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Digital Solutions

Snapper Services

Navigating the Future: Enabling the Citizen-Centred Smart City

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The vision of a human-centred, open, inclusive and diverse city has redefined urban landscapes across the globe.

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Since its conception in the 1970s, the smart cities concept has evolved from a technology-centric strategy to a citizen-focused environment. Adam Greenfield's collection of essays **"The city is here for you to use"** is an on-point summary of the current vision for the smart city.

Councils and urban authorities are prioritising health and safety, mobility, economic and educational opportunities as well as governance as they evolve their cities in line with the complex and ever-changing nature of human society. Today, **the leading smart city exemplars target high quality of life, sustainable economic growth and transportation networks**. The **IMD Smart City Index 2023** has Asia and Europe as the leading regions, with so-called 'second-tier' cities ahead of the pack.

An increasing number of councils are moving away from a centrally controlled and managed urban environment towards one that easily adapts and responds to the complex web of human, social and environmental interactions. This includes a particular focus on developing superior public transit services.

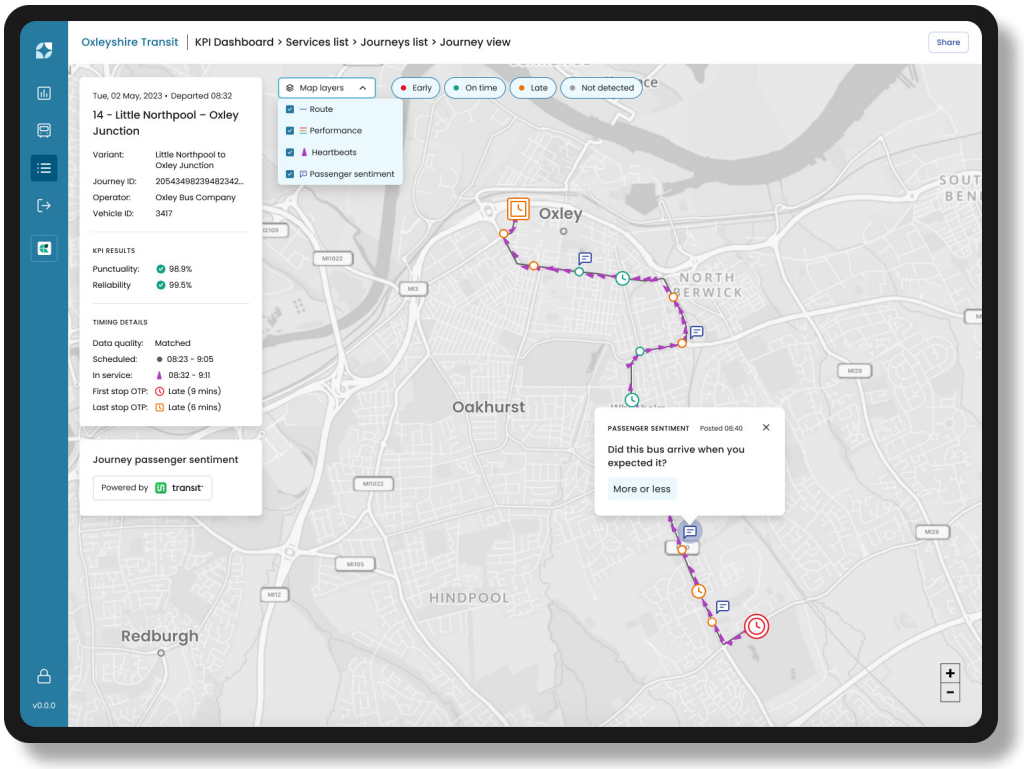
These promising trends combine citizen participation, committed urban development professionals, and advanced technologies to continuously improve mobility within a city.

Enabling citizen-centred smart cities means understanding where we are now and how the intersection between the rapidly emerging micromobility domain, demand-responsive transport (DRT) and fixed-schedule mass transit will play a role if we are to move towards truly accessible, sustainable and well-connected cities.

Connected City Landscapes

Connected cities have truly arrived, with governments and transit operators across the globe harnessing the power of new technology to improve the lives of citizens. Central to these efforts are the trustworthy, open data systems that are a foundation of smart cities.

There are prominent examples in Asia Pacific, where, for instance, **Tokyo has topped a list of the world's future-ready cities** thanks to its ability to adapt according to residents' needs. Similarly, South Korea's capital, Seoul, has been **recognised for its Smart Seoul**



platform, which has boosted digital inclusion across everything from mobility and education to safety and communication. Canberra was rated #3 in the IMD Smart City Index following its integrated transport planning approach, recently **prototyping a green light rail track** that will improve urban mobility while reducing heat from concrete tracks.

We can also see the new technologies emerging that could simplify complicated transit systems. This includes AI, which can be deployed to optimise signal timings and reroute vehicles to reduce congestion, **with Germany demonstrating the role this can play in traffic management**.

Transport for London (TfL) has improved the experience for passengers, by using machine learning to analyse passenger data and movement, to reduce train and station congestion. These have led to very low-cost changes to help improve journeys, like highlighting when it might be better to get off at an earlier stop and walk above ground.

Enabling a Dynamic and Accessible Future

While successful use of advanced technologies shows promise, there's more to be done to support the creation of the next generation of smart cities. The goal is a city that all members of society can use, not just those with access to the latest technology.

One of the biggest steps will be understanding how fixed-schedule transit services can best intersect with micromobility and DRT, adapting routes and distributing resources based on real or forecasted demand.

In a truly dynamic city, planners will be able to seamlessly leverage these different transit modes, which will all have a role to play in creating a cost-efficient public transit network that supports Net Zero targets and fully serves the population, including vulnerable members of society and areas with lower demand.

With these transit modes meeting varying needs and preferences, a truly future-oriented city will be able to synthesise data from users and providers of all different service types and make better planning decisions such as where to locate micromobility parking spaces, considering their city as a whole.

This will allow for developing tailored services that adjust in line with demand to meet residents' requirements – whether that's bus routes that are planned to better facilitate scooter use for last-mile

journeys, or an adjusted fixed network route that takes into account when DRT would be more efficient and cost-effective at a given time of day or season.

Collaboration Is Key

The only way to achieve this is through a genuinely collaborative approach, which is key to unlocking the potential of cities. The complexity of more intelligent transit systems means multiple technology providers need to collaborate – with each other and with the public sector – to gather, share, analyse and respond to the wealth of data that exists.

There are clear signs that government legislation will facilitate this collaboration. One example is the Finnish government's Act on Transport Services, which ensures that "essential data on transit services can be made open". In a similar vein, the European Commission has adopted a vision to have a European Digital Transformation by 2030, which aims to promote interoperability and bring 100% of public services online.

These efforts are important given that no two cities or regions are the same, which means interoperable solutions that can be used flexibly will prove important in the future.

With a collaborative approach built on standardised data shared via APIs, cities can determine which processes can benefit from automation and, by maintaining sovereignty of their citizens' data, AI solutions can be appropriately applied to improve all modes of transit. Our vision to create excellent transit experiences is central to everything we do at **Snapper Services**, with our focus on enabling operators and authorities to continuously improve the performance of their networks. This includes our launch of **Mosaiq** in 2023, which enables public transit operators and authorities to identify inefficiencies across routes, extend capabilities, understand impact on passengers and have complete visibility over their operations.

Our belief is that providing operators with the tools to enable a culture of continuous improvement will play a vital role in creating citizen-centred smart cities that respond to the ever-changing needs of society. Combining standardised data, the latest technology and the collaborative efforts of the private and public sector will result in transit services that foster and serve more inclusive, happier and healthier communities.

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