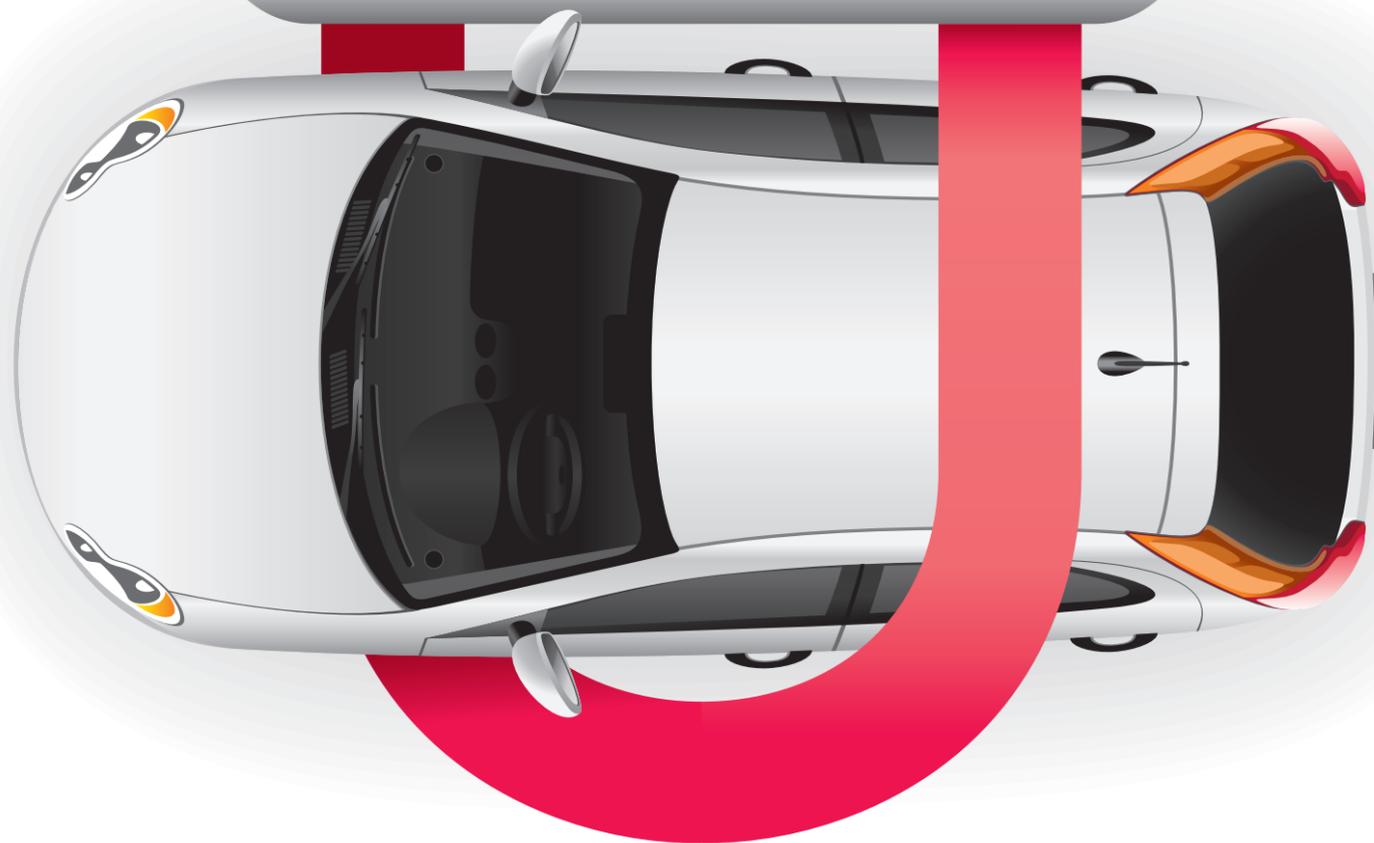


UNLOCKING MAAS

DATA IS ESSENTIAL FOR SUCCESSFUL MAAS OPERATIONS

Portuguese road operators are already enjoying the benefits of a collective, countrywide Mobility as a Service (MaaS) solution. The underlying technology is readily transferable and scalable to meet the needs of other countries and geographic regions

