THINK TANK
#VEHICLES7YFN
PRESENT AND FUTURE OF MOBILITY IN EUROPE:
2020 ITERATION

MOBILITY, URBAN INFRASTRUCTURE AND SOCIAL IMPACT IMPLICATIONS
OF THE 2025 SCENARIOS ON AUTONOMOUS VEHICLES IN EUROPE

Am**etic**
LA VOZ DE LA **INDUSTRIA DIGITAL**

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MOBILITY, URBAN INFRASTRUCTURE AND SOCIAL IMPACT IMPLICATIONS
OF THE 2025 SCENARIOS ON AUTONOMOUS VEHICLES IN EUROPE

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PRESENTATION

Dear all,

AMETIC, the representative organisation of the electronic and digital technology sector in Spain, and a recognised expert in digital transformation, engages on a continuous basis with key stakeholders at the national and European level.

Given the accelerated transformation of the mobility sector due to technological, environmental and societal developments, it is our role to design new mechanisms for collaborating that can bridge the public-private divide, cut-across spatial scales (local, national and global), and convene a range of sectoral actors (OEM, energy, transport, infrastructure, insurance, digital and telecom).

Thus, came the idea of creating a Think Tank in 2018 to gather leading actors across Europe to explore the present and the future of mobility in Europe, focusing on Autonomous, Connected Vehicles and Sustainable Mobility.

The uncertain and fast-paced nature of change in our world renders impossible to try to predict the future; nevertheless, we need more than ever to have future-oriented dialogues built on structured approaches that integrate complexity and uncertainty. This is the rationale for our choice to develop Scenarios, using the Oxford Scenario Planning Approach, with design, methodological support and facilitation by NormannPartners. On our first iteration of the Think Tank, where 72 senior executives and experts from 60+ organisations gathered, we focused on building scenarios for the future of Autonomous Vehicles in Europe.

The 2019 iteration of the #VEHICLES7YFN Think Tank focused on mobility, urban infrastructure and social implications of these scenarios, bringing state of the art insights from leading European research institutions, technology centres, associations, academia, standardization agencies, public and private bodies.

Our main goal is to engage braver conversations, challenge common assumptions, better make sense of disruptive change, rethink strategy and uncover opportunities. We aim to foster dialogue and enhance participants' resilience by bringing to the fore what if? questions.

We consider #VEHICLES7YFN to be a very productive and enriching journey towards the future of the mobility sector in Europe. Therefore, we would love to have you during the next stage of the project to continue fighting for a better and more sustainable Europe.

Pedro Mier
President of AMETIC

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INTRODUCTION

The transport sector is on the cusp of a profound transformation due the confluence of several technological trends including autonomous and electric vehicles, renewable and decentralised energy, connectivity and artificial intelligence. The interaction of these trends will shape not only what and how we drive, but the configuration of production systems, the design of urban environments, and choices around where people live and work.

Navigating these fast-evolving trends and uncertainties require new mechanisms for collaborating that can bridge the public-private divide, cut-across spatial scales (local, national and global), and convene a range of sectoral actors (OEM, energy, transport, infrastructure, insurance, insurance, digital and telecom).
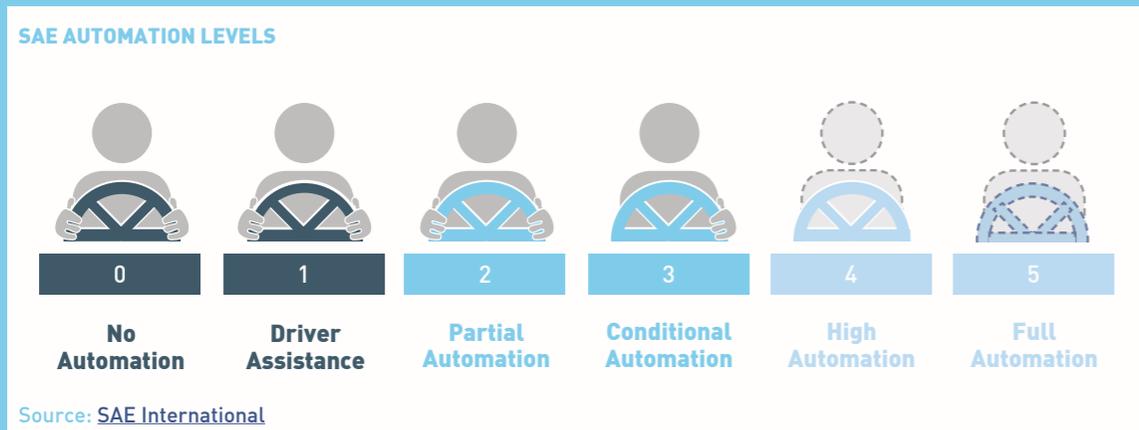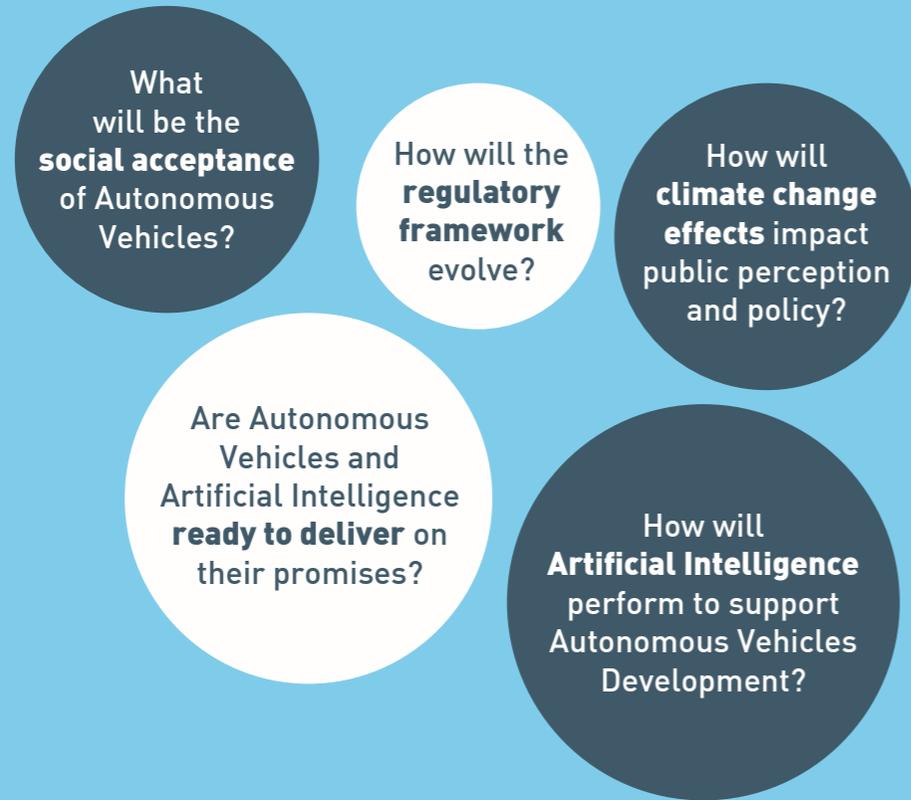
This is the purpose of #VEHICLES7YFN is a Think Tank that explores the present and the future of mobility in Europe focusing on Autonomous, Connected Vehicles and Sustainable Mobility, gathering leading European actors in the mobility space. It is convened by AMETIC, the representative organization of the electronic and digital technology sector in Spain, and a recognised expert in digital transformation.

The 2018 iteration of the #VEHICLES7YFN resulted in the 2025 Scenarios on Autonomous focused on Futures of Autonomous Vehicles in Europe generating a set of scenarios available for download at AMETIC website. On the 2019 edition, participants were invited to address the challenges and opportunities that the future of mobility, urban infrastructure and social impact implications sets both for industry and for society in Europe. The process was based on the scenarios created on the previous iteration and the research contributions from our members. During the meetings, members designed reconfigured systems and assessed the viability of the business model opportunities and their potential policy implications in the cities of Bilbao and Madrid and generated business model offerings designed for the city of Barcelona.

#VEHICLES7YFN Think Tank has methodological support from NormannPartners, pioneering strategy advisors who enable clients to navigate uncertain futures, design ecosystem shaping strategies and deliver top line values.

Even if it is impossible to predict how mobility in Europe will look in 2025 from a societal, political or technological perspective, we can create plausible future scenarios enabling us to focus our thinking, sharpen our strategies and inform our decision-making.

Why?

To focus our thinking, sharpen our strategies and uncover opportunities and risks

What?

Three challenging yet plausible scenarios on the future of Autonomous Vehicles in Europe

How?

By gathering leading actors bringing expert knowledge to collaboratively design plausible scenarios and their implications

Where will the **European mobility system** be in 2025?

Will **Autonomous Vehicles** be a reality in Europe?

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What will be the **social acceptance** of Autonomous Vehicles?

How will the **regulatory framework** evolve?

How will **climate change effects** impact public perception and policy?

Are Autonomous Vehicles and Artificial Intelligence **ready to deliver** on their promises?

How will **Artificial Intelligence** perform to support Autonomous Vehicles Development?

