OPINION

Exchanging dynamic data at scale and volume – we've solved it with ConVEx

Cost-effective access to data for all in the transport eco-system has accelerated the future mobility agenda and is driving business innovation and new service models, says **Mike Waters**

Data has helped many global companies create and refine their products and services across many sectors. We have worked alongside Government, academia, vehicle manufacturers, infrastructure operators, technology providers and SMEs to define the solution that will allow the traditional transport sector and new mobility entrants to capitalise on the vast amounts of valuable insight that can be drawn from the data the platform called ConVEx will make available.

ConVEx is a cloud-hosted data exchange facility underpinned by a software platform with added value data services such as analysis, aggregation and validation.

This is a unique initiative in the UK and is the only known project internationally to create a sustainable business involving public and private sector partners focused on making data available to all via an open marketplace.

The new facility signals the end of hard-to-reach data and overly complex relationships between data providers and consumers that stall our market growth and potential.

It complements strategic investments the UK has already made in this sector such as the West Midlands 5G Program, Midlands Future Mobility Public CAV Testbed, the Future Transport Zones, the UK's Battery Industrialisation Centre, MaaS and new service models such as e-scooters.

The creation of ConVEx was a response to the industry's recognition that the success of the future of mobility depends heavily on the availability, aggregation and analysis of data. Data-sharing is difficult, especially for organisations that do not have the resources or capabilities.

The investment will allow companies and travellers to capture the benefits of new transport technologies sooner. It will also help the UK to grow its market share in the research and development for new mobility products and services.

PUBLIC AND PRIVATE SECTOR HEAVY HITTERS WORKING TOGETHER

ConVEx is an excellent example of extensive stakeholder engagement, gap analysis and collaboration with enthusiastic and complementary partners – Transport for West Midlands (TfWM), Jaguar Land Rover, Bosch, Warwick Manufacturing Group and three SMEs: Valerann, Synaptiv and Immense.

The solution opens up new capabilities to all stakeholders in the transport eco-system – enabling the aggregation data from a diverse range of sources, making these available for sale, or under licence, or for purchase by the facility user.

Services will include the curation of datasets within a single 'shop window', data cleansing and analysis, enabling organisations to monetise data resources that may have previously been left dormant, drawing together relevant datasets and exploring connections that generate further insight for clients.

The partners in the current build-and-demonstrate phase, which is supported by Innovate UK funding (through CCAV and Zenzic), will set out specific case studies to illustrate the capabilities and benefits which can be realised.

However, the underlying platform and capabilities themselves remain open to all – without commercial conflict and with individual entities interests being fully protected. From a public authority perspective open data can be readily surfaced and costs recovered from where added value activity has been undertaken to enrich that data and it is of value to commercial entities.

ABOUT THE AUTHOR

Mike Waters is responsible for establishing many collaborative public environment intelligent mobility projects across the West Midlands. He sits on the Zenzic CAV Hub Advisory Board.

WHY IS DATA AVAILABILITY SO IMPORTANT?

By improving the availability of different types of real time transport sector data, innovative service providers will develop second and third generation data-driven services. Examples include green-lighting for public transport vehicles, dynamically variable parking restrictions for freight loading and unloading, as well as speed and pollution management solutions around schools.

ConVEx accelerates the future mobility agenda by enabling cost-effective access to relevant data for all in the transport eco-system, driving business innovations and new service models. It also supports strategic and regulatory decision-making by local, regional and national bodies around the deployment of new mobility services, like e-scooters and robotaxis, for example.

THE NEW WORLD – NOW AND POST-COVID

In parallel, TfWM has set about creating a wider mobility data exchange environment for its partners. Using technical innovations, we've created a platform that enables data sharing and exchange between all our mobility providers and stakeholders.

The use of web-based geospatial integration systems provides rapid visual insight for users – for example enabling us to define and spin up a new semi-demand-responsive transport service for key workers which carried more than 13,000 key worker journeys to essential health care work during lockdown.

With fewer vehicles on the road, congestion has reduced and vehicles are travelling faster. TfWM and the police now use our new dashboards to monitor changes in the average speed of vehicles in strategic road 'corridors' and put interventions in place to improve road safety.

The journey is just beginning. TfWM, for example, can now source agile, unique and powerful intelligence and insight capability, merge with commercial and public benefit outcomes to provide a powerful foundation for continued development across the UK.

The data and insights gathered from areas such as ground truth devices and from users' vehicles will be stored in state-of-the-art data facilities, allowing real-time and historical analytics, enabling predictions on the state of the network, advance simulation, modelling and further advance ITS and CAM use cases.

Unlocking the connected and self-driving future

By making it easier to collate, share and analyse data through a single platform, ConVEx will act as a catalyst for growth in future mobility and the development of smart transport technology in the UK and abroad.

This unique, UK-based, data marketplace will allow companies to share and exploit unprecedented amounts of crucial transport data.

There is a multitude of benefits to this, from offering pandemic-proof modes of transport for essential workers, reducing transport-related pollution by managing traffic, or helping regulatory bodies create essential policies around the deployment of new smart modes of transport.

Being part of CAM Testbed UK, ConVEx is another example of the innovation and forward-thinking technology the UK is harnessing as a global leader in Connected and Automated Mobility.

CAM Testbed UK is the world's most interoperable cluster of testing facilities. It unlocks the potential of the ecosystem for the connected and self-driving future – enabling safer testing and development of CAM systems and services, and accelerating us all along Zenzic's UK Connected and Automated Mobility Roadmap to 2030.

Daniel Ruiz, CEO of Zenzic