The World Geospatial Information Congress

The Geospatial Way
to a Better Future

What Is GIS Today?

A Platform for Managing, Analyzing and Applying Geographic Information

Understanding

. . . And Solving Problems Holistically

Integration

Leveraging Location . . .
. . . and Technology

Communication

. . . Maps and Visualization

Analytics

Geographic Sciences . . .
. . . and Modeling

Web Services

A Platform for Organizations. . .
. . . And Society

A Platform for Smart Cities

Many Innovations

- Cloud
- Web Services
- 3D Visualization
- AR / VR
- Advanced Analytics
- AI & Machine learning
- Real Time / IoT
- Mobility
- Big Data

Delivering Benefit

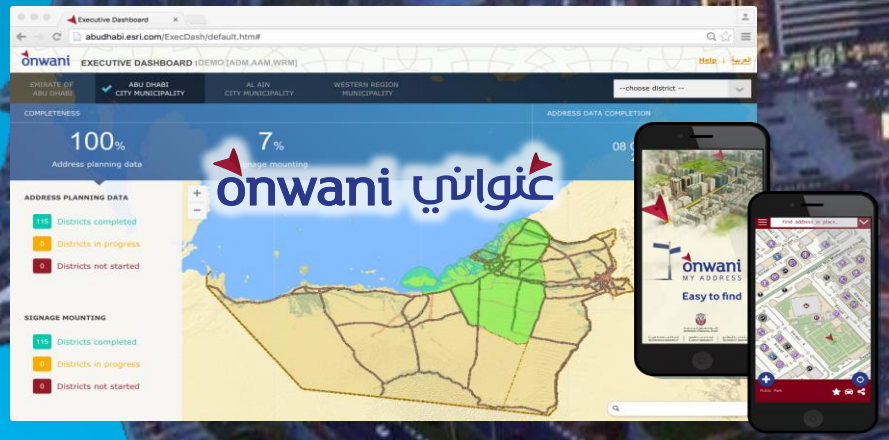
Connecting the City

Enabling Distributed Integration and Collaboration

Abu Dhabi – Smart Applications

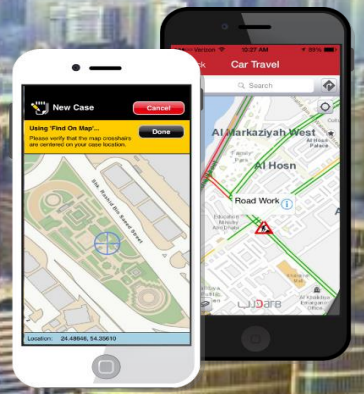
Applying GIS to government services to support better decision making

