# Data Infrastructure and SDGs Dashboard:

## *An Infrastructure for Measuring, Monitoring and Comparing*


ABBAS RAJABIFARD

CHAIR, UN-GGIM ACADEMIC NETWORK

DIRECTOR, CENTER FOR SDIS AND LAND ADMINISTRATION

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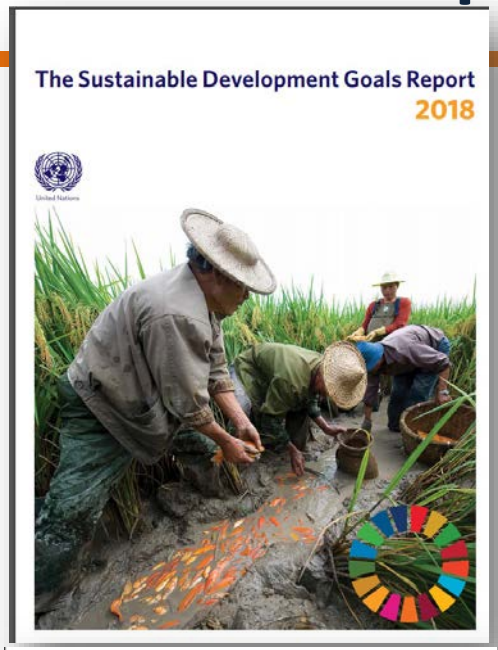
# The SDG Report 2019

# The SDG Report 2018 & 2019



## Interlinked Nature of the SDGs

# Data Requirements

(SDGs Report 2017)

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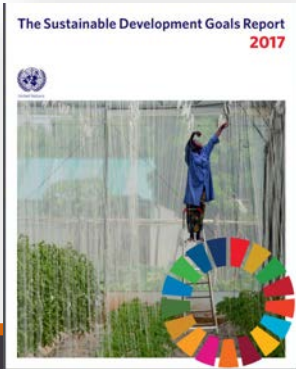
- Development of data standards and best practices in parallel with available technology and users' needs
- Development of new methodologies to ensure the quality and reliability of citizen-generated data
- New open data management frameworks and establishment of transparent mechanisms
- Modernization of data governance and quality frameworks
- New data sources and technologies for data collection and integration of different sources of data
- Facilitating interoperability among data providers, managers and users
- Private sector, academia and civil society partners to contribute to data, expertise and technology to achieving the SDGs
- The integration of geospatial information and statistical data



# A Process to Achieve SDGs

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# CSDILA-Current Research Areas

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**Research Area 1** Improving Spatial Data Infrastructure and Community Resilience

**Research Area 2** Enabling Technology, Informatics and Analytics-*a Dashboard*

**Research Area 3** Enhancing Policy and Decision Making

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# Research Area 1:
# Improving Spatial Data Infrastructure and Community Resilience

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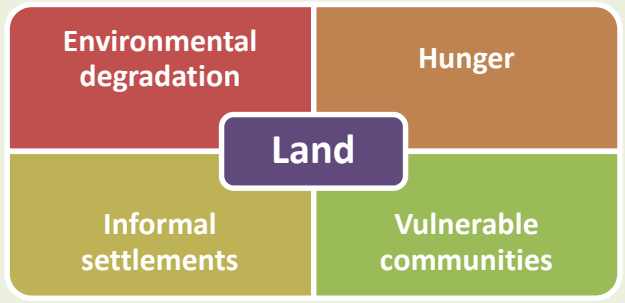
## Global Urbanisation Challenges




- ✓ Land is in the centre of global urbanization challenges and key for the future developments

## SDGs and Community Resilience

- ✓ Developing a method or improving existing methods to measure and monitor community resilience indicators related to land tenure in the context of SDGs

(CSDILA-Zahra Assarkhaniki 2019)

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## Research Area 2:
# Enabling Technology, Informatics and Analytics-*a Dashboard*