SAE AUTOMATION LEVELS

0	1	2	3	4	5
No Automation	Driver Assistance	Partial Automation	Conditional Automation	High Automation	Full Automation

Source: SAE International

#VEHICLES7YFN - JOURNEY SO FAR
2018 ITERATION

01
• Scope Definition & design of the Think Tank process

02
• Mapping the landscape via Research & Interviews

03 Bilbao Forum
• Exploring drivers of change in the mobility space
• Uncovering opportunities by designing future mobility ecosystems in Europe
• Engaging with Spanish mobility, digital & start-up ecosystem

04
Sttutgart Forum
• Building 2025 Scenarios on Autonomous Vehicles & iterating with world-class experts
• Affirming scenario set & exploring implications, opportunities & risks
• Engaging with Stuttgart & German mobility, digital, & start-up ecosystem

2019 ITERATION

05
• Exploring mobility, urban infrastructure and social impact implications of the scenario set

06
• Research of the state of art in mobility trends

07 Bilbao Forum
• Mapping urban mobility ecosystems, relationships and co-created values
• Designing plausible future urban mobility ecosystems in each scenario ('Big is Beautiful', 'Slippery Slope' and 'Citizen Mobility') and across scenarios
• Identifying business opportunities and how Think Tank members can lead ecosystem reconfiguration

08 Barcelona Forum
• Matchmaking with Barcelona innovation ecosystem
• Design of innovative value propositions & business models

PUBLICATIONS:
• 2025 SCENARIOS ON AUTONOMOUS VEHICLES Brochure *(publicly available)*
• 2025 SCENARIOS ON AUTONOMOUS VEHICLES Final Report *(members only)*
• MOBILITY, URBAN INFRASTRUCTURE AND SOCIAL IMPACT IMPLICATIONS OF THE 2025 SCENARIOS ON AUTONOMOUS VEHICLES IN EUROPE Brochure *(publicly available)*
• MOBILITY, URBAN INFRASTRUCTURE AND SOCIAL IMPACT IMPLICATIONS OF THE 2025 SCENARIOS ON AUTONOMOUS VEHICLES IN EUROPE Final Report *(members only)*

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METHODOLOGY
OXFORD SCENARIO PLANNING AND NETWORKED STRATEGY APPROACHES

The world is increasingly networked. The connections these networks foster are radically transforming business and society, making it richer as well as more **t**urbulent, **u**ncertain, **n**ovel and **a**mbiguous. This **'TUNA'** environment poses significant opportunities and challenges.

Scenarios are a set of plausible and challenging stories and systems of the plausible future context one might inhabit.
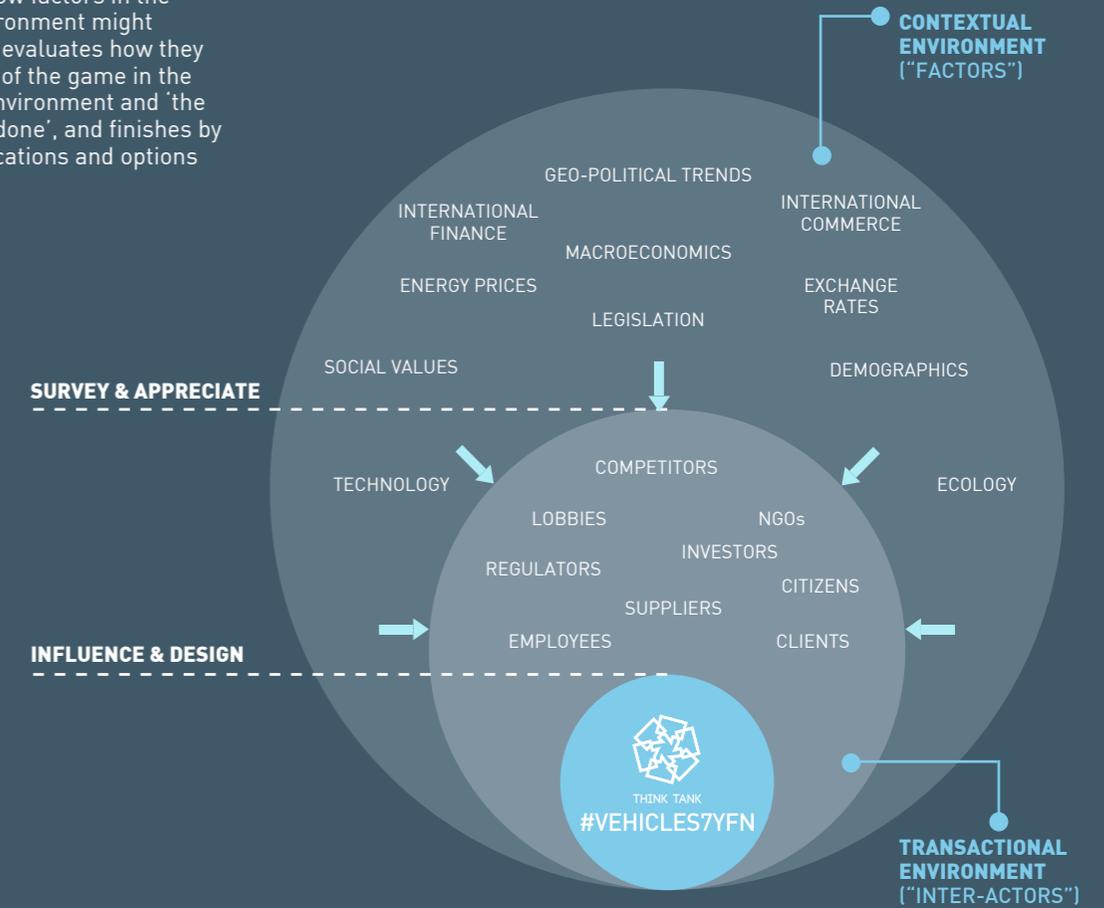
Scenario planning enables organizations to better engage with this TUNA context to re-perceive changes in its context; to surface, question, and challenge its strategic assumptions; to better prepare for plausible and significant new contexts; and to inform the development of innovative value-creating systems.

Value-creating systems (VCS) is a modelling approach that identifies how strategy is manifested in the management of and attention given to the relationships an organisation has with other networked actors. It is based on the notion that the relationships organisations manage define their identity, and that value is co-created by multiple actors in value-creating systems, not in linear value chains.

In today's service-based, solution-oriented, networked world, what matters are the interactions among networked parties that provide values of many types; these relationships are configured into a VCS where there will be an interplay of different stakeholders with different value offerings (e.g. commercial, financial, political, reputational, etc.). The strategic ability to orchestrate others into a designed VCS is in networked contexts as important as a focus on competition.

The role of the contextual environment in Scenario Planning

It is important to distinguish between actors in the transactional environment of an organisation and factors in the broader contextual environment. Scenario planning first explores how factors in the contextual environment might develop, it then evaluates how they affect the rules of the game in the transactional environment and 'the way things are done', and finishes by exploring implications and options for actors.

CONTEXTUAL ENVIRONMENT ("FACTORS")

GEO-POLITICAL TRENDS
INTERNATIONAL FINANCE
INTERNATIONAL COMMERCE
MACROECONOMICS
ENERGY PRICES
EXCHANGE RATES
LEGISLATION
SOCIAL VALUES
DEMOGRAPHICS

SURVEY & APPRECIATE

TECHNOLOGY
COMPETITORS
ECOLOGY
LOBBIES
NGOs
REGULATORS
INVESTORS
CITIZENS
SUPPLIERS
INFLUENCE & DESIGN
EMPLOYEES
CLIENTS

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TRANSACTIONAL ENVIRONMENT ("INTER-ACTORS")

Sources: Vickers; Emery; Trist; Smith; Ramirez; van der Heijden

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MAIN UNCERTAINTIES
FACING THE DEVELOPMENT OF AUTONOMOUS VEHICLES IN EUROPE BY 2025

OBSERVED CLIMATE CHANGE

POLICY ALIGNMENT

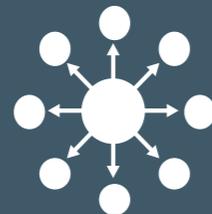**SOCIAL ACCEPTANCE OF AUTONOMOUS VEHICLES**

EUROPEAN MOBILITY POLICY FOCUS

AUTONOMOUS VEHICLE TECHNOLOGY

EUROPEAN INTERNATIONAL TRADE POLICY

ATTITUDE TO OWNERSHIP

FLEET ELECTRIFICATION

DIGITAL INFRASTRUCTURE INVESTMENT

2025 SCENARIOS
ON AUTONOMOUS VEHICLES IN EUROPE

BIG IS BEAUTIFUL

Alignment of European economic, political and environmental interests fosters autonomous and connected vehicles, digital infrastructure development and steady development of AI and AV technology. Industrialization of solutions is favoured. OEMs and Tech incumbents race ahead, and a two-speed mobility system is reinforced across the continent.

SLIPPERY SLOPE

Bitter trade disputes, policy patchworks and technology setbacks are the norm. Litigation emerges from the legal quagmire to grow both in unexpected areas and exponentially. Liability, corporate and personal, is a barrier for deployment of AV offers. China switches to the accelerated deployment of 'New Energy Vehicles' and the rest of the world follows in its wake. "Mobility as a service" offerings flourish.

CITIZEN MOBILITY

Soft, shared and multi-modal mobility solutions are favoured. Autonomous Vehicles, where permitted, are integrated into Mobility as a Service offerings. Europe flexes its global regulatory super-power muscles and takes the lead in setting open and secure mobility data standards. A thriving digital ecosystem for connected mobility emerges and several European start-ups successfully scale-up.

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SCENARIO 1:
BIG IS BEAUTIFUL
AARNI'S STORY

Alignment of European economic, political and environmental interests fosters autonomous and connected vehicles, digital infrastructure development and steady development of AI and AV technology. Industrialization of solutions is favoured. OEMs and Tech incumbents race ahead; and a two-speed mobility system is reinforced across the continent.

