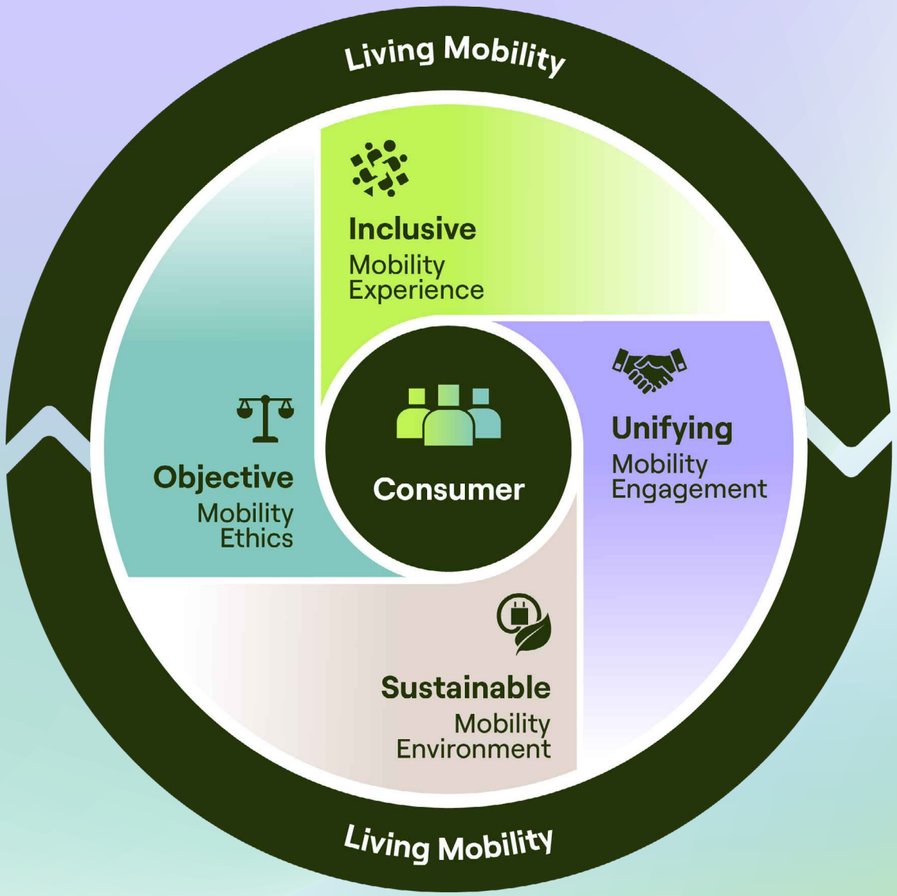
Hogan Lovells

Living Mobility Spotlight

Q&A series

Contents

***To read the individual articles, click on the headline.**



Living Mobility: Redefining How We Move and Live

What is Living Mobility? It is easier to say what it is not. The automotive and mobility industry is no longer focused on the traditional vehicle. Not only are the vehicles changing but we are now focused on mobility: different modes of travel for people and goods all connected in new and evolving ways. As this sector changes it will also change how we live because it will change how we move, are connected and even what we do. Living Mobility is an attempt to capture this vibrant evolution of not just our vehicles, and of our mobility networks, but of how we live.

Changes of this magnitude take time. But the rate of change is rapid. Companies development of technology and with it new business models will combine with changes in consumer demand and government regulation to create the future. Change of this magnitude generates a host of novel business, legal and policy issues. We envision Living Mobility broadly with four key characteristics: Living Mobility is Objective, Inclusive, Unifying, and Sustainable.

These four elements comprise various opportunities and challenges that are highlighted in the following Living Mobility Spotlight Q&A Series.

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Living Mobility is

Objective

Living Mobility is Objective

Spotlight on AI and consumer trust

In conversation with Mark Brennan, Global Managing Partner for Digitalization, and Katy Milner, Partner.

As artificial intelligence (AI) paves the way for increasingly integrated transport systems, manufacturers are joining forces with service providers and software developers to deliver innovative mobility solutions. But the promise of AI-enabled transport is not without its challenges. Mark Brennan and Katy Milner discuss a few of these challenges and the overarching importance of prioritizing consumer trust in AI mobility solutions.

Featured speakers

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What should the mobility and transportation industry keep in mind about consumer trust and AI?

Brennan: Being transparent with consumers about your data, safety, and other practices remains critical. The details matter. We are seeing a lot of rapid legal, regulatory, and policy developments for autonomous vehicles (AVs) and unmanned aerial vehicles (UAVs), ridesharing, and micromobility like e-scooters. But long-term success in the market will almost certainly depend on maintaining consumer trust. Data protection, service terms and conditions, and fee structures all can significantly impact consumer trust.

Our clients are innovating to change the world, and we are their strategic advisors. It's really important that we bring an innovative mindset and continually look for opportunities to enhance our services and help them find creative new solutions to their challenges.

We also need to be mindful that assessing risk involves more than the immediate legal issues – long-term impact and reputational harms also play an important role.

Is it possible to harmonize service offerings and regulatory compliance?

Milner: It is both possible and an imperative to develop service offerings with an eye toward compliance. Stakeholders across the value chain from developers to deployers to end users need to be aligned – or risk legal (and reputational) consequences. With the rapid moving legal and regulatory environment for AI, in particular, industry needs to stay abreast of developments and holistically operationalize compliance strategies, for the lifespan of the product.

What should AI developers consider when approaching commercial agreements with manufacturers and service providers?

Brennan: For AI, one question for developers is at what points you need to ensure that somebody is maintaining a level of control. It's not enough to say "We trained the AI and then it decided everything after that."

As advisors, we must make sure that our clients build processes and protections that go beyond core compliance in their commercial agreements and think holistically about the ever-changing sphere of risks involved.

How can industry work with government to balance consumer protections with technological investments?

Milner: Opportunities abound for engagement – we are seeing that government wants to hear from the experts and those working at the cutting edge of innovation. Your insights can help regulators formulate policies that advance innovation while protecting consumers.

Brennan: We need a thoughtful approach that supports innovation. We are seeing a race among some regulators to see who can "regulate more," especially on consumer protection issues. There seems to be a presumption by some that more regulation is automatically better, without any critical assessment.

There needs to be a holistic approach taken with the first step being a fulsome analysis of whether and to what extent any new requirements are needed, or if there are sufficient developments in the marketplace to protect consumers.

