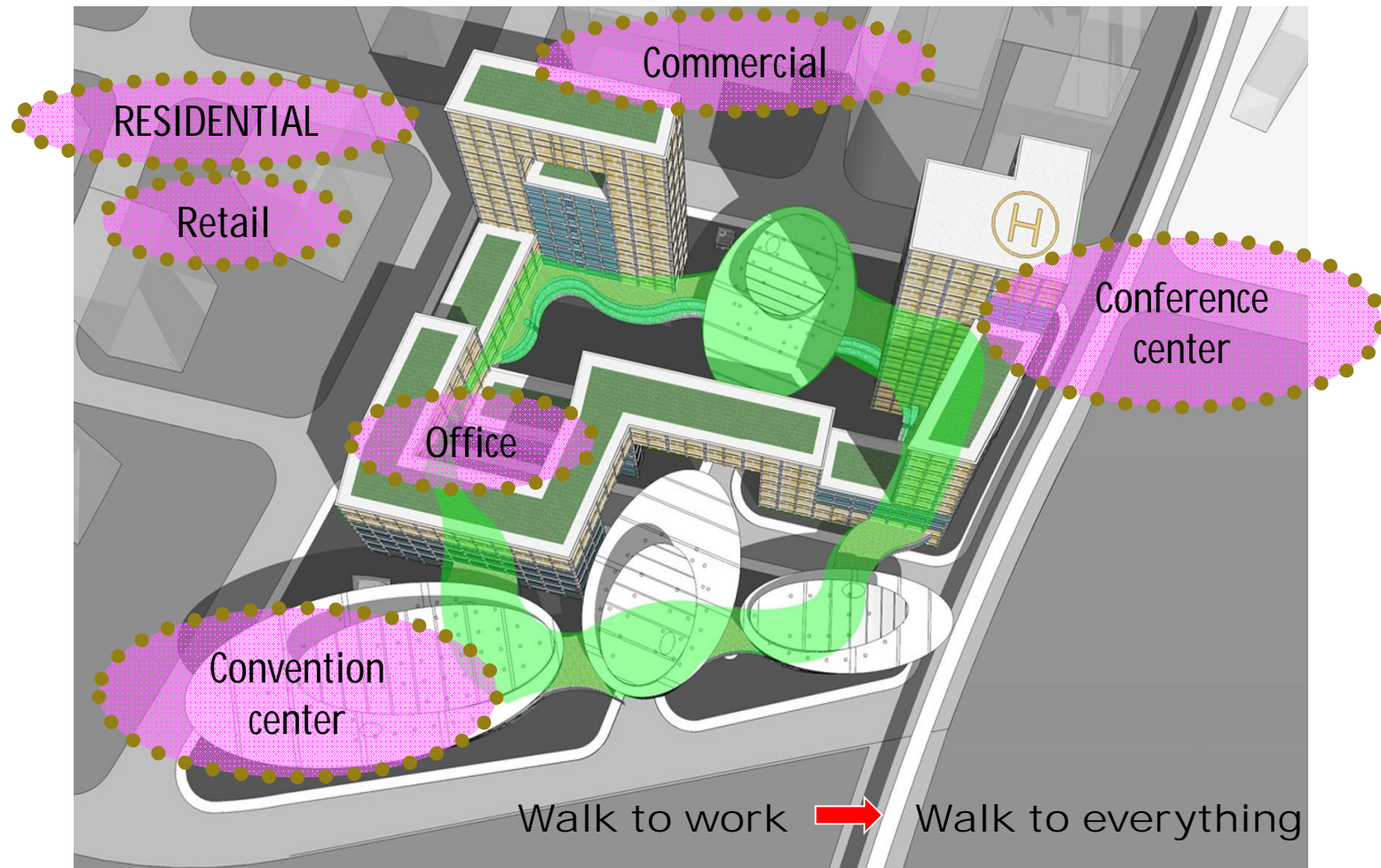
Zero Defect City Control

Efficient Management Control

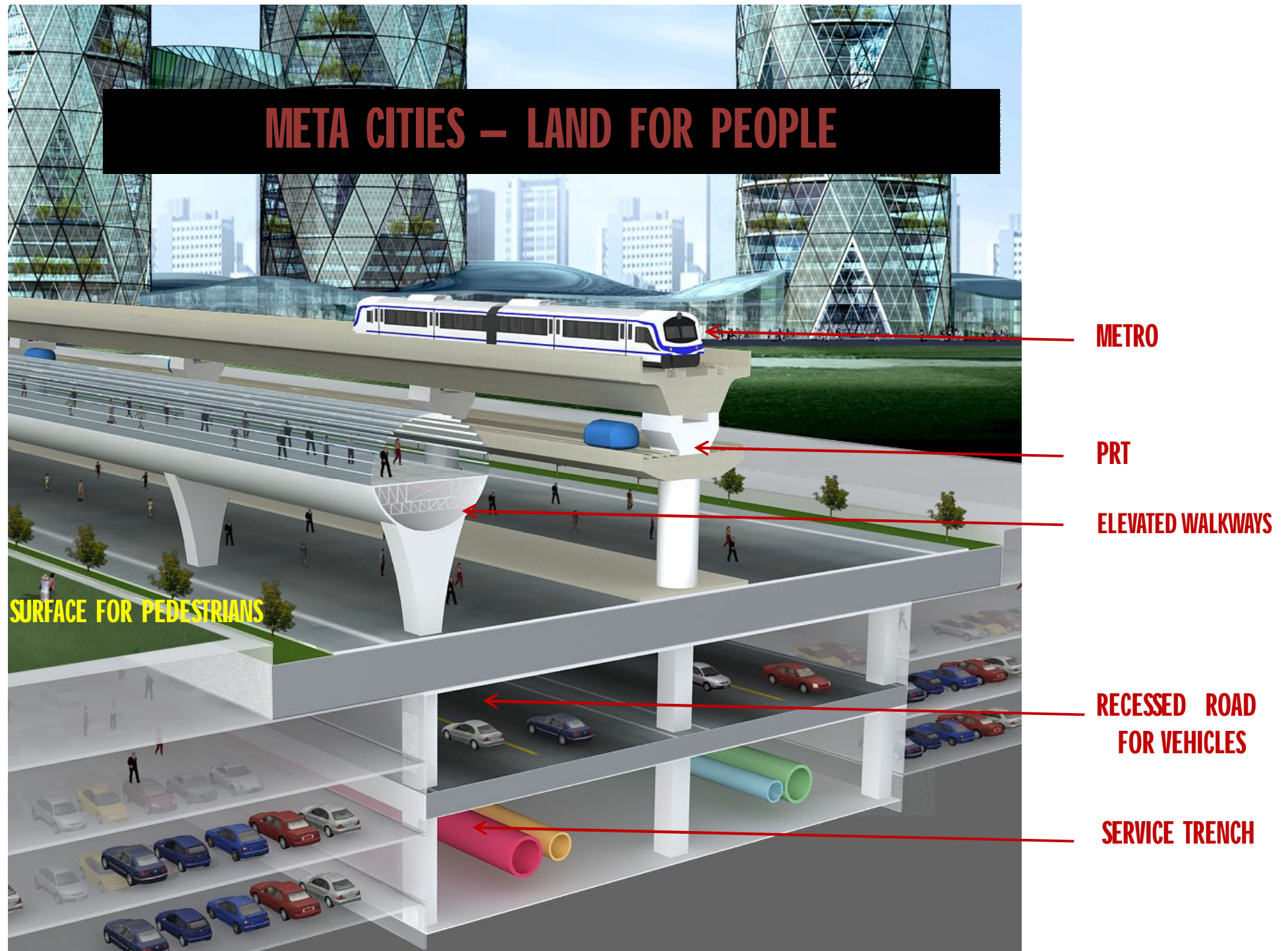
Management Cost Reduction

Quick Response

META CITIES - Self Sustainable Units / Mixed Use Communities with well knit functions



