Rethinking Mobility

Why mobility innovation must love data and ecosystems
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Introduction

In times like these, where a traditionally successful industry faces new players entering from the sidelines, unexpected challenges in larger numbers than previously estimated, rapid urbanization at an overwhelming pace, and a growing need for new business models, the need for change is under discussion frequently – if not constantly.

As big words about the seismic business shift in the mobility sector get thrown around, new mobility concepts keep emerging all around us. But although companies are aware of their need to change and learn about new opportunities every day, they often lack concrete guidance, clarity on how to tackle this challenging situation, as well as examples and principles that they can really use to master this change.

In addition to this point-of-view paper, we have set up a dedicated mobility landing page that compiles and presents our thinking on what’s going on and needed in the sector today. Please take a look at futurice.com/mobility.

Get on this exciting ride together with us – we are looking forward to driving that change with you!

Feedback, comments, questions?
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At Futurice, our mobility experts have been working intensively on these major shifts, together with a variety of mobility players. In this point-of-view paper, we take you on a journey of inspiration – but also tangible actions. On the following pages, we will focus on both ecosystems and data, and discuss why mobility innovation needs to embrace both in order to stay relevant. We’ll also share examples and important steps to help you succeed.
The future of mobility – growing needs in a changing business landscape

Rapid urbanization is driving a growing demand for better mobility in general and urban mobility solutions in particular – but advances in this area are hampered by mobility providers’ past attempts to build their own proprietary ecosystems.

As a result of evolving user needs, urban mobility in today’s fast-growing cities is a sprawling patchwork of transportation services and methods.

One of the main driving forces behind the status quo has been the established public and private mobility providers’ desire to extend their offering with services that complement their traditional core offering. They’ve typically attempted to do this by creating their own proprietary ecosystems with the aim of extracting maximum value from their company assets in a digital economy while ignoring the bigger picture.

So far, this approach has failed to result in an efficient and usable urban mobility ecosystem. Services are often poorly integrated and hard to manage. In other words, they fail to meet user expectations and are often prohibitively costly to maintain. Challenges range from the number of players in a given market and the complexity of technically integrating their services, to official regulations and difficulties in finding business models that benefit all service providers.

68% of the world population will live in urban areas by 2050.

Source: “Revision of World Urbanization Prospects” (UN, 2018)

Evolving societal circumstances lead to evolving needs

People

Now: more congestion, comprehensive alternative mobility ecosystem, less long-distance driving.

Future: smart cities with minimal private vehicles.

Business

Shift towards the new mobility realities and the smart city blueprint.
The evolving role of traditional mobility players

The market is turbulent all over the world. In early 2020, car-sharing provider ShareNow made headlines with its decision to withdraw from a number of markets, including the US. With its constant influx of startup competition and high costs of fleet maintenance in major cities, the American market proved untenable.

Make no mistake, urban mobility is still transforming, only now with a focus on how and where companies can find their place and succeed in the wider ecosystem. Today, the most important questions address the roles between different service providers, most importantly, who is the orchestrator and who are the partners. These questions remain unanswered, and the playing field is still open to a degree – but for how long?

ShareNow’s recent decisions should not be seen as a retreat from the new urban mobility market or the sharing economy. Instead, they represent a welcome shift in the way carmakers understand their future role in urban mobility. Investments in tech such as digital keys – most prominently, the collaboration between BMW and Apple – speak of their trust in the continued growth of the sharing economy, and a desire to integrate the car into a larger mobility ecosystem. It also signals a willingness to let go of the idea of owning the mobility ecosystem as its orchestrator and instead become important enablers. This role will still offer them an opportunity to make the most out of the core assets within their traditional knowledge domains like sensors, collected mobility data, and the car as a device for additional service opportunities.

The data economy takes things beyond today’s sharing economy in the way it enables service providers to customize and personalize their offerings to each customer. All of this depends on the users’ willingness to share data.
How to design an urban mobility ecosystem that works

From entertainment to retail and finance, the digital economy has disrupted one sector after another. This has had a profound impact on customer expectations – people have grown to expect seamless services that offer them what they need when they need it.