Citizen Engagement

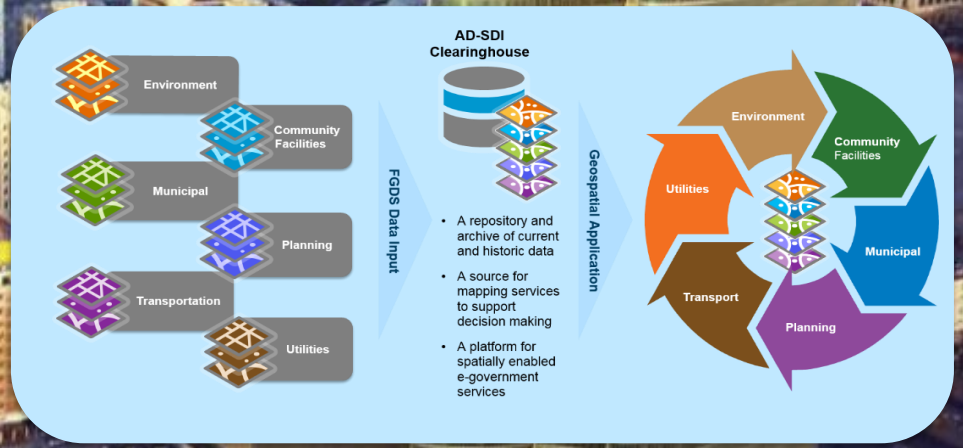


3D Spatially Enabled Urban Planning

Improved Services



700+ layers & 120+ web services



Delivering 230 - 320 % Return on Investment

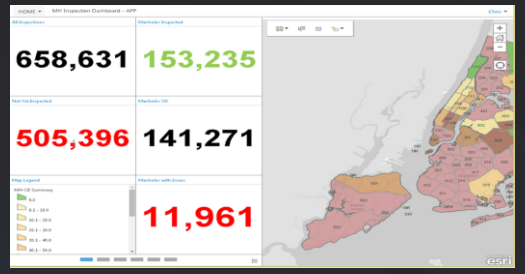
New York City GIS Systems

Improving situational awareness for everyone

esri THE SCIENCE OF WHERE

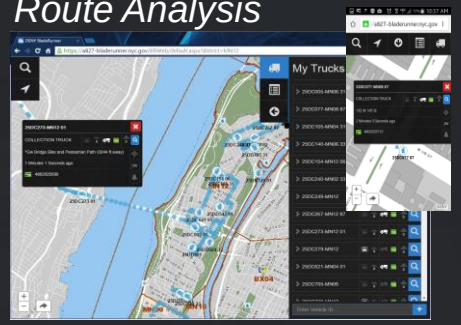
Delivering Value Across the City…

Asset Mgt & Inspections
Water Security,



DEP

Fleet Mgt
Route Analysis



DSNY

Forestry Resource Mgt

Parks

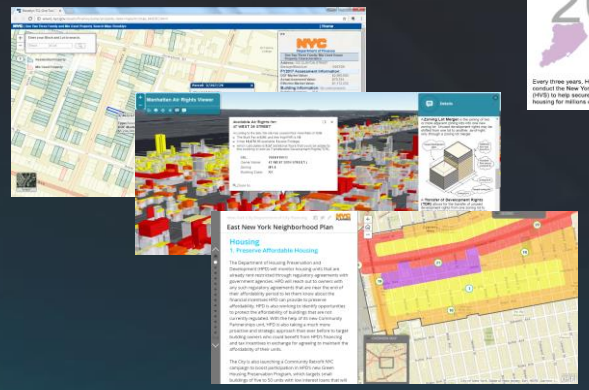
Situational Awareness, IMT

FDNY

Facilities Management

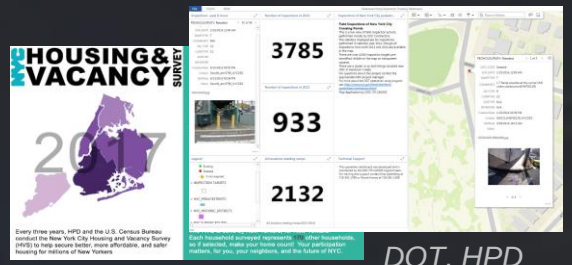
NYCHA

Citizen Engagement



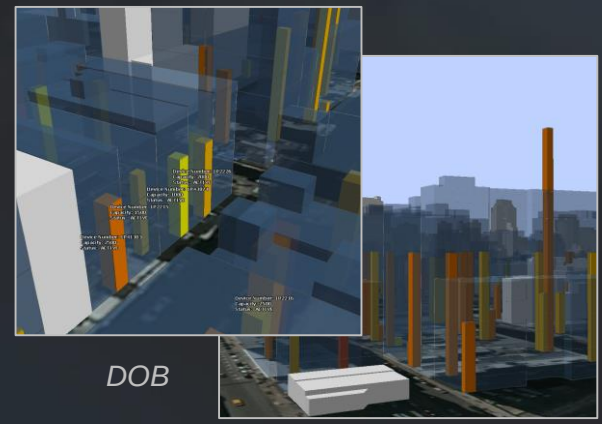
Finance, Health, Planning

Field Inspection



DOT, HPD

Elevator Work Orders



DOB

Emergency Management

NYC EM

Crime Analysis

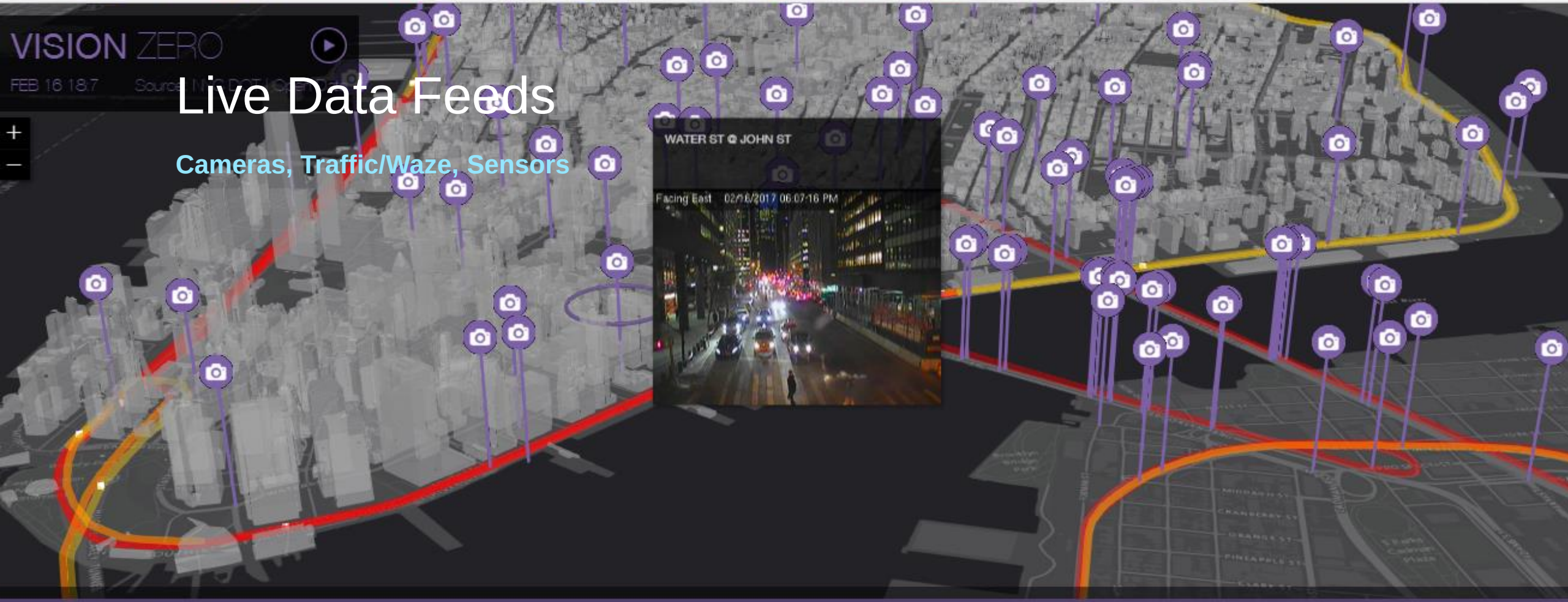
NYPD

. . . Hundreds of Applications, Systems and Departments

Bookmarks | New folder | Speaking the "Langua | Reimagining cities fro | ArcGIS User Seminar | Document Viewer - A | 911 Industry Sales bri | 911 CAD INTERNAL B | https://nyc3d-portal-

Live Data Feeds

Cameras, Traffic/Waze, Sensors



CAMERAS

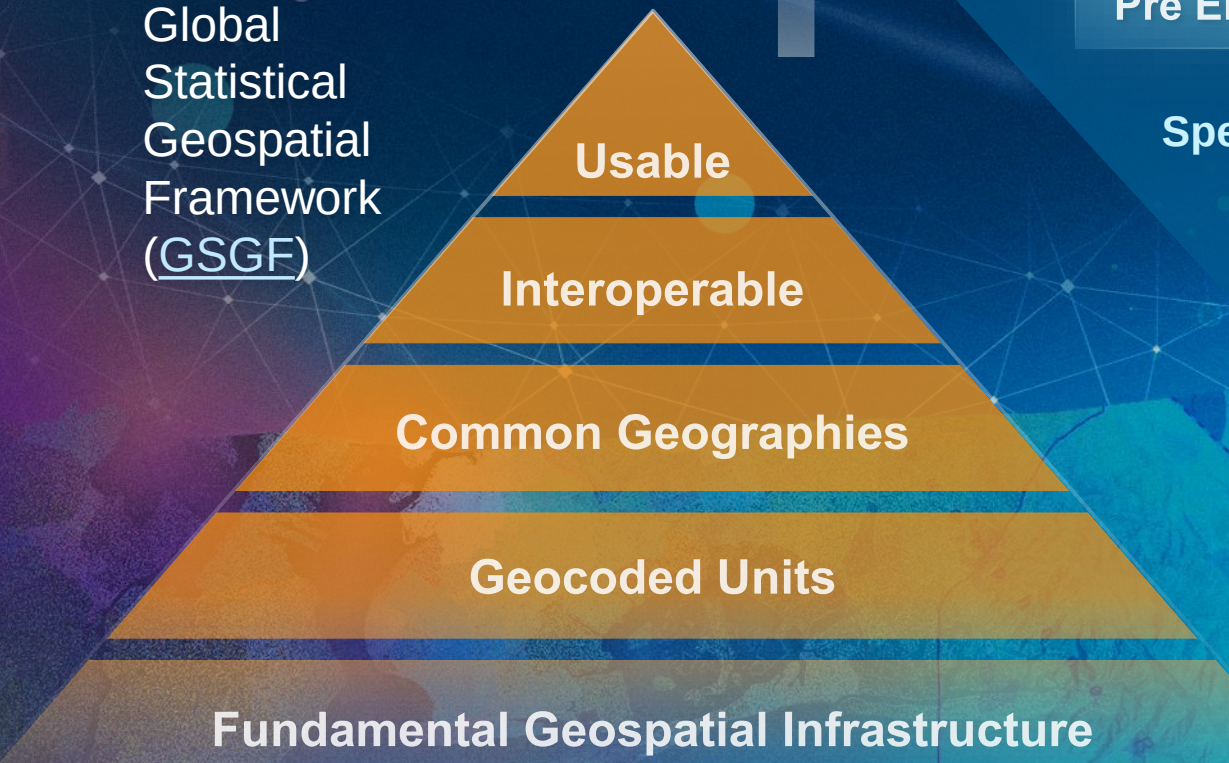
Integrating National Geospatial & Statistical Data

GIS Integrates Statistical and Geospatial Data

Bringing Two Communities Together

IS S

Global Statistical Geospatial Framework (GSGF)



Statistical Process Model (GSBPM)

Planning/ Pre Enumeration	Enumeration	Post Enumeration/ Dissemination
Specify Needs	Collect	Disseminate
Design	Process	Evaluate
Build	Analyze	

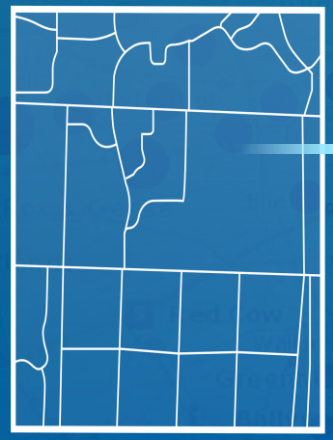
Quality / Metadata Management

GIS Integrates Geospatial and Statistical Data

An Integrated Data Model

Nested Administrative Hierarchy

Boundaries



Key

EA Id	Area
1203501750071	42.3
1203501750072	34.8
1203501750073	26.9
1203501750074	51.2

Census Data

EA Id	Population	Male	Female
1203501750071	432	209	223
1203501750072	502	240	262
1203501750073	525	258	267
1203501750074	494	251	243

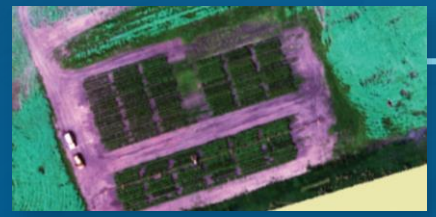
EA Id	Num HH	Avg HH size
1203501750071	89	4.9
1203501750072	98	5.1
1203501750073	102	5.1
1203501750074	85	5.8

Diagram and information taken from the “Handbook on the Geospatial Infrastructure in Support of Census Activities”, Department of Economic and Social Affairs, United Nations Statistics Division

GIS Also Integrates Imagery

Tree Canopy

Crop Health



Land Cover

Analytics

Boundaries

Key

EA Id	Area
1203501750071	42.3
1203501750072	34.8
1203501750073	26.9
1203501750074	51.2

Tree Canopy

EA Id	Density	Own	Height
1203501750071	4	C	M
1203501750072	5	A	L
1203501750073	5	C	H
1203501750074	6	O	M

Crop Health

EA Id	Moisture	Vigor
1203501750071	89	M
1203501750072	98	M
1203501750073	102	H
1203501750074	85	M

Land Cover

EA Id	Primary Type	% change
1203501750071	Forest	+4.9
1203501750072	Ag	-5.8
1203501750073	Wet L	-5.1
1203501750074	Scrub	+3.5

