

Safeguarding our
cities for the future

Welcome to the autumn 2022 edition of Momentum's Connect. In this issue we're looking ahead to the future, with the launch of our very own 'Momentum City'.

Keep in touch

www.momentum-transport.com
www.momentum-city.com
 LinkedIn: Momentum Transport Consultancy
 Instagram: momentum_transport
 Twitter: @Momentum_TC_Ltd
 Vimeo: www.vimeo.com/momentumtransport

Transport consultancy is changing faster than it ever has. It's an exciting place to be with opportunities to tackle some of society's biggest challenges.

The most serious challenge we all face is climate change. Globally, the transport sector is the major contributor to greenhouse gas emissions, and it clearly follows that progressive transport planning and consultancy must be at the forefront of the fight against it. We continue to work every day with our clients to push sustainability boundaries and do things better.

But our work also has to go beyond moving the dial on emissions targets. People are our priority and society today is facing many other challenges, which good urban design can help to mitigate or solve. The projects that we work on, across market sectors and around the world, ensure more people can travel sustainably, while also creating safe, liveable, well-planned and equitable places and neighbourhoods. The articles in this edition of Connect explore these areas in more detail through the lens of the role of heritage and 20-minute neighbourhoods in Scotland's bid to improve societal interconnectivity, reduce social isolation, improve health and wellbeing, improve levels of activity and regenerate areas of decline; and decelerating transport's contribution to emissions. We also feature a snapshot of our case studies which are already delivering benefits to our clients and to the people using the spaces which have been created through our transport strategies.

With these themes in mind, we're also excited to invite you to visit Momentum City.

Over the coming months Momentum City – our exemplar global city – will grow to explore how good urban design and transport can accelerate the transformation of our economies and communities, bend the curve on global emissions and deal with the impacts of climate change. You can read more on pages 10-11 or head to www.momentum-city.com to find out more.





Contents

06 - 07

Shifting the shift
towards space and place.

Written by Roy McGowan and Kana Nomoto



12 - 13

Case study
snapshot



08 - 09

20 minutes to better health,
net-zero and more equitable
communities: creating imaginative
and attractive places to live.

Written by Mailys Garden and Nicola Atkinson,
Artist and Director of Beautiful Materials Design Studio



14 - 17

Introducing
Momentum City

Illustrations by Tasia Graham



10 - 11

Decelerating transport’s
contribution to emissions
– with five initiatives.

Written by David Hart



18 - 19

About our
contributors



Shifting the shift towards space and place.

We're in the midst of a shift in thinking – and action. Brought about by some stark facts: transport is the largest contributor of emissions in the UK, but the speed of change in reducing emissions since the 1990s has been so slow, the UK risks not meeting its target of net zero greenhouse gas emissions by 2050.

In London the Mayor has set the target of being a zero-carbon city by 2030, alongside a vision for walking, cycling and public transport to comprise 80% of journeys by 2040. But there is understandable concern that the challenging progress with transport will fail to meet these targets.

The DfT's 'decarbonising transport – a better, greener Britain' (published July 2021), the government's hydrogen strategy (published August 2021), Gear Change (published July 2020), the bringing-forward of the ban on the sale of pure internal combustion engine cars to 2030 and the Mayor of London's expansion of the ULEZ scheme (with little objection) all led us into last November's COP26. The culmination of COP26, from a transport perspective, was a declaration on accelerating the transition to 100% zero emission cars and vans, signed by more than 30 governments, as well as regional governments, automotive manufacturers and others.

For many the solution to transport's climate change challenge seems to rely on electrification and other technologies and fuels. However, the DfT's strategy clearly underlines that this alone cannot give us the results we need: "We cannot simply rely on the electrification of road transport, or believe that zero emission cars and lorries will solve all our problems, particularly for meeting our medium-term carbon reduction targets to 2035. It continues: "We cannot pile ever more cars, delivery vans and taxis on to the same congested urban roads. That would be difficult for the roads, let alone the planet, to tolerate. As we build back better from the pandemic, it will be essential to avoid a car-led recovery."



The shift to space and place

This is why the shift needs to shift – towards thinking about space and place.

At Momentum we've previously talked about transport as an enabler, in the context of looking for solutions for London's housing crisis. We believe this is true when it comes to tackling climate change too.

