Review of Fourth Industrial Revolution (4IR) trends and effects on Urban Mobility in Johannesburg

The broad objectives of this project are to develop the readiness of the City of Johannesburg, to understand, assess and implement appropriate mobility-related Fourth Industrial Revolution (4IR) innovations. In Year 1, the project succeeded in developing outputs that explored the broad spectrum of 4IR disruptions in urban mobility, both locally and internationally. It also developed tools to assist the City in assessing appropriate responses to this. Following the progress made in 2020, it was decided that the project would be transferred to the City initiative. As a result, the focus of this quarter and the next will be on developing a roadmap for the City of Johannesburg and the development of a report to outline the implications of 4IR disruptions for the City’s transport department. This report will cover the implications of disruptions institutionally, functionally, and in terms of planning, policy and operations. This work will also include a focus on inclusion and how Gender & Social Inclusion considerations can be explicitly and adequately addressed.
In our previous newsletter, we highlighted the City of Johannesburg 4IR Mobility project and showcased one of our reports which explored what 4IR means for the future of mobility. A summary of the report can be found [here](#), with the full report available [here](#).

**Strategic Area Framework and Associated Implementation Tools for Soweto Triangle, Johannesburg**

This project focuses on a specific part of Soweto (defined as a key intervention area in Johannesburg's 2016 Spatial Development Framework) and supports the Planning Department for the development of a Strategic Area Planning Framework and Implementation Tools for Soweto. The project began with a comprehensive `Status Quo' analysis, and the intention of this project is to collaboratively produce a sustainable spatial and economic development vision and trajectory for the area. The project has a strong focus on `township economic development' and community engagement.

Through the lessons learnt from Year 1 of the project, Year 2 sees a shift in emphasis towards producing the Framework in a highly participatory manner that will see co-design between the City, the technical team and the community. The consolidated Status Quo Report takes the form of an online ‘Story Map’ resource (access it here: [Status Quo Story Map](#)). This story map provides an excellent read with insights from members of the community. The first quarter of 2021 has seen the beginning of the framing of those, relevant communities that were mapped in 2020. This includes formally addressing what economic exclusion would consist of, and what the key barriers are to preventing access to economic opportunities. The project has also charted which individuals are economically vulnerable, and will take these findings to the communities to discuss it with them.
The Informal Settlement Information Management Solution (ISIMS) project aims to facilitate improved collection, integration and analysis of city-level data with the ultimate objective to “utilise this information management solution as a planning tool for redressing spatial, social and economic inequalities to support inclusive, resilient and sustainable human settlements”. The end goal is to advance collaborative informal settlement actions within the eThekwini Municipal Area and catalyse the development of improved solutions to the broader data management challenges in the Municipality. In 2020, the project focussed on laying the foundations by defining the data principles, engaging with users on data needs and understanding the landscape. Feedback is an ongoing essential part of the project and stakeholder workshops and in-depth one-on-one engagements have taken place with both internal and external stakeholders to understand current data uses and requirements.
Enhanced Institutional Governance for Transit-Oriented Development in eThekwini

The primary objective of the eThekwini Transit Oriented Development (TOD) project is to help eThekwini Municipality design and plan institutional, financial and economic models which the City can use to operationalise its pipeline of projects along corridors and nodes of its public transport network to realise spatial transformation, achieving financial sustainability of the network infrastructure. The project provides a unique opportunity for pursuing transformation in Durban as part of its social, economic and spatial objectives. In 2020, the project has spent most of its time establishing the baseline of the activities including the introduction of tools and approaches. Recent work has involved a focus on financial modelling and data to inform land use choices as part of the Land Use Transport Housing (LTH) model. The purpose of the model is to provide a mechanism for measuring costs, revenue, and benefits allocation amongst all stakeholders when considering land.
Implementation of Data Strategy & Economics capacity building in Cape Town

This project supports the City of Cape Town in the implementation of its Data Strategy, which includes the development of an economic toolkit. Through use cases and implementation within the city ecosystem it can demonstrate the impact a data-driven city can have on improving the lives of residents and in the development and progress of the city.

The City of Cape Town's internal Data Strategy aims to harness City records, administrative data and increasingly external data, to inform future planning, decision-making and operational improvements. It forms part of the City's overall ambitions to become more resilient in the face of various shocks and stressors, and responsive to citizen needs, and to use data to improve the cities strategies, policies, plans, services and operations.

The project aims to support the implementation of the City of Cape Town's Data Strategy, which aims to support evidence-based decision making and more efficient and effective City operations. It focuses on data culture, skills and capabilities, architecture and governance, privacy and sharing, and collaboration and partnerships, as part of a data maturity journey that leaves no City official behind in advancing the ways in which the City collects, stores, analyses, packages and applies data - whether that is for better informing complex policy choices, providing insights into emergent crises, or for automating routine City operations.
The applied economics workstreams demonstrate how data is used in applied economics, to inform City decision making processes. One example being looked at is how the City collects its revenue taking into account household incomes and ability to pay for services. Another example is the development of a project appraisal approach to introduce credible, consistent cost benefit analyses into project preparation and selection. This enables the City to target scarce resources where they will have maximum.

Work this year is focusing on use cases within the City's prioritised pipeline of data projects.

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