Normalizing Earth Observation Data into statistical Units

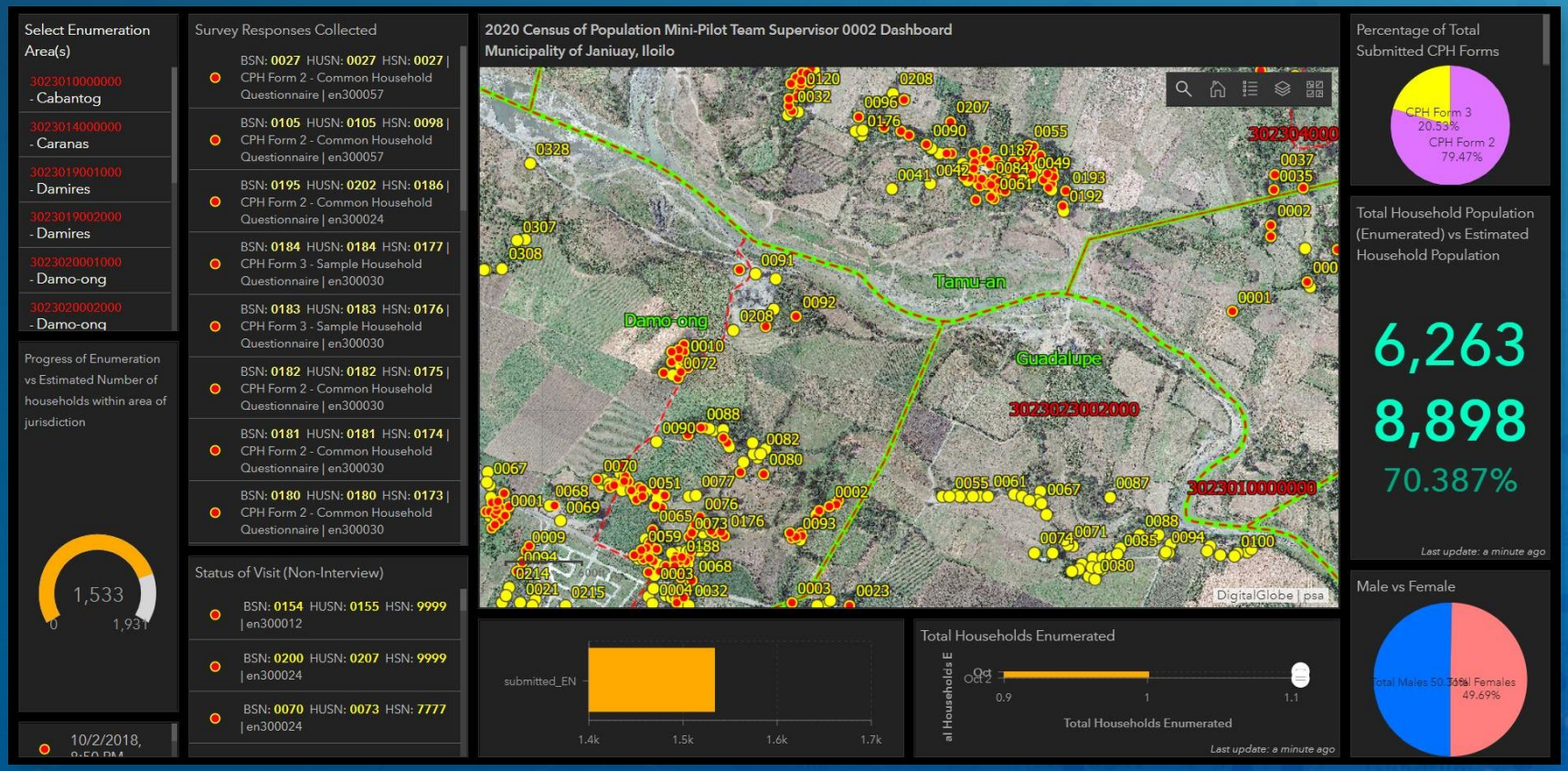
Integrating Geography and Statistics

Results in Powerful Information Products

Integrating Geography and Statistics

To understand our society, economy and environment

Census Operational Dashboard

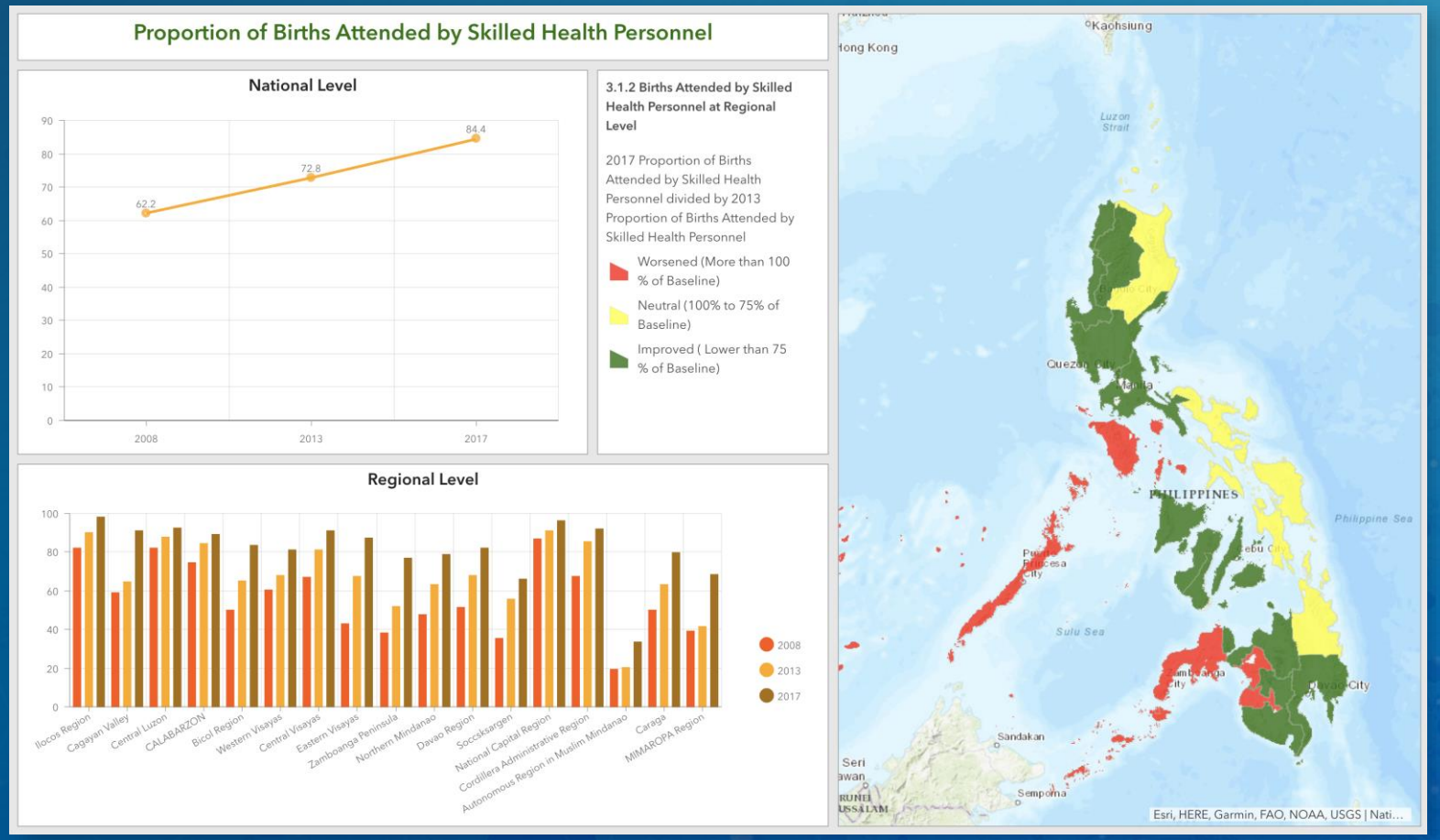


Philippines Statistics Authority

Integrating Geography and Statistics

To understand our society, economy and environment

Births and Public Health



Philippines Statistics Authority

The UN and Member States Have Created a Federated System for the SDG's

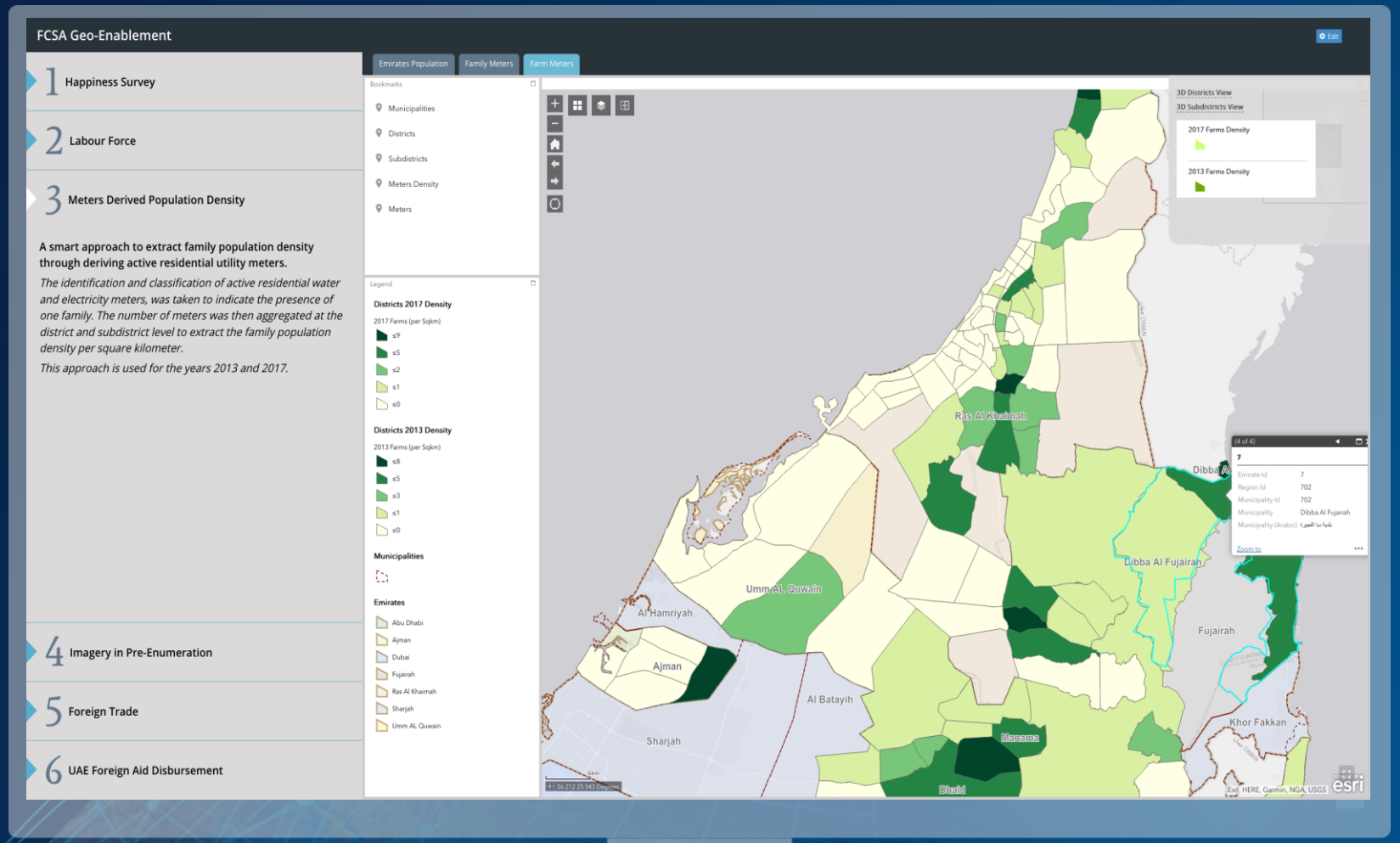
- Country-owned, Country-led
- Global data coverage
- Supporting the Monitoring and Reporting of the SDGs

