



ELECTRIC MOBILITY IN PORTUGAL

ELECTRIC MOBILITY PROGRAMME



VISION

PORTUGAL AS A NATURAL ENVIRONMENT FOR THE DESIGN, DEVELOPMENT, ENGINEERING, MANUFACTURING AND REAL LIFE TESTING OF NEW TECHNOLOGIES, PRODUCTS AND SERVICES FOR ELECTRIC MOBILITY

PILOT PROJECT IN 2009

CHARGING POINTS
MANAGEMENT SYSTEM

2014

NEW LEGAL FRAMEWORK

2018-2020

MARKET PHASE



ELECTRIC MOBILITY IN PORTUGAL

ENERGY PRODUCTION

60% RENEWABLES

POLICY FRAMEWORK

FISCAL INCENTIVES

DIRECT SUBSIDY FOR EVs

FREE PARKING

FREE CHARGING - PUBLIC NETWORK

ELECTRIC MOBILITY MODEL

EV USER CENTERED

NEW ELECTRIC VEHICLES

BATTERY, PRICE, OFFER

ENVIRONMENTAL IMPACT MONITORING

TRACKING OF CO2 EMISSIONS

ELECTRIC MOBILITY

STRONG GROWTH

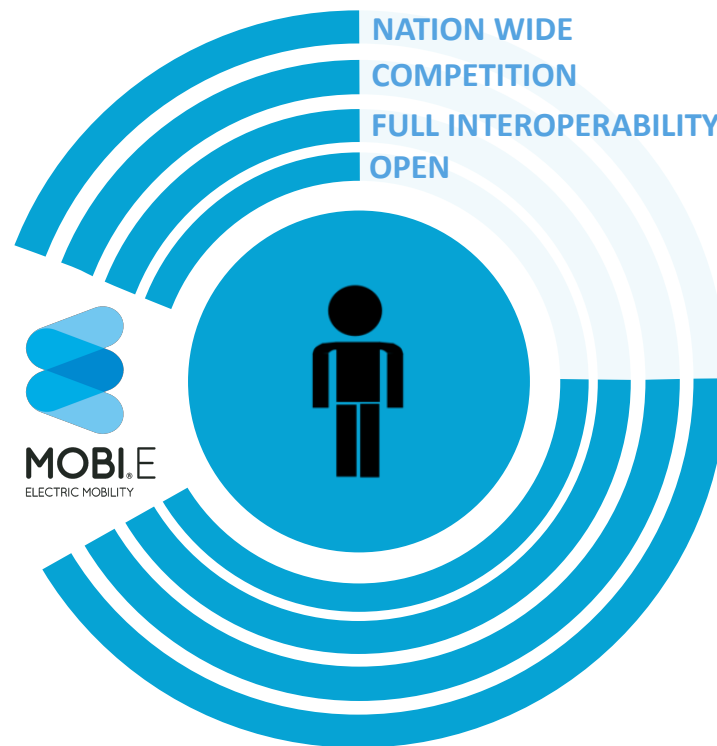
PORTUGUESE ELECTRIC MOBILITY MODEL

MOBI.E MODEL



USER CENTRIC MOBILITY

USER CHOICE



FULL INTEROPERABILITY AND COMPETITION

MULTIPLE RETAILERS

MULTIPLE OPERATORS

INTEGRATION WITH THE ELECTRIC GRID

NATIONAL WIDE

CROSS COUNTRY "ROAMING"

