From challenge to implementation

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**Where innovation starts**

Outline

- 1. From Hype to Magnitude

- 2. From Challenge to Implementation

- 3. Looking at the implementation of Smart Mobility

From Hype to Magnitude; hype

- In last years 3 to 4 **successive hypes in mobility, and one ongoing narrative**

- The narrative is on **Data**; vehicles are huge data producers, and with all these data information can be created. Interesting ; who owns the data from the vehicles, and who is allowed to produce clever information.

- The hypes are respectively on **electric, on automated, and on mobility as a service (and probably on the hyperloop)**

From Hype to Magnitude: hype
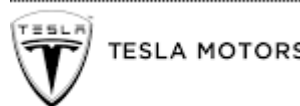
- What is a hype ?

- Gartner hype cycle

Hype cycle
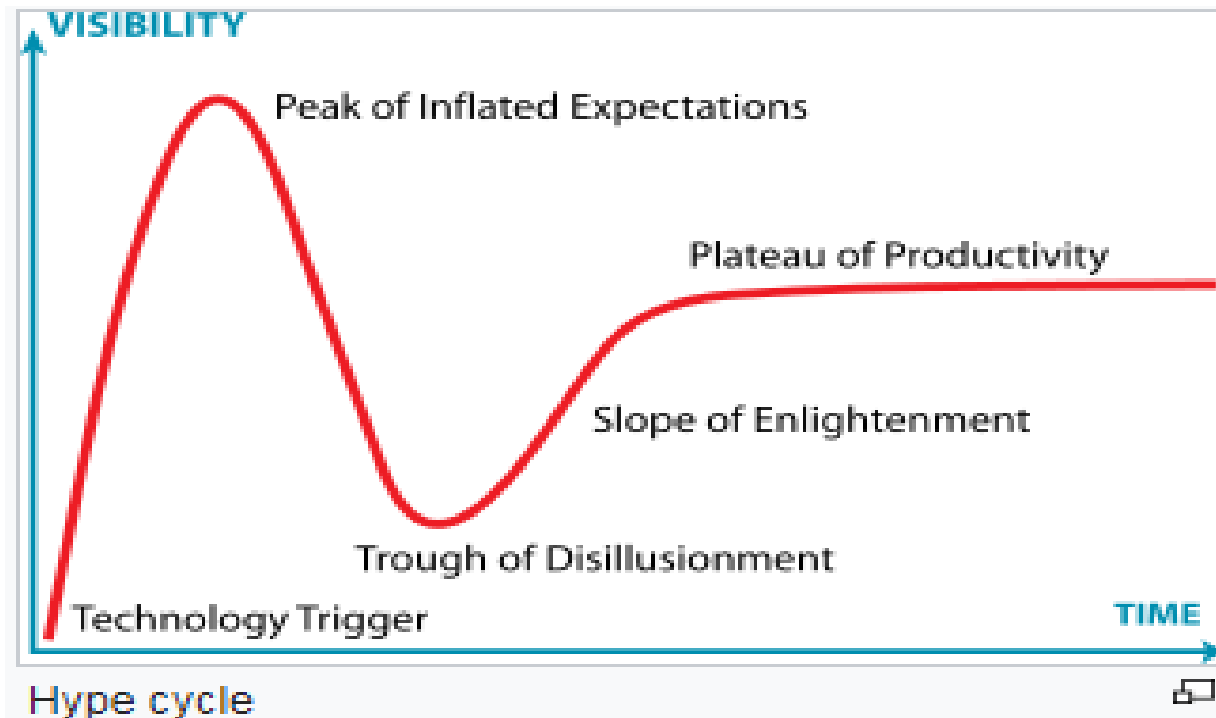
From Hype to Magnitude: hype

- **Hype has specific language ;**

- A. focus on technical possibilities ; in 2025 there will be cars, that…..

- B. reasoning via innovative examples and companies

  TESLA MOTORS

- C. *mixing up* introduction in test environments with real life selling and buying

From Hype to Magnitude; hype

- Creators of hypes :

- **Technology Enthusiasts**

- **Consulting firms** ⟷ **Journalists**

- But; always **Through of Desillusionment !**

From Hype to Magnitude; magnitude

- **Magnitude; "***the great size or extent of something*"

- What is magnitude about in mobility ?

