

NEMESYS

NEw Mobility Electric SYSstem



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Electrical Mobility today is based of two solution:

1) Batteries

- **Recharging** are very too slow
- **Overweight** of the electrical vehicles with batteries
- **Autonomy** is very limited compared to thermal engines

2) Fuel cells:

- **Safety**, because they used hydrogen in very high pressure
- **Costs** are very high for safety along all supply chain
- **Infrastructure** - the lack infrastructures for refueling

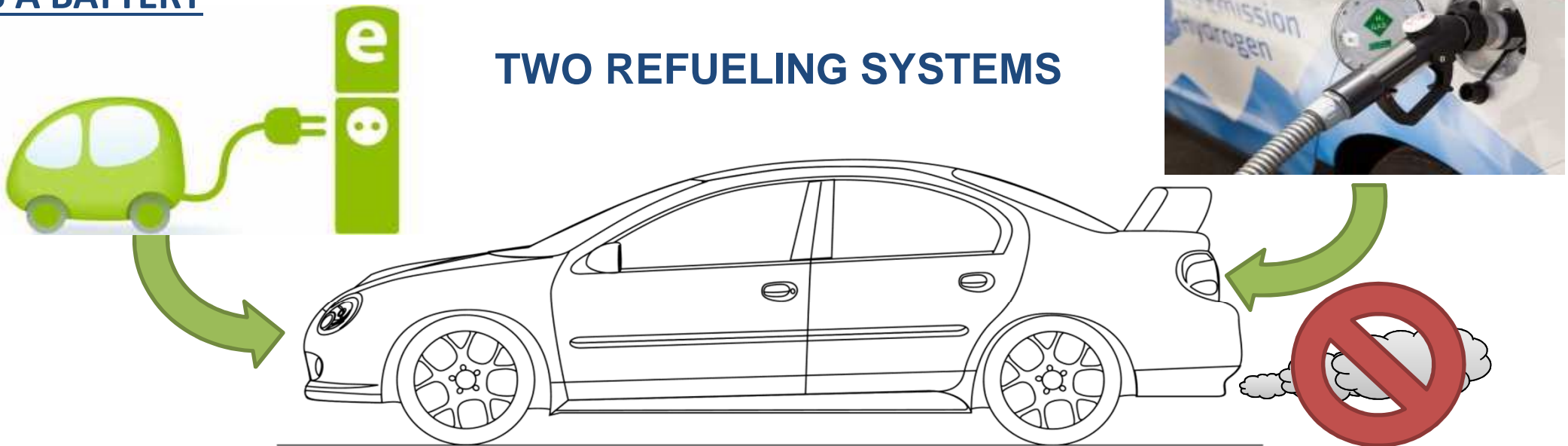
We have developed a new technologies to solve this problems

