ConnectedCities
unity in diversity

ConnectedCities

Camilla Ween
Head of Communications

ConnectedCities
unity in diversity

How to locate new development to minimise Climate Change and maximise Investment Returns

ConnectedCities
unity in diversity

Climate Emergency

The United Nations:

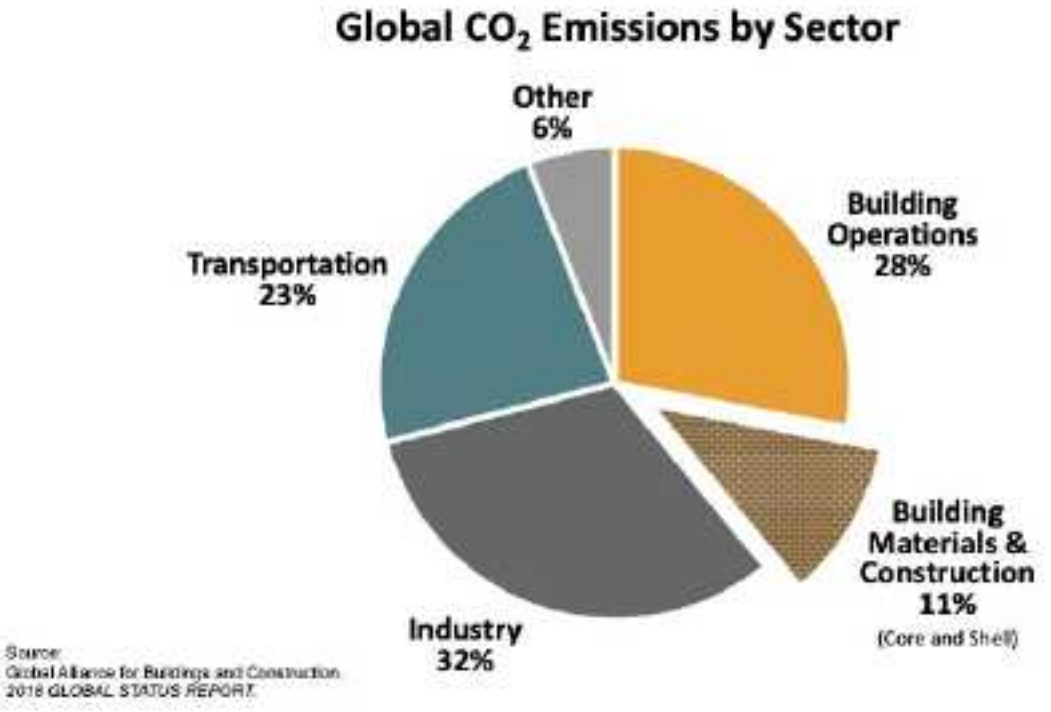
- The past decade the planet's hottest since records began
- Each of the last four decades has been hotter than the preceding one

Chennai declared "day zero" in 2019 as taps ran dry in the weeks before the monsoon