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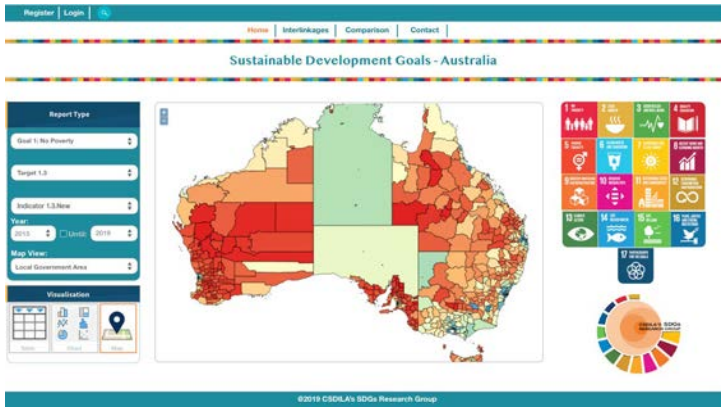
Visualise SDGs index in Sub-National Level




Comparison Between Sub-National Level

Visualising the synergies and trades-off

Live Forecasting of SDGs Index

(CSDILA-Atie Asadikia 2019)

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# An Infrastructure for *Measuring, Monitoring and Comparing*

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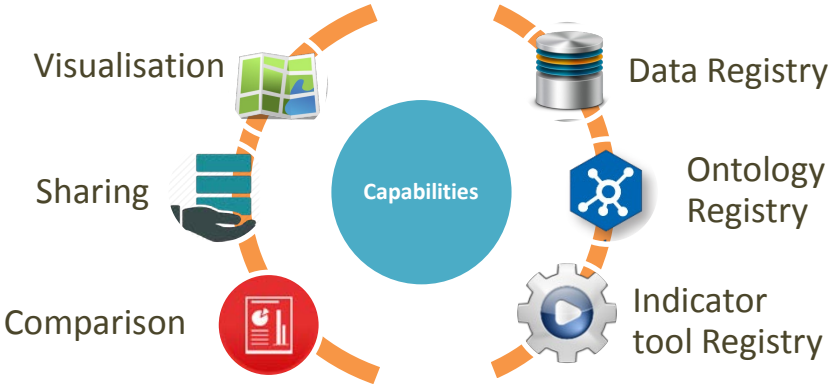
A digital data **infrastructure** that enables the **integration**, **harmonisation**, **connectivity** and **scalability** of **multi-source datasets**.




An infrastructure with a **new ontological framework** and a **dictionary** to underpin the **next generation** of **data driven modeling** and **decision-support tools** to enable **smart**, **sustainable**, **productive**, and **resilient** future.

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# Objectives

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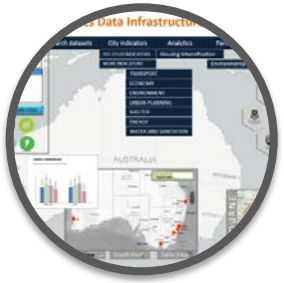
1 To provide an underlying **framework** for **harmonisation** and **integration** of (urban) data by adopting the ISO 37120 and **ISO 19115 standards**.

2 To develop **data tools**, including data access, **registry**, **integration** and metadata API through adoption of **OGC standards**.

3 To develop an **integrated platform** and web-portal to visualise and evaluate the cross-jurisdictional and cross-domain performances.



