Delivering urban efficiency through collaboration. Today.

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CEBC Smart City, 9 June 2014

Schneider ⚡ Electric

At a glance

> Introducing
Schneider Electric

Schneider Electric – the global specialist in energy management

24
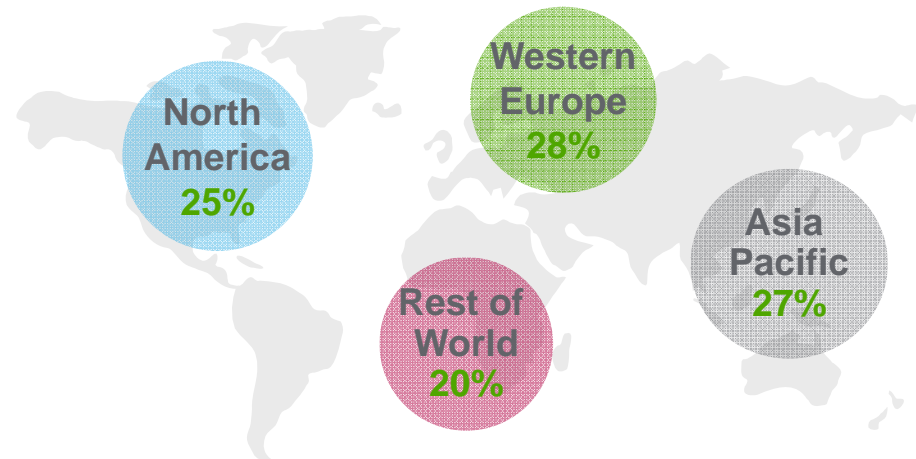billion € sales in 2013

43%
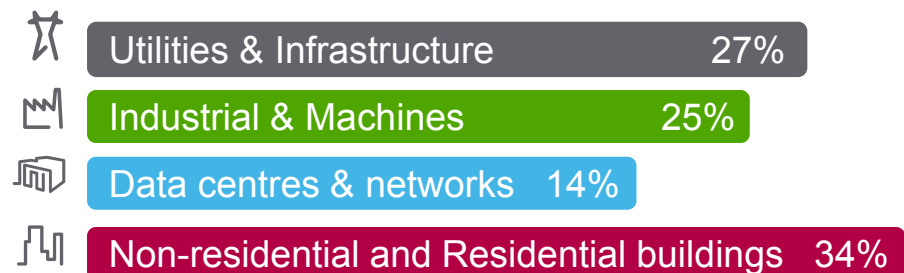of sales in new economies

150 000
people in 100+ countries

4–5%
of sales devoted to R&D

Balanced geographies – FY 2013 sales

North America 25%

Western Europe 28%

Asia Pacific 27%

Rest of World 20%

Balanced end markets – FY 2013 revenue

Utilities & Infrastructure	27%
Industrial & Machines	25%
Data centres & networks	14%
Non-residential and Residential buildings	34%