ConnectedCities
unity in diversity

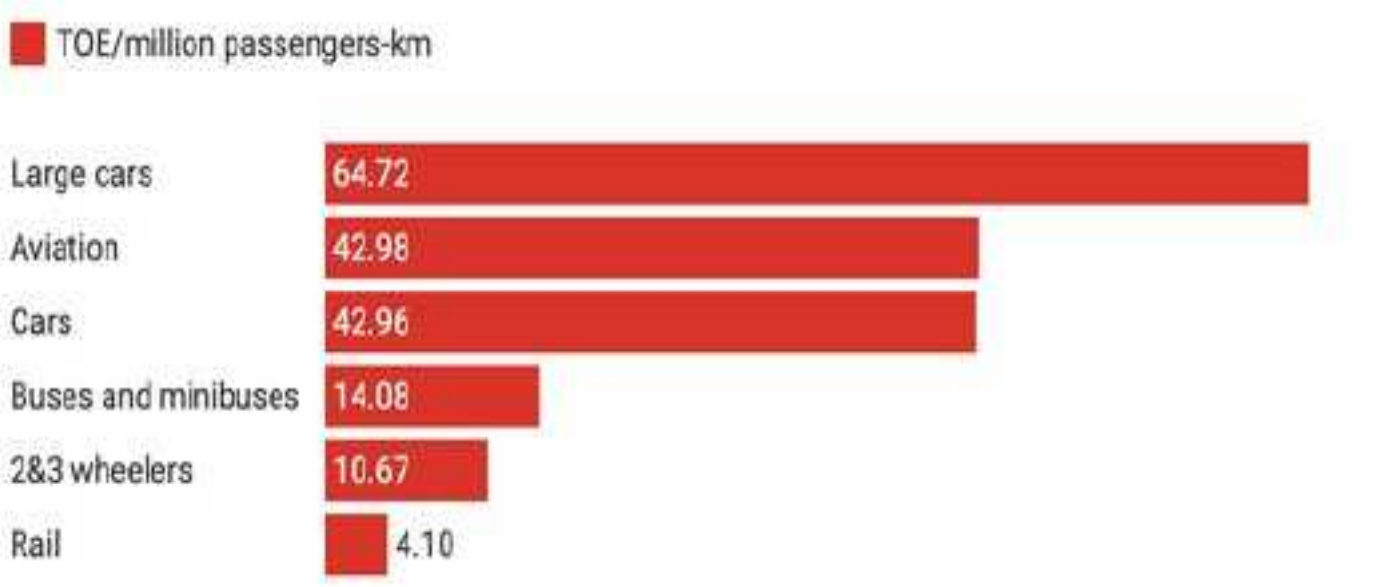
Greenhouse Gases

1. Building Use
2. Transport
3. Industry
4. Building Materials
5. Other



ConnectedCities
unity in diversity

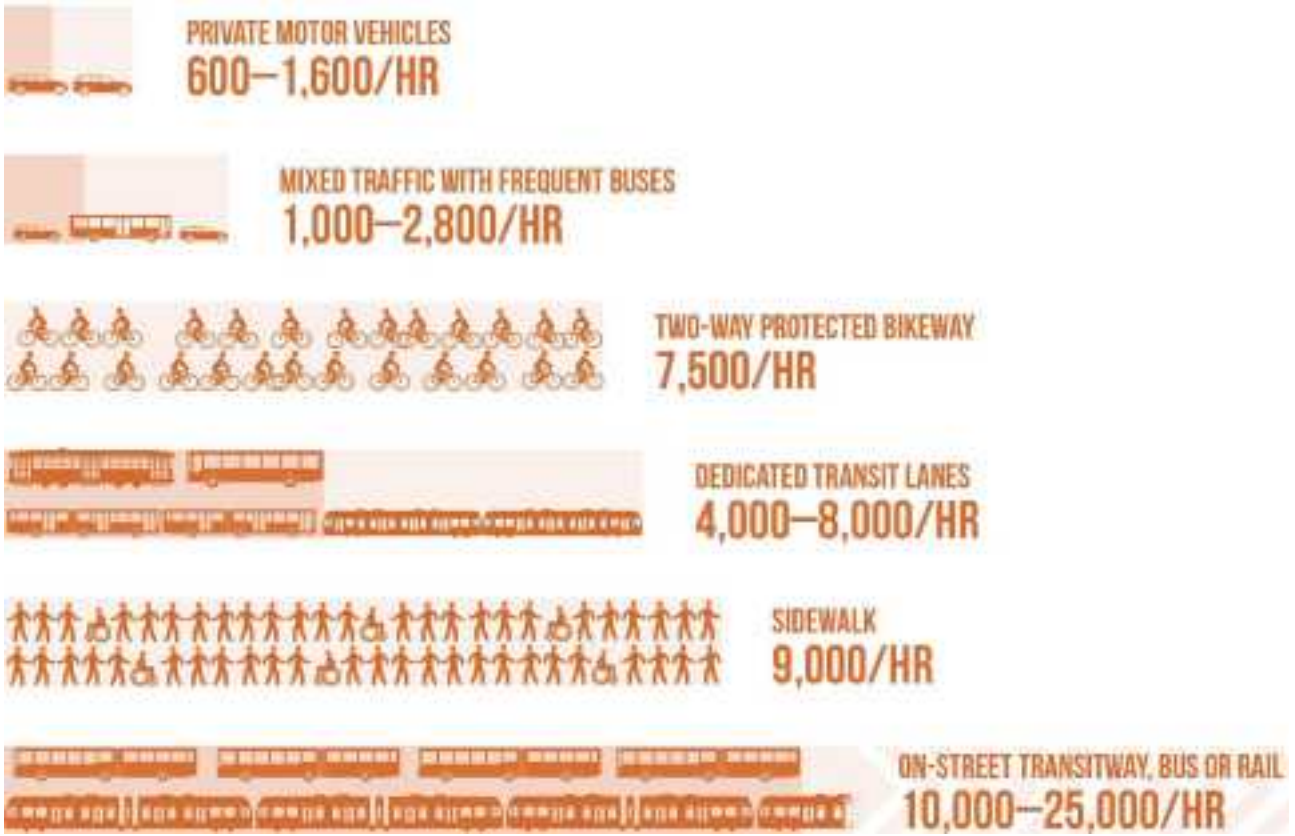
Emissions to move 1million passenger-km - by Modes



