

I. From ICE Car to Electric Car

Even industry watchers don't quite realize what an amazing feat it is that **Tesla** started out in the U.S., where gasoline prices are less than half of those in the EU and domestic market share of U.S. car makers more than halved in half a century. Is President Biden on to something that the U.S. may well become the Nr 1 automotive nation once again?



Volkswagen (VW)

- First car 1937 (Beetle)
- USD 35 billion in settlements and fines emission scandal related
- Pictured: VW Passat

Tesla

- 5% of VW's annual car production
- 300% of VW's market value
- First car 2005 (Roadster)
- USD 3 billion ZEV credits +
- Tesla Model 3 - electric 'but still just a car'

So, what's next?

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II. There's more to tackle - solve - gain - make better

simply because there's more to Mobility than replacing ICE cars with EVs.

To begin with, vehicle mass not displaced = kWh not needed = GHG not emitted.



Vehicle size not displaced = better space utilization of the present infrastructure.

III. Imagine tackling all other issues... It may well be 'The Next Big Thing'

Below: how everything relevant is interrelated.



IV. Market Opportunity

Car has grown obese (SUV trend). Huge void opens up between Car and Bicycle. More than 75% of the EU's and U.S. population resides in and around cities. Cities stimulate micro-mobility solutions, and tend to curb car traffic and car parking. Below: car brands are contemplating 'in between' concepts. The search is for the proper format.



Global car sales 2019: 75 million (source: Statista 2020). With the SUV trend, there is literally room for 'something in between'



Global sales 2019 motorcycles, scooters, mopeds 50 million (source: ReportLinker 2020)



Volkswagen 1 Liter Wagen



Opel



Audi



Toyota



Renault



Peugeot



V. Going from A to B: a matter of Mass - Energy - Space - Time

The finer the grain...



Most people sit alone in their car, particularly when commuting...

Left: the 'shrink-to-fit-demand' vehicle which is able to split-lane use freeway lanes (in a bricklayer formation). Will be a lot easier than expecting autonomous cars to drive close to each other front to back.

Below: the **Tesla Model 3** is wider than the driver is tall. Which is like lying stretched out across a freeway lane, inching sideways. Not the smartest way to utilize costly infrastructure.



Battery pack weighs 478 kg or 1054 lbs. That's 5-6 times as much as the driver weighs.



Width 76" or 1.93 m.



It weighs 3700 lb - the weight of having around 20 people onboard, moving back and forth with each trip, without ever dropping one off. A big waste of precious resources (space, materials, energy, time) since the average car trip consists of 1.1 person, average Uber trip of 1.2 passenger.

