Mind the Gap – closing the gap between multimodal theory and reality

The integration, extension and augmentation of personal and public transportation based on integrated digital platforms - is inevitable

IN 30 SECONDS

- Multi-modal transportation has yet to mature because of issues around data, unclear and immature ROI and lack of co-operation between stakeholders
- The main challenge for transportation organizations is a cultural change: How to move from a traditional engineer – build – operate model and towards a collaborative and agile test-and-learn model
- Agile approaches are needed both to quickly confirm which services make sense, for which customers at what cost; and to bridge the gap between “old” transport engineers and digital natives (millennials)
- Both IT/Internet companies and traditional operators have to conquer any fears and seize the opportunity by adopting agile innovation approaches designed for the future, not the past.

Mind the gaps: connecting theory and reality of multi-modal transport system

Do authorities, Internet companies and Transport Operators want to integrate their data and end-to-end travel services?

85% of respondents believed that international and inter-modal end-to-end travel chains including booking and payment will be possible in the next five years

75% believed that multi-modal mobility platforms will generate more passenger kilometers for railways and public transport service providers

75% believed that big public, national or international transport providers have no interest or are not legitimate to operate multimodal mobility platforms

85% of participants stated that solid integrated payment solutions between platform participants are a critical success factor for the entire business model

OPERATIONAL OBSTACLES

Data standardization
Transport Operators more than IT/Internet companies fear missing data availability from stakeholders of other industries as a major concern

Cooperation models
Integration between Transport Operators and IT/Internet companies is vital so that authorities and industry working groups develop key partnerships

Source: BearingPoint Institute
In November 2016, BearingPoint launched a study to understand the multimodal world, to identify key market dynamics and to propose recommendations on implementing mobility services platforms: 59 operators and other stakeholders from nine European countries - as well as Japan and the USA - participated in the study, representing railway, technology, public transport, government, car sharing, associations, science and bicycle.

The topline finding was confirmation of the need for multimodal platforms, their function and resulting business models. According to respondents:

- 85 per cent believed that international and intermodal end-to-end travel chains, including booking and payment, will become possible in the next five years
- 75 per cent believed that multimodal mobility platforms will generate more passenger kilometers for railroad and public transport service providers
- 75 per cent believed that big public, national or international, transport providers have no interest or are not legitimate to operate multimodal mobility platforms

Overall, respondents regarded the mobility platform business as worthwhile, including public transport, which sees the opportunity to grow usage as greater than the risk of “cannibalization”. One respondent commented, “Increasing the market share of railroad companies would be possible only by taking into account their integration with other modes. The core question to be addressed is more modal integration than modal shift.”

Transport operators expect competition from digital players, as a logical consequence of their role of approaching mobility issues and anticipating customer needs. However, 85% of respondents also noted that the expansion of the company’s own offer with additional mobility platform business is challenging.
Introduction – the multimodal (lack of) power play

George Bradshaw, creator of the world’s first railroad timetable catalogue, found inspiration from mapping out the complexities of the train and canal systems criss-crossing his native Britain. First published on October 19, 1839, Bradshaw’s Guides expanded across Europe and as far as India and Australia. “Seldom has the gigantic intellect of man been employed upon a work of greater utility,” stated the magazine, Punch, in 1865.

In these digitally enabled times, we need - once again - a shared data resource for public transportation. The landscape is more complex: we have aircraft, buses, trams and automobiles alongside trains and waterways, as well as a highly technology-aware customer base. The challenge and opportunity remains the same, however: by harnessing the complex pools of data involved, stakeholder organizations can ease passenger journeys while delivering new services.

Our increasingly metropolitan lifestyles create significant impetus for multimodal transportation. “More people live in cities and new transport solutions are easier to implement in cities,” explains David van Oertzen, Head of Technology at Daimler subsidiary, moovel. Meanwhile, longer distance journeys can constitute thousands of miles and also depend on multiple forms of transport.

Public transport operators have integrated digital services such as timetabling and ticketing since the 1990s, but the scope remains limited geographically, or is functionally constrained to planning/booking tickets. No current mobility platform covers all transport modes, regions and countries, which is a source of frustration to all parties. “I am convinced by the theory, but we are not there in practice,” says Matthias Hüske, CDO at operator DB Vertriebs GmbH.

The ultimate goal – to make multimodal transport as convenient and connected as personal transport – remains hampered by legacy constraints. “It is a digital thing to orchestrate how people get from point A to point B, to make all other forms of transport equivalent to a car journey. It’s a pain to organize those trips,” remarks Michael Peterson, Marketing Executive at Deutsche Bahn Long Distance. So what is preventing this from happening and how can players maximize the chances of success in this complex market space?