And in seeking to address the challenges of climate change (and air quality, and public health) through a holistic transport strategy we also set into motion a virtuous circle which shifts our thinking from simply decarbonising motor vehicles, towards equitably taking cars and freight off our roads and freeing up 'spaces' - so that we can then create 'places' that people enjoy spending time in.

At a recent New London Architecture (NLA) event (titled Embracing Changing Transport Methods), at which we were honoured to speak, we highlighted the challenging position that London is in. We are seen as one of the most congested cities in the developed world, air pollution from road vehicles is a significant problem, car usage has rebounded following Covid, we have an increasing amount of freight on the roads and a road safety problem - and we have hugely ambitious targets to meet. But there are transport strategy levers which we can still pull. These include distance-based road user charging (an opportunity to offset TfL's current funding challenges), shifting modal priorities, achieving car free environments, introducing micromobility and harnessing the use of river and rail, last-mile deliveries and freight consolidation.

It's a sobering statistic that half of the freight vehicles in the City of London have neither an origin nor a destination in the City.

Within DfT's Decarbonising Transport report, it's recognised that road freight is a key contributor of carbon emissions in cities and there is a significant opportunity to decarbonise the last mile. The report also supports a modal shift from road to more sustainable alternatives, such as micromobility and light rail. When we look

at transport more strategically, we start to see solutions. Such as how we might deliver freight consolidation strategies using measures such as collective procurement to reduce the number of trips from suppliers; and the use of e-cargo bikes to lower emissions generated and the space used by delivery vehicles.

The report also highlights the role of new technology, shared mobility and data to increase average road vehicle occupancy by 2030. Shared mobility offers an alternative to traditional mass transit, decongesting our transport network by offering first- and last-mile solutions. Building on the UK's national and regional e-scooter trials, we developed an in-depth study of rental e-scooters in Dublin for e-scooter provider Dott, which found that their success requires consideration of the site-specific context and strategic locations near transport hubs.

Finally, the DfT more holistically focuses on how we can achieve these targets within the planning system to fuel a long-term shift towards a decarbonised transport network. The guidance notes that there is no uniform approach to reducing transport's environmental impacts and actions must be place specific. A place-based approach - working closely with local authorities to understand the local context both from a transport and policy perspective – is critical to achieve the targets.

Speaking at the London Car Free Day Summit 2021, our colleague David Hart argued that many of the interventions which are necessary to address the challenges society faces are "being progressed with policy support, albeit in a piecemeal way. Fundamental changes that bring more impactful change are also needed." We believe that a holistic transport strategy, working collaboratively with government, local authorities, commercial developers, architects and communities puts transport at the forefront of addressing and fighting climate change.





Public Artwork 'Damask & Red Shoes'. Photo ©Jim Payne



From examples around the world, we know that 20-minute neighbourhoods work. Being tried and tested from Portland, Oregon, to Paris, community feedback from pilot programmes has demonstrated what can be achieved with a set of (relatively) straightforward interventions such as improving cycling and pedestrian crossings of railway lines; enhancing connectivity of existing facilities through improved walking and cycling paths; reviewing bus service routes and frequency; supporting safe walk-to-school programmes; supporting community public art programmes and installations to reflect cultural heritage; and delivering streetscape improvements to revitalise local centres.

The Edinburgh City Plan 2030 has already identified eight town centres as starting points and Scotland has the opportunity to be a global leader in delivering this concept across the country, showing that it is feasible in both urban and rural locations. We can also showcase and reflect Scotland's rich cultural heritage through public works of art and design tailored to suit each town or city. As Glasgow City Council states in its Heritage Assets Plan: "The importance of heritage cannot be overstated; it contributes substantially to prosperity, health, education and civic pride through providing evidence of our collective shared past, a high-quality urban environment and a unique identity for a place. It also sustains neighbourhoods as attractive places in which people wish to live, work and play."

There is, without doubt, a major opportunity for Scotland to use 20-minute neighbourhoods to improve societal interconnectivity, reduce social isolation, improve health and wellbeing, improve levels of activity and regenerate areas of decline.

So great is the opportunity that in its Programme for Scotland, the Scottish Government committed itself to work with local government to take forward its ambitions for 20-minute neighbourhoods where people can live, work and learn in communities close to home, as well as promising over £500 million over five years for large scale, transformational active travel infrastructure projects and introducing Low Emissions Zones in Scotland's major cities in the first half of 2022.