Living Mobility is Objective

Spotlight on data use and transparency

In conversation with James Denvil, Partner.

Living Mobility is Objective and fosters consumer trust based on transparent data usage. Data is the key to mobility solutions in smart cities. But in order for consumers to accept these advanced solutions as part of the way that they live, they must be in a position to trust that their data will be collected and processed fairly and responsibly. James Denvil discusses the role of transparency in building consumer trust and optimizing data-enabled initiatives.

Featured speaker

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What should the mobility and transportation industry keep in mind about data-driven mobility solutions in smart cities?

Denvil: Data is a source of value and a source of risk. That is true for every industry sector. But it is particularly true for technologies supporting mobility, connectivity, and smart cities. Mobility, connectivity, and smart-city data can reveal deep insights regarding infrastructure and people. The data can help us identify where to allocate resources, how to better distribute energy, where people congregate, and what people are interested in. Those insights can help private and public stakeholders increase efficiency and deliver desired products and services. But even as technological innovation moves forward at a seemingly ever-increasing rate, legal frameworks and consumer expectations can be slow to adapt. Almost every jurisdiction has laws and regulations in place regulating the collection, processing, storage, and sharing of data. Some of those frameworks reflect insights regarding 21st century technologies. However, many of the frameworks were developed in the days of dial-up modems, before cloud computing and big data were commonplace. Those outdated frameworks can create obstacles for technologies that rely on seamless connectivity and unobtrusive data collection, particularly where local laws differ across the globe. Industry must therefore consider how to advocate for changes to existing frameworks that will foster innovation and enhance global compatibility. We often see industry standards or principles as being key to building trust with consumers, policymakers, regulators, and others.

What are some examples of different consumer reactions to the use of data?

Denvil: There are many. Some consumers love the idea of being able to pay for goods and services or unlock their vehicle by simply using their face or fingerprint. But facial recognition and biometrics can raise fears of government databases. Voice-activated devices and services make lives easier for many of us. But some consumers generally balk at the idea of government access to voice recordings. Those two examples alone illustrate that there is no one-size-fits-all approach here. The technologies themselves are tools. In certain use cases, they can deliver enormous value. Industry benefits when it demonstrates the focus on those use cases while transparently addressing the steps taken to mitigate risk of unwanted uses.

How are data-driven mobility solutions developing in the United States?

Denvil: Development depends on numerous factors like incentives and environment. California, for example, has embraced being a testing ground for autonomous vehicle technologies. In South Dakota, the Prairie Hills Transit authority is working on a framework for building an AI-based dispatch system that will support micro-transit services. These initiatives involve multistakeholder coordination, requiring industry to work with public sector organizations and others to identify and address risk with a focus on delivering value.

What is the relationship between data usage transparency and data privacy laws?

Denvil: Transparency is a key element of almost all data privacy laws. However, approaching transparency with a compliance mindset may not be optimal. Anyone who has read a website terms of use document or the regulatory disclosures inside the box of a connected device likely understands that checking the box on disclosure requirements doesn't necessarily equate to transparency. While compliance is important, the mobility industry may also wish to invest resources to confirm that disclosures are understandable and help build trust.

That isn't necessarily an easy goal to achieve. Data privacy laws differ from jurisdiction to jurisdiction, even within the same region. There may be a need for jurisdiction-specific disclosures or addenda. A simple, global approach may not be possible. But a considered approach to transparency in data-driven mobility solutions prioritizes the trust of consumers from the beginning.

If there's one thing that will impede consumer acceptance of data-driven mobility solutions and smart cities, it's a lack of trust. As privacy laws in the region align around concepts such as data breach notification and accountability models, we see privacy laws as a potential enabler of trust. But the law can only go so far in this regard and

in certain areas at least, industry standards hold promise as both an effective way to manage risk and serve as a communication tool for the public.

How can public-private partnerships address public trust deficits to work towards consumer acceptance of data-driven mobility solutions?

Denvil: In this day and age, it may be quite easy to discredit or distrust any one particular source of information. Consumers may be quick to think that industry is driven by profit alone and lawmakers are focused solely on maintaining political advantage. Public-private partnerships can enhance public trust by demonstrating that a varied group of stakeholders can join together to support common goals. Lawmakers and industry can work together to identify solutions that will foster innovations with clear benefits while addressing concerns in a thoughtful, transparent manner.

Living Mobility is

Inclusive

Living Mobility is Inclusive & Objective

Spotlight on MaaS and data sharing

In conversation with Charlotte Le Roux, Counsel.

Inclusive Living Mobility requires making mobility services accessible to all users, regardless of geography, socio-economic status, or connectivity. Objective Living Mobility requires building fair, secure, and transparent frameworks for the massive amounts of data and algorithms that power these services. At the crossroads of automotive innovation, digital platforms, and new EU regulation, Mobility as a Service (MaaS) presents opportunities and challenges for all stakeholders.

Charlotte Le Roux discusses some of the challenges and opportunities surrounding data sharing and MaaS platforms, with a particular focus on the legal context in the EU.

Featured speaker

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What is MaaS?

Le Roux: MaaS refers to platforms that integrate access to diverse mobility solutions such as public transport, ride-hailing, car-sharing, micro-mobility, and increasingly connected or autonomous vehicles. For the consumer, MaaS means seamless access: one interface, one subscription, one payment. For the industry, it reshapes value creation. Instead of the car itself, the platform, the data, and the user relationship become central. This is a fundamental shift for manufacturers, operators, and technology providers.

Why is data sharing essential for MaaS to deliver both efficiency and inclusion?

Le Roux: MaaS depends on the continuous circulation of high-value data, from vehicle telematics and traffic flows to charging availability and public transport schedules. While public data is generally available, private data remains fragmented and tightly controlled, creating structural barriers to integration. Without access to these datasets, platforms cannot optimize routes, predict demand, or ensure that services reach all users, including those in underserved areas.

The challenge goes beyond technical interoperability. It requires enforceable legal frameworks that reconcile competing interests: ensuring compliance with applicable legal rules such as the GDPR, the Data Act, the AI Act, relevant cybersecurity rules, and others, while also defining how proprietary insights are safeguarded, how access rights are structured, and where liability falls if data is inaccurate or misused. Efficiency requires seamless integration, but inclusion requires that such integration be fair, transparent, and accessible to all. Without balanced mechanisms, MaaS risks reinforcing inequalities instead of addressing them.

