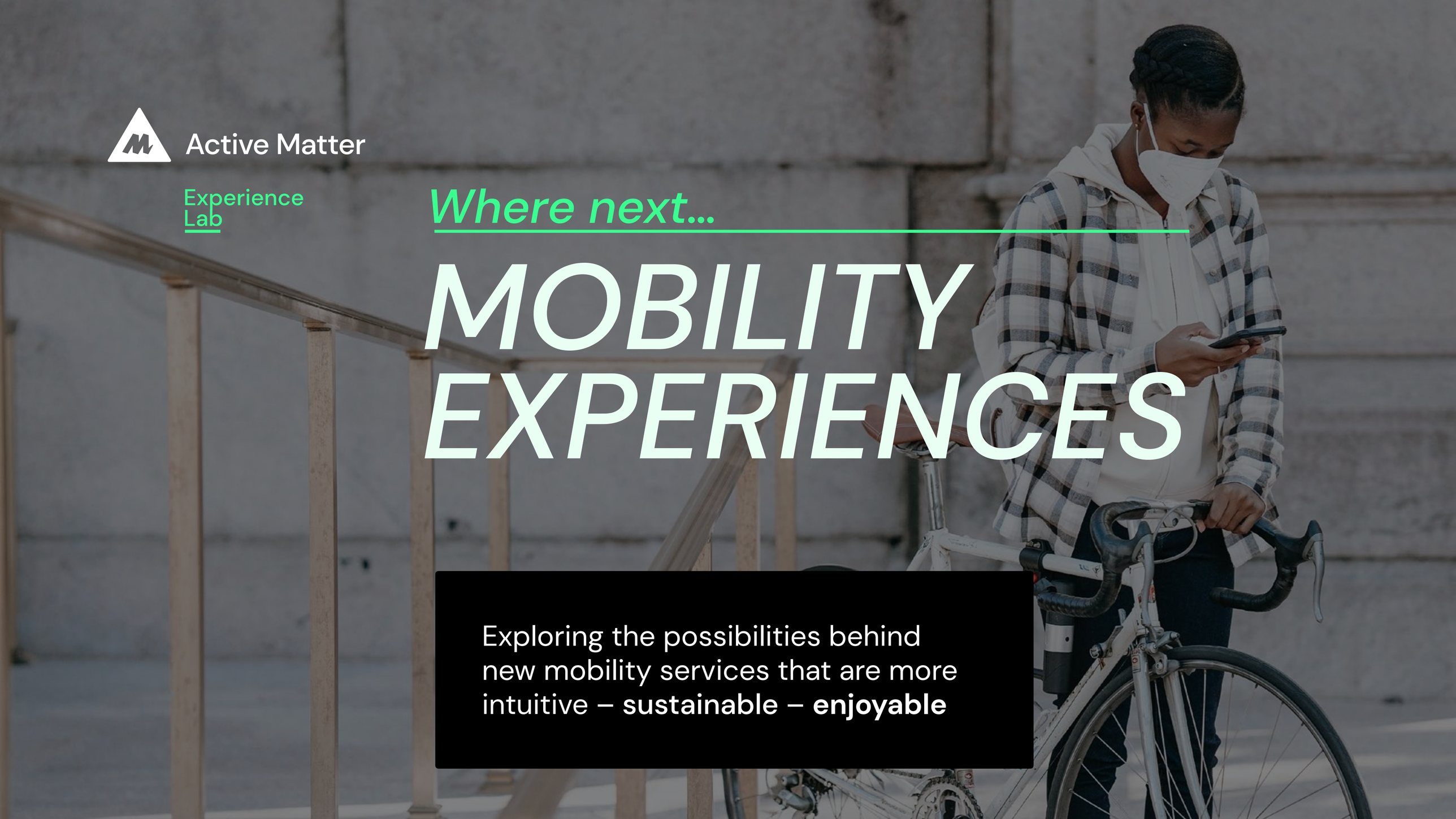
Active Matter

Experience Lab

Where next...

MOBILITY EXPERIENCES

Exploring the possibilities behind new mobility services that are more intuitive – **sustainable** – **enjoyable**



1/4 (24%)

UK greenhouse gas emissions come from domestic transport. The largest contributing sector to GHG.

GOV.UK

Active Matter

Content

"We are at a pivotal moment in the evolution of transportation. We have the opportunity to shape the future of mobility in a way that is more sustainable, more efficient, and more accessible to everyone."

Janette Sadik-Khan

Transportation expert, Former commissioner of New York City Department of Transportation

Amid higher rates of urbanisation, the resulting rise in congestion and subsequent ecological and health concerns, mobility providers are being challenged to deliver lower carbon, more convenient and efficient modes of transportation.

Combined with the evolution of consumer technology and the resulting shift in consumer expectations, modern mobility services are required to be better connected, more convenient, and with greater levels of efficiency than ever before.

However, there is a long way to go in matching the services that are available today with this heightened consumer expectation.

In particular, there are concerns around **reliability, the efficiency of provided routes, lack of amenities, accessibility, and the cost and provision of real-time information** to inform customers' route planning.

While legislation could be the key to improved services, there is a **big opportunity** for mobility service providers to drive change.

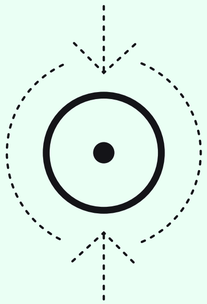
"Low current levels of satisfaction and virtually no brand loyalty suggests a market opportunity ripe for disruption with superior technology, accessibility and service delivery." - Forsta.

"Mobility is not just about getting from A to B. It's about connecting people to the places, experiences and opportunities that make life worth living."

Carlos Moedas

EU commissioner: Research, Science and Innovation

We need to start thinking **outside–in**



Getting people and goods from A to B has long been driven by convenience, speed and cost.

