

FLASHBACK: 2nd edition



International Road Federation
Fédération Routière Internationale
Federación Internacional de Carreteras

الطرق السيارة بالمغرب
Autoroutes du Maroc



50 points de recharge



1600 km



EV Roadmap Morocco



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المكتب الوطني للكهرباء والماء الصالح للشرب
Office National de l'Electricité et de l'Eau Potable



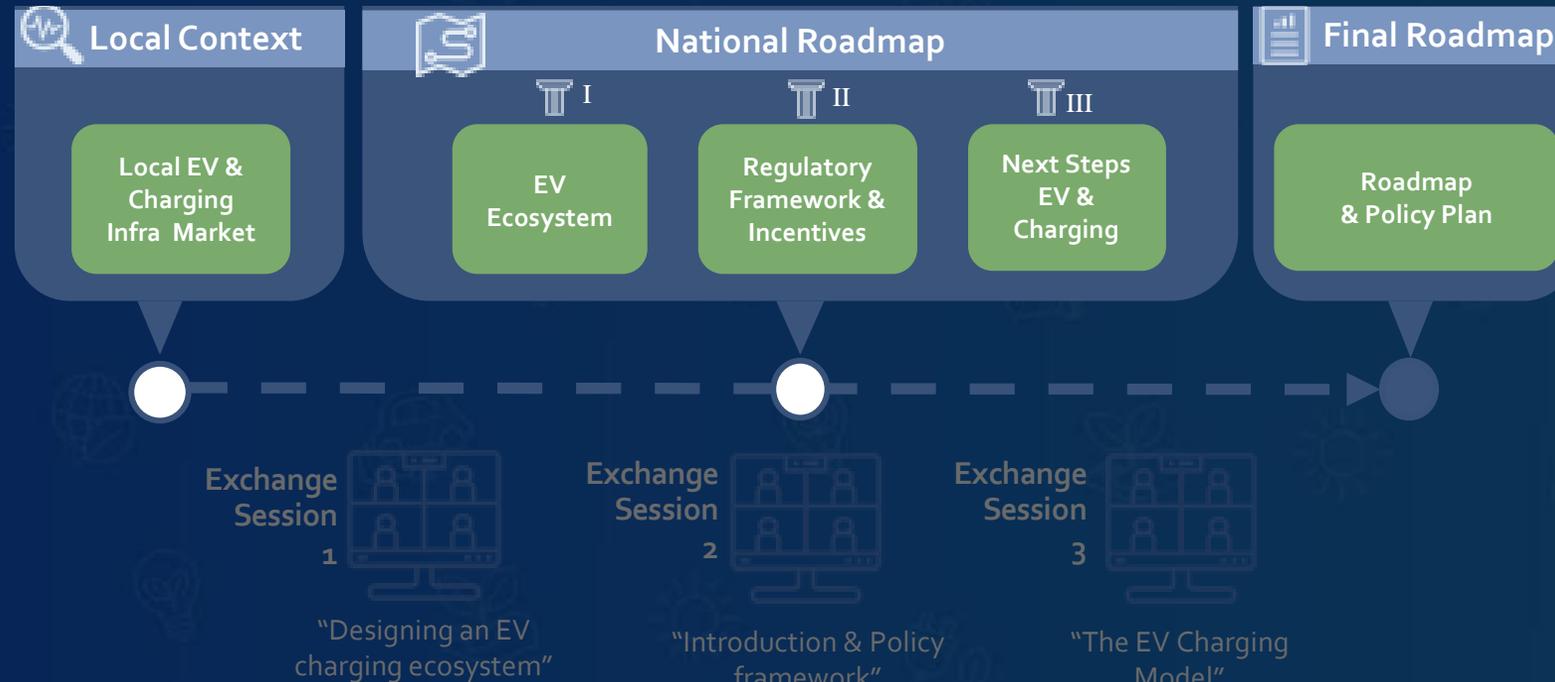
المملكة المغربية
وزارة الصناعة والتجارة
Royaume du Maroc
Ministère de l'Industrie et du Commerce



الإتحاد العام لمقاولات المغرب
Confédération Générale des Entreprises du Maroc



Royaume du Maroc
Ministère de la Transition Énergétique et du Développement Durable



EV – Current context



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EV fleet

~400 electric vehicles
and more than
10 000 hybrid
vehicles
12 electric buses.



