What's next in Smart Mobility? An Investment Perspective

Welcome

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What’s next in Smart Mobility?
An Investment Perspective

Welcome

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What’s next in Smart Mobility?

An investment perspective

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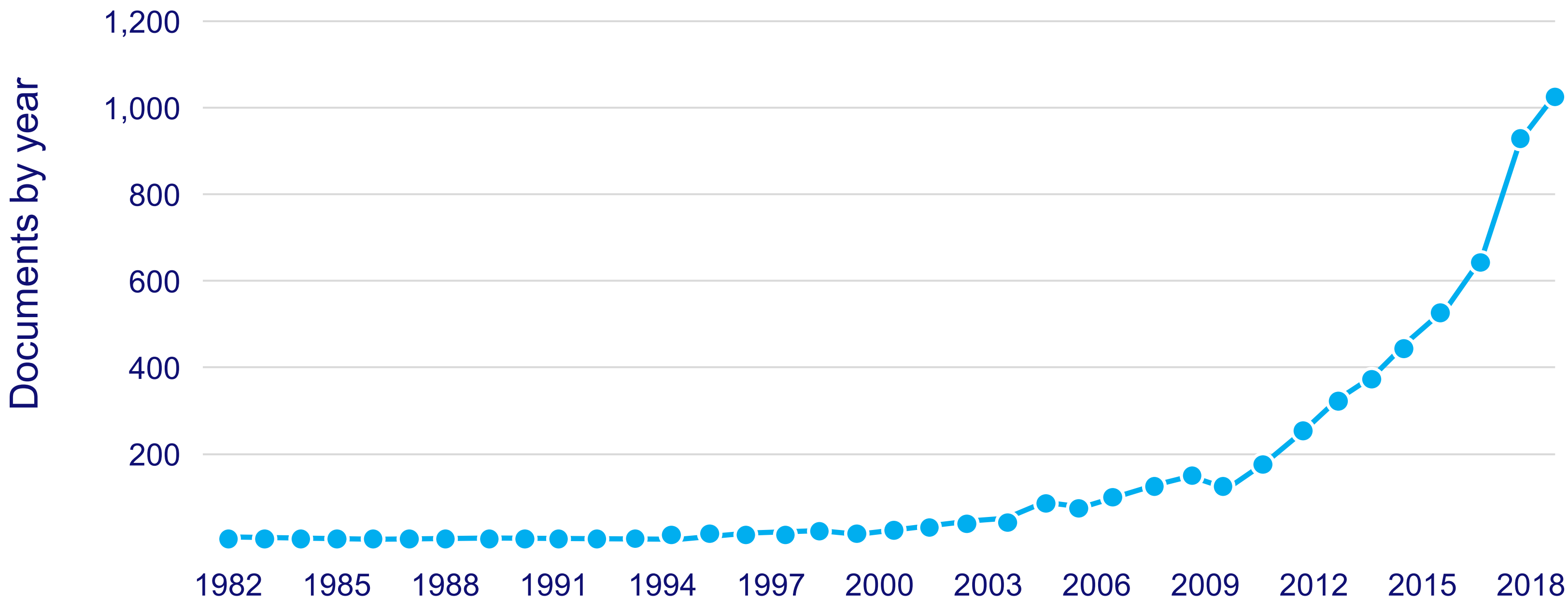
Where innovation starts

Content

- The smaller story; Smart Mobility
- The greater story; Mobility Transition; electric, automated, shared
- Coming of age: timeline
- Problems, neutral aspects, perspectives
- Common interest
- Advice

