EV City Casebook and Policy Guide

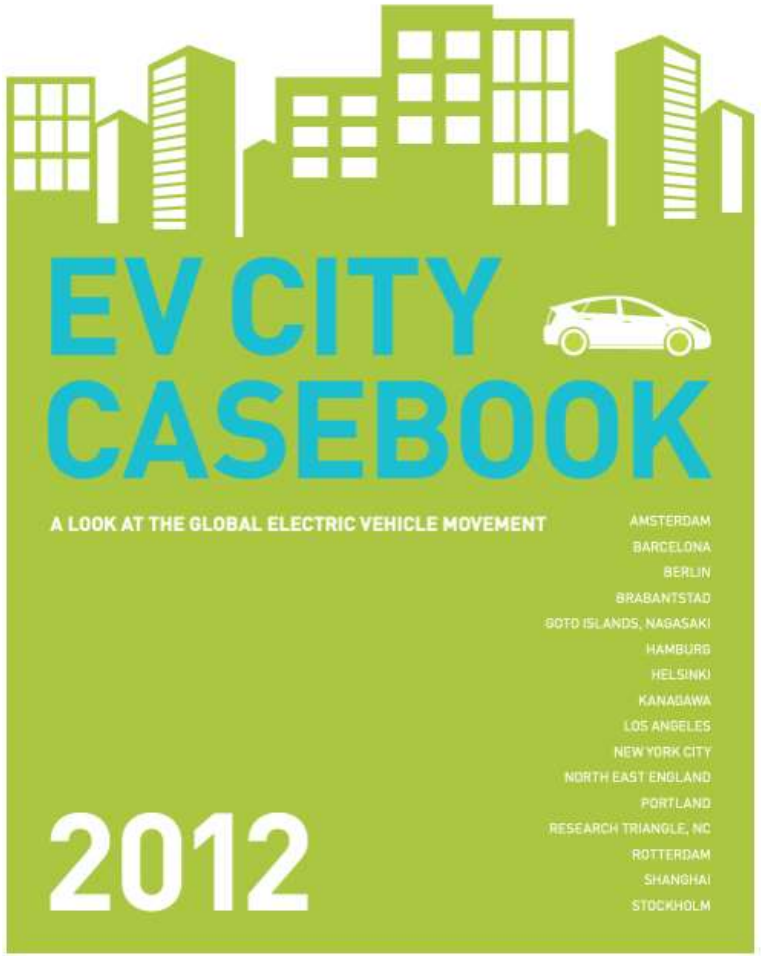
Dr. David Beeton
CEO & Founder, Urban Foresight

15 November 2019

Prepared for
International Smart Shared Mobility Congress

Urban Foresight

Looking back and looking forward





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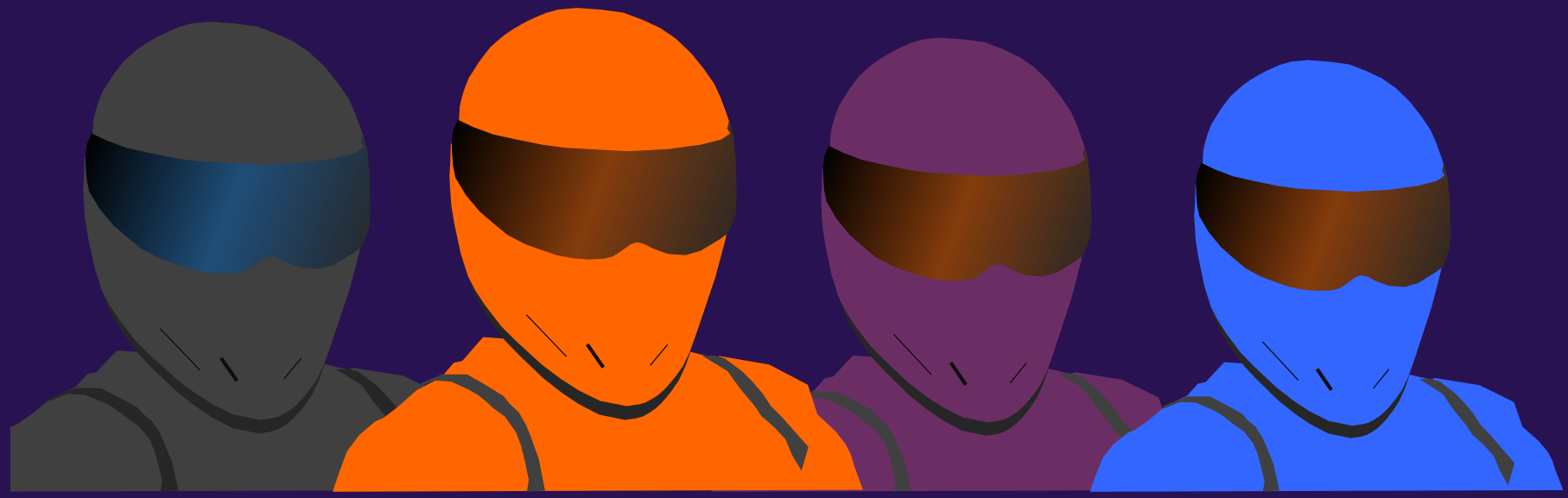
2007

YEAR OF:

HIBERNATION

EVs were only a minority activity for governments and automakers.

Biofuels and hydrogen arguably enjoyed greater prominence and attention.



2008

YEAR OF:

IGNITION

The economic downturn hit automakers hard and encouraged the acceleration of electrification R&D as the closest-to-market technology to reinvent the fortunes of an ailing sector.

