Climate Smart Cities

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Are your buildings 'smart'?

Sustainability –
Siemens aims to be net-carbon neutral by 2030

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2.2 Mt CO$_2$　　**-50%**　　**-100%**

2014　　2020　　2030

Electricity
Heating / Process heat
Fleet
Other
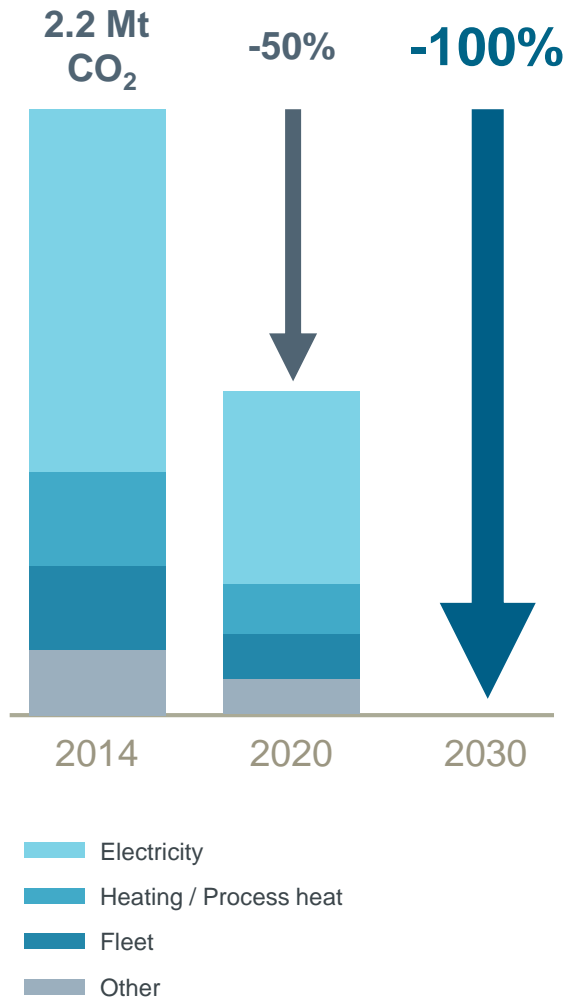
We are investing over €100 million in measures to reduce our carbon footprint

Drive energy efficiency program
Increase energy efficiency in factories, employ sustainable technologies in new buildings