New opportunities ahead

In order to understand and capitalize on new opportunities, companies must first understand the entire spectrum of customer expectations – from usage and contextual preferences to willingness-to-pay – and correctly interpret and analyze the data created by existing services and products. These insights are invaluable in helping mobility providers rethink their role in the industry, diversify their offering, compete with new players, and most importantly, leverage their core competencies and build the right partnerships.
Ecosystems in the urban mobility market

In an effort to stay relevant in the digital economy, mobility companies have approached ecosystem thinking in a variety of ways – from creating their own ecosystems to augmenting existing products with new services or coupling together individual, existing services.

Building a new ecosystem – or simply a service for an existing one – requires a multidisciplinary approach. From the very first idea to scaling the offering, it is crucial to have a clear understanding of the ecosystem’s wider strategy and the problem it is trying to solve. These should be seen as core guiding factors throughout the service creation process.

Ecosystem design also features a layer of complexity that stems from interactions between multiple services: Extensive and complex needs that can no longer be addressed by one specific service require a seamlessly integrated ecosystem, which involves multiple stakeholders working together. That’s when elements like single sign-on, common user experience, consistent branding and design language, or comparability become increasingly relevant.

To navigate through this process, mobility companies could benefit from the help of external consulting agencies that can act in an advisory or mediating capacity. There are two commonly used approaches to ecosystem building:

1. From opportunity to ecosystem, where one or more actors identify an opportunity to innovate and create an ecosystem, and build an offering to meet the need. After identifying a potential opportunity area, the next step is to evaluate it:

   How big of a challenge are we talking about, and what is the best way to address it? Is it large and complex enough to warrant its own ecosystem instead of a standalone service? Are we solving a specific phase within a larger customer journey, or something bigger?

   Are other existing ecosystems connected to the same problem with a low enough barrier to entry? Would it make sense to join an existing ecosystem?

   If the problem is sufficiently complex and requires an ecosystem to fulfill the need, it is necessary to consider what kind of ecosystem would make the most sense, and whether it will be attractive enough to support sustainable growth.

   If it becomes apparent that the opportunity can instead be addressed by a single mobility service, it’s important to build one that is intelligent and flexible enough to be integrated into an existing or even a future mobility ecosystem.

2. From services to ecosystem, where one or more actors bring together somewhat rounded but fragmented existing service offerings together to form a new ecosystem. Various mobility providers have already built up portfolios of individual services that cover specific needs. Various OEMs, for example, have a number of solutions that extend its core automotive offering with car-sharing or parking aggregation.

   Introducing a set of separate standalone services into an ecosystem can be a huge challenge, but so is the payoff – both for the service provider and the user. Seamless integration will provide a better user experience for customers, but also grows the user base of each individual service, which helps attain a solid foothold in the market.

Example

In urban mobility, new micro-mobility solutions have recently emerged to tackle the “last mile problem” and help people cover short distances in our cities, e.g. from public transportation to the final destination. Most of these solutions have come from all-new mobility startups like Tier or DonkeyRepublic.

After initial skepticism, they are becoming more and more integrated into the digital offering of public transportation providers – but at the same time, their offerings are very similar and the micro-mobility market is overcrowded. The companies most likely to succeed are the ones that are betting on strong partnerships and ecosystem integration.
Individually created services are rarely ready for ecosystem use as-is. Building a proprietary ecosystem is an expensive and risky undertaking to begin with, but integration can also be costly, both from a technical and a legal standpoint. Carefully weighing the associated costs and opportunities is extremely important. It may well be that integrating an existing digital service portfolio – whether partially or in its entirety – into an existing ecosystem is what will provide the best reach and chance for success.

The success of partnerships is also dependent on brand value alignment and having a common customer base. For companies that offer premium services for a specific group, other players in the same ecosystem need to share your interest in the same target audience and understand its needs.

Different end-user needs and design choices will result in different types of outcomes. The following presents a broad overview of the different types of ecosystems – and their individual benefits and drawbacks – in the urban mobility context.

**Aggregator ecosystem**
- A transactional ecosystem where an aggregator combines various existing mobility offerings into one application or service to meet known market demands
- Typically, the aggregator receives a fixed or prorated fee from the partners for giving them access to a wide user base
- Can offer a large portfolio without much effort, but has limited control over quality
- Success is dependent on network effects, breadth of offering, level of integration and ease of use
- Examples: Whim, Urbi

**Innovator ecosystem**
- The ecosystem owner provides an environment and platform for third-party mobility service development
- Can offer access to smaller entities, but liable to have trouble scaling
- Quality, access and completeness of offering are ensured by the owner
- Example: Berlin CityLab

**Orchestrator ecosystem**
- The ecosystem owner determines the strategy and services in the ecosystem portfolio, typically under its own brand, with operational partners in the background
- Boundaries of the offering are clearly defined and solutions completely integrated with a streamlined user experience
- A strong orchestrator can offer consistent quality, but at a higher cost and limited growth potential
- Examples: ShareNow, FreeNow, Uber, Grab

All ecosystem types are dependent on network effects. To succeed, a network has to be big enough to attract both service providers and users, and the business attractiveness needs to support sustainable growth with break-even potential.