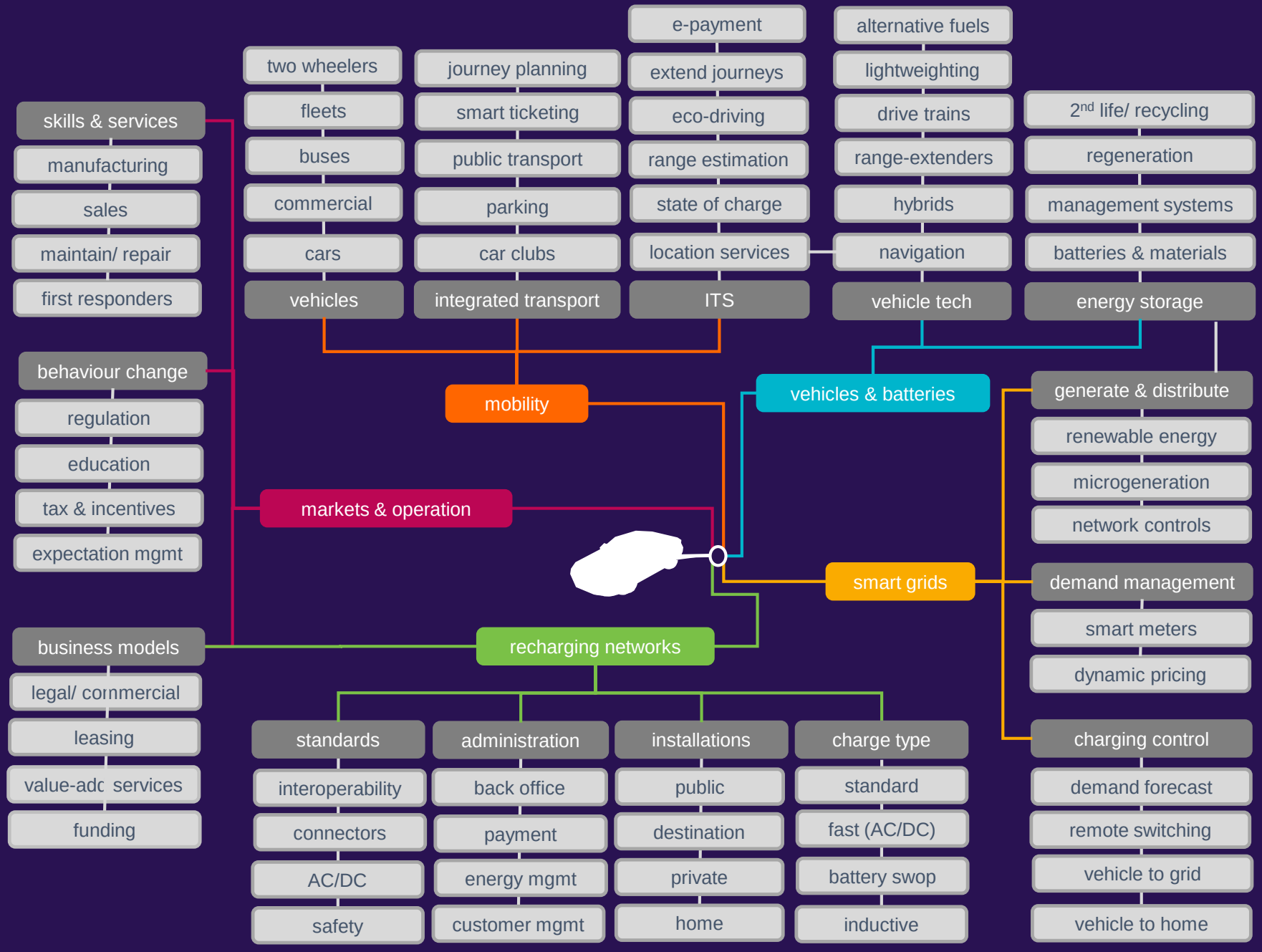


2009

YEAR OF:

PARTNERSHIPS

Collaborative EV programmes were initiated to combine the expertise of governments, OEMs, utilities, cities, regions and technology suppliers.



2010

YEAR OF:

PILOTS

Data and findings from pilots emerged from major cities and pioneering regions around the world, informing both the development of vehicles and charging infrastructure systems.

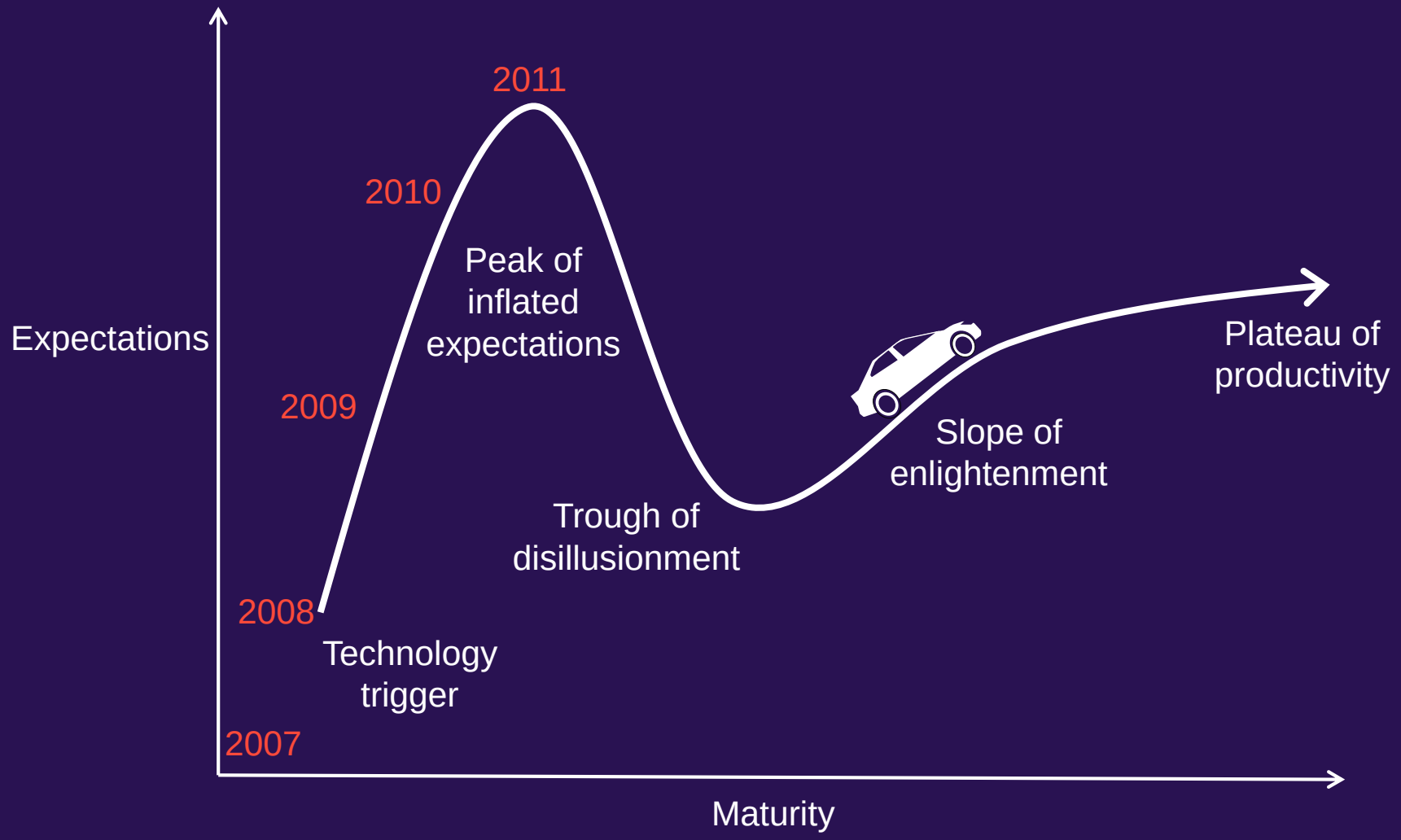


2011

YEAR OF:

EXPECTATION

The excitement of the anticipated arrival of cars created a situation where global demand appeared to outstrip supply.