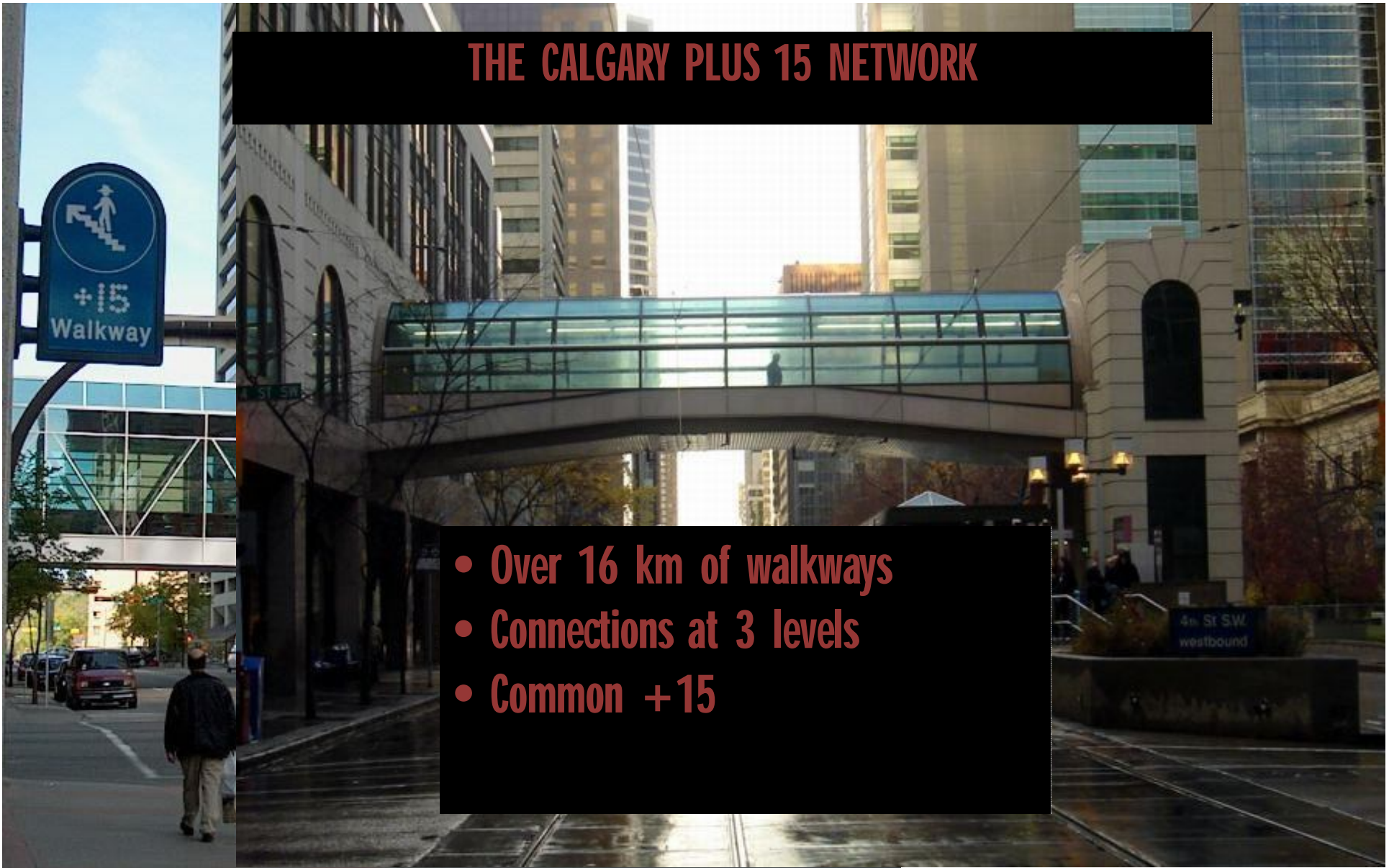
META CITIES – LAND FOR PEOPLE



Connected ..