NEMESYS have patented a device that it used a new solution of hybrid technology

REFUELING
BY ELECTRICITY RECHARGIN
WITH GRID CONNETTED SYSTEM
AS A BATTERY

REFUELING
BY HYDROGEN
LOW PRESSURE
AS A FUEL CELL

TWO REFUELING SYSTEMS



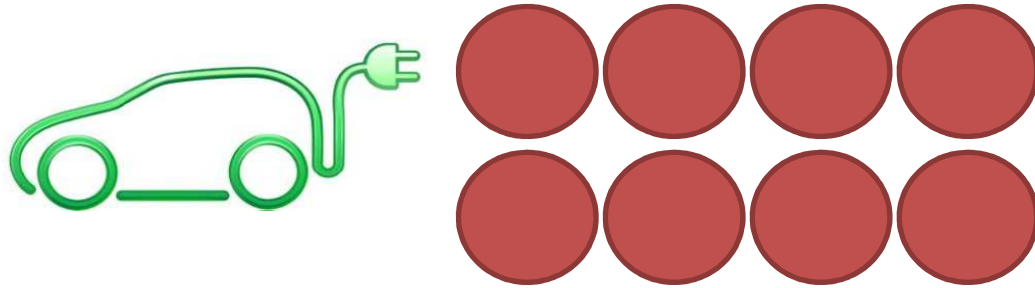
MORE SAFETY

IT USE HYDROGEN AT LOW PRESSURE FROM ZERO TO EIGHT BAR

Comparison with lithium Battery technology

Li-Ion Battery:
just a recharge system

Time of recharging
> 8 hours



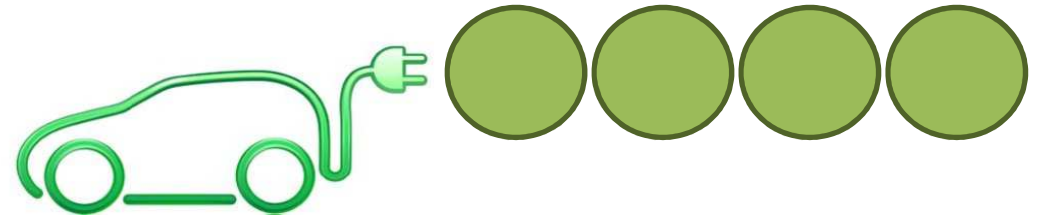
Weight/Autonomy
1km/1kg

TESLA Li-Ion 75kWh



NEMESYS:
two charge systems

Time of recharging in
electrical modus
< 8 hours



Refueling Very Speed
4 minuts



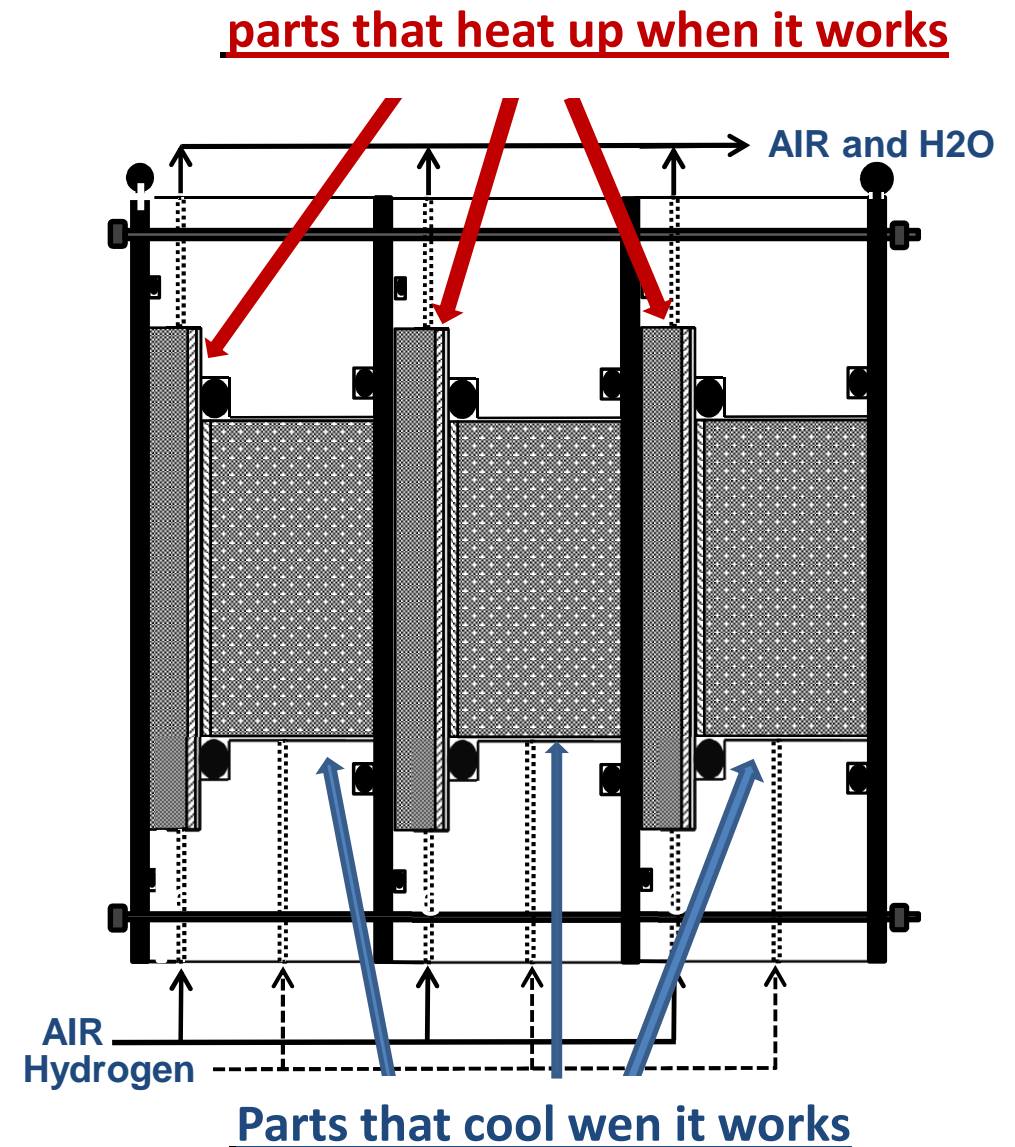
Weight/Autonomy
3,5 km/1kg

Hydrogen refueling 140kWh
with low pressure <10Bar



Many vantages:

- Very fast recharge
- More efficiency
- Less heavy
- More security
- Less costs
- More independence of refueling infrastructures



Three NEMESYS cells layout

NEMESYS TEAM:

- **Marco Matteini** business owner, systems integrator of technologies and renewable energies;
- **Alessandro Tampucci**, Scientific Director, electrochemical author of many patents in the field of hydrogen and batteries technologies;
- **Massimo Tucci**, Designer electric vehicles and power-train;
- **Marco Ulivagnoli**, Specialist of private equity, Sweat Equity Srl;
- **Enrico Baluardi**, expert accounting tax administration and finance - STUDI ASSOCIATI Srl

Customers & Market

Automotive market forecasts by Cambridge Econometrics (A BIG MARKET)