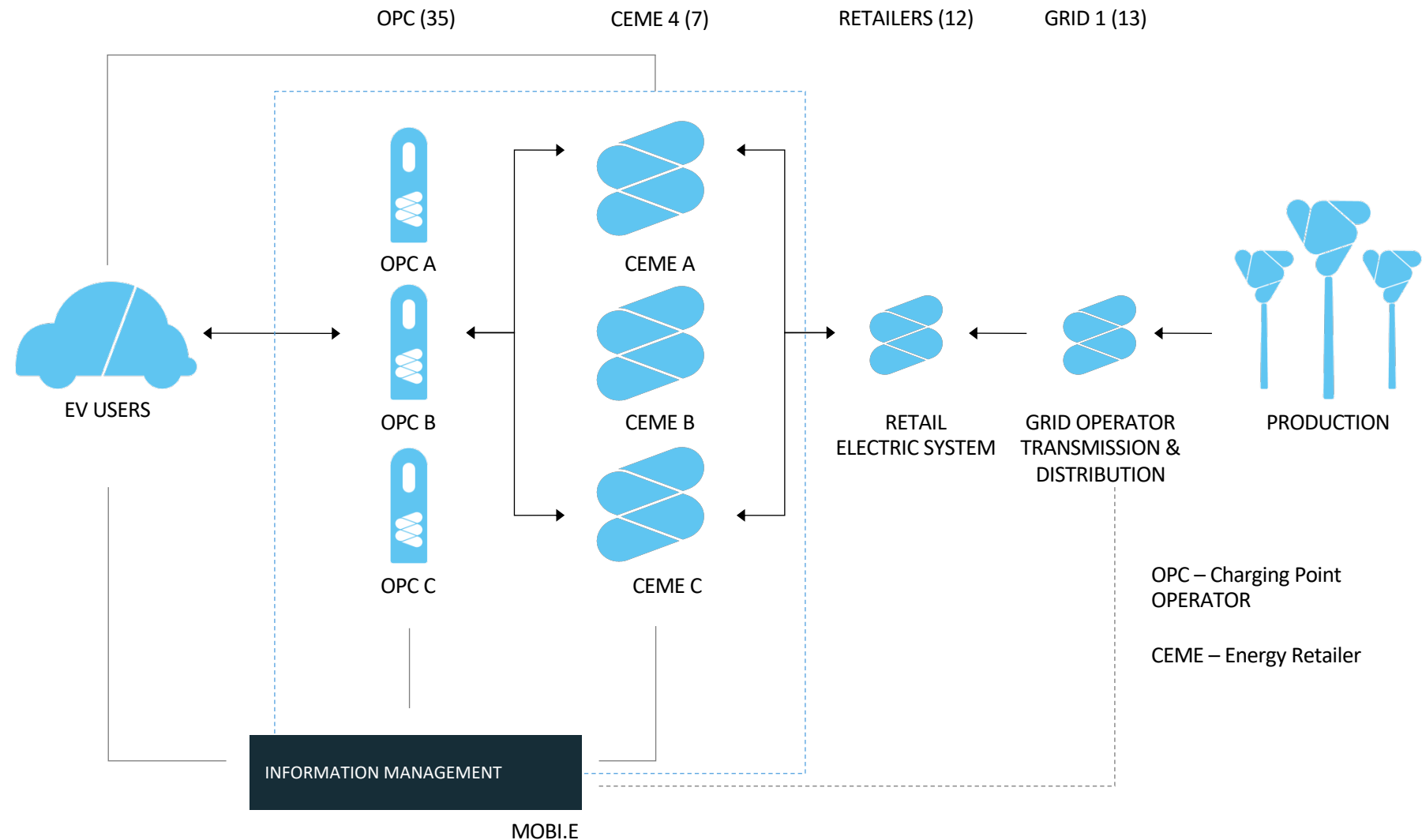
OPEN SYSTEM

TECHNOLOGY COMPATIBILITY

OPEN INTEGRATION PROTOCOLS

ELECTRIC MOBILITY MODEL

BUSINESS INTEROPERABILITY and COMPETITION AT WORK



THE NETWORK

819 EVSE

752 Normal Chargers (3,6 kW to 22 kW)

404 Normal (Pilot Project)

348 Normal (Private investment)