**Types of ecosystem partners**
The power of an ecosystem comes from its collaborating partners, such as:

- **Business entities**
  Companies, service providers

- **Infrastructure owners**
  Cities, network providers

- **Public sector & NGO stakeholders**
  Governments, legislators, international bodies and associations, research institutions, universities, nonprofits
Designing resilient mobility ecosystems – the checklist

When designing an ecosystem – or services for one – it is easy to lose focus and get sidetracked. Attempts by mobility providers that the world has seen so far haven’t been perfect, and they often tend to repeat certain fundamental problems. In order to prevent that from happening, we’ve tailored this checklist for companies working on creating mobility ecosystems.

**User-centricity**
Focus on end-user needs and convenience rather than assets, equipment or data. The average person wants a comprehensive mobility offering that is easy to access, use, and pay for – these needs are the foundation of customer value creation in mobility. If all participating partners are properly aligned on this, the ecosystem will be able to offer an enriched, seamless and convenient experience. The ability to iterate, get rid of redundant legacy functionalities, and adapt to change is also important.

**Value creation and attractiveness**
A successful ecosystem attracts both partners and customers by offering a clear value proposition and benefits to each. For partners, these may include new value creation and revenue stream opportunities, access to a wide customer base interested in the integrated offering, service offering reciprocity between partners, lower risk and reduced investments as well as data and expertise sharing to improve services. In order for the ecosystem to prosper and grow, the cost structure must be sustainable.

**Openness and collaboration**
An ecosystem that enables collaboration is likely to result in a better service for the end-user and, consequently, larger profits for partners. Openness and networking within an ecosystem enable stronger, mutually beneficial partnerships and revenue generation opportunities, and thus increase the ecosystem’s business attractiveness. Active collaboration between a versatile selection of partners also helps them reach a wide user base with lower investment and risk. But as ecosystems grow, orchestrators will face higher management costs and risks. To prevent sprawl, it is important to also set clear boundaries and stay within them.

**Data utilization**
Having managed access to data is vital for spotting, understanding and predicting use patterns, customer needs, tech trends and emerging business opportunities. Exchanging knowledge between ecosystem members – in a controlled and consent-based way – is an equally important way to augment existing data, and create a symbiotic relationship between the ecosystem and its end-users.

**Adaptability and modularity**
Ecosystems exist in an environment characterized by constant technological advances, evolving customer expectations and potentially disruptive business opportunities. Designing in the ability to adapt to these changes makes them more resilient and successful. A modular structure, with elements that are easy to arrange and assemble further contributes to this cause.

Rethinking Mobility
A changing mobility landscape – Views from the industry

Interviews with Valentin Jahn (CAR2AD) and Dr. Martin Vetter (TÜV SÜD)

It is not about creating the next new hyped means of transport, but about really understanding what your user needs.

Valentin Jahn, CEO at CAR2AD

Looking at urban mobility, what are the biggest trends and needs you are observing?

If we are looking at the current mobility landscape, we are facing two big developments: an increasing variety of transport modes on one hand and the Corona situation resulting in a shrinking use of public transport on the other hand. Especially looking at the second, it is now more than ever key to closely look at how to prevent a renaissance of MIV (motorized individual traffic) in cities. Therefore, I feel like it is an absolute necessity to look at the actual needs of the users, not just developing the next brand-new means of transport. We need to understand the reasons why a user is traveling, which criteria support the decision for a specific means of transport or how one simply wants to reach a certain destination.
Where do you personally see the biggest opportunities around urban mobility?

Looking at urban mobility, I see the biggest opportunity in the urban space itself. Our urban way of moving is highly connected to our living and recovering space, our gardening and working space. We discover a lot of spaces and opportunities that are currently unused. A lot of urban space is currently used, but not really in a thought-through manner. For example, a lot of cities don’t even know how many parking spaces they have, what their size is or how frequented they are. We experience a lack of parking spaces while we actually have a very evolved network of urban transport with free capacities. I think that thoroughly understanding these intermodal connections and the actual user needs will provide a big bucket of new opportunities.