Charging network

The charging network currently consists of **600 e-chargers**, a large part is located along the Tangier-Agadir highway.

Local production

Production of the electric city cars Citroen AMI and Opel ROCKS- in Morocco / Implementation of the first production line of EV charging stations in Benguerir.



Target

The public authority aims to increase the share of hybrid and electric vehicles in the government fleet to 30%

EV policies

Morocco has introduced a VAT reduction for importers and distributors of ecological cars. Excise duties have been reduced to 2.5% for hybrid and electric vehicles. The latter are also exempt from the tax on luxury goods and the road tax.

Emission standards

From January 2023, vehicles sold in Morocco must comply with Euro 6 emission standards.

EV – CURRENT CONTEXT



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- Total cost of ownership of electric cars remains higher compared to their fossil fuel counterparts.
- 2 and 3 wheelers are already financially more attractive.
- Cars, taxis and buses still need financial incentives to facilitate and accelerate EV adoption.



EV – SCENARIOS



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	EV adoption by 2030	EV percentage share	CO2 emissions savings (Tons eqCO2)*	Charging Infrastructures (No. EVSE)**	
Pessimistic	11,000	0.4%	12,045	1,100	Normal chargers: 770 Fast chargers: 330
Reference	258,000	9%	282,510	25,800	Normal chargers: 18,060 Fast chargers: 7,740
Optimistic	425,000	15%	465,375	42,500	Normal chargers: 29,750 Fast chargers: 12,750

* Assumptions used for the calculation of CO2 emissions: Energy consumption per EV is about 0.2 kWh/km, considered daily journey is 25 km/day, Fuel vehicle emissions: 132 gCO2 / km (Diesel), 120 gCO2 / km (petrol), national electricity grid is 52% decarbonized by 2030, Non-carbon-free part of the network is responsible for 760 gCO2/kWh / ** Assumptions used for estimating charging infrastructure: European Union (AFID) recommends having at least one charging station per 10 vehicles, share of normal chargers is estimated at 70%, and that of fast chargers at 30%.

EV – ADOPTION BENCHMARK



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- 100% electrified sales
- 100% ZEV sales
- 100% ZEV stock
- Net-zero pledge