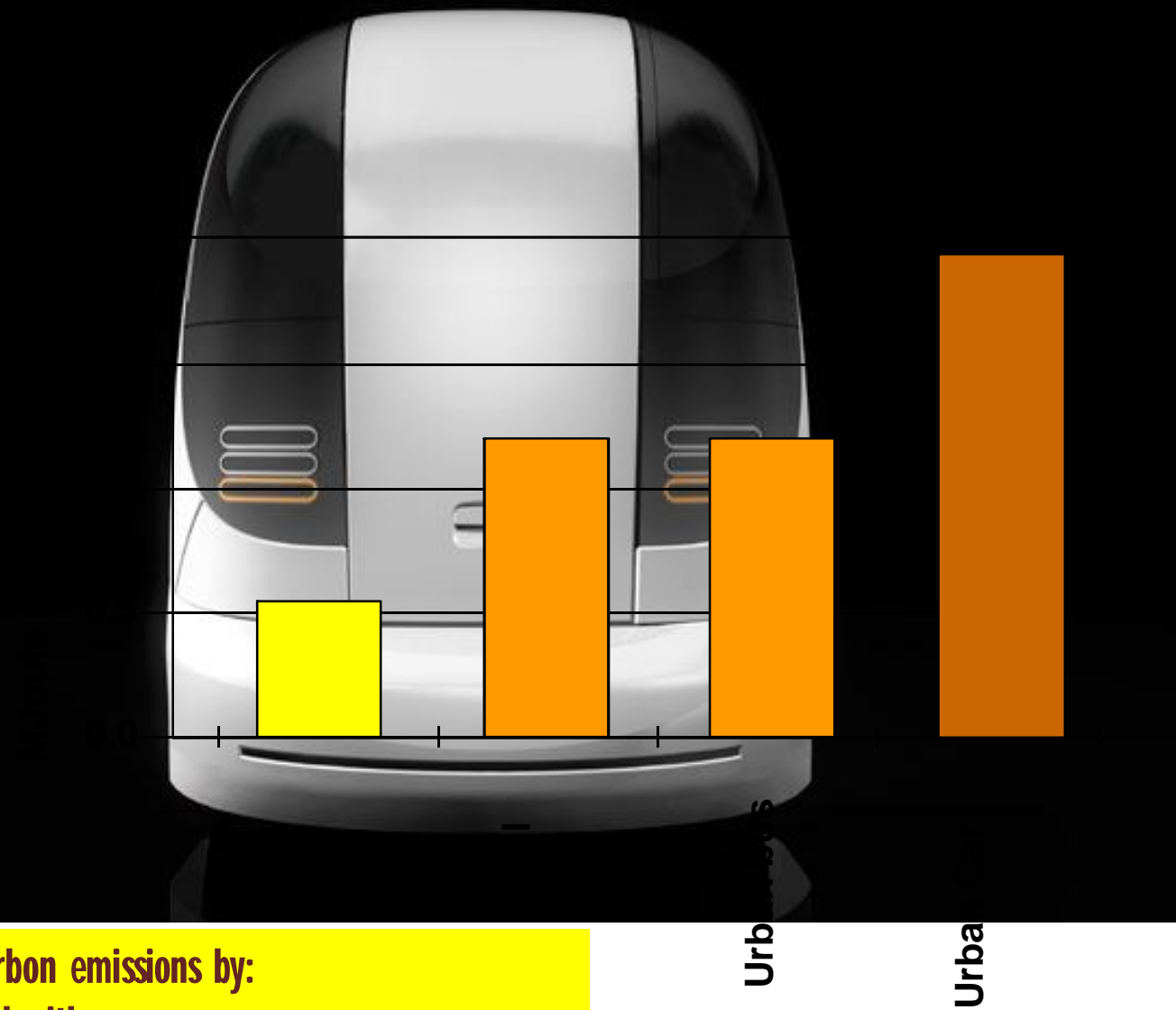
THE CALGARY PLUS 15 NETWORK

- Over 16 km of walkways
- Connections at 3 levels
- Common +15



Eco Friendly Technologies on City Scale

