What's Now. What's Next.

Mobility

↳ People-orientated Transport

Mobility: People-orientated Transport

↓

Welcome to our **What's Now. What's Next.** series – an exploration of resilience, adaptation and antifragility in the context of an increasingly complex world.

This paper explores how, against a backdrop of dynamic factors, we can deliver sustainable, equitable transport networks.

The changing face of mobility

The way we travel is changing.

Against a backdrop of climate change, increasing urbanisation and shifting human behaviours around how we work, live and play, decision makers have more dynamic factors to consider than ever before. Added to this is the need to accommodate multiple requirements and user demands within increasingly constrained spaces.

By taking a systems approach to network planning, forward-thinking transport solutions can unlock opportunity and contribute to a more sustainable and equitable society.

How transport can enable placemaking

Placemaking is a well-known approach to planning and designing public spaces with the community in mind.

Carefully considered and executed transport networks can be a powerful lever to effective placemaking – enabling connection, inclusion and wellbeing – by responding to the unique needs of the local community while balancing the needs of disparate user groups.

A combination of public transport, such as buses and trains, as well as active travel options, like walking or cycling, plays an important role in the liveability of any place. Mobility hubs that seamlessly incorporate public transport and active travel can create better shared areas, increase connectivity and make it safer for users like pedestrians and cyclists to get from A to B. In acknowledging the role transport plays as both a connector and enabler of place, it is imperative to carefully consider how we plan and design our streets and public spaces to deliver elevated community outcomes.

Looking at the transport network more holistically allows planners, designers and engineers to harness opportunities to enhance the use of public space. This can be as simple as closing roads to cars on the weekends to allow for pop-up community events, outdoor cafés or markets, or converting a single-use street into a multi-use boulevard. In this way, optimal mobility outcomes are about the best use of 'place and space' and informed by what the community values most. At its best, holistic transport planning looks well beyond maximising traffic throughput to enable multiple social and economic functions.

A sustainable, accessible, reliable and safe mobility network does more than just get people from one place to another. The focus on more sustainable and equitable means of mobility is helping to connect our transport network, creating 'loveable' places that people are drawn to – and want to linger in.

A combination of public transport, such as buses and trains, as well as active travel options, like walking or cycling, plays an important role in the liveability of any place.

Putting people at the heart of planning decisions

Another key consideration in the mobility equation is understanding people's needs and desires for a space through appropriate community engagement.

This can often lead to unexpected outcomes. When engaging the community on a suburban transport project in the United Kingdom, our team presented options for creating a dedicated bicycle lane, removing cars and allowing bus access only to a key through-road. Surprisingly, the cyclist user group we engaged with decided that a separate bicycle lane servicing this connection was not the best use of space. This resulted in more dedicated footpath space for pedestrians and cost savings overall – a win for the whole community.

Putting people at the heart of decision-making means designing transport that can be used by everyone. Universal design – that is, building in solutions that address the needs of all user groups, not just the majority – ensures more equitable and accessible outcomes. For example, because cars are essential for many mobility-impaired people, adopting universal design principles can reduce reliability on specialised transit systems and increase uptake of public mobility systems. By better understanding the nuanced needs of unique user groups, more inclusive design decisions can be made.

An example of this is the innovative approach our transport planners took when working for a residential developer in the United Kingdom, where car clubs – providing short-term rentals as an alternative to private vehicle ownership – are standard in dense urban areas such as London. Because most mobility-impaired people require a vehicle that can accommodate a wheelchair, our planners proposed London's first ever 'mobility inclusive' scheme by including wheelchair-friendly vehicles for hire. In addition to the benefits of car-sharing schemes in enabling efficient use of residents' parking spaces, a new, inclusive option for mobility impaired people was conceived and delivered.

Universal design – that is, building in solutions that address the needs of all user groups, not just the majority – ensures more equitable and accessible outcomes

Anticipating future needs, adapting to change

As our climate changes, technology advances and working patterns shift, transport and mobility systems will need to be increasingly adaptable and flexible. Large, expensive transport infrastructure won't always be the answer; instead of thinking one hundred years ahead, tomorrow's transport professionals may deliver smaller, perhaps even temporary, transport solutions that are sustainable and more cost-effective. Responsive solutions built to shorter horizons – especially those that take into account more extreme and frequent weather events, changing community structures and incoming technology – will become the norm.

The transport industry and infrastructure sector more broadly, is undergoing a critical transformation in response to climate and circular economy challenges. There is a growing societal shift among transport professionals to 'move more with less'. In Australia, we have provided complex evidence-based decision making to help politicians and communities understand how high-impact infrastructure, such as additional lanes and bypasses, are not the best solution. We were able to show that there are innovative ways we can create mobility and access through smart use of existing assets. This work has saved millions in capital expenditure and has a much lower climate burden.

With transport currently responsible for

20%

of global greenhouse gas emissions, green transport and cleaner mobility will be key to helping us meet climate goals.

In places like the United Arab Emirates, encouraging active travel in 40-degree Celsius heat is difficult. In hot climates in particular, incentivising the adoption of lower emitting vehicles and making active travel cooler and more comfortable through the integration of trees for shade, green spaces for biodiversity and places to sit, as well as incorporating water and nature into the design, will be key. This challenge is not limited to hot climates alone. As one of the highest contributors to climate emissions, decarbonising transport will be critical for the future of mobility.

The good news is more sustainable modes of transport are already emerging. In 2021, electric vehicle sales doubled from the previous year to a record of

6.6M

and have continued to rise in 2022, enabled in part by increasing numbers of fast charging stations in many parts of the world. In urban centres, people are relying less on single occupancy vehicle travel, with a rapid rise in ridesharing and the use of electric bikes and scooters. As fuel prices increase, incorporating active travel and greener, shared transport into our mobility network will foster thriving, climate-resilient communities.

Making improvements, today

To make the most of the mobility revolution that is upon us, transport professionals and decision-makers at all levels can look to innovative, people-centric solutions.

- Best practice examples exist in many parts of the world, with new approaches being pioneered by the current and emerging crop of urban professionals.

- These solutions couple the tangible and intangible benefits of leading-edge transport planning to support the fundamental rights and needs of all citizens to move freely within their community, while balancing complex environmental, economic and social considerations.

- By leveraging movement data, engaging the community, adopting inclusive universal design principles, understanding how mobility can contribute to a sense of place and championing sustainable transport, mobility can continue to adapt and benefit our future communities.

Contributors

Samantha Chapman

Engineer and Transport Market Leader for Tasmania;
Engineers Australia Tasmanian Young Professional of the Year 2022

Hobart – Tasmania, Australia

David Hurren

Leader of GHD's UK Transport Team

London – United Kingdom

About GHD

GHD recognises and understands the world is constantly changing. We are committed to solving the world's biggest challenges in the areas of water, energy and communities.

We are a global professional services company that leads through engineering, construction and architectural expertise. Our forward-looking, innovative approaches connect and sustain communities around the world. Delivering extraordinary social and economic outcomes, we are focused on building lasting relationships with our partners and clients.

Established in 1928, we remain wholly owned by our people. We are 10,000+ diverse and skilled individuals connected by over 200 offices, across five continents – Asia, Australia, Europe, North and South America, and the Pacific region.

Discover more at ghd.com