TOE is tonne of oil equivalent, a unit of measure to indicate the amount of energy released in burning one metric ton of crude oil.

ConnectedCities
unity in diversity

Number of People Moved per Hour - by Mode



ConnectedCities
unity in diversity

Infrastructure Costs

UK

New rail	£60M per km (Strategic Rail Authority)
Upgraded rail	£8M-30M per km (See following examples)

India

New rail	Rs140M per km (Indian Railways)
Upgraded rail	Rs70M per km (See following examples)

ConnectedCities
unity in diversity

Making Maximum Use of Existing Transport Infrastructure

ConnectedCities
unity in diversity

Manchester Metrolink Phase 1

Used existing heavy rail infrastructure

Length: 21.1 km

Cost: £227 M

Cost per km: £7.3M

ConnectedCities
unity in diversity

Manchester Metrolink Phase 2

Used mainly new rail infrastructure

Length: 8 km

Cost: £208 M

Cost per km: £26M

ConnectedCities
unity in diversity

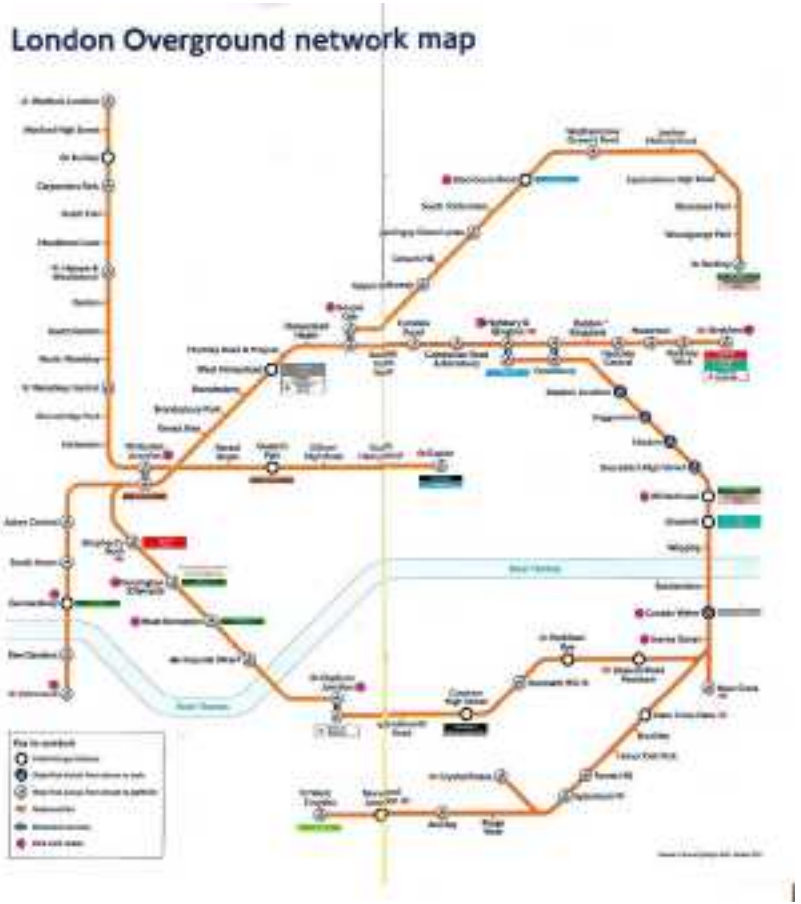