Energy use

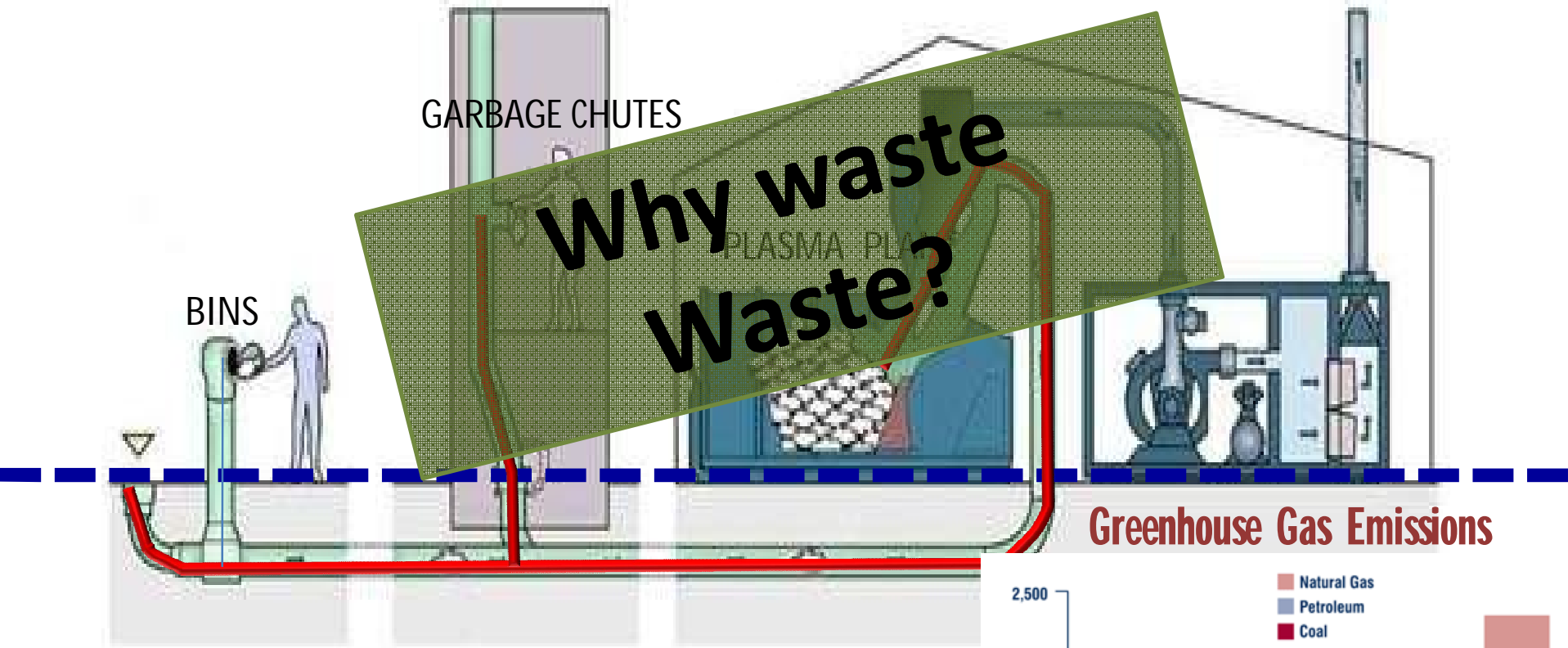


PRT reduces carbon emissions by:

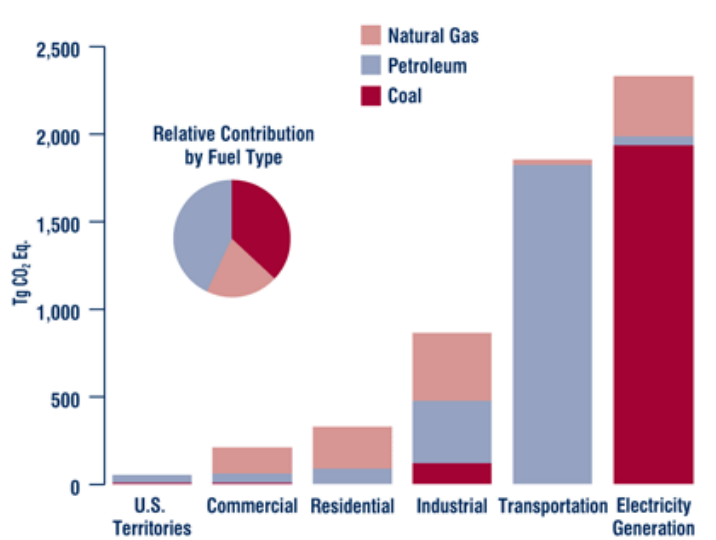
- 70% compared with cars
- 50% compared with train/bus