Gartner's Hype Cycle

2012

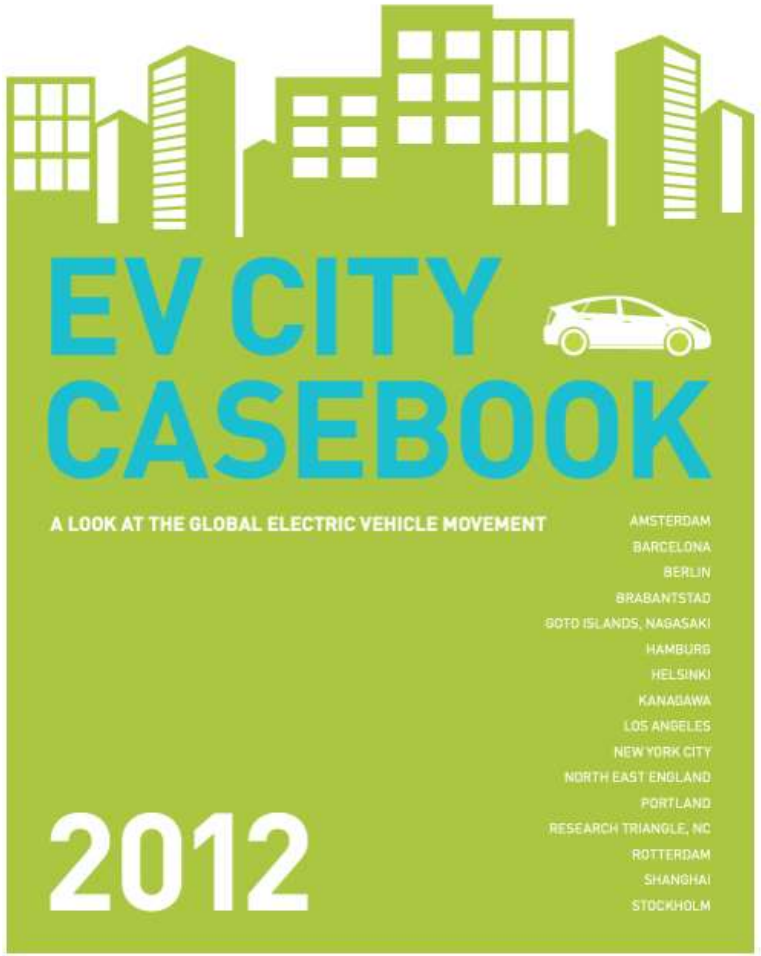
YEAR OF:

QUESTIONS

The first full year when anyone could buy an EV encouraged questions about the prospects for the technology and a short-term focus on its limitations.



EV City Casebook 2012



Goals:

- Highlight importance of city leadership.
- Establish structure for collecting data and insights
- Define best practice

IEA International Energy Agency Hybrid & Electric Vehicle Implementing Agreement

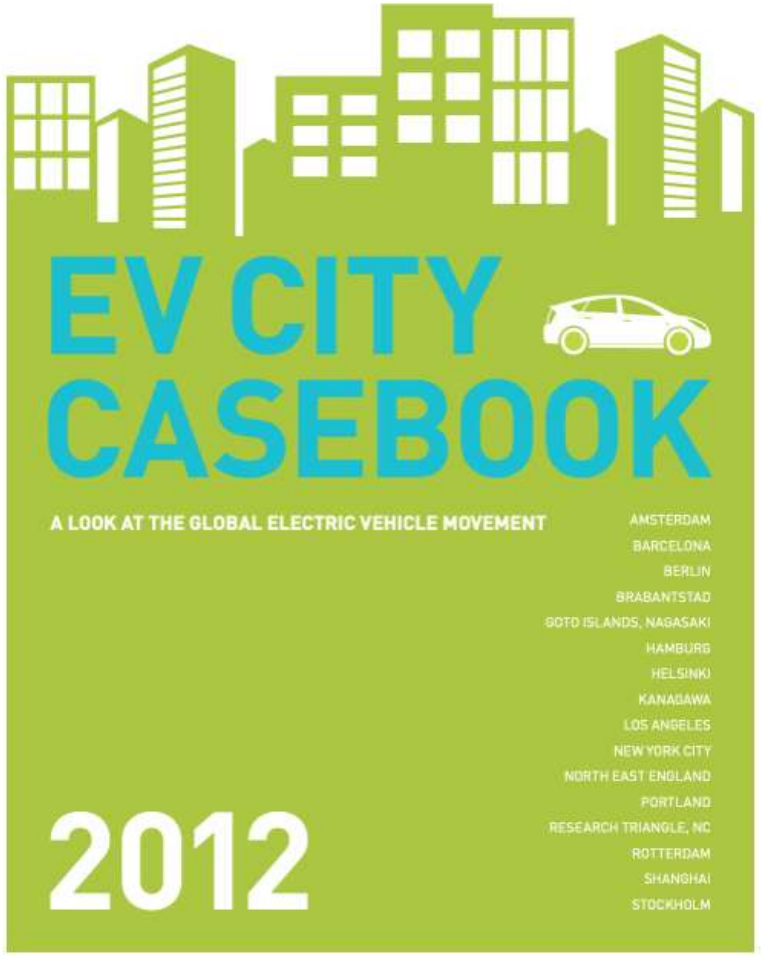
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Electric Vehicles Initiative

