

The Big Data revolution can radically transform how cities monitor, manage, and enhance the liveability of their communities. A successful smart city will be one in which the public agencies, businesses and people are able to make informed decisions and respond to dynamic conditions based on real-time sensing and data analytics. The A*STAR's Urban Systems Initiative was launched to address the technological needs of the rapidly urbanising world.

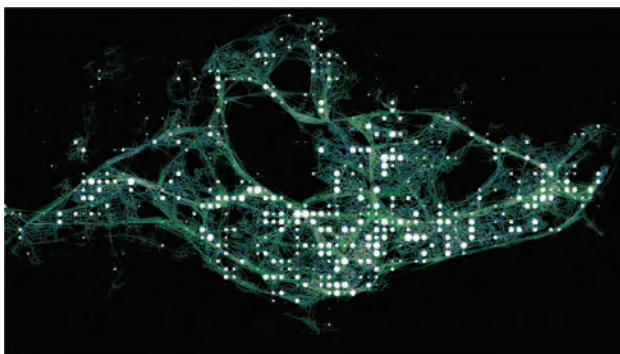
To achieve Singapore's Smart Nation initiative, large amounts of data collected by the public and private sectors need to be effectively managed, integrated and analysed.

The A*STAR Data Analytics Exchange Platform ("A*DAX") is also developed to merge and store such data that can be efficiently accessed and securely shared among programmes—the data backbone for the Urban Systems Initiative.

Features

A*DAX is a scalable and open standards based platform designed to store, integrate and manage data for secure data exchange, analytics and visualisation.

The platform incorporates data security and privacy features and handles both static and real-time data from the public and commercial sector. It allows translation and integration of data into actionable insights through machine learning and data analytics, so that citizens, businesses and public agencies can make informed decisions.

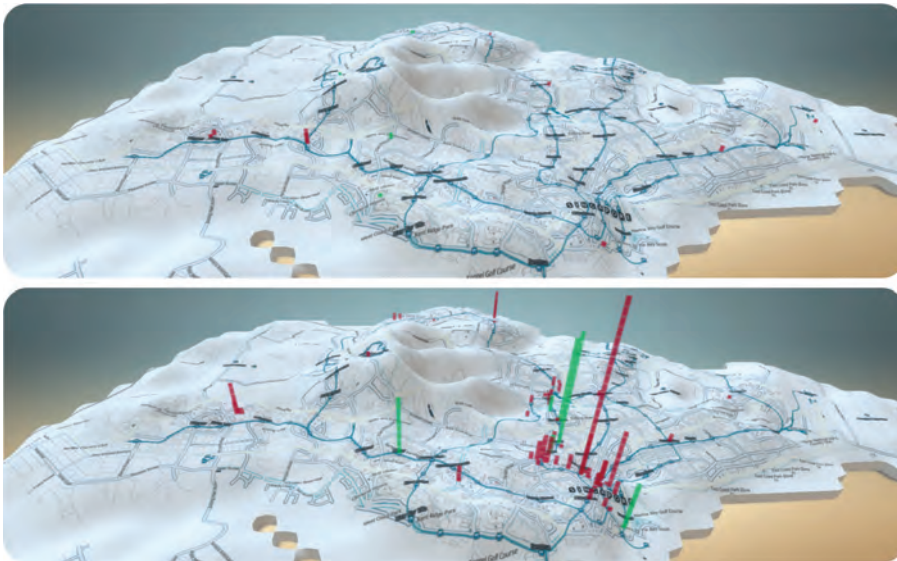


Visualisation of taxi trajectory in peak hours.

Applications

By leveraging on the A* DAX toolkits, libraries and APIs, the possibilities are virtually unlimited for development of urban applications:-

- Real-time network and traffic monitoring
- Streaming, event-based location-aware computing
- Demand prediction
- Event detection and source tracking
- GIS modeling and simulation
- Visualisation of meshed data for insights generation



Visualisation of supply and predicted demand of taxis at MRT stations.

Benefits

The key value propositions of A* DAX are geared towards helping public agencies, private businesses and people make informed decisions and respond intelligently to dynamic urban conditions based on real-time sensing and data analytics:

- One-stop unified data platform designed
- Open and standards-based architecture
- Flexible components substitution
- Secure data sharing and exchange