The smaller story; Smart Mobility

Scopus (academic search engine);
articles with “smart mobility” in its heading



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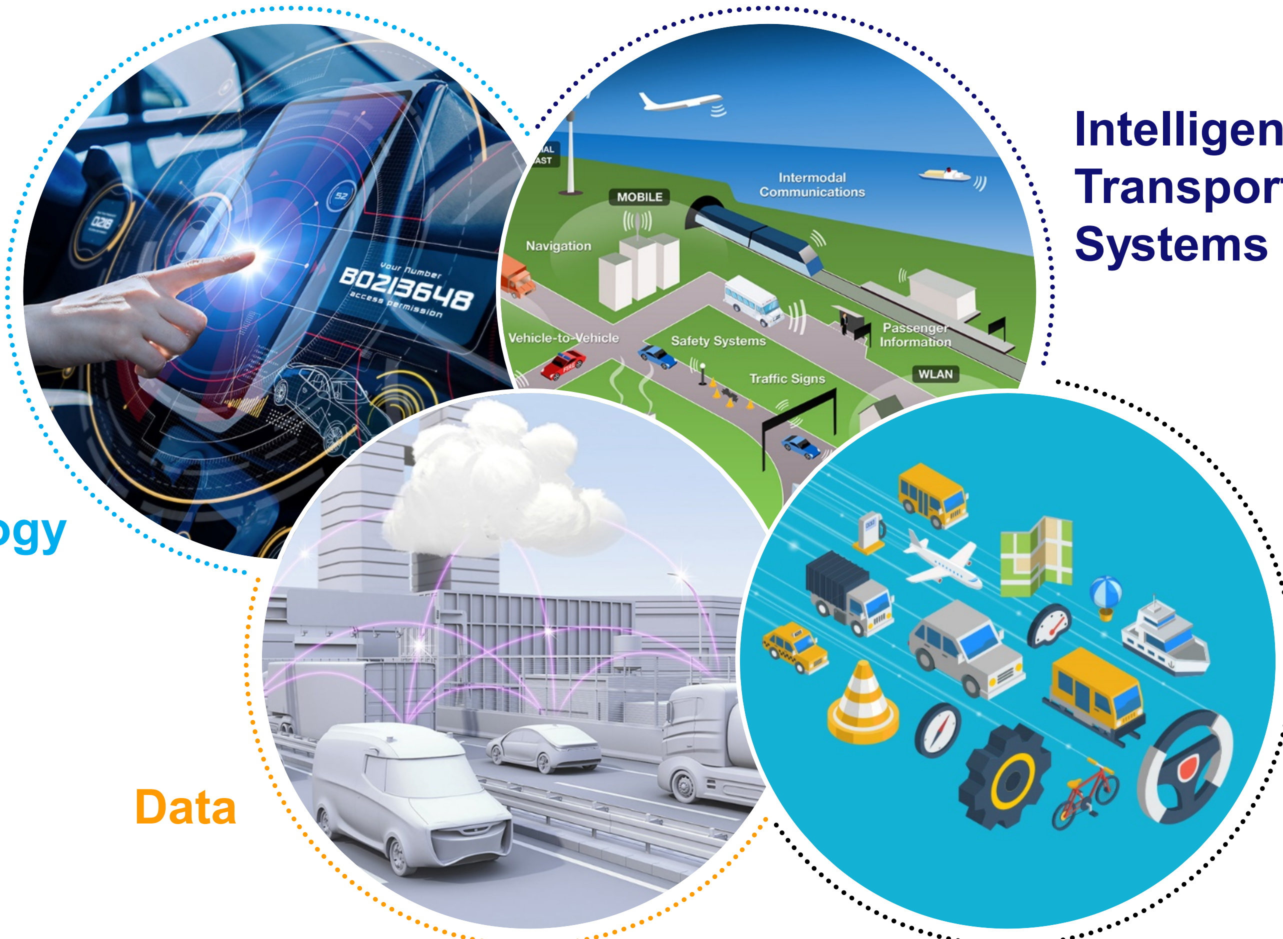
Smart Mobility now



Vehicle technology

Intelligent Transport Systems

Data

Mobility as a Service

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Smart Mobility in the Netherlands now