How do you experience customer needs in the changing landscape of urban mobility?

Based on our everyday experiences, we more and more experience customers looking for seamless solutions and value propositions that are integrated in our daily, individual routines. This applies to commercial and business customers alike. And it especially applies to digital natives. Besides that, we see how events like the Covid-19 pandemic suddenly change urban mobility but also the responsiveness to digital solutions. So for example, the demand for (e)bikes has strongly increased and mobility patterns have already been affected.

Urban mobility is tightly connected to data – how can we ensure a secure and trustworthy use of data?

First of all, we need to ensure trustworthy data along all kinds of processes, stretching from the generation of data in autonomous vehicles to the use of data for example as secondary usages. Data integrity needs to be guaranteed and data access should be free of possible discrimination. This also includes access right management and transparency of who is dealing with what kind of data. Ecosystems will create compelling new, data-driven value propositions to individuals. But the handling of data, data streams, data processing, data storage and data access must be transparent, free of discrimination, trustworthy and in relevant areas even certified.

The shared urban mobility offering needs to be seamless for the user to drive acceptance on a large scale, avoid cannibalization of public transport and reduce traffic in urban areas or keep it at least constant in times of global urbanization.
Building trust and creating value – how to use data in mobility ecosystems

As consumer priorities shift in the mobility market, car manufacturers and other mobility providers are entering uncharted territory. To come out on top, they will need to master ecosystem thinking, but also understand the role of data, and pay attention to building trust and creating customer value.

Consumer priorities are moving from a focus on perfection in driving experience towards an overall optimized mobility experience. Unfortunately, this change is not something that automotive companies can address simply by offering a balanced and comprehensive model range. These days, aspects like digital, convenience and sustainability are prioritized over the traditional performance values we used to find in the car comparison card games as kids.

Compelling mobility services as we understand them today are created with much more than just cars. They extend beyond the physical world and encompass a variety of digital and data-enabled features – from POI recommendations to payments and bookings and third-party integration – that tie everything together, and integrate it into cohesive digital services. Data is the most important part of this equation – and harnessing it may cause some grey hairs for car manufacturers, as it requires insight and skill sets that many of them have not previously had.

The shifting market

Urbanization, sustainability, and the sharing economy are indicators of shifting customer needs that have to be addressed. This applies to car manufacturers, too, as the mobility journey keeps evolving and extending beyond car ownership. Today, fewer and fewer people in Europe and the US get a driver’s license. At the same time, the sharing economy has already found its way into the mobility domain with new on-demand and peer-to-peer mechanisms that are considered viable alternatives to car ownership and “professional” taxi drivers. Predictions suggest that by 2025, the mobility market will have fewer incumbents and an estimated value of $335 billion.

The use of data and its rapid growth will be central factors in market shifts like these – especially in the autonomous future, where sensors and systems of a self-propelled car may end up generating as much as 4 terabytes’ worth of data every day.
The role of data has shifted from asset-focused and engineer-driven to “humanized data”. When both vehicles and their drivers are connected to all their surroundings, the value of data extends beyond mobility.

Previously, the data generated by cars was used to create the perfect car experience. Today, we utilize it to build the best mobility experience. As cars become more and more connected, their data may eventually serve as one component in creating a better overall life experience, alongside many other data sources. But in order to do so, we need to first understand data and how we can leverage it in more ways, both individually and together with trusted partners.

For companies investing in the mobility industry, attempting to own their customers’ end-to-end mobility journey is typically not an efficient use of their time and effort. Instead, they should focus on playing to their individual core strengths and building and positioning their own brand in the field, while establishing smart partnerships with companies that represent similar values and target demographics, and a customer experience to complete your offering and enter different levels of their customers’ lives. The beauty of partnerships is that they can be established across and between sectors that haven’t necessarily meshed well previously.

As companies commit to being true ecosystem players, it is up to them to decide how far they want to go in being part of their customers’ ecosystem. Each level comes with its own possibilities and challenges.
As cars themselves become platforms for services, mobility companies may find themselves teaming up with retail, health or media companies in addition to their usual energy, travel or finance partners. This allows everybody to reach and conquer their target segments on a wider scale – as long as the partners are on the same level in terms of the quality of their service and offering.

