

# MAASSIVE PROMISES

## Mobility-as-a-Service

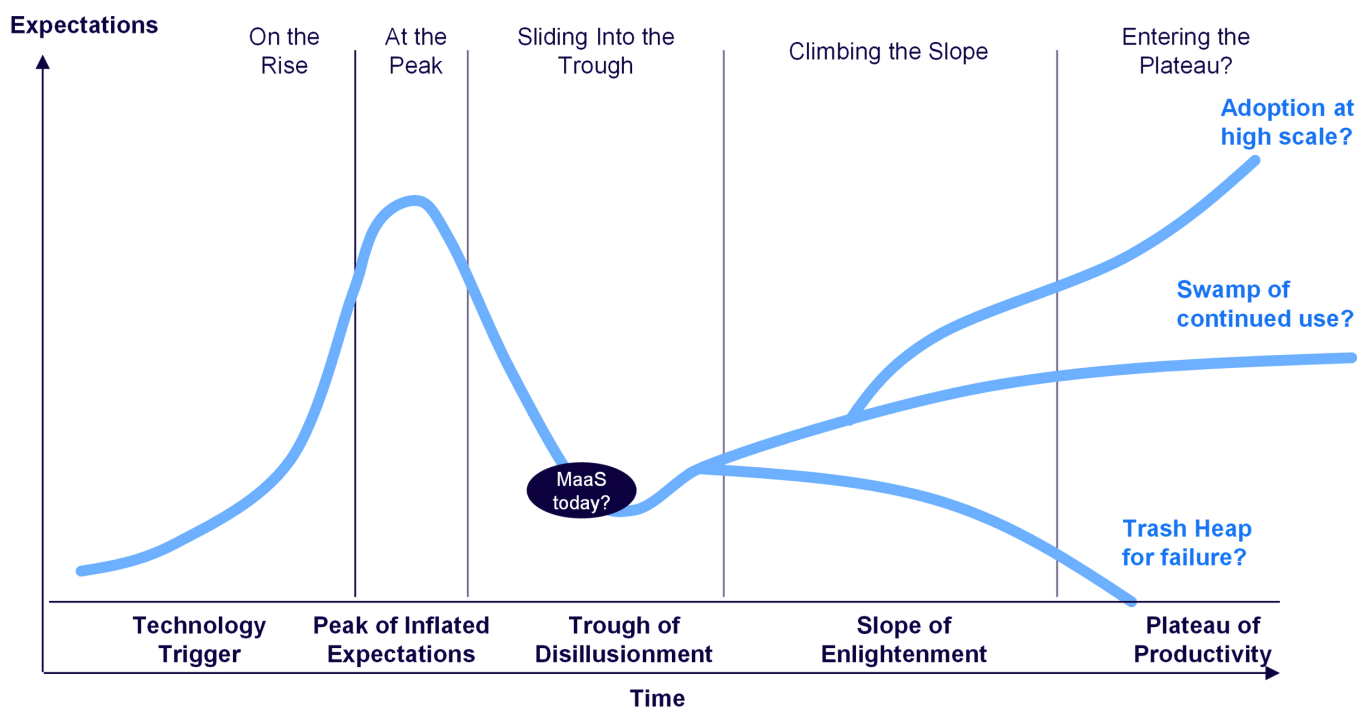
(MaaS) has the potential to deliver more sustainable, resilient and human-centric mobility for the world. Yet despite some encouraging progress, significant barriers remain. Based on their experience, **Arthur D. Little**, **RISE**, Research Institutes of Sweden, and the **City of Gothenburg** take a fresh look at the barriers and what cities can do to overcome them.

Mobility-as-a-Service (MaaS) aims to encourage the usage of more sustainable transport modes, away from individual cars 'by default'. MaaS promises to provide seamless access to a wide array of mobility options to meet differing needs and to increase simplicity and convenience in planning, booking, payment, getting information and accessing services for all passengers. From the perspective of cities and authorities, as well as encouraging more sustainable mobility patterns and improving accessibility, MaaS could allow system-level optimisation of flows and assets. For mobility service providers (MSPs), a MaaS framework could help to better engage with customers, understand needs, tailor offerings, and reduce customer acquisition costs.

The last few years have seen some encouraging developments in the progress towards MaaS, but significant barriers remain towards adoption and — more importantly — towards achieving measurable impact.

WRITTEN BY  
FRANCOIS-JOSEPH VAN AUDENHOVE  
HANS ARBY





**Where is MaaS now on the Gartner group’s technology hype cycle?**

Arthur D. Little

**Where are we with MaaS today?**

In practice, many MaaS implementations to date have been limited to ‘one size fits all’ travel planners (i.e., not focused on specific use-cases), with only a limited number of MSPs being fully integrated in terms of ticketing and payment, and others only partly integrated.

