



The future of mobility

*If the bus is to play a leading role in the long term future of urban mobility, we need to be **scanning the horizon now and sowing seeds of change** to ensure that a very different bus world stakes its claim to exist.*

*We shouldn't be spending time and energy implementing a retro 1980's governance model for yesterday's buses but be focused on **designing a new age of the bus looking toward 2030 and beyond.***

*This is the **eleventh** of fourteen weekly articles on what different aspects of that new bus future could look like and the kind of things we need to be sowing seeds for now if we are to truly **ride the wave of future opportunity.***

*We need to **be bold if we are to shine** over the next 40 years and do more than invest in a zero emission fleet, tinker with governance and introduce the odd capped fare.*

Episode Eleven – The Lost Souls of Mobility

This **Episode** could have three possible titles - *The Lost Souls*, *The Orphans* or *The Problem Children* of Mobility.

There are **two concepts which come up in any conversation about mobility beyond the car** and both have been referred to previously in **Episodes Two and Three** as core components of a future **Active Travel and Mass Transit First** mobility model.

Mobility as a Service and **Digital Demand Responsive Transport** otherwise referred to as **MaaS** and **DRT**.

Branding them as *Lost Souls*, *Orphans* and *Problem Children* arises as they are an **enigmatic conundrum**.

The **theory behind both concepts is a powerful one but**, despite being around in various forms as a concept for many years, **they simply haven't ever really caught fire in the market and become mainstream** and, as at today, the jury remains out as to whether they ever will.

The *Active Travel and Mass Transit First Net Zero* model is a fertile breeding ground for both to fulfil their destiny but **is either concept grown up, mature and viable enough to step into the limelight and deliver on the big stage when it matters?**

They are a part of the bigger picture but, right now, a flaky part.

We **need more evidence of their credibility, crowd appeal and operational and market substance** before we can truly rely on them to deliver.

The *Problem Twins* title was dropped because they aren't really joined at the hip and need to be able to perform on their own as well as together. *The Orphans* title didn't stick either as, if anything, they already have way too many parents and sponsors and that is part of their problem so, let's move on and discuss *The Lost Souls of Mobility* initially individually and then, at the end, together.

Mobility as a Service

I **first encountered, and considered, the concept nearly 40 years ago in 1986** when I was setting up *The Bee Line Buzz Company*, a disruptive high frequency minibus start up in Manchester in the very first phase of bus industry deregulation post the 1985 Transport Act.

The objective was to convert the residents of South Manchester to a new style ultra high frequency 'turn up and go' minibus network running at least every 5 minutes delivering the most desirable element of a public transport system – sheer frequency!

Part of our wider, longer term Business Plan was to **deepen and broaden the concept by providing people with a complete alternative mobility package to owning a car.**

A comprehensive network of 'always on' **high frequency minibuses would be packaged with a monthly subscription model also giving access to taxis, car rentals, trains and intercity express coaches** for all of the journeys they couldn't make on our network.

That was in a world where *Compaq* portable computers was as state of the art as you could get so it would be all about landlines, call centres and over the counter transactions and didn't get as far as talking to *Access* and *Barclaycard*.

Sadly, we were then distracted by an existential battle with the local authority owned GM Buses for market share threatening our very existence and our **ambitious MaaS Project (although the acronym didn't exist then) went on the back burner.**

It remained, however, on my one day 'to do' list and was only properly **revisited in 2017** when I set up **busreinvented.com** and it became **one of the concepts which would have to be part of a reinvented bus industry.**

By then, the acronym existed and SkedGo's *Whim* was active in Helsinki and a lot of developers were getting excited about the concept.

That was 7 years ago and, in the interim, there has been **a lot of opportunistic and fashionable jumping on the bandwagon but not a lot of true mainstream progress.**

Two things seem to have muddied the water and stifled any kind of mass market adoption of *MaaS*.