67 Fast Chargers (45-50 kW)

40 Fast (Pilot Project)

27 Fast (Private investment)

1 901 PLUGS

1 732 Normal

169 Fast

COVERAGE

86 MUNICIPALITIES WITH EVSE

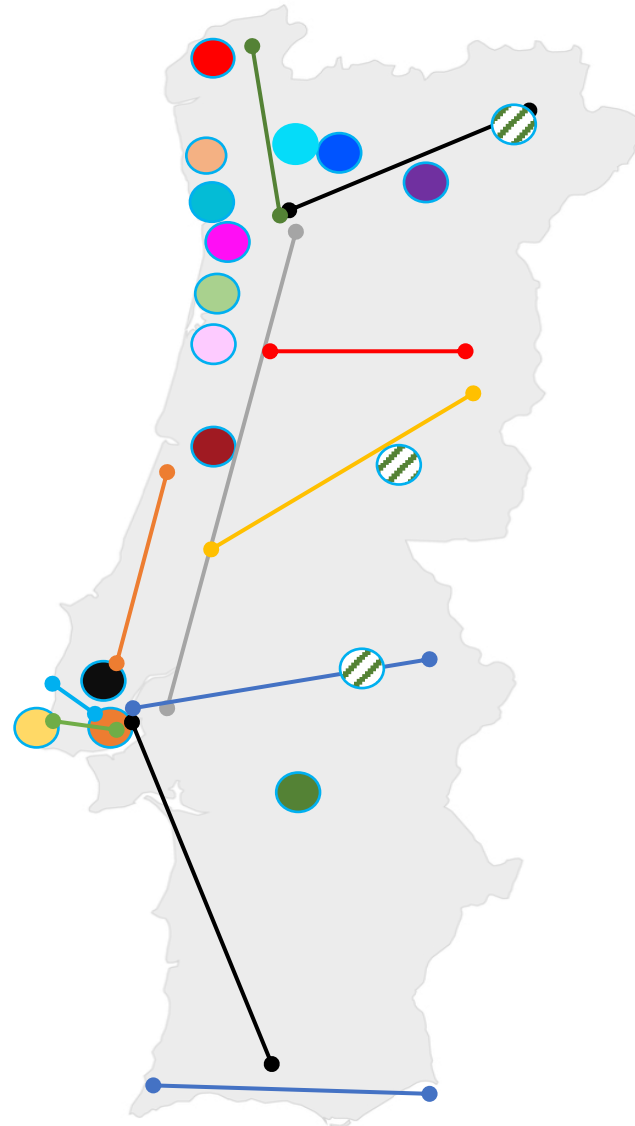
272 MUNICIPALITIES WITH

USERS (15 FROM ABROAD)



THE NETWORK

FAST CHARGING



50 kW EVSE
Combo/CCS
CHAdeMO
MENNEKES Type 2 (AC)