Companies have several choices when selecting their strategic approach with data, what goals they want to pursue with it, and how to use it to reach their desired ecosystem position. These choices will affect which areas of the experience economy they will operate in.

Traditionally, the automotive industry has had a very straightforward value chain and value drivers – you’d offer your product or solution to a customer that paid for it. But utilizing data will bring a whole new set of customers and revenue models within reach, and enable asset-focused and engineering-driven companies to shift towards becoming driven by “humanized” data. It is estimated that by 2030, around 20% of the automotive industry’s profit potential will come from data-driven services.

This means all car manufacturers will eventually need to switch from a purely product-based mindset and direct revenues over to a hybrid mix of digital and physical services, and both direct and indirect revenues, both from upstream and downstream in the value chain, as illustrated in the accompanying graphic. The shift will involve multi-sided revenue models based on components such as subscriptions and rentals, licensing, certifications, and advertising – to mention just a few.

With a holistic mix of digital and physical services, it’s possible to create personalized experiences that meet unique user needs and utilize physical portfolios optimally, in beneficial ways. This could mean enabling onboard systems for all kinds of changing usage and sharing scenarios by default, or allowing third parties to complement the digital offering through APIs or projects like the Open Smart City APIs.

Trust breeds data, data creates value, value reinforces trust

Even as the market landscape evolves into new directions, traditional automotive OEMs will have a clear trust advantage that will help them solidify their position. Consumers already trust their engineering enough to feel confident that their products will function safely at high speeds. If they manage to extend that trust to the way they use their customers’ data and demonstrate that they can create additional tangible customer value, people are likely to keep favoring their services, and also feel comfortable sharing more.

And the cycle goes on: that added customer value breeds more trust. As interactive personal assistants or search engines have shown us, if the value they offer is tangible and evident enough, users tend to become less anxious. When people have established a certain level of trust in your service, they are willing to share more.

The new data ecosystem adds new potential to basic revenue models. Data enables a combination of multiple revenue streams and allows companies to address more customers with the same or a slightly optimized offering.
Data economy’s virtuous cycle

The reason why trust is such a crucial factor in any data-based service ecosystem

Trust provides the basis for everything. And if lost, it is very difficult to regain.

#1

Maximise the value of collected data – for your customers and company.

HOW to create highest value with customer data?
1. Identify the right customers and their specific desires
2. Match customer value and business value
3. Build - Measure - Learn

WHY does it matter?
You’re measured against the value you provide. It’s the customer’s perceived value that counts.

Example from our work
PHEV study revealed that OEM was selling the wrong product to the wrong kind of customer. Adapted the targeting and offering combination.

#2

Gain trust and loyalty by showing the value of sharing data.

HOW to gain customer trust and loyalty?
1. Identify “Trust Triggers” in your customer journeys
2. Measure your “Trust Battery” constantly
3. Formulate data handling processes to prioritise trust

WHY does it matter?
In a world full of complexity and uncertainty, trust becomes ever more important.

Example from our work
An investigation in usage-based insurance showed that requesting location data from users resulted in an immediate decrease in trust.

#3

Protect your data assets.

HOW do we get continuous access to customer data?
1. Identify and secure business critical touchpoints
2. Measure data maturity of touchpoints
3. Improve data collection of touchpoints

WHY does it matter?
“The biggest threat today is to lose your market share of mind.” – The Economist

Example from our work
While exploring opportunities for an automotive OEM in the smart home context, we build a personal data assistant that is a crucial brand touchpoint in homes and only after this in-car. IPAs only work in multi-environment ecosystems.
But in order to use data to create more customer value, the automotive industry will first have to learn how to understand and use it to solve problems before they emerge – much like a traffic prediction model that helps guide decision-making.

In business contexts, data is often described as the new oil. But, to use a car analogy, the way data is typically used today has more in common with exhaust fumes – a mere by-product of doing business, rather than something that fuels it or makes it run smoother. In any sustainable data-powered business, customer value should always be the driving force. And once customers have been assured of your value proposition, data can become both the input and output of services – the fuel and emissions at the same time.

A network of trusted partners

As more companies come into possession of data, they have to ask themselves how to balance maximizing the use of data on the one hand, and their customers’ trust on the other. In the era of the personal data economy, trust is paramount, and as more data gets collected, this will only become more pronounced.