Creating Applications for SDG Reporting

Story Maps Illustrate Data Driven Progress

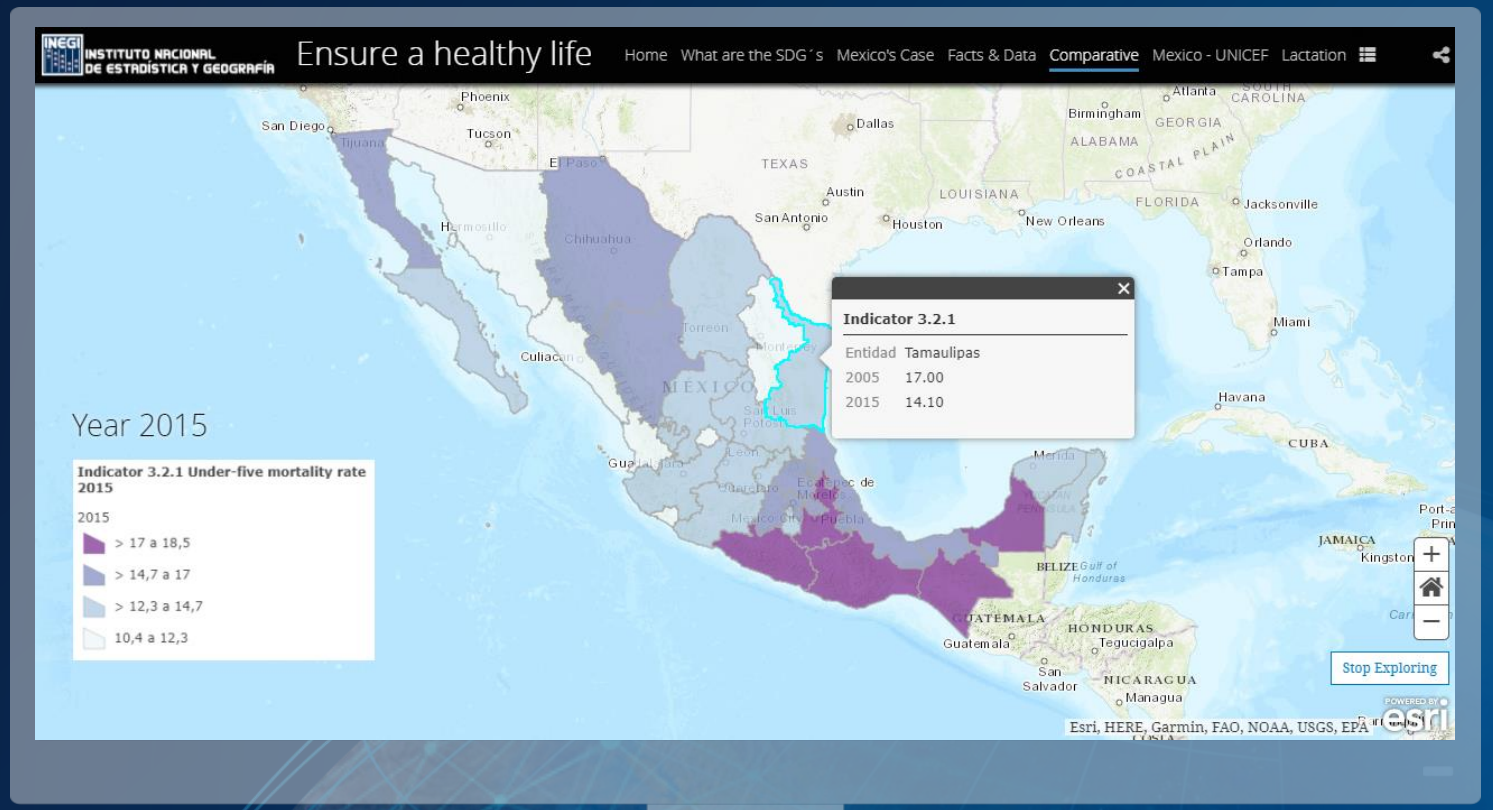
Publishing Information Products

Using An Open, Interoperable, and Services-based Approach



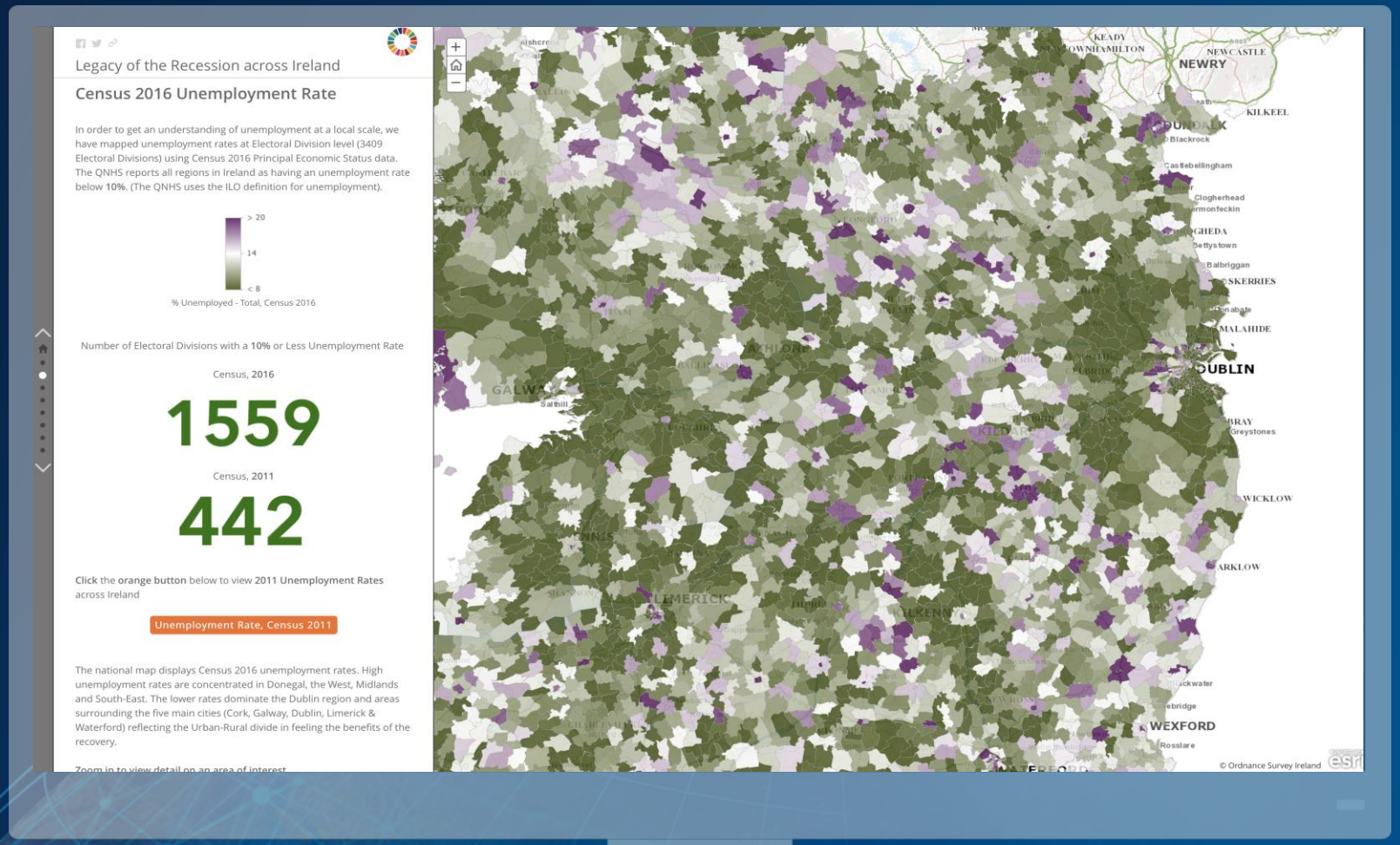
Creating Apps for Decision Makers. . .