Tampere, Finland, 25 February 2025
09.15 hrs. Aarni looks at his digital dashboard supervising a fleet of 215 autonomous trucks across the country. Only 22 were currently under human control. The remainder were happily making their way across the Finnish highway system. A red-light flashes under A543, an articulated truck with two containers heading north towards Kuopio. Aarni checks the video feed. The truck is part of a 5-vehicle convoy led by Matti. False alarm.

Aarni relaxes, smiles and sips his coffee. It had been a long journey for his logistics company since the RoboBusLine was introduced in Helsinki back in 2017 as part of the EU Horizon 2020 research and innovation program. Mini buses taking people backwards and forwards to the zoo. Who was watching which animal Aarni wondered with a wry smile? In any event, the constant tinkering of the 2010's with innovation and mini-pilots finally made way for some more serious efforts to scale things up.

Back then, Aarni was on the verge of taking over his father's modest logistics company with just over 100 vehicles. With his IT background, he realized that there was only one possible future for trucking and that was autonomous. The power train might be ICE, electric or hydrogen but the days of one driver per vehicle were numbered. So Aarni started to invest in distance monitoring and invited his staff to familiarize themselves with remote control and automated logistics systems. He also started to look around for an opportunity to participate in any efforts to make the Finnish fleet autonomous.

Aarni did so out of a conviction that the company his father had built up would either make the transition or it would go out of business. The economics were too obvious. 50% of the cost of a truck was the driver and human drivers would always use more fuel. And then there were the safety aspects – autonomous monitoring systems were always going to be much safer than a human driver, it was only a matter of time before the built-in learning capabilities of AI overtook even the most careful of drivers in terms of road safety.

As a result, when the Finnish government tendered for a large-scale trucking operation to go autonomous, Aarni was quick to react and delighted to win. The EU-backed AV/AI initiative meant that every country in Europe, even the UK, would have their own major AV/AI operation. Some countries choose taxi fleets in inner cities, other countries went for suburban transportation, but Finland went for logistics and that suited Aarni perfectly. The Finnish government was also happy with their choice as AV tax schemes in other European cities were stop and go. AV in dedicated, closed off city center areas were generally fine, but as soon as mixed mode with busy traffic was introduced into the mix, problems arose.

With the help of local IT expertise and the truck manufacturer, Aarni had quickly expanded his fleet and made it as autonomous as possible. For longer journeys his company used convoys, usually one driver for five trucks. For shorter journeys, single autonomous vehicles were allowed to travel around the country with a remote operator – at least during off-peak hours such as during the night.

The government, partially driven by safety aspects and partially driven by unions concerned about future employment opportunities, was still arguing how many vehicles a remote operator could supervise effectively at once. Aarni personally reckoned that it was about 10-15 in a city area but his company was restricted to 7 for now which meant three people working over a 24hr day. Still worth it though and the number of times they had to intervene was going down every month.

10.30 hrs. Red light. A wild moose had wandered into Leena's convoy near Kajaani. Back to work. Better to be at the table rather than on it.

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SCENARIO 1:
BIG IS BEAUTIFUL
HOW THIS WORLD COMES ABOUT…
UP AND RUNNING

After the May 2019 elections, the European Union enacted a series of ambitious policies and regulations for the implementation, on an industrial scale, of an electrified economy based on renewable energy with sustainable heating, cooling, housing and mobility. As a direct consequence, the development of Connected and Autonomous Vehicles (AV) focusing on safety, data protection and data share-ability is accelerated. Investment lines in Artificial Intelligence (AI), cybersecurity and the resolution of the tension between 5G and ITS-G5 favour the industrialisation of solutions by incumbents.
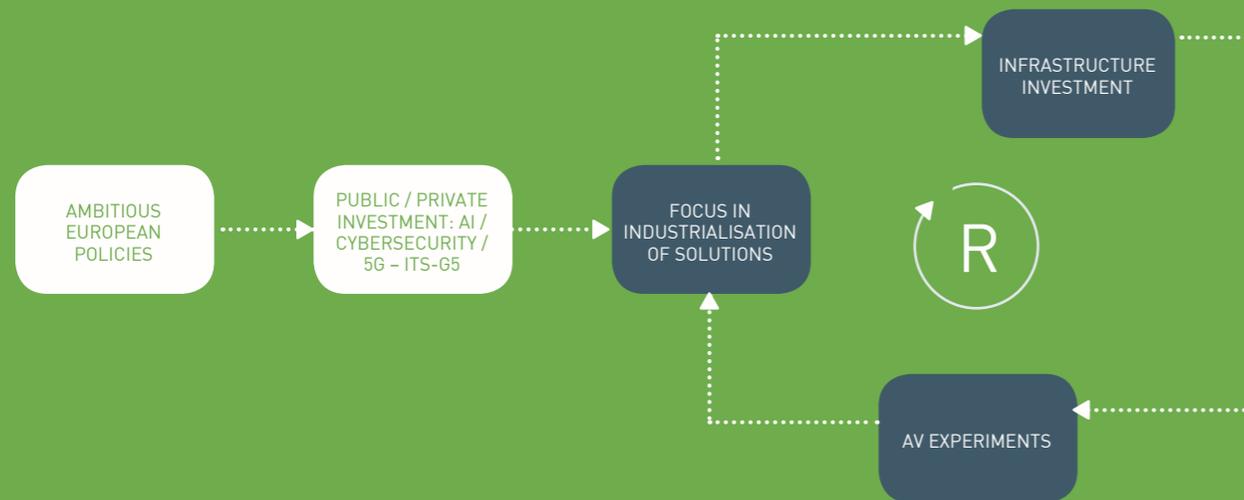
These ambitious policies rely on an alignment of interests emerges between EU politicians, environmentalists, the energy sector, the construction industry, the mobility industry, regulators and city authorities. The policies are designed to stimulate economic growth in sustainable technologies and systems, partially in response to environmental change, partially in response to city liveability challenges and partially to ensure global green leadership in European industry. Each European country, including the UK, selects a major section of its mobility infrastructure for implementation of an AV/AI solution with a heavy, but not exclusive, emphasis on electrification. As a result, Metropolitan areas in Europe compete to be pioneers in the emergence of AV services (e.g. robot-taxis, logistics), freeing space for experiments with level 5 AV. AV adoption in delimited areas (e.g. airports, warehouses) provides a compelling case for cost (and jobs) reduction.

A two speed-mobility system is reinforced with dense urban areas seeing a competition of numerous Mobility as a Service (MaaS) offerings. Rural and peripherical areas lag behind with public transportation systems lacking adequate funding despite 5G satellite coverage. Large logistic firms, OEMs and Tech incumbents race ahead as the pioneering European mobility start-ups of the 2010s struggle to scale-up.

Although stringent regulations on pollution and emissions favour fleet electrification, ICE retains a substantial share of the market much to the frustration of EU politicians and environmentalists. In 2025, most new vehicles integrate level 3 and 4 automation.


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AMBITIOUS
EUROPEAN
POLICIES  ---->  PUBLIC / PRIVATE
                INVESTMENT: AI /
                CYBERSECURITY /
                5G – ITS-G5  ---->  FOCUS IN
                                    INDUSTRIALISATION
                                    OF SOLUTIONS  ---->  INFRASTRUCTURE
                                                         INVESTMENT

                                    R

                                    AV EXPERIMENTS
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SCENARIO 2:
SLIPPERY SLOPE
CLARA'S STORY

Bitter trade disputes, policy patchworks and technology setbacks are the norm. Litigation emerges from the legal quagmire to grow both in unexpected areas and exponentially. Liability, corporate and personal, is a barrier for deployment of AV offers. China switches to the accelerated deployment of 'New Energy Vehicles' and the rest of the world follows in its wake. "Mobility as a service" offerings flourish.

Barcelona, 21 October 2025
"Señora, you are a trained "Abogada" registered with the bar association. You surely understand that being reasonable is not an option when you want to change things. You need to be unreasonable." Clara Torres Bonet shuddered slightly with the still vivid memory of Javier Vega Aguirre, married and father of two children aged 5 and 7. He had walked into her recently formed legal practice two days ago to explain how his youngest child had been killed by an autonomous vehicle on the streets of Barcelona.

What he wanted was not compensation or admission of liability. He already had that and had duly received two million euros in damages from the operator and vehicle manufacturer. What he wanted now was to use a significant proportion of that money to force the City of Barcelona to ban outright any autonomous vehicles whatsoever. And he wanted Clara to lead the case.

The accident was truly tragic. His daughter had been playing on the pavement near their home when she stumbled and fell towards the road. The driver of the oncoming car saw what happened and swerved to narrowly avoid Maria by driving onto the pavement, crashing into the wall. She panicked, got up and rushed away from the crash across the road and straight into an oncoming autonomous vehicle coming in the opposite direction. She was killed immediately. Javier had won compensation since the onboard video of the autonomous vehicle clearly showed that the car did not slow down until Maria started to run towards it. The judge deemed that a human driver would have instinctively, and immediately, slowed down when seeing what was happening on the other side of the road and that therefore, under Article 137 of LRD 1/2007, the vehicle "did not provide the safety that could be legitimately expected from it."

Furthermore, the court deemed that the vehicle manufacturer had acted with gross negligence when programming the car to mainly ignore events occurring on the other side of the road.

But now Clara had to take the matter further, namely to the City of Barcelona. And that was a very different case. She stood up to her flip chart and picked up a pen. It was her favourite way of thinking and organising her thoughts.