Even after all the recent tumult and scandals in the car industry, people tend to trust established mobility companies more than startups. A key factor in this is that customers tend to see cars as well-engineered and secure products, and something it is possible to physically interact with. This reputation can be leveraged to forge new partnerships and business models with other established brands to create innovative, trusted ecosystems.

Connecting the dots: trust, value and wider goals

Successfully monetizing data within sustainable networks of trusted partners is not the whole picture. Careful brand positioning is crucial. A complete data strategy should clearly indicate and reflect who and what exactly a mobility company wants to be. Trust and value creation are the guiding factors behind different data strategies, and as the matrix shows, companies can fall into one of many categories. Mobility companies should plan their desired position carefully and weigh the relative advantages and disadvantages before making a decision.

Once a data strategy has been set and the connection between trust, data and value is understood, it’s time to start dealing with data and change more proactively. Starting with the least delicate or politically difficult topic is the smart thing to do, as it helps make success visible, easily shareable, and can create the necessary trust and guidance within the organization to proceed further.

The most important consideration in any data strategy is clear value created for the customer. To maximize the value and benefit of data use for all parties, come up with a data value chain: Ask why, understand the how, and decide on the what, based on hard data. And finally, always take data protection seriously.

In order to get started, the first step in every part of the value chain should be to take a moment to reflect on these questions:

- How do we establish a deep enough trust with our customers and become a partner they feel comfortable sharing their data with?
- How can we use our resources to create new services that provide value?
- How can we meet each customer’s individual mobility need?
- How can we establish a deep enough trust with our customers and become a partner they feel comfortable sharing their data with?

Monetizing data

There are several different approaches to monetizing customer data in a responsible and sustainable manner – from improving business processes and augmenting services to selling it both up and down the value chain.

We highly recommend taking a look at a separate article by Mika Ruokonen that takes a closer look at this topic, complete with with real-life cases, on the Futurice blog

Leveraging the power of trust and data in urban mobility

Some of the most far-reaching changes in any business sector today are happening in the mobility landscape. Luckily, it’s not the first sector to get disrupted. Certain things are likely to play out similarly to other sectors – and companies can leverage this to carve out competitive advantage.

In the age of the digital revolution, new business models and solutions – powered by a combination of digital services and connected physical products – can appear virtually overnight and spread at an incredible pace, often profiting from network effects.

At the same time, new ideas can get copied equally quickly due to low entry barriers as well as business models that are trivially easy to imitate – consider electric scooters – or disrupt due to a weak linkage between the customer and services or products.

For anyone aiming to come out on top, the new status quo calls for better experiments that help companies identify where their core strengths and weaknesses lie relative to the value they create for the customers and the kind of customer relationship they are pursuing. These experiments also allow new ideas to be tested for their uniqueness and ease-to-copy by asking a series of questions investigating how sustainable an advantage is.

Experimenting to extend your own domain

As discussed in the previous chapter, in a world where no one will ever control the entire customer journey, companies are better off teaming up and building smart partnerships and ecosystems. The users won’t stop where your offering stops – if you are unable to meet their needs, they’ll simply look elsewhere. Understanding those needs, as well as your customers’ behavior before and after the touchpoints where you interact directly with them, depends on the ability to share and analyze anonymized user data within the ecosystem.

The users won’t stop where your offering stops

The more multi-modal our partnerships become, the more (and higher quality!) data we will generate – and this enables us to fulfill not only vertical, but also horizontal user needs. Uncovering patterns and predicting behaviors allows you and your partners to continuously adapt your offering and optimize value creation throughout the value chain.

Building data-enabled ecosystems is a matter of scale with far-reaching consequences. Minor tweaks to your service alone may result in incremental improvements in your offering and marginal gains in your customer relationship. But there’s more to be done with the latent data collected by public and private mobility services.

At the moment, there isn’t much exchange between different providers, and consequently, only very limited added value to the individual user, resulting in a very low utility for the users who choose to share their data. Companies are missing out on a huge opportunity to improve the quality of mobility and its value proposition, and failing to show users how their contribution of data helps make travelling better for them.

As digital literacy and awareness of the true value of data increase, expectations grow as well. If the benefits of sharing are not made completely obvious and evident to the average customer, we risk moving into a direction where asking users to share their data will be met with growing skepticism and friction.
It’s not about who can collect the most data

Collecting data comes with a considerable fallacy. As described by Andrei Hagiu and Julian Wright in their article on data creating a competitive advantage, many companies directly link the collection of data to network effects, assuming that the only way to succeed requires a very large amount of data to create a competitive edge. But not every company has the possibility to create a product that relies on network effects.