- Many plans in regions
- A lot of small pilots
- Vehicle technology some magnitude; Light Year, Automotive Campus
- National government not proactive, exception Talking Traffic, MaaS pilots
- No disruption but optimalisation
- Apps, iVRI’s, shuttles, smaller changes traffic

Smart Mobility future

WORLD FIELD

Vehicle technology, standards, data-business models, time schedules for market introduction and take-off, start-ups

REGIONAL FIELD

Regional and local projects where physical planning, traffic management and public transport investments meet

The Greater Story; Mobility Transition

CLEAN

CO_2, air quality, noise

Environmental standards

CAPACITY

Road capacity, parking capacity, quality of urban life

Occupancy rates of cars and trucks

The Greater Story: Mobility Transition

Capacity

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The greater story; Mobility Transition

ELECTRIC
Clean

AUTO-MATED
Capacity

SHARED
Capacity
& clean

Hypes

Respective hypes

2011 – 2012: ELECTRIC

2013 – 2014: Automated

2015 – 2016: Mobility as a service

Production of hypes

Enthusiastic professors ⇄ Consultants

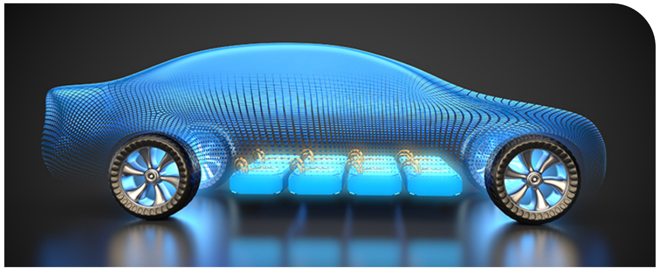
↓ ↓

Journalists

Always; too dynamic, too fast, forgetting implementation challenges, funny energy…

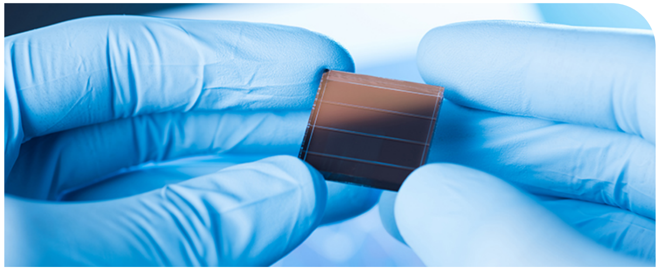
Electric: problems

1 Reluctance
(2018; 24,000 and first quartile 2019 sales, only 5,000 sold)



2 Price and subsidy interplay; how to reach 100% electric car sales in 2030?

3 Range anxiety
and battery development



4 Holidays and roaming tariffs

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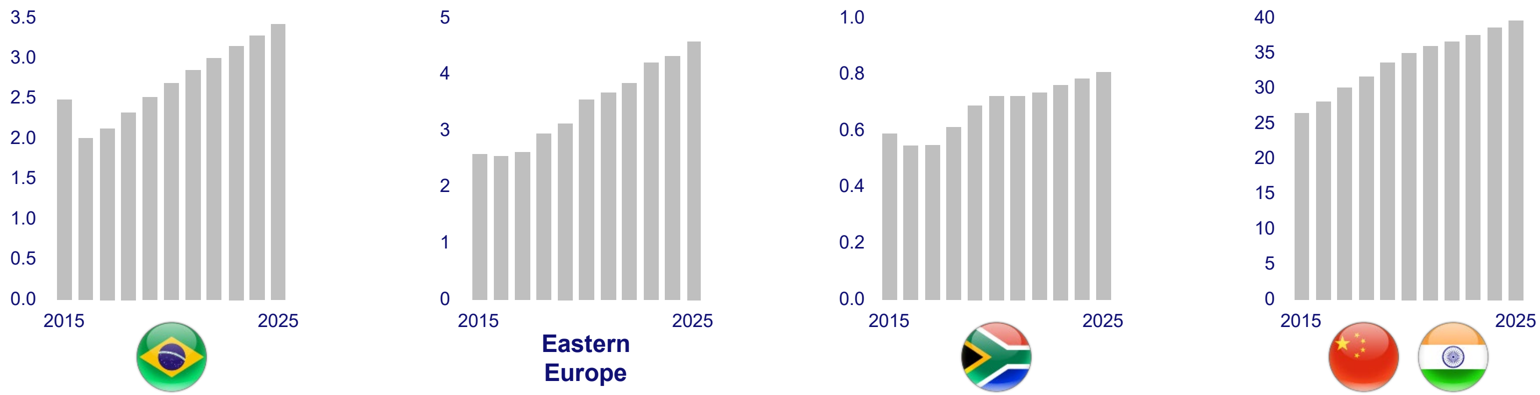
Electric: neutral