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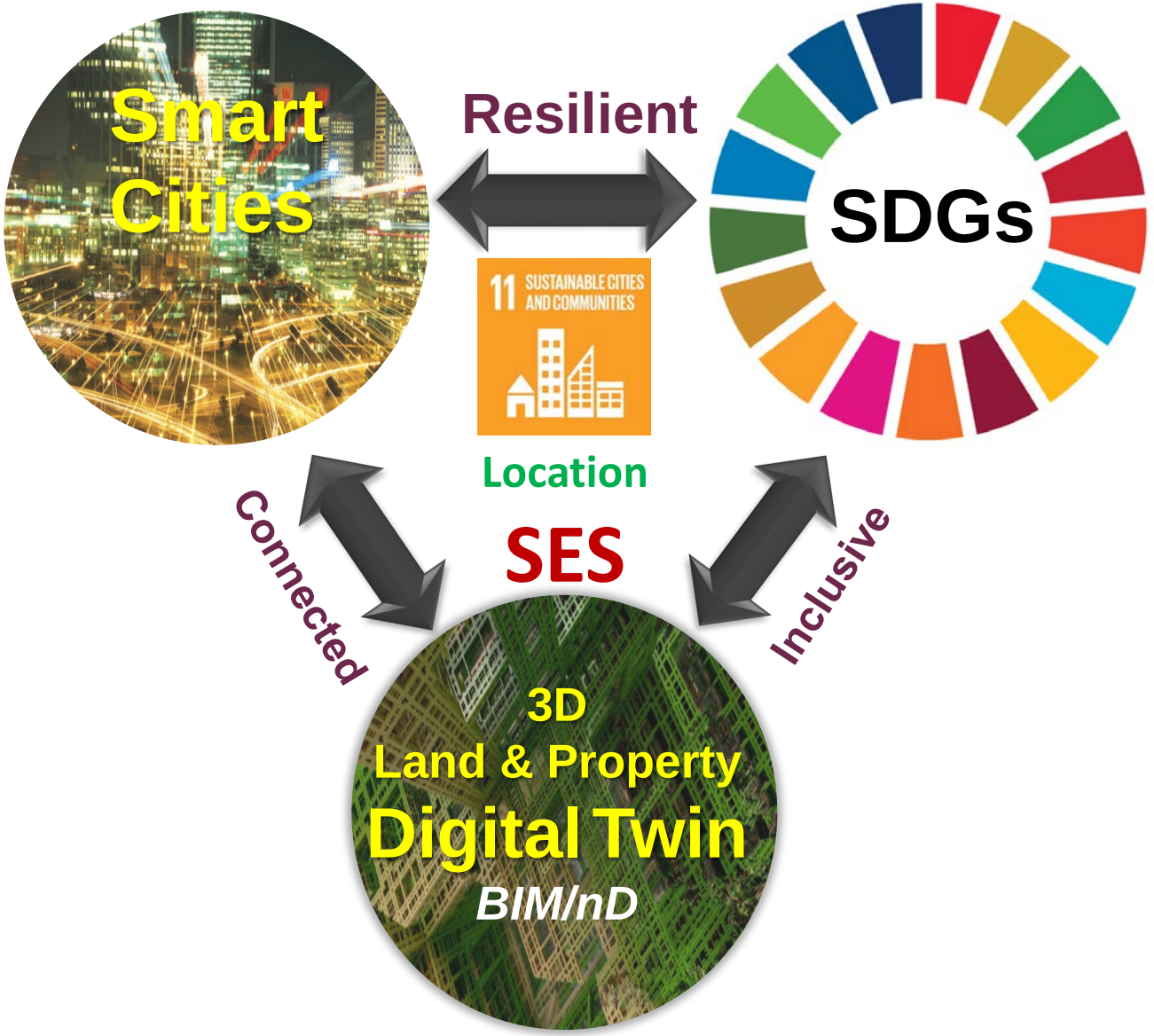
# Interconnected FUTURE For ALL