- **1. Creating production lines and business models**
- (setting up factories, making contracts, creating supply chains, procurement)

- **2. Selling the new elements to the public at large** (vehicles, contracts, subscriptions)

From Hype to Magnitude; magnitude

- **3. Buying the elements** (individual households, lease providers, companies)

- **4. Getting a great coverage in society;** below 10 % no real magnitude

- **5.** After great coverage ; **real investments done, and real impacts analysed.**

- **Reaching magnitude is a problem in mobility**

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From Challenges to Implementation ; challenges

- **5 Great Challenges on Mobility**

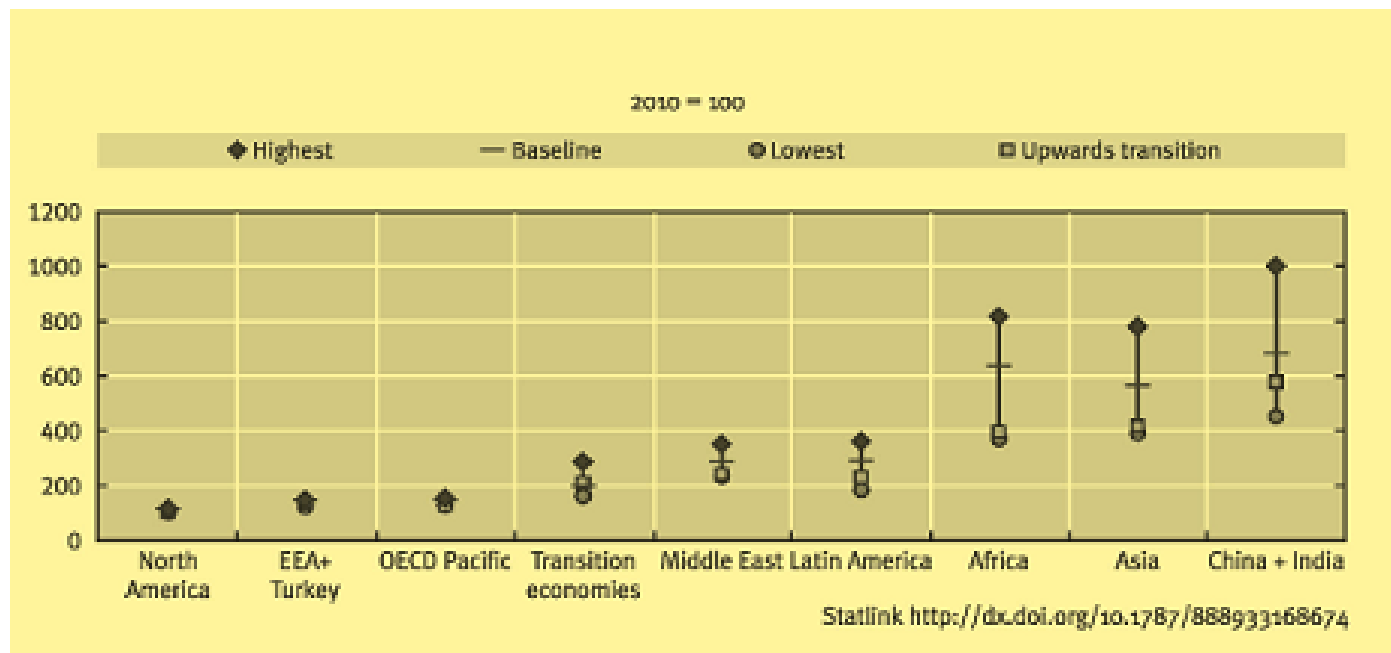- **The Challenge of Urban Mobility** (see Marletto, 2014)

From Challenges to Implementation ; challenges

- **The Challenge of IT in Mobility**

From Challenges to Implementation ; challenges

- **The Challenge of Globalisation and Freight**

- **Enormous growth expected ; sustainability ?**

From Challenges to Implementation; challenges

- **The Challenge of Energy and Climate** (see Holden, Linnerud and Banister, 2013)

From Challenges to Implementation ; challenges

- **The Challenge of Next Generations**

From Challenges to Implementation; implementation

- In mobility at this moment developments are alternating between go slow and fast at one and the same time.

- Whereas electric driving, truck platooning, mobility as a service are all cases of new concepts that are coming quick and fast in the **ideaworld,**

- at the same time the development of applications has been slow in the **real world**.

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From Challenges to Implementation; implementation

- Why is this slow real life implementation the case ?