The Energy challenge is the cornerstone of our business strategy

The facts

$\times 2$

Energy demand
By 2050
Electricity by 2030

Source: IEA 2007

vs

The need

$\div 2$

CO_2 emissions to avoid dramatic climate changes by 2050

vs. 1990 level
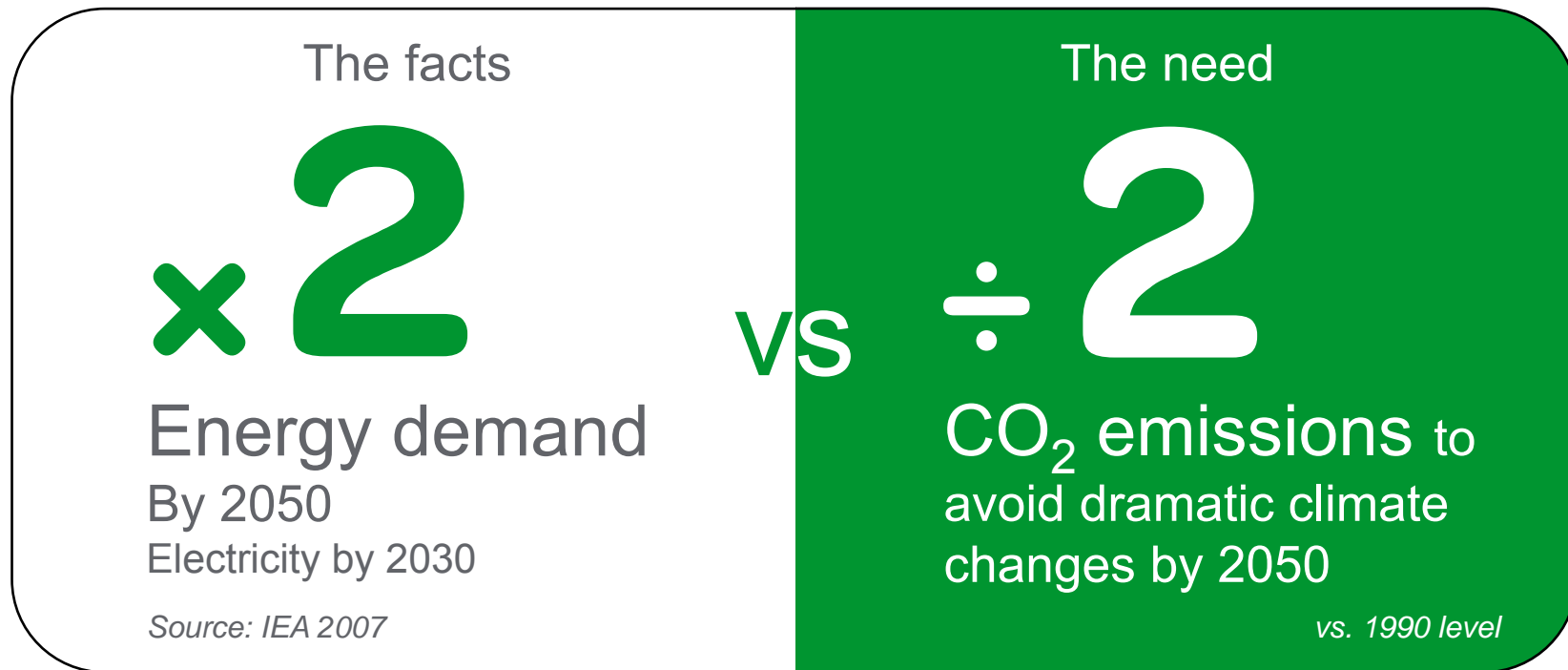
we want to help address this challenge

>

Cities, cities everywhere…
…and all of them different.

So what makes a city 'smart' ?