- Real moment of take-off
- OEM's; capacity building for old markets versus sales on newer markets



- Providing electricity

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Electric: perspectives

1 Changing business models in the dealers world: servicing the electric drivers

2 Changing business models on “second cars” (private lease, Amber)

3 Expertise of the communities of electric drivers

4 Roaming across EU in relation to electric driving

Automated: problems

1 Time schedules and technology developments

2 SEA level 3 as the Valley of Death

3 Intricate interplay between accidents and enthusiasm

4 Two different paradigms

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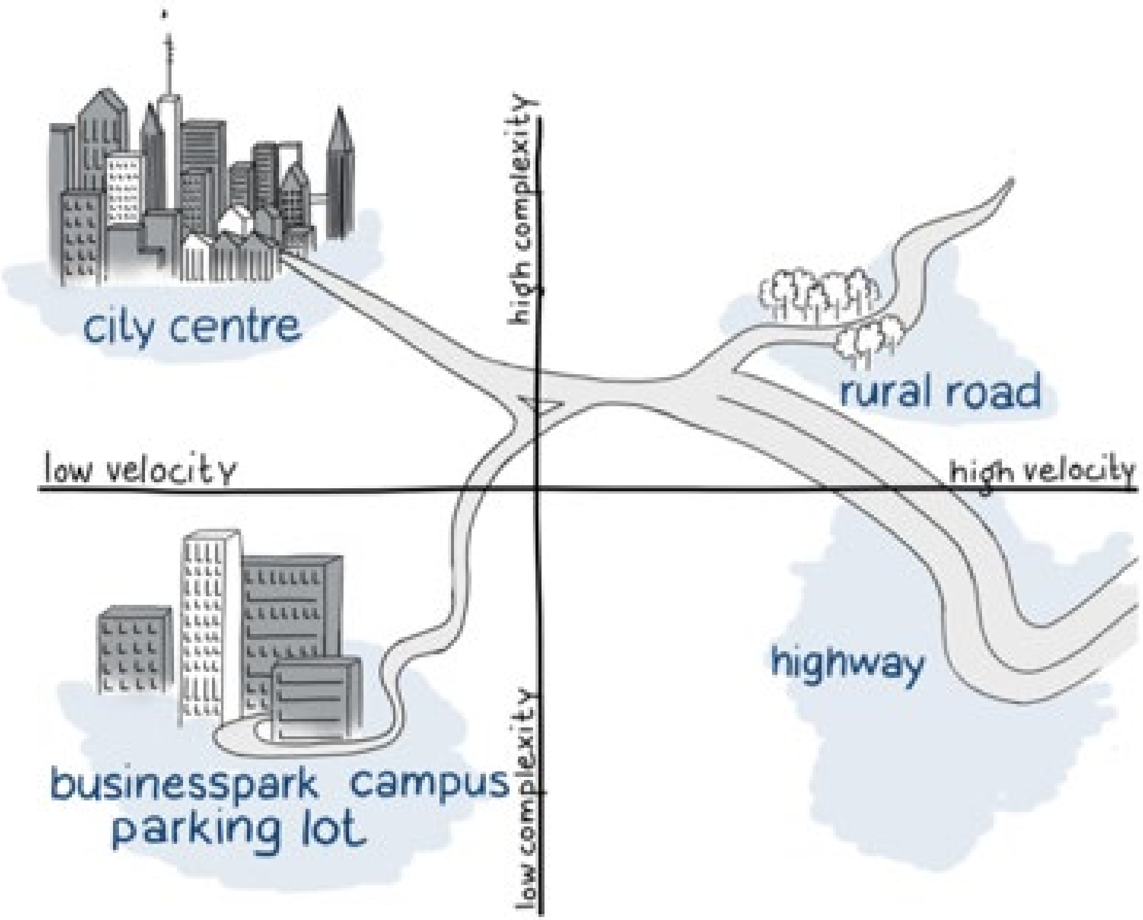
Automated: neutral