Leverage distributed energy systems
Reduce energy costs and CO$_2$ emissions

Reduce fleet emissions
Utilize potential of low-emission cars in fleet, including electro mobility
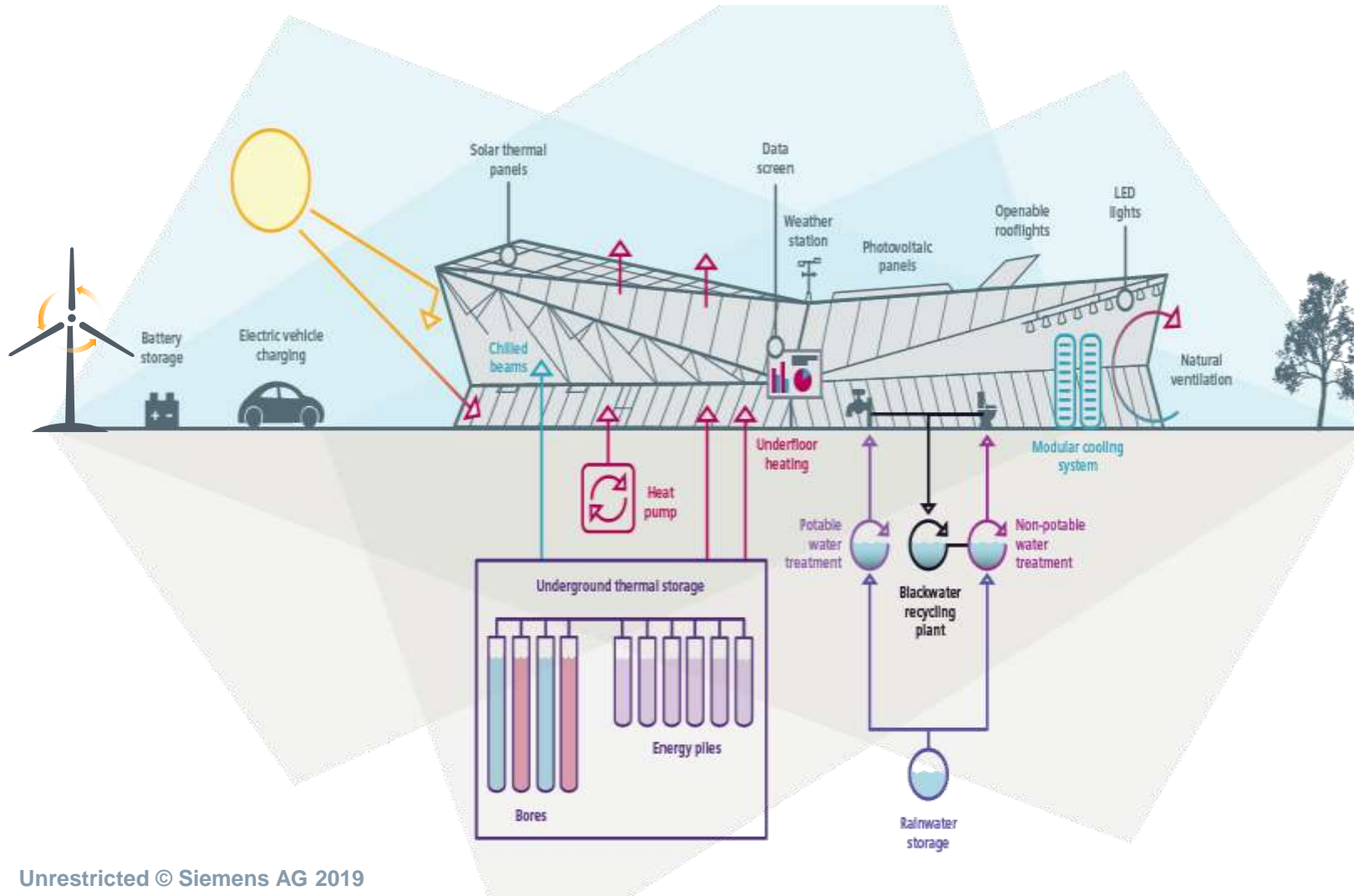
Purchase green energy
Move toward a significantly cleaner power mix with a strong focus on renewable energy and highly efficient gas

Independent auditors will monitor and report on progress of implementation.

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The Crystal
An all-electric intelligent building

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Certification

The first building awarded with

LEED Platinum

BREEAM Outstanding

43% improved energy efficiency

71% lower green-house gas emissions

In the future, autonomous buildings will talk to each other and city infrastructure as part of a Living City of the future

