

AUTOMOTIVE TRENDS

BY IVAR HAMMARSTEDT.



<http://www.nissanusa.com/future-and-concept-vehicles/ids-concept/>

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PERSONAL FREEDOM OF TRAVEL MORE EFFECTIVELY SEEMS TO STAY.

WHAT SEEMS TO CHANGE IS THE ENGINE AND ITS FUEL.



1850

GENERAL ELECTRIC 1910

1950

LEAF II 2020

2050

HP/AVERAGE

2

10

200

200

400

RANGE/AVG KM

50

30

500

300

800

REFUEL/ MIN

420*

1000

5

7000 0,1 KM/MIN 10A 230V

3

***30MIN HAY FEEDING + REST 0,1 KM/MIN**

0,1 KM/MIN 5A 110V

100 KM/MIN

**720 0,6 km/h 3x16A 230V
138 6 km/min 325A 360V**

300 KM/MIN H2

2016 TO 2030 AUTOMOTIVE TRENDS

BY IVAR HAMMARSTEDT.



PROPULSION

Petrol (Diesel) & (BEV) FCEV



EI ~ 2% 2 Milj.

PHEV/FCEV ~20% 20 Milj



MEGA CITY - SMOG & dBA

2000 10 mega cities >10milj citizens
2020 >20 mega cities >60% of sales

How to enjoy a traffic jam, with smog.



DATA ENGINEERING

How to identify
Good vs. bad SW?
Industry 4.0, ML, AI

Eyes - on robots

-1927 = 0 Gb/car

-2016 = 1 Gb/car

-2050 = 100 Gb/car



BUSINESS CHALLENGE

PRICE POWER

+10%power/10th year cost neutral

- G-force - kg/hk
- Weight / size
- New -Time?!



BUSINESS AS USUAL



CAR ON DEMAND



~2% 2Milj. BMW drive now

VOLUME GROWTH

A B C CD DE F F+

- 5th Sedan



-SUV ,s

-Pick up,s



-MPV,s

- ANNUALLY GROWTH FROM 75 TO 115 MILJ. CARS
- OVER PRODUCTION 5% GIVES ~6 MILJ. CARS
- CO2 - FLEET AVG <85g / 100KM 2050 0-FOSSIL VISION
- SAFETY - LEGAL 0-DEATH VISION

BRAND DEATH 2 WILL GO

Fisker, Oldsmobile, Revere,,,
PSA, Opel, Fiat/Chrysler,,,-



BRAND BIRTH 1 WILL SURVIVE

Apple, Tesla, Qoros, Geely,,,-



WORK AND OR PLEASURE NEEDS SEEMS TO STAY AS A CUSTOMER PURCHASE SEPARATOR.

WHAT SEEMS TO CHANGE IS THE VALUE.



1850

VALUE

BREED DNA

USABILITY

WORK OR PLEASURE

BRAND

ARDENNER, LIPIZZANER, DARLEY ARABIAN



1950

ICE DNA INTERNAL COMBUSTION ENGINE

WORK OR PLEASURE

GM, MB, FERRARI



2050

SOFT WARE DNA

WORK OR PLEASURE

GEELY, MB, GOOGLE

END THANK YOU



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