



See final project here

RESILIENT SMART ISLANDS

"How can Smart City Innovation meet the needs of Small Island Developing States?"



THE SMART CITY PARADIGM

Many definitions of Smart Cities exist. This research revolves around Giffinger et al's (2007) definition with the understanding that a Smart City generally refers to the search and identification of intelligent solutions which allow modern cities to enhance the quality of services provided to citizens.

The innovation in these cities may occur in product, service, process, strategy or governance. Smart Innovations are not limited to the implementation of ICT.

Singapore, Amsterdam and Copenhagen are some Smart Cities.

SMALL ISLAND DEVELOPING STATES & THEIR VULNERABILITIES

SIDS are amongst the most vulnerable nations. This is partly due to their shared vulnerabilities including:

- Susceptibility to natural disasters,
- Their remoteness and
- Their lack of economic diversification.

BUILDING RESILIENCE

Due to the consequences of these vulnerabilities, it has become crucial for these states to build resilience to improve sustainability. The Smart City concept was introduced as a way to mitigate increasing urban issues and make urban development more sustainable (Alawadhi et al., 2012).

Therefore, smart innovations can be a possible solution to mitigate the impacts of these vulnerabilities.



THE **AIM** OF THIS RESEARCH IS TO **INVESTIGATE** AND **DEMONSTRATE** HOW VARIOUS **SMART CITY DRIVERS** INFLUENCE SIDS' ABILITY TO DEVELOP **RESILIENCE** AGAINST THEIR VULNERABILITIES, PARTICULARLY **EXPOSURE TO NATURAL DISASTERS**.

1. To formulate an analytical framework to assess the applicability of smart city innovation in SIDS.
2. Analyse case studies to identify smart city innovations that may be applied in SIDS and produce relevant smart solutions that addresses disaster resilience.
3. To present initial smart solutions to key stakeholders in Anguilla to evaluate the appropriateness in addressing their contextual needs.
4. To revise smart solutions in order to achieve the aim of study.

SMART SOLUTIONS TO BUILD RESILIENCE

- Revised smart solutions based on feedback and responses from key stakeholders.

QUESTIONNAIRE

- Online questionnaire targeted to stakeholders in Anguilla to gain a better insight of contextual issues and 'test' the initial smart solutions in the form of a consultation.
- 100 **citizens** of Anguilla.



CASE STUDY ANALYSIS

- Using the framework, case studies of Smart City initiatives will be analysed to **extract initial smart solutions** that can be implemented in SIDS.

INTERVIEWS

- Online interviews with key stakeholders in Anguilla to gain better insight of contextual issues and to 'test' the initial smart solutions in the form of a consultation.
- 2 **Policy Makers/Government representatives**
- 2 **Property Developers**

METHODOLOGY



BUILDING TOWARDS RESILIENCE

Case studies have highlighted smart innovations in Smart Cities that can be applicable in SIDS through modifications of design to account for the vulnerabilities of SIDS. The results are expected to show key stakeholders' perspectives on disaster resilience and their feedback of the proposed smart solutions. Their feedback then informs the final, refined smart solutions that promotes disaster resilience in SIDS.

REFERENCES

- Alawadhi, S. et al. (2012) 'Building Understanding of Smart City Initiatives', p.10. Available at: https://doi.org/10.1007/978-3-642-33489-4_41.
- Giffinger, R., Fertner, C., Kramar, H., Kalasek, R., Pichler-Milanovic, N. and Mejjers, E.J., 2007. Smart cities. Ranking of European medium-sized cities. Final Report.

Figure 1: Analytical Framework (Author, 2023)