Is exclusive control of mobility data coming to an end?

Le Roux: Access to data generated by connected vehicles is entering a decisive stage. From 12 September 2025, the EU Data Act will give users a right to obtain data produced through the use of their vehicles, such as diagnostics and telematics, and to share it with third parties of their choice. While manufacturers will remain entitled to protect derived insights, trade secrets and cybersecurity interests, they will no longer exercise exclusive control over raw usage data.

Until now, cybersecurity has been the main argument for blocking external access to vehicle data, given the risks of vulnerability and liability in case of a breach.

This transition enables new MaaS services but intensifies the legal debate: balancing openness with intellectual property, protecting sensitive information, and allocating liability if data is misused. To support this, the European Commission must adopt Model Contractual Terms by 12 September 2025. In parallel, the European Mobility Data Space, launched in March 2025, seeks to establish standardized, secure conditions for sharing by harmonizing metadata across regional portals to improve dataset discoverability and interoperability.

How will algorithmic governance shape MaaS?

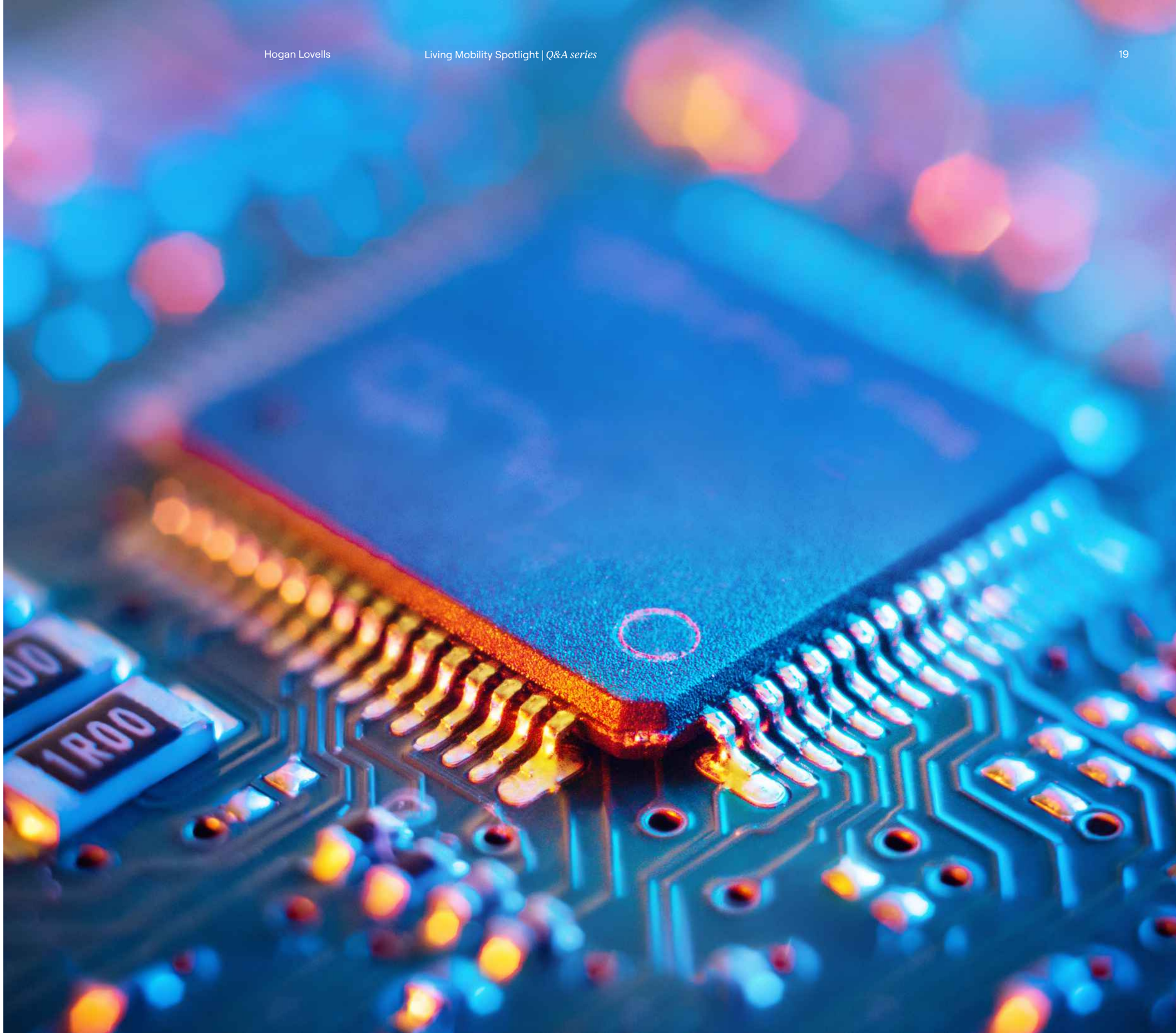
Le Roux: MaaS relies heavily on algorithms for demand prediction, route optimization and dynamic pricing. The AI Act entered into force on 1 August 2024, with a phased implementation. Since February 2025, bans on unacceptable AI practices and AI literacy obligations have applied. From August 2025, rules for general-purpose AI models and governance obligations take effect. Full requirements for high-risk systems, including those used in autonomous mobility, will apply by August 2027.

For MaaS, algorithmic governance is no longer theoretical: platforms must demonstrate that their systems operate with transparency and fairness, and that risks of bias or opacity are actively managed. The legal framework is designed to ensure accountability, but its real test will be whether it strengthens user confidence. The real challenge is to embed governance as a driver of user confidence, not merely a compliance framework.

What lies ahead for MaaS?

Le Roux: The direction is set. Access to vehicle data will become a right, algorithms will be subject to governance, and privacy and cybersecurity safeguards are non-negotiable. These are not optional add-ons, they define the competitive environment.

For clients, the issues are practical. How to structure agreements that reconcile access with IP protection, integrate privacy and security by design, and anticipate algorithmic obligations.

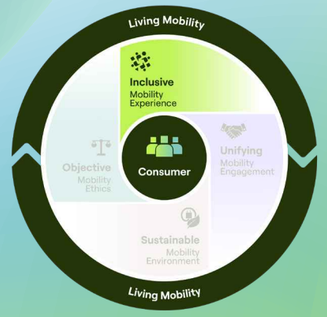


Living Mobility is Inclusive

Spotlight on mobile connectivity-enabled accessibility

In conversation with Ari Fitzgerald, Partner.