It has also long been assumed that private car travel is the best solution for these core needs. However, this approach has also driven the rise in pollution, congestion and a rise in sedentary lifestyles.

As rates of urbanisation continue to sore (forecast to double by 2050), these issues will only become more exaggerated.

While new technologies continually improve and expand the possibilities for low-carbon and efficient travel, we must build service models that facilitate an easy transition to new modes of transportation.

Considering consumer behaviour, sentiment and motivations, we can unearth leverage points for service and infrastructure improvement.

By considering the wider context of mobility, we can realise a greater potential for positive change through the improved experiences of mobility services.

It pays to look outside–in.

When exploring the human-centred design of mobility experiences, it is important to consider the context of the issue(s) as well as the sentiments of consumers.

This allows us an empathetic approach to identifying solutions that will cater for the complex range of needs across the mobility ecosystem.

Human-centred mobility

Great mobility services of the future will be driven by an ability to ‘join the dots’ of consumer habits, behaviours and needs.

It is only possible to do this by shifting our lens and viewing mobility as an ecosystem with a complex range of players and interdependencies.

- Empathise
- Define
- Ideate
- Prototype
- Test

Intrigued? Our **AM packages** turn thinking into practice...

Step 1: Empathise

Any shift in consumer habits will need to be driven by experiences that consider current consumer sentiment and how this relates to their proposed solution.

Before creating new systems, products and services to address the current challenges facing modern mobility, we must first consider how we have arrived at the present state.

Many of the current issues with mobility (pollution, congestion, public health etc.) have stemmed from our over-reliance on vehicle travel.

A study by the Institute for Transportation and Development Policy (ITDP) found that **cars are used for over half of all trips that are less than 3 km in length, even though walking or cycling would take a similar amount of time.**

Meanwhile, a report by the National Renewable Energy Laboratory (NREL) has found that **transportation is the fastest-growing source of greenhouse gas emissions in the U.S. and that cars and light trucks account for the majority of these emissions.**

The heavy use of cars also leads to increased road congestion and decreased physical activity, which has been linked to numerous long-term health problems.

While these issues highlight the need for a shift towards more sustainable and human-centred modes of mobility in the future, we need to ask why they remain such a popular mode of travel?

Why are we still so obsessed with using cars?

According to Transport for London, the main reasons people choose to use their car over public transport are (in approximate descending order):

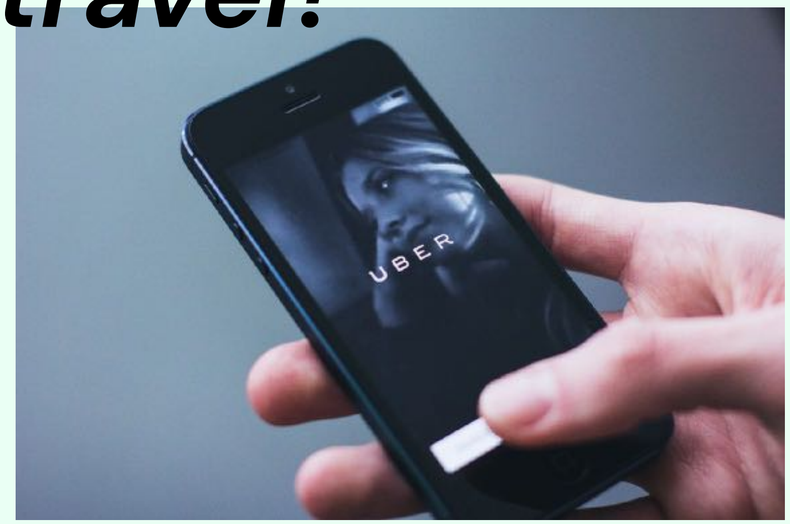
- Convenience
- Travel time
- Comfort
- Encumbrance
- Trip chaining
- Cost

But today, public and shared transport options are increasingly comfortable, clean and cost-effective.

However, there remains a significant ‘experience gap’ to fill if planners want to nudge people out of their cars and onto buses, trams or ride-sharing services.

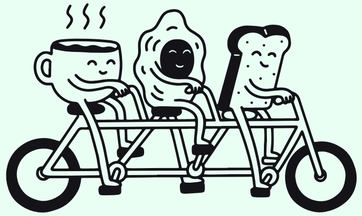
How might modern transport address the shortfalls in perceived convenience?

Could MaaS offer a solution as appealing as car travel?



A report by the International Transport Forum (ITF) found that **MaaS can provide a seamless and integrated transportation experience for consumers, reducing the need for personal car use.**

Additionally, a study by the Union of Concerned Scientists (UCS) found that **MaaS can increase the accessibility and availability of alternative modes of transportation, making it easier for individuals to reduce their reliance on personal cars.**



These studies suggest that MaaS has the potential to provide a convenient and accessible transportation experience for consumers, while reducing the need for personal car use.

However, it is important to note that the success of MaaS will depend on a number of factors, including the availability of alternative modes of transportation and the level of its integration with public transit systems.

“In a context where you've actually got public authority bringing in policies to make private car ownership and use less attractive, these [MaaS] are probably a very important part of the solution.”