First, she had to think about who had standing to bring such a case. Javier on his own would probably not be enough. The right to initiate proceedings on behalf of collective interests usually required either the majority of affected people or the support of a legal entity such as a consumer or user association. Getting the majority of parents in Barcelona to sign up was a non-starter – better to approach FACUA, the consumer rights group. Clara knew some former classmates who had gone to work there and there was the added bonus that they would have an excellent understanding of data breaches and the EU GDPR.

So, standing should be okay, but what were the main arguments? After all, the manufacturer and operator could reasonably argue that they had fixed the software problem. Furthermore, the City of Barcelona had invested substantially to develop an efficient urban mobility model by collaborating with stakeholders in its innovation ecosystem, and it was bound to come up with all sorts of statistics and expert opinions showing that AVs were safer than human drivers.

Not to mention the compelling, in their eyes, need for Europe to be competitive with China and the USA.

She had explained this to Mr. Vega, but he did not care. He wanted more than compensation, he wanted an end to AVs potentially being able to kill children on the streets of Barcelona. But why? Why, if AVs were safer on the roads (and they surely were), would you ban them?

And then it hit her, human drivers can be held accountable for their actions – machines cannot. If a human killed a child in a similar accident, the law could choose between accidental death, manslaughter and murder. That was not an option for an AV. Neither the vehicle, its programmers or its corporate owners could be held to account in the same way as a human being. Clara scribbled on the flip chart. Does the City of Barcelona have the right to decriminalise killing? Human rights versus commercial rights? Erosion of personal accountability is a slippery slope. Legal analogy to weapons not controlled by humans? Who in the City of Barcelona had authorised companies to program ethical choices that could kill or injure? To what extent had the City of Barcelona done due diligence on the AV software? Do they have the skills, competence or authority to do due diligence and to make such value judgements? Should the case be referred to the European Court of Human Rights?

Clara stood back and looked at her work. Yes, there was a case there. Create enough doubt about the probable defense by the City and then go on the attack. She sat down behind her computer. Be unreasonable.

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SCENARIO 2:
SLIPPERY SLOPE
HOW THIS WORLD COMES ABOUT.
A VICIOUS CIRCLE OF ACRIMONY

The simmering tension in international trade relations towards the end of the 2010's has expanded into an all-out round of bitter international trade disputes. Trade-related environmental protectionism is widespread as climate change is exploited as a handy, sometimes perverse, excuse to erect trade barriers. These disputes frequently involve major actors in mobility, in particular those associated with the industrial heart of Europe. The resultant economic malaise coupled with continued migrant pressures has enabled populist governments to get traction in Europe. Consequently, the definition of EU-wide trade and regulatory frameworks has become ever-more contested and a patchwork of policies has emerged across countries generating an uneven playing field that only large companies with their sophisticated legal services can navigate. Schadenfreude trumps European solidarity as Germany struggles with a weakened industrial base.
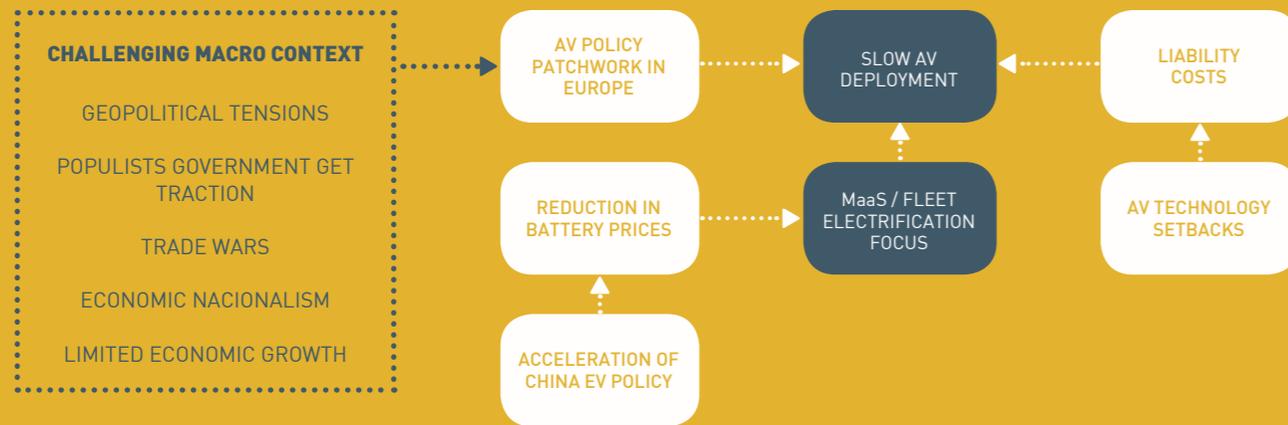
Under international trade and populist pressures, the EU takes a protectionist stance and infrastructure investment lags behind. In the West more generally, regulation and litigation grow exponentially, and liability is a barrier for innovation and any deployment of levels 4 and 5 AV offers. But not in China. The Chinese State accelerates deployment of 'New Energy Vehicles' (EV, hybrid and hydrogen) and favours AI & AV development by pushing Chinese standards on data sharing, batteries and 5G. Extensive European M&A activity by Chinese companies empowers them to establish de facto industry standards (EU standard setting having frozen to a standstill) in these areas and to deploy fully tested technology against European and American incumbents. More recently, cracks in Chinese hegemony have started to appear as they too begin to struggle with the impact of an aging population and the human cost of decades of environmental destruction in the name of economic progress.

US, Chinese and Korean battery prices reduce substantially favouring fleet electrification and 'Mobility as a Service' (MaaS) offerings flourish. Some European battery manufactures emerge onto the scene on the back of government stimulus at the national level. In Europe, pollution consequences in dense urban areas become more acute and metropolitan areas put further, stringent restrictions on internal combustion engines. Individual car ownership continues to decline. OEMs central focus is on hybrid and EV propulsion to support MaaS.

Artificial Intelligence and Autonomous Vehicles struggle to perform in complex, often contradictory, regulatory environments. Vandalism, cyber breaches as well as accidents with casualties involving AV are singled out in the press and social media. These are then picked up by populist politicians, activist lawyers, trades unions, the media and regulators.

Chinese investment and economic power leads to a situation where, in 2025, most new vehicles integrate level 3 automation but aggressive, and highly fragmented, litigation holds back any significant deployment in Europe of AV level 4 or 5 technology. The few pilots that did get approval for mixed-mode traffic operations have had a series of catastrophic, and tragic, setbacks further fuelling litigation, regulation and political reluctance.

CHALLENGING MACRO CONTEXT

GEOPOLITICAL TENSIONS

POPULISTS GOVERNMENT GET TRACTION

TRADE WARS

ECONOMIC NACIONALISM

LIMITED ECONOMIC GROWTH

AV POLICY PATCHWORK IN EUROPE

SLOW AV DEPLOYMENT

LIABILITY COSTS

REDUCTION IN BATTERY PRICES

MaaS / FLEET ELECTRIFICATION FOCUS

AV TECHNOLOGY SETBACKS

ACCELERATION OF CHINA EV POLICY

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SCENARIO 3:
CITIZEN MOBILITY
CRISTINA'S STORY

Soft, shared and multi-modal mobility solutions are favoured. Autonomous Vehicles, where permitted, are integrated into Mobility as a Service offerings. Europe flexes its global regulatory super-power muscles and takes the lead in setting open and secure mobility data standards. A thriving digital ecosystem for connected mobility emerges and several European start-ups successfully scale-up.

Bilbao, 18 June 2025
Cristina is heading back from her 3 days stay in Bilbao and she has a couple hours to put together the final lines of her article to be published in the Financial Times special report on Mobility in Europe.

Bilbao and the Bizkaia region have been lauded for the past decades for their transformation from an industrial city into a cultural tourism destination, in what came to be known as the "Guggenheim effect" . Whereas most people believe the opening of the Guggenheim museum in 1997 is the cause of this transformation, it is less known that this was the result of a concerted effort by several stakeholders including policy makers, private actors and civil society to revitalise the region and turn it in a thriving hub of urban and economic innovation, particularly in manufacturing (autoparts, oil refinery and steel tubes for oil extraction) and the electrical energy sector.

Almost 30 years later, Bilbao and the Bizkaia are starting to be recognised by a different transformation: its pioneer public policy in supporting a thriving digital ecosystem for connected, soft, shared and multi-modal mobility.

Urban planners and authorities were one step ahead in creating an enticing policy environment to favouring the development of integrated door-to-door mobility solutions. In concertation with public transport, ride hailing, car pooling and sharing, infrastructure and soft mobility providers, a one-stop mobile platform enabled users to obtain the most adequate solution to their mobility needs. It agreed with these actors an open source data policy where the enormous amount of data brought by the proliferation of IoT sensors in the region was aggregated and made publicly available in an anonymized real-time database to favour the emergence of new mobility solutions. The European GDPR and the focus in cybersecurity ignited by the 2018 Cybersecurity Act and translated in investments in the EU budget 2021-2027 had forced these operators to adopt stringent protocols to protect privacy.

The Bizkaia region freed up space for autonomous vehicle experimentations that receive, for the time being, a positive acceptance from citizens given their proven role in reducing fatalities. It also committed itself to stringent CO2 and NOx emission targets as pollution litigation grows and city liveability is a key criterion to attract and retain talents to nurture its vibrant start-up ecosystem. The region is thus able to track in real-time emissions and, despite resistance, it decided last year that some parts of the Bilbao Centre would be restricted to low-emissions certified vehicles. It is also fair to say that the development of the electric charging infrastructure network has been faster than most people anticipated.