London Overground

Used existing heavy rail infrastructure

Length: 167 km

Cost: £200M

Cost per km: £1.2M



ConnectedCities
unity in diversity

Maniyachi-Tirunelveli Nagercoil

Double Tracking & Electrification

Length: 158 km

Cost: Rs1,182 crore (118bn)

Cost per km: Rs7.4 crore (74M)

ConnectedCities
unity in diversity

Using Existing Rail to Create Metros

Chandigarh

Uses existing Indian Railways lines

1 new rail link

5 existing stations

6 new stations

Proposed cost Rs 1,000-crore

Proposed cost for the Metro system was Rs 14,000 crore

.

ConnectedCities
unity in diversity

ConnectedCities

Brian Q Love
Chief Executive

ConnectedCities
unity in diversity

A Typical *Connected*City

A voluntary federation of towns linked by existing rail lines

No station more than 15 minutes from the Hub Town

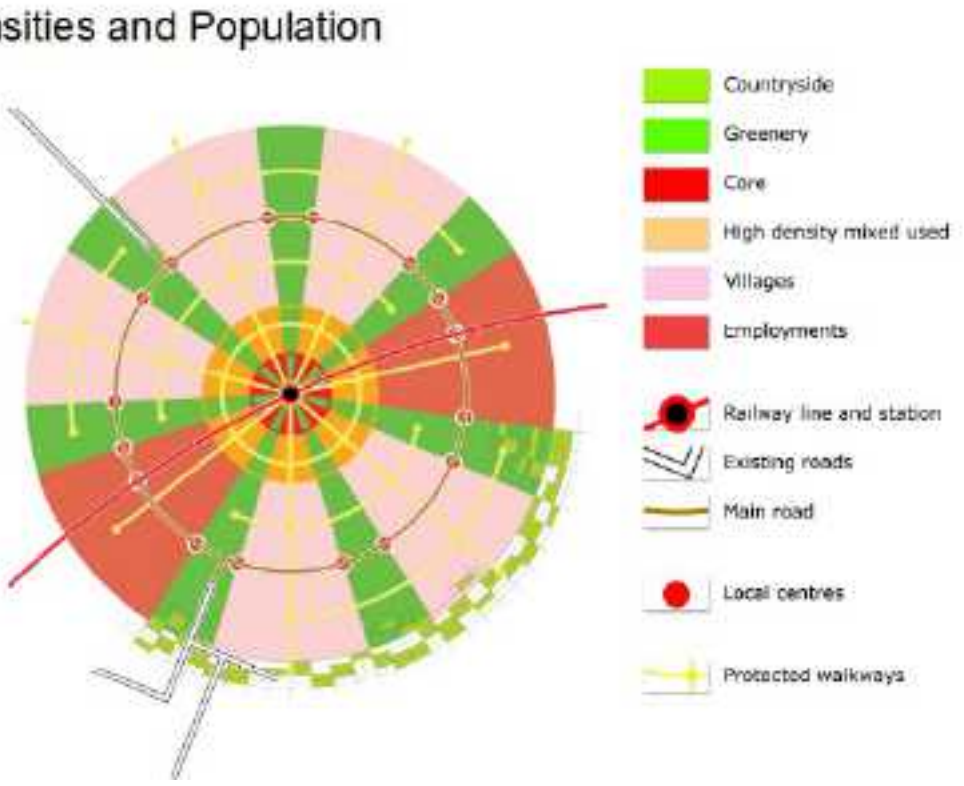
A ConnectedCity is self contained, with home, work, leisure and commerce all within the city