‘At a fundamental level, trust is based on independence. Platform operators should be seen as ‘operator agnostic’. If there is a suspicion that the platform has a bias towards one operator’s services, the platform will not succeed.’ – LAURENT KOCHER, EXECUTIVE DIRECTOR MARKETING, INNOVATION AND SERVICES AT KEOLIS
What is holding organizations back from a multimodal future?

Let’s look at what is driving the gap between theory and reality. More than 85% of respondents recognize that extending business-as-usual into the new mobility platform business can be a challenge; so, what is getting in the way of the vision? If we look at the survey results (Figure 1), we can see inertia caused by data management, business models and more general cooperation.

Issues around data security, integration and management

Many top concerns are data-related: 93% of respondents saw a lack of data standardization as an obstacle: “Without common standards for data flows, we are creating barriers to innovation,” says Dr. Libor Lochman, Chairman of the Community of European Railways (CER). This is followed closely by data security and by a shortage of data coming from the same industry. Lack of data integration results in passenger pain, recounts Roland Werner, Head of Government Affairs and Policy at Uber Germany, from personal experience: “On a recent train journey, on the last five miles it was impossible to book a ticket for the last section, I had to step off and back onto a train to buy it.”

Real-time data management is an issue for all players, not least operators. “You can scale planned information but not real-time information,” says Peterson, linking this through to overall service delivery. “Officially we have a schedule that covers 365 days of the year; in reality, we operate 365 different train schedules, as it changes every day. The real challenge is how to reimburse passengers for only part of a journey, should something go wrong.”

Many concerns are related to links to the overall lack of maturity of the multi-modality technology landscape. 93% of respondents saw a lack of data standardization as an obstacle, followed closely by data security and fourth a shortage of data coming from the same industry.

The fact that unclear ROI is seen as the second largest constraint, according to 82% of respondents, indicates the immaturity of the mobility platform business.

55% of respondents believe that intra-modal rivalry prevents traditional rail and public service providers from cooperating and competing against disruptive mobility stakeholders. This thwarts cooperative ventures, although these would be indispensable for platform operations.

Figure 1: Inertia is preventing progress of establishing multi-modal mobility platforms

93% think that missing data standardization is a constraint for all stakeholders, but other concerns are visible

Source: BearingPoint Institute
Some issues are self-imposed by operators. Says Hüske, “Small operators (local bike or car) have no APIs at all, meanwhile others - such as MyTaxi, Flixbus and car2go in Germany - don’t want to offer content on shared multimodal platforms. You might be able to access offers, timetables, but they don’t open their APIs for booking or integrate their offers.”

With competitive distrust between stakeholders, any solution will need to allay concerns around data ownership and, indeed, the value such data can bring. Explains Alain Flausch, CEO of the International Association of Public Transport (UITP), “In 2014, we discovered that data is the petroleum of tomorrow. We don’t want to just hand all the data over to Google and others, so they can sideline us.”

Fears, such as these, are felt by players new and old, all looking to monetize their own data. “EU law states that public transport operators have to provide timetable data, but it is not clear that we have the right to access real time data, so stakeholders including cities are thinking that perhaps they can offer better solutions under their own brands,” says van Oertzen. Confirms Laurent Kocher, Chief Marketing, Innovation and Services Officer of mobility solutions provider Keolis, “For the platform to cover on-demand transport, it needs to incorporate data and services from operators such as Uber and taxi companies. Such operators would refuse to be disintermediated unless the platform has a sufficiently strong brand to impose its presence.”

From the research, a specific example of the dilemma around open data is around customer loyalty programs. 58% of transport companies regard participation in customer loyalty programs as being important, while only 33% of technology companies agree – what could cause this discrepancy? We believe the answer lies in the fact that transport operators are keen to tie existing customers in, whereas IT-based operators (with no heritage to protect) are more comfortable with transient relationships. While it may be hard to ‘let go’, traditional operators may have to embrace increased uncertainty if they want to remain competitive in an increasingly open landscape.

Unclear and immature business models

Unclear ROI is the second largest constraint, reported by 82% of respondents: this presents a strong indicator of the immaturity of multimodal mobility. “The business model hasn’t yet been found,” says Kocher. “Audience models (through advertising) would not work as passengers would find pushed ads unacceptable; and as for commission-based models, 10% commissions on a €20-50 ticket might fund the platform, but in public transport, with a ticket priced at €1-2, even 20% would not suffice.”