Cities: from global challenges…

Earth's surface — **2%**

World population — **50%**

70% — **World population**

Global energy consumption — **75%**

40 — **Years to double the urban capacity developed over the past 4000 years**

Global CO$_2$ emissions — **80%**
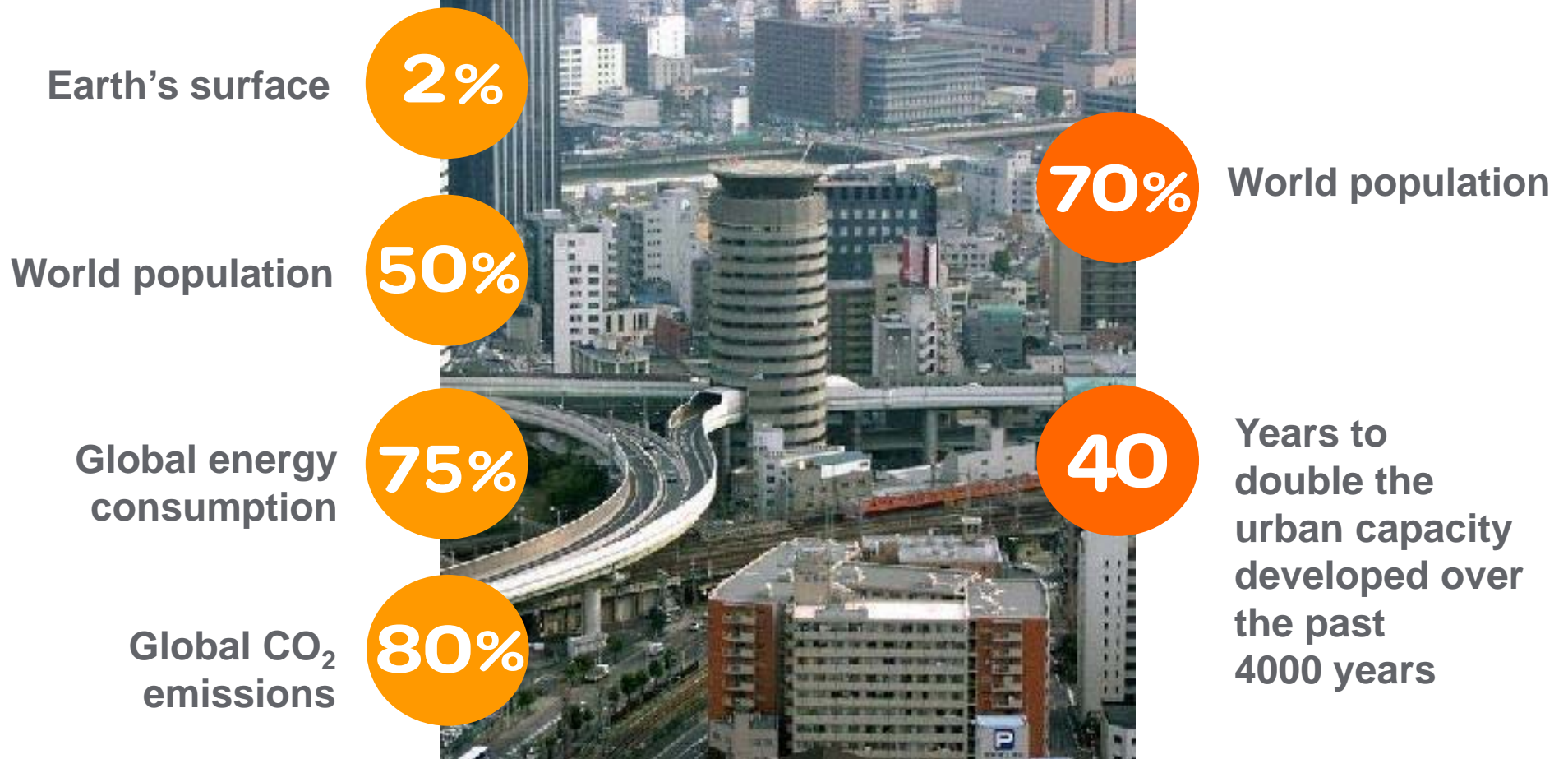
…to local priorities…

History, culture, size, geography, economy make each city unique.

…via regional specifics.

Meeting basic infrastructure needs

Managing urban expansion

Improving services, regenerating districts

Recovering from natural disaster

Hosting a global event

Boosting their image

Cities need to attract investment, jobs and talent!

Infrastructures are a city's building-blocks

Efficient infrastructures are a Smart City's building- blocks

Boosting competitiveness

Making the city efficient, liveable & sustainable

Creating jobs

Increasing attractiveness for residents, citizens and visitors

Improving the efficiency of the city's underlying urban infrastructures

Providing new, innovative services

Improving public services: schools, safety, transportation…

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Getting to 'smart'.

What is the journey?

'Smart' is a change management journey

City Government as leader Citizens at the centre.
Technology as enabler. Business as partner.

From siloed systems… …To smart infrastructures	From urban challenges… …To urban attractiveness	From multiple stakeholders… …To engaged community
▪Smart energy ▪Smart transportation ▪Smart water ▪Smart buildings ▪Smart public services ▪Smart integration	▪Urban planning ▪Resilience ▪Resource efficiency ▪Sustainable mobility ▪Innovative services ▪Sustainable model	▪City leadership ▪Engaged citizens ▪Collaborative business ▪Active academia

5 success factors to 'smart'

1 **Share the vision**
- ✓ Smart local community
- ✓ Citizen-centric vision
- ✓ Holistic roadmap