ConnectedCities
unity in diversity

Town in the I km radius Around a Station

1km Radius Pedshed

- 300 hectares
- Population 30,000.
- Density of 100 person/ha
  UN minimum level for viable
  public transport
- 10,000 dwellings
- 50% of land green space
  (public, semi public and private)



ConnectedCities
unity in diversity

Greater Bristol *Connected*City

Existing Stations

Eleven rail stations within
15 minutes travel time of Bristol TM:

Station	*Potential new pop*
• Clifton Down	500
• Montpelier	500
• Patchway	3,000
• Bristol Parkway	7,000
• Filton Abbey Wood	2,000
• Stapleton Rd	1,000
• Lawrence Hill	3,000
• Bristol Temple Meads	5,000
• Bedminster	2,000
• Parson St	3,000
• Nailsea & Blackwell	15,000
• Yatton	15,000

Existing stations new pop 57,000

ConnectedCities
unity in diversity

Greater Bristol *Connected*City

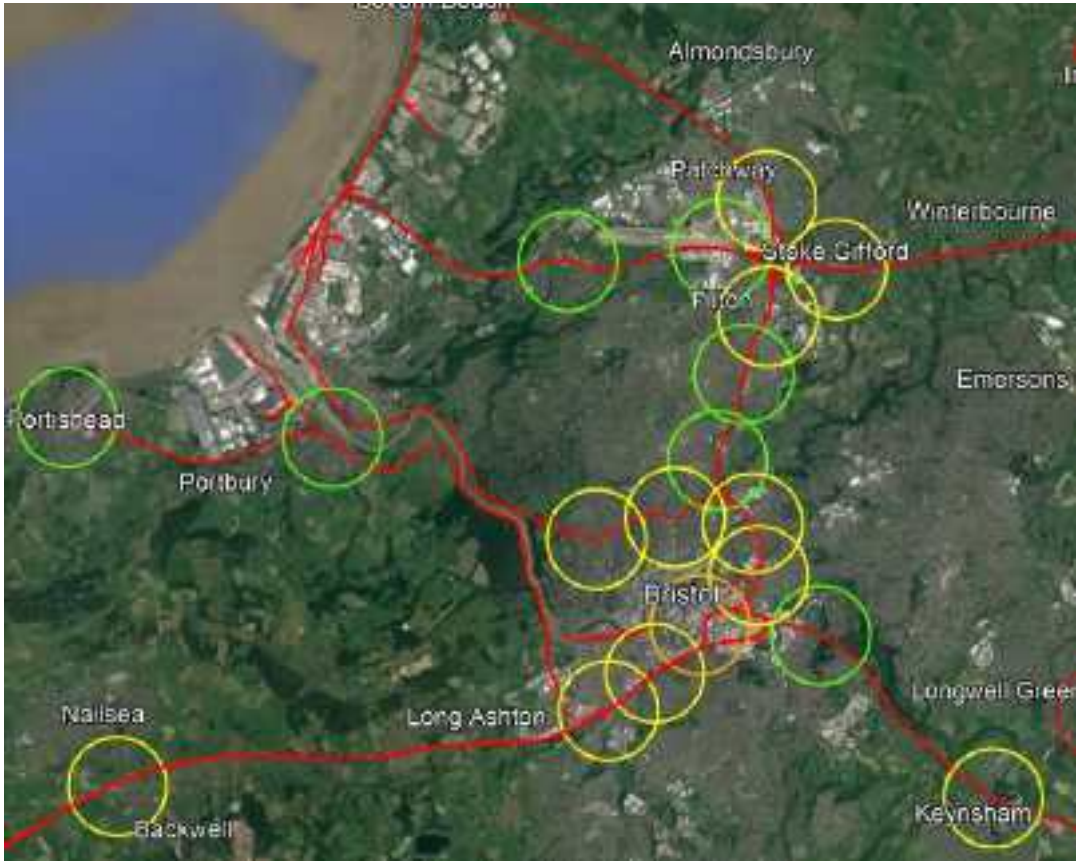
New Stations

Eight potential new stations within 15 mins travel of Bristol TM:

Station	*Potential new pop*
● Henbury	7,000
● North Filton	1,500
● Horfield	1,000
● Ashley Hill	2,000
● St Annes Park	500
● Pill	5,000
● Portishead	7,000

New station potential pop 24,000

Total new plus existing **80,000+**



ConnectedCities
unity in diversity

Avonmouth *Connected*City

Existing & New Stations

Eight existing & new stations within 15 mins travel of Avonmouth:

Station	*Potential new pop*
● Sea Mills	500
● Shirehampton	500
● Portway P&R	500
● Avonmouth	7,000
● St Andrews Rd	7.000
● Chittening	25,000
● Severn Beach	5,000
● Plining	29,000
New potential pop	75,000

ConnectedCities
unity in diversity

Bristol MetroWest

Upgraded Rail
Integrated Public Transport

MetroWest phase 1: Portishead line
new stations
- Pill
- Portishead

MetroWest phase 2: Henbury rail line
new stations
- Henbury
- North Filton
- Ashley Down

Combined new population capacity
Greater Bristol + Avonmouth
Existing stations + new **155,000+**
Govt housing target 7,000 p.a.

ConnectedCities
unity in diversity

Tirunelveli *Connected*City

Existing Stations

Seven rail stations within 15 minutes travel time of Tirunelveli Junction:

- Tirunelveli Town - 8 trains per day
- Cheranmadevi - 8 trains per day
- Palayamkottai - 6 trains per day
- Pettai - 4 trains per day
- Sengulam - 1 train per day
- Seydunganallur - 7 trains per day
- Thalaiyuthu - 5 trains per day

ConnectedCities
unity in diversity

Tirunelveli *Connected*City

Existing Stations

If growth continues at 15% per decade,
population in 2050 will be 875,000
an increase of 375,000.

Existing station pedsheds could
have housing and commercial/civic
facilities at average densities for

- 165,000 persons

ConnectedCities
unity in diversity

Existing Station Example - Pettai

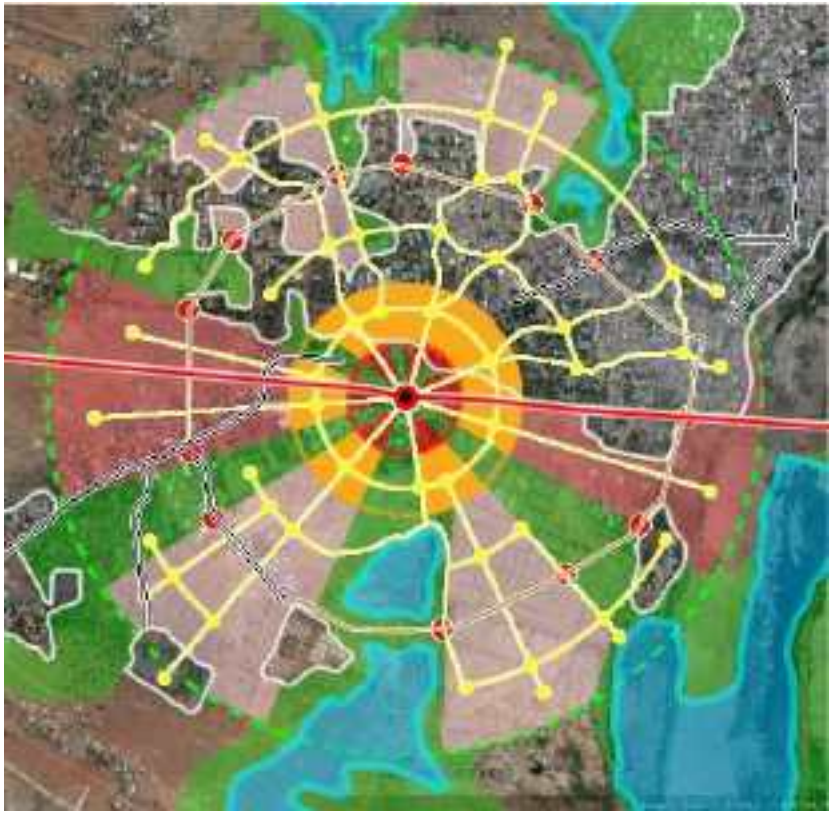
The pedsheds of stations serving towns such as Pettai will be developed to preserve each one's character and direct new growth.