Without clear business models, the incentive to invest financially or otherwise is reduced, leading to significant challenges, according to Lochman, “The main issues are surrounding the financing of new infrastructure; if you don’t have infrastructure, customers will not come.”
Implementing mobility platforms requires a significant investment, not only in the core platform, but more importantly in such areas as ticket validation, says Kocher. “For the platform to be effective, passengers must be able to use their mobiles to validate their tickets, clearly and transparently, when starting a journey. No obvious technology is addressing this requirement currently.”

Some regulations in the field of mobility and transport are seen as a challenge as they do not embrace the opportunities of digitization. “In Germany, the regulations that make mobility possible date from the 1980s,” mentions Werner. “For example, private hire vehicles have to go back to the seat of the business after delivering passengers so they are forced to go empty through cities, with no passengers.” Agrees Peterson, “How can you come up with quick solutions based on market demand, if you need to go through an 8-week process to check pricing?” Unsurprisingly, the research tells us that technology companies are more disappointed by the lack of political support than the (incumbent) transport sector.

Other differences emerge from different stakeholder groups — considering the sale of real time operational data to mobility platform operators, for example, transport operators were uncertain (46%) whether this was important, but digital players saw it as paramount (82%). Without investment it becomes harder to build experience levels and gain clarity, says Jörg Bruchertseifer, Vice Chairman of passenger association Pro Bahn: “We know only of selected services, such as Qixxit and moovel. I do not know yet of a full-scale service integrating both timetabling and ticketing – so lessons about full-scale services are still unknown.”

Such uncertainties play into the hands of industry inertia, believes Flausch: “Of course, there are some pioneers and some followers but I am anxious about whether there is a sufficient sense of urgency.” A knock-on effect is a lack of multi-modal skills and resources, further slowing market development: twice as many technology companies complain about the shortcoming as transport industry respondents.

“‘The customer does not want to have to provide information at each stage — customers want to go from the start to final destination, they want a clear price, to know how fast the journey will be etc.’— JÖRG BRUCHERTSEIFER, DEPUTY FEDERAL CHAIRMAN, PASSENGER ASSOCIATION PRO BAHN
We have seen the consequences in reticence to share data, but the challenge goes far deeper: some groups are keen to protect their historically captive markets, whether or not this is in the customer interest. “Taxi people were very protective for a long time, it was good that Uber came and rocked the boat so they renovated their offering,” says Flausch, adding, “You could question Uber’s profitability, whether they are paying enough, but we cannot reject them.”

Beyond competitive pressures, transport operators have traditionally worked in isolation. “Too many stakeholders are interested in only their own areas, national, regional rail, local bus companies and so on,” says Bruchertseifer. And, within these silos, each stakeholder group has different success factors to manage. For example, transport operators are judged on quality of service, and so will be uneasy about bundling their services with external operators, as these could add risk. Says Lochman: “If a customer complains - for example with no ticket - and the customer service team [in another group] don’t know about your system, you will have issues.”

Distrust goes both ways: digital startups are rarely keen to engage with operators looking to set up their own platforms, for example. “They are subsidized by public money for public transport services, so leveraging on their strengths/assets to deliver unregulated services will require changes in the regulation. In return, these changes would help local Authorities regulate all mobility services on their territory” says Kocher. “An early example is the HelloGo platform in the Netherlands, which leverages the intermodal information service 9292 to sell all mobility services, including NS train tickets.”

**HOW TO CREATE AND SAFEGUARD SKILL SETS AND MINDSETS FOR THE DIGITAL WORLD**

- Recruit and nominate roles to be responsible for multi-modal mobility for all stakeholders, to both grow experience and build relationships
- Attract digital-native employees by creating spaces for innovation to explore digitalization within the organization, together with more flexible workplaces and time schedules
- Develop relationships between the digital ecosystem and internal / external digital stakeholders, and digitalize the internal support processes to develop a digital employer brand
- Demonstrate the necessity and benefit of digital change for the future of transport business and for attracting high-caliber projects and staff

‘Huge potential exists for partnerships between players: traditional players are developing in digital, and digital players are learning from traditional players.’ – ROLAND WERNER, HEAD OF GOVERNMENT AFFAIRS & POLICY, DACH, UBER
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Strategic recommendation – close the gap between stakeholders

While all challenges are important and interconnected, the main cause of bottlenecks to multimodal mobility stems from the lack of cooperation and support between stakeholders. Issues with both data and business models will improve more quickly or slowly, depending on how well traditional operators, technology organizations and other stakeholders - from transport authorities to rolling-stock manufacturers and automobile manufacturers - work together.

