# FAQs

Webinar: Mobility as a Service (MaaS)
27th March 2020

## 1) General Questions

**Is ride-hailing really the same as MaaS?**

- It depends on your definition of MaaS! For TfWM, MaaS is a service which brings together multiple modes of public and private transport and facilitates journey planning, payment and ticketing for users' journeys. So, we wouldn't consider ride-hailing in itself as MaaS, although ride-hailing can be an important part of a MaaS offering. We're exploring ride-sharing and demand-responsive transport as part of our wider innovation portfolio.

  *- Keelan Fadden-Hopper, Senior Future Mobility Developer, Transport for West Midlands*

- No. MaaS is a concept to better organise all transport modes in combination that offer a seamless journey from AtoB. This may be synchronising different public transport schedules (train/bus timetables), offering a single fare model for all modes and to provide pre-booking of some modes (e.g. shared bikes/scooters/ride hailing). Ride hailing is just one aspect of the MaaS eco-system.

  *- Paul Speirs, Director, Global Pre-Sales, PTV Group*

**How easy/possible is it to integrate MaaS in any existing transport mode/?**

- Depends on the definition of MaaS. If we are talking about a multi-modal assignment where inter-modality is a desired option (e.g. a blend of bike, walk, bus, rail etc.) then it comes down to software choice. I can't speak for other vendors, but with PTV Visum this is entirely possible. The same goes for fare models where different business rules relating to fares can be designed and incorporated into Visum.

  If we are talking about shared mobility as a mode choice within the whole MaaS eco-system, then you need to consider two distinct ways to assign trips. Shared mobility is, by design, on-demand (so does not follow a timetable) and is free-floating (so does not follow a fixed route). Also, each passenger does not necessarily follow typical convergence model rules (think about detours a passenger may experience to pick-up/drop-off other travellers). As a mode it is a variable in itself and is more akin to a logistics solution. This needs to blend with the more structured/scheduled modes. As far as I know, there is only one software solution that can blend the logistics style solution required for shared mobility with conventional traffic/public transport assignment – and that is PTV Visum.

  *- Paul Speirs, Director, Global Pre-Sales, PTV Group*

**How can you take into account the change in human behaviour (e.g. working more from home, ordering more online, less people on public transport) due to unforeseen situations like COVID-19 when it comes to modelling? Won't that change the decisions for MaaS? Would an additional scenario be required?**

- In time Stated/Revealed Preference surveys may provide the evidence we need to adjust the mode-choice parameters to better reflect the travel behaviours that are affected by COVID-19. For now, sensitivity testing is one approach – by either determining the mode share outcome, or by adjusting the parameters in favour of alternate behaviours (e.g. frequency of work at home – you might adjust the trip generation mobility rates for this person group).

  *- Paul Speirs, Director, Global Pre-Sales, PTV Group*

**2) Questions for Transport for West Midlands**

**Should CO2 emission cost be integrated in the MaaS pricing so that MaaS helps climate change mitigation?**

- Reducing CO2 emissions from mobility is really crucial – in the UK, the transport sector is now the biggest contributor to the national carbon footprint. Pricing is an important tool for driving behaviour change, but it can be implemented at multiple layers in the mobility ecosystem. For instance, taxes on fuel are well correlated with CO2 emissions, so can be used as a lever; alternatively, CO2 emission costs could be reflected in MaaS pricing.

  Any pricing model should take account of existing pricing in the mobility ecosystem. Taxation and charging is already in place in different parts of the mobility ecosystem (such as fuel taxes and congestion charging), whilst many incosts are socialised and not captured directly – not only CO2 emissions, but also, for example, health implications from air quality and collisions. Pricing for MaaS should take a holistic view of this, and take into account that MaaS will not capture all users.

  *- Keelan Fadden-Hopper, Senior Future Mobility Developer, Transport for West Midlands*

**Should national legislation enforce data sharing between operators and MaaS providers to boost MaaS solutions?**

- National, regional and local regulatory bodies should definitely consider their options around enforcing data sharing, and whether it's right for their local circumstances. In particular, there are examples of mandating operators to share data, such as the Bus Open Data Digital Service in the UK, the Los Angeles DOT Mobility Data Specification, and the Act on Transport Services in Finland – which are all opening up more data. However, data sharing alone is not enough to ensure that MaaS solutions will be delivered – this will require partnership working between operators, MaaS providers and government agencies, as well as user demand.