- Three important reasons:

- **Reluctance** of potential users

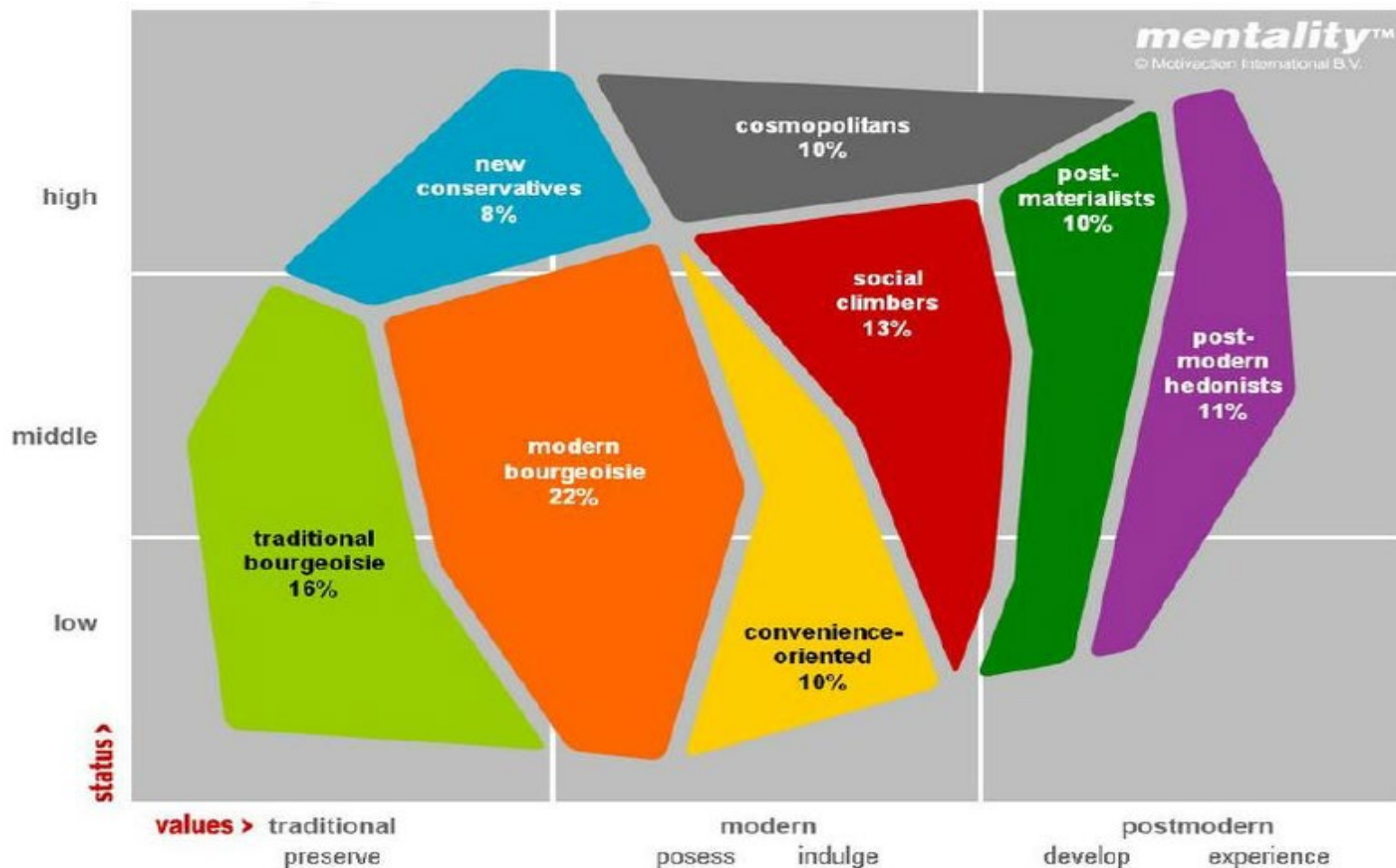- Problems with **scaling up**

- Lack of **Governance Capacity**

From Challenges to Implementation; implementation

Reluctance, in two forms

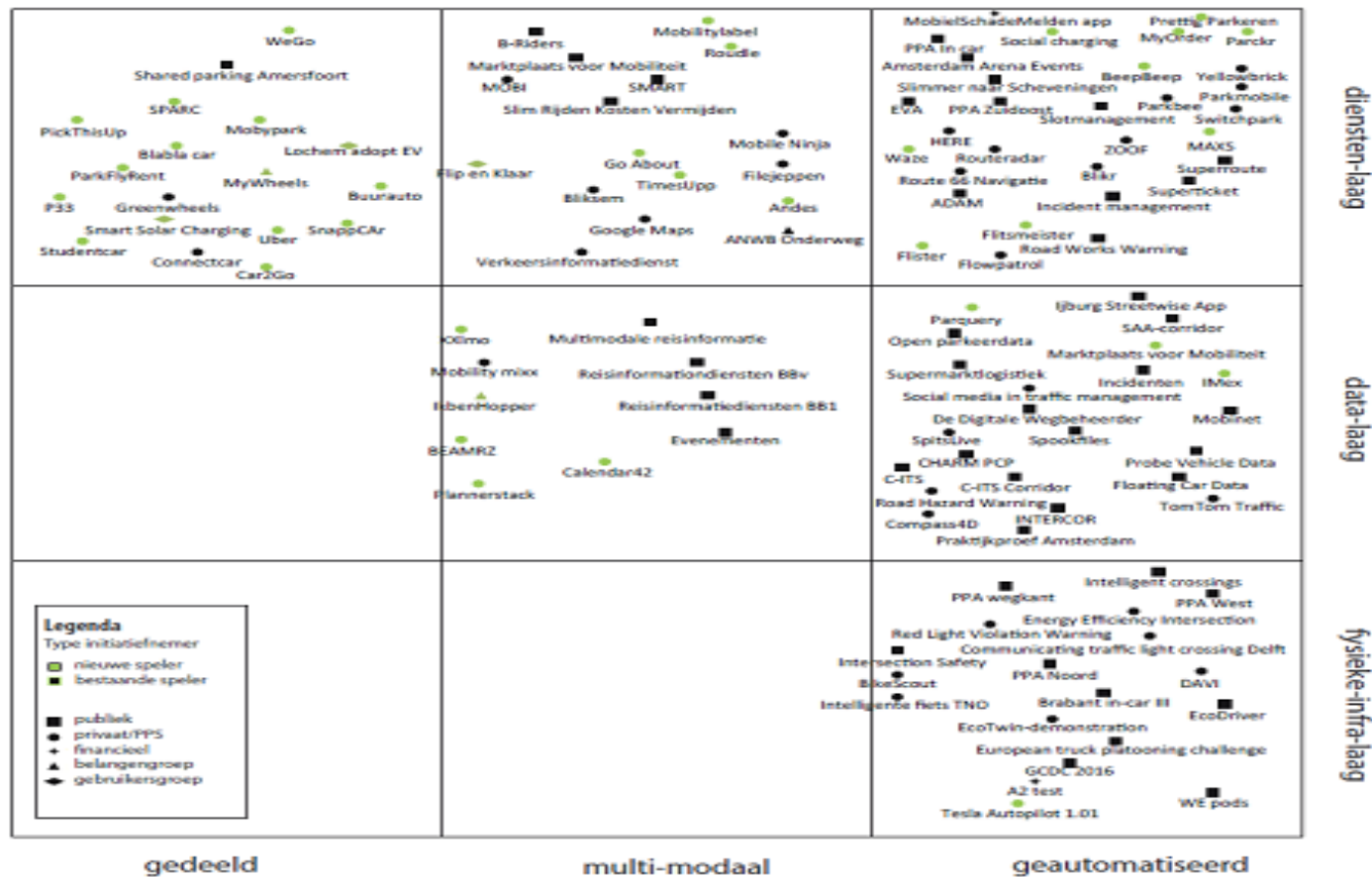# From Challenges to Implementation; implementation

- **Mentality groups**

From Challenges to Implementation; implementation

- In moving to something else than the individual car…reluctance!

- The new conservatives (8%) and the social climbers (13%) are very car dependent and love car driving,

- as do, to somewhat lesser extent, the modern bourgeoisie (22%) and the convenience oriented (10%).

