



**MOBI.E**  
ELECTRIC MOBILITY

# ELECTRIC MOBILITY IN PORTUGAL

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## ENERGY PRODUCTION

60% RENEWABLES

## POLICY FRAMEWORK

FISCAL INCENTIVES

DIRECT SUBSIDY FOR EVs

FREE PARKING

FREE CHARGING - PUBLIC NETWORK

## ELECTRIC MOBILITY MODEL

EV USER CENTERED

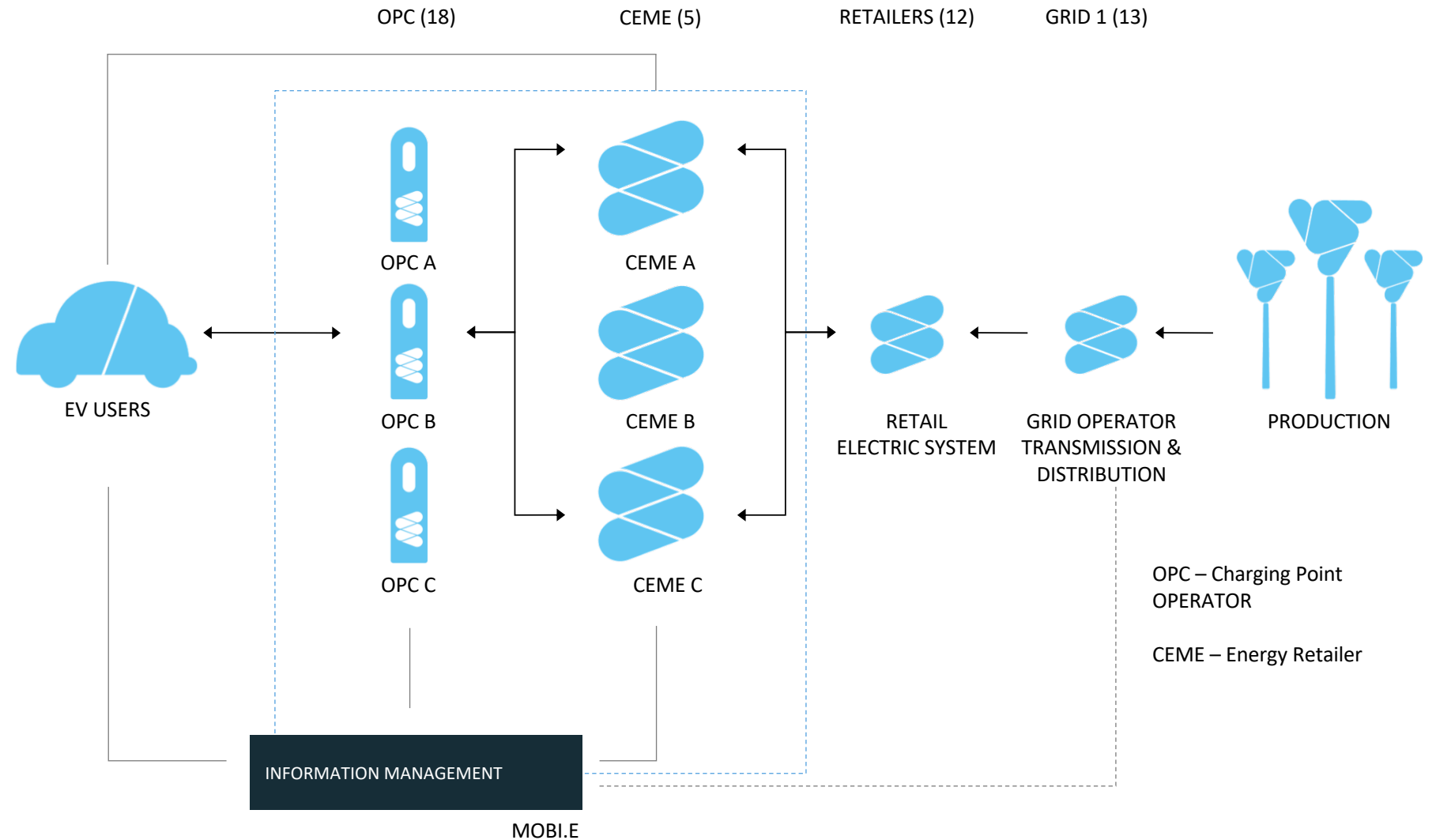