All parties seem to agree that cooperation between providers within and outside the transport industry is seen as a top-rated factor in establishing a mobility platform. Cooperation between operators with the same service portfolio scored 95%, whereas cooperation of transport operators with Internet/IT-companies scored 92%. However, as we have seen, parties are reticent to open themselves up to the unknown. The response from one respondent is therefore unsurprising: “Implementing a multimodal platform can only be made by ‘disruptive players’ who have nothing to lose, who are eager to make (a lot of) money out of it and ready to take risks, even if these imply lawsuits.”

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Figure 2: Aspects of the establishment of mobility platforms

Even with competition between same-service modes of transport – 56% think there is no success without cooperation

- 56% Cooperation between Transport Operators with same service portfolio
- 46% Offer additional value add services to customers by business partners
- 41% Offer additional value add to customers by own organization
- 34% Free distribution of traffic data only to selected partners
- 29% Participation in loyalty programs
- 54% Cooperation of Transport Operator with IT/Internet company
- 44% Integration of social media to complete an all-embracing service
- 39% Free distribution of traffic data to non-profit platform provider
- 32% Selling of real time operation data to mobility platform operator
- 20% Selling of customer data

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The main issues are around financing of new infrastructure; if you don't have infrastructure, customers will not come.' – DR. LIBOR LOCHMAN, EXECUTIVE DIRECTOR, CER - COMMUNITY OF EUROPEAN RAILWAY AND INFRASTRUCTURE COMPANIES
So, what to do? Looking at the research, one way forward emerges from looking at two of the strongest stakeholder groups – traditional transport operators, and IT/Internet companies (including OEMs) who are looking to disrupt the market. While on the surface these organizations may appear diametrically opposed, if we look at the competences of each (Figure 3) we can see that their strengths and weaknesses are diametrically opposed: that is, the weaknesses of one can be offset by the strengths of the other.

Each group has a choice: to invest in areas of weakness, in a risky attempt to prevent the competition from getting ahead; or to work in partnership with others, bringing core competences to the table and building upon strengths. Both groups can learn from each other, thinks Werner: “Huge potential exists for partnerships between players: traditional players are developing in digital, and digital players are learning from traditional players.”

As we have mentioned, transport operators and IT/Internet companies are only two of the stakeholder groups, however they do create a fulcrum upon which other parties can operate. For example, public transport authorities are in an increasingly powerful position to drive progress. “In the past [public

‘Public transport operators think in about 20, 30 year timescales, it’s impossible to have an idea what the world will look like by then.’ – DAVID VAN OERTZEN, HEAD OF PRODUCT, MOOVEL GROUP GMBH
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“Another important group are automobile makers. In Peterson’s telling, “The experience of car manufacturers becomes increasingly important. In Germany, the car was the status symbol, but for the younger Generation Y, the first time they think about owning a car is when they get a family. Initiatives like Car2go and Drivenow were established for the younger generation – manufacturers would like to establish indirect relationships through these services, and they might then decide to buy the Mercedes or BMW.”

Of course, the ultimate stakeholders are traveling passengers, whatever their modal preferences. “Customers are the most driving group, as it is them who opt for how they would get from A to B. So, it is necessary for people representing new technology companies to maintain a high-level dialogue with the public,” says Werner. Concur Bruchertseifer, “Companies think about revenues, but should think how to acquire passengers first – do this and the answer comes automatically.’’

The platform has to bring customers extra value for their daily lives and long distance journeys – it has to jump forward from what people normally use, otherwise platforms won’t be used in a constant way,”—MATHIAS HÜSKE, CHIEF DIGITAL OFFICER, DB VERTRIEB GMBH (DISTRIBUTION)

Conclusion – Taking courageous steps towards a platform-based, multi-modal future

“The future is already here - it is just not evenly distributed” - William Gibson, The Economist, December 4, 2003

In many ways the future of multi-modal transportation is already here. “The breakpoint is happening with regional and metropolitan services, we can see it in the natural progression towards integrated ticketing, and cycling and walking are increasingly the reality,” explains Lochman. “For long distances, we are moving towards a tipping point – 2020 should be the breakpoint, when we can book a trip throughout all possible modes, integrating trains, planes and buses.” Stakeholders wanting to become big winners can benefit from the array of platform technologies, cloud-based services, mobile and analytical capabilities now available – such technologies are already well-established in other industries.