Firstly, there have been an awful lot of **payment and ticketing start ups and apps** which have hijacked the name and concept and **see it simply as a retail platform.**

Secondly, for it to truly take off requires all of the **core mobility players to fully engage and co-operate including the biggest ride sharing businesses of all – the major UK Bus Groups.**

To truly **deliver the equivalent of the car in your drive** as an app on your phone **requires signing up every possible mobility alternative to car ownership into one brand.**

It is also possible to envisage several *MaaS* brands competing in the market built around different partnerships and providing a series of competing products no different to the kind of competition which exists in the mobile phone industry.

Alternatively, there is the view that there should only be one in any city or region controlled by the local transport authority which drags us back to **Episode Ten on Governance** and the debate about the suitability of a local authority to manage a consumer product.

Those two broad issues are like a swamp with the *MaaS* concept truly stuck in the mud.

Some people want to get out of that swamp and move on whilst others see the swamp as a useful way to protect their historic business interests.

And then there is the question of **whether there is genuine traction and desire in the market for the *MaaS* product?**

Perhaps that is a *'chicken and egg' issue?*

For **as long as the car retains its current dominance of the roads, people may simply prefer the 'real freedom' of their own car than an app** giving complete immediate access to alternative mobility.

Once it is accepted and established that the current traffic environment is unsustainable, unacceptable and inconsistent with *Net Zero* and the car is constrained, **the alternative may suddenly seem more appealing.**

Do we need to change the Mobility World first before *MaaS* can truly take off as one of the many compensatory *'carrots'* underpinning the necessary need to reduce car traffic in urban areas and on major interurban roads.

Hence it may be destined to remain a *'Lost Soul'* for now.

In the short term, we **do need to talk about the swamp around payment and ticketing.**

If the bus, as a mode, is to become fundamentally more important in the context of *Net Zero* and we are to embrace the kind of developments outlined in **Episode Four** on developing consistent simplified ticketing and payment methods across the UK, **we do need to bring some more order into the technology surrounding the issue without constraining innovation.**

That area, however, is a big and important issue in its own right beyond the scope of this article.

For now, *MaaS* hangs in the ether **as a *Lost Soul* looking, hopefully, for a happy ending.** However, the news in the last few days of the **demise of *Whim* and *MaaS Global* in Helsinki** do not inspire confidence.

Digital Demand Responsive Transport

Demand Responsive Transport has been around in a **non-digital format** since the 1970's, **commonly known as *Dial a Ride*** and generally operated by local and health authorities for a **defined restricted customer base with mobility issues and health needs** which would constrain their access to standard public transport.

It would be **more appropriately described as pre booked, rather than demand responsive**, as it was usually only available on fixed days at fixed times.

In the early 2000's there were also some bigger **pilot public demand responsive schemes**, like one **run by Stagecoach linking Dunfermline housing estates with Central Edinburgh over the Forth Bridge**, aimed at professionals with young families choosing to live in the cheaper environment of Dunfermline whilst working in Edinburgh.

These were, **genuinely, demand responsive** operating all day 7 days per week with the **fleet controlled by radio and reservations made by telephone** to a control centre.

That scheme **ran commercially for a full year but was then discontinued as it was not financially self-sustainable**. None of the relevant local authorities had any interest in finding the funding to continue it.

In the **2010's a number of start up operations** developed around the world to **use 'Uber style' technology to provide group shared ride hailing** or regular commuter trips in small buses.

Chariot, initially in the USA, which was ultimately acquired by Ford Motors, and **Bridj**, initially in Australia, **were early examples**.

Whilst there was demand for the services, that **demand was not strong enough to create a long term viable commercial proposition** and most of those operations eventually ceased.

The only **ones which remain tend to be focused on commuter travel to and from specific workplaces, partially or fully, funded by employers**.

There was an **intuitive assumption that the technology used by Uber and Lyft etc for individual ride hailing purposes could be adapted to a model of collective ride sharing in small vehicles** in both urban and rural areas but most of the experiments and **pilots conducted to date have failed to be financially sustainable** and **those that survive are heavily financially supported** by either local authorities or other organisations.