## NEW ELECTRIC VEHICLES

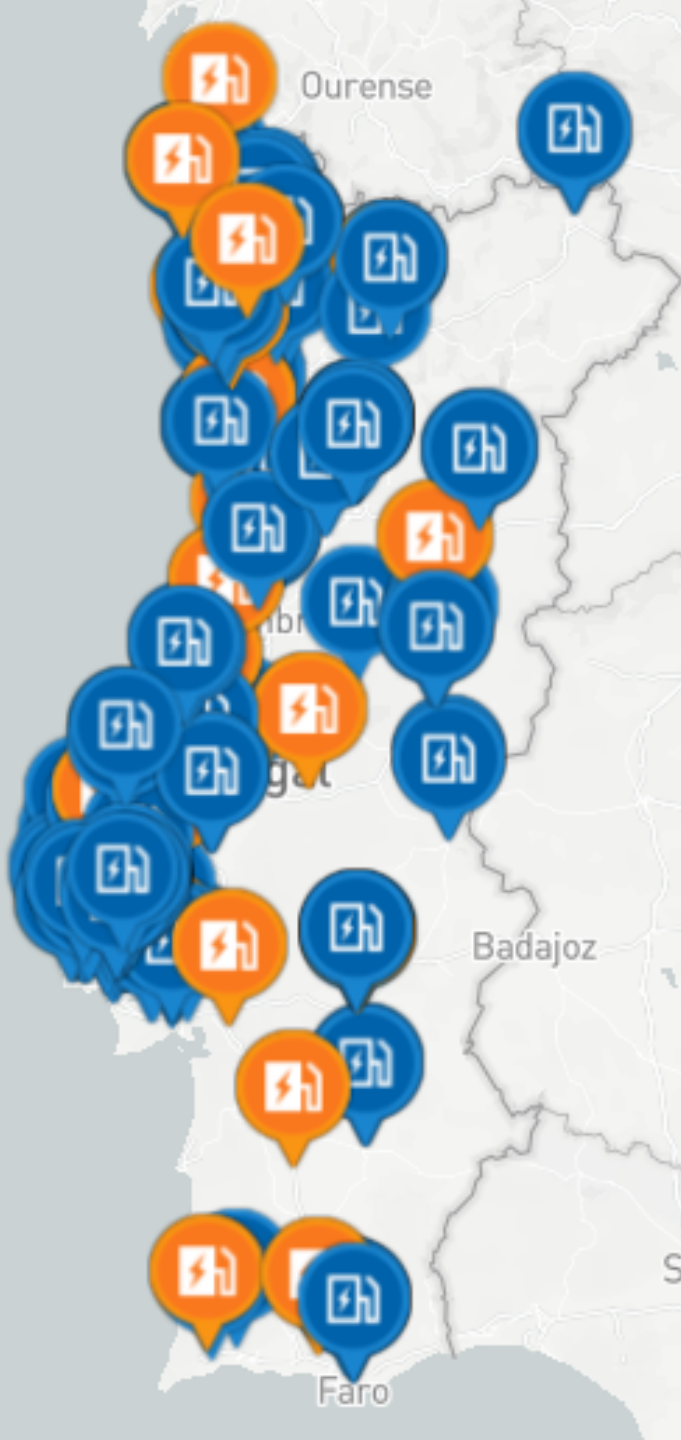
BATTERY, PRICE, OFFER

**ELECTRIC MOBILITY**  
STRONG GROWTH

# ELECTRIC MOBILITY MODEL

BUSINESS INTEROPERABILITY and COMPETITION AT WORK





# THE NETWORK

## 608 EVSE

### 550 Normal Chargers (3,6 kW to 22 kW)

404 Normal (Pilot Project)

146 Normal (Private investment)

