a vehicle for social change
a new relation between people & cities & vehicles
90% of population growth will be in urban areas.

Increased urban densification

60% of the population and 80% of the wealth

and a new concept of SMART CITIES

Imperial College Urban Energy Systems Project
PEOPLE
✓ technology everywhere and anywhere
✓ connected to internet
✓ personal user experience
1. Private Automobiles

Major source of pollution and carbon emissions; massive congestion, parking and noise problems

40% of total gasoline use in cars looking for parking

2. Public Transport

Does not cover the entire city, inconvenient and inflexible schedules

3. First Mile - Last Mile Problem

Of public transit is not solved
rethinking the concept of urban mobility in the new sustainability context
be simple personal connected technology electric electronic smart
a new electric and electronic vehicle concept
technical description
key data of the 2 passenger vehicle

✓ Dimensions:
  - normal: 2.634mm (long.) x 1.750mm (anch.) x 1.565mm (alt.)
  - fold: 2.070mm (long.) x 1.750mm (anch.) x 2.070mm (alt.)

✓ Weight
  - without batteries: 540 kgs.
  - with batteries: 700 kgs.

✓ Power: 15 kw / 20 cv

✓ Loading time: from 20% to 100% in 15 minutes (for a fast charge)

✓ Integral steering

✓ Reach with full battery: 120 kms

✓ Slope ascent: up to 20%

✓ Speed:
  - maximum: 90 km/h
  - self limited: 50 km/h

✓ Homologation: light four-wheel motorcycle

✓ Frontal access

✓ Boot capacity: 210 ltrs.
technical features
key data of the 2 passenger vehicle

✓ the car can move in all directions when folded
✓ driven by a haptic wheel
✓ 15 or 16 inch aluminium rims
✓ variable trunk concept

✓ sound system, windscreen wipers
✓ interface for an smartphone
✓ “urban” communication system (traffic, parking, charging)
✓ unbreakable, heated antisteam glass
✓ 4 electro-engines, one at each wheel
✓ two sets of separated battery packs
✓ roof integrated solar panel
✓ 2 little ventilators for air circulation

✓ all glass is laminated glass
✓ disk brakes on all wheels
✓ due to the position of driving, the car does not need to be equipped with airbags
modular design

design and manufacture following modular conception of 6 modules

1. WHEELS: the Robo Wheels, incl. motor traction, steering, braking system and suspension
2. FRONT MODUL: including front door and lateral windows
3. REAR PART: includes the auxiliary batteries
4. COCKPIT: includes seats, driving console and folding driving wheel
5. STRUCTURAL FOLDING CHASSIS: includes the batteries
6. ELECTRONIC MODULE: includes the control electronic as well as the power transmission electronics
robo-wheels
included motor traction, steering, bracking system and suspension
a new urban mobility concept
CityCar parking ratios
3 to 1 vs. traditional vehicles

Folded CityCar vs. conventional 4-door sedan
Parking ratio = 3.3 : 1
dialogue

city         citizen

dynamic prizes
mobile ad
geolocalization
urban commerce
urban tourism
complementarity
urban public transport …
A Market Economy of trips

Intelligent incentive mechanisms allow smooth inventory distribution.
“Mobility on Demand” systems will generate an ecosystem for new business models to emerge
promote partners
timeline
2010:
- Starting point
- Companies consortium

2011:
- Cities agreement

2012:
- Brussels Global Launch
- First prototype

2013:
- Cities test

2014:
- ON MARKET
Genius begins great works; labour alone finishes them

*Joseph Joubert*