# Indicator Infrastructure - Technical Features

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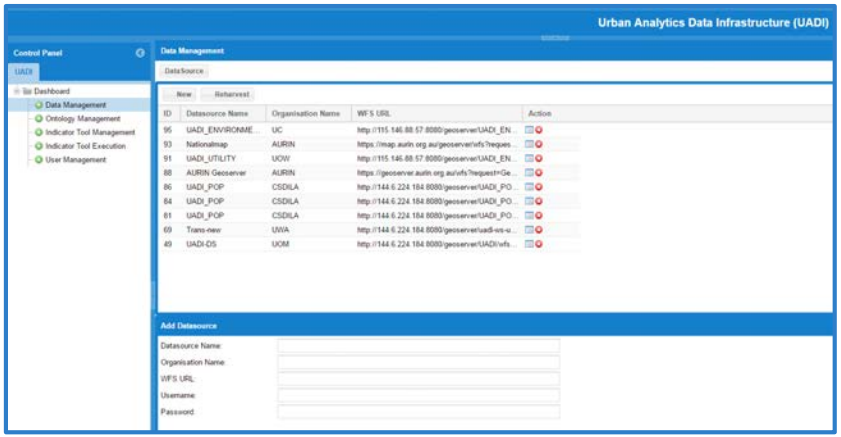
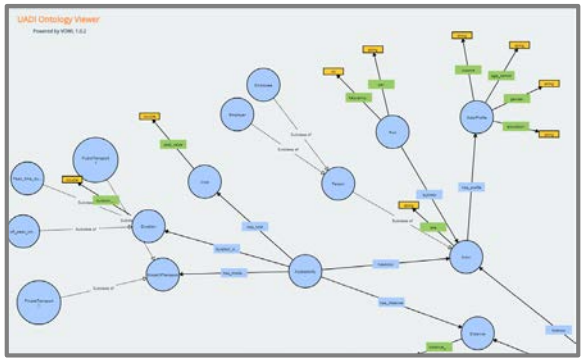
## Development Environment

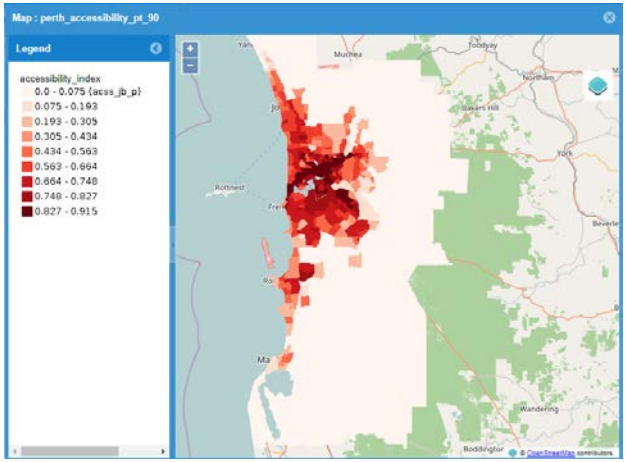
### Data Registration




### Ontology Registration



### Comparative Tool: Registration and Indicator Publishing

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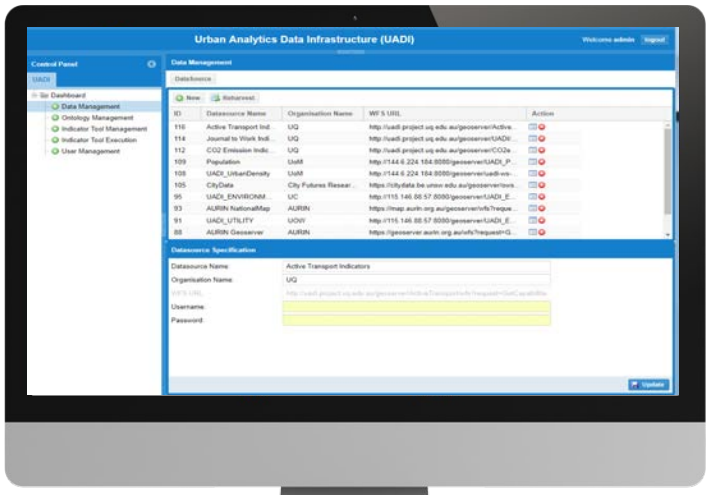
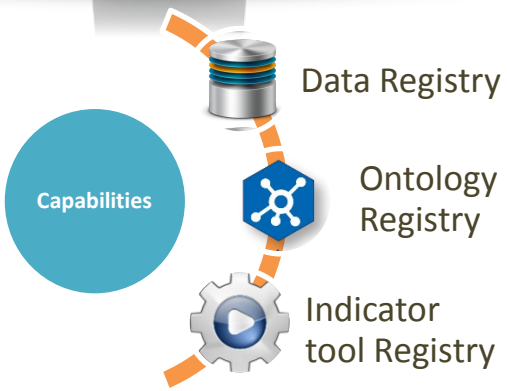
# DASHBOARD