### 58 Fast Chargers (45-50 kW)

39 Fast (Pilot Project)

19 Fast (Private investment)

## 1 469 PLUGS

1 316 Normal

153 Fast

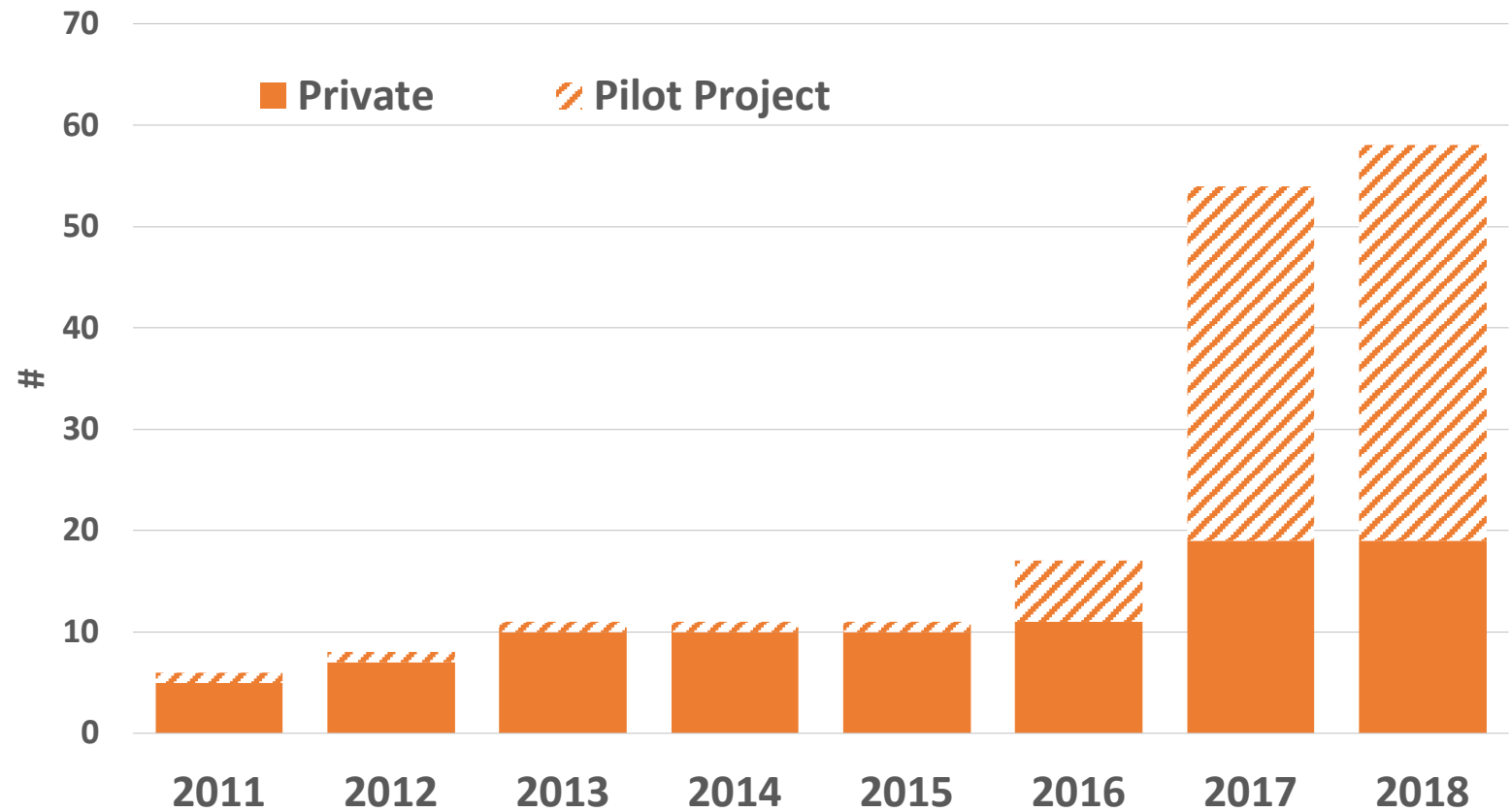
## COVERAGE

69 MUNICIPALITIES WITH EVSE

198 MUNICIPALITIES WITH USERS (8 FROM ABROAD)

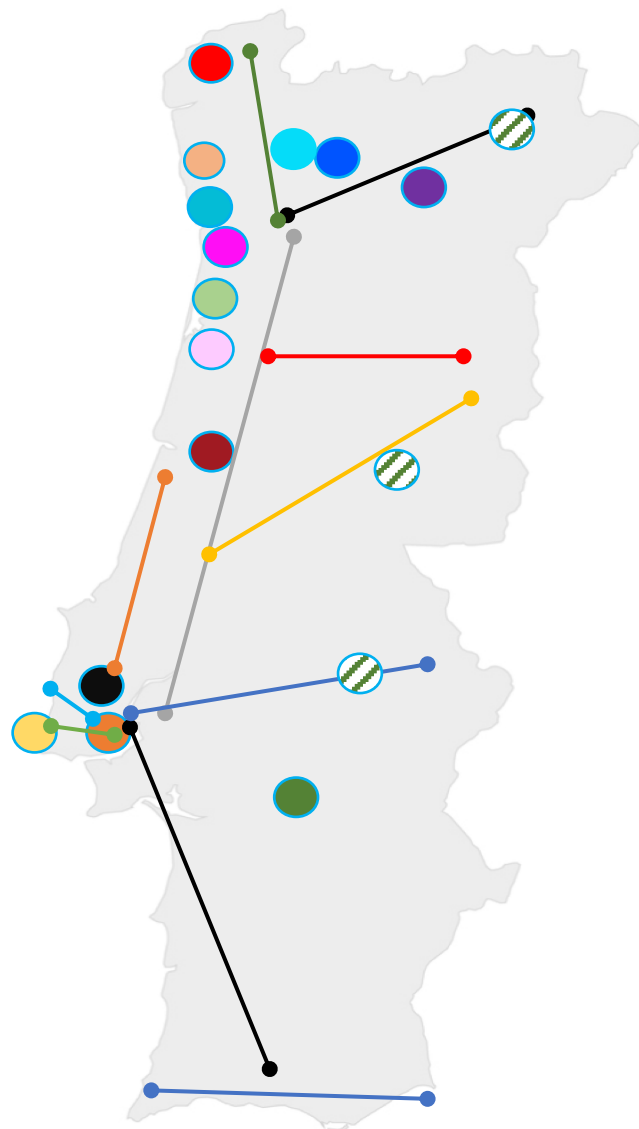
# THE NETWORK

NUMBER OF FAST CHARGERS (45-50 kW)