TODAY…

Building Technology
leveraging digital tools

TOMORROW…

Smart Buildings
talking to one another

BEYOND…

Intelligent Infrastructure
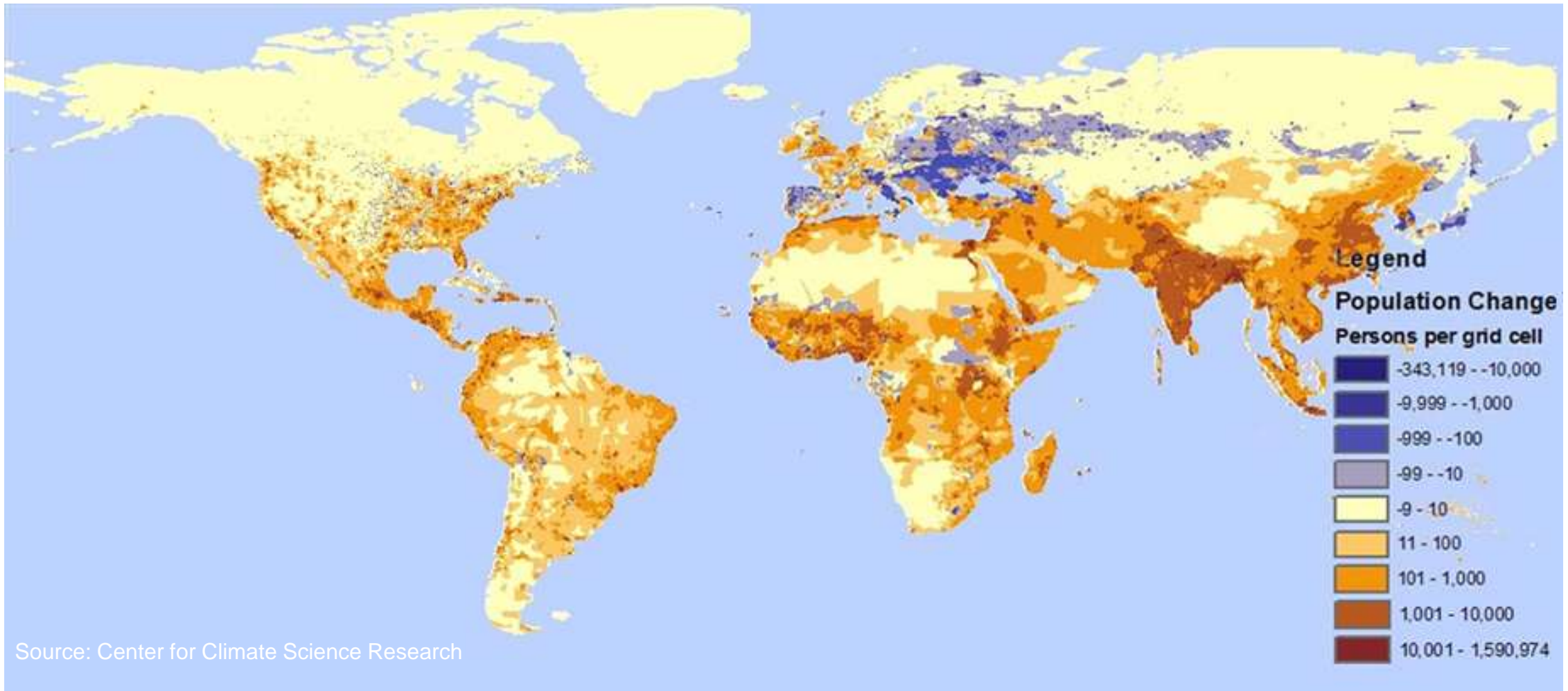enabling autonomous buildings & living cities

Electrification of transport:
a key driver to reach sustainability targets!

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Do we have the right vision / policy framework in place?

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75% of world's cities located in exposed coastal zones

Legend

Population Change

Persons per grid cell

- -343,119 - -10,000
- -9,999 - -1,000
- -999 - -100
- -99 - -10
- -9 - 10
- 11 - 100
- 101 - 1,000
- 1,001 - 10,000
- 10,001 - 1,590,974

Source: Center for Climate Science Research

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City Performance Tool

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GHG

Air quality

Economy

CO_2

PM10

NO_x

Jobs

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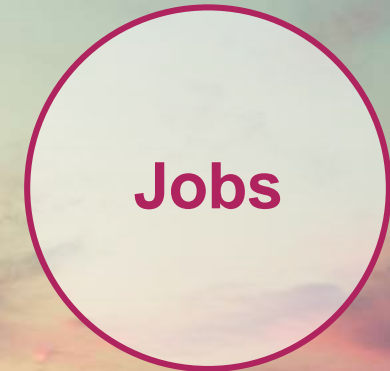
A number of cities supported by the City Performance Tool