Furthermore, recent elections put mobility centre stage alongside economic and unemployment considerations. Citizens play a bigger and bigger role in the energy transition, both as consumers and as voters. Young citizens, in particular, are strongly apt to translate a social media storm into real action. To a substantial number of this cohort, owning a mobility asset is unthinkable; mobility is a service, private or shared, but a service and this makes perfect sense with developments in other areas where services are more and more on offer over ownership. It is true that this approach answers the challenge of continually rising real estate prices that put a drain on purchase power. It remains, nevertheless, a challenge to provide mobility services to those pushed out into peri-urban areas.

Bilbao is not alone in driving this mobility transformation. It is part of a group of innovative agglomerations across Europe including Copenhagen, Frankfurt, Barcelona, Stuttgart, London, Paris and several other members of Eurocities taking substantial action to fulfil climate change commitments. This group has been instrumental in lobbying the European Union to act on the opportunity to develop standards for open and secure mobility data.

It is said that a 'lighting never strikes the same place twice', but Bilbao and the Bizkaia region seem on track to contradict this popular myth.

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MOBILITY, URBAN INFRASTRUCTURE AND SOCIAL IMPACT IMPLICATIONS
OF THE 2025 SCENARIOS ON AUTONOMOUS VEHICLES IN EUROPE

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**SCENARIO 3:
CITIZEN MOBILITY**
HOW THIS WORLD COMES ABOUT.
LISTENING TO VOTERS
& CONSUMERS

Chinese-US relations remain tense with both investing heavily through their military infrastructures in order to claim technology hegemony in AI, EV and energy storage. The EU, ASEAN block, India and Africa all adopt a pragmatic stance doing their level best to avoid bitter trade disputes with either super power.

The European priority is on encouraging innovation and economic growth against a backdrop of an aging population and limited migration. Europe flexes its global regulatory super-power muscles and takes the lead in setting open and secure mobility data standards. EU Regional Development Funds are subsequently leveraged to encourage cities and local regions to align local regulatory frameworks with EU-wide data protection, cyber-security and mobility data regulations. Other countries (as well as some US states) follow suit, starting with the UK and Japan, ensuring a de facto export of EU legislation, and standards, across much of the world.
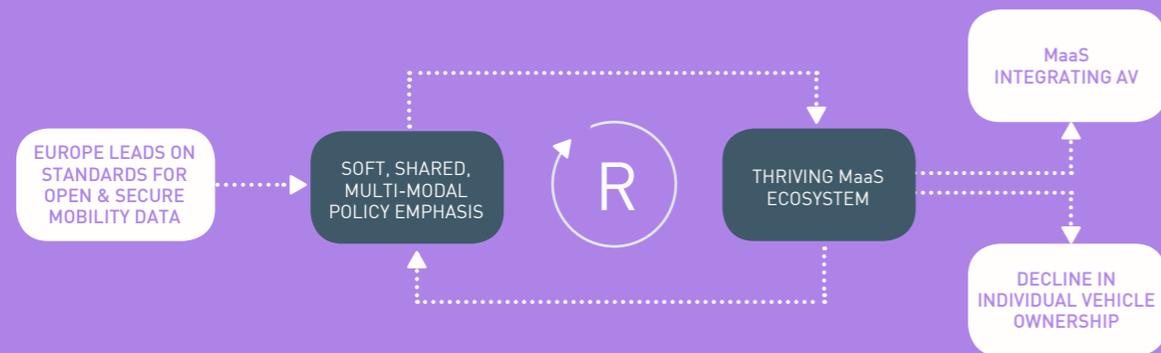
This regulatory framework encourages private and public investment in Mobility as a Service (MaaS). The initial focus is on start-ups with, once again, less attention being paid to the industrialisation of mobility solutions by major incumbents. Level 5 AV is initially seriously limited to 'dedicated urban areas' but this does, at least, free up the necessary investment to integrate AV into emerging MaaS offerings. To the surprise of many observers and entrenched interests, a thriving digital ecosystem for connected mobility quickly emerges and several European start-ups successfully scale-up.

Their innovative MaaS offerings were warmly embraced both by consumers finally getting a boost in disposable income and a rather peculiar alignment of interests between groups who normally worked against each other.

EU regulators were pushed along by the 2019 Parliament and Commission to enable, not strangle, innovation and economic growth. City authorities and civil society simply wanted cleaner and more affordable mobility. MaaS offered the promise of both. Politically influential environmentalists were, for their part, reasonably supportive of MaaS on the grounds that the basic economics behind such solutions encouraged 24/7 vehicle use – a type of use that suited perfectly electric power trains. Finally, MaaS offered a credible alternative to the carbon pricing schemes that were becoming commonplace.
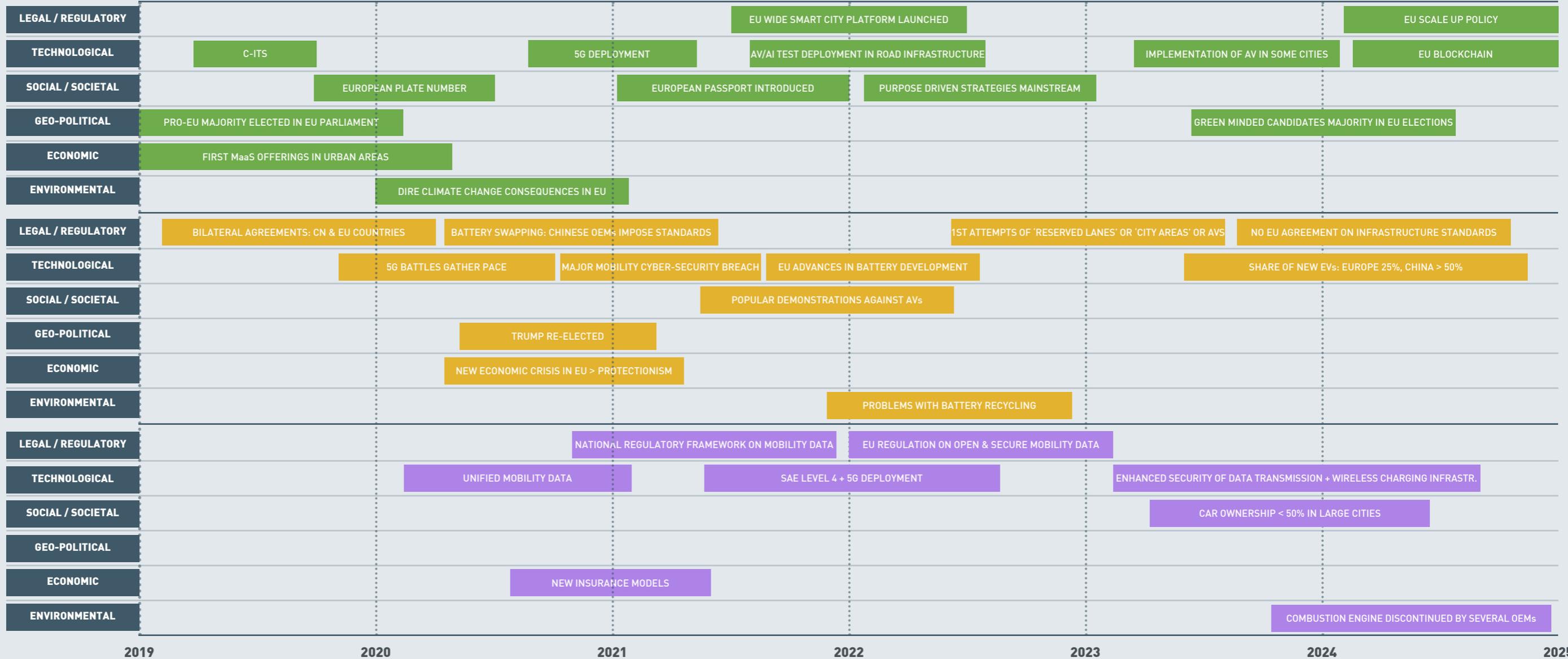
Economic reality is dealing a death blow to individual ownership of vehicles in built-up urban areas. City authorities, encouraged by this windfall and their voters, direct their urban planners to follow suit and to irreversibly exploit the freed-up space. Renewable energy production grows substantially, and fleet electrification explodes.

In 2025, most new vehicles integrate level 3 and 4 automation. More importantly, at least for supporters of Level 5 automation, the societal and economic conditions for growth of future AV offerings are positive. Cities, emboldened by the success of MaaS and backed by popular support, are increasingly showing willingness to restrict city centre access to autonomous, renewable, mobility services (ARMS).