# THE NETWORK

## FAST CHARGING



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

10 MAIN HIGHWAYS

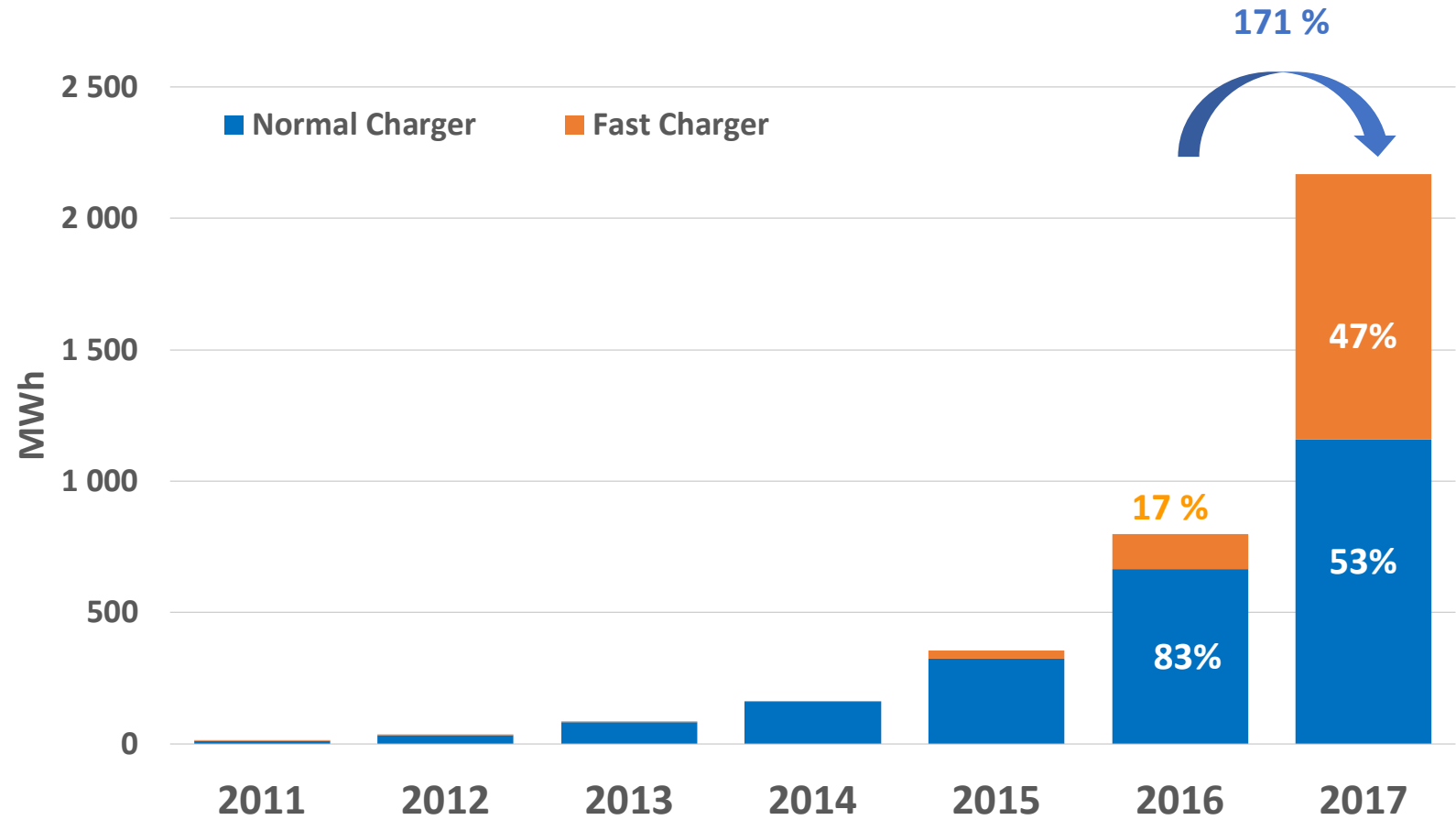
14 + 3 CITIES

AVEIRO  
BRAGA  
CASCAIS  
COIMBRA  
ÉVORA  
GUIMARÃES  
LISBOA  
LOURES  
MATOSINHOS

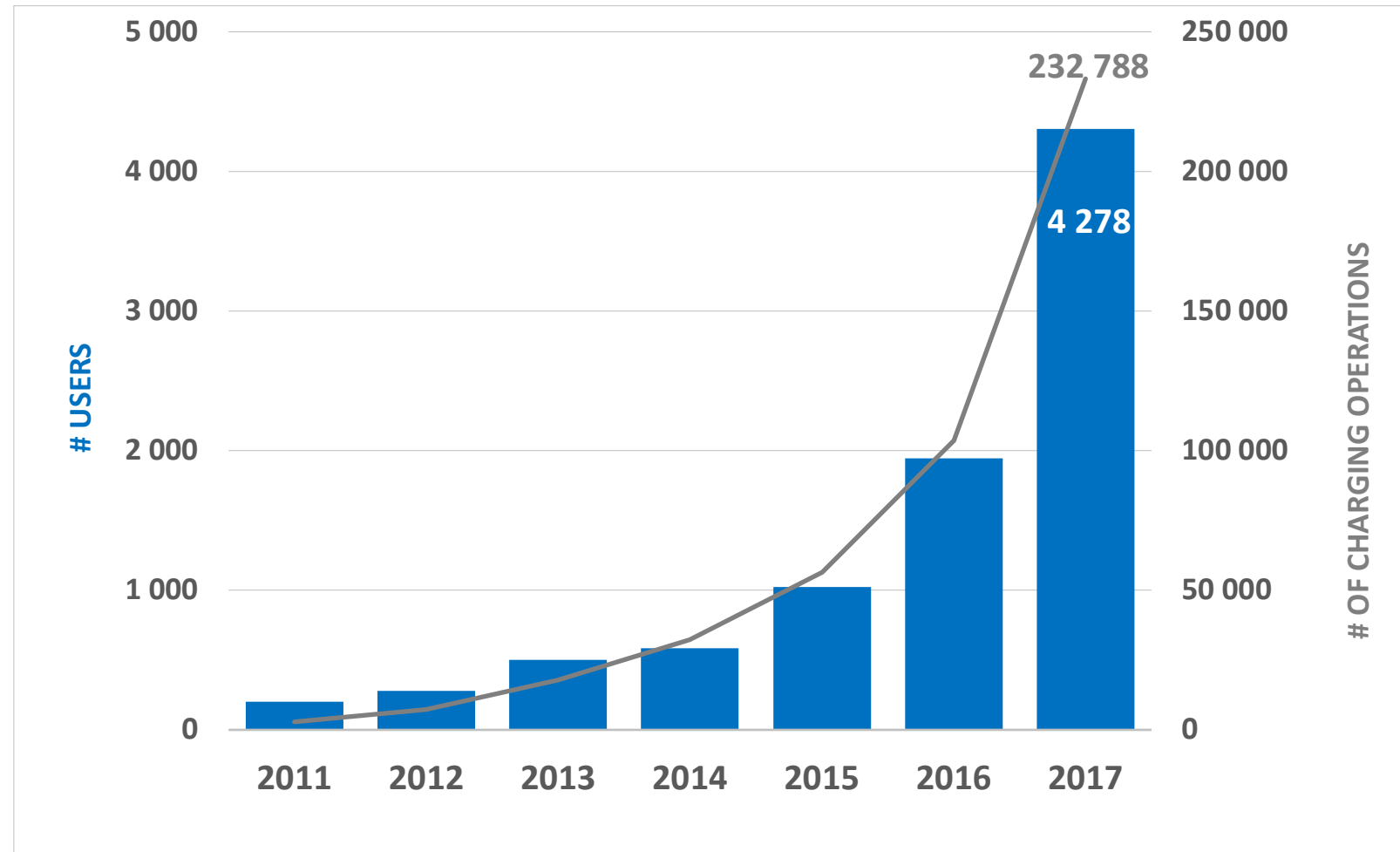
PORTO  
VALENÇA  