Inclusive Living Mobility encompasses equity and transparency in the use of mobility-improving technologies. Service providers, disability advocates, and automakers are working together to address some of the mobility challenges experienced by people with disabilities. Viable solutions include automated and standardized transit functions, including self-driving vehicles, that otherwise require the assistance of other people. But automating and standardizing functions requires a reliable signal and the lower latency made possible by 5G and other high-speed mobile technologies. Ari Fitzgerald discusses a few of the challenges specific to high-speed connectivity and accessible transport options.



Featured speaker

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What are some of the policy considerations that the mobility and transportation industry should keep in mind?

Fitzgerald: As a policy matter, the mobility and transportation industry should be thinking in advance about the accessibility of its designs. At the highest level of automation, an autonomous system will make it safe for people who are physically incapable of operating a standard automobile to be transported in the vehicle without any other person being present. We should strive to ensure that those with physical disabilities that prevent them from taking control of the vehicle in which they are being transported have the same ability to benefit. This is similar to a concept long embraced by the communications industry called universal design.

What is universal design?

Fitzgerald: Universal design establishes as a primary goal for any developer of products or services that they be universally accessible. The communications industry has embraced universal design for many years. While it may seem intuitive now, it was not so when cell phones were first introduced. Initial cellphone designs made it difficult for many people with physical disabilities to use them. Individuals with hearing loss, for example, were unable to use early generation cellphones without attaching clunky TTY devices, which essentially eliminated the benefits of mobility. The first generation of digital mobile phones could not be used by people who wore hearing aids. They also could not be operated via voice commands and brail was not included on their keypads, making use by the blind virtually impossible.

This led the U.S. Congress to pass Section 255 of the Communications Act in 1996. That law required that telecommunications services and equipment be made accessible to people with disabilities if "readily achievable."

In 2010, the Twenty-First Century Communications and Video Accessibility Act (CVAA) expanded upon these congressional efforts and updated the law for modern communications.

How would universal design apply to the mobility and transportation industry?

Fitzgerald: As the mobility and transportation industry moves towards autonomous vehicles, revenue generation will depend largely on selling the experience. Automakers should think of ways to import universal design concepts into their vehicles and the vehicle-based products and services they offer.

Broadly speaking, the mobility and transportation industry should be thinking in terms of universal design (i.e., ensuring at the conceptual stage that the total experience is designed in a way that makes it accessible to the greatest number of people possible at initial launch, as opposed to later through adjustments) and incorporating this concept into whatever tech-based mobility offerings they are developing.

What is the role of government subsidies in expanding high-speed connectivity to rural areas?

Fitzgerald: 5G and (in the future) 6G will enable faster and more reliable communications within cities. Theoretically, the same benefits could be realized in rural areas – but deploying advanced communications networks in sparsely populated areas is very expensive. From the very beginning, the U.S. Congress and regulators recognized that bringing new infrastructure (roads, electricity and, yes, communications) to rural areas would be more expensive than bringing that same infrastructure and services to cities. Yet, they decided that as a public policy matter it would not be appropriate to leave rural infrastructure deployment exclusively to the whims of the marketplace. That is why government subsidies were provided to ensure that a basic level of infrastructure and service would be affordable to people in rural as well as urban areas. So should it be with 5G and 6G because they will not reach rural areas based on market forces alone.

What regulatory hurdles might impede the development of 5G and 6G-enabled accessible mobility?

Fitzgerald: For many years, the Federal Communications Commission (FCC) has focused on getting licenses to operate over large chunks of

well-propagating radio spectrum into the hands of commercial mobile providers in the hope that they would deploy advanced networks broadly. More recently it has focused on breaking down other barriers to high-speed mobile network deployment, including local governmental regulatory barriers that make densification of the infrastructure (and the capacity gains created thereby) more cumbersome, and reducing the sheer cost of deployment in sparsely-populated areas. I expect the second Trump Administration to double down on those efforts. Spectrum-related provisions included in the One Big Beautiful Bill Act reinstate the FCC's authority to auction spectrum, which had lapsed during the Biden Administration, and requires the FCC and Executive branch agencies to identify at least 800 MHz of additional spectrum that can be repurposed for commercial mobile service and auctioned. As it becomes more difficult to identify high-quality spectrum that can be easily repurposed for commercial mobile use, I expect the FCC and the National Telecommunications and Information Administration at the Department of Commerce to also continue exploring technical ways to facilitate more intensive sharing of spectrum between existing and new users.

It is important to remember that the FCC focuses its efforts mainly on regulating connectivity services and the infrastructure used to provide those services. For the most part, the FCC will not be involved in directly regulating the mobility and transportation industry. With that said, the mobility and transportation industry will increasingly be affected by the FCC's decisions, especially in the areas of spectrum, 5G, 6G, and accessibility, as it continues to roll out autonomous vehicle technology.

Living Mobility is

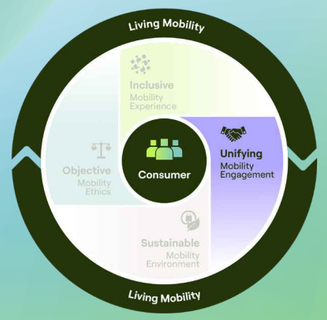
Unifying

Living Mobility is Unifying

Spotlight on trade and supply chains

In conversation with Juan Francisco Torres-Landa, Partner.

Living Mobility is Unifying. The automotive sector is an example of interconnectedness as supply chains are global and players along those supply chains depend on each other. But manufacturing globally means playing by the rules of the jurisdictions your consumers call home. Trade agreements can facilitate global supply chains, but they involve a myriad of legal issues. Technology and business models also "travel" internationally. Juan Francisco Torres-Landa discusses some of the issues relating to the impact of trade on the future of mobility in Latin America.



Featured speaker

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Why is trade so critical to the mobility and transportation industry in Latin America?

Torres-Landa: Mexico plays a significant part in the global mobility and transportation industry, specifically the automotive industry. This industry is particularly interconnected because the product manufactured – the automobile – culminates from so many companies along the supply chain. A solid free-trade agreement (FTA) can positively impact the mobility and transportation industry. The interconnected supply chain requires nimble companies with the ability to pivot in order to accommodate market needs and varying trade rules to operate on a global scale. Global trade is being reorganized based on changing geopolitical realities and new policies driven by the U.S. administration. Finding the right jurisdiction based on existing or renewed FTAs is one way in which the mobility industry can achieve this adaptability.