  *- Keelan Fadden-Hopper, Senior Future Mobility Developer, Transport for West Midlands*

**Isn't it a threat to the system, that public transport passengers will have a gain when moving to ride sharing?**

- This is a key risk for MaaS and ride sharing – the 'abstraction risk' that existing public transport users may find ride sharing more convenient and therefore lead to a mode shift from public transport to ride sharing. This is a threat to the viability of traditional public transport provision, carbon emissions reduction targets, and other social goals such as inclusivity and accessibility. It's absolutely something that public transport operators, local government and national policymakers are concerned about. There's no one right policy response to this – governments will have to choose the right response for their city or region, but the important thing is not to ignore this phenomenon. New forms of mobility such as ride sharing are here to stay, they're popular with users, and governments must consider how to weave them into a sustainable ecosystem.

  *- Keelan Fadden-Hopper, Senior Future Mobility Developer, Transport for West Midlands*

**What is the benefit for the operators to share their data?**

- Operators are able to optimise their own businesses, but there are potentially greater gains from being able to optimise the operation of the whole transport system. We need to find models where this can work for all parties – this will be challenging, but the gains are potentially very great.

  *- Keelan Fadden-Hopper, Senior Future Mobility Developer, Transport for West Midlands*

**Is MaaS is difficult to implement where there is already a very good integration of public transport operators?**

- To me, public transport is at the heart of delivering good MaaS, so good integration with public transport is actually crucial for any successful MaaS deployment. But MaaS should also be evolutionary, rather than revolutionary – so if your city has a very good integration of public transport operators, that's a great place to start and widen out your overall mobility offer and integrate new services around that core.

  *- Keelan Fadden-Hopper, Senior Future Mobility Developer, Transport for West Midlands*

**Which type of tools/analyse methods are used to know the impact of the system which will be introduced, so the city is prepared for it?**

- There is a whole range of approaches that we can take to this – such as our traditional transport models, which we're looking to update and consider what new tools we could use, such as agent-based modelling, and being able to draw on a range of new data sources. We're also collecting more attitudinal data, through our traveller segmentation work, to get a sense of how people's attitudes may change and how this may influence their behaviour. From a policy perspective, techniques such as scenario planning and systems thinking and are helpful in thinking through the implications of different possible futures. Finally, there's no substitute for trialling out new services with real users – that's the true test of impact, and it's what we spend a lot of our time doing.
  *- Keelan Fadden-Hopper, Senior Future Mobility Developer, Transport for West Midlands*

**Do you expect there will only be one MaaS per city? How does it work with visitors from a different another city/MaaS?**

- There are strengths and weaknesses to having one or more MaaS offering in the city. On the one hand, a single MaaS could allow greater control for transport authorities or public transport operators, who might be able to use this to direct MaaS towards their strategic goals. On the other hand, this might limit choices for users and stifle more innovative development. Remember though, that the underlying payments and information infrastructure could be shared between multiple MaaS user apps or package structures.

  Regarding visitors from another city – this could be challenging to get right, but there are a number of different possible solutions. Some MaaS apps could become popular across multiple cities, such as those promoted by long-distance rail operators or national governments. Alternatively, good interoperability between different apps could allow users to continue using their preferred 'local' app in other cities. The key to getting this right will be a level of standardisation and interoperability between different cities' mobility providers.

  *- Keelan Fadden-Hopper, Senior Future Mobility Developer, Transport for West Midlands*

- The narrative of a successfully deployed MaaS system / concept dictates that the optimum would be one single source to plan / book your journey. But for each component part (ride hailing, bike/scooter providers etc) there could be many operators running in parallel. One important factor will be the operators of the component parts conforming to an agreed set of regulations that optimises their contribution within the whole.