Words José Bragança Pinheiro
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BROADENING THE MOBILITY PORTFOLIO

A-to-Be brings to the mobility sector a multifaceted portfolio that fully reflects the pace of change in technology and travel habits. The offer includes technological solutions for both traditional and electronic tolling/road pricing; integrated payment, ticketing, enforcement and access-control solutions for road, rail and public transport including ferries; value-added payment services for fuel, convenience food and other applications; smart parking services; and vehicle-sharing.

These provide network operators and travelers with single sources that address the vast majority of contemporary mobility needs. They reflect the growth of MaaS and service providers' desire to supply holistic solutions that are safe, environmentally responsible and reliable. All are underpinned by proven, state-of-the-art data-gathering and back office systems and are readily deployable in countries right across the world.

Although it is still a relatively new name, A-to-Be has an impressive heritage. Five years ago, senior executives from Brisa came together to consider mobility's future. Since being founded in 1972, the company has risen to be Portugal's largest operator of tolling concessions. Along the way, it has worked to build and maintain a reputation for innovation and early adoption. Nevertheless it was decided that major change was needed. To reflect the increasing diversity and complexity of the sector, Brisa would transform itself from an infrastructure management specialist into a provider of a much broader range of mobility services.

Set up as a subsidiary, with the express intention of injecting a distinctive brand into the market, A-to-Be therefore came into being with the financial and intellectual backing of a parent company with over four decades of experience of road network operation.

Recognizing and addressing change are the hallmarks of any successful organization. Road network operators are no exception – their environment is increasingly influenced by significant technological and societal change.

In particular, the internet, smart devices and wireless connectivity are having profound effects. The prevalence of personal technology and online buying have resulted in a much greater level of expectation of the quality of online services.

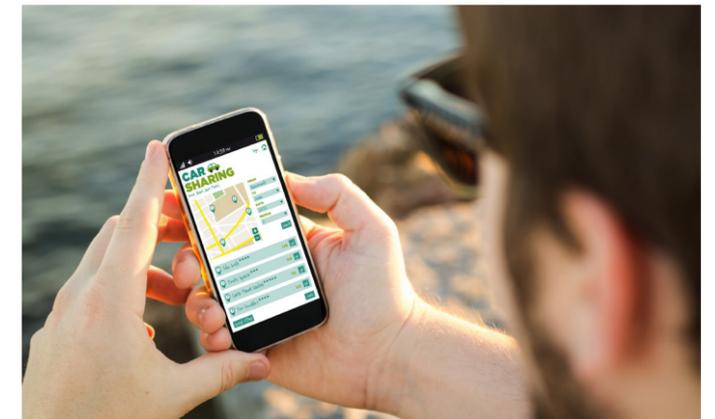
These societal changes are challenging the traditional roles of mobility providers. In addition to building and maintaining physical infrastructure, road operators must also establish and maintain accurate real-time navigation, travel information and payment services that are easy to access and use, and are multimodal in nature.

Growing MaaS appeal

MaaS is rapidly taking hold in developed countries and the true possibilities are being realized by governments and individual travelers alike.

Governments are looking for alternative means of addressing the increasing demand for mobility. Acknowledging that unrestrained road-building is environmentally and financially unsustainable, technology is seen as a means of providing additional capacity. This is pushing the need for multimodal solutions and reliable, dynamic information services, as well as applications that enable informed choices for when and how to travel, payment for services on the move, and the ability to make mid-journey changes to itineraries as necessary.

The monetary and environmental penalties of owning and running a private vehicle nourish individuals' desire for MaaS, which is the product of an increasingly shared economy. The younger generation of travelers, for whom car ownership is less relevant, want to be better informed of multimodal choices. This attitude is also reflected among older generations and the socially disadvantaged, for whom MaaS dramatically reduces mobility's cost-of-entry threshold.