What is a free-trade agreement?

Torres-Landa: A free-trade agreement (FTA) lays out rules for economic activity among participating countries. To boost trade, partnering countries agree to reduce barriers to trade among participating countries by lowering tariffs and eliminating non-tariff barriers, for example. To foster investments, the FTA includes preferential rules of origin to incentivize use of local suppliers – that is, suppliers located in countries within the FTA.

How might free-trade agreements generate industry resiliency?

Torres-Landa: Trade flexibility can positively impact economic development and the mobility and transportation industry by helping industry pivot where necessary to meet changing market conditions. What enables adaptability – or resiliency – is a level of certainty that the public sector provides and the private sector requires to adopt good business decisions and benefit the community.

These rules and agreements are the current substantive matters being discussed among various trade partners. Monitoring the outcome of those reviewed structures will be critical for the proper planning of long term investment in supply chain infrastructure and plant locations. The renegotiation and updating of the Mexico-United States-Canada Treaty (USMCA) represents an opportunity for industry to evolve and adapt during a time of industry disruption. Strengthening the North American integration with a clear understanding of the actual priorities and demands of the three participating countries represents a unique opportunity to find a good solution to challenges in the current global trade wars.

Within Latin America, how might public and private sectors work together to advance electrification and shared services?

Torres-Landa: For shared services, compliance is critical. One example of this is the performance of micromobility companies in Latin America. Micromobility used to be very visible in Mexico City. But certain micromobility ventures were not successful in part because some companies entered the process without getting fully licensed and thus experienced compliance issues. There were four to five visible micromobility players; now there are only two.

In contrast, the transition to electric vehicles (EVs) is well under way in Latin America. In Mexico, we are seeing practical efforts by the public and private sectors to work together to advance electrification. New vehicle and ownership taxes have been eliminated for EVs and street charging stations in Mexico are mostly free of charge. Internal combustion engine (ICE) vehicles may not be driven one day a week in certain areas, a restriction that does not apply to EVs. And published import duties on EVs have been reduced from 15% to zero.

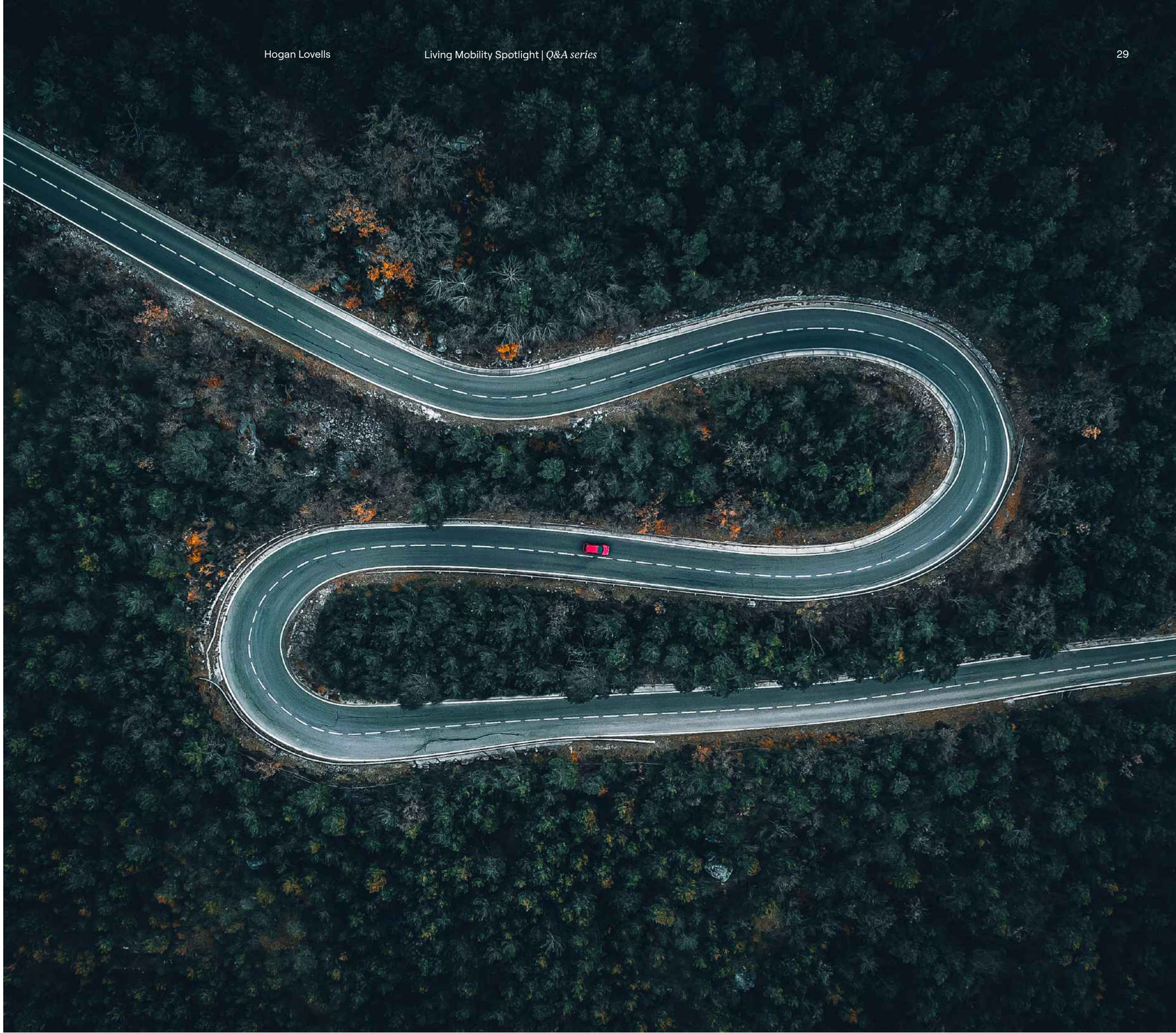
But hurdles remain. Two significant challenges to electrification are price point and a limited number of charging stations, particularly outside of main urban areas. A strategic growth plan is needed. While servicing EVs is simple compared with ICE vehicles, service shops where repairs can be made are limited and that increases operational costs and resulting inconveniences.