Producing Energies

PRODUCTION OF POWER THROUGH PLASMA



Greenhouse Gas Emissions



Using Wasted Materials



One Bryant Park, America



56,250
tons of CO₂

Saved from entering
the atmosphere by
adding 45% blast
furnace slag to the
cement used at
One Bryant park

META CITIES – WATER NEUTRAL AND ZERO DISCHARGE CITIES

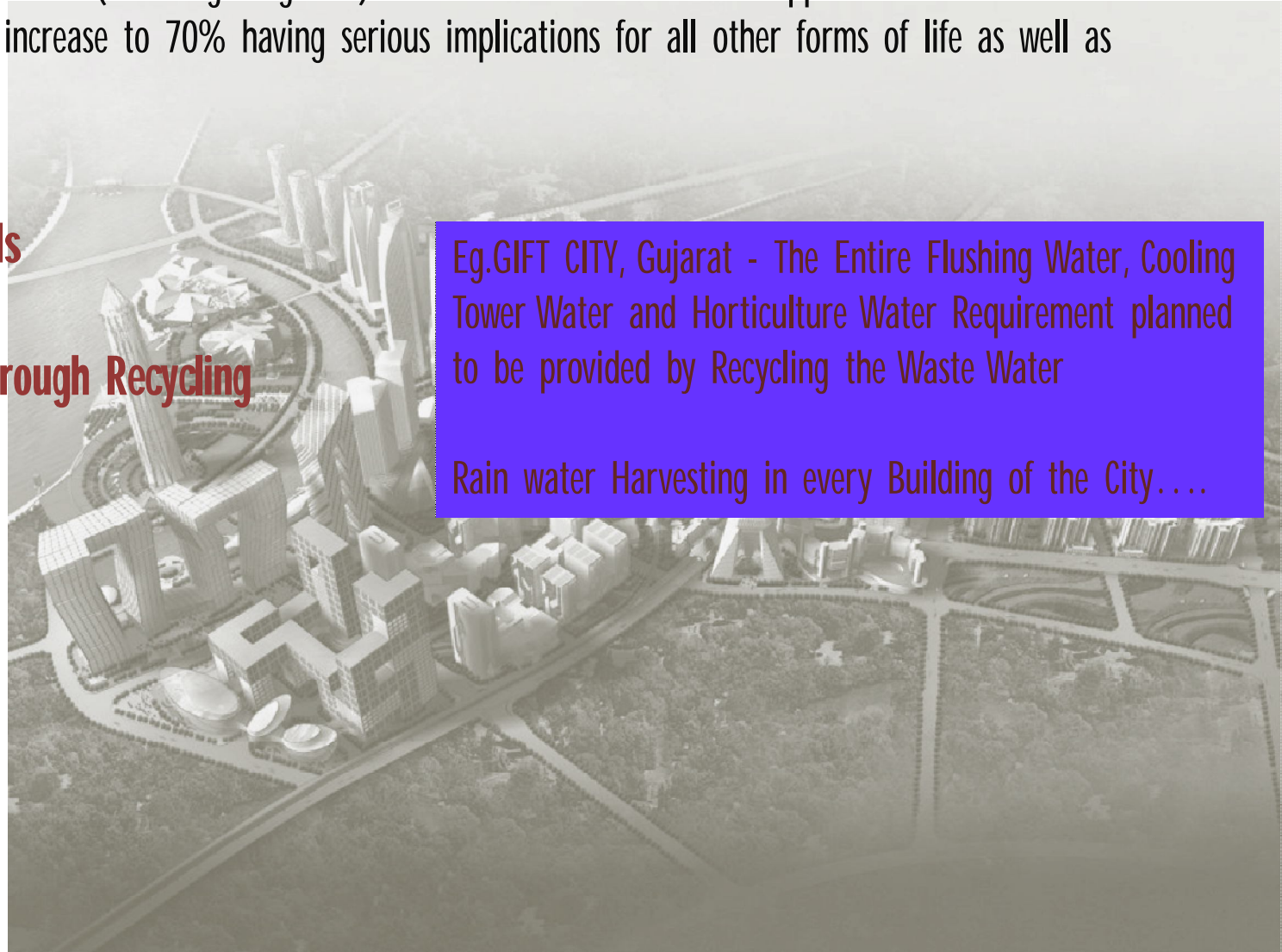
Human Beings use upto 54 % (including irrigation) of all accessible freshwater supplies in the world.
By 2025, this share will increase to 70% having serious implications for all other forms of life as well as plants.....