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Vienna	Riverside	New Bedford	Nanjing	Shenzhen	Copenhagen
Munich	Minneapolis	Helsinki	Mexico City	Aarhus	Ningbo
Adelaide	San Francisco	Seoul	Berlin	Stuttgart	Wuhan
Charlotte	Washington	CyPTAir Pilot — Nuremberg	Madrid	Portland	The Hague
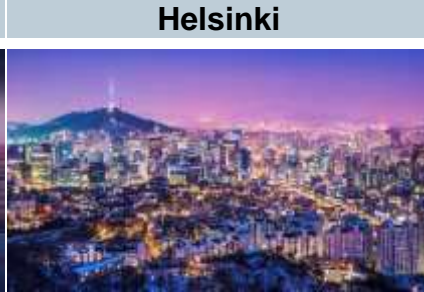
Outdoor Air Quality

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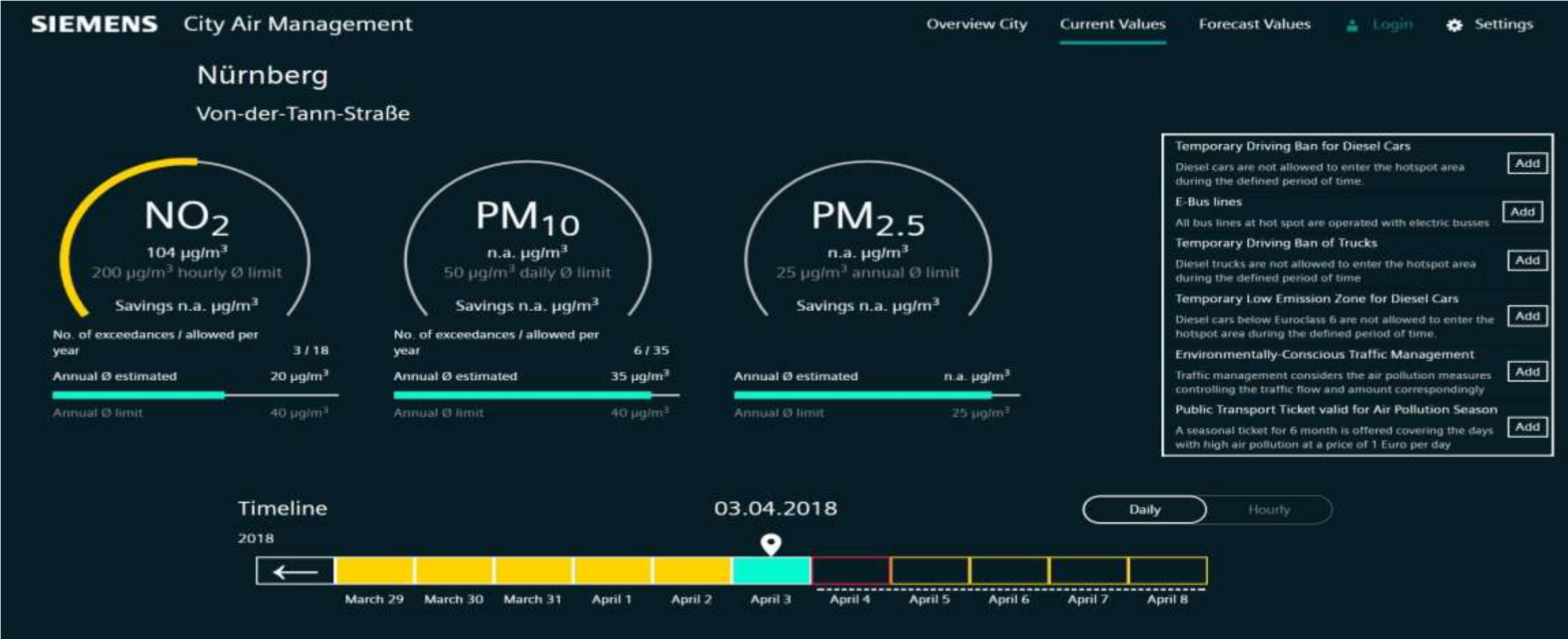
The evolution of city infrastructure: City 4.0

1.0 "Brick and steel" infrastructure

2.0 (Semi-) automated infrastructure

3.0 Intelligent infrastructure

4.0 Fully integrated, intelligent infrastructure

Targeted investments drive increase in productivity, efficiency, capacity, resilience and quality of life

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What role can we all play?