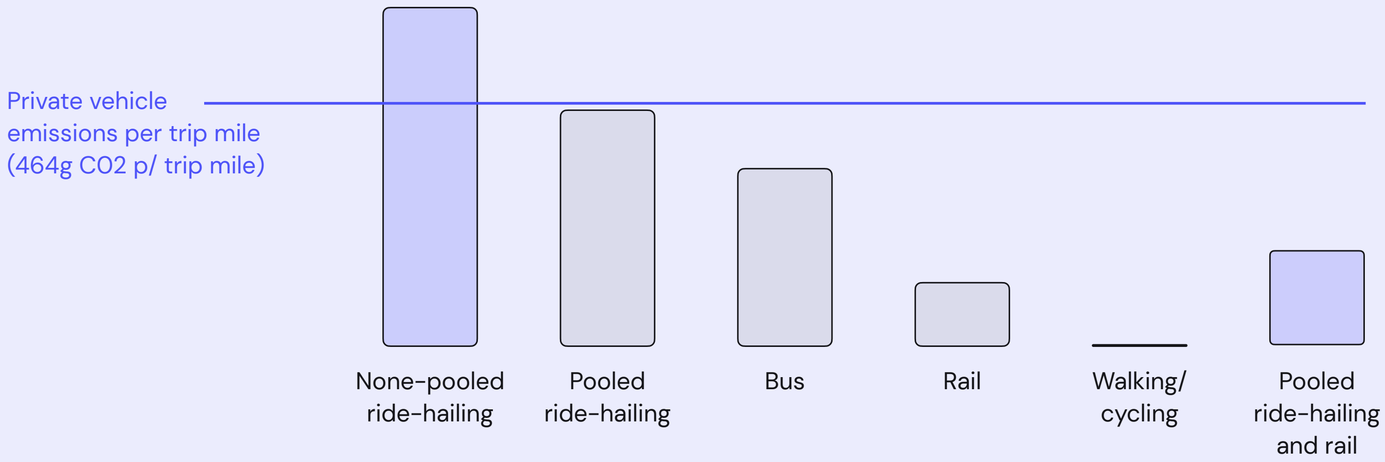
Leo Murray

Director of Innovation, Possible
(Climate action charity)

However, MaaS, currently fulfilled by traditional cars, does not prove a fully fledged solution to the pollutants of modern travel...

None-pooled ride-hailing emissions **+69%**

Transport modes and their emissions per trip mile compared to private vehicle travel



None-pooled ride-hailing (think Uber, Lyft etc) produces 69% more climate pollution than the journeys they displace. This is largely due to idle time between passenger rides.

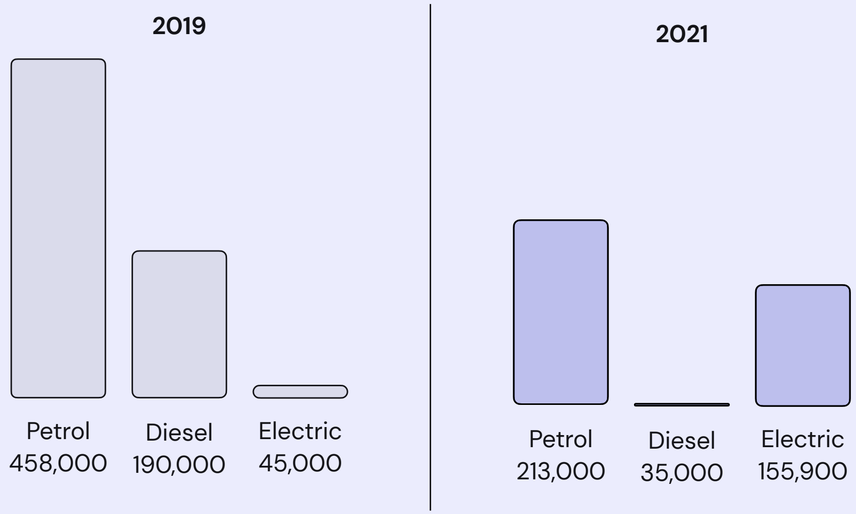
However, when timely paired with a shared mobility service such as rail, the reduction in emissions is significant.

This illustrates a need to create connected and multi-modal transport services.

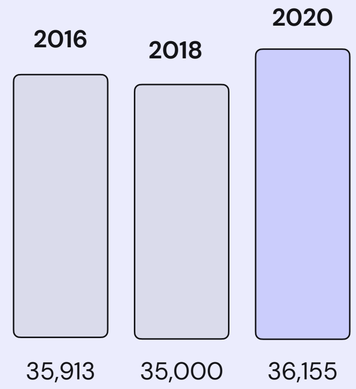
It’s important to note, electrification alone, will not solve issues around congestion and sedentary lifestyles...

While the adoption of EV cars is on the rise, largely due to the legislative pressures on OEMs, the rates of car ownership also continue to rise.

New cars register in the UK (by fuel type)



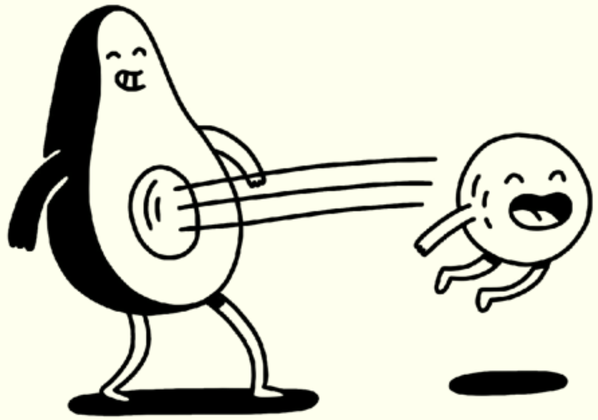
Rates of car ownership (in thousands)



EV cars may reduce the pollutant effects of a population obsessed with private car use, they will not reduce congestion on the roads or the negative effects of a sedentary lifestyle.

This further highlights the need for a shift in mobility use and a holistic approach to the challenges posed by modern mobility habits.

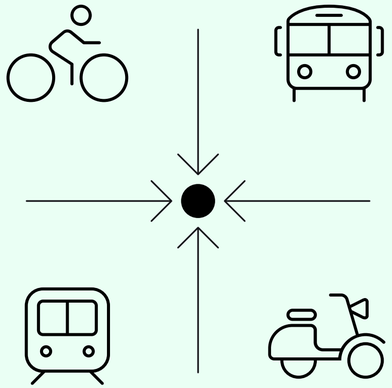
MOBILITY HUBS ENHANCE CHOICE, EASE AND INTERACTION



Step 2: **Define**

Mobility hubs are spaces where multiple modes of transport converge. Combined with local amenities and travel information, they offer a promising solution to more efficient and engaging travel experiences.