Until very recently, getting customer insights has been an arduous process that requires extensive customer research using focus groups, surveys and other labor-intensive research tools. Especially automotive OEMs have had a hard time getting direct customer insights and optimizing their products accordingly, due largely to their distance to customers with national sales organizations and dealers in the middle.

Recent developments in technology and communication, such as cloud or edge computing, fast wireless networks and increased processing power, have changed this. Today, even car manufacturers and their supplier network can collect usage data directly and gain a more comprehensive understanding of their customers. The ability to interact with their customers more directly helps companies demonstrate the value of their data sharing and build a trusting relationship, and that, in turn, can help them develop an advantage over their competitors.

It is now easier than ever to analyze how products built on data impact the way we use our means of transport – through real-time traffic information, vehicle-to-everything connections, crowdsourced data, optimized charging, or sharing platforms. Companies like Mobileye, a driving assistance systems provider, need a huge amount of data used to optimize products for the customer. The more high-quality data they have access to, the safer their product becomes, and each incremental improvement in safety benefits every user.

It should be perfectly clear, then, that the companies with the most significant competitive advantage aren’t ones that collect the most data but the ones that use it best. After all, if your choice affects the safety of your children, who wants the second best system?

It should also go without saying that appropriate use of data includes taking every necessary step and precaution to keep it safe. Nothing is as efficient at undoing every last bit of trust between your customer and your company as losing or misusing data. And as trust disintegrates and users flock out of your platform with their data in tow, you’ll also lose any competitive advantage that trust may have gained you.

Bridging the gap without direct access to consumers

Of course, not everybody has direct customer contact or the ability to provide direct value for shared data. This includes companies like Urban Engines, which uses real-time consumer travel data to help public transit agencies visualize, analyze and improve public transit network performance.

For such companies, it is crucial to clearly communicate the bigger picture of how they use data, and send the message that their offered value makes everybody profit in the long run. Their ultimate goal is not to provide direct value to the individual customer, but improve the offering as a whole. By proxy, the utility for the end-user is less direct and the advantage comes through the mass of data as well as the precision of their predictions, tools and algorithms.

In these cases, it is not so much a question of whether your predictions are better at improving individual cases by one percent or two – it is much more about how you are able to use the real-time and historic data to improve the experience as a whole, maybe by 10 or 25 percent.

Why predictive analytics – and the right kind of data – matter

As new services are launched into the market, a legitimate (or perceived) lack of regulation, or confusion about their supporting infrastructure or complementary role within the mobility ecosystem may emerge and spark public controversy. In the worst case, this may result in bans and prohibition, similar to what has happened with many sharing services like electric scooters, ride-hailing or city bikes.
Situations like these can be avoided by taking the time to predict usage and behavior beforehand. Having an idea of details like whether a new service will in fact replace foot traffic or trips by car will help ensure that it will live in a symbiotic relationship with other forms of mobility services.

That said, when working with analytics, it is crucial to ensure that you act on data that is still relevant and valid. If you keep recommending your customer a route with a public transit connection based on outdated incidental data, and another provider is able to offer real-time data instead, you will probably end up losing this customer because your service provides less value. Speed and precision are key here.

Having access to real-time data is much less of a concern when the focus is on improving infrastructure. In these cases, the optimal outcome is more dependent on being able to make the right decisions based on all the available data. Much akin to search engines, this requires a lot of historical data, and the more high-quality data you have and are able to use to create value, the higher your competitive advantage.

New urban intelligence platforms like Placemeter try to combine these two aspects, aggregating all kinds of data from videos and a wealth of different platforms to optimize smart mobility solutions, streamline traffic flows, improve pedestrian crossings, or assess the safety of intersections.

Unique data is the best protection against copycats

The last important aspect is the ease to copy, collect or reconstruct the user data that you need in order to offer your service. If your data is very easy to collect, or maybe even openly available – e.g. from a public mobility provider – and you simply use it to show departure times or give route recommendations, your advantage may be quite small.

On the other hand, if you collect data through your own hardware or ecosystem and come up with a way to use it to create value for your users, it is typically much harder to copy. This, in turn, creates higher entry barriers into your market.