10 MAIN HIGHWAYS

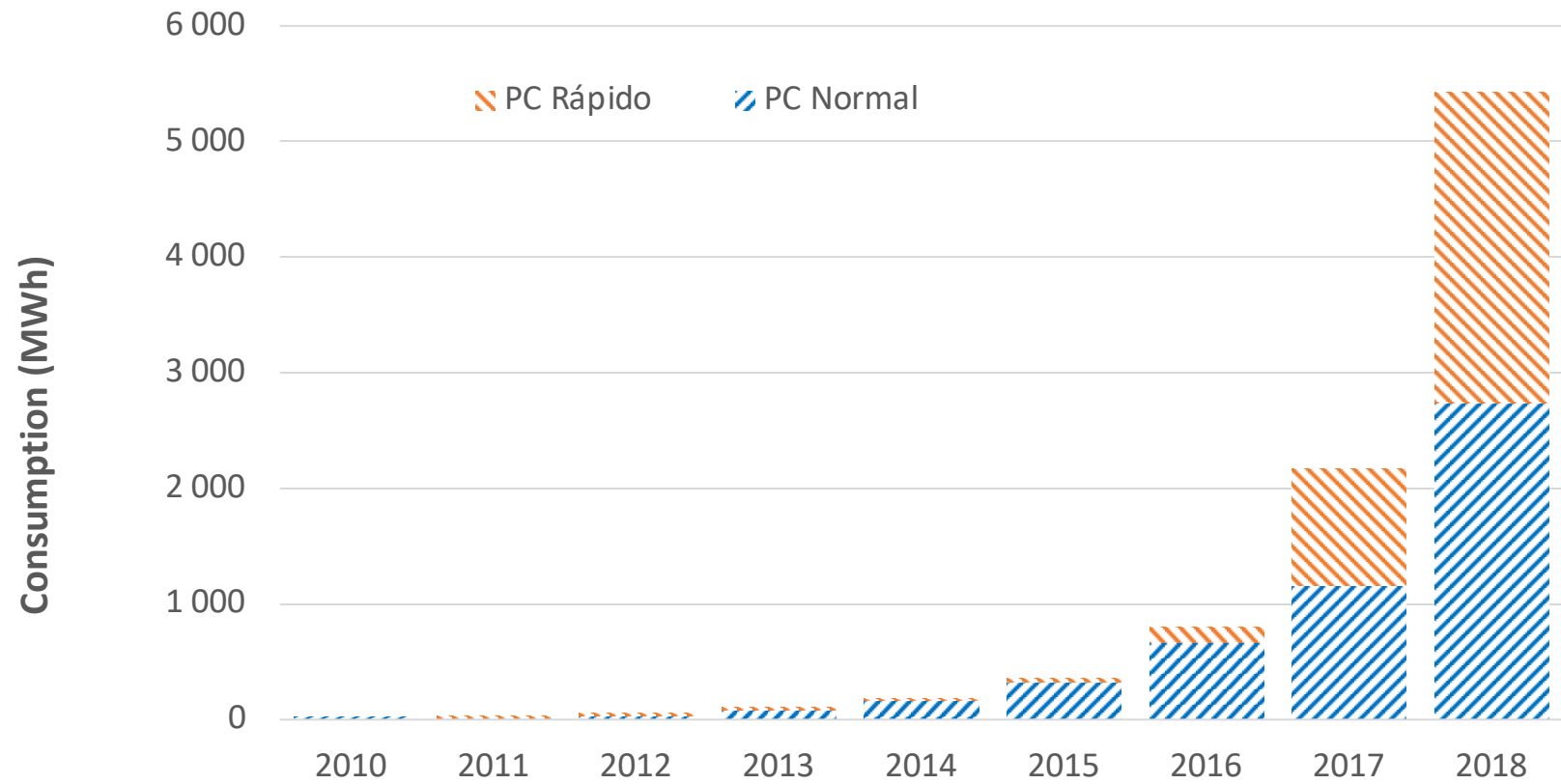
14 + 3 CITIES

AVEIRO
BRAGA
CASCAIS
COIMBRA
ÉVORA
GUIMARÃES
LISBOA
LOURES
MATOSINHOS

PORTO
VALENÇA
VIANA DO CASTELO
VILA NOVA DE GAIA
VILA REAL

BRAGANÇA
CASTELO BRANCO
ESTREMOZ

NETWORK ENERGY CONSUMPTION EVOLUTION PROFILE



THE NETWORK

		total	last year	last month	current month
	energy consumed	11,465,777.22 kWh	5,434,268.93 kWh	767,419.11 kWh	411,053.05 kWh
Nº 	# chargings	1,150,345 #	493,490 #	65,139 #	32,907 #
Nº 	# users	10,846 #	8,382 #	4,099 #	3,097 #
	CO2 avoided	7,587,478.08 kgCO2	3,596,127.46 kgCO2	507,839.59 kgCO2	272,014.35 kgCO2

CHARGING OPERATIONS EQUIVALENT TO **72 300 000 km** TRAVELLED

THE NETWORK IN 2019

FAST CHARGERS

New 10 EVSE in 2nd Quarter from pilot project

At least 40 new EVSE from private investment in 2019

TECHNOLOGICAL UPGRADE

Work in progress – to end in 2nd Quarter

100 new 2x22 kW EVSE to replace old ones

Hardware and software upgrade and new plugs in 304 normal EVSE (all 3,6 kW EVSE)

COVERAGE GROWTH

New 202 EVSE (2x22 kW) till the end of 2019, one in each Municipality not yet covered

BY THE END OF 2019

50 new fast chargers (50 kW)

302 new 22 kW chargers

All Municipalities in Portugal with, at least, one 22 kW EVSE

THE FUTURE

2019 -

SELF-PRODUCTION AND ENERGY STORAGE

HIGH POWER CHARGING

VEHICLE-2-GRID (V2G)

ELECTRIC ROAD SYSTEMS

INTEGRATION WITH OTHER MOBILITY SERVICES

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Thank you so much for your attention

Nuno Maria Bonneville

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