Designed as places where residents can meet most of their day-to-day needs within a 20-minute walk from their home, they are considered enablers for many of the objectives our transport strategies seek to achieve, such as improved health and wellbeing, increased

active travel, sustainable and inclusive transport, and air quality improvements. But future 20-minute neighbourhoods must also be designed in a manner that nurtures strong local communities characterised by trust and people working together to create a liveable place. Creating a sense of community is an important identity-creating factor for people and the design of such a neighbourhood should inspire inhabitants to have a sense of pride in their community.

Nicola Atkinson, Artist and Director of Beautiful Materials Design Studio, says "With this understanding artists should be involved throughout the process, working in cooperation with the project leaders and the community to create thoughtful, imaginative and attractive places where the environment supports a high quality of life and sharing the hierarchy of ideas. Art and design is an essential part of this and is fundamental to the success of the identity and sense of community in any neighbourhood. Art brings imagination, creativity, expertise and inspiration to the everyday. Creating an artistic landmark by using locally sourced materials or just excellent design will provide long-lasting pieces of public art which would be of benefit to the community and its sense of place."

One such example is the public artwork 'Damask & Red Shoes' on Bruce Street in Dunfermline (see left), created by Nicola. The public art installations have improved the look and feel of the street, as well as reflecting local history and encouraging more people to visit the area by foot and bike. Bruce Street is a partnership between Sustrans Scotland, Fife Council and local partners Delivering Dunfermline and Dunfermline Heritage Partnership.

Strengthening the concept of 20-minute neighbourhoods using art and design will help to build social capital as people select communities to live in based on many parameters including attractive urban qualities, pleasant atmospheres and good social infrastructure.

And this means working together with communities to create spaces in a collaborative approach to enhance community cohesion, inclusivity, safety and resilience. All the while recognising the importance of creativity, culture and the arts to our collective identity and future places.



20 minutes to better health and more equitable communities.

Written in collaboration with **Nicola Atkinson**, Artist and Director of Beautiful Materials Design Studio, who has established a practice at the forefront of creative, placemaking, community engagement, and delivering artworks developed through genuine public participation. Beautiful Materials Design Studio is committed to delivering well-conceived and durable artworks that inspire and prompt actions, interactions, and reactions.

<https://beautifulmaterials.co/>

There's been a lot of talk about 20-minute neighbourhoods. Although not a new concept within planning, there's certainly a renewed political and societal focus on their development and potential benefits.

In Scotland, 20-minute neighbourhoods feature as a concept in several national policies as a means of both supporting post-Covid recovery and reinventing places for the future. They also serve Scotland's emissions reduction target of becoming net-zero by 2045 by an anticipated reduction in the need to travel. Scotland's fourth National Planning Framework Position Statement (published in November 2020) focuses on four key areas: 'a plan for net-zero emissions', 'a plan for resilient communities', 'a plan for a wellbeing economy' and 'a plan for better, greener places'. It's clear to see how the 20-minute neighbourhood concept, along with sustainable transport planning and urban design, might be the enabler to all these aims.

Decelerating transport's contribution to emissions – with five initiatives.

10.

At Momentum we believe we are – and have been since we were founded in 2012 – at the forefront of addressing and fighting climate change. But as we inch closer to the deadlines of the many environmental targets that have been set, it's more important than ever that we assess and put measures into place that are going to be truly effective.

As part of all the projects we work on, we consider how to enable our clients to be compliant with current policy - while also thinking about how to reduce and minimise the predicted environmental impacts from the development and project. At the World Car Free Day Summits in 2020 and 2021, we've spoken of the 'micro' initiatives that can lead to 'macro' change within our towns and cities, and how we can decelerate transport's contribution to emissions – with five initiatives.



▲ Walking and cycling, and the 'healthy streets' agenda

In London, TfL's healthy streets agenda has undoubtedly brought about a shift in modal priorities, with active travel being prioritised over cars. Whereas historically the overriding priority for schemes was to model traffic, we're now seeing a change: with a transfer of streetspace from cars to active travel modes.

We work extensively in development planning and are increasingly seeing sites becoming more permeable. The idea of fortress-like blocks is being left behind in favour of dissecting sites out and creating new pedestrian routes through them. We're seeing improved connectivity and a blurring of the lines between buildings and streets - entrances at ground floor level are more porous, allowing the public to come in and integrate with new buildings.