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EV – ROADMAP & ACTION PLAN



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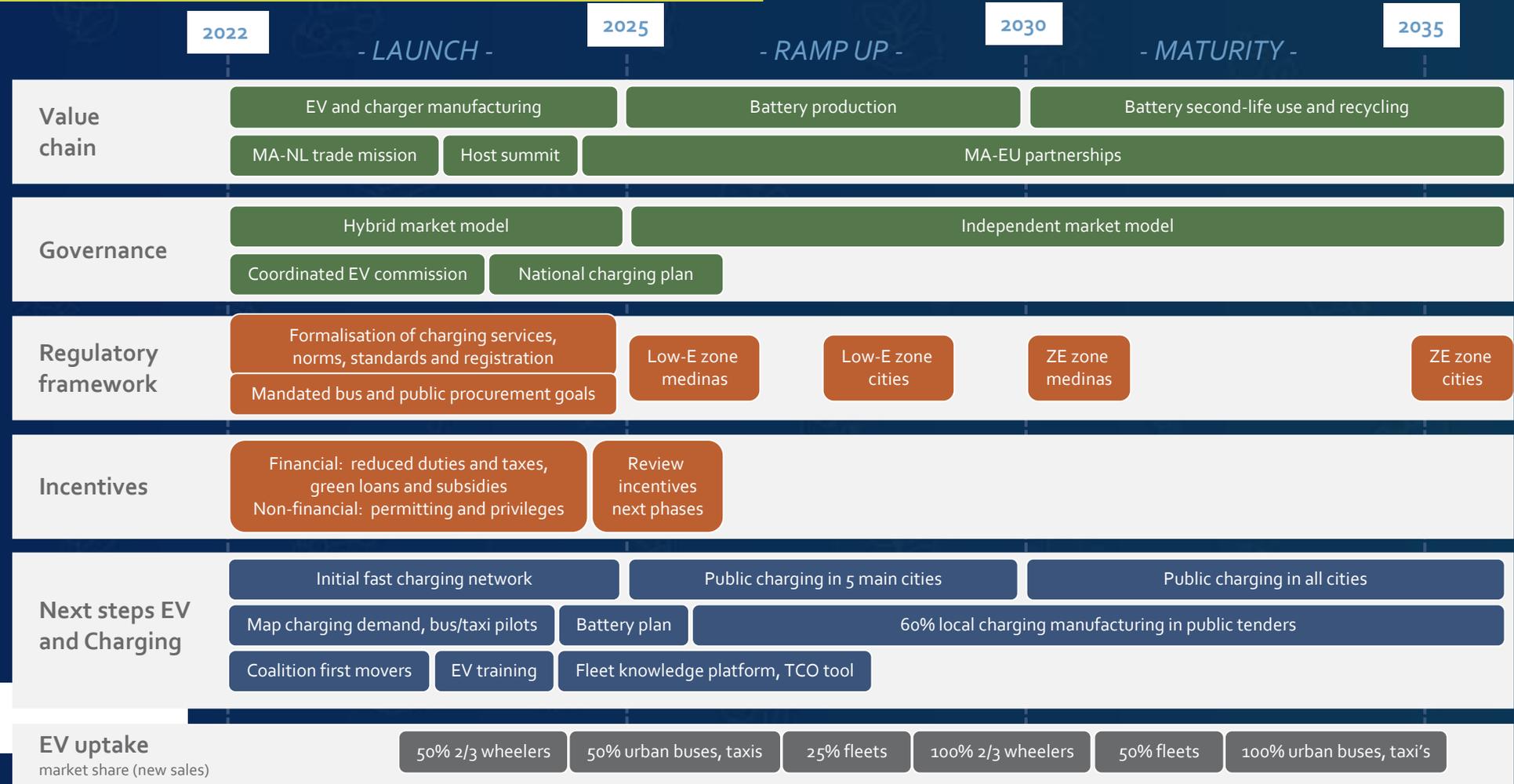


EV – ROADMAP & ACTION PLAN



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EV – ROADMAP – POTENTIAL



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ELECTRIC CARS



258,000
ELECTRIC CARS



25,800
CHARGING
POINTS



1000
MMAD



282,564
Tons eqCO₂/an

Reference case 2030

2/3 WHEELERS



250,000
E-2R/3R



25,00
POINTS DE
RECHARGE



250
MMAD



272,025
Tons eqCO₂/an

BUSES



2,000
E-BUS



200
POINTS DE
RECHARGE



40
MMAD



4000 Tons
eqCO₂/an



- **Priorities:** adapting the regulatory framework and setting up a national charging infrastructure plan (minimal infrastructure, EV chargers management model, interoperability,..)
- **Governance:** In order to implement the roadmap and insure the sustainability, we recommend to establish a national commission, bringing together all stakeholders from the public, institutional, industrial and academic sectors. This commission will have the task of monitoring the progress of the implementation of the action plan defined by mutual agreement between the stakeholders and a certain number of performance indicators, including an annual objective for the number of charging infrastructures and electric vehicles.
- **Sustainable mobility:** a second complementary phase, financed by the Dutch agency RVO and CGEM is launched to generalize the proposed roadmap to the other parts of the sustainable mobility in Morocco.