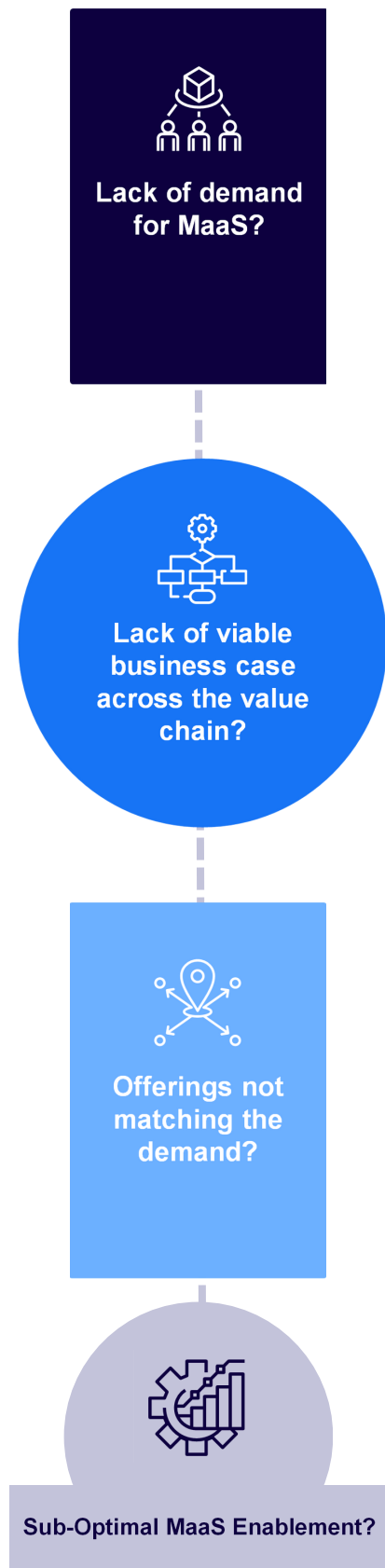
However, we are seeing some interesting trends, including a general move from Business To Business-to-Customer (B2C) models, financed with private capital, towards Government-to-Customer (G2C), led by public transport authorities or operators. And, while most G2C schemes are still ‘walled gardens’ in terms of data sharing, there are signs of a shift towards open public MaaS platforms accessible to third parties, as pioneered in Vienna (Upstream), now being applied in the Netherlands (Rivier) and possibly later in Brussels.

Business-to-Employee (B2E) models have seen some positive evolution over the past two years, especially in Western and Central Europe triggered by fiscal incentives, and several vendors and B2C players, including MaaS Global, are pivoting to this model.

We are also seeing a rise in MaaS B2C models targeting specific use cases with better returns, such as Tourist MaaS (e.g., Alpine Pearls) and Rail/Aviation MaaS (e.g., Doco by Renfe in Spain or AurAsia MaaS by Malaysian airline). A further B2C variant is where mobility services are offered as an integrated feature of another set of services, such as insurance, rent (Business to Tenant) or banking – sometimes called ‘Mobility-as-a-Feature’, or within SuperApps. There are also some promising Rural MaaS applications which focus on accessibility, for which the business case is more about cost savings for regional authorities rather than new revenue streams.

There have been positive efforts to evolve regulations, standards and codes of practices to accelerate MaaS deployment and ease management of relationships across different stakeholders, for example in Europe MMTIS and MDMS. However, overall, scaling up has been slow and ‘MaaS-powered trips’ still represent a tiny proportion of all mobility trips worldwide. We have to conclude that up to now, MaaS has not delivered on its promise. In terms of the Gartner hype curve, we are probably close to the ‘trough of disillusionment’. Whether, and how, we can climb the ‘slope of enlightenment’ is the key question.

## The root causes of the lack of progress



When attempting to verify the impact of MaaS, we run into two problems: 1) lack of large-scale implementations to date, and 2) lack of proper evaluation of most pilots and services in operations that are not sharing data. Through our experience as strategy consultants advising cities and operators and as entrepreneurs driving MaaS deployments, we have tried to analyse possible root causes for MaaS falling short on of its promise.

We see these falling into four categories:

- Lack of demand: Demand for good public transport is high but does not cover all the needs of users, such as door-to-door. Another rare example with high demand – and willingness to pay– is micromobility, especially e-scooters, e-bikes and bikes. While the percentage of intermodal trips in cities (i.e., using different modes in one journey) is typically less than 5%, excluding walking, there seems to be a good demand for ‘multimodal life’ – that is, using different modes for different journeys - which MaaS can facilitate.
- Offerings not matching demand: Here, one of the main failings is insufficient investment in the necessary physical solutions and infrastructures to provide the required service and customer experience, in addition to the digital components of MaaS. A second issue is that the accessibility, reliability, relevance and pricing of the included mobility services themselves are often not attractive enough, and a MaaS offer can only be so much more attractive than its components. Finally, MaaS offerings are often insufficiently matching specific use cases of customers.
- Suboptimal enablement: The lack of collaboration between traditional Public Transport Operators, MaaS providers and third-party MSPs acts as a major barrier to the acceleration of MaaS deployment. Few PTOs have opened their systems for third-

party ticket reselling, and even fewer allow reselling of monthly passes or flexible tickets/subscriptions. Current regulations to support such collaboration are still insufficient.