▲ Micromobility

The 'marmite' of mobility, micromobility (and in particular e-scooters) has the potential to provide a vital role in unlocking sites outside of city centres. Our research shows that 98% of inner London and 78% of outer London are brought within reach of a rail or tube station with a 10-minute e-scooter journey.



▲ Enhancing public transport

Making sure developments are well connected to public transport networks, to influence people's travel habits, is key if London is to meet its aim of 80% of trips on foot, cycle or by public transport by 2041.

Our current work for Landsec at Victoria brings a final piece of the puzzle – introducing a contra-flow bus lane to help cut bus journey times while also dedicating more priority to pedestrians and more open permeability.

▲ Urban logistics and consolidation

The recent huge increase in e-commerce, accelerated by Covid, has resulted in a corresponding increase of delivery vehicle mileage. Yet, from a development perspective it's generally accepted that up to half of delivery vehicles could be cut through good consolidation strategies. We strongly encourage our development clients to bring through consolidation strategies and advocate for the role that cargo bikes can play in micro consolidation roles, replacing vans and trucks. A holistic consolidation strategy, serving the entirety of a city, would represent a massive step forward in taking vehicles off streets.



Political courage needed

Are we on the path to meeting the aims laid out by governments and cities? Yes, we're seeing the green shoots of strategies and initiatives, but we're unfortunately moving much too slowly if we are to achieve these vitally-important targets.

Greater behaviour and attitude change towards car usage is needed in urban areas, but the essential element is that we see some political courage. Many of the interventions above are being progressed with policy support, albeit in a piecemeal way. Fundamental changes that bring more impactful change are also needed. I believe it's time to seriously consider road user charging schemes which charge for every single bit of distance driven by a car, as well as factoring in emissions, occupancy of the vehicle and the vehicle's desired routes. It requires courage to implement congestion charges in the first place – and that's what we need to see more of now, alongside robust transport strategies which enable places to be built and adapted to support car-free environments.

▲ Road user charging

With the London congestion charge now nearly 20 years old, it has become – in my opinion – defunct, with its effect largely nullified. A revamp is needed to provide a more robust and larger-scale imperative to reduce the prevalence of the private car in London.

11.

Case study snapshot.

Momentum’s sustainable transport strategies make the best use of available land and encourage the use of public and active transport.

We devise mobility and freight solutions that support the resilience of urban spaces including micromobility and innovative urban logistics such as consolidation and ‘first and last mile’ strategies. We help our clients (including local authorities, councils, commercial developers and architects) to develop more efficient and sustainable transport strategies. These strategies can reduce their transport carbon footprints, positively respond to ESG requirements and help make better use of existing infrastructure for servicing, mobility and permeability.

► Olympia

Through design development and strategic work with the client and wider project team, we helped to reduce the logistics and parking areas and enable full future provision for electric vehicle charging. The existing multi-storey car park is now permitted to be converted to a hotel and a school.



◀ Ilford Gyratory

Developing highway design proposals that re-accommodate general traffic away from the town centre and rebalance the streetscape in favour of pedestrians, cyclists and public transport users.

► Central London

Developing a comprehensive consolidation strategy to bring down delivery vehicle numbers at a major development proposal in central London (confidential client).



▲ Museum of London

Introducing cargo bike deliveries.



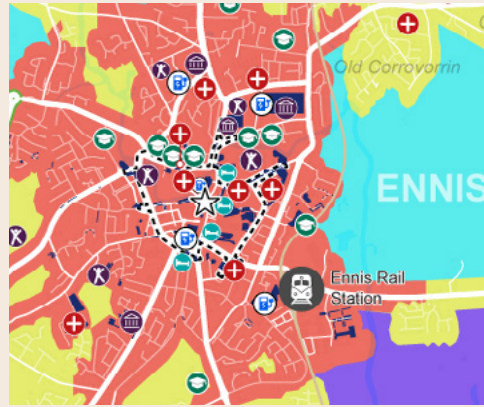
▲ Brabazon Masterplan, Bristol

Working to deliver thousands of much-needed homes without putting a single additional car on the road.



▲ Nova, Victoria:

With the realignment of highways, wider footways, new crossing facilities, new bus stands and stops, Momentum’s work has been instrumental in transforming Victoria into a people-focused destination. Momentum also assisted in the successful delivery of a hidden operations strategy comprising of priority basement level parking, temperature-controlled storage facilities to ensure deliveries can be taken around the clock and a waste strategy tucked away out of sight within the basement.