Urban congestion is an overarching issue that needs collaboration between the public and private sectors. In cities like Mexico City we still see overreliance on individual vehicles causing congestion, while the extensive subway system is insufficient because it requires more connections

to other transit systems to match actual consumer needs. This combination triggers an urban planning nightmare.

The presence of Chinese vehicles (EVs, HEVs, and ICE vehicles) is a recent development, but one that is taking Latin America by storm. While the US restricts such vehicles through tariffs, China is now the largest manufacturer of EVs in the world.

There is a huge opportunity to do things better, but it will require significant investments. Just as economies are increasingly integrated around the world through the irreversible process that is globalization, unifying efforts between public and private sectors at the national level will become increasingly important in the future of mobility. The trend is permanent, but a pragmatic and technically savvy planning process is required to maximize benefits.

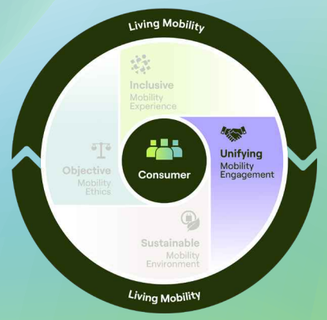


Living Mobility is Unifying

Spotlight on PPP for future mobility

In conversation with Liang Xu, Partner.

Living Mobility is Unifying. Collaboration between the public and private sectors to improve mobility solutions is an important illustration of the unifying aspect of living mobility. In China, the integration of the public and private sectors is particularly profound. For example, a business enterprise can partner with local government to bring advanced technology to an area in exchange for help in growing its business. Against this backdrop, artificial intelligence is flourishing in China and being widely adopted in the mobility sector, with increasing focus on the legal framework that places growing emphasis on data protection. Liang Xu discusses technology developments and the impact of public-private partnerships (PPP) on the future of mobility.



Featured speaker

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What should the mobility and transportation industry keep in mind when considering technology developments specific to China?

Xu: Broadly speaking, people in China are more accepting of AI and technology than people in other parts of the world. From a data privacy perspective, the Chinese people are more tolerant of personal data usage and more accustomed to accepting technology than people in Europe and the United States. Consciously exchanging data for convenience is part of daily life. This premium placed on convenience is one distinctive feature of Chinese culture impacting industry.

For example, people in China have been using apps like Cainiao to track, send, and pick up their parcels. When logging onto such an app, there are usually standard Privacy Policy and Terms and Conditions requiring consent for certain collection, processing and use of personal data. Through such consents, Cainiao integrates parcel information by connecting with major logistics and e-commerce platforms to provide people with consolidated, real-time updates.

As to the policy environment, to foster confidence in innovation and long-term collaboration, China is also pushing for a fair competitive environment for both domestic and foreign-invested companies, along with stronger protection of intellectual property rights.

How has public sentiment on data privacy impacted AI development in China?

Xu: Beyond making life more convenient and more fun, apps and platforms demonstrate the power of AI to optimize convenience when provided with data that is physically grounded in daily activities. Deep learning can only optimize on data made available to the algorithm. In China, AI capacity is supported by data beyond online activity. Chinese companies, for example, Didi (a car-hailing service provider), gather data from public activities in daily life like physical purchases and trips taken, to optimize its services (e.g., route planning). Because of the robust data pools, AI can be applied broadly to daily life.

However, as China's data privacy framework becomes more comprehensive, companies are now navigating regulations surrounding personal data and AI governance with greater care during data collection and processing. This evolving legal landscape reflects growing public demand for stronger data protection, thereby shaping how AI technologies are developed and deployed.

How do public-private partnerships (PPP) in China impact developing technologies like EVs?

Xu: In terms of electric vehicle (EV) technology, the public sector works with the private sector to bring advanced technologies to cities by offering financial incentives from local governments. For many years, the Chinese government has been trying to invest in and encourage the development and use of EVs for environmental benefits, creation of jobs, and other economic and social benefits. Financial incentives include tax breaks, interest-free loans, and investment funds supplied by state-owned institutions that provide equity to private companies to help them develop their technology and grow their business.

Public-private partnerships (with local governments providing funds or space) are commonly seen in EV infrastructure development, including specialized test sites and charging stations. The expansion of these facilities has further promoted EV adoption and industry growth.

The Chinese government has also taken considerable efforts (including providing financial incentives) towards the development of autonomous vehicle (AV) technology (particularly autonomous buses and taxis, which are being rolled out on a pilot basis in certain Chinese cities) together with the underlying 6G infrastructure.

How might public-private partnerships (PPP) impact industry supply chains in China?

Xu: From the supply chain perspective, public-private partnerships are things local governments are on top of. Sometimes the partnership involves an equity investment by a state-owned entity (for example, through the establishment of a joint venture with the foreign investor); other times, the local government's role is limited to providing a space for the business (for example in a high-tech industrial park) and other financial incentives as discussed above. For example, the local government in the Chinese city of Hefei partnered

with NIO (an EV manufacturer) through equity investment in developing a world-class EV cluster. The cluster has attracted multiple core auto parts suppliers to set up operations therein, which results in a significant reduction in NIO's costs by approximately EUR 500 - 600 per vehicle. This integration demonstrates how PPP can help build efficient supply chains that benefit both lead firms and their suppliers.

For business enterprises, negotiations with local authorities often involve an "investment cooperation agreement" enforceable against the local government. Contractual safeguards prompt delivery on a party's promise to maintain a good relationship with the local government. As a practical matter, keeping good relations with local authorities is important as support is needed almost on a daily basis after setting up operations. If all parties are acting reasonably, then partnerships work well. If a party is not honoring its commitments, recourse can involve reporting to higher levels. Such efforts help protect the interests of involved parties and maintain good relationships.

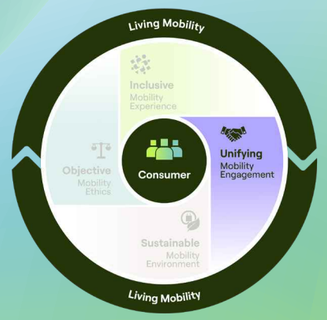
At the end of the day, mutually beneficial partnerships represent opportunities for improved mobility solutions.

Living Mobility is Unifying

Spotlight on autonomous driving regulations

In conversation with Patrick Ayad, Global Managing Partner for Sectors, and Susanne Schuster, Counsel.