EUROPE LEADS ON STANDARDS FOR OPEN & SECURE MOBILITY DATA → SOFT, SHARED, MULTI-MODAL POLICY EMPHASIS → R → THRIVING MaaS ECOSYSTEM → MaaS INTEGRATING AV / DECLINE IN INDIVIDUAL VEHICLE OWNERSHIP

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2019 TO 2025: SCENARIO TIMELINES

BIG IS BEAUTIFUL

Category	Events
LEGAL / REGULATORY	EU WIDE SMART CITY PLATFORM LAUNCHED · EU SCALE UP POLICY
TECHNOLOGICAL	C-ITS · 5G DEPLOYMENT · AV/AI TEST DEPLOYMENT IN ROAD INFRASTRUCTURE · IMPLEMENTATION OF AV IN SOME CITIES · EU BLOCKCHAIN
SOCIAL / SOCIETAL	EUROPEAN PLATE NUMBER · EUROPEAN PASSPORT INTRODUCED · PURPOSE DRIVEN STRATEGIES MAINSTREAM
GEO-POLITICAL	PRO-EU MAJORITY ELECTED IN EU PARLIAMENT · GREEN MINDED CANDIDATES MAJORITY IN EU ELECTIONS
ECONOMIC	FIRST MaaS OFFERINGS IN URBAN AREAS
ENVIRONMENTAL	DIRE CLIMATE CHANGE CONSEQUENCES IN EU

SLIPPERY SLOPE

Category	Events
LEGAL / REGULATORY	BILATERAL AGREEMENTS: CN & EU COUNTRIES · BATTERY SWAPPING: CHINESE OEMs IMPOSE STANDARDS · 1ST ATTEMPTS OF 'RESERVED LANES' OR 'CITY AREAS' OR AVS · NO EU AGREEMENT ON INFRASTRUCTURE STANDARDS
TECHNOLOGICAL	5G BATTLES GATHER PACE · MAJOR MOBILITY CYBER-SECURITY BREACH · EU ADVANCES IN BATTERY DEVELOPMENT · SHARE OF NEW EVs: EUROPE 25%, CHINA > 50%
SOCIAL / SOCIETAL	POPULAR DEMONSTRATIONS AGAINST AVs
GEO-POLITICAL	TRUMP RE-ELECTED
ECONOMIC	NEW ECONOMIC CRISIS IN EU > PROTECTIONISM
ENVIRONMENTAL	PROBLEMS WITH BATTERY RECYCLING

CITIZEN MOBILITY

Category	Events
LEGAL / REGULATORY	NATIONAL REGULATORY FRAMEWORK ON MOBILITY DATA · EU REGULATION ON OPEN & SECURE MOBILITY DATA
TECHNOLOGICAL	UNIFIED MOBILITY DATA · SAE LEVEL 4 + 5G DEPLOYMENT · ENHANCED SECURITY OF DATA TRANSMISSION + WIRELESS CHARGING INFRASTR.
SOCIAL / SOCIETAL	CAR OWNERSHIP < 50% IN LARGE CITIES
GEO-POLITICAL	
ECONOMIC	NEW INSURANCE MODELS
ENVIRONMENTAL	COMBUSTION ENGINE DISCONTINUED BY SEVERAL OEMs

Timeline axis: 2019 · 2020 · 2021 · 2022 · 2023 · 2024 · 2025

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KEY ASSUMPTIONS COMPARISON

	BIG IS BEAUTIFUL	SLIPPERY SLOPE	CITIZEN MOBILITY
LOGIC	'SUCCESSFUL TO THE SUCCESSFUL' STORY	'SETBACKS AND DIVERGENCE' STORY	'LET A THOUSAND FLOWERS BLOOM' STORY
PERCEIVED CLIMATE CHANGE	MODERATE	INTENSE	INTENSE
POLICY ALIGNMENT	EUROPE-WIDE ON AV	PATCHWORK OF NATIONAL AND LOCAL POLICIES	EUROPE-WIDE ON OPEN AND SECURE MOBILITY DATA
SOCIAL ACCEPTANCE OF AV	SMOOTH GOING	RISKS EVERYWERE	SMOOTH GOING BUT MaaS HAS PRIORITY
EUROPEAN MOBILITY POLICY FOCUS	INDUSTRIALISATION OF SOLUTIONS	MOBILITY POLICY AT NATIONAL, REGIONAL LEVEL	OPEN - EMERGENCE VIA START-UPS ECOSYSTEMS
AV TECHNOLOGY	ACCELERATED PROGRESS	MAJOR SETBACKS	STEADY PROGRESS
EUROPE INTERNATIONAL TRADE POLICY	PRAGMATISM	PROTECTIONISM	CONFLICT AVOIDANCE. EU IS GLOBAL REGULATORY SUPER POWER
ATTITUDE TO OWNERSHIP	WIDELY SHARED	INDIVIDUAL CENTRIC	SHARED INSIDE CITY CONURBATIONS
FLEET ELECTRIFICATION	EXPONENTIAL	MULTIPLE ROADBLOCKS	STRONG GROWTH THROUGH MaaS FLEETS
DIGITAL INFRASTRUCTURE INVESTMENT	SUBSTANTIAL IN AV	STAGNANT	SUBSTANTIAL IN MaaS

KEY CHALLENGES

BIG IS BEAUTIFUL	SLIPPERY SLOPE	CITIZEN MOBILITY
Is the "class of 2019" EU parliament able to show effective leadership in energy, the environment and technology?	Is there any way out from the spiral of mistrust and acrimony between society and technology companies?	How will the OEMs react to a historical decline?
How will society react to the fear, and plausible reality, of mass unemployment emerging from an automotive sector that employed some 12 million people across Europe in 2018"?	Can the constant and growing bitterness in global trade be de-escalated?	How will society, politicians and citizens react to the unemployment emerging from the automotive sector and the perspective of European 'Detroits'?
How will society, and the companies responsible, react to the inevitable data breaches and growing pains of an emerging AI/AV world of mobility?	Will Europe ever manage to have a positive industrial policy?	Which pace for energy transition policies? How will they weigh on the mobility sector?
Does Europe have the economic and political determination to drive through the transition from a carbon to an interconnected, renewable energy market?	Will populism prevail?	Does Europe have the economic and political determination to establish a leading role in standards for open and secure mobility data?

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IMPLICATIONS OF 2025 SCENARIOS ON AUTONOMOUS VEHICLES
URBAN INFRASTRUCTURE, SOCIAL VALUES, 5G & POLICY MAKING

	BIG IS BEAUTIFUL	**SLIPPERY SLOPE**	**CITIZEN MOBILITY**
DOMINANT SOCIAL VALUES	• Responsible consumption • Pollution free – healthy cities, sustainability • Transparency	• Individualism, tribalism, protectionism, anti-EU sentiment • Power struggle: transnational policy vs. local will • Mistrust on technology, institutions, litigation on the rise	• Trust, transparency, safety • Environmental / 'caring' values • Change from ownership to usage • Affordability, low cost services
5G NETWORKS IMPACT ON MOBILITY	5G networks enable safety services and contextual information, value added mobility services (e.g. remote driving, sensor sharing, or platooning) and, in specific use cases, support operation of autonomous vehicles (e.g. heavy machinery)	Multiple standards (patchwork); 5G deployed only in cities, enabling safety services and contextual information. Experiments with 5G for value added mobility services	5G networks enable safety services and contextual information; and value-added mobility services to improve user experience in public transportation
CRITICAL TRANSFORMATIONS IN URBAN INFRASTRUCTURE	• Integration of micro-mobility (scooters, bicycles, accessibility...) • Bigger relevance of residential and distributed energy resources (DER) as source of energy for EVs/AVs • Technology enabled urban infrastructure • Ubiquitous computing development based on actual and future quantum computing (latency & location)	• Infrastructures must be able to cope with some AV pilots and conventional vehicles • Electric recharging infrastructures: varied approaches across countries and cities; asymmetric (for private cars vs for public/shared vehicles) • Bigger changes if climate goals are strengthened	• Connected infrastructure: sensors + data + analytics • Development of flexibility and adaptability • City planning 'reinvented'
CRITICAL ISSUES FOR POLICYMAKERS	• Public, social associations for pushing policy alignment • Speed up in standardisation	• Enforcement of law and regulation • Standardisation • Lack of common European regulations / multisector regulations	• Public-private interaction / collaboration • Harmonised European Regulation • Streamline EU support to local authorities • Technical knowledge • Integrate users demand

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PROCESS OF IDENTIFICATION OF
BUSINESS MODEL OPPORTUNITIES AND POLICY IMPLICATIONS

01 MAPPING — We first mapped the current urban mobility ecosystem in which Think Tank participants find themselves, specifying inter-actors and relationships (political, knowledge, investment, service/commercial, data, regulation), with emphasis on the role of emergent technologies, digital actors and start-ups.

02 DESIGN — Think Tank members then designed plausible future urban mobility ecosystems of two cities representing large size and mid-size European cities, Madrid and Bilbao, exploring how value-creating systems might develop in each scenario ('Big is Beautiful', 'Slippery Slope' and 'Citizen Mobility') and across scenarios.

03 IDENTIFY — This led the Think Tank members to identify networked business opportunities, as viewed through collaborative strategy lenses, and how they could lead ecosystem reconfiguration. The unique mix of members from the public sector (at different levels), private sector (large, middle, small, start-up), research institutions and civil society enabled the identification of 20+ business opportunities.

04 FOCUS — In the Barcelona Forum, taking place during the Smart City Expo week, we designed plausible future urban mobility ecosystems for Barcelona exploring how value-creating systems might develop in each scenario ('Big is Beautiful', 'Slippery Slope' and 'Citizen Mobility'). We chose Barcelona for its specificities (e.g. urban topography, tourism flows) and leading role in enabling citizen participation and connectivity.

05 DELIVER — We then explored how Think Tank members could lead the ecosystem reconfiguration by revising and further developing business opportunities and policy implications identified in the Bilbao Forum. We then explored offerings Think Tank members could co-create and identified steps to set-up and operate them.