2 **Lay the foundations**
- ✓ Efficient infrastructures
- ✓ Leveraging (OT & IT)
- ✓ Delivering measurable value

3 **Integrate** *selectively*
- ✓ Integrating [OT+ IT] selectively
- ✓ Reinventing organization & processes
- ✓ Providing new, better services

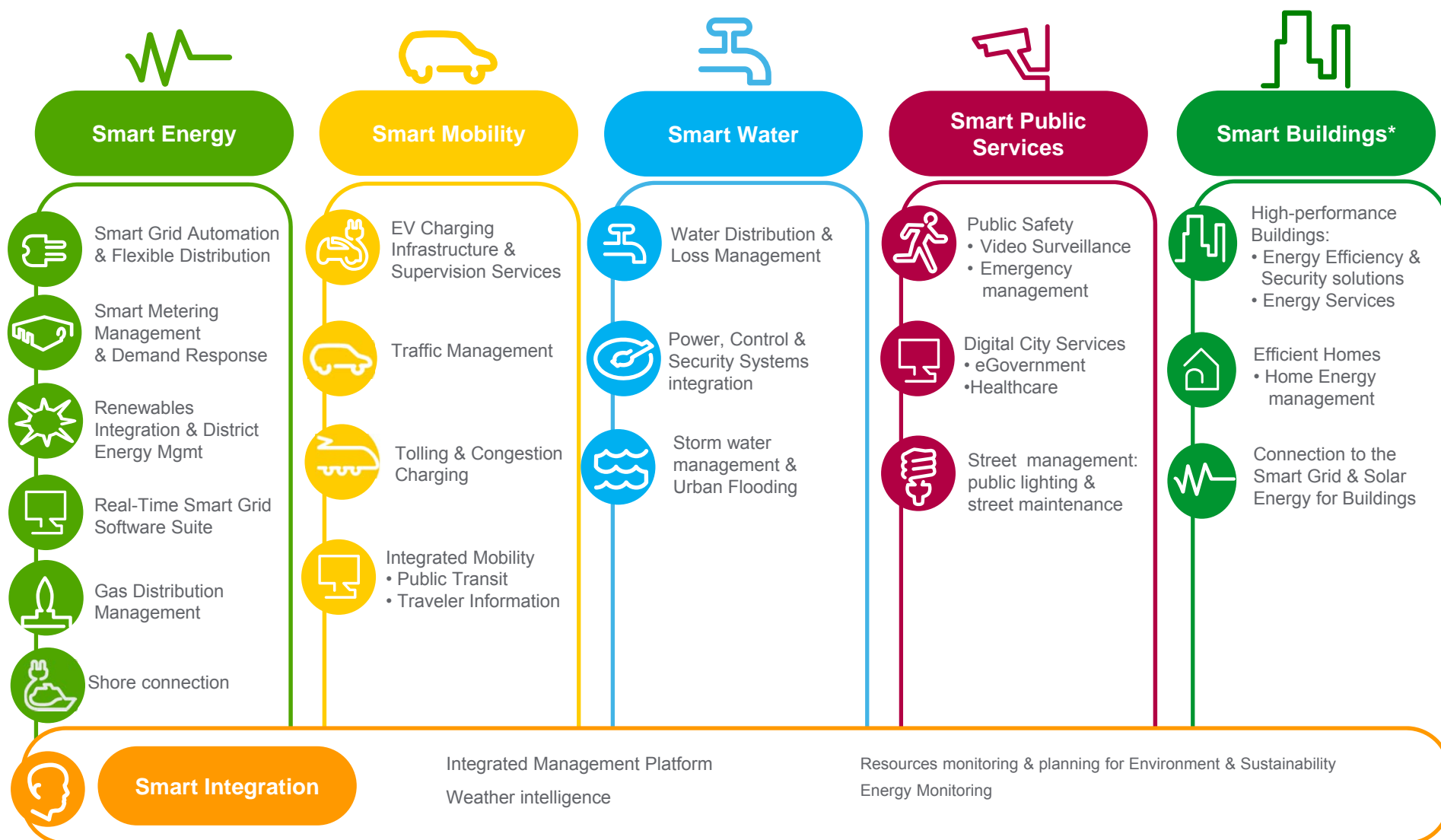**4** **Make stakeholders collaborate**
- ✓ City + people + business
- ✓ Global + local industry
- ✓ Multiple sectors and city domains