- Thus, *in a country such as the Netherlands at least 53 % of households are fully car- oriented.*

From Challenges to Implementation ; implementation

- **Scaling up**

From Challenges to Implementation; implementation

- **Why is upscaling difficult?**

- Pilots are not very risky, there is always some innovation budget available

- Incumbents are not challenged in pilots

- Moving towards upscaling means entering institutional rules, procedures , planning and budgetting systems

- Is essentially another playground

- So ; enthusiasm around pilots no great indicator for succes (= reaching magnitude)

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From Challenges to Implementation; implementation

- **Governance Capacity**
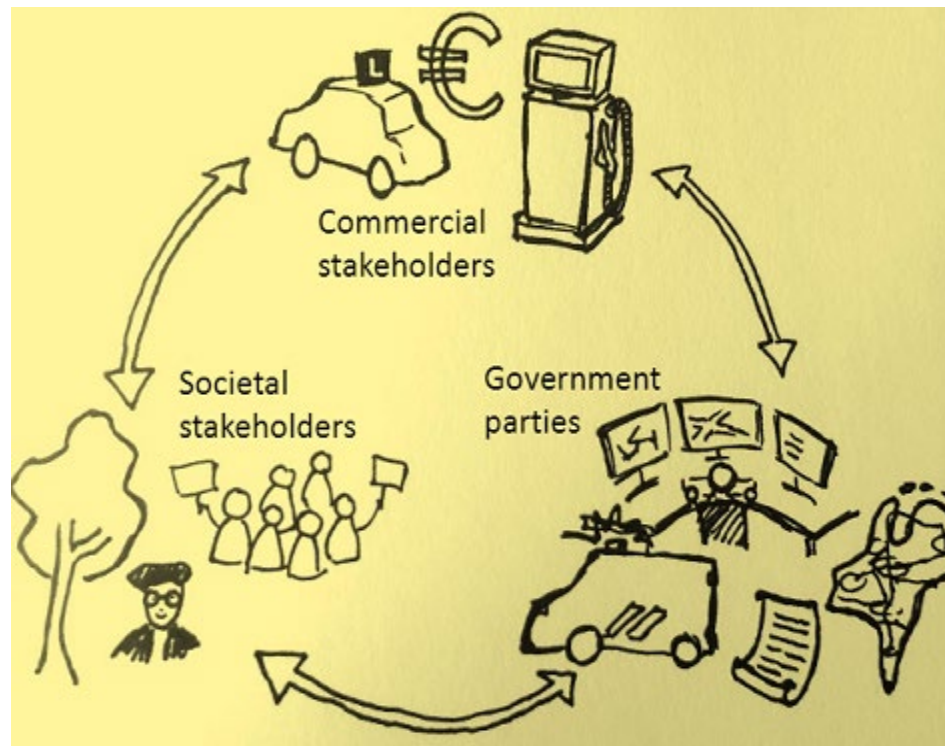
From Challenges to Implementation; implementation

- Is the **capacity of stakeholders in a societal sector to create joint solutions for the challenges in that sector**

- For water sector governance capacity is high, for mobility low

- Look at the stakeholders : OEM 's, Arab state oil companies, commercial oil companies, societal action groups, governments. Much secrecy, different ethics, no culture of joining forces….example ; Dieselgate

- **Problematic role of national governments….**

Characteristic	National governments	Urban governments
Goal orientation	Dominance of economic goals	Equilibrium between economic, ecological and social goals
Frame*	Predict and provide, recently ; smart mobility	City as a place, sustainable mobility
Political colour	Majority mostly right wing	Majority often left wing
Relation with European Commission	Rather often inharmonious	Cooperating, from the same goal orientation

From Challenges to Implementation; implementation

- Central word**: alignment**

- Are stakeholders aligned, or do they all have their own story

- Example for MaaS in Noord Holland ; we will endorse and support, but will **not** cocreate with budgets (region governments) versus government should be launching customer to get this realized (potentially interested companies)

Smart Mobility; where are we standing ?

- Smart mobility is a concept that has been present in the world of traffic and transport for just under 10 years now. But what does smart mobility actually mean? (see also Docherty, Marsden and Anable, 2018)

Vehicle Technology

Intelligent Transport Systems

Data

Mobility as a Service

Smart Mobility; where are we standing?

- There is now a whole series of plans and programs around smart mobility. Regional authorities in particular have become enthusiastic about the theme

- Many pilots are introduced in the plans. For example, Smartwayz (Brabant and Limburg) has 31 smart mobility projects and GO Voort (East Netherlands) offers no fewer than 46 projects.

- Most pilots and projects are very small in size

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Smart Mobility; where are we standing?

- Most pilots and projects have a short duration and are introduced as the first steps towards something bigger, which, however, is not yet visible….

- There are some positive signs in the world of vehicle technology. Our country is seen as a good test location for automated driving.