Automated: neutral

High government regulation

AV's tamed by policy & people

- Lower per capita travel
- Road pricing introduced
- No wide acceptance of AV's
- AV's more people movers

Strong — **MARKET FORCES** — **Weak**

AV's on the rise

- Individually owned
- Increased congestion
- Longer distances made
- Benefits for disabled

Low government regulation

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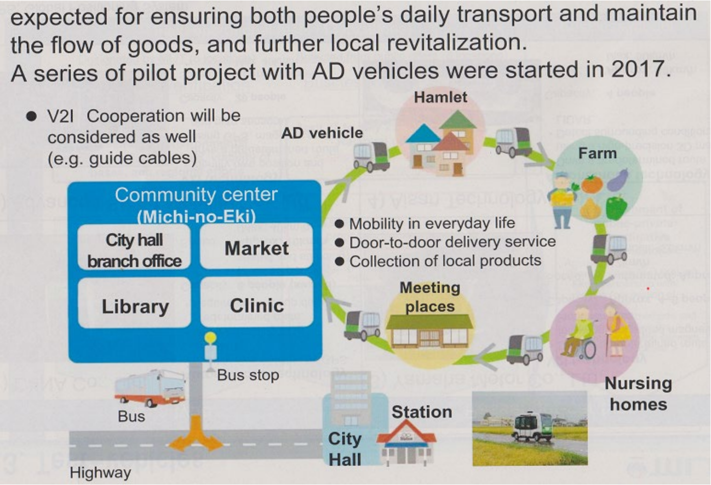
Automated: perspectives

- Closed areas; Efteling, Port Authority areas etc.
- Looking at Japan



- Ride hailing in public transport services
- Urban logistics and delivery, freight traffic/ truck platooning, drones