▲ West Ealing

Developing a freight and servicing strategy with the overarching aim of reducing the impact of freight and servicing activity, including the potential for collective procurement of common supplies, last-mile deliveries using e-cargo bikes and ultra-low emission vehicles, and the reduction and retiming of delivery trips to, and generated by, businesses. Our work has also been integral in informing streetscape, gateway and public space concept design proposals being led by the wider project team.

▲ Dott in Dublin

Investigated the impact of e-scooters on accessibility in dublin and the likely trip types they would facilitate, with the results highlighting great opportunities for e-scooters to ‘plug’ existing gaps in the public transport network which could be contributing to the high private modal share.



◀ San Francisco Flower Mart

Supporting design development to ensure efficient mobility to, and through, the site and effective logistics. Momentum’s pedestrian studies ensure comfortable spaces for people by testing the pedestrian level of service in the public realm.

◀ Ennis, County Clare

Momentum worked closely with Ennis Municipal District and Ennis 2040 to assess potential pedestrian-friendly measures and identify suitable Park and Stride locations in the town.



▲ Dundee

Momentum was part of a consortium, consisting of Stellan Brand, LDA Design and Savills, commissioned by Dundee City Council to prepare a long-term (30-year) plan to best prepare for, support and guide future development and investment opportunities in the city.



14.



Illustrations by Tasia Graham

15.

Welcome to Momentum City.

The time for transformation in our cities is now.

The climate crisis, public health emergencies and dispossessed communities are just some of the challenges we face today as society. And as transport consultants we know that the work we do is critical in facing these challenges successfully.

Our work involves understanding the link between transport and land use, and the future shape of our towns and cities. With a desire to share this understanding and demonstrate how the initiatives we're championing can accelerate transformation, we're taking what we know and applying it to our own fictional city: Momentum City.

Our city is built on the foundations of a commitment to both society and the environment. These values will underpin how the city develops.

With these foundations in place, we'll take a closer look at the landmarks and features common to global cities. We'll consider how each development connects with its urban environment and operates within it, and how this is likely to evolve in the future. Momentum City will demonstrate how the wide range of solutions in our transport and urban design toolkit can build equitable cities, address the challenges of public health and climate change and deliver connected spaces which safeguard our environment for future generations - unlocking the key role that cities and buildings play in achieving our societal goals.

Most importantly, our journey around Momentum City will show how incremental changes - such as alternative forms of transport to the car (regardless of fuel source), intelligent freight and logistics solutions, technology and effective management of space - can make huge changes to cities and the people who live and work in them. Along the way we'll also consider the challenges to efficient transport decarbonisation which apply to real-life cities across continents, including governance models and financing.