5 **Innovate** *pragmatically*
- ✓ Technical, financial & organizational
- ✓ Breaking down barriers
- ✓ Driving change

Solutions to cities' needs

Improving operating systems through expertise in Operational & Information technology

Smart Energy

- Smart Grid Automation & Flexible Distribution
- Smart Metering Management & Demand Response
- Renewables Integration & District Energy Mgmt
- Real-Time Smart Grid Software Suite
- Gas Distribution Management
- Shore connection

Smart Mobility

- EV Charging Infrastructure & Supervision Services
- Traffic Management
- Tolling & Congestion Charging
- Integrated Mobility
  - Public Transit
  - Traveler Information

Smart Water

- Water Distribution & Loss Management
- Power, Control & Security Systems integration
- Storm water management & Urban Flooding

Smart Public Services

- Public Safety
  - Video Surveillance
  - Emergency management
- Digital City Services
  - eGovernment
  - Healthcare
- Street management: public lighting & street maintenance

Smart Buildings*

- High-performance Buildings:
  - Energy Efficiency & Security solutions
  - Energy Services
- Efficient Homes
  - Home Energy management
- Connection to the Smart Grid & Solar Energy for Buildings

Smart Integration

Integrated Management Platform

Weather intelligence

Resources monitoring & planning for Environment & Sustainability

Energy Monitoring

* Office buildings, industrial facilities, datacenters, hospitals, homes….

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City Government as leader

Citizens at the center

Technology as an enabler

Schneider as ONE of the **partners**

Collaboration to make it all happen

No company or organization can deliver a Smart City alone

Global players

Local players

Governments

Design & Engineering

Planners & Developers

Technology providers

Local community & government

Finance & Investment

Construction & Implementation

Utilities

Operations

NGO's & associations

> We walk the talk

Urban efficiency is real:
Over 200 references worldwide

- Aix-en-Provence
- Angers
- Cannes
- Grenoble
- Lyon
- Nice
- Paris
- Athens
- Budapest
- Florence
- Genova
- Milano
- Naples
- Rome
- Venice
- Verona
- Riga

- Riga
- Cluj
- Bucharest
- Moscow
- Novochebksary
- Celje
- Alicante
- Almeria
- Avilés
- Barcelona
- Bilbao
- Cadiz
- Cartagena
- Cordoba
- Cuenca
- El Ejido
- Emasca (Cordoba)

- Huesna
- Leon
- Madrid
- Malaga
- Murcia
- Oviedo
- Palencia
- Pontevedra
- Sabadell
- Salamanca
- Santiago de Compostela
- Seville
- Valladolid
- Vitoria
- Zamora
- Zaragoza
- Stockholm

- Berlin
- Oskarshamn
- Høje-Taastrup
- Sankt Wendel
- Strasbourg
- Hirsholm
- Ostfold
- Buenos Aires
- Cordoba
- Rosario
- Belo Horizonte
- Recife
- Rio de Janeiro
- Sao Paulo
- Santiago
- Valparaiso
- Oviedo
- Palencia

- Carrolton, TX
- Eugene, OR
- Cheasepeake, VA
- Chicago IL
- Clinton, OK
- Fairbanks, AK
- Columbus, OH
- Contra Costa, CA
- Farmington, MN
- Memphis, TN
- Mobile, AL
- Puebla City
- Radford, VA
- Nashville, TN
- Newton, KS
- Jersey City
- New Orleans, LA
- Raleigh, NC

- New York Statewide
- Salem, VA
- Palm Beach, Fl
- Pennsylvnia Statewide
- Pittsburg, PA
- Sherbrooke, Quebec
- Oran
- Rabat
- Tunis
- Cairo
- Jeddah
- Medina
- Mecca
- Lebanon
- Abu Dhabi
- Haifa

> In conclusion…

Smart Cities is not a concept – it is about urban efficiency, and it is happening today.

We understand what it takes. We make Smart Cities a reality.