

*National Platforms for SDG Reporting  
January 22 to 24, 2018  
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# GIS and tools for data communication





# Integration of Statistical and Geospatial Data

Global Statistical  
Geospatial  
Framework  
(GSGF)



Statistical Business Process Model (GSBPM)

Planning/  
Pre Enumeration

Enumeration

Post Enumeration/  
Dissemination

Usable

Specify  
Needs

Collect

Disseminate

Interoperable

Design

Process

Evaluate

Common Geographies

Build

Analyze

Geocoded Units

Quality / Metadata Management

Fundamental Geospatial Infrastructure





# Vision

## GIS

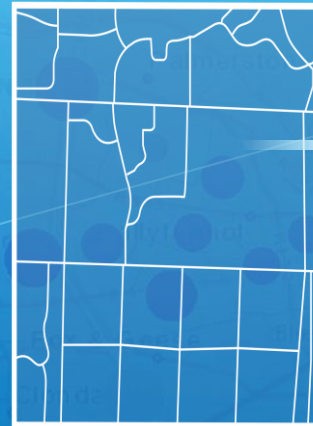
Is Enabling a  
Sustainable World



# Geography and Statistical Data Are Foundational

An Integrated Data Model is Essential

## 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

## Nested Administrative Hierarchy

### Provinces



### Districts



### Localities

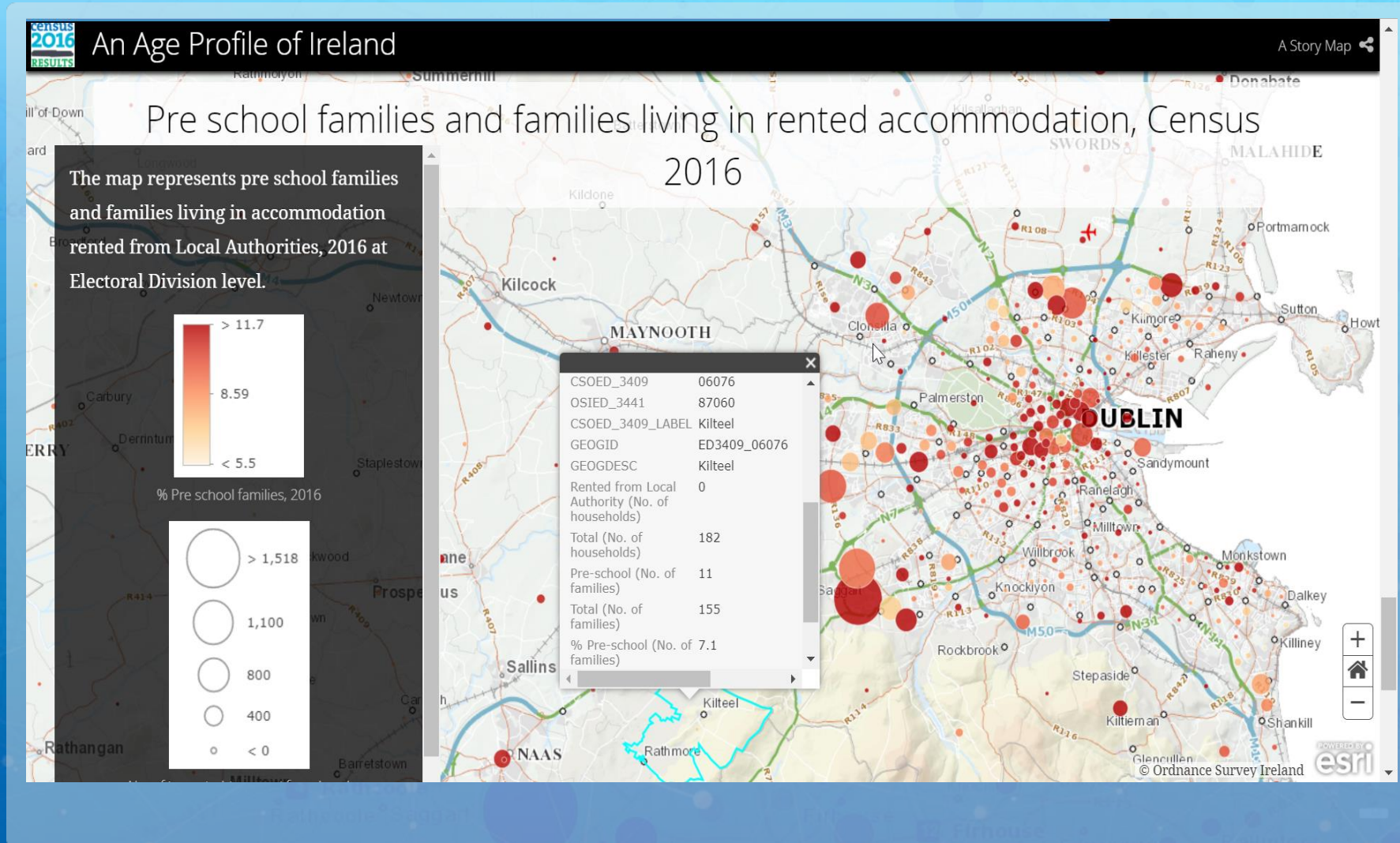