Are Already Determining Mexico's Development Progress



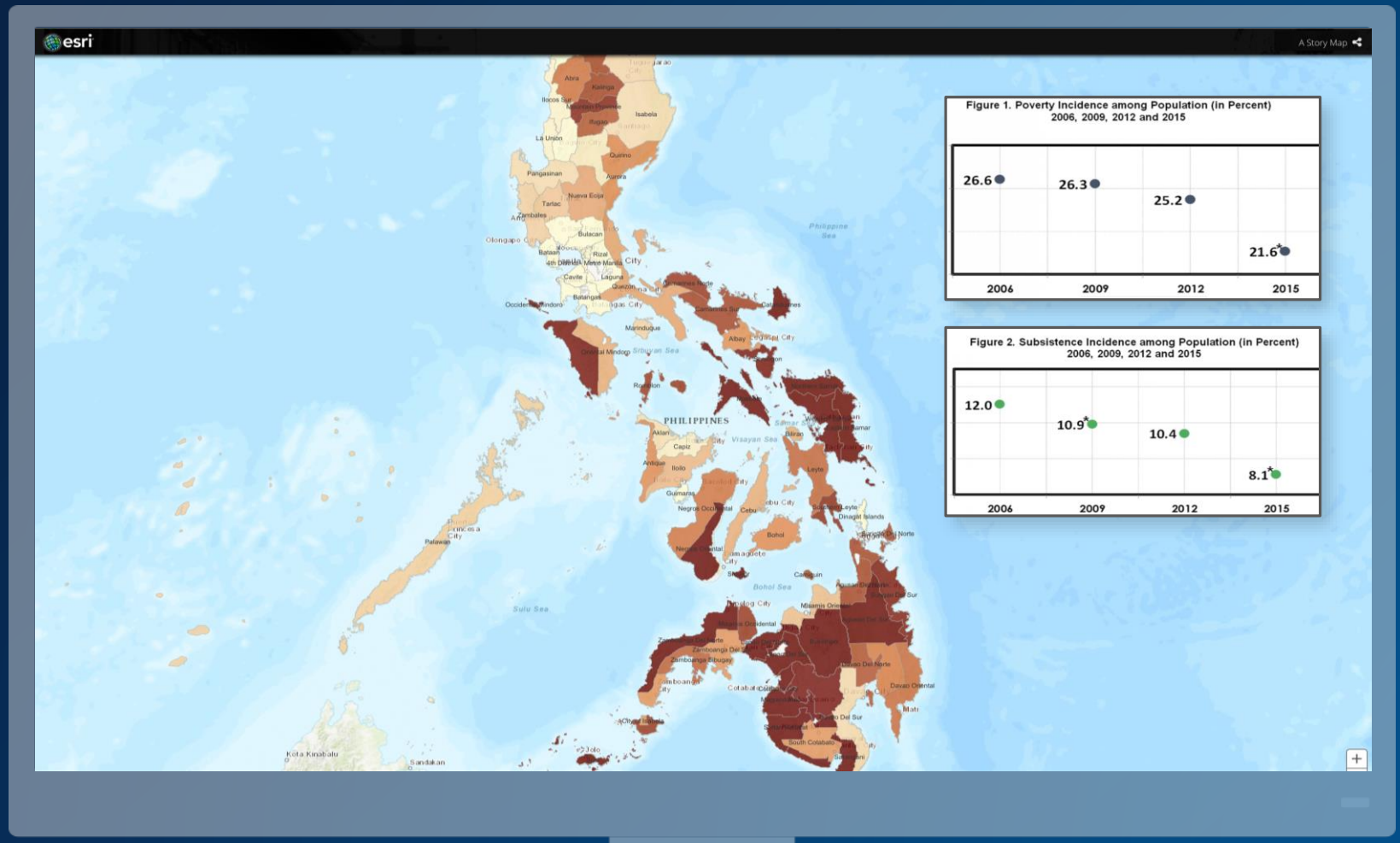
Helping Ireland Understand

Where to Apply Resources



Empowering the Philippines

To Understand Poverty



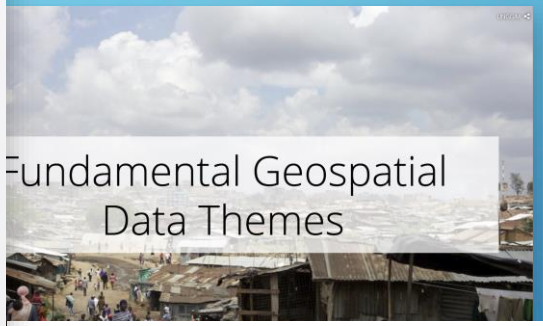
Web GIS Provides the Means . .

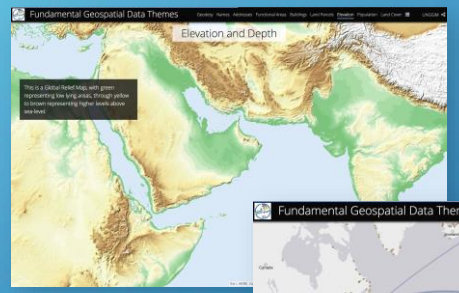
.

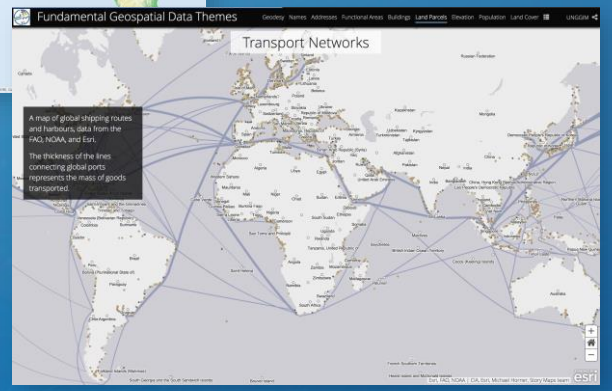
. . For Creating Federated Systems

UNSD Created an Integration Framework

Referencing and Accessing Federated Systems







A Web Services Based Platform . .