Personal Communication > MobilePhone

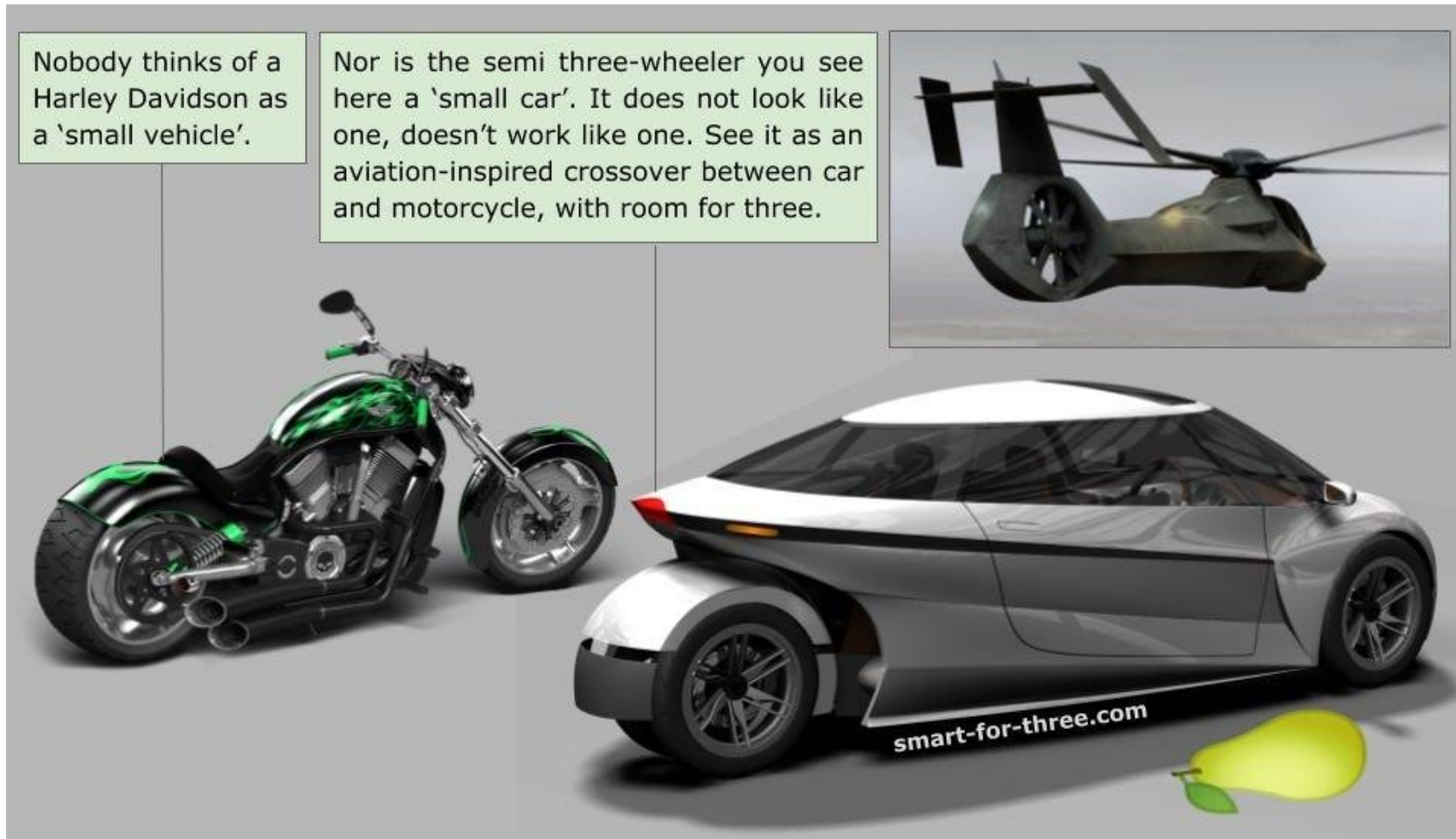
VI. Personal Mobility > AutoMobile

We no longer use bulky PCs nor brick-like cellphones. Why can't a 'personal mobility device' be lightweight, sleek, efficient and cool too?



What's more, billions already went into developing self-driving, which proved to be much harder to crack than anticipated. Sleek vehicles might help. *See Page 9.*

VII. Finding the Proper Format | Avoid the 'Small Car' stigma



Sleek | **Lightweight & Rigid** | **Comfy & NCAP Safe** | **Unparalleled Visibility**

(yellow marked terms contain thru-links)



**Piaggio
MP3**



**Toyota i-Road
three-wheeler**



smart-for-three.com

FUN: Unusual track/wheelbase ratio means it needs to bank to offset lateral forces whilst cornering



smart-for-three.com

The **Smart For Three** is a **Best of Both**: car-like comfort and safety, and the economy, fun, agility of a motor-scooter. Notice how the side-car seating position is integrated within the body, so passengers don't sit next to each other shoulder to shoulder.

VIII. 'From Car to Auto-Mobile'

(yellow marked title contains thru-link)

"**Design** is not just what it looks and feels like, design is how it works" - **Steve Jobs**

Round-off and sloping contours eliminate fragmented scanning and imaging; no blind spots, which is unavoidable with more boxy vehicles.



New technology tends to influence product format. Instead of putting autonomous hard- and software in conventional cars as add-ons, reformat the vehicle first to have it benefit optimally from AV technology. A self-driver can be set up like an elongated 360 degree vision motorcycle helmet.