UC Davis University of California

Rocky Mountain Institute

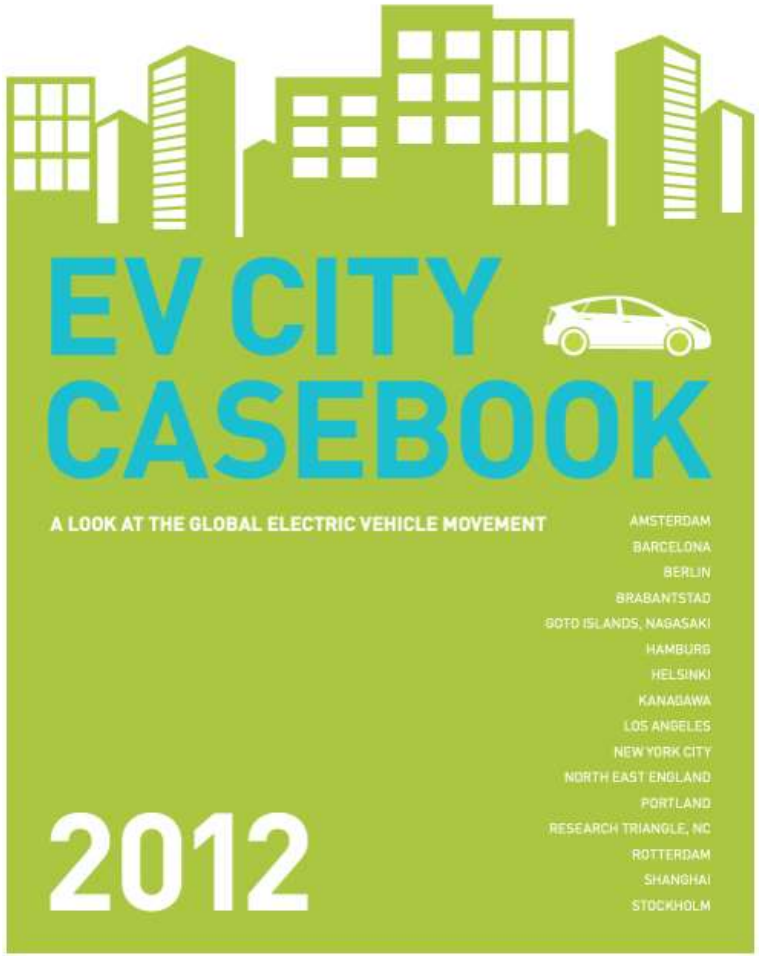
EV City Casebook 2012



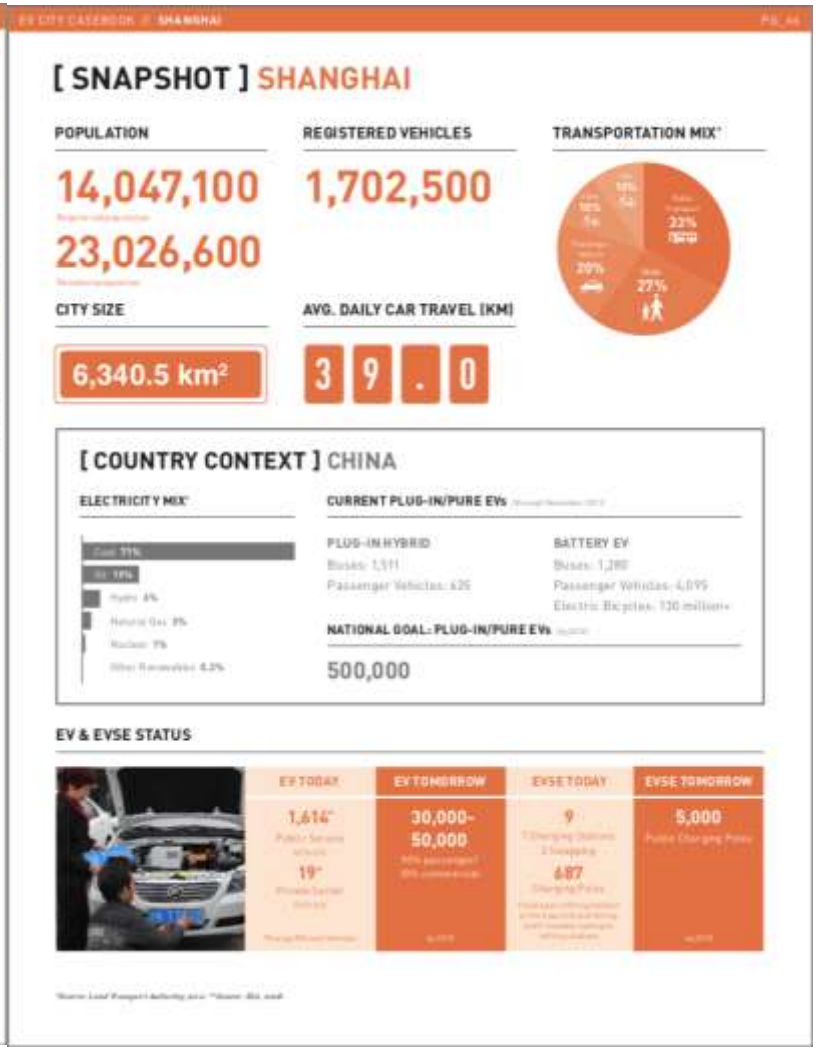
16 pioneering cities from 9 countries



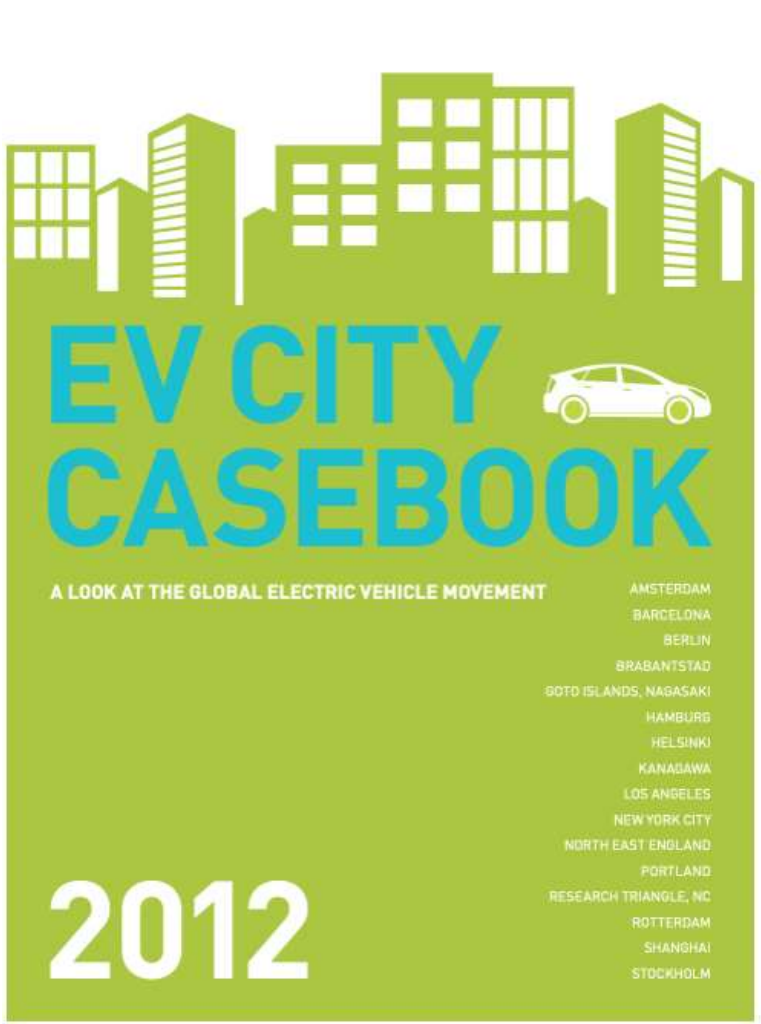
EV City Casebook 2012

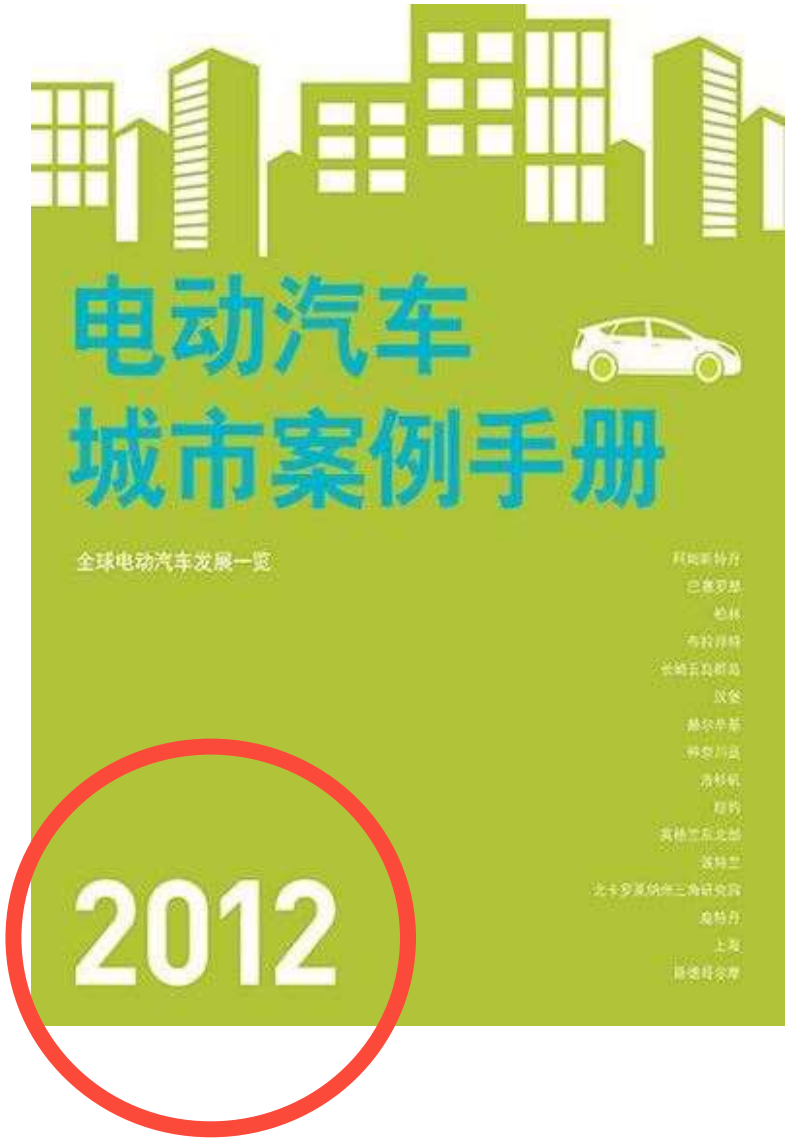






EV City Casebook 2012





Strong media interest around the world

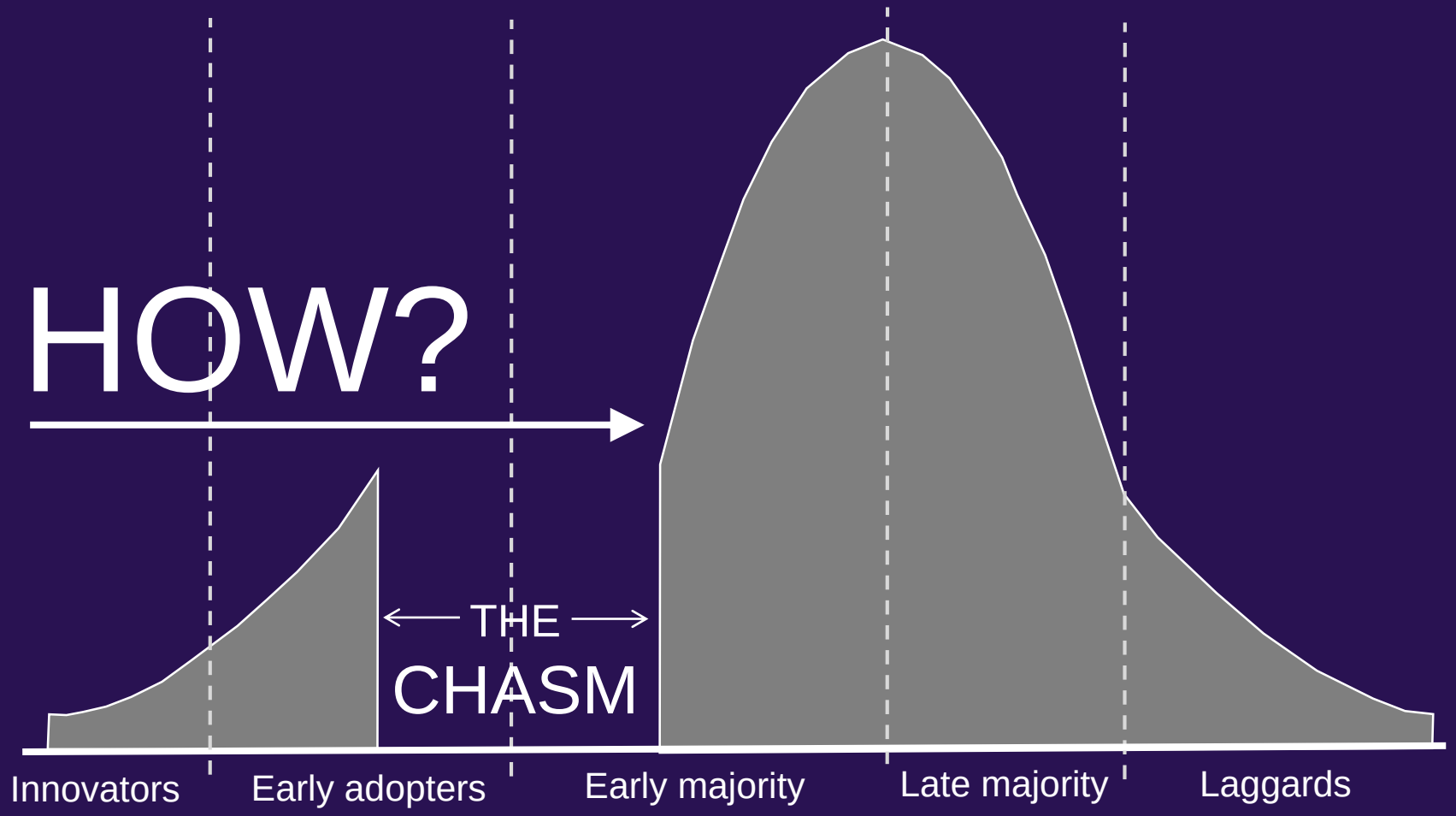
2014

2014

YEAR OF:

CHASM

Industry and governments searched for the future policies, technologies and business models to facilitate the transition to mass market adoption.



EV City Casebook 2014



- RELATIVE ADVANTAGE
- AWARENESS & UNDERSTANDING
- EASE OF USE
- ENVIRONMENTAL BENEFIT
- VEHICLE PERFORMANCE
- ENERGY SYSTEM BENEFIT

EV City Casebook 2014



Electric Bus Routes | Rome



Local Incentives | Oslo



EV promotion | Shanghai



Procurement | Stockholm



Lightweighting | Global



Energy management | Kyoto



Car sharing | Paris



Low Emission Zone | London

2020

Overview

Aim

Showcase success stories and lessons learned from the deployment of EVs in cities and metropolitan areas around the world.

Objectives

- Help to establish and increase cities' capacity to deploy EVs.
- Data and insights to allow cities to benchmark and compare progress.
- Recommendations on how to pursue policy pathways to increase EV capacity.