VIANA DO CASTELO  
VILA NOVA DE GAIA  
VILA REAL  
  
BRAGANÇA  
CASTELO BRANCO  
ESTREMOZ

# THE NETWORK

## ENERGY CONSUMPTION



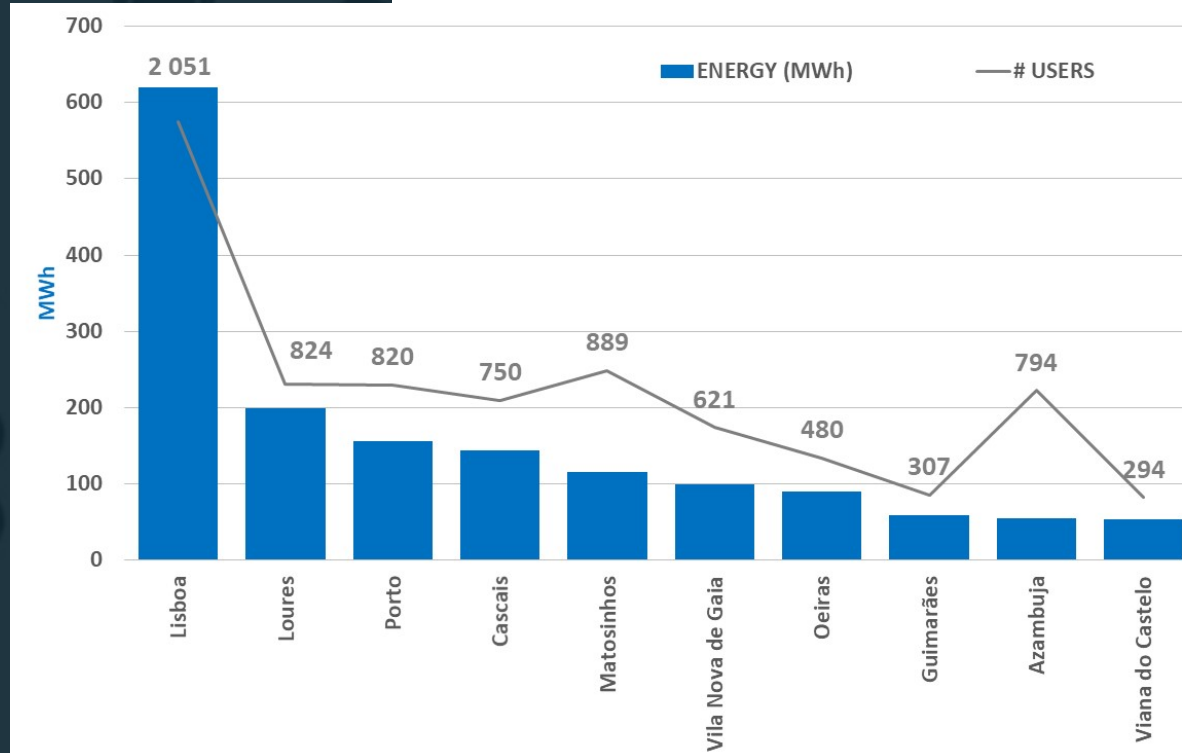
# THE NETWORK



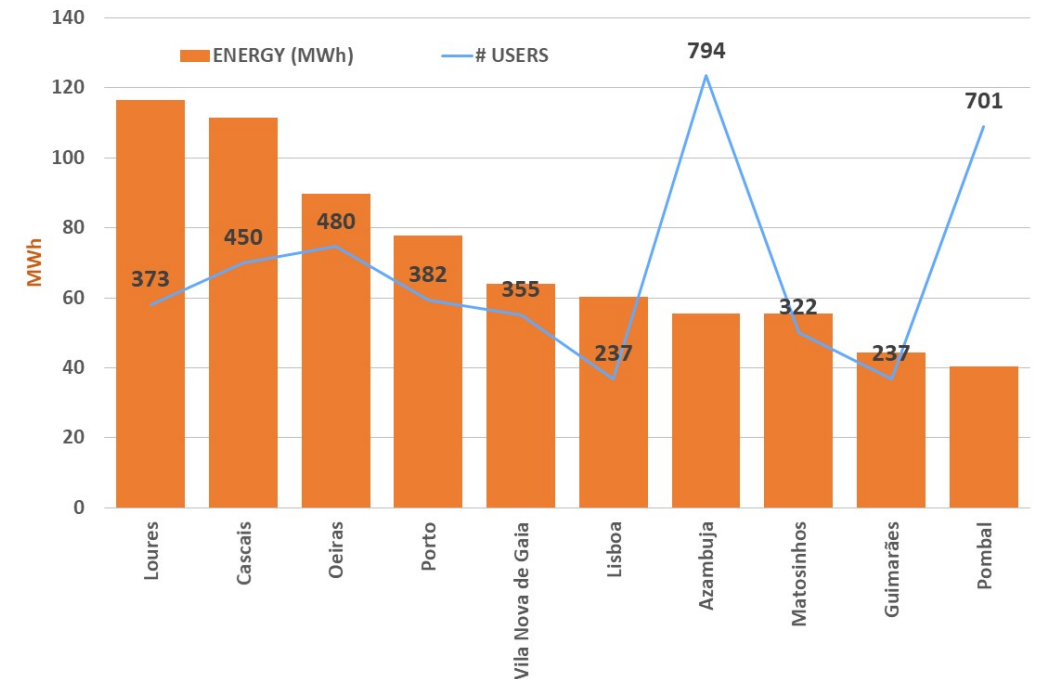


# CONSUMPTION PROFILE

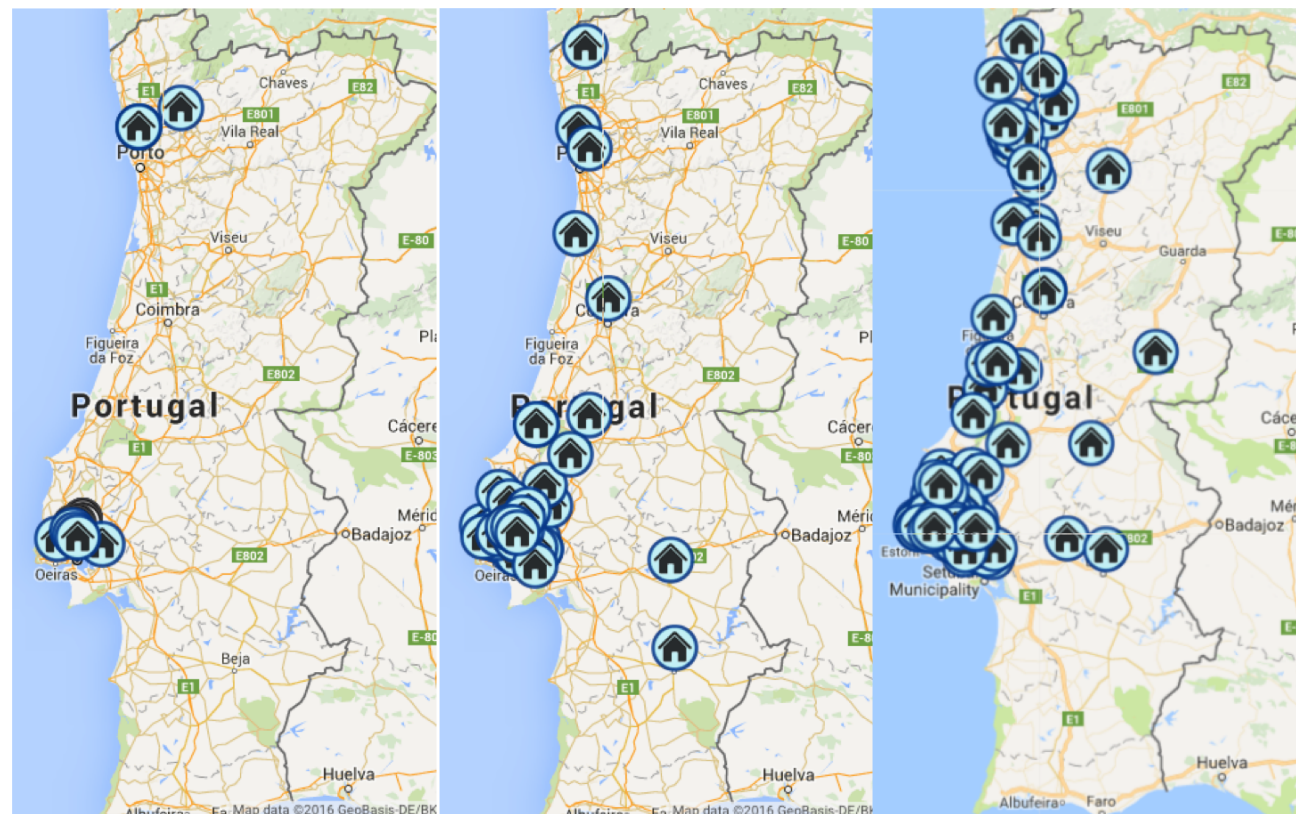
## TOP 10 MUNICIPALITIES



## TOP 10 MUNICIPALITIES – FAST CHARGING



# DEMAND PROFILE - LISBON



LISBON




2011

2013

2017

Users	105 (56% residents)	313 (37,5% residents)	2 051
Energy (MWh)	3,9	41,5	620
# of Charging Operations	1 165	9 245	76 072
CO <sub>2</sub> avoided (tonCO <sub>2</sub> )	2,6	27,5	410

# THE NETWORK

	total	2016	last year	last month
 energy consumed	4,036,827.26 kWh	798.527,69 kWh	2,164,260.94 kWh	310,523.47 kWh
Nº  # chargings	495,282 #	103.593 #	232,788 #	31,091 #
Nº  # users	5,395 #	1.936 #	4,278 #	2,663 #
 CO2 avoided	2,671,370.44 kgCO2	528.425,70 kgCO2	1,432,199.68 kgCO2	205,488.91 kgCO2