While platform business models give the potential for scalable growth and therefore first mover advantage, adoption has its challenges not least as organizations look to follow agile test-and-learn models rather than the engineer-build-operate models more familiar to traditional transportation. As well as adopting a culture and digital execution model with the skills and capability to be able to iteratively and continuously innovate, develop and deploy, success requires an obsessive focus on the customer. As a result, the overall digital experience and using analytics/data to personalize services are crucial.

Operating model transformation provides the starting point for iteratively building on and enriching the service, adding ecosystem partners along the way. In practical terms, we see clients starting their platform journey by taking an
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Existing product or service and working with partners to combine offerings that create better outcomes for customers. In this way, organizations can not only capture innovative responses emerging through trial and error as hypotheses are tested, but also gain experience and create stronger connections with ‘digital natives’ among both the user base and the workforce.

From our research and experience, we know that no stakeholder has the legitimacy or power to implement a multimodal technology platform alone – co-operation, not isolation, holds the key. To ensure any steps enable a meeting of minds rather than a clash of cultures, we would propose focusing on initiatives that create mutual understanding between players, for example:

- Create data labs to experiment with digital applications and get behind open data principles. Make sure all staff visit these data labs to enable experiences to be shared
- Invest in collaboration with digital start-ups, through tools, shared forums and workshops, to foster a spirit of innovation
- Co-create apps and services with customers, as a good way to understand client expectations (and what they are prepared to pay for).
- Work with governments and municipal transport authorities to set framework conditions (IT, liability, consumer protection, etc.) at local, national and international level
- Focus on service quality within each form of transportation and across providers, creating and developing trust in specific brands
- Contribute to best practice around standardization (for example, TAP-TSI), regulation and transport tendering processes, such that public service contracts integrate innovation and digital service delivery

One of the standout conclusions of the survey (as shown in Fig. 1) is the finding that participants do not understand at present where the money is going to come from: ‘The fact that unclear ROI is seen as the second largest constraint, according to 82% of respondents, indicates the immaturity of the mobility platform business.’ The corollary to this is that whoever takes the lead and discovers how to make money from a MMM platform will have the distinct advantage. And whoever fails to do so will be at a severe disadvantage. Therefore, in the absence of a compelling business case, we would recommend however to be somewhat “brave” (as quoted by one of our survey participant) and to place a bet: start in a test & learn mode with a small investment to qualify the services the customers are ready to pay for.

The ultimate goal for any platform-based business, in transportation or elsewhere, is to benefit from a network effect, interactions that generate economies of scale and greater value to both customers and providers. “The platform has to bring customers extra value for their daily lives and long distance journeys – it has to jump forward from what people normally use, otherwise platforms won’t be used in a constant way,” says Hüske. Achieving this requires traditional operators to conquer any fears and seize the opportunity by adopting agile innovation approaches that enable ideas to be tested and experience gained.

“I would say to those in charge, give more space to these opportunities,” says Werner, and Flausch agrees wholeheartedly: “You need to be brave from time to time.”

‘Regulations are not attuned to today’s world. How can you come up with quick solutions based on market demand, if you need to go through an 8-week process to check pricing?’ – DR. MICHAEL, PETERSON, MEMBER OF THE BOARD OF MANAGEMENT (MARKETING), DB FERNVERKEHR AG
#Digital

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Examples of multimodal mobility concepts in Europe

Qixxit — In 2014, Deutsche Bahn officially launched “Qixxit” as a platform for the transport of vehicles, with which users can choose their individual itinerary. This means that different means of transport are proposed for the journey of Qixxit. These include, among others, taxi, car sharing, carpooling, car rental, public transport, train, long distance bus, aircrafts (via airline search engine partners) and rental bicycles.

- In order to emphasize the neutrality of the carriers, deliberately selected partners of competing mobility providers are part of the platform’s portfolio.

Web: https://www.qixxit.de/en/

Swiss Pass — The “SwissPass” is a customer card of the Association of Public Transport - VdöV (the abbreviation for the Association of German Transport Companies), which has been issued since August 2015. The SwissPass can be used for all booking and payment for public transport in Switzerland such as railways, ships, local buses and trams. Further services are included, such as car sharing, bike rental, Switzerland Mobility (network for non-motorized private transport, for leisure and tourism) as well as ski lifts in certain ski resorts.

- The SwissPass aims to network the transport providers of the Swiss regional transport and tariff networks: a platform on which step-by-step tickets and additional mobility offers can be integrated.