Electric Vehicles Initiative

IEA INTERNATIONAL ENERGY AGENCY HYBRID & ELECTRIC VEHICLE TECHNOLOGY COLLABORATION PROGRAMME

iea

Urban Foresight

Areas of Interest



- Highway/ inter-city charging
- City-wide networks
- On-street/ residential
- Workplace/ destination charging
- Private networks (e.g. taxis, buses, logistics vehicles)
- Interoperability between networks
- Use of digital technologies to improve user experience (e.g. reserving and paying for charging)

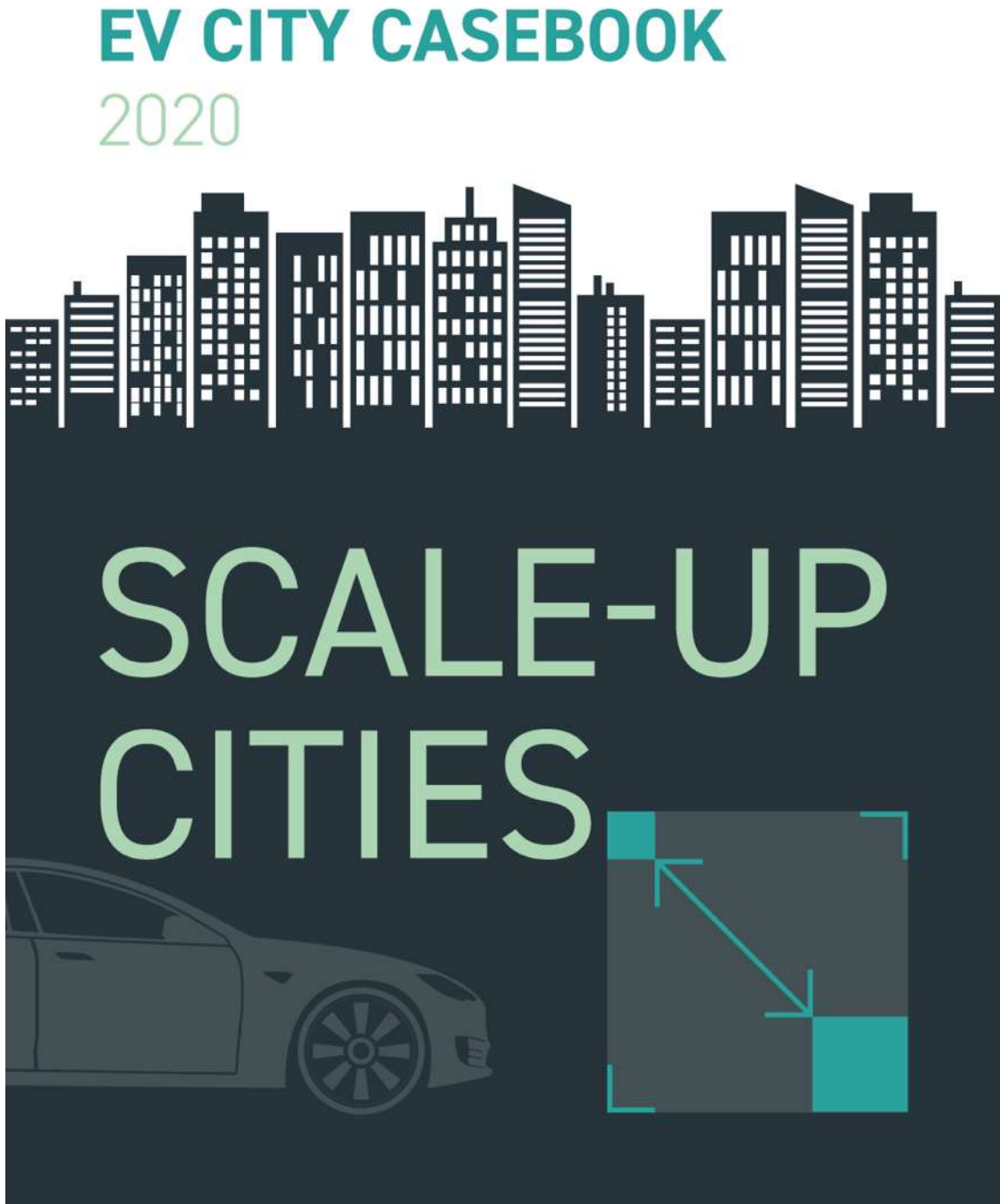
- Procurement consortia
- Public sector and corporate fleets
- Buses
- Taxis
- Car sharing
- Logistics vehicles
- Taxi regulations
- Low emission zones
- Public transport regulation

- Fiscal and non-fiscal incentives
- Planning policy
- Building regulations
- Parking ordnances
- Taxi regulations
- Low emission zones
- Public transport regulation

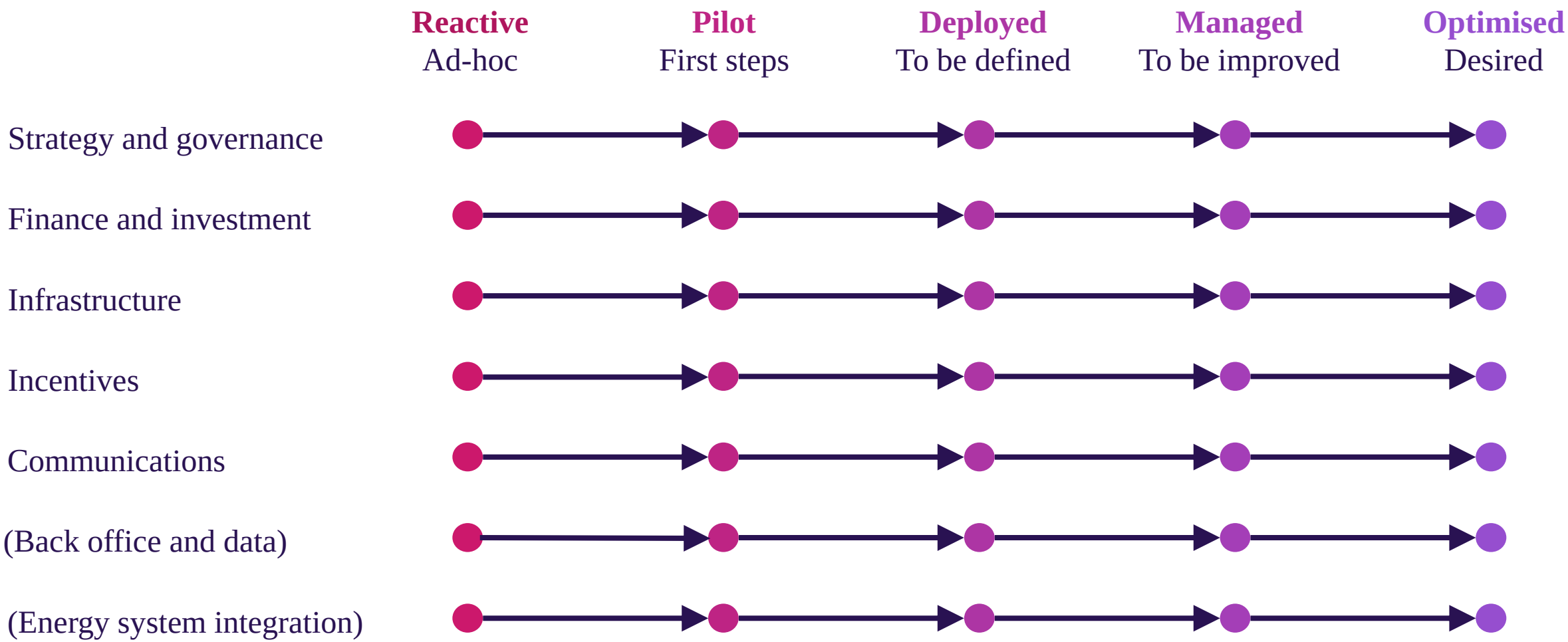
- Consumer campaigns and marketing programmes
- “Try-before you buy” initiatives/ EV experience centres
- Government-industry forums
- Leasing/ finance models
- Digital tools
- Dealership programmes
- Fleet analysis/ accreditation programmes