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Shared: problems

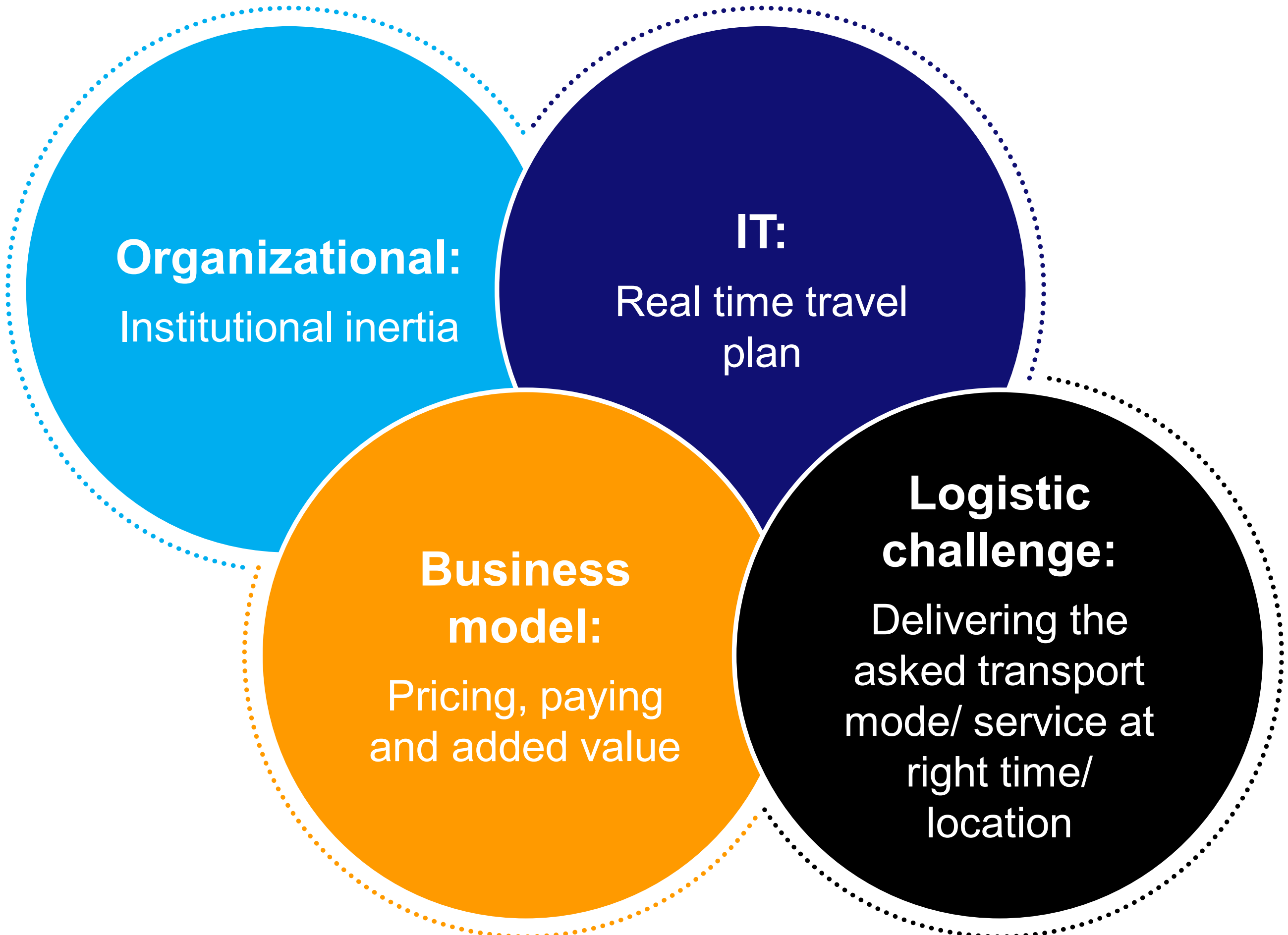
- **Most unclear**
  What will younger generation do?

- **Substitute or just an extra service?**

- **Difficult to realise**
  Car sharing, as nobody is forced to share, role of employers