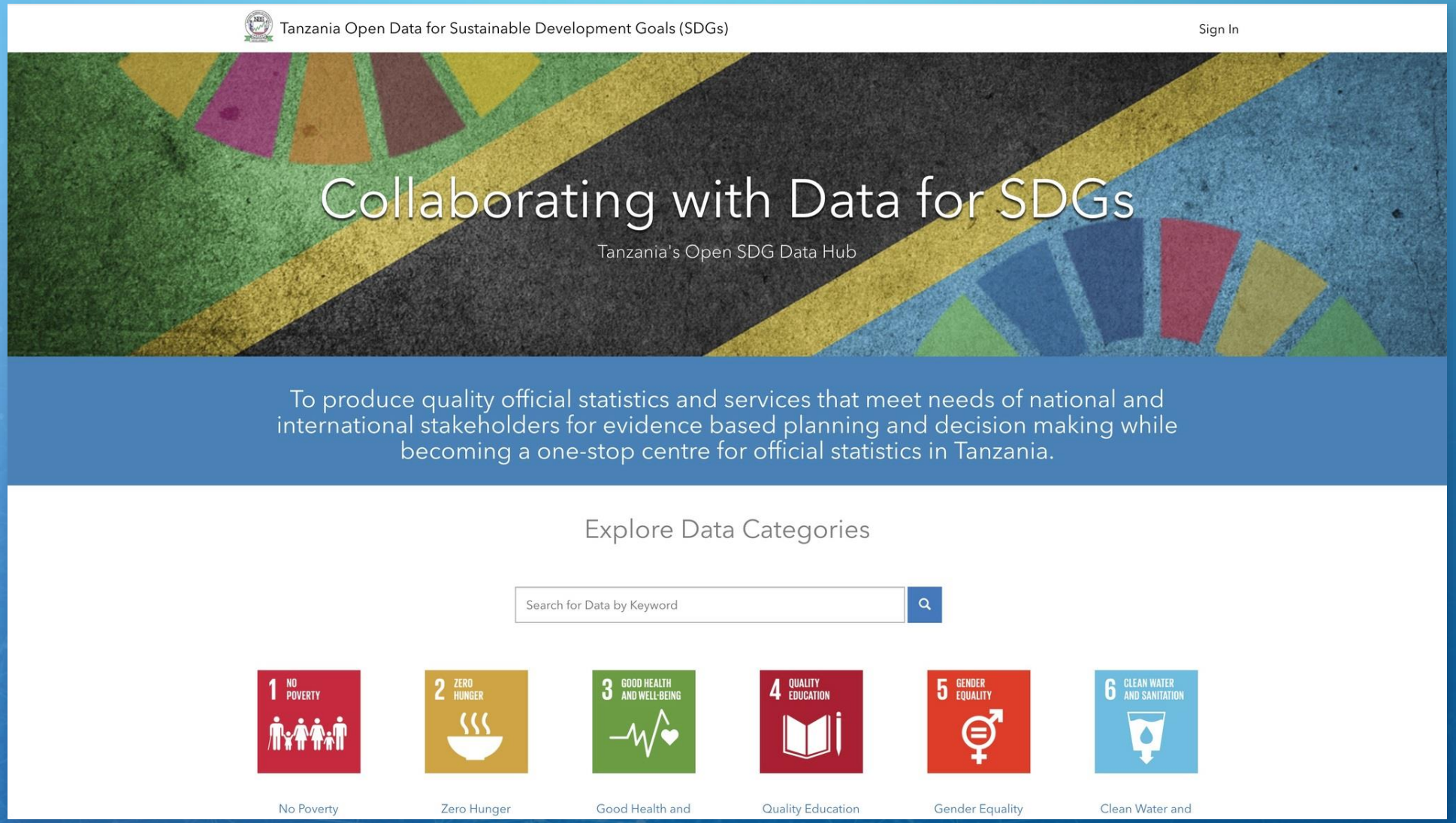
. . . for Integration and SDG Reporting

Open SDG Data Hubs

Are enabling in-country collaboration and action

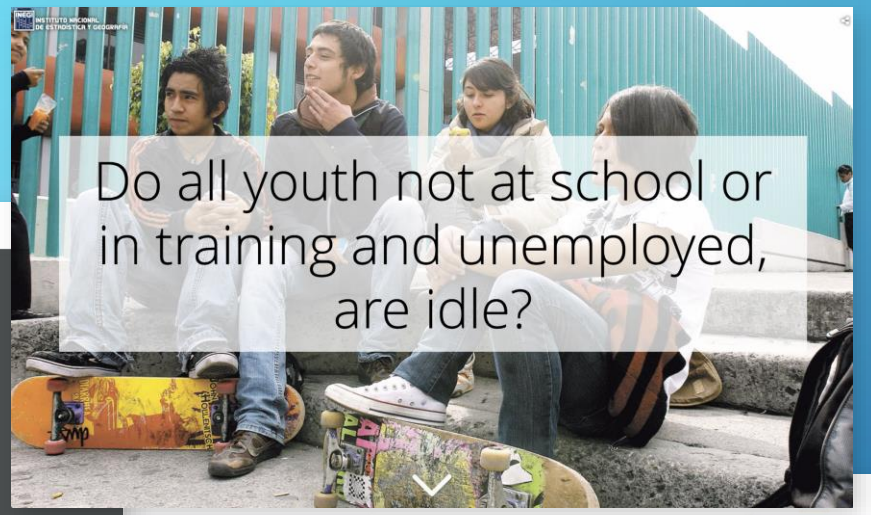
Data
Sub-national
Reporting
OPEN
SDGs
National
Standards Based
Implementation
Enabling
Country Led
Collaboration
Geospatial
Aggregation
Interoperability
Country Owned
Statistical
Integration
Dis-aggregation
GIS
Monitoring

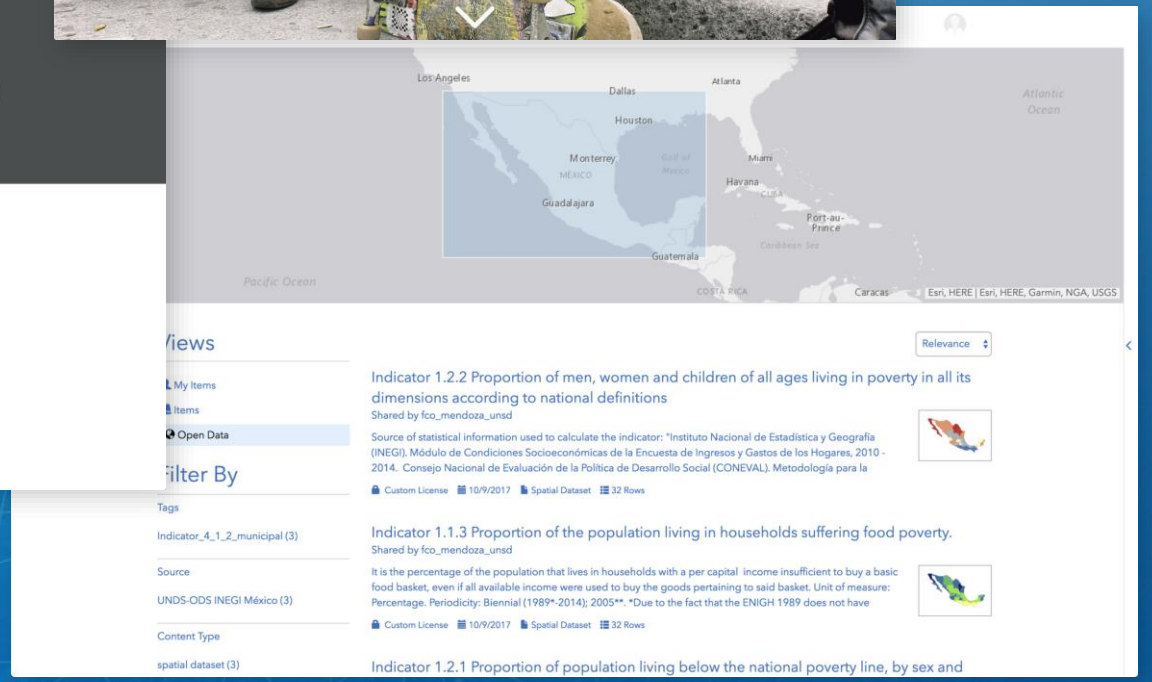
Tanzania


Tanzania Open Data for Sustainable Development Goals (SDGs)
Sign In
Collaborating with Data for SDGs
Tanzania's Open SDG Data Hub
To produce quality official statistics and services that meet needs of national and international stakeholders for evidence based planning and decision making while becoming a one-stop centre for official statistics in Tanzania.
Explore Data Categories
Search for Data by Keyword
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
No Poverty
Zero Hunger
Good Health and
Quality Education
Gender Equality
Clean Water and