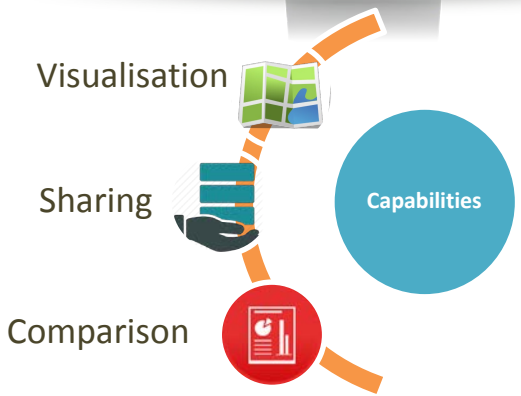



http://apps.csdila.ie.unimelb.edu.au/uadi/index.html




# UADI PORTAL

http://apps.csdila.ie.unimelb.edu.au/uadi-portal/index.html

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# Portal

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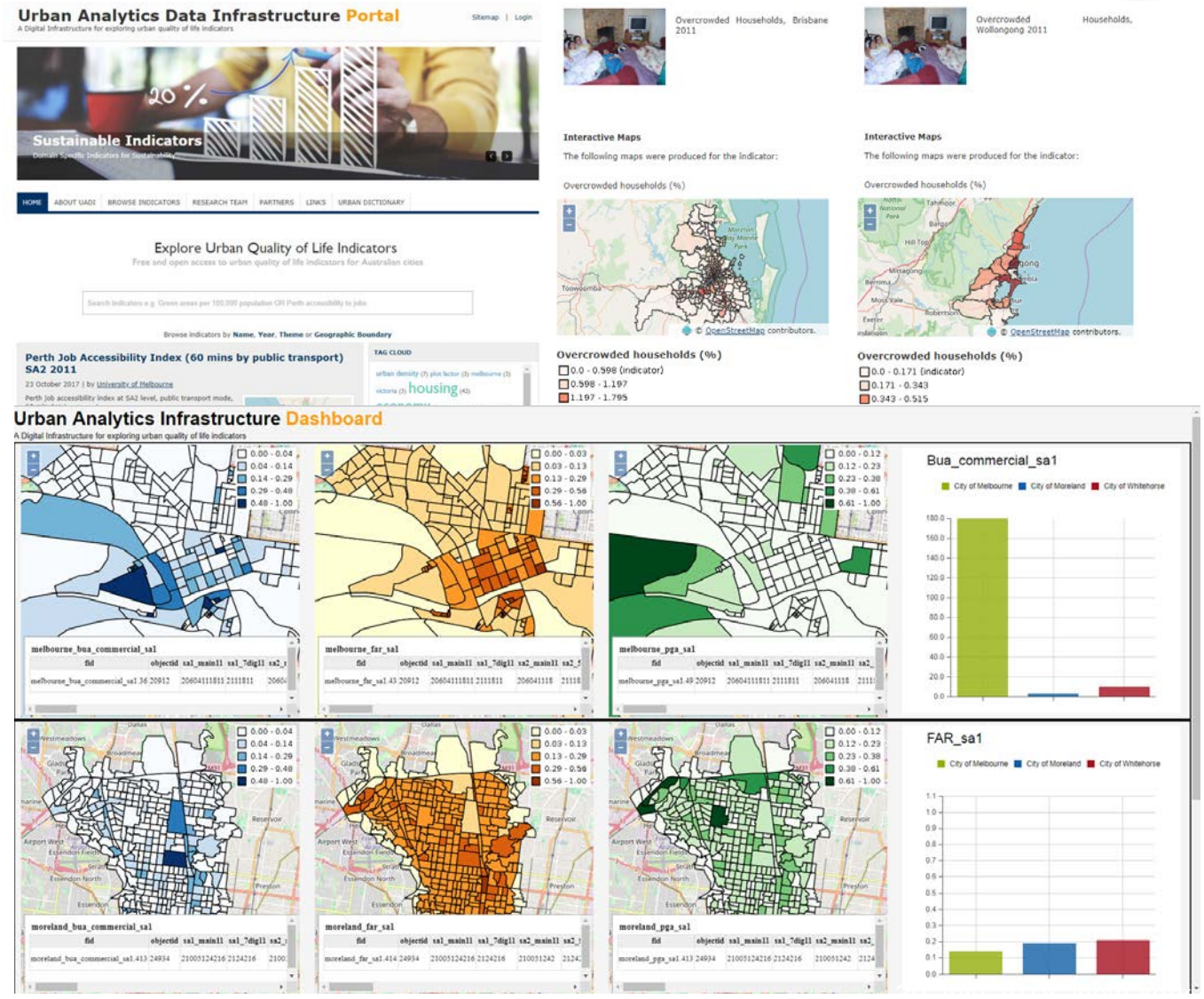
## Urban Indicators