Above: Smart device functionality has shaped expectations of online services

Established methods of gathering data, using in-road and roadside monitoring technology, will continue to play a major role for the foreseeable future. But we are already seeing the increasing effect of a widening range of non-traditional data sources. Mobile devices' Bluetooth and wi-fi media access control (MAC) addresses, for instance, are used to gather anonymized crowdsourced data, while data derived from electronic transactions can also be used to ascertain travelers' movements and intentions – both in the moment and predictively. Connected devices/



individuals and, soon, an increasing number of connected vehicles will make huge contributions to the data concerning movements, the state of infrastructure and other related influences such as weather conditions.

Road operators – public and private – will no longer have sole influence over their domains. However, they will benefit from engaging more readily and cooperating more fully with established and emerging partners, across geographical and jurisdictional boundaries and becoming cognizant of the wider effects on their networks of travelers’ and other operators’ aspirations.

This is not good news for closed systems. Data systems need to be modular, scalable and enthusiastic adopters of open standards in order to cater for the widest possible range of sources, providers and users.

We have entered the ‘Data Century’, and its first decade has seen Brisa Group and its subsidiary, A-to-Be (see sidebar, *Broadening the mobility portfolio*), provide Portuguese mobility operators with a comprehensive service offer that reaches far beyond the parent company’s established expertise in tolling and fully embraces the MaaS concept.

International relevance

The Brisa Group’s mobility offer is based on a series of complementing elements (see *Functional elements*, left). The scale of the capability provided and the amount of data handled annually in Portugal is impressive – roadside devices managed number in the tens of thousands, and some 320 million transactions are processed each year.

By virtue of its open, modular and scalable nature, the solution is readily transferable elsewhere. A-to-Be is already making inroads in the USA, where it has an established office, and it stands ready to become a MaaS provider in other locations around the world. ❖

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FUNCTIONAL ELEMENTS

Brisa’s mobility offer includes Via Verde services and A-to-Be technology

Via Verde is the result of over 30 years’ experience in Portugal operating a unified network of 16 road operators. It caters for electronic toll collection and other electronic/wireless fee-paying applications. For different service providers – tolling concessions, parking operators, fuel stations, ferries and drive-through restaurants – it provides an integrated, full-spectrum solution for customer account management, handling and validation. By providing a unified central payment system, complexity is reduced. Both service providers and paying customers benefit from the increased clarity resulting from integrated invoicing and reduced investment/operational costs.

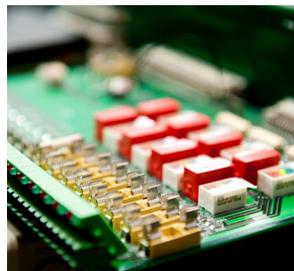


A-to-Be MoveBeyond is an advanced, modular mobility platform. It is scalable, enabling it to handle large quantities of data from a diverse range of sources. It supports multiple secure payment options, including pre- and post-paid, and is available in own-premises and cloud-based forms. This combination simplifies extension or improvement.

It is the central software brain of a MaaS provider’s applications. Designed in line with smart city trends, A-to-Be MoveBeyond fulfills the task of providing a seamless mobility experience for the traveler across all modes of transportation – walking and cycling, private vehicle and ride-share, as well as mass transit.

With an emphasis on the end-user experience, A-to-Be MoveBeyond manages and implements business rules to guarantee operational, commercial and operational capabilities. From the palm of their hands, travelers can journey plan, purchase tickets and use route-guidance services. Feedback and user-assistance services are also provided.

A-to-Be LinkBeyond provides at-the-roadside connectivity with the physical elements of MaaS provision – all the devices, apps and gadgets that gather and provide the data that supports mobility services, as well as the hardware that governs applications such as access control. A-to-Be LinkBeyond’s open nature enables existing infrastructure to be optimized to serve the purposes and deliver the vision of a seamless experience for each individual traveler.



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This article is based on a presentation that will be given at The Future of Transportation World Conference 2018. To find out more about **STREAM 5: Mobility as a Service** at the 2018 event, visit the website: www.thefutureoftransportconference.com