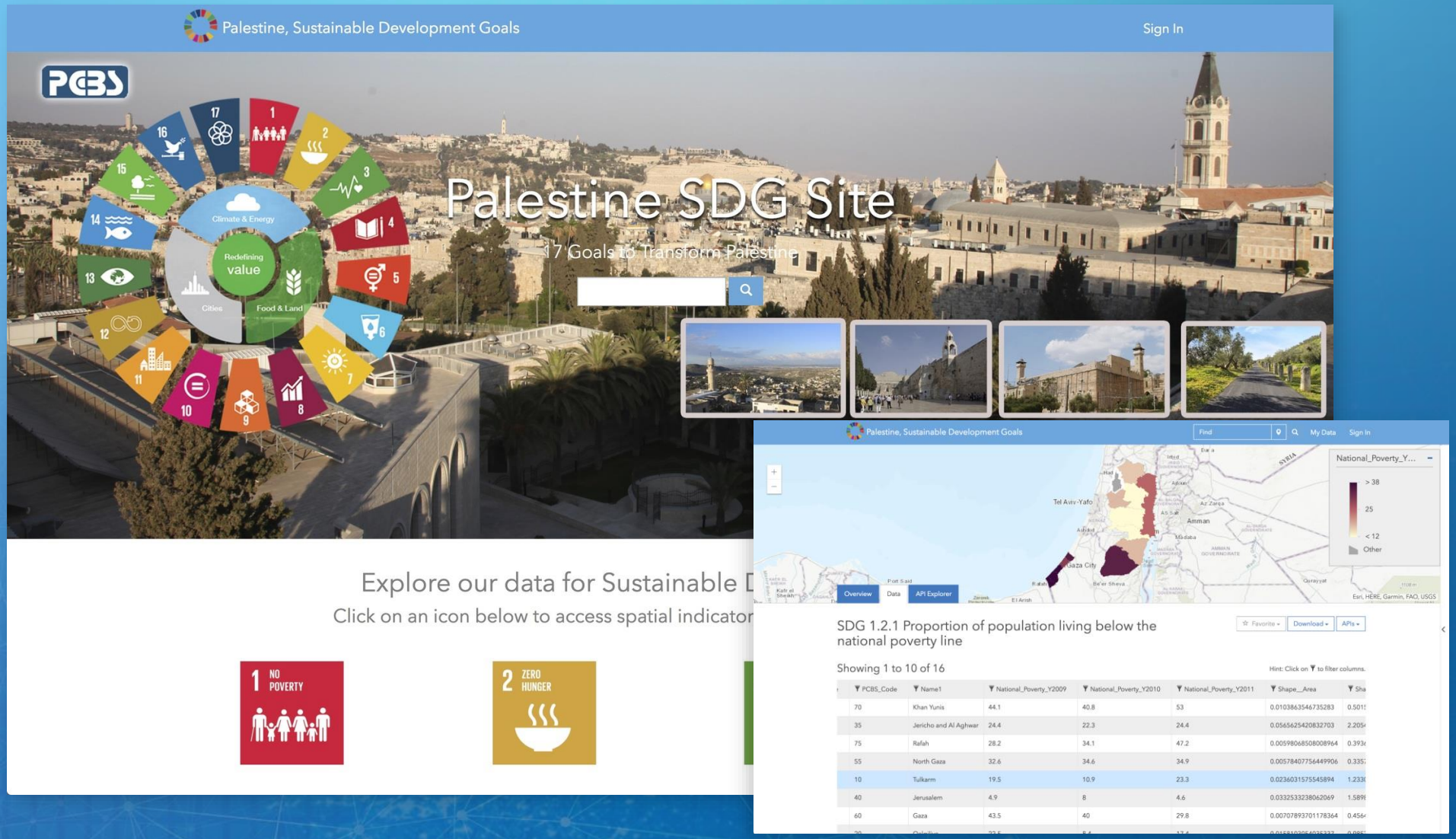
Mexico

SUSTAINABLE DEVELOPMENT GOALS
SUSTAINABLE DEVELOPMENT GOALS
On 1 January 2016, the world officially began implementation of the 2030 Agenda for Sustainable Development–the transformative plan of action based on 17 Sustainable Development Goals–to address urgent global challenges over the next 15 years. This agenda is a road map for people and the planet that will build on the success of the Millennium Development Goals and ensure sustainable social and economic progress worldwide. It seeks not only to eradicate extreme poverty, but also to integrate and balance the three dimensions of sustainable development–economic, social and environmental–in a comprehensive global vision. All nations will need to build the Sustainable Development Goals into their national policies and plans if we are to achieve them.
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
11 SUSTAINABLE CITIES AND COMMUNITIES

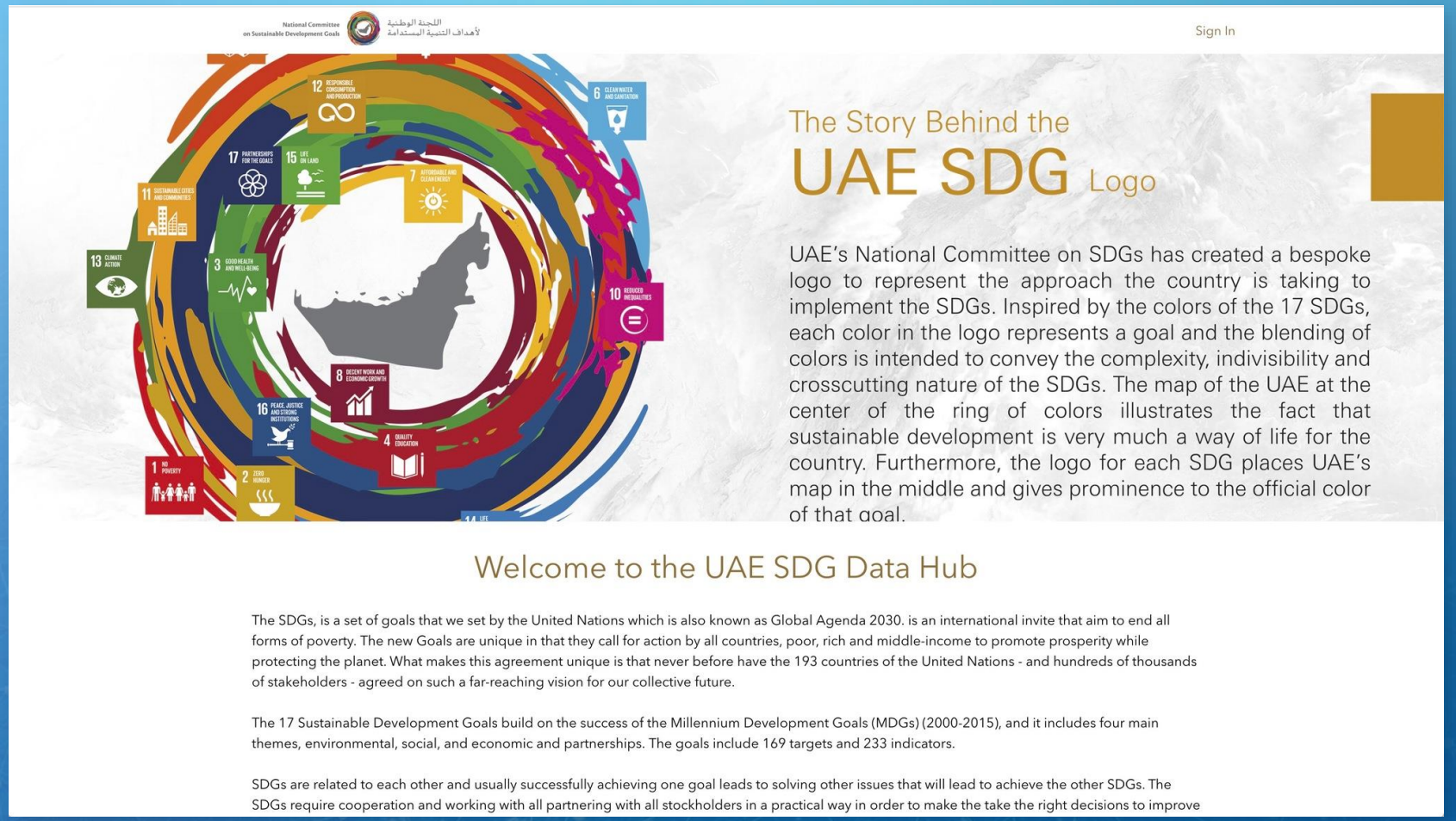

Do all youth not at school or in training and unemployed, are idle?


Los Angeles
Dallas
Atlanta
Houston
Monterrey
MEXICO
Guadalajara
Miami
Havana
CUBA
Port-au-Prince
Guatemala
Caribbean Sea
Pacific Ocean
COSTA RICA
Caracas
Atlantic Ocean
Esri, HERE | Esri, HERE, Garmin, NGA, USGS
Views
Relevance
My Items
Items
Open Data
Filter By
Tags
Indicator_4_1_2_municipal (3)
Source
UNDS-ODS INEGI México (3)
Content Type
spatial dataset (3)
Indicator 1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
Shared by fco_mendoza_unsd
Source of statistical information used to calculate the indicator: "Instituto Nacional de Estadística y Geografía (INEGI). Módulo de Condiciones Socioeconómicas de la Encuesta de Ingresos y Gastos de los Hogares, 2010 - 2014. Consejo Nacional de Evaluación de la Política de Desarrollo Social (CONEVAL). Metodología para la
Custom License
10/9/2017
Spatial Dataset
32 Rows
Indicator 1.1.3 Proportion of the population living in households suffering food poverty.
Shared by fco_mendoza_unsd
It is the percentage of the population that lives in households with a per capital income insufficient to buy a basic food basket, even if all available income were used to buy the goods pertaining to said basket. Unit of measure: Percentage. Periodicity: Biennial (1989*-2014); 2005**. *Due to the fact that the ENIGH 1989 does not have
Custom License
10/9/2017
Spatial Dataset
32 Rows
Indicator 1.2.1 Proportion of population living below the national poverty line, by sex and