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GENERIC ACTOR MAPPING OF
URBAN MOBILITY ECOSYSTEM IN EUROPE

Authority / Policy maker	City, Agglomeration, Region, Country, Europe
Human	Roles: Citizen, Visitor, Professional, Commuter, Customer
Mobility Infrastructure	Roads, Tunnels, Traffic, Airports, Ports, Train stations
Digital & Telecom Infrastructure	Telecom Network, Satellites, GPS, Data Center, Cloud, IoT, 3G/4G/5G, Cryptography
Energy Infrastructure	Petrol/Diesel, Gas, Electricity
Parking	Public, Private
Urban Services	Waste Collection, City Road Operator, Toll Roads, Public Assets /Road Maintenance
Public Transportation Services	Bus, Subway / Tramway, Rail, Public Bicycles
Vehicle Mobility Services	Car/Moto Sharing, Car Rental, Taxi, Ride Hailing, Shuttle Service, Fleet Provider
Soft Mobility Services	Bike hailing, Electric scooters
Energy Provider & Services	Petrol/Diesel, Gas, Electricity
HW/SW Platforms	Traffic Apps, Cartography, Payment, Flow Facilitator, Mobile Operator, Information Repository, Social Media, Search Engine, OS, Smart Phone Maker, Mobile Ticketing
Financial Services	Insurance, Real Estate Developers, Investors
Logistics Services	Post, Last-mile (soft), Goods
1st Tier Supplier	Battery, Tires, and so on
Vehicles OEMs	Dealers & Wholesale
Ecosystem Agents	University, Sectorial Cluster, Incubators, Research Center, Consultancy
Civil Society / Media	Citizen-led movements, NGOs, Influencers, Media (Press)
Mobility Device	Car, Moto, Bycicle, Bus

A CURRENT URBAN MOBILITY ECOSYSTEM IN LARGE EUROPEAN CITY:
CASE OF MADRID
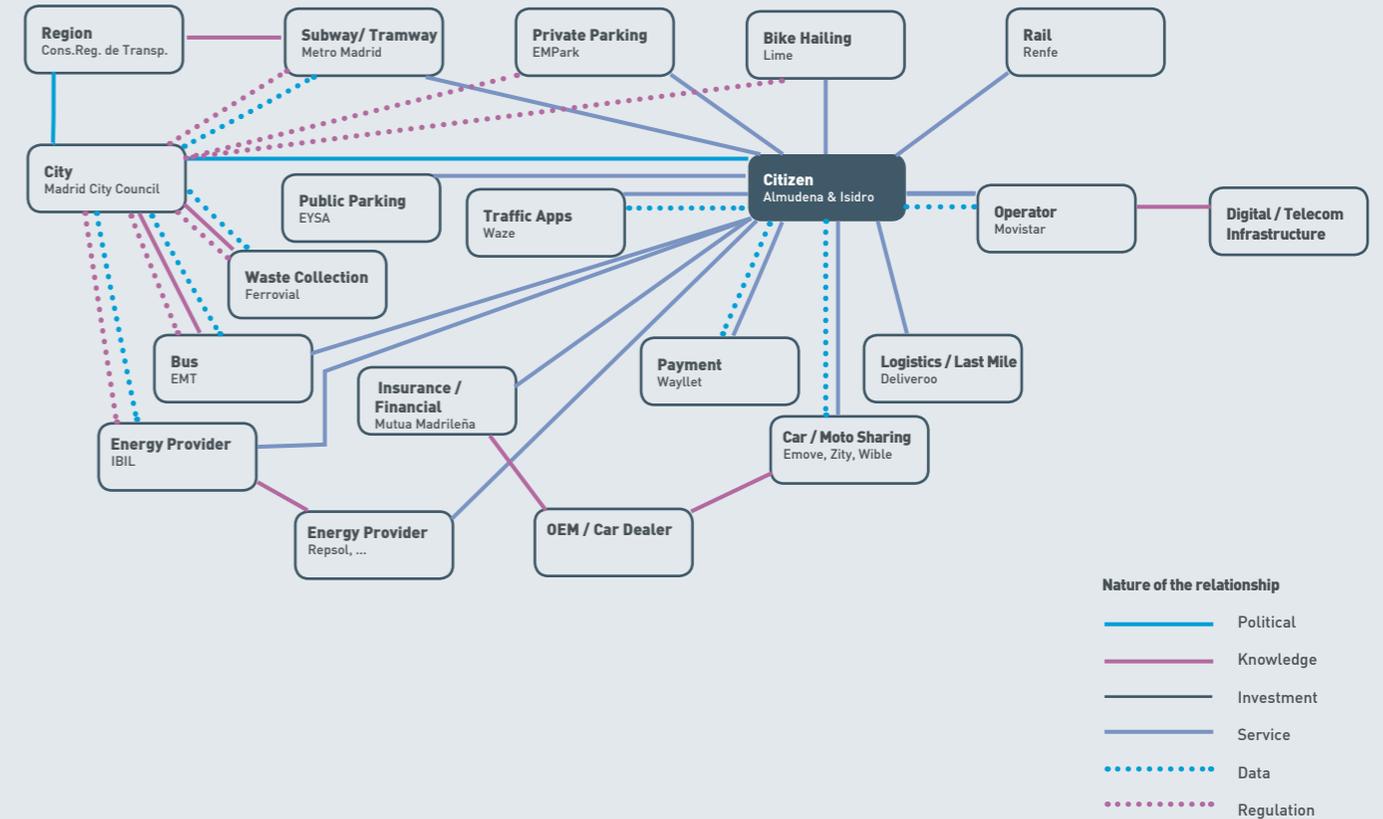
This is a non-exhaustive ecosystem mapping presenting some actors and relationships that Think Tank members decided to reflect upon.

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Organisation and company names serve illustrative purposes only

MAJOR CHANGES TO LOCAL URBAN MOBILITY ECOSYSTEMS BY 2025

BIG IS BEAUTIFUL **SLIPPERY SLOPE** **CITIZEN MOBILITY**

	BIG IS BEAUTIFUL	SLIPPERY SLOPE	CITIZEN MOBILITY
MADRID	• Massive local data handling • Smart energy management: aggregators, intelligent connectivity, energy storage • Car manufacturers become MaaS providers	• City authorities become more powerful • Chinese EV OEMs gain market share • Consolidation of car sharing services providers	• Collaborative Administration (e.g. PPPartnerships) • From energy to electricity • From different services to MaaS • From ownership to sharing

BILBAO	• Integral UGD (Urban Goods Distribution) logistics
	• Integral Management Systems for Mobility
	• Dynamic use of public / private space
		• Integrated management of transport / mobility /data
		• Mobility as a Service (public + private) + last mile
		• Access restrictions
			• Mobility as a service:
			  a) multimodal (new services)
			  b) new platform handled by public authorities
			• Environmental Conscious:
			  a) policy / restriction
			  b) electrification
			• Full connectivity / 5G

BARCELONA	• Technology enabled urban infrastructure • AV Pilots • Regulation of fleet management in real time (number of vehicles, routes, controlling different fleets – tourist busses, taxis, etc.) → flexible traffic regulation / management • MaaS development	• City authorities become more powerful • Livability & litigation as key drivers of policy making • Integration of micro-mobility (scooters, bicycles, accessibility...) • Electric recharging infrastructure	• Connected infrastructure: sensors + data + analytics • Development of flexibility and adaptability • City planning 'reinvented' • Exponential MaaS development • 5G operational

This is a non-exhaustive ecosystem mapping presenting some actors and relationships that Think Tank members decided to reflect upon.

INTEGRAL MGMT SYSTEMS FOR MOBILITY (BILBAO)

Description

Platform that includes all mobility related agents within a city. The platform would include logistics companies, car sharing companies, garbage collection companies, etc. The platform would gather data and would help take dynamic decisions in order to improve mobility in the city. It would also give all the agents optimal routes. It would benefit urban traffic management, as well as all the implied agents and also citizens.

Actors

All mobility actors; City council (urban traffic manager); ICT companies to develop the platform; IoT sensors.

Implications

All delivery actors would be geolocated and identified. It would help reduce bad practices; Necessary regulatory changes.

Scenario

 BIG IS BEAUTIFUL

PARKING AS A SERVICE

OPPORTUNITY #3

SCENARIO

🛞 SLIPPERY SLOPE

OFFERING

'Parking as a Service' (enhanced park & ride concept)
- Shareable parking spaces
- Electric vehicle recharging service
- Outside LEZ (low emission zone) & connected to public transport hubs (and shared vehicle services)

People
- Data scientists
- Land and transport planners
- Parking management specialists
- Energy / charging specialists

Process
- Routing
- Park space management
- Booking & payment
- Prediction
- EV Charging

Risk & work sharing formula
- Client engagement
- Fragmentation
- Insurance costs
- Peak demand situations / Congestion / Space unavailability
- Unforeseen events

Technology
- Artificial intelligence
- EV Charging
- Operational platform
- E-payment / Blockchain

Information
- Availability of parking spaces
- O/D and travel time
- Calendar of events

For / with
- For citizens (inside & outside LEZ)
- With mobility service operators

Monetised value ($) and other values co-created
- Time in park space
- Battery recharging
- Subconcessions to commerces, restaurants in hub

SET UP

The actors for setting up the Urban Mobility are to be gathered in three main task forces:

1. Authorities and Policy makers (at least at three different territorial levels), that will carry out the competences of urban/regional regulation, strategic vision of transport, initiative and management of public-private partnerships (PPP) with private companies, cooperation with academia, tech centers and other institutions
2. Infrastructures (physical and digital), that includes management of streets and urban highways, car park places (on-street &off-street), electric vehicles charging facilities and services, and also telecom grids and virtual infrastructures (simulation, data)
3. Vehicles include not only the OEM activities of manufacturing and assembly of the complete vehicles, but also the industry of parts (Tier1) and the manufacturers of high-tech batteries for the electric mobility of any kind.