So, why are mobility hubs such a promising solution?



Mobility hubs offer a link between various modes of transport promoting and educating consumers on the most efficient modes for their journey.

This can significantly reduce the number of cars on the road leading to a better distribution of the movement of people.

Hubs offer and encourage more sustainable modes of transport such as micro-mobility and active travel through the provision of rental schemes, bike storage and route information.

Hubs improve customer experiences, by making better use of public spaces and providing a range of services at one location, customers can expect a more seamless and enjoyable mobility experience.

BREMEN

53° 04' 42.5" N + 8° 48' 00.9" E

Case study

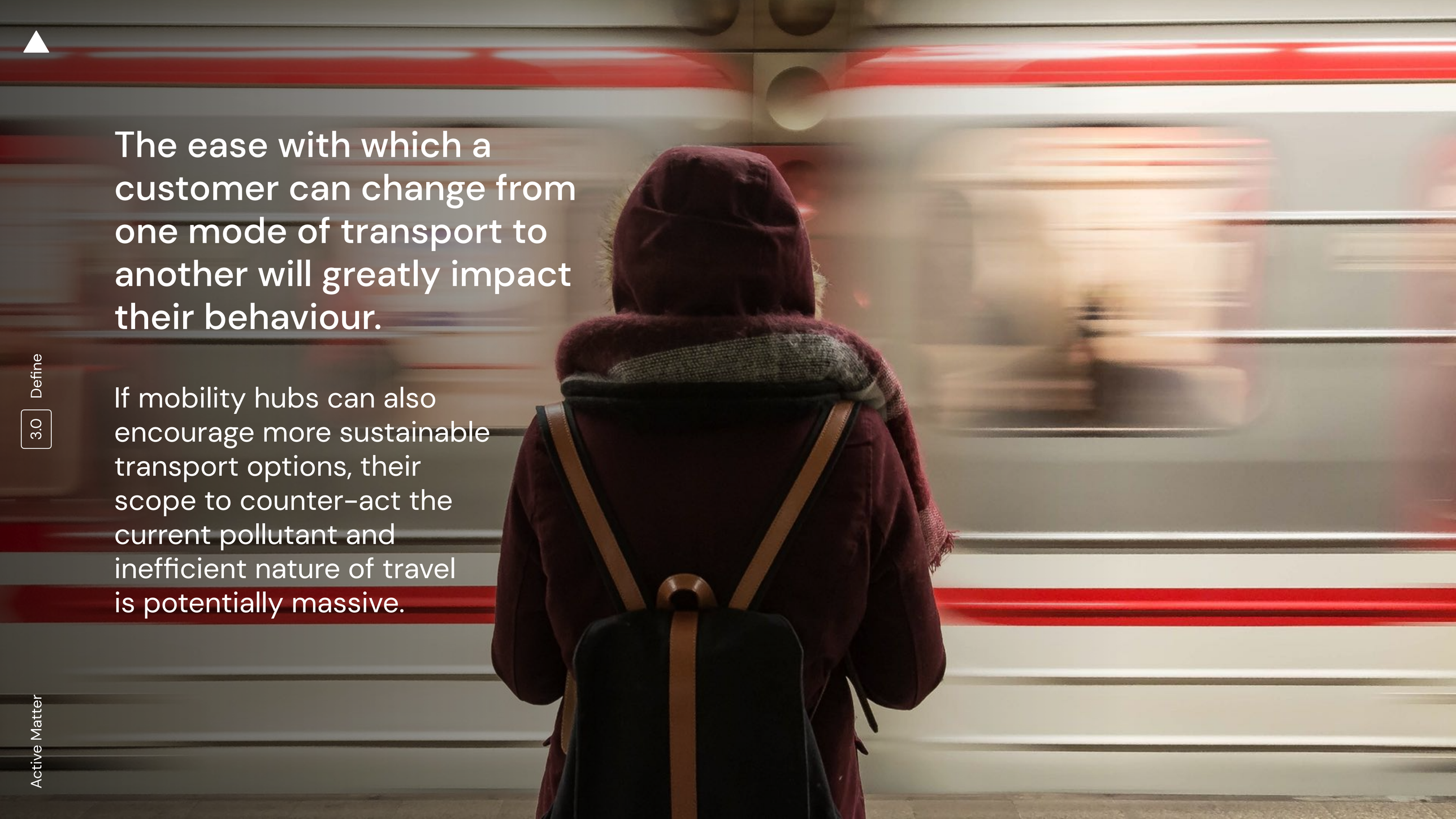
In Bremen, an ecosystem of mobility hubs have been in place since 2003 aiming to cut down private car ownership across the city.

24 hubs are spread throughout the city. Bremen include car-sharing as a form of transportation in addition to conventional public transportation choices, with 14,000 customers in 2017.

The hubs connect buses, trains, private bike parking and charging, a bike sharing programme, as well as a newsstand and other amenities, in addition to the substantial fleet of shared EVs.

Subsidised tenant mobility tickets substituted a number of regular car parking spaces, being able to reduce the amount of private car parking spots by approximately 4,000.

The vision is that all citizens should be able to walk to their local hub. Hubs should also be frequent enough to encourage customers to walk to their nearest alternative should their preferred mode of onward transportation not be available at their local hub.



The ease with which a customer can change from one mode of transport to another will greatly impact their behaviour.

If mobility hubs can also encourage more sustainable transport options, their scope to counter-act the current pollutant and inefficient nature of travel is potentially massive.

How might we unlock the full potential of mobility hubs?

- ***Connected***
- ***Convenient***
- ***Community-led***

A key benefit to mobility hubs is their ability to combine a range of transport modes in one accessible location, facilitating the convenience and journey chaining that brings such appeal to private car use.