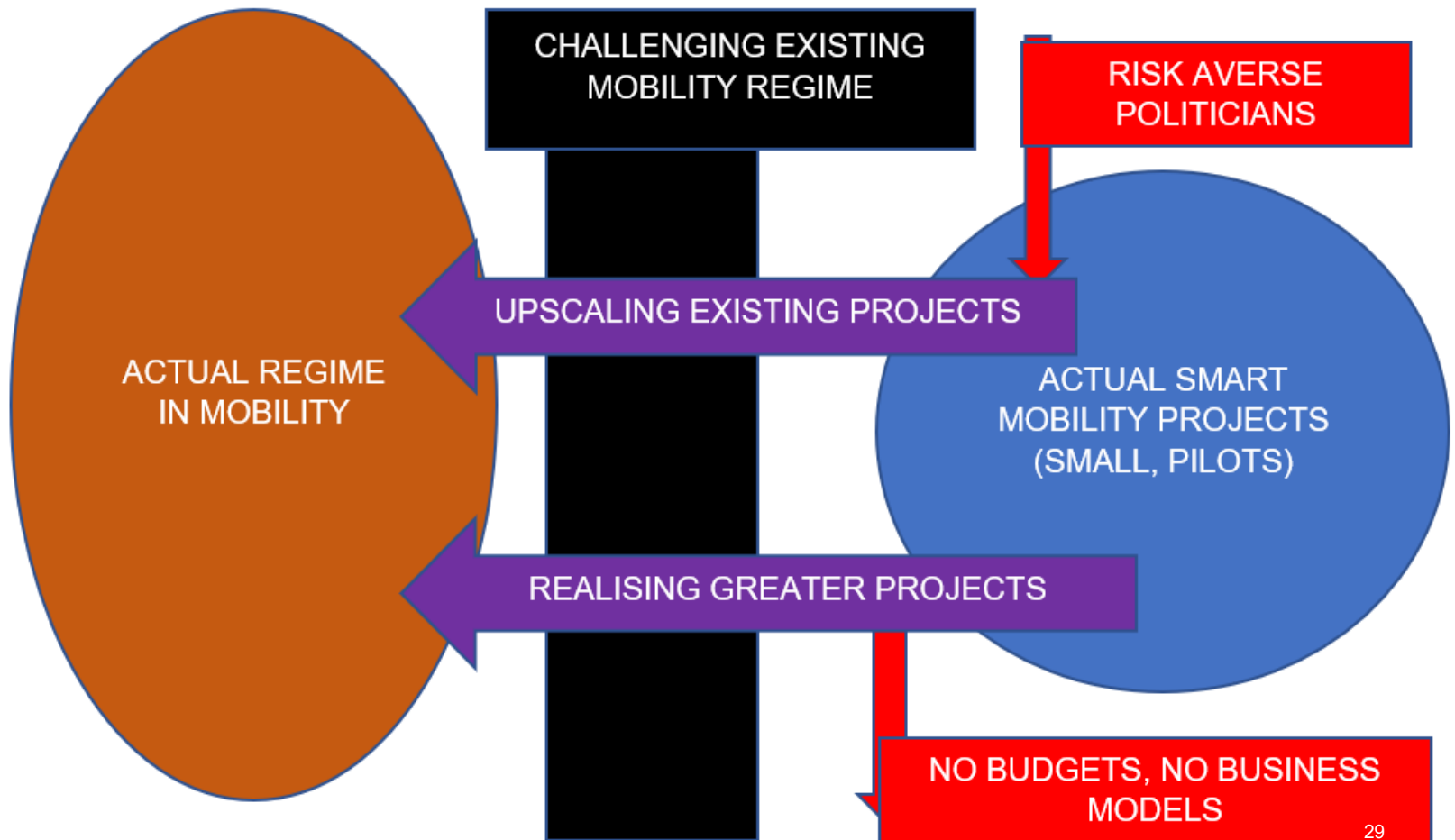- And we recently saw the development of Lightyear and Amber.

Smart Mobility; where are we standing?

- However; until now, it still takes great effort to create functioning business models.

- Where companies actually participate or realize a little more often gets off the ground.