### Enumeration Areas



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 is Enabling Understanding of the SDGs





# THE SCIENCE OF WHERE

*A Framework and Process*



*Transforming How We Collaborate and Act . . .  
Providing a More Integrated Approach*



# GIS Provides a Platform

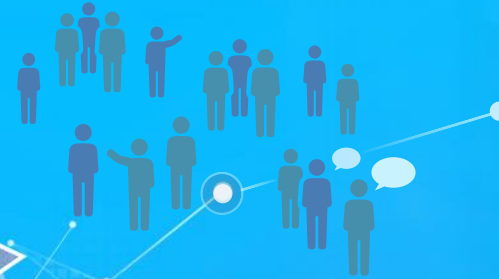
For Managing, Analyzing, and Applying  
Geographic, Statistical & Imagery Information

Integrating People,  
Processes, Things,  
and Data About Them

System of  
Record



System of  
Engagement



System of  
Insight



Using the Power of Where  
to Integrate Everything





# Web GIS Simplifies Working With All Types of Data

Using Web Maps, Scenes, and Layers

Creating  
A Common Language

Apps

Distributed

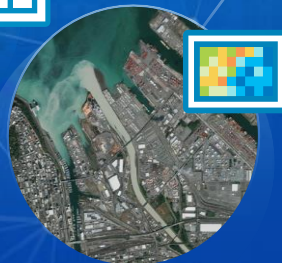
Portal



Map



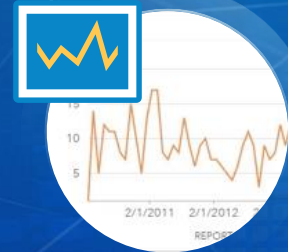
Tabular



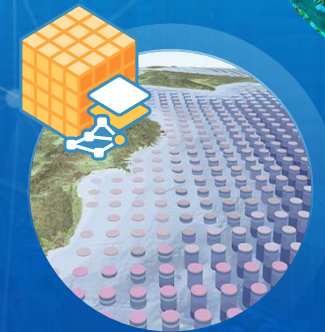
Imagery



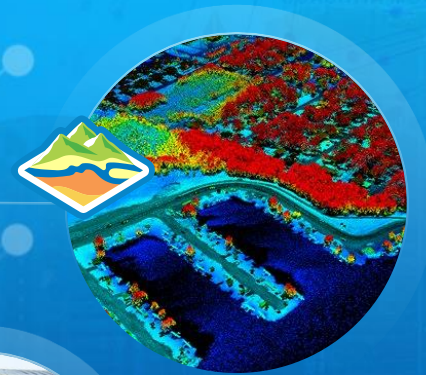
3D



Real-Time  
(IoT)