- **Even more difficult to realise**
  Mobility as a Service

Shared: problems



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Shared: perspectives

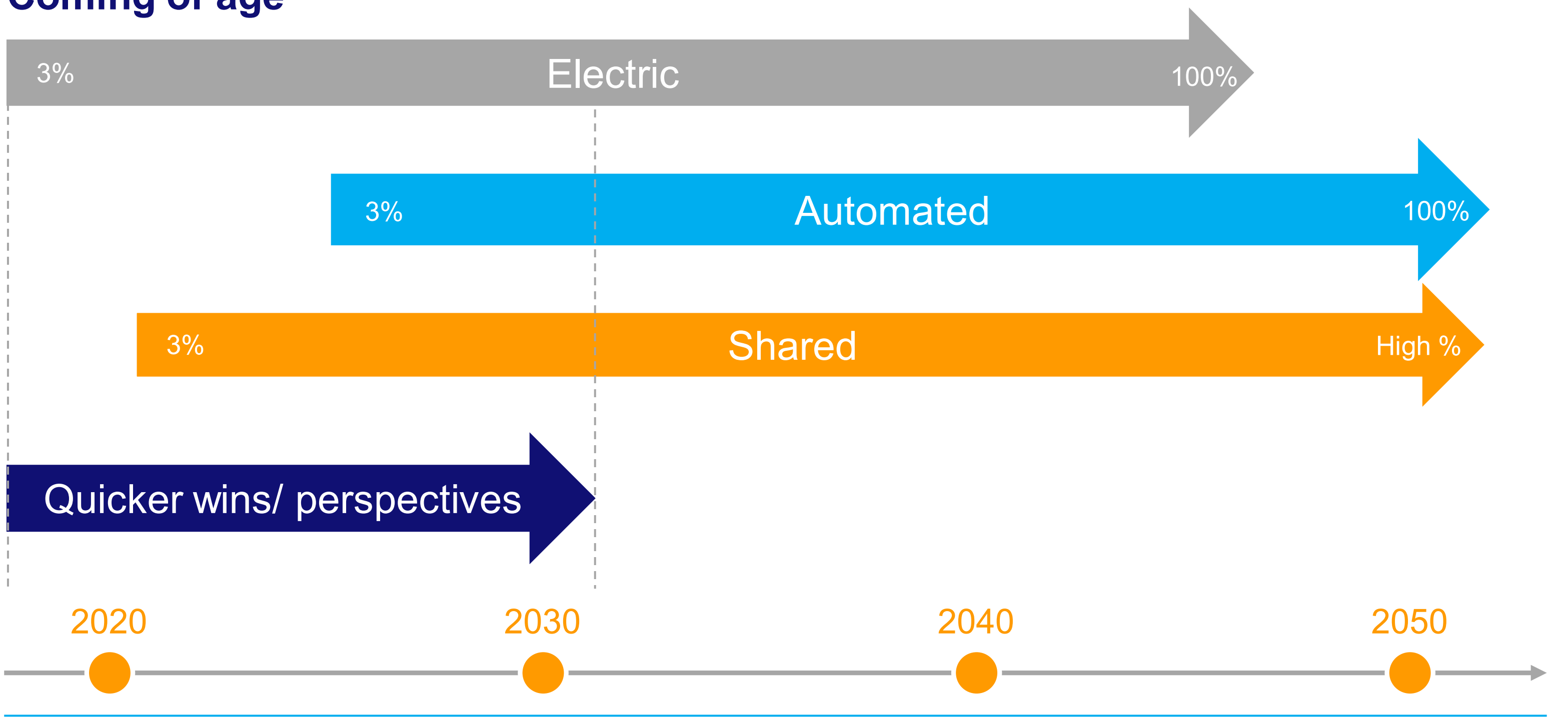
- **In essence**
  Mobility as a service is about using and getting data on travel pattern and expectations/wishes of customers

- **Data- architecture will be essential in the 2 coming decades**
  Who will be able to break the reluctance to share data

- **Perhaps out of the box**
  Booking?