- There is a "grid" of disclaimers, ownership, privacy and security especially around the exchange of data

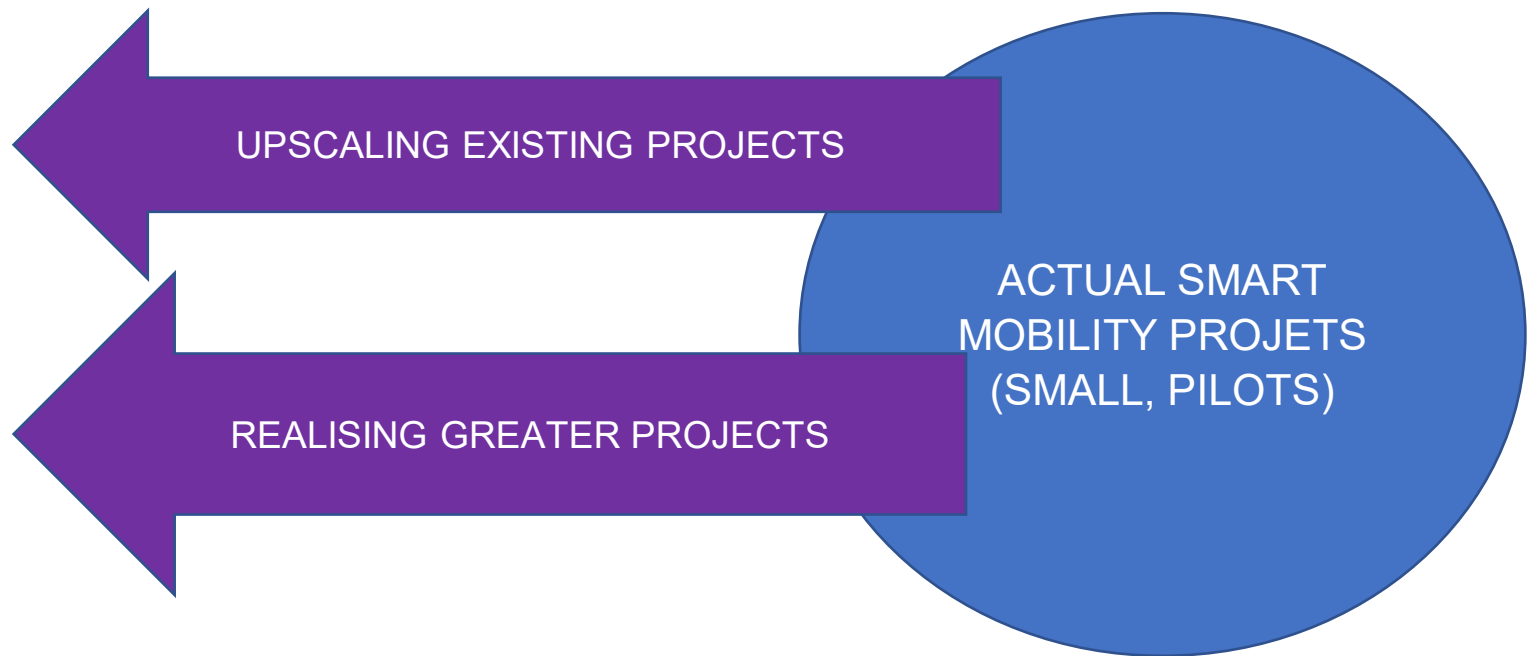- National government is rather reluctant to participate; no investment budgets

Smart Mobility; where are we standing?

- **Why?**

Smart Mobility ; where are we standing?

- **What should happen?**

UPSCALING EXISTING PROJECTS

REALISING GREATER PROJECTS

ACTUAL SMART MOBILITY PROJETS (SMALL, PILOTS)

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Smart Mobility ; where are we standing?

- **Why is this not happening?**

RISK AVERSE POLITICIANS

NO BUDGETS, NO BUSINESS MODELS

WHEN SUCCESFUL : TOO MUCH CHALLENGING EXISTING MOBILITY REGIME

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Smart Mobility ; where are we standing?

- Right -wings politicians wisdom; many pilots are far better then projects with magnitude, because…

- …these projects are too risky, and challenge too much the existing regime, in which these politicians are key players

- So ; smart mobility , presented as a new paradigm, is in essence **tinkering** on the existing regime**…**

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To conclude ; the "take away's"

- Hypes are no magnitude

- Implementation in mobility is problematic

- Lack of alignment between stakeholders

- Never forget the users (see also Lyons, Hammond and Mackay, 2019)

- Risk averse politicians

- Beware of pilots, go for changes in the real world