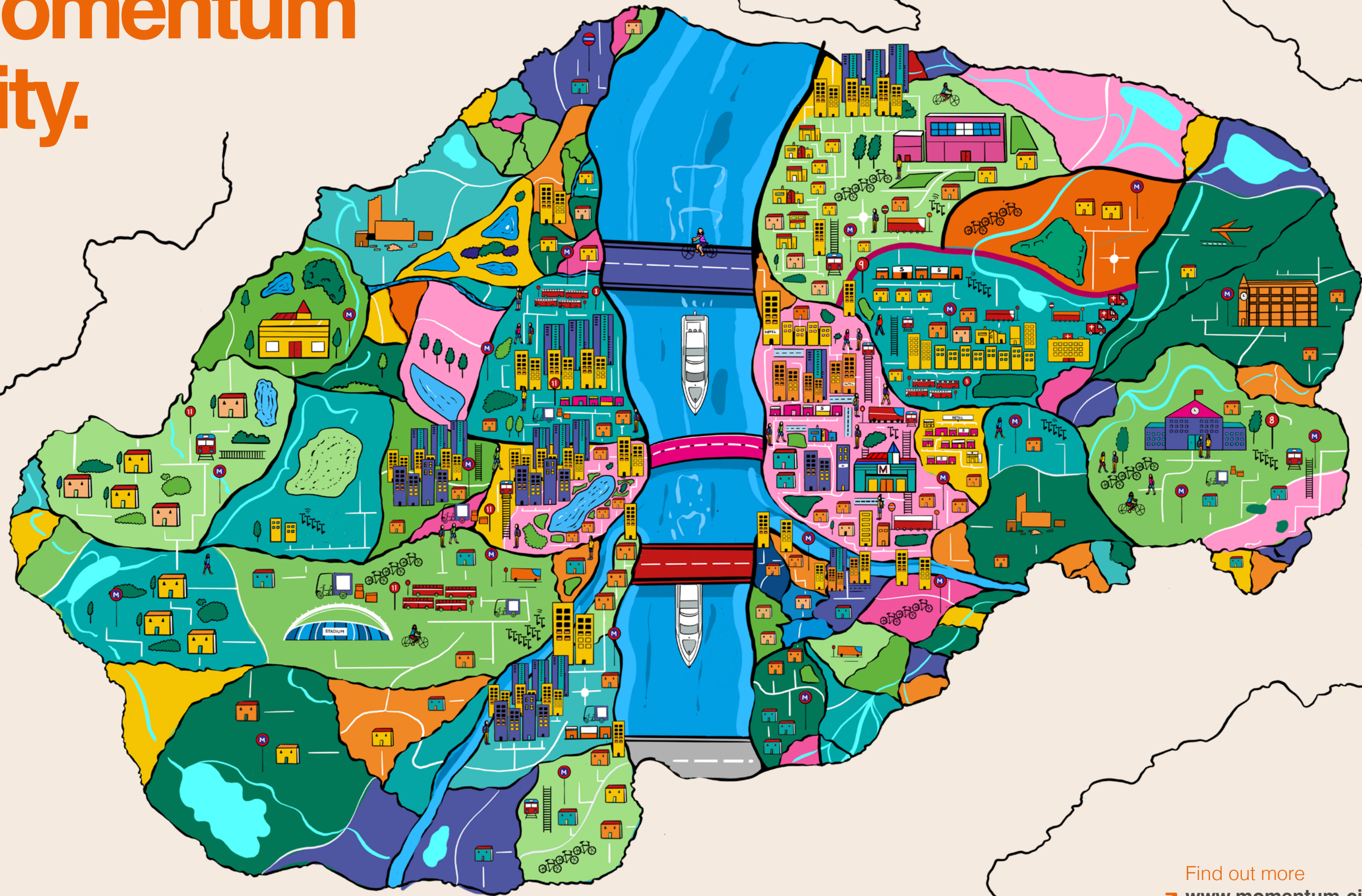
So, come aboard to find out how Momentum City will safeguard the city for our future generations.

www.momentum-city.com

Find out more
➤ www.momentum-city.com



Momentum City.



16.

17.

About our contributors.

Roy McGowan

Roy is managing director at Momentum Transport Consultancy and has a passion for designing world-class transport solutions for cities. With a career spanning 40 years, his projects cross the Americas, Middle East, Asia and South Africa. In London, his experience includes the King's Cross regeneration, London 2012 bid and delivery, Wembley and Arsenal Emirates stadia, Nova Victoria and Museum of London.



David Hart

David is a founding director of Momentum and continues to build his wealth of experience on commercial, residential and retail development projects. Having led projects on Nova Victoria, 21 Moorfields and Cundy Street Quarter, he relishes solving the most challenging transport problems to provide high-quality spaces for people to enjoy.



Kana Nomoto

Kana is a consultant in Momentum's London office and has contributed to masterplanning schemes such as the Olympia redevelopment and Brabazon Masterplan, as well as working with local authority clients including LB Camden on the Phoenix Road Public Realm. Kana graduated from UCL with an MSc in Sustainable Urbanism and is passionate about making our cities more people-friendly through sustainable and inclusive transport infrastructure.



Nicola Atkinson

Nicola is an artist and director of Beautiful Materials Design Studio. She has established a practice at the forefront of creative placemaking and community engagement, delivering artworks developed through genuine public participation. Beautiful Materials Design Studio is committed to delivering well-conceived and durable artworks that inspire and prompt actions, interactions, and reactions.

Mailys Garden

Mailys is an associate, based in Momentum's Edinburgh office. She develops transport strategies for major regeneration projects to promote public realm enhancements and vibrant communities. Her experience ranges from feasibility studies through to planning applications, construction logistics, cultural, residential and sport venues. Mailys leads the development of Momentum's Ireland and Scotland offices, is a board member of Women in Transport and the transport representative of the CPA NextGen committee.