There has been a lot of public sector interest in seeking to **use DRT as a cost effective way of meeting socially necessary demand in areas where conventional bus services aren't viable**.

Many **pilots have been initiated and**, more often than not, **when the pilot period ends, the services have simply been withdrawn** as the levels of demand do not justify the subsidy required.

There is another **intuitive assumption that *DRT* might be the best way to deliver evening and weekend services on commercial local bus networks when there is insufficient demand to cover the cost of a conventional evening or Sunday timetable.**

However, **to date, no commercial operator has seriously addressed that option.** Procuring vehicles and technology, purely for evening and Sunday use, makes no sense and, when you balance that against the fact that the commercial operator will already have both fleet and staff available, the marginally cheapest option might be to deploy them in some form.

There are **two alternative models for *DRT* currently gaining some traction.**

Firstly, seeking to **blend standard demand responsive travel with the existing statutory needs of local authorities and the NHS** to provide facilities for those with special mobility or health related needs **and running all of the operations from a consolidated fleet to deliver efficiencies.**

This **keeps overall cost down** for the combined package of operations and can bring them **to a level which the local and health authorities may see as affordable.**

Secondly, as exhibited by a pilot in Dallas, Texas in the US, **operating *DRT* with a minimum number of dedicated buses underpinned by a contract with Uber to deliver passengers from their home or destination to the nearest public transport access point whenever a dedicated *DRT* vehicle is not available.** That scalable **approach can make the overall *DRT* cost 'affordable'** to the local transport authority **but still requires material subsidy.** It can, however, prove more cost effective than having a larger dedicated, but inefficiently deployed, fleet.

Both of those models still require material amounts of public subsidy but **avoid some of the extortionately high costs per passenger** being seen in many local authority run *DRT* schemes.

The message emerging around the globe on *DRT* is that **the *Uber*/*Lyft* ride hailing model has worked extremely well in the taxi space but trying a similar model, using small buses for ride sharing, doesn't work so well commercially.**

So, there is a **divergence between intuition and real-world evidence.**

Does this tell us that the intuitive assumption that using *DRT* to plug low demand gaps in an ***Active Travel and Mass Transit First*** Model of mobility won't work or

have we simply more to learn around scheme design, customer behaviour and the performance of the technology and algorithms?

Two things are, however, clear.

Firstly, the very concept of an *Active Travel and Mass Transit First* Model of mobility with significant car constraint **will increase the market penetration of commercial bus operation and, therefore, simply make some of the need for DRT melt away.**

Secondly, the concept of commercial, or at least cost effective, **delivery of public transport in low demand areas or low demand times of day with DRT, needs more work and research.**

Hence *DRT* sits, quite simply for now, as **another *Lost Soul of Mobility*.**

It is, however, **too early to draw a definitive conclusion.** We **need to do the work to fully understand what it can, and cannot, achieve and deliver.**

Conclusions

Both *MaaS* and *DRT* have been around in various forms for some time but more recently they have evolved in terms of technology. Despite that evolution, we are **yet to see true viable commercial potential from either model.**

Quite simply, the **jury remains out on both options** as a material credible component of an *Active Travel and Mass Transit First* approach to mobility.

Both concepts need more work if they are to play a positive role in an environmentally and financially sustainable *Mass Transit* offer.

Next Week

In *Episode One*, we discussed the **potential of the bus** to play a major role over the next three decades in delivering *Net Zero* in the UK by 2050. That would **require much more change than simply converting the existing fleet to zero emission.**

Episodes One to Eleven outline the many **steps which will need to be taken to deliver the necessary transformation** of the bus product and market focusing on the industry's strengths and the opportunity **to develop a future golden age of the bus.**

However, a **future golden age of the bus is not in any way a given** and *Episode Twelve* will focus on the **potential weaknesses and threats which**

could jeopardise that golden opportunity and how they can be addressed and avoided.