www.camecon.com

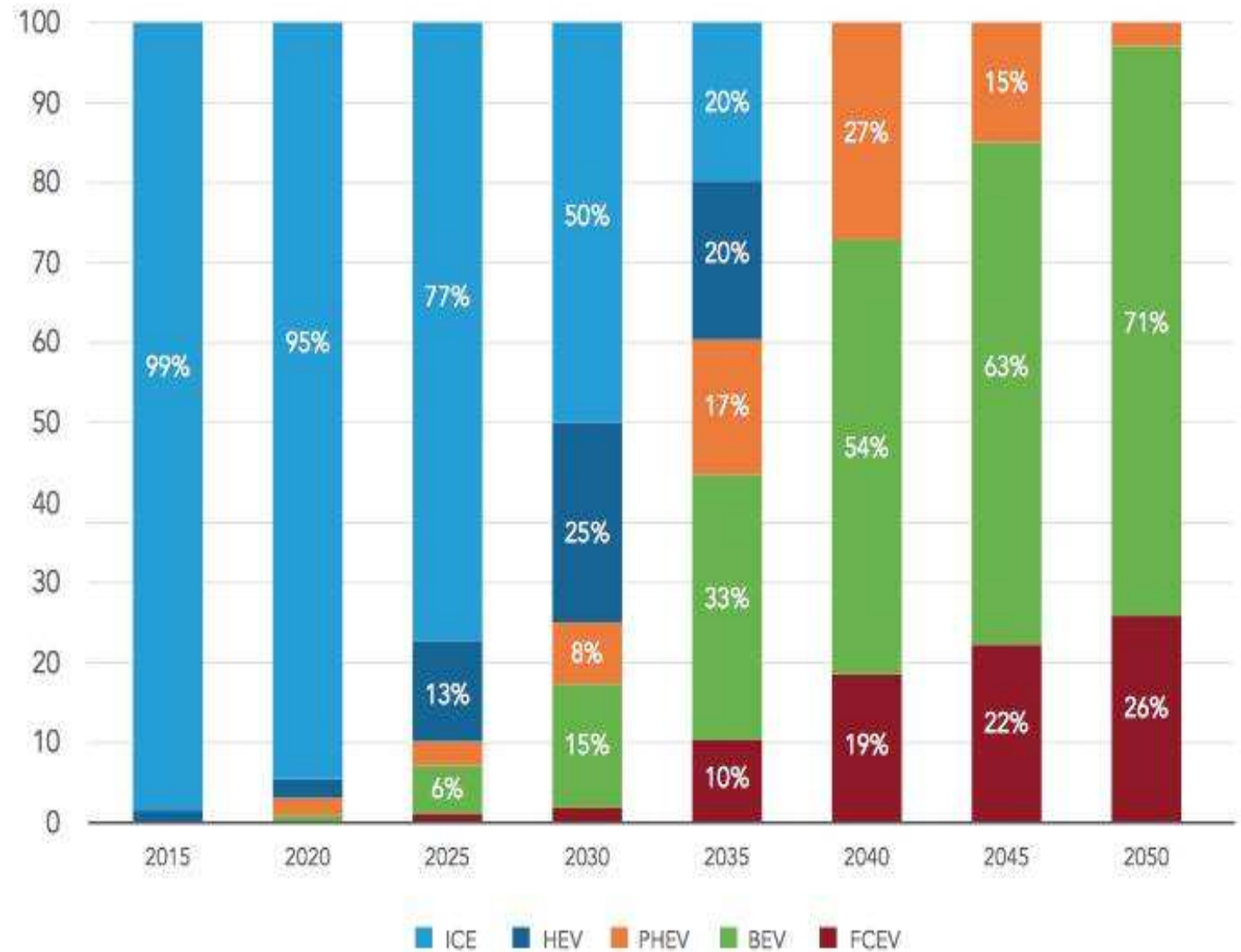
ICE
Internal Combustion Engine

HEV
Hybrid Electric Vehicle

PHEV
Plug-in Hybrid Electric Vehicle

BEV
Battery Electric Vehicle

FCEV
Fuel-Cell Electric Vehicle



Many other market applications



Beyonde automotive sector, many other market applications

NEMESYS GOALS

Competition

We have developed and patented a new technology, different from the battery and fuel cell.

It is a hybrid between these and opens up the possibility of building a new range of products for all mobile electrical applications.

The goals of NEMESYS is to develop many applications in partnerships or in joint ventures with the largest companies that already have their markets, providing technological support of our own technology and using our patent in exchange for royalties

Business Model & Market Strategy

Institutions



Horizon 20-20
Industry 4.0



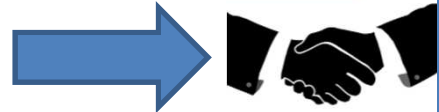
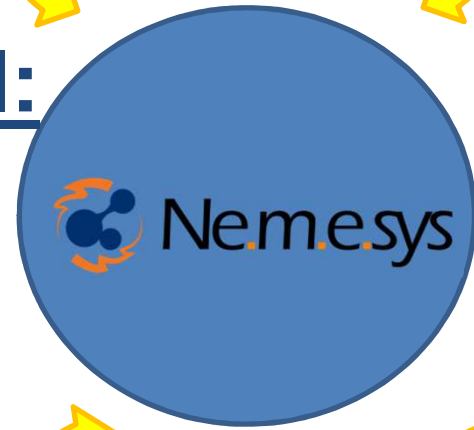
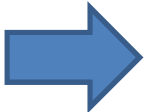
Business Angels



Market Strategy:

Business Model:

Intellectual Property Company



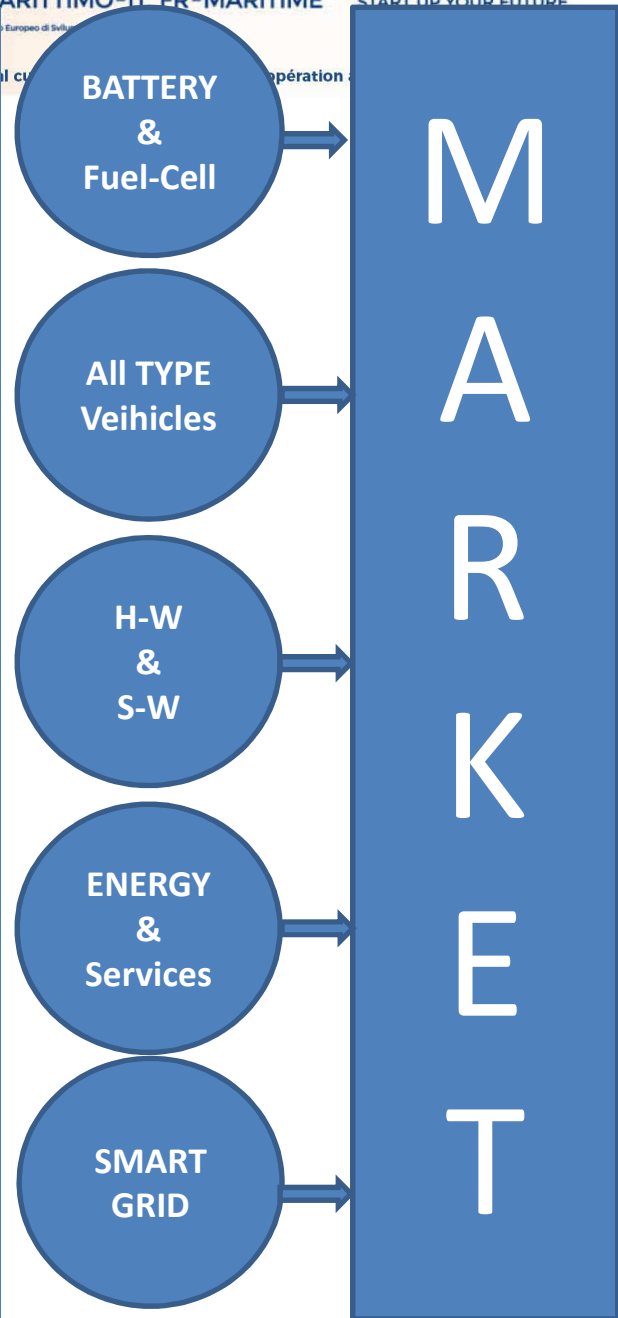
we aim at many Joint-Ventures



Capitals Market



Banks



Many Partners

Current status & Roadmap

✓ = Realized
wip = Work in Progress
tbd = to be determined



La cooperazione al cuore del Mediterraneo | La coopération au cœur de la Méditerranée

First step (2016-2019)

- ✓ 1. Establishment of NEMESYS Srl Innovative start-up of law Dlg. 179/2012
- ✓ 2. Participation to regional tender for request of funding for innovative start-up
- ✓ 3. Request of patent of the basic technology for NEMESYS Hydrogen-Air batteries
- ✓ 4. Realizzazione dei primi prototipi dimostrativi e test di laboratorio e benchmark
- ✓ 5. Opening and equipment of electrochemical laboratory in the incubator of technologies
- ✓ 6. Participation to the calls of European SME instruments Phases 1 (pending action)
- wip 7. Participation to the calls of European SME instruments Phases 2

Second step (2019-2021)

- wip 1. Agreements for participation in other European projects with various industrial partners
- wip 2. Achievement second level patents for the projects shared with our industrial partners
- wip 3. Pre-industrialization of the applications with industrial partner selected

Third step (from 2021 onwards)

- tbd 1. Joint venture with battery or fuel -cell producers, for specific applications
- tbd 2. Joint venture with manufacturers of electric vehicles or/and with of other devices
- tbd 3. Joint ventures with energy companies and managers of energy distribution networks
- tbd 4. Participation in dedicated companies for the production of products
- tbd 5. Participation in to the companies for the production and distribution of hydrogen
- tbd 6. Participation in companies for energy services

NEMESYS IS THE WINNER INTERREG FIR_STRAT (16 November 2018)

Thank you for your attention



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