Unifying Living Mobility envisions a reimagined mobility future connecting all sectors as vehicles shift to providing services well beyond movement. Mobility players, including traditional vehicle manufacturers and large technology companies, share a unifying goal for the mobility future – the development of interoperable, safe and trusted automated driving systems governed by a globally harmonized regulatory framework. Patrick Ayad and Susanne Schuster discuss some of the issues related to the adoption and expansion of automated driving systems.



Featured speakers

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Why can autonomous driving be seen as a catalyst for change in today's mobility landscape?

Ayad/Schuster: Autonomous driving is more than technical innovation. It unites entire sectors and builds new connections between industry players, governmental institutions and civil society. What used to be distinct domains are becoming a shared space of traditional vehicle manufacturers (OEMs) and suppliers, tech companies, cloud service providers, city planners, mobility and transport service providers, authorities as well as society. This unification can also lead to a broader societal shift in which mobility is reimagined. The vehicle links individual users, infrastructure and technical systems, and shifts its role from a "mere" private object to a public service provider.

How is this shift playing out across the industry?

Ayad/Schuster: Over the past few years autonomous driving has triggered a structural transformation across the automotive and mobility sectors and beyond. The focus has shifted from isolated pilot projects toward scalable, commercially viable applications, from robotaxis and other mobility-as-a-service platforms to goods delivery services such as hub-to-hub logistics (including autonomous trucks). This level of transformation can normally not be achieved by one player alone. It usually requires broad collaboration. This is why we are seeing increased consolidation and collaboration as well as a rise in strategic partnerships between OEMs, suppliers, AI start-ups or tech giants. Actors that may traditionally have operated in silos are joining forces, and yet their approaches vary: some players aim at gradually climbing the levels of driving automation, while others directly target full SAE level 4 capabilities; some focus on fully integrated, end-to-end solutions, others pursue open platforms compatible with multiple OEMs systems. Despite these different strategies, the development of interoperable, safe and trusted systems has become a shared goal.

How are legal frameworks affected by these developments?

Ayad/Schuster: In the past, the legal narrative focused on a "race" between countries to establish the necessary legal frameworks. This has shifted toward broader regulatory harmonization to avoid fragmentation and enable cross-border mobility. Lawmakers understand that it is no longer just about regulating technology. The legal framework must evolve alongside technology. Overregulation risks slowing down innovation. Regulations and standards (e.g., SAE J3016) must be flexible, holistic, and technology neutral, while still including clear definitions to provide legal certainty and safety. The complexity of multi-stakeholder involvement raises legal questions that existing homologation frameworks and authorities have not yet dealt with due to the traditional OEM-centric approach. Who holds responsibility in a multi-actor environment? What is the role of each actor in the value chain? In response to new and shifting responsibilities, new roles are being integrated into legal frameworks, such as technical supervisors or operators of autonomous vehicles.

What are legislators currently working on?

Ayad/Schuster: Legal frameworks for autonomous driving are evolving across jurisdictions – nationally, regionally and internationally – and increasingly in close cooperation to establish a globally harmonized framework. Germany, for example, was among the first to create a legal framework for the introduction of SAE level 4 vehicles on public roads. The United Kingdom recently introduced its own national set of regulations. Also, the European Union developed regulations for the small-series type-approval of automated driving systems (ADS) and is now working on its extension to unlimited series production, while in the United States there are efforts to introduce federal laws governing autonomous vehicles. In parallel, at the international level, United Nations Economic Commission for Europe experts are jointly working on harmonized type-approval regulations for ADS building on national legislative experiences and aiming at establishing common requirements across markets. A key challenge is how to address the industry's diverse technological approaches and collaboration models. Another challenge is the lack of harmonization across national traffic laws, even in the EU.

What does that mean for the consumer?

Ayad/Schuster: Autonomous vehicles promise real benefits: increased safety, greater accessibility and

more sustainable transport options. For consumers it can change the perception of vehicles, from simply owning a vehicle to using it as a service. But these benefits can only be realized when technology, industry objectives, infrastructure, consumer demands and expectations as well as the regulatory frameworks are effectively aligned. Such alignment builds the necessary trust for broad public acceptance.

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Spotlight on hydrogen

In conversation with Andrew Shaw, Partner and Firas Albani, Senior Associate.

Living Mobility is Sustainable. Hydrogen has the potential to be a sustainable fuel source that could be used in many transportation modes. The by-products of a hydrogen fuel cell are water and heat. The sustainability of hydrogen as a fuel source depends ultimately on how hydrogen is sourced. Andrew Shaw and Firas Albani discuss the promise of hydrogen as an enabler of sustainable mobility and the challenges for adoption of hydrogen as a clean fuel.

Featured speaker

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What role can hydrogen play in improving the sustainability of mobility and transportation?

Shaw/Albani: Hydrogen power is attractive because it offers potential to address sustainability through technology. Hydrogen can be a green alternative to fossil fuels. The chemical reaction of hydrogen with oxygen generates energy to power a vehicle, and the by-products are water and heat—no emission of CO2 or other greenhouse gases. Depending on how cleanly the hydrogen is produced and distributed to users, it could be a near zero-emission fuel source. Moreover, hydrogen is non-toxic and unburdened by the typical risks of environmental contamination associated with other energy sources.

What kinds of transportation applications does hydrogen have?

Shaw/Albani: Innovators are exploring any number of hydrogen applications for ground, air, and marine transportation. Hydrogen will not necessarily be an optimal solution for every use case, but active efforts exist to use hydrogen to power cars, buses, trucks, trains, airplanes, drones, ferries, shipping vessels, and more. Today, there already are hydrogen-powered cars, buses, and trucks on the road, along with hydrogen refueling stations, in various countries around the world—although still in relatively small numbers. Hydrogen-powered trains have already been running trials in Europe and are moving into regular commercial operation. Similar progress from demonstration to commercial deployment is occurring for marine vessels. Aviation manufacturers are working to retrofit existing aircraft with hydrogen powertrains as well as develop clean-sheet designs for new hydrogen propulsion aircraft.

What are the main challenges in moving toward adoption of hydrogen in transportation systems?