A trusted ride-hailing company likely knows exactly where and when the demand hits its peaks and can use that information to ensure rides are available at a moment’s notice when the time is right. In the era of data-enabled mobility services, using data to scale your ability to respond to micro-level changes in customer needs like this is one of the cornerstones of value creation.

Time to act: Get the data game started sooner rather than later

Regardless of where you are on the path of establishing trust with your customers to generate data, and leveraging that trust to create a competitive edge, it is important to get started and keep thinking a couple of steps ahead.

Seven out of the ten most valuable companies in the world today have built their business around data. Several new companies in the ride-hailing and micro-mobility domain have also already established solid data strategies and platforms, and built entire business models around data.

For traditional organizations, this is wake-up call to start integrating existing portfolios and developing new intelligent services, partnerships and ecosystems. It’s a sink or swim scenario: Only those who know their customers well enough and offer them the right mix between convenience, safety, equity, sustainability, flexibility, effectiveness and connectivity, will be able to build a service that is difficult enough to copy.

There is no single correct answer to utilizing the trust of your users to create more value and gain a competitive advantage for your company. There are various aspects to consider, but in order to maximize your chances for success, you will need to understand your own goal for using data, as well as who you are improving your product or service for, and in what context and time frame.

You don’t have to own the game to win the race.

To maximize your chances for success, you will need to understand your own goal for using data.
Three steps to creating trust and value with a data-based service

The virtuous cycle of trust, value and data doesn’t simply happen by chance – it is the outcome of systematic work that takes time, effort, and determination. To make it as easy as possible to get started, we have mapped out three key steps to help companies figure out which areas to focus on, and how.

Step #1
- Identify your most data-savvy customers and create personas around their psychographics
- Create data-savvy customer panel; a test group for exploration and validation of data-based ideas
- Rigorously run all data-based services and offers through this panel in customer value sprints
- Share resulting data-usage insights with all interested/relevant parties

Step #2
- Drive a shift from data lock-in to data love-in
- Explore opportunities to become the best data custodian for its customers, leveraging the brand
- Run a customer data sprint to look at services and offerings from an unbiased data perspective
- Make silo-busting your problem, not the customer’s
- Predict what customers want before they ask for it (like Ikea or Amazon) – then prototype and validate it
- Define what a seamless brand experience means beyond the car

Step #3
- Visualize how data flows securely and trusted through your ecosystem (and into adjacent ecosystems)
- Ensure data accountability in partnerships
- Create high value, premium partnerships
- Identify and measure the real value of customer data – direct and indirect, short-term and long-term
- Create clear data-value-chains: “with data x we will generate customer value y and business value z”
- Collect and store only what is needed to provide value
- Connect legal teams to development work BEFORE most of the work is done by engineers, designers, devs...
- Establish a premium standard of privacy in the data economy
- If a data project cannot show (future) customer value: don’t do it!
Rethinking mobility

If there’s one point we hope to have successfully communicated with this point-of-view paper, it’s the fact that the very heart of urban mobility is evolving. In order to drive that change, the mobility sector needs innovation that embraces data and ecosystems. Our mobility landing page compiles our thinking on what the sector is going through and how it should navigate all the changes.

Artificial intelligence in business is not (just) about automation but unprecedented connectivity within organizations. With the help of AI, it is possible to make visible and even shape internal social networks, and turn them into better performance and innovativeness. Innovating new solutions and services is the kind of work that a connected company does better.

Three steps to extracting business value from AI

AI has been a hot topic for a while now – in the press, in academia, and also inside corporate boardrooms and corner offices. But so far, the discussion has been dominated by technical and societal perspectives. It’s time for the commercial dimension to take a stronger role in the conversation, and focus on how to extract business value from AI.

Recommended reading

The connected company rises along with data and AI

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Contact us

An exciting journey is ahead of us - we are very excited to drive that change together with you. Drop us a note, give us a call or let’s have a coffee together to discuss what the future of mobility holds for us. We are happy to hear from you!

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Futurice is an international digital innovation company that helps organizations transform their business by bringing together complex software engineering and beautiful human-centered design. We unleash a culture of innovation and create digital products and services that help you become future capable. Since 2000, we have helped our clients develop their business practices, ways of working and culture to meet the challenges of digital disruption - in industries ranging from energy, retail and construction to media, finance and automotive. We are a community of more than 650 people with offices in Berlin, Helsinki, London, Munich, Oslo, Stockholm, Stuttgart and Tampere.

www.futurice.com/mobility

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