- Discovery
- Visualisations
- Comparisons
- Sharing

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

11 SUSTAINABLE CITIES AND COMMUNITIES

17 PARTNERSHIPS FOR THE GOALS



# Indicator Visualization and Comparison

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9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

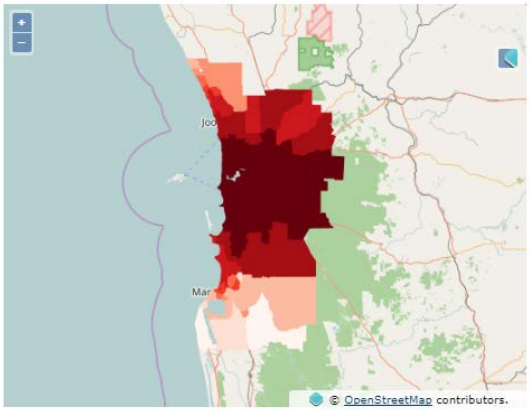
11 SUSTAINABLE CITIES AND COMMUNITIES

13 CLIMATE ACTION

15 LIFE ON LAND

Map View | Charts

Interactive Map




Legend for layers

accessibility_index
0.326 - 0.417 (acss_jb_p)
0.417 - 0.550
0.550 - 0.663
0.663 - 0.744
0.744 - 0.812
0.812 - 0.869
0.869 - 0.928
0.928 - 0.976
0.976 - 0.999

Download Indicator Outputs:

- **accessibility_index** (geoJSON , ShapeFile, GML 3)

Indicator Provenance Information

Inputs Metadata | Tool Metadata

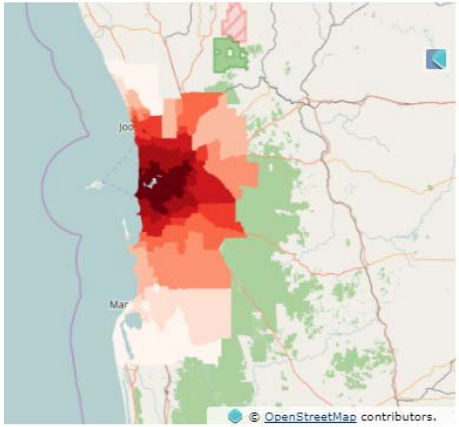
The followings are the inputs of the tool that was used to derive the indicator. You can download the metadata or - if the permission is provided - the data itself for further explortation:

**Input 1**

Input name: jobuuid (string)

Charts

Map




Legend for layers

accessibility_index
0.081 - 0.158 (acss_jb_p)
0.158 - 0.238
0.238 - 0.335
0.335 - 0.445
0.445 - 0.576
0.576 - 0.750
0.750 - 0.861
0.861 - 0.943
0.943 - 0.992

licator Outputs:

**y_index** (geoJSON , ShapeFile, GML 3)

rovenance Information

adata | **Tool Metadata**

lata of the tool used for deriving this indicator are as follows:

**custom:execIndicatorAccessibility**
calculates the accessible jobs and labour force for each zone and according to the mode of

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# A Blueprint for Disaster Management RD&D Supporting the SDGs

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International Symposium and Workshops
A SMART SUSTAINABLE FUTURE FOR ALL
Enhancing Resilience in a Changing Landscape
MELBOURNE, AUSTRALIA | 24 - 26 SEPTEMBER 2018

Launched of the Blueprint for DM RD&D to Support SDGs on September 25, 2018, Melbourne, Australia

**Mapping the links** between disaster management and resilience research themes with the **UN-SDGs** and supporting trans-disciplinary research to overcome real-world challenges.

CDMPS
CENTRE FOR DISASTER MANAGEMENT AND PUBLIC SAFETY

WORLD BANK

UN-GGIM
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# A Sustainable and Resilient Future for All

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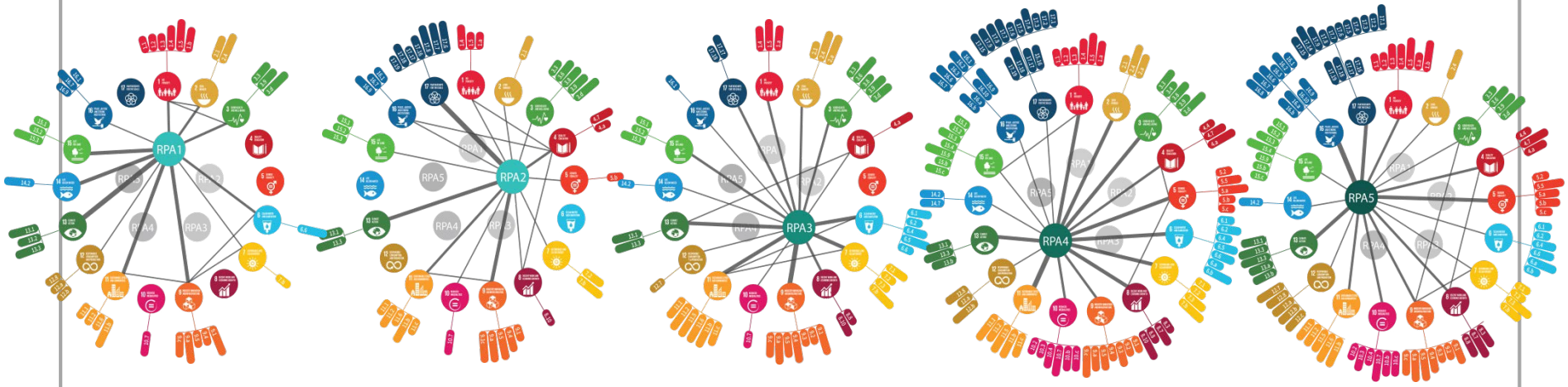
Sustainable Development → *"Leave no one behind"*