Shaw/Albani: Adopting hydrogen as a mainstream energy source for transportation faces a mix of commercial, legal, and technical challenges:

- Infrastructure Deficit: The lack of hydrogen refuelling stations is a key bottleneck. Unlike electric charging points, hydrogen stations require substantial upfront capital and compliance with stringent safety regulations. This deters private investment without public support.
- High Costs: Producing green hydrogen (as opposed to blue hydrogen) for hydrogen cars remains expensive. Until production scales up, hydrogen will struggle to compete with battery electric and fossil fuel alternatives on price.
- Regulatory Uncertainty: There is still no harmonised international framework governing hydrogen classification (e.g. green, blue, grey), carbon intensity thresholds, or cross-border trade. This causes risk for developers and investors.
- Vehicle Availability: Hydrogen fuel cell vehicles (FCEVs) remain relatively scarce compared to battery EVs. This is partly due to lack of demand, which itself stems from infrastructure and cost issues.
- Project Development and Financing: From a legal perspective, projects involving hydrogen for transport often face uncertainty over subsidy schemes, contract structuring (e.g. offtake and supply agreements), and risk allocation for nascent technology.

Overall, a mix of technological maturity, market incentives, clear regulatory frameworks, and collaborative investment is needed to move hydrogen transport from pilot to scale.

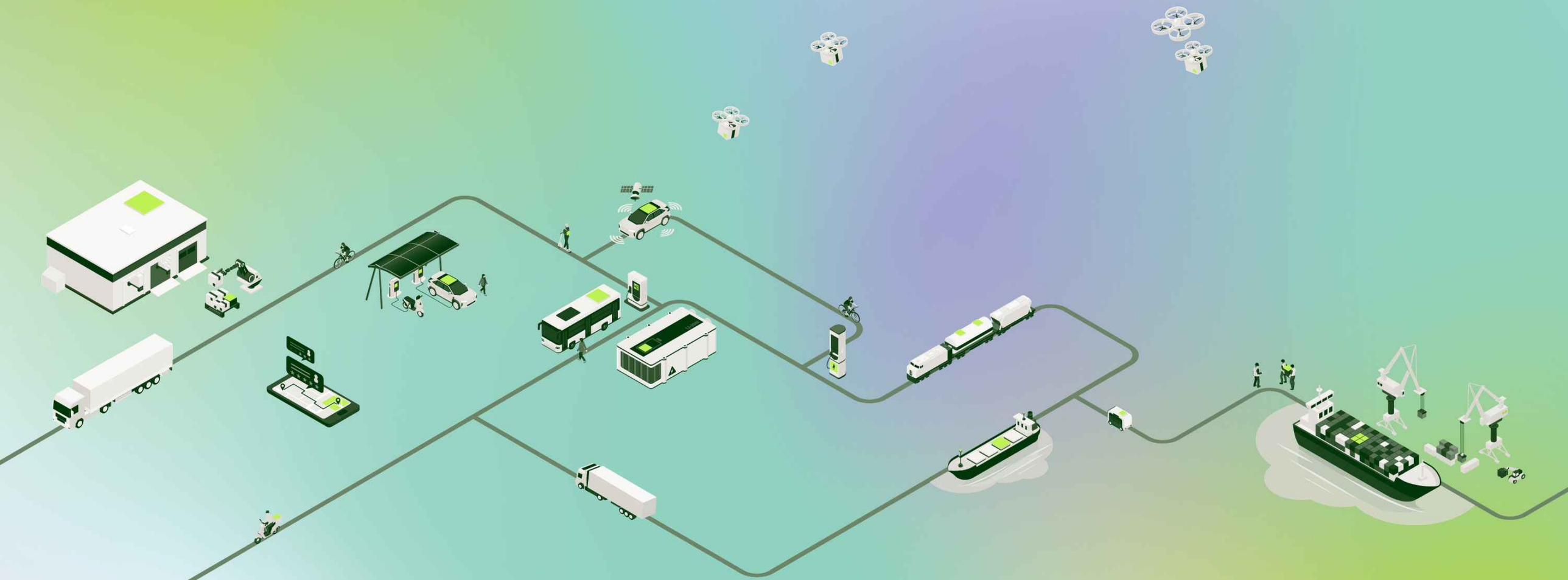
If hydrogen can be consumed cleanly, what concern is there with the sustainability of hydrogen as a fuel source?

Shaw/Albani: The concern for sustainability turns principally on how hydrogen is produced. Even though hydrogen is abundant, it does not typically exist in isolated, pure form. Rather, it is commonly a component element of water (H2O) or hydrocarbons such as methane (CH4). Some processing has to be done to extract hydrogen from water or hydrocarbons. For hydrogen as for other fuel sources, the extraction process factors significantly in the cleanliness of the supply. The extraction process itself requires significant energy input, and it leaves a by-product (oxygen from water, or a carbon compound from hydrocarbons). Ideally for environmental purposes, the precursor

would be water, the energy input to process it would be renewable or carbon-neutral, and the by-product would be oxygen. Development is ongoing to realize the goal of producing green hydrogen that is affordable at mass scale. One idea being explored is to produce hydrogen during periods when renewable power generation creates electricity supply that otherwise outstrips demand, taking excess energy for which the grid has no use and converting it, through electrolysis of water, into hydrogen as an energy store. That hydrogen could then be used as fuel for transportation or for shoring up the grid when electricity demand surges.

Apart from its environmental impact, what are advantages and disadvantages of hydrogen as a transportation fuel?

Shaw/Albani: Hydrogen not only can be clean, but also offers important practical advantages. Most focus on five major advantages of hydrogen. First, hydrogen is an abundant element with effectively unlimited availability. Second, a hydrogen fuel cell is perhaps two to three times more energy efficient than a fossil-fueled internal combustion engine, meaning that, pound-for-pound, hydrogen moves a vehicle farther than gasoline does. Third, re-fueling with hydrogen can be completed in minutes, faster than recharging a battery and potentially faster than refilling with fossil fuel. Fourth, a hydrogen fuel cell has no internal moving parts, so it can be more reliable and quieter than a conventional engine. Fifth, hydrogen delivers consistent performance as it gets depleted. These advantages must be weighed against disadvantages. Perhaps the most significant challenges relate to storage and movement through the supply chain. Hydrogen has to be stored under high pressure as a gas or at very low temperature as a liquid to reduce its volume to a manageable level, complicating its movement through the supply chain and its incorporation into vehicle designs, not to mention the obvious safety concerns given that it is a highly combustible and explosive substance. Successful commercialization of hydrogen-powered transportation will require finding applications and supply chains that affordably capitalize on hydrogen's benefits while overcoming its limitations and providing guarantees as to safety and reliability.



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