- Lack of viable business cases: Apart from specific use cases, the business case for MaaS operators is challenging due to low margins and difficulties in building sufficient volume. The lack of volume and high competitive intensity are also making it challenging for MaaS vendors, limiting their ability to invest. Apart from micro-mobility players, most MSPs don’t see the value in being integrated into MaaS services, involving having to give up precious margins, while the current MaaS scope does not necessarily cover their customers’ needs. Money is to be found in the economy of car ownership, which is something that MaaS still needs to tap into. Subscription-based services can create more value for all parties, but it is a hard sell.

**Why is MaaS not delivering on promises – Possible root causes?**

Arthur D. Little

## What cities and authorities can do

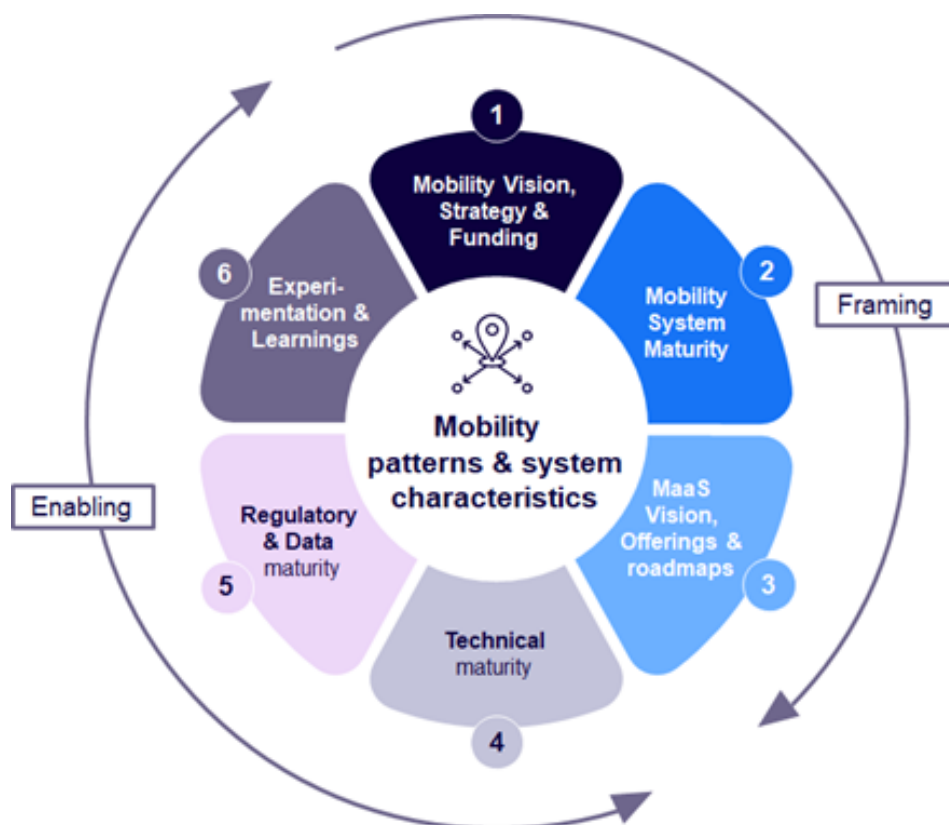
Moving ahead requires a more comprehensive approach to frame and enable a virtuous mobility system powered by MaaS, as well as increased collaboration between public and private stakeholders.

While cities and authorities cannot bring about such a system on their own, they have a key role in setting priorities to help fully extract value at the system level. Working out how to prioritize efforts in a tight funding environment is difficult. The 'MaaS 360°' framework identifies six dimensions to address which together can drive progress.

- Framing dimensions: i.e., review mobility vision, strategy and funding considering mobility patterns and system characteristics, create the right conditions for MSPs, invest in infrastructures, and promote/ensure progressive deployment of MaaS offerings that cater to relevant customer use cases.
- Enabling dimensions: i.e., technical development and support to integration, improve regulations to trigger open collaboration across actors and incentivize more sustainable behaviours, and ensure learnings from experimentation are extracted and shared to foster continuous improvement.

## Conclusions

In conclusion, while MaaS has not yet delivered on its promise, it is a journey and there are huge benefits ahead that justify continuous efforts. As with most innovations, first steps are taken by targeted use cases, not with 'one size fits all' offerings. Moving ahead requires a more comprehensive approach to frame and enable a virtuous mobility system powered by MaaS, as well as increased collaboration between public and private stakeholders. Cities, transport authorities and PTOs have a significant role to play in unlocking the full potential and extracting value at system level.



*Arthur D. Little's MaaS 360°  
review framework*

*Arthur D. Little*

**Do you wish to get more information on the article?**

Contact **François-Joseph Van Audenhove**, Managing Partner at Arthur D. Little ([vanaudenhove.f@adlittle.com](mailto:vanaudenhove.f@adlittle.com)), and **Hans Arby**, Senior Researcher RISE and City of Gothenburg ([hans.arby@ri.se](mailto:hans.arby@ri.se))