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Digitalisation in 2013

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Video: https://www.youtube.com/watch?v=WKHV5_KYw8k

Sharing Cities: London / Greenwich, Lisbon and Milan
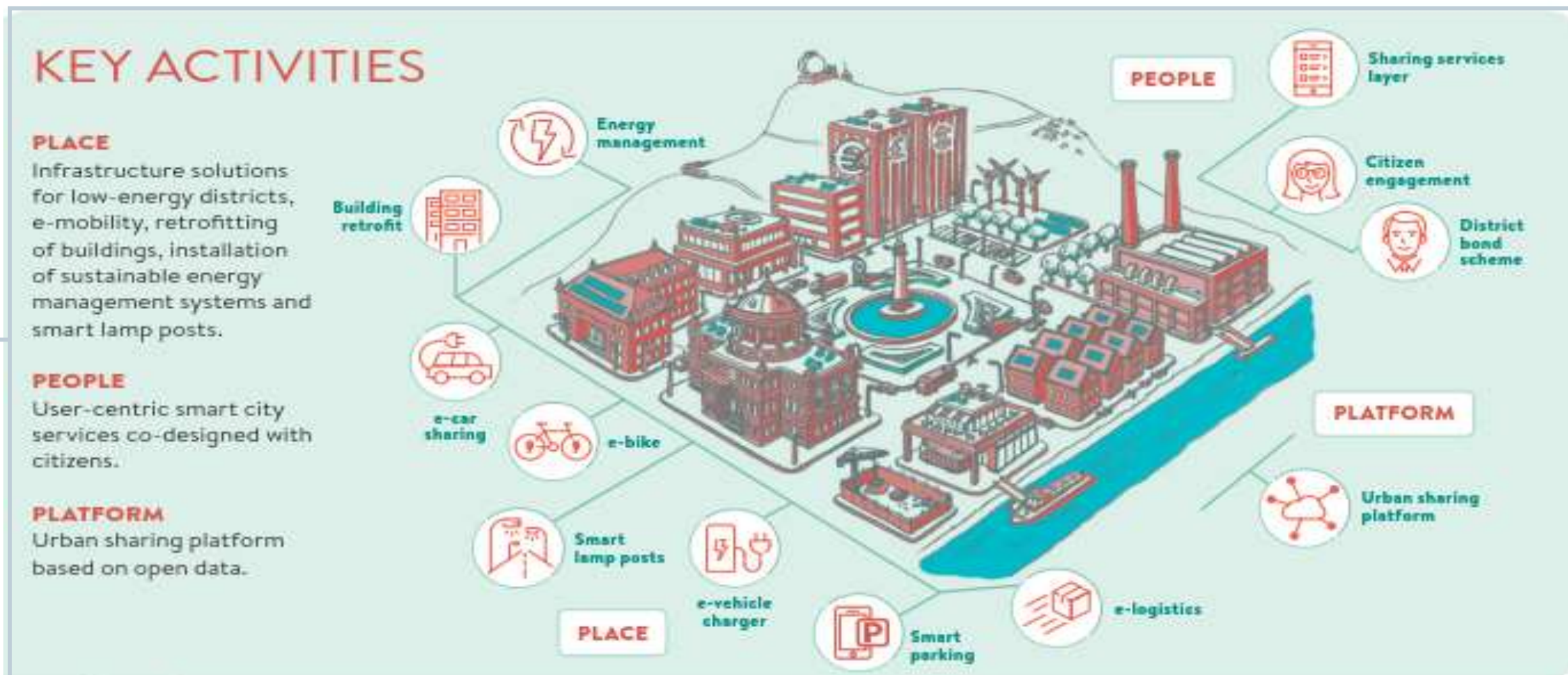
In summary: 3 calls to action

1. **Construction Industry / Property owners**
   - ➤ **Ensure all your buildings are 'smart'**

2. **Cities / Government**
   - ➤ **Set the right vision / policy framework**

3. **General Public / Others**
   - ➤ **You all have a part to play!**

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