R.Rajagopalan

META CITIES towards

Reducing demand through Recycling

Restoring



Eg.GIFT CITY, Gujarat - The Entire Flushing Water, Cooling Tower Water and Horticulture Water Requirement planned to be provided by Recycling the Waste Water

Rain water Harvesting in every Building of the City....

META City – A Community



Indian cities are exclusionary – fail to create Public spaces. Cut, divide, wall up, segregate. Planning norms are designed for exclusion.

Building Dense and Vertical
to create well knit and coherent communities



Beyond Glass and Concrete....



META CITIES – More Productive...

COMPACT
DEVELOPMENT

KNOWLEDGE SPILLOVERS

The increased Commercial
Density afforded by tall cities has
key Economic impacts

COMPETITION

SPECIALISATION

EFFICIENCY

What India Needs to do.....

A National Discourse on City Planning

City Planning needs a
Paradigm Shift

Government Incentives for Building green and Optimisation of Resources

Based on Quantified
Environmental Costs and
Benefits of the project –
e.g. BCA Singapore
yardsticks
Reviewing the FSI's

Review the Planning Norms

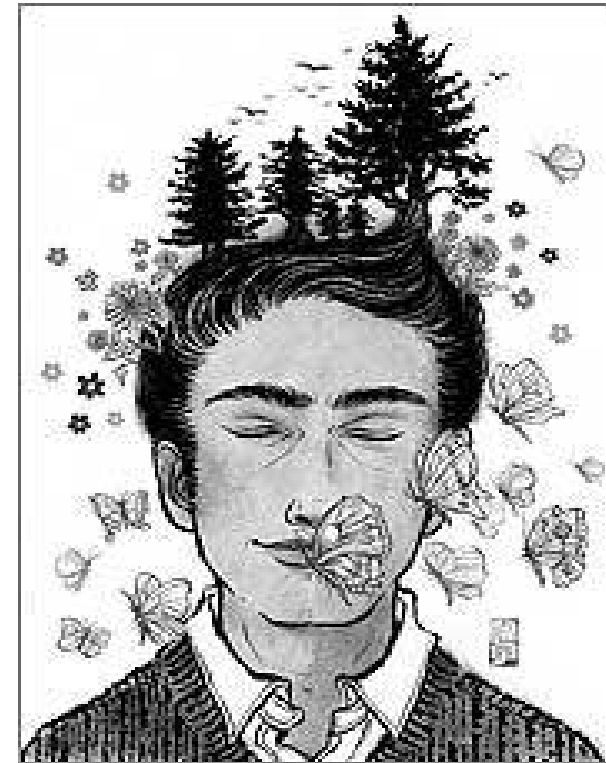
Strict Land Use

Large Stake of Private Sector and Citizen's Participation

Integrated Design Rather than Zoning –
Cities need to be Self Sustainable Units

Inclusive Cities – Informal sector

Above All – A Futuristic Approach for Cities



**Reducing the ecological
footprint of our cities**

**Making our cities for
people**

And this will need -

Mega Solutions & Mindset change