Web: https://www.swisspass.ch/auth/login?lang=en

iDPASS — Since July 2015, SNCF has offered the smartphone-controlled application “iDPASS” for the integration of various modes of transport: car sharing, rental bicycles, railway, taxi, car rental, eRoller rental and parking spaces near train stations. The service is offered in the fifteen largest cities in France. In addition, SNCF rail connections are bookable (ticketing & payment), which allows a complete travel chain cover between these cities.

- SNCF plans to double the number of public transport users in France by 2030. Public transport and aviation have so far been excluded.

Web (French): https://idpass.sncf.com/

GoEuro — GoEuro is a travel meta search engine and booking platform for Europe that allows users to compare the prices and travel times of air, rail and bus options in a single search. The service has been active since 2013 and meanwhile GoEuro partners with over 500 European transport operators. It was designed by the Indian founder Naren Shaam after his trip to Europe, when he found transparent comparability of the various modes of transport websites to be insufficient.

- The respective modes of transport are comparable and bookable, eliminating the need to visit multiple websites to plan a trip. However, there are currently no options for the combination of different transport modes and focus is put on main lines, less first/last mile.

Web: www.goeuro.com
Examples of multimodal mobility concepts in Europe

Subscription support for public transport in the Île-de-France region, the Navigo card (11 million cards) is gradually becoming a multimodal pass, extending its initial access offer (metro, bus, tramway and RER) to the river shuttles “Batobus”, transportation to the airports “Filéo”, secured bicycle relay “Véligo”, self-service bicycle “Vélib” and since April 2017, to self-service cars “Autolib”. In terms of functionality, the range also extends with the possibility to create a Navigo.fr personal account and to make its online transactions (paying a subscription, modifying personal informations, downloading a certificate for employer refund, declaring the loss of its card, etc. and by 2018, to be used in ”post-payment” mode (users who make this choice will be billed at the end of the month only according to their consumption).
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**Key takeaways**

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<td>Data</td>
<td>Foster standardization topics within industry working groups and involve government (national/international)</td>
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<td>ROI</td>
<td>Decision needed on “make”, “buy” or “cooperate”; start with small investments, in a test &amp; learn mode, to qualify the market</td>
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<td>Operating Models</td>
<td>Keep the focus on operations basics, and provide new service bundles to improve digital / platform maturity</td>
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<td>Customer centricity and ability to deliver end-to-end services require intra-modal &amp; inter-modal cooperation, as no one can cover the full spectrum</td>
<td>Start deeper cooperation with all stakeholders around mobility platform management: e.g. operators, IT companies, service providers, new entrants (car manufacturers). Take united steps towards government and regulation to set frameworks for data security, reliability, etc., and to secure funding</td>
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<td>Functional characteristics</td>
<td>Integrate value add services to platforms around travel (regional, national, international) to round off a full package for customers</td>
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<td>End-to-end travel management &amp; client centricity are core functions. This includes also flanking functionalities around travel</td>
<td>Develop/decide for consistent usage based payment &amp; validation solutions which are scalable and flexible</td>
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While payment solutions exist, enabling these across stakeholders and across (mobile) customer devices becomes a critical success factor.
ABOUT THE RESEARCH

The Survey was addressed to all companies/organizations who are involved in mobility platform business. We took the opportunity to launch our questionnaire on InnoTrans 2016 event and did an additional online questionnaire in November-December 2016 to gather the information.

59 decision-makers from eight European countries (Germany, Switzerland, France, Austria, Italy, Spain, UK, Belgium) as well as from Turkey, Japan and the US participated in the survey, representing the following sectors: railway, software/IT/Internet, public transport, government, car sharing, associations, science and bicycle (all enumerated by frequency). A series of expert interviews in 2nd quarter 2017 completes our 360° view of the platform topic.
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About the BearingPoint Institute
At the BearingPoint Institute, our ambition goes beyond traditional ‘thought leadership’. We aim to contribute original ideas to the science of business management whilst equipping decision makers with practical advice gained in the field and through our research projects.

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About BearingPoint
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Topline research findings: the multimodal platform opportunity

Introduction – the multimodal (lack of) power play

What is holding organizations back from a multimodal future?

How to create and safeguard skill sets and mindsets for the digital world

Strategic recommendation – close the gap between stakeholders

Conclusion – Taking courageous steps towards a platform-based, multimodal future

Examples of multimodal mobility concepts in Europe

Key takeaways

About the research

About the author

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