Examples of Scale-Up Projects

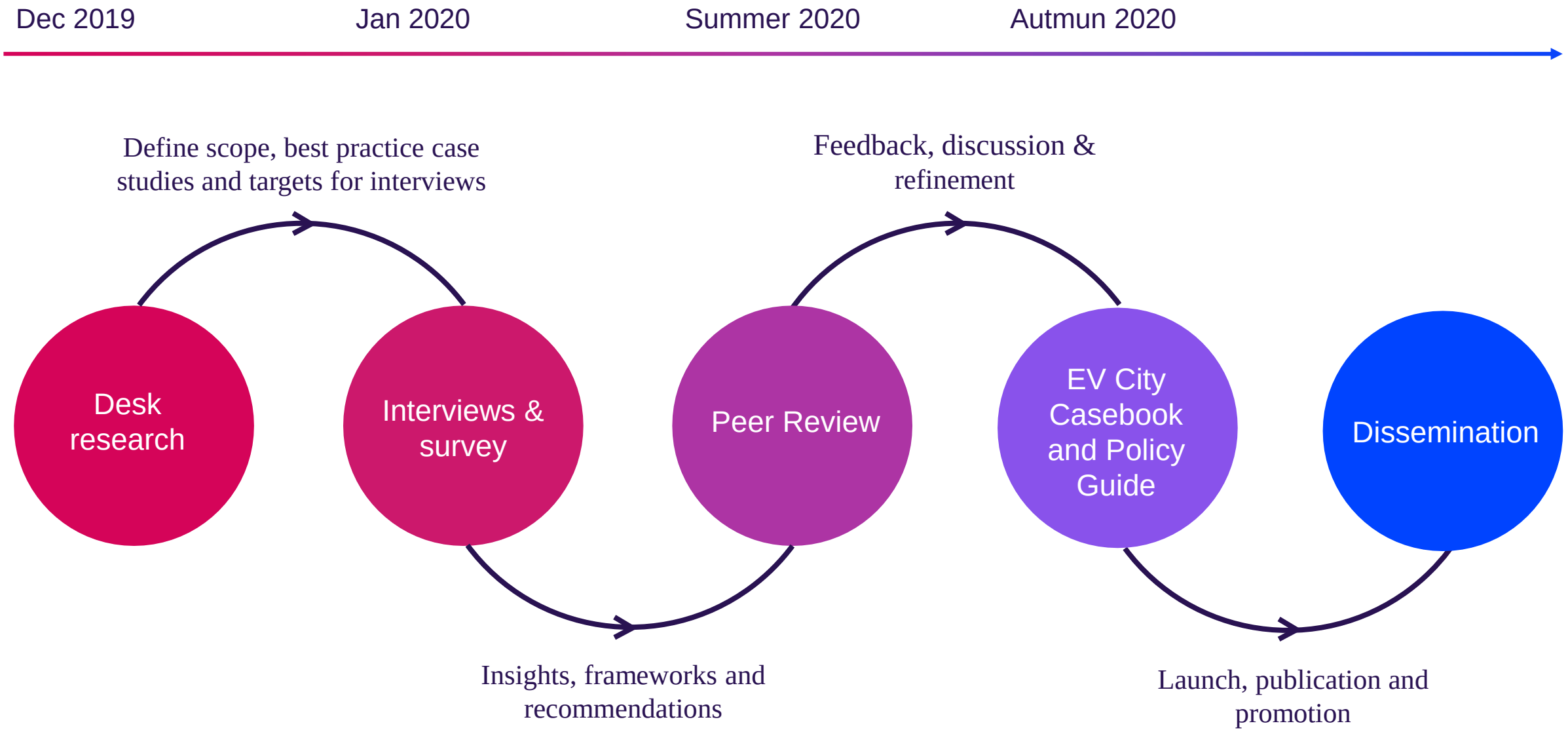
- VW is planning to introduce 1,500 EVs to a new car sharing service in Berlin in 2019.
- Over 100 electric buses are currently operating at Schipol airport and are set to increase to 258 by 2021.
- Taiyuan, the capital of Shanxi province, replaced its 8,000 strong taxi fleet with electric vehicles in a single year.
- California, New York, and New Jersey announced $1.3 billion of investments in charging infrastructure in June 2018.
- A $44 million Green City programme funded by Electrify America will radically upgrade Sacramento's electric vehicle infrastructure - adding hundreds of cars, charging stations, and buses.



Maturity Model



Timeline


Dec 2019
Jan 2020
Summer 2020
Autmun 2020
Define scope, best practice case studies and targets for interviews
Desk research
Interviews & survey
Insights, frameworks and recommendations
Feedback, discussion & refinement
Peer Review
EV City Casebook and Policy Guide
Launch, publication and promotion
Dissemination

