University of Salford MANCHESTER

THINKlab

DIGITAL CITIES

ENVISIONING CITY FUTURES

www.salford.ac.uk/thinklab

SCHOOL OF
BUILT
ENVIRONMENT

DIGITAL CITIES

Creating healthier, wealthier and safer cities for the future

Creating sustainable cities requires a stronger collaboration between a range of public and private sector organisations to ensure cities are safer, healthier, intelligent and prosperous places for citizens to experience an enhanced quality of life. In response we have developed a range of novel technology platforms that will allow public and private organisations in a city to utilise the power of their data intelligence to make collective evidence-based decisions to address the challenges faced by cities. We have an experienced R&D team to develop customised technology platforms for bringing city information into a discussion space through advanced visualisation and interaction technologies.

We are specialised in the following areas:

- Facilitating collaboration among city stakeholders.
- System platforms that integrate dispersed data sources for creating integrated information spaces for cities.
- Data mining that can extract patterns and correlations.
- Advanced visualisations of complex social, economical and environmental datasets over 2D and 3D city models.
- Easy to use interfaces for exploring "what-if" scenarios.

Our technology can be used to develop and implement new partnership models for delivering various policy agendas as well as engaging with local communities in bringing local visions to life.

"Our partnership with the Thinklab has brought cutting-edge technological innovation into how we plan for and respond to emergencies, including helping us to identify and support some of the most vulnerable in society"

Kathy Oldham, Head of Civil Contingencies and Resilience Unit, Association of Greater Manchester Authorities

AGMA Association of Greater Manchester Authorities · Environment Agency · GMResilience Greater Manchester agencies working in partnership · Greater Manchester Prepared

Manchester City Council · NHS · Ordnance Survey · ResilienceDirect · Salford City Council

"In this data rich world where mapping is the new technological frontier. The work that The THINKlab delivers is hugely important. Working with the Resilience Community it is essential that key data sources are incorporated into our multi agency work across Local Resilience Forums to aid in situational awareness"

Luana Avagliano, Head of Resilience Direct

Urban Simulation

Our 3D urban modelling and simulation work allow many stakeholders to come together to co-design and co-create their local futures. It allows planners to assess the proposed design from various perspectives, taking the input from all the stakeholders including the local citizens.

Flood Simulation

In collaboration with the Environment Agency a digital city platform has been developed to demonstrate the impact of floods around the river Irwell near the University of Salford. It allows flood resilience teams to explore the impact of floods on the build environment as well as the natural environment and take steps towards building flood resilience.

Troubled Families

This multi-agency project brought together a range of un-connected social datasets to model the social dimensions of a socially deprived area in Manchester. It demonstrated how such an information rich virtual city could be developed to bring new intelligence, insight and interpretations within the complex policy domain of 'troubled families'

Building Resilient Cities

Building resilience in a city for disasters requires multi-agency collaboration. Our modelling and simulation work in disaster management allow multi-agencies to collectively assess and reduce the social and infrastructure vulnerabilities of a city. The knowledge about the remaining vulnerability can be used by the agencies during a disaster event to further reduce fatality and economic impact. THINKlab has received £1.2m from EPSRC to create a collaborative multi-agency platform for building resilient communities in Sri-Lanka, Pakistan and Malaysia. This project is applying system dynamics, real-time satellite data and social media to provide intelligence to emergency services to reduce the impact of disasters.

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