Measuring, Monitoring and Comparing SDG Indicators; New and Integrated Indicators? Need for an Infrastructure

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SDGs: Targets and Indicators

193 Member States
169 Targets
232 Indicators

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**UN-GGIM 2017-2021 Strategic Framework**

**Vision:** Positioning Geospatial Information to Address Global Challenges

- National Policies, Legal Frameworks & Institutional Arrangements
- Provision of Fundamental Authoritative Data and Information
- Agreed Standards, Methods, Guides and Frameworks
- Information Sharing and Knowledge Transfer
- Integration and Interoperability of National Information Systems
- Principles on Geospatial Information and Open Data
- Building Local to Global Capacity & Capability

**Operating Principles**
Data Requirements

- Development of data standards and best practices in parallel with available technology and users' needs
- New data sources and technologies for data collection and integration of different sources of data
- Development of new methodologies to ensure the quality and reliability of citizen-generated data
- New open data management frameworks and establishment of transparent mechanisms to achieve the SDGs
- Modernization of data governance and quality frameworks
- The integration of geospatial information and statistical data

UN-GGIM Forum on the 2030 Agenda for Sustainable Development “Where is the Data?”

Tomorrow, Conference Room 3
SDGs Indicators

The Inter-Agency and Expert Group on SDG Indicators (IAEG-SDGs) has developed a global indicator framework of **232 indicators**.

How can we facilitate indicator registration and sharing?
A digital data **infrastructure** that intends to enable the **integration**, **harmonization**, **connectivity** and **scalability** of multi-source urban datasets.

The infrastructure aims to develop 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** cities.
UADI-Objectives

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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Development Components

1. Ontology
2. Data Registration (WFS)
3. Data Enrichment (Metadata & Semantic)
4. Indicator Tool Development (WPS)
5. Indicator Tool Registration
6. Configure and Run Tool
7. Publish & Visualise Indicator
Input

- Selection of ISO 37120 City Indicators
  (38 Core and Supporting Indicators)
  - Economy (5.1 – 5.7)
  - Energy (7.1, 7.2, 7.4 – 7.5)
  - Shelter (15.2)
  - Solid Waste (16.1 – 16.10)
  - Urban Planning (19.1 -19.4)
  - Wastewater (20.1 – 20.5)
  - Water and Sanitation (21.1 – 21.7)

- Additional Indicators and Housing Density Scenario

  - Population
    - Relation of housing type and household size
    - Ratio of active age cohort to employment ratio
  - Economic
    - Locational variation of property price
    - Number of jobs/full-time employment
  - Environmental
    - Energy consumption and carbon emission in central cities
    - Urban Heat Island (UHI) Measures
  - Infrastructure
    - Residential electrical energy use per unit of dwelling per year
    - Water consumption per capita/household/dwelling units (litres/day)
  - Transportation
    - Accessibility to job and labour
    - Kilometres of bicycle paths and lanes
    - Kilometres of high capacity public transport system
  - Water and Sanitation
    - Housing size, type, and diversity
    - Housing/Rental affordability
  - Education
  - Energy
  - Environment
  - Recreation
  - Safety
  - Shelter
  - Telecommunications and innovation
  - Finance
  - Fire and emergency response
  - Governance
  - Health
**Indicator Infrastructure - Technical Features**

Development Environment

**Data Registration**

**Ontology Registration**

Comparative **Tool**: Registration and Indicator Publishing

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Ontology Management

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Portal

Urban Indicators
• Discovery
• Visualisations
• Comparisons
• Sharing
Indicator Visualisation and Comparison

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Potential Contribution To SDGs

Digital Infrastructure

Access and Integration
Reliability and Replication
Sharing and Visualisation

Data
Tool
Indicator

National Input

SDGs Progress Management

Quality
Reliability
Standardization

Measure
Monitor
Compare

Informed Decision Making for the SDGs

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Takeaway Message

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

The **UN-GGIM** can facilitate the development of an **Infrastructure** for Member States to register new **indicators** related to **land administration**, disaster risk reduction, **food security**, and the **implementation of standards** in order to measure and monitor the inclusive progress of the **SDGs**.
Thank you!

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