3 closing thoughts

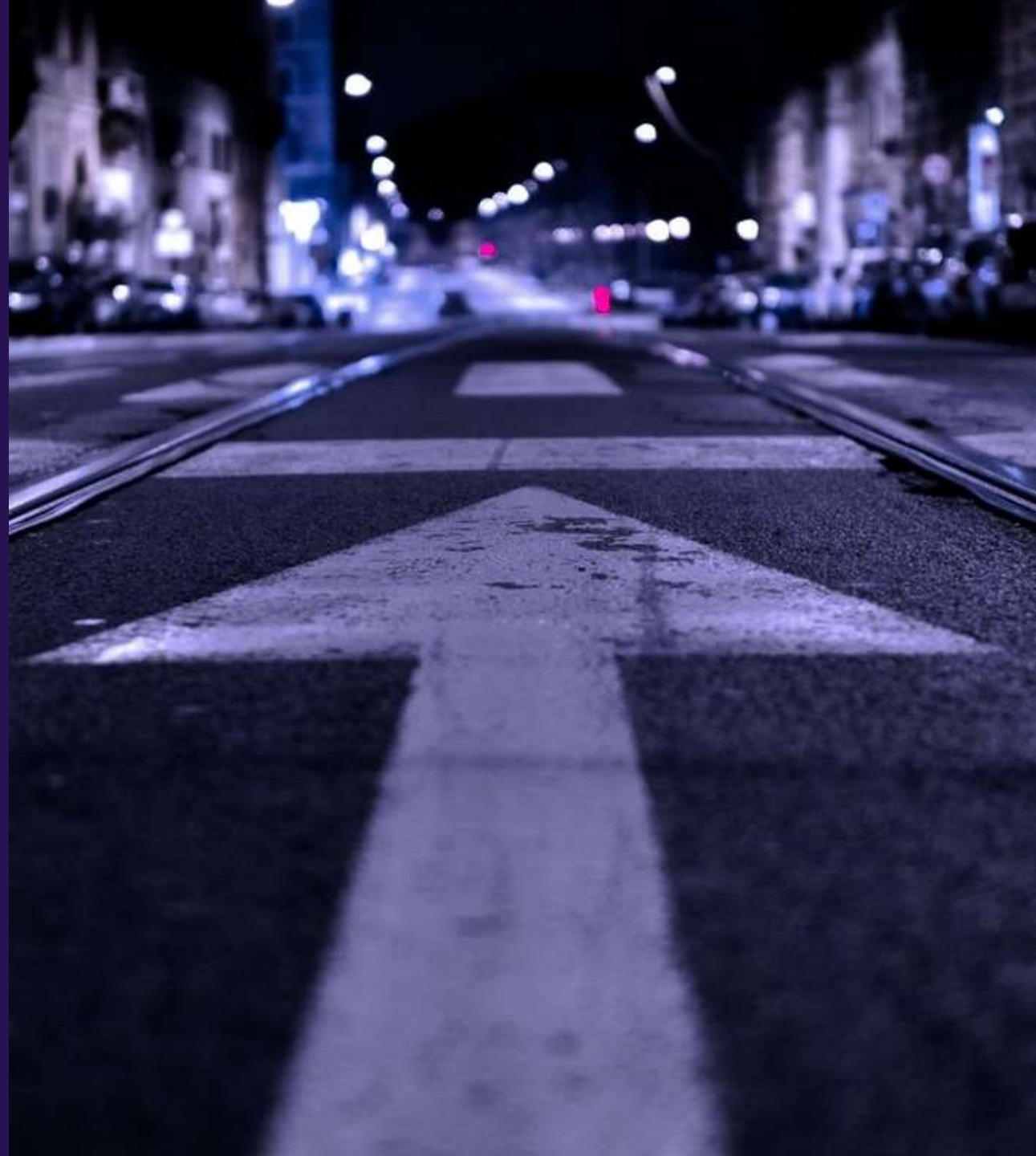
Global cities share common challenges



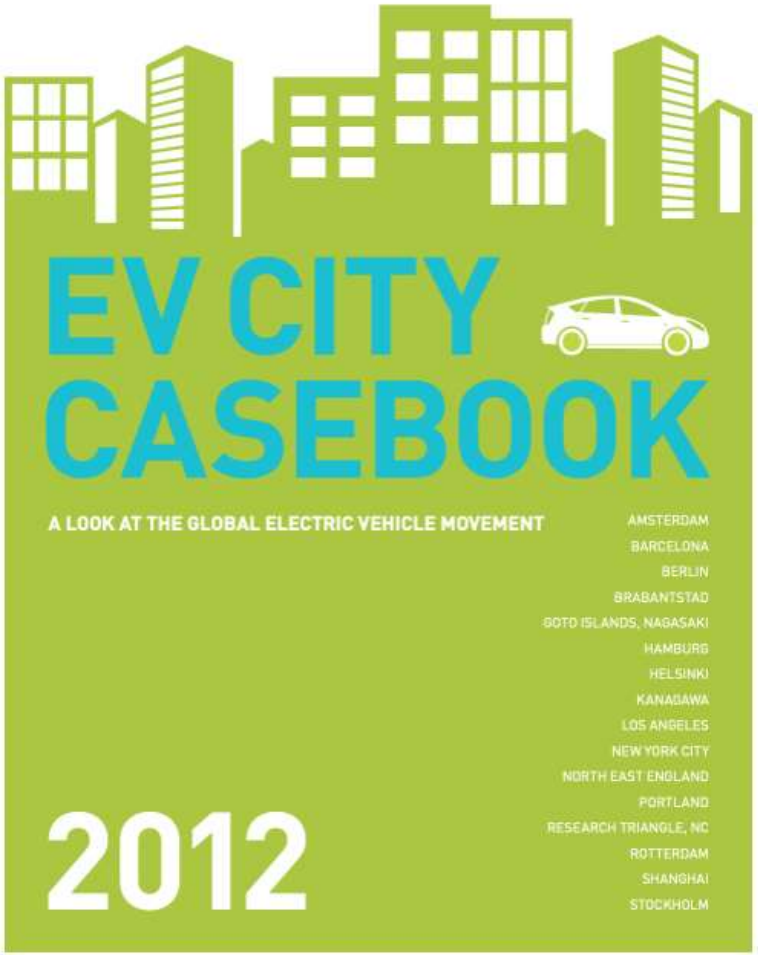
No city is doing everything



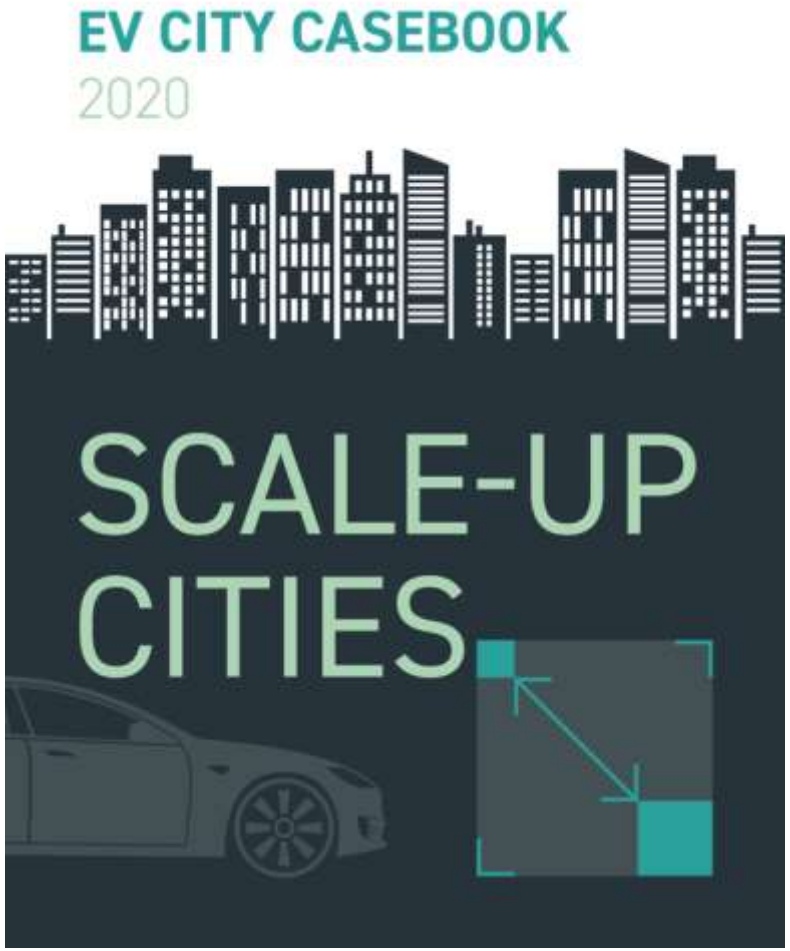
Scaling up is the next big challenge



Become part of the 2020 Casebook







For further information please contact:

David Beeton

CEO & Founder

Urban Foresight

david.beeton@urbanforesight.org

+44(0)191 495 7350

urbanforesight.org

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The Core, Newcastle Helix, Bath Lane, Newcastle upon Tyne, NE4 5TF, UK

Flour Mill, 34 Commercial Street, Dundee, DD1 3EJ, Scotland