This approach can offer a number of benefits, such as increased flexibility, reduced congestion on roads, and more efficient use of resources.

For example, a person may use a train to travel to a city centre, and then use a bus, bike or e-scooter to reach their final destination.

Greater provision of route information and real-time travel suggestions can further reduce the barriers such as lack of awareness or safety concerns that may limit the use of micro mobility or active travel options.

Beyond this, hubs can further their appeal through the provision of amenities and services. By doing so, hubs can act as a focal point for local communities and further drive consumers towards better travel options.

Step 3: **Ideate**

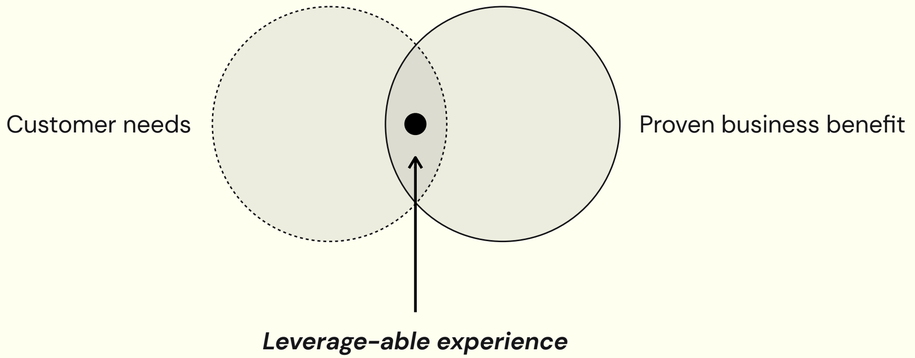
By stretching current thinking, considering future consumer needs and addressing possible barriers to the implementation of mobility hubs, we can begin to highlight their full potential.

Amongst the most common barriers to the wider adoption of mobility hubs as a model for improving mobility services are:

- **Limited coordination** and collaboration among different transportation agencies and stakeholders involved in the planning and implementation of mobility hubs.
- **Limited funding** and investment in the development and implementation of mobility hubs, especially in the public sector. (This is driven by a hesitation to invest in new infrastructure without guaranteed ROI).

What if... mobility hubs also provided methods to improve the flow and economic efficiency of private sector businesses through hosted delivery locations or kerbside drop off slots (as posed by mobility start-up Kerb).

An approach that marries private business benefits with consumer needs would stimulate private investment in new hub development.



COMMUNITY HUBS

What if...

"Mobility hubs have the power to transform communities, connecting people to the resources they need to succeed."

Janette Sadik-Khan

Transportation expert, Former commissioner of New York City Department of Transportation

For example, they can be designed to include public spaces, such as parks or plazas, which can provide a pleasant and inviting place for people to gather and socialise.

They can also include amenities such as cafes, shops, art installations or meeting and co-working space which can boost the local economy and reduce the strain and monopoly of city-centre amenities.

Utilising mobility infrastructure to provide places for service interaction reduces the number of journeys needed to complete daily tasks.

If mobility hubs can actively anticipate and incorporate such community needs as well as experiences to attract and delight consumers, they can realise greater usability and interaction further overcoming potential barriers and or negative attitudes towards their development and integration.

WELLBEING HUBS

What if...

More than two-thirds (67%) of global tourists find travel more stressful now than pre-pandemic. Demand is therefore surging for concepts to nurture holistic health in-transit.

COLLINSON

Health and wellbeing is a consumer need on the rise, accelerated by the pandemic and set to continue being a key consideration in urban planning and the development of public spaces.

Alongside the convenience of mobility hubs, utilising their information services could be a great tool to encourage healthier choices for travellers.

This could include the recommendation of routes where active travel (walking or cycling) is easier or more convenient that alternatives longitude amenities like bike storage, repair and rental.

Alternatively, offering public spaces for travellers to engage in sport or to destress and invest time in wellness activities could prove a great draw for mobility hubs of the future.

Equally, providing information on the pollution levels on certain routes may prove an additional factor in aiding public health.

ACCESIBLE HUBS

"A great mobility hub is one that brings together different modes of transport in a way that is intuitive, convenient, and accessible for all."

Seleta Reynolds

General manager,
Los Angeles Department of Transportation

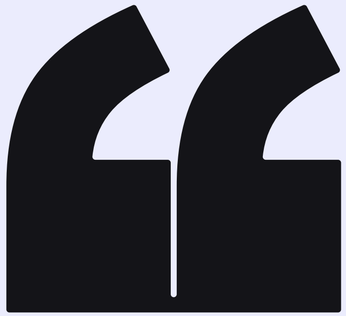
As well as making the experience of mobility more engaging, mobility hubs also have the potential to make travel more accessible for a range of audiences.

Harnessing accessible design principles, such as those published by designability can make their impact as universal as possible.

What if...

Design features to consider include:

- Providing clear way-finding and signage providing clear and visible signage to amenities and services;
- Designing the layout of the mobility hub to ensure that there are accessible routes to all areas, with smooth and level surfaces, and adequate space for people with mobility impairments to move around.
- Ensuring that amenities at the hub are accessible to everyone. This may include providing accessible restrooms, seating at a suitable height for people using wheelchairs, and other accommodations.
- Providing staff and other support services to assist people with mobility impairments in accessing the mobility hub and its services.



"Collaboration is critical to the success of mobility hubs, because it allows us to break down silos, share resources, and create a more integrated transportation system."

Scott Kubly

Director, Seattle Department of Transportation

While it is clear that there are many avenues that could extend and maximise the positive social and environmental impact of mobility hubs, the largest barrier lies in the successful collaboration and integration of these services.

Currently, transport hubs suffer form a lack of collaboration by private and public bodies responsible for their operation and service provision.

This can lead to a disjointed and unsatisfactory customer experience, a possible driver behind the current preference for automotive travel.