  *- Paul Speirs, Director, Global Pre-Sales, PTV Group*

## 3) Questions for PTV Group

**Did you take into account the constraint of max Driver Hour regulations, and the need to return to base before hours expire?**

- No. The simulations aggregated the results over a four hour period, so these impacts would be less pronounced. PTV Visum's On-demand calculations can consider Holding Areas for driver rest-breaks / depot starting points etc.

  *- Paul Speirs, Director, Global Pre-Sales, PTV Group*

**How is it possible to ensure a balance between cooperation and competition on a MaaS ecosystem? How should the relationship be between the MaaS platform provider and transport operators?**

- I call this Optimising the Optimised. Each operator will consider that their own operations are optimised to their business rules, but often in isolation to the wider transport eco-system. Strong regulation will be essential if each operator is to be optimised into a holistic solution. Helsinki's MaaS platform (check out MaaS Global) may be a good example of achieving buy-in from the operators where collaboration is vital to theirs and the system's success.

  *- Paul Speirs, Director, Global Pre-Sales, PTV Group*

**If rail/mass transit traffic is not modelled, then how are the pre- and post-trips taken into account? I.e. people using the car to drive to the station?**

- If the access/egress leg of a rail trip (e.g. car, bus or tram) is included in the transport model then these trips were considered within the ride-share solution. PTV inherited the demand from #Ruter's own transport model.

  *- Paul Speirs, Director, Global Pre-Sales, PTV Group*

**What about an ABMS approach to model human behaviour based on individual decisions in Traffic Models?**

- PTV's simulation of ride share is calculated at an Agent Based level. Each trip request represents and individual with their own personal desired pick-up time, plus unique pick-up/drop off locations. The results are available at agent based level (or vehicle based level if you wish to look into the vehicle tour). The wider transport model is more aggregate, so human behaviour is also aggregated. The idea to create a full ABM has pros & cons which should be balanced against the objectives of the model's wider purpose and the notorious difficulties in building a truly converged ABM (not to mention time and cost). That said, as more human behavioural evidence comes to light and computer processing powers increase, then perhaps in the future there is a real manageable role for ABMs.

  *- Paul Speirs, Director, Global Pre-Sales, PTV Group*

**4) Questions for Feonix – Mobility Rising**

**How are prices and the drop-off times set? Is the driver choosing everything or is your platform computing them, to a certain extent? Also, how does your organization get funded?**

- Prices are set by the provider. Each provider has different parameters, miles, minutes, pick-up fees, etc. The volunteer Freedom Drivers are paid mileage at $0.575. In some communities they receive both unloaded and loaded miles, in other communities, it's just loaded. Our goal is to provide the customer with the most options and let the market and customer service make the decision.

  Our organization is funded by grants and contracts from a broad range of partners: regional, state and federal governments, private foundations, academic partnerships, hospitals, corporate partners, departments of economic development, major national non-profits, and beyond.
  *- Valerie Lefler, Executive Director, Feonix – Mobility Rising*

**How to overcome 'silo'attitudes – are existing providers reluctant to give up autonomy and co-operate?**

- We bring the providers in the same room as the social workers, the nurses, the teachers, and the veterans. The providers listen in first person to the needs of these treasured members of our society and hear the stories of need of community members in their backyards and under almost all circumstances, look beyond themselves to make an effort to join the platform. IT IS ALL ABOUT STARTING WITH THE WHY. Those who cannot or do not generally will never make good business partners, as they are opportunistic in nature. We never ask transportation providers to operate at a loss or go down on their prices. Our gain is not their loss.

  We come around the table together as leaders in the community positioned to make a difference. We allow providers autonomy to operate the business in the manner they see fit and provide a platform for them to receive additional business. MaaS in the ecosystems we at Feonix build is a win – win and the customer makes the decisions. Sometimes the customer is the passenger, sometimes the customer is the hospital. We bring providers together and break bread and celebrate milestones, we say thank you to our providers as members of our family, we send gift baskets on the holidays, we pray for them, and we genuinely want them to be successful. Success = a health community. Start with the why and the right providers will come forward and the silos fall down naturally.

  *- Valerie Lefler, Executive Director, Feonix – Mobility Rising*