PARKING AS A SERVICE

OPPORTUNITY #3

SCENARIO

🛞 SLIPPERY SLOPE

OPERATION

The operators of Urban mobility are service providers:
- Car sharing and micro-mobility operators (mainly electric cars, but not limited to)
- E-logistics (Operators of urban transport of goods, including last mile deliveries)
- MaaS service providers (Urban transport integration platforms)
- Insurance companies, that shall adapt their services to the new mobility
- Traffic Management and Traffic/Environmental enforcement operators (This can be PPP organizations lead by authorities (City Council/TMB)
- Infrastructure operators (physical and digital)

POLICY OPPORTUNITIES

1. New public service offering (on demand)
2. Cost reduction in healthcare
3. Open data policy (AMETIC + public authorities)

RATIONALE

The workgroup selected a single business amongst the list of the opportunities. The business selected was an enhancement of the urban parking business, increasing the technology inside car park places to allow automatism and enhanced management, including electric vehicle charging as a relevant part of the business and integrating this business in the "Mobilty as a Service" concept.

This business model can be boosted thanks to the implementation of the LEZ (Low Emission Zone) in Barcelona since January 1st 2020. LEZ will cover practically all the urbanized area of Barcelona inside the B10 and B20 ring roads. Old gasoline-engine vehicles will be banned to enter the city. New and refurbished park places, connected to public transport, shall be placed around the LEZ. In such places, non-allowed vehicles shall stay during the time the uses need to get into the LEZ, only accessible with public transport and electric cars.

The name given to of this opportunity is "Parking as a Service". Places available info shall be integrated in MaaS platforms to allow users an easy booking and ensure multimodality.

Why did the workgroup choose such business? Because we understood that the scenario "Slippery Slope" will not allow autonomous vehicles being significantly deployed in cities in 2025. However, this scenario depicts a substantial deployment of electric urban mobility.
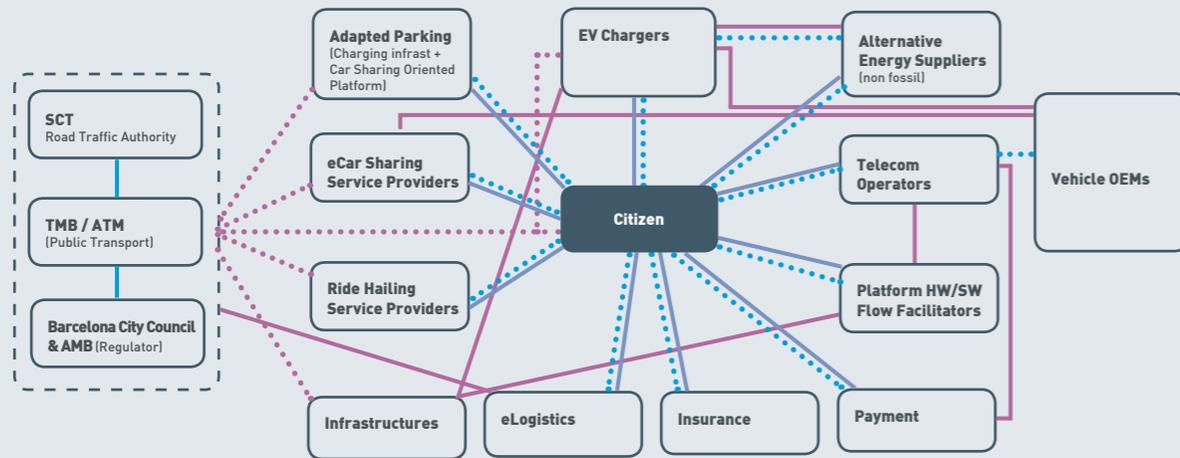
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PARKING AS A SERVICE

OPPORTUNITY #3

SCENARIO

SLIPPERY SLOPE

ECOSYSTEM MAP

SCT
Road Traffic Authority

TMB / ATM
(Public Transport)

**Barcelona City Council
& AMB** (Regulator)

Adapted Parking
(Charging infrast +
Car Sharing Oriented
Platform)

**eCar Sharing
Service Providers**

**Ride Hailing
Service Providers**

EV Chargers

Citizen

**Alternative
Energy Suppliers**
(non fossil)

**Telecom
Operators**

**Platform HW/SW
Flow Facilitators**

Vehicle OEMs

Infrastructures

eLogistics

Insurance

Payment

Nature of the relationship

Political

Knowledge

Investment

Service

Data

Regulation

This is a non-exhaustive ecosystem mapping presenting some actors and relationships that Think Tank members decided to reflect upon.
Organisation and company names serve illustrative purposes only

NEXT #VEHICLES7YFN ITERATION IN 2020

AMETIC's Think Tank #VEHICLES7YFN is a 'learning journey' where the journey is as important as reaching the destination. It provides a 'safe space' within which differences of views, opinions and framings can be explored productively.

The Think Tank's design explicitly confronts co-creators with challenges and disruption. It leverages AMETIC's unique role as a neutral convener bridging the digital sector with multiple stakeholders (companies, regulators, cities/regions/national governments, citizens, civil-society entities, and so on).

In 2020, we will expand the focus of the Think Tank to explore the future of sustainable mobility in Europe and to assess the business offerings and their implementation.

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FEEDBACK FROM THINK TANK MEMBERS

Congratulations, very well done; great group of people.

Thanks to AMETIC for process to generate innovative and disruptive ideas and purpose.

Escalate this initiative to European level.

Keep on promoting interaction and cooperation among different stakeholders.

THINK TANK
#VEHICLES7YFN
PRESENT AND FUTURE OF MOBILITY IN EUROPE:
2020 ITERATION

THINK TANK
#VEHICLES7YFN
PRESENT AND FUTURE OF MOBILITY IN EUROPE:
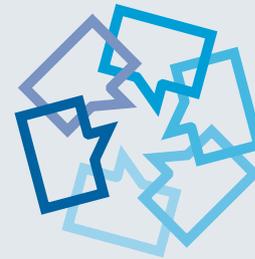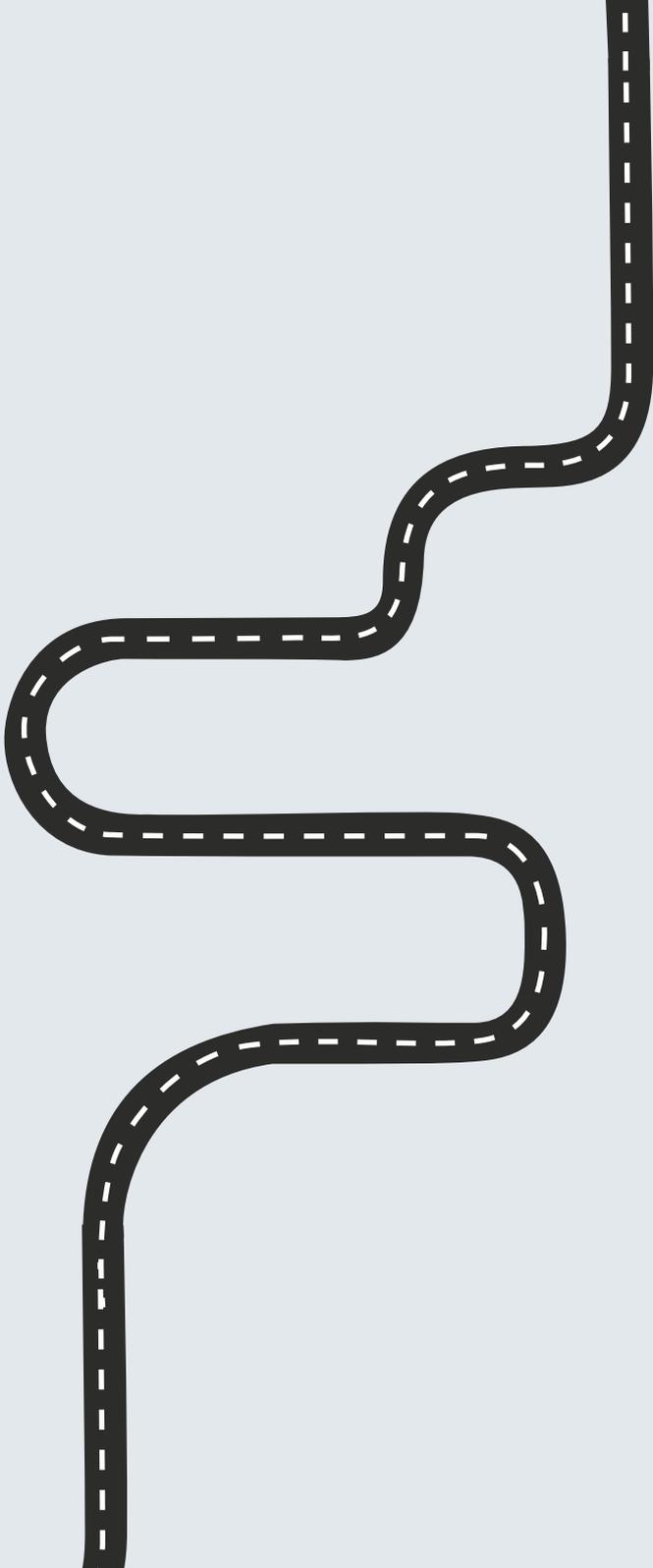2020 ITERATION

Engaging with AMETIC initiatives and the #VEHICLES7YFN Think Tank:

AMETIC is the convener of the **#VEHICLES7YFN** Think Tank with design, methodological support and facilitation by www.normannpartners.com

The views expressed in this publication have been based on workshops, interviews, and research and do not necessarily reflect those of AMETIC. References mentioned in this report are available upon request.

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THINK TANK

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PRESENT AND FUTURE OF MOBILITY IN EUROPE:
2020 ITERATION

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