However, as technology continues to develop new ways to connect consumers and service providers, a connected ecosystem could serve to benefit all parties invested in the success of mobility hubs.

A recent study by the Hilton group suggests that **67% of UK travellers are looking to technology to make travelling more seamless in the future.**

It seems only logical that as consumer experiences become increasingly connected and interactive, that travel, and the organisations charged with developing MaaS services, should be no different.

IMOVE, MANCHESTER

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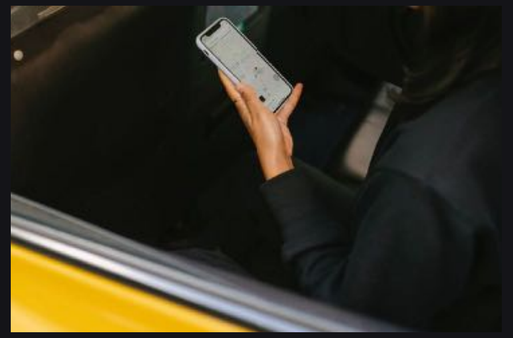


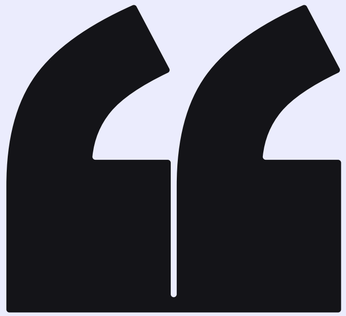
Case study

Transport for Greater Manchester (TfGM) recently trialled the IMOVE APP to integrate different private and public transportation companies in and around Greater Manchester into a single platform.

The platform gave staff and consumers at Manchester Airport easy access to reserving Enterprise car rental and car club options, Stagecoach bus services, trains, Metrolink trams, and TfGM's Local Link minibus service.

When users were planning their journeys, public transportation choices like buses were given priority over car clubs and car rentals, while walking and cycling were included as active travel mode options.

The journey planner and tram and rail reservations were the most popular features.
A majority of participants expressed satisfaction with the IMOVE platform while their perceptions of public transport also improved with 100% of participants agreeing that digital mobility services such as this would benefit Greater Manchester and 75% stating they would cycle, jog or walk to work if offered incentives.



“Digitally transformed businesses typically develop an ecosystem that blurs the lines between supply chain, partner, customer, crowd, and employee and both strategy and execution are heavily influenced by this ecosystem”

Isaac Sacolick

CIO & MD, Greenwich Associates

Digitisation offers a range of benefits for customers and stakeholders within the travel industry.

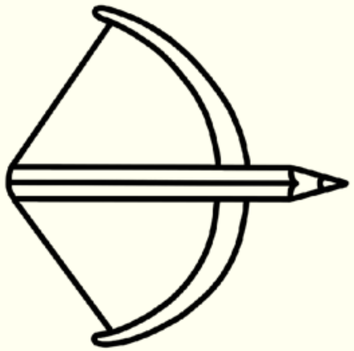
By making information about travel options and destinations easily accessible online, customers can make more informed decisions in real-time, improving their experience and reducing the need to contact customer service.

The ability to book, pay and manage travel plans digitally also makes the experience more convenient, saves time and effort, and makes journey and multi-modal travel planning and chaining easier.

Improved communication through online channels helps build trust and facilitates the delivery of timely communications and updates and enhances the overall customer experience.

Digitisation also enables travel companies to collect and analyse customer data to provide personalised experiences, recommendations or rewards improving the overall travel experience and customer satisfaction.

MOBILITY WITH HUMAN EXPERIENCE AT THE HEART



Designing a compelling digital offering will unlock the potential of mobility hubs to further combat the current challenges facing mobility and exceed the customer satisfaction levels of travel alternatives.

For this, we have developed a design framework that we call **C.A.R.E**.

Handle with CARE:
A framework for human-centred mobility design

The **C.A.R.E** model focuses on four key attributes of a successful mobility service design.

We believe that by providing **contextual** information, **accessible** experiences with the use of **real-time** feedback and insights alongside **edgeless** transition and payments between modes of transport, mobility hubs could truly realise their full potential to tackle the wide spectrum of societal and environmental challenges currently facing modern mobility.

With human experience at the heart

Our principles to create products and services
with the full potential of mobility in mind

C.A.R.E

Contextual

Knowing where your customer is, where they're going and who they're with are all pieces of information about the context they're in.

The best travel services use context to create the most convenient and useful experiences.

Accessible

Mobility experiences don't have to feel impersonal and transactional.

Travel should feel natural, personalised, fun and helpful, for everyone, at scale.

Real-time

We've all become accustomed to an interconnected world where we can shop, communicate, learn, and consume media all in real-time.

The expectation of travel and mobility is no different. Products need to surface updates, make smart suggestions, and give rewards in real-time.

Edgeless

Movement should be convenient and smooth. A flow from one place to another that's orchestrated for you with minimal anxiety.

From hopping on a bus to last-mile delivery to seamless payments, the experience should be frictionless.

Furthermore, what other human benefits might be unlocked if we get things right and create a smooth-flowing transportation ecosystem based on a mobility hub mentality?

