kapsch >>>
challenging limits

Kapsch Intelligent Corridor

Highly scalable and quick-to-deploy transport solutions to achieve a multimodal ecosystem.

Many cities around the world have a complex combination of traffic control systems, applications and technology. These are often operated in a silo approach with roads, public transport and pedestrians being viewed as separate entities using the same network instead of mobility being viewed as a balanced ecosystem. This thinking and approach creates poor transport network conditions through increased congestion, reduced air quality and reduced safety for all users.

Creating the future transport network

Introducing the Kapsch Intelligent Corridor (KiC) where a coordinated approach to the transport ecosystem allows for mobility insights and a real world application of innovation. Kapsch has created the KiC in the Australian Integrated Multimodal EcoSystem (AIMES) which is a real world, on roads transport testbed. The KiC is a view into the future of Urban Mobility and represents a unique opportunity for road industry, academia and government gain never before available insights and understandings into a truly multi model mobility hub.

Key Aspects of the project

The KiC utilizes the Kapsch Mobility suite including our Deep Learning Versatile Platform (DLVP), EcoTrafiX™ – Urban Mobility Management, and our Mobility Data Platform (MDP), a data fusion platform for advanced analytics. These elements combine with existing and new road side technology to provide any transport operator the change levers needed to create an effective and efficient multi-model ecosystem.

Project Scope:

The four guiding pillars of the KiC are Safety, Demand Management, Traffic Insights and Congestion Reduction. Within these four we have developed a series of real world use cases that are a challenge to every developed city around the world.
KiC use cases include :

- Queue Length Detection
- Vehicle Speed, Counter & Classification
- Left Turn & Pedestrian Counter
- Yellowbox zone monitoring & detection
- Near-miss detection & SCATS integration for SPaT (in progress)

The Challenges:

- The ITS infrastructure in Victoria is dated and requires innovative methods to obtain critical control system integration and how best to utilize existing infrastructure where possible.
- The city is plagued by lack of space in road side and below ground infrastructure requiring out of the box thinking to overcome critical challenges in this area.
- Dealing with multiple systems and platforms that aren't integrated or coordination yet are critical to a complete situational awareness of the Melbourne network.

The Solution:

The KiC provides a scalable mesoscopic transport system to apply to a single or multiple busy transport corridors. Our software, EcoTrafiX™, povides an integrated platform for traffic control to achieve high situational awareness, multimodal transit data integration, multiagency collaboration for public transportation control in city environments. The flexibility of the software has been designed to accommodate the individual agency's transportation needs. From a simple signal system to an ATMS and more; a region's needs, from event management and sharing to connected corridors and decision support systems; and ultimately to more automation of the needs of connected corridors, by providing the gateway between

information and drivers; and finally, smart mobility as a part of a smart city concept.

The key to our solution is the ease of scalability from small area deployment to large scale rollout through our containized solution architecture. This is ideal for this project as our software requires less overhead in a VM environment (ideal for Cloud-based deployment), better application development to support agile and DevOps efforts to accelerate development, test and product cycles) and much better efficiency to allow scaling of this test area to other areas to be rapidly deployed   in any transport network.
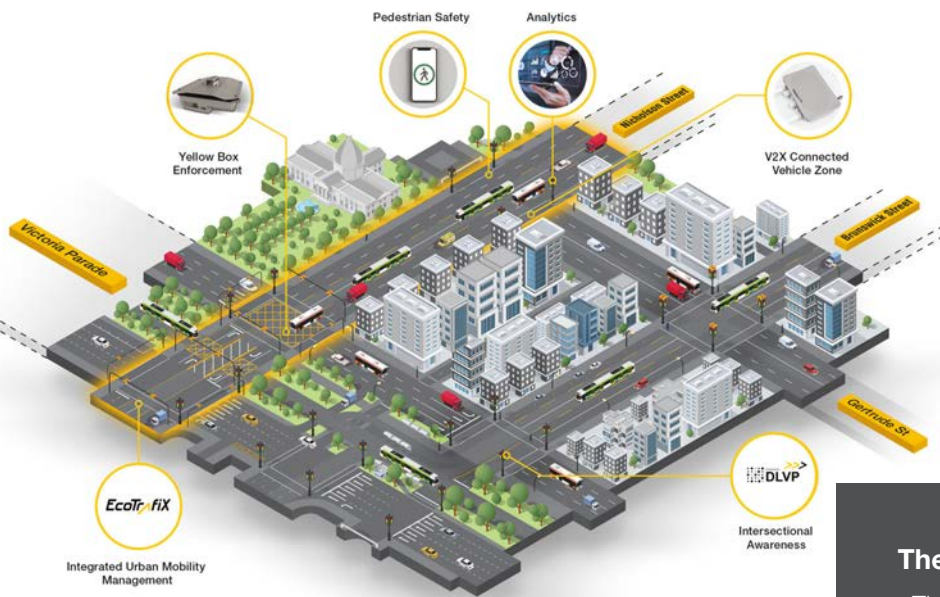
The Added Value

- The Kapsch Intelligent Corridor showcases many of Kapsch's ITS products in a single corridor environment, providing a window into what is possible for the future of multi-modal network optimisation.

- Scalable packaged solutions enable cities to tailor the platform to their specific and unique needs. Where the needs of the cities network change and evolve over time, our platform is highly flexible in its ability to add new capability modules where required, such as 'clean air zones', a 'data fusion platform' to bring multiple ITS device data together and 'safety insights' utilizing the latest in AI technology for video streams to identify near-misses and detect incidents faster so first responders can be on the scene as fast as possible.