CHARGING OPERATIONS EQUIVALENT TO **26 900 000 km** TRAVELLED

# THE NETWORK IN 2018

## FAST CHARGERS

New 11 EVSE in 1<sup>st</sup> Quarter from pilot project

At least 20 new EVSE from private investment in 2018

## TECHNOLOGICAL UPGRADE

Work in progress – to end in 2<sup>nd</sup> 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 3<sup>rd</sup> Quarter, one in each Municipality not yet covered

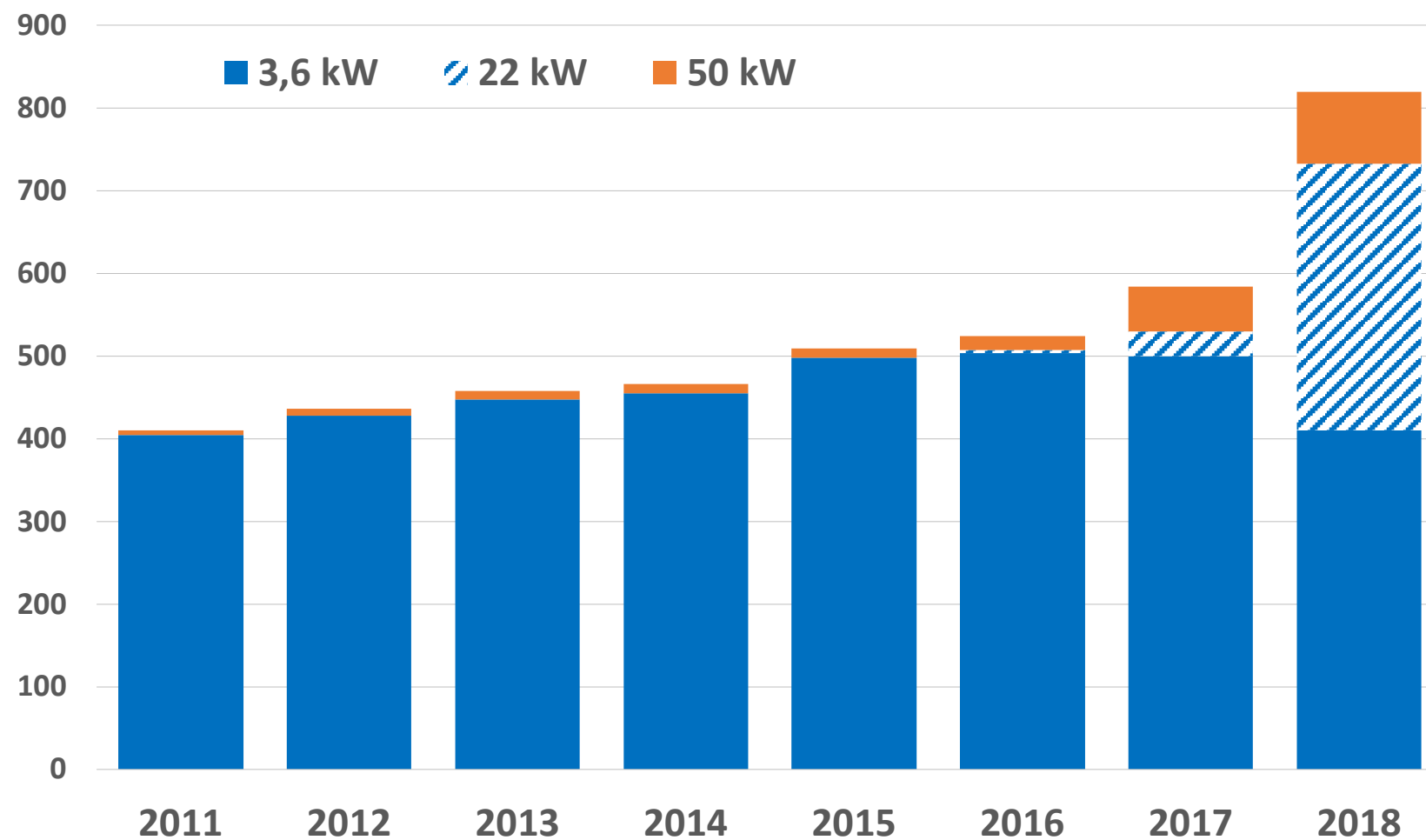
## BY THE END OF 2018

**31 new fast chargers (50 kW)**

**302 new 22 kW chargers**

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

# THE NETWORK IN 2018



# THE FUTURE

2018 - ....

SELF-PRODUCTION AND ENERGY STORAGE

HIGH POWER CHARGING

VEHICLE-2-GRID (V2G)

INTEGRATION WITH OTHER MOBILITY SERVICES

## 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



FOR MORE INFORMATION

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