A healthier, more active society – improving mental health for all

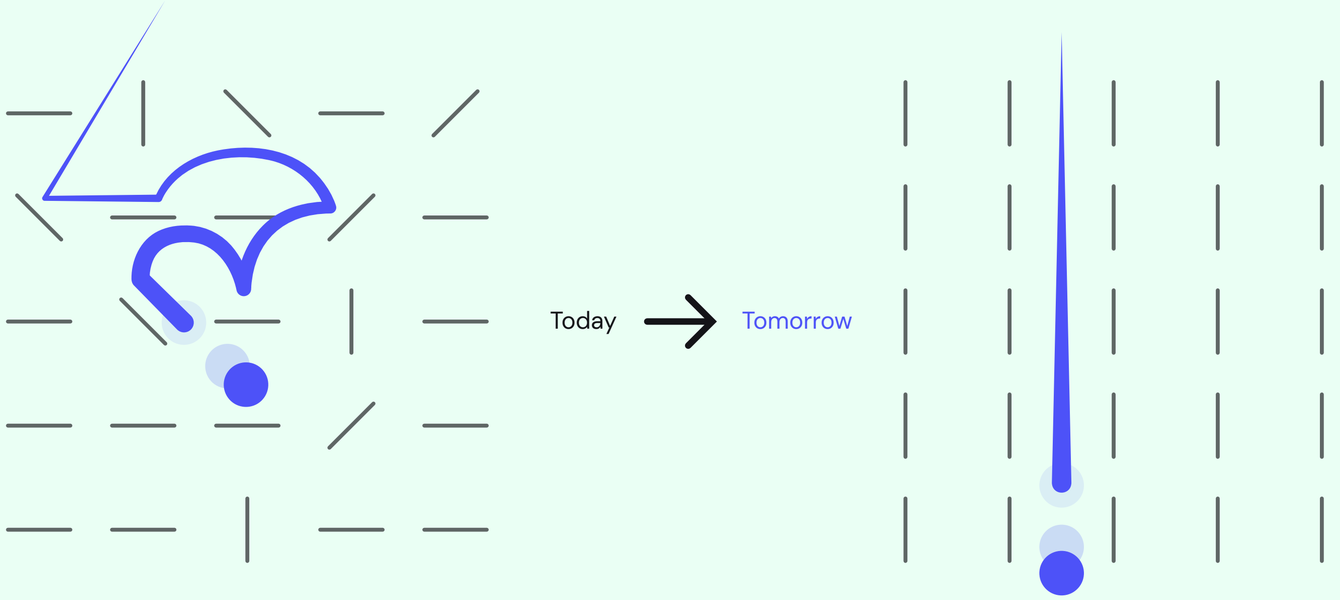
Lower levels of obesity – leading to less pressure on the NHS

Reduced 'dead' travel time – leading to increased productivity

Create new communities – leading to new opportunities for both business and leisure

Greater social mobility – leading to improved opportunities for everyone

Cities designed for people, not cars – making environments people want to enjoy

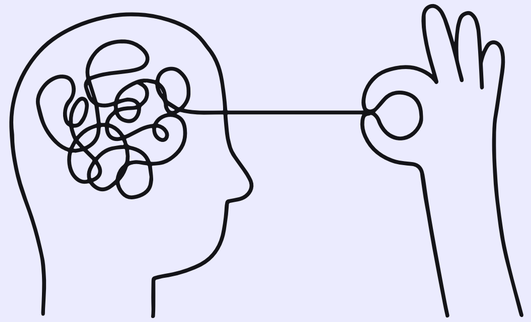


Where next? **Prototype & test**

Fail fast, learn quick.

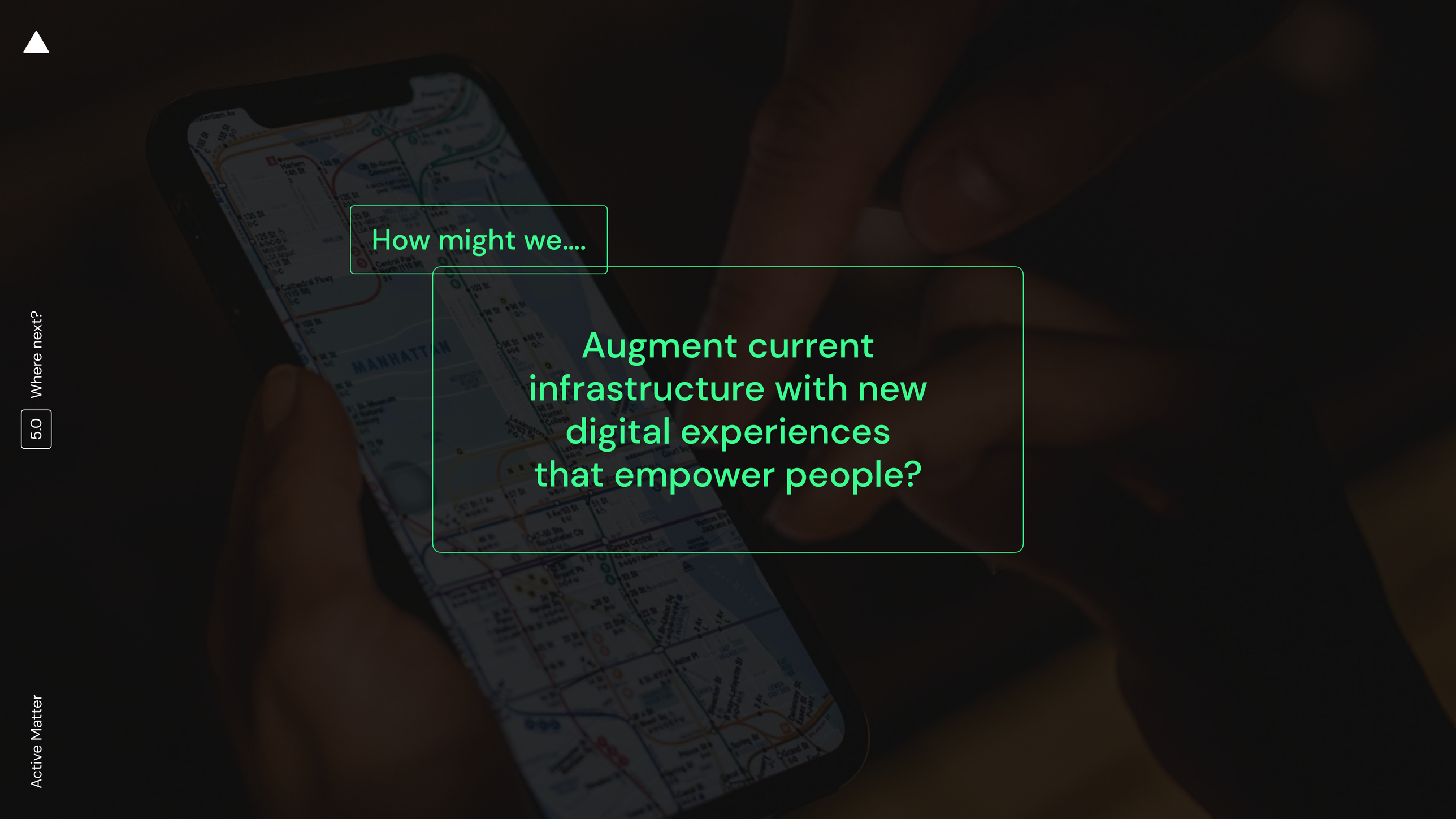
A common barrier to advancing customer mobility services is the inability to rapidly prototype and test or to scale promising solutions.