Coming of age – timeline

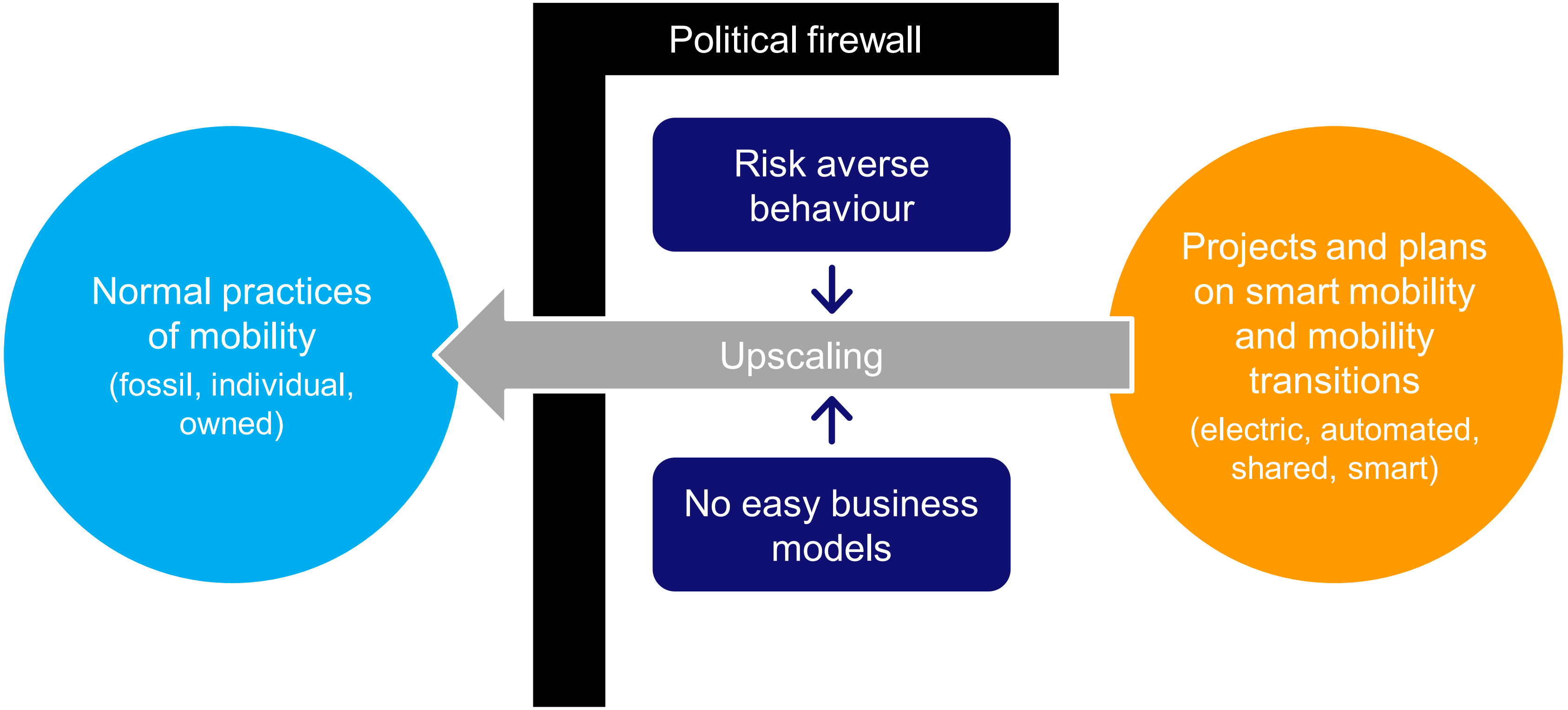
Coming of age



Market phases

Common interest

In my vision; **the transition moves far too slow**



Common interest

- **Background**
  Enthusiasm, immediately followed by reluctance, and again enthusiasm, reluctance…

- **Who dares to break this circle?**

- **What should be created?**

- **What should be bought?**

Advice

- **Areas**
- Matching demand and supply (car trips, freight) – higher occupancy rates
- Leasing instead of owning vehicles
- Delivering mobility services with profit margins

Advice

- Look at the perspectives I have tried to show
- **In the public realm**
  Concentrate on urban regions, not on national governments
- Assess the 43 companies at the **Automotive Campus**
  Which ones could have a growth potential when in other more economic-clever hands?
- Reconsider the functioning of lease companies
- Create new business strategies for the car dealers business

Advice

In the public domain

Concentrate on urban regions and cities that are willing, and less on national governments

The “ladder of national government interventions”

- *Building infrastructure*
- *Laws and EU standards*
- *Taxes*
- *Acting as Launching Customer*
- *Subsidies*
- *Pilots*
- *Just following the EU*
- *Research programmes*
- *Non legal declarations*
- *Management by speech; stimulate and facilitate*

Advice

You have to consider *yourself…*

…whether I have been supportive in some way

THANKS

for your attention

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