Key historic buildings and high yield agricultural land will be be retained.

Town core of mixed use buildings of 4 to 7 stories in which civic, commercial, educational and residential uses.

Beyond, family villages will be in lower-rise buildings.

Growth restricted to the 1km radius pedshed.



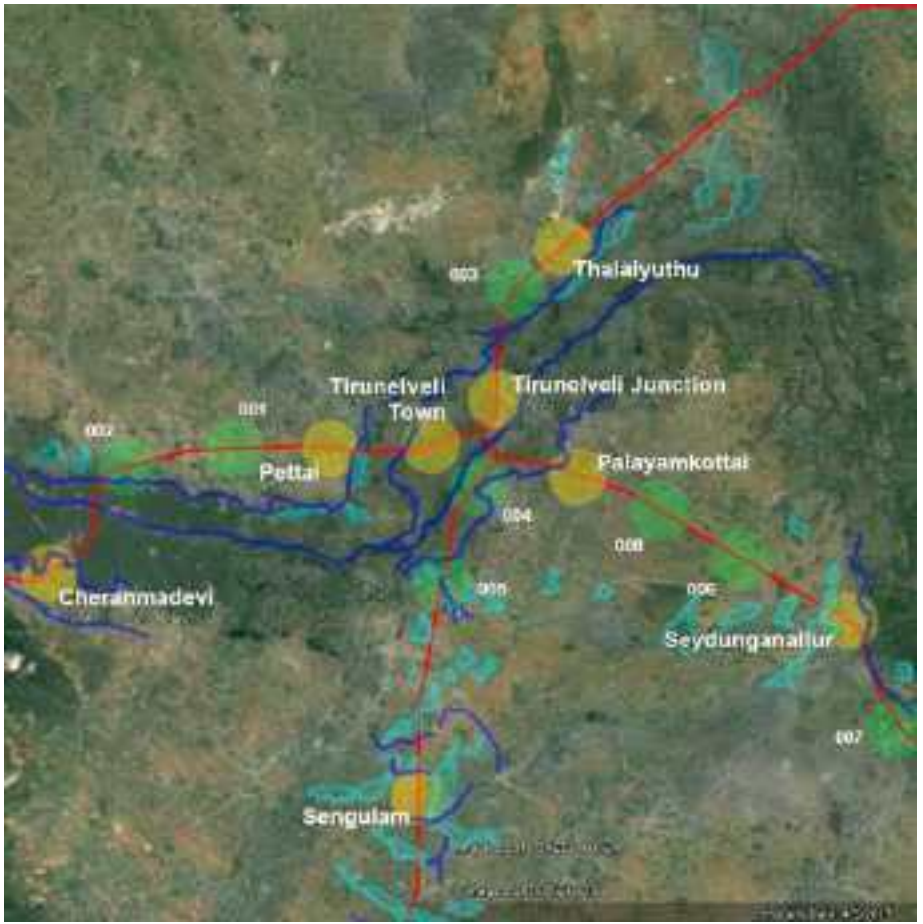
ConnectedCities
unity in diversity

Tirunelveli *Connected*City

8 new station pedsheds could house:

- 200,000+ at average densities
- 500,000+ at medium densities

equivalent to population growth of more than 20% per decade



ConnectedCities
unity in diversity

www.ConnectedCities.co.uk

When googling be sure to type

ConnectedCities

(all one word)