THE GLOBAL GOALS For Sustainable Development




Resilience Thinking → *"Building back stronger"*

Sendai Framework for Disaster Risk Reduction
2015 - 2030

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# Blueprint Digital Copy

Link:
https://www.unimelb.edu.au/cdmps/home#sdg-blueprint

# Potential Contribution To SDGs

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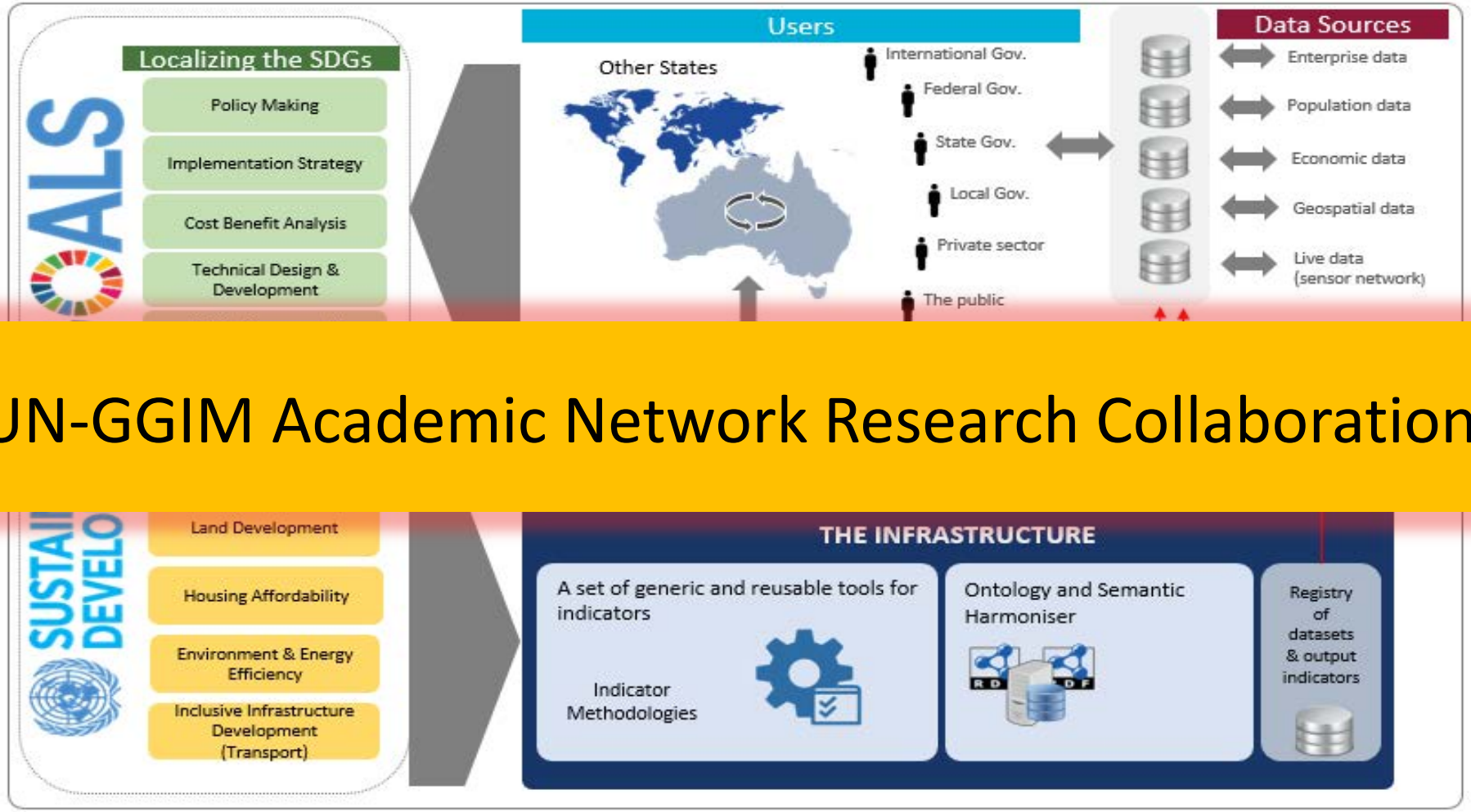


UN-GGIM Academic Network Research Collaboration

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# Takeaway Message

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The development of (National) **Indicators** for the **SDGs** requires an **Infrastructure** that can facilitate the **Registration** and **Sharing** of **indicators** Globally.

The **UN-GGIM Academic Network** can facilitate the development of an **Infrastructure** for Member States **to register new indicators,** to measure and compare and monitor the **inclusive** progress of the **SDGs**.

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# THANK YOU


**abbas.r@unimelb.edu.au**

**Prof Abbas Rajabifard**

Chair, UN-GGIM Academic Network

Director, Centre for SDIs and Land Administration

Melbourne School of Engineering, The University of Melbourne


**www.csdila.unimelb.edu.au**

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