Palestine

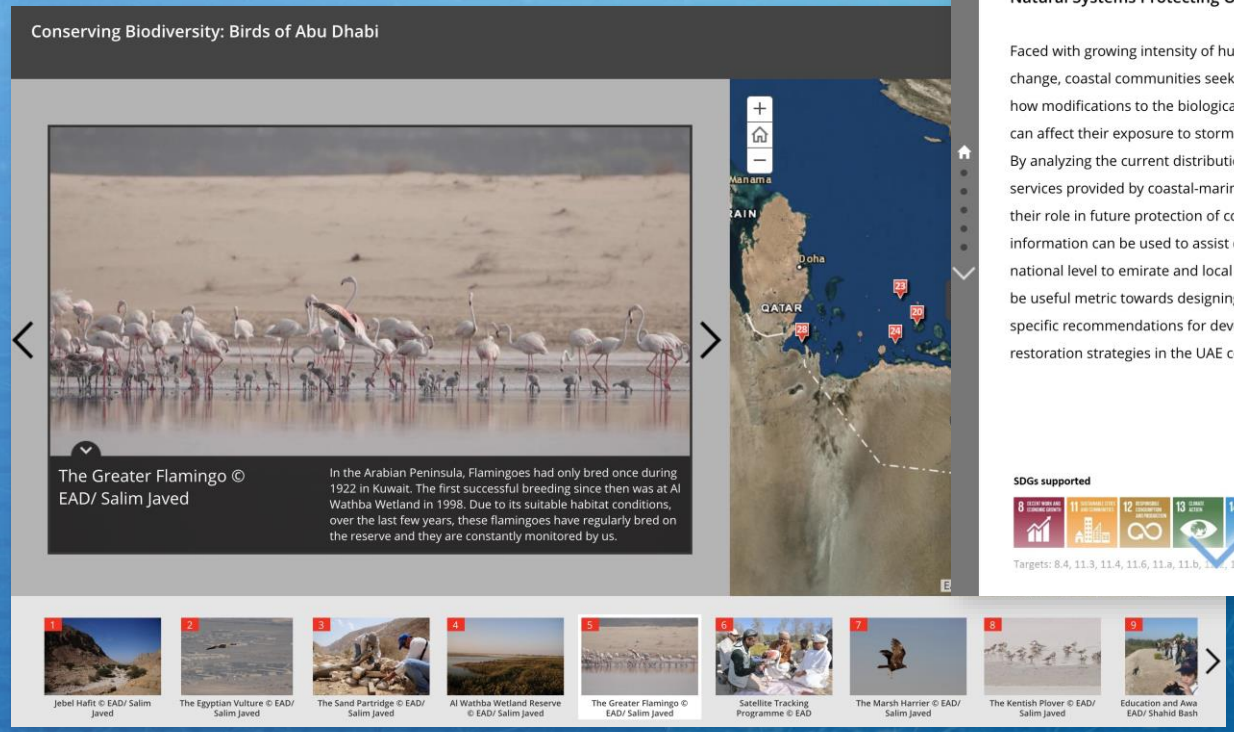

Palestine, Sustainable Development Goals
Sign In
PCBS
Palestine SDG Site
17 Goals to Transform Palestine
Climate & Energy
Redefining value
Cities
Food & Land
Explore our data for Sustainable D
Click on an icon below to access spatial indicator
1 NO POVERTY
2 ZERO HUNGER
Palestine, Sustainable Development Goals
My Data
Sign In
National_Poverty_Y...
> 38
25
< 12
Other
Overview
Data
API Explorer
SDG 1.2.1 Proportion of population living below the national poverty line
Showing 1 to 10 of 16
Hint: Click on to filter columns.
PCBS_Code
Name1
National_Poverty_Y2009
National_Poverty_Y2010
National_Poverty_Y2011
Shape__Area
70 Khan Yunis 44.1 40.8 53 0.0103863546735283
35 Jericho and Al Aghwar 24.4 22.3 24.4 0.0565625420832703
75 Rafah 28.2 34.1 47.2 0.0059806850800896
55 North Gaza 32.6 34.6 34.9 0.0057840756449906
10 Tulkarm 19.5 10.9 23.3 0.0236031575545894
40 Jerusalem 4.9 8 4.6 0.0332533238062069
60 Gaza 43.5 40 29.8 0.00707893701178364

United Arab Emirates

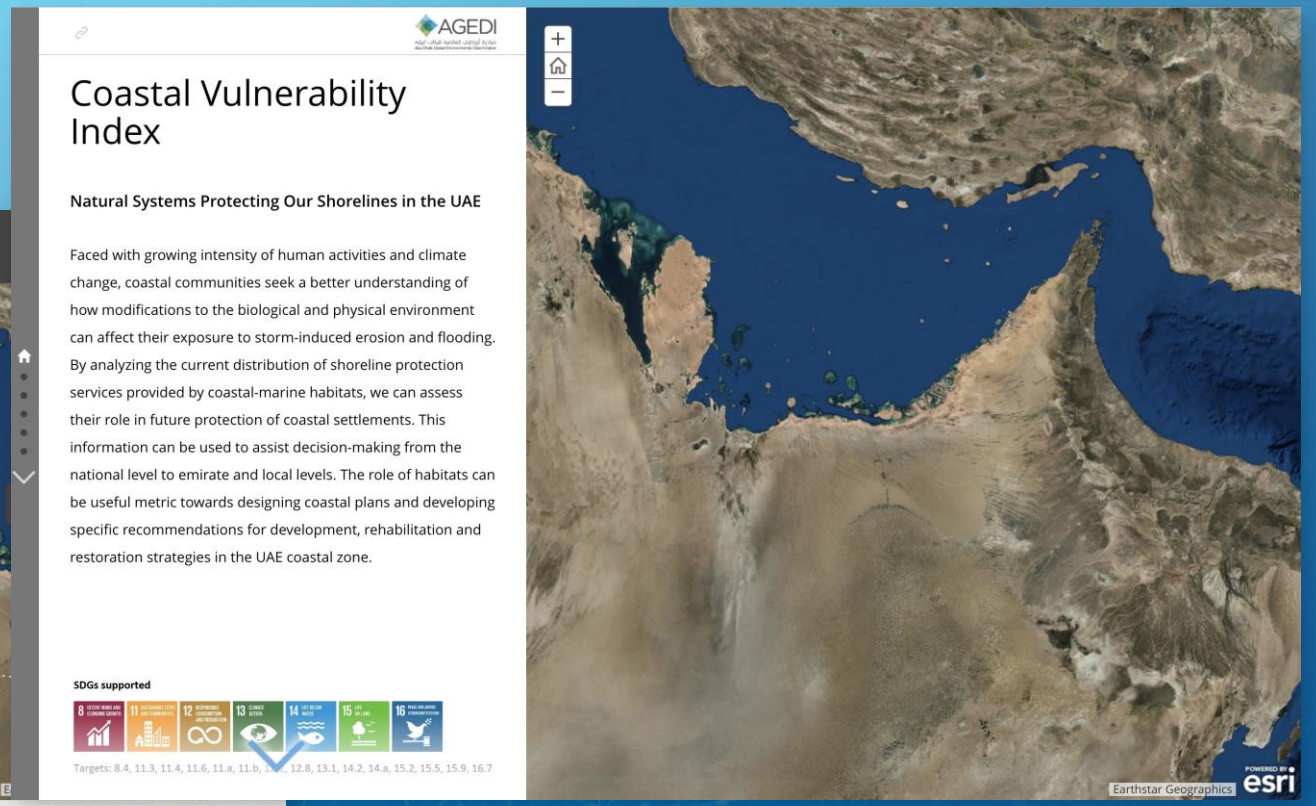


United Arab Emirates

EAD Environment Agency Abu Dhabi



AGEDI Abu Dhabi Global Environmental Data Initiative



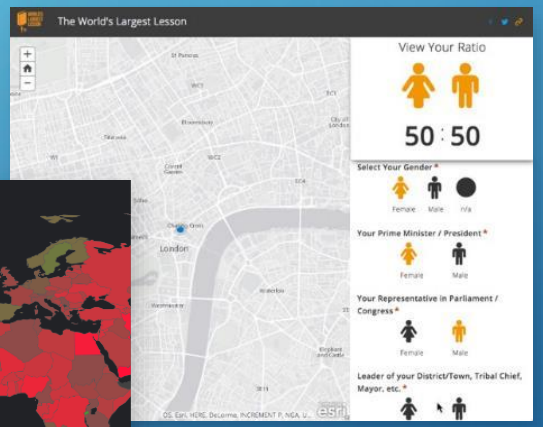
Senegal

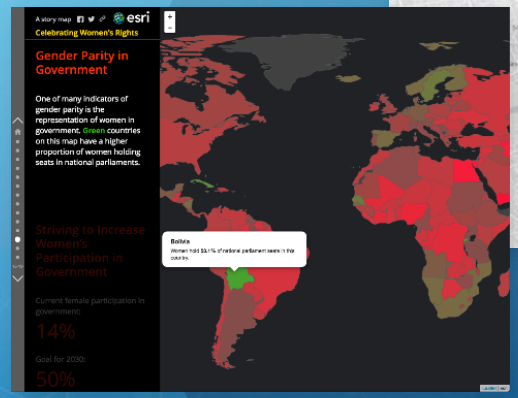
Sénégal, Open Data Site
Sign In
Sénégal, Plateforme de suivi des ODD
17 Objectifs pour transformer le Sénégal
Sénégal, Plateforme de suivi des ODD est une plateforme publique pour explorer et télécharger des données ouvertes, découvrir et participer à la résolution des problèmes locaux importants. Vous pouvez analyser et combiner des jeux de données ouverts à l'aide de cartes.
Explorer les données ouvertes
Rechercher les données
Rechercher

The Framework is Also Engaging a Broad Community

Citizen Groups

Nonprofits





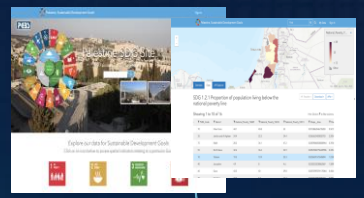
Private Sector

Participating in a Federated System of Open SDG Hubs

Sharing and Collaborating

A Global SDG Hub …

Palestine



Palestine Central Bureau of Statistics

Philippines

Philippine Statistics Authority

Partner

Partner

Mexico

Instituto Nacional de Estadística y Geografía (INEGI)

UN SDG Hub Network

Ireland

Central Statistics Office & Ordnance Survey Ireland

UAE

Federal Competitiveness & Statistics Authority

Partner

National SDG Hubs

Web GIS Will Bring the World Together. . .

Integrating Information, Processes, and Workflows . . .

. . . All Happening at the Same Time

An Open Platform for SDIs

Using the Power of Location to Integrate Everything

Implementing GIS

Requires More Than Technology

- Vision, Leadership, and Involvement
- A Strong Champion
  - Understanding The Mission

  …and Business Value
- Clear Strategy
  - Cost, IT, Vision, Risk Management
  - Realistic Timelines
- Ongoing Governance
- Good People

. . . And a Culture of Collaboration

"Collaboration Moves at the Speed of Trust."
- Chris Thompson

WORLD.
Showing the Tracks & Discoveries
of Capt. Cook.
Drawn from the Best Authorities.