However, digital products do not require the same level of investment, time, land or resource as physical infrastructure, to quickly build, test and learn what customers really want.



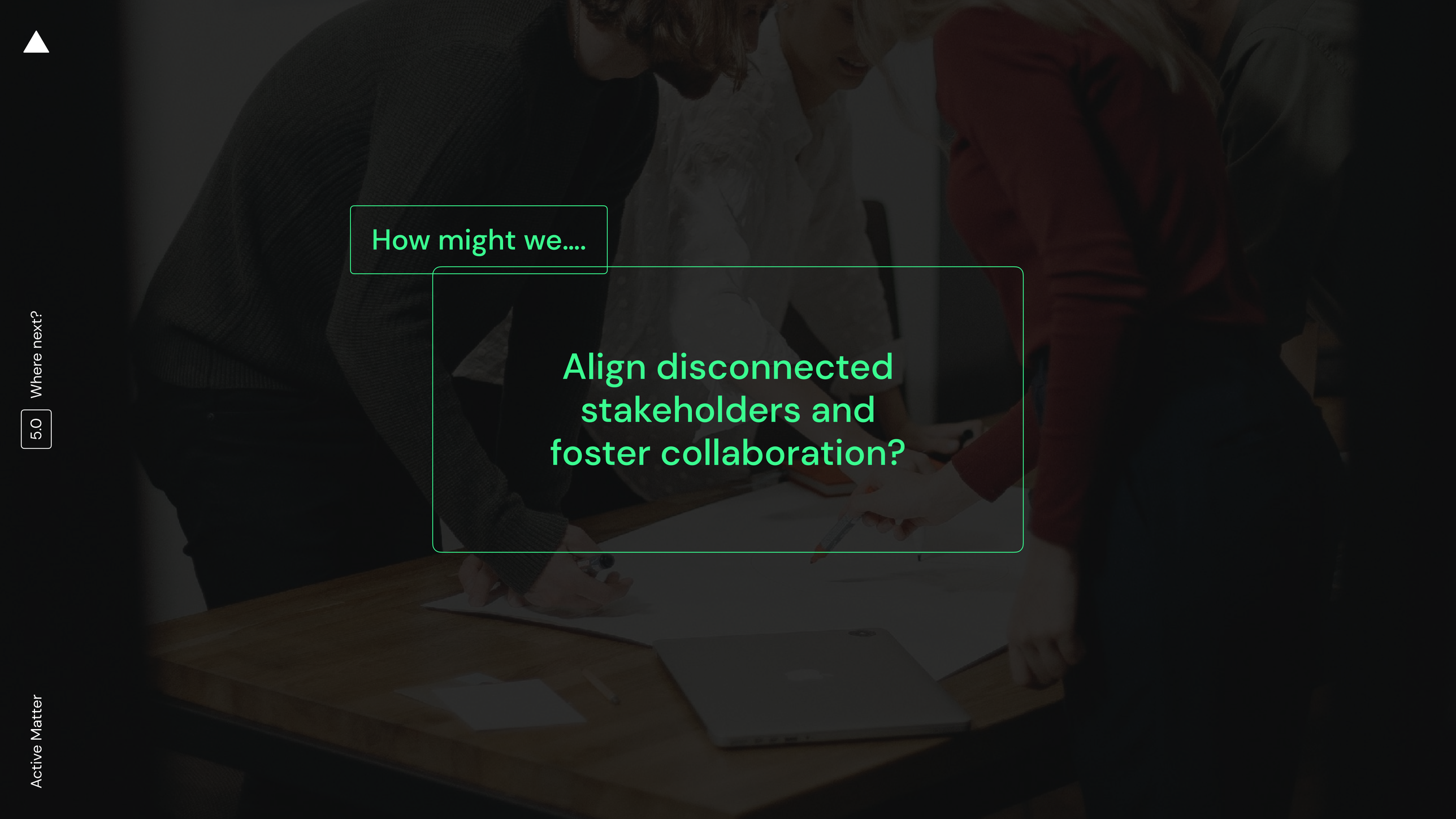
Ultimately, **test and learn** is built on the ability to put such principles to practice as the most efficient way to qualify any approach or solution before iterating and refining your ideas. De-risking your investment exposure and ensuring a solid foundation for a profitable future.

Got a challenge? Our **Product launchpad** is built for this...



How might we....

Augment current infrastructure with new digital experiences that empower people?



How might we....

Align disconnected stakeholders and foster collaboration?

How might we....

Ensure mobility hubs are fit for the future?

Active Matter partners with ambitious organisations at moments of reinvention and growth.

Together we create products and services that improve experiences, open new markets, and drive sustainable growth.

Do you have a difficult design challenge?
We'd love to talk...

tom@ActiveMatter.co

Positive business growth by design