Big Data

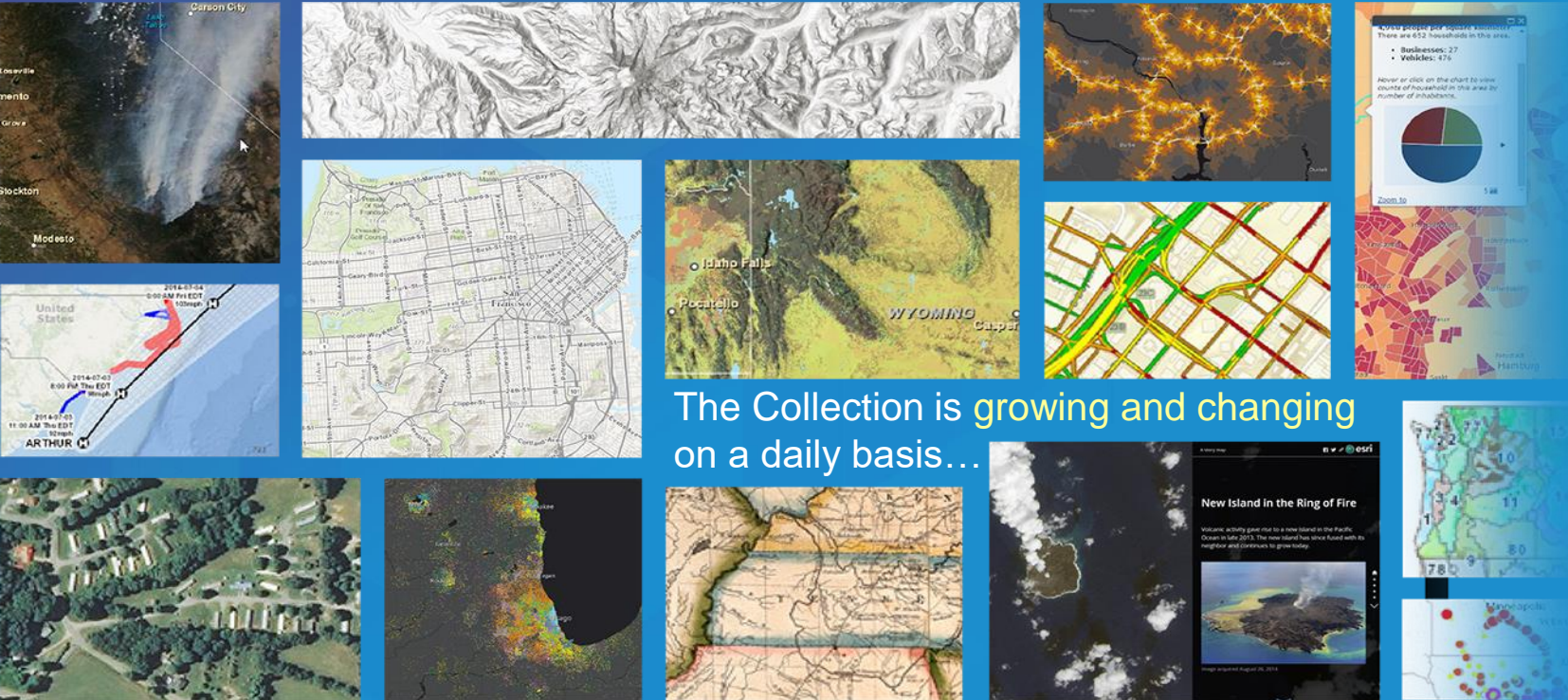


Lidar



# ArcGIS includes a Living Atlas of the World

Maps and Layers from Esri and Thousands of Contributors



The Collection is growing and changing on a daily basis...

Transportation  
Weather  
Historical  
Landscape  
Urban Systems  
Basemaps  
Boundaries  
Land Cover  
Soils  
Hazards  
Imagery  
Observations  
Demographics  
Habitats  
Elevation  
Hydro

... with Curated Content on Many Topics



# Global Ecological Land Units

Explore the Ecological Tapestry of the World



Search

**Bioclimates +** Hot Semi-Dry

**Landforms +** High Mountains

**Rock Type +** Metamorphics

**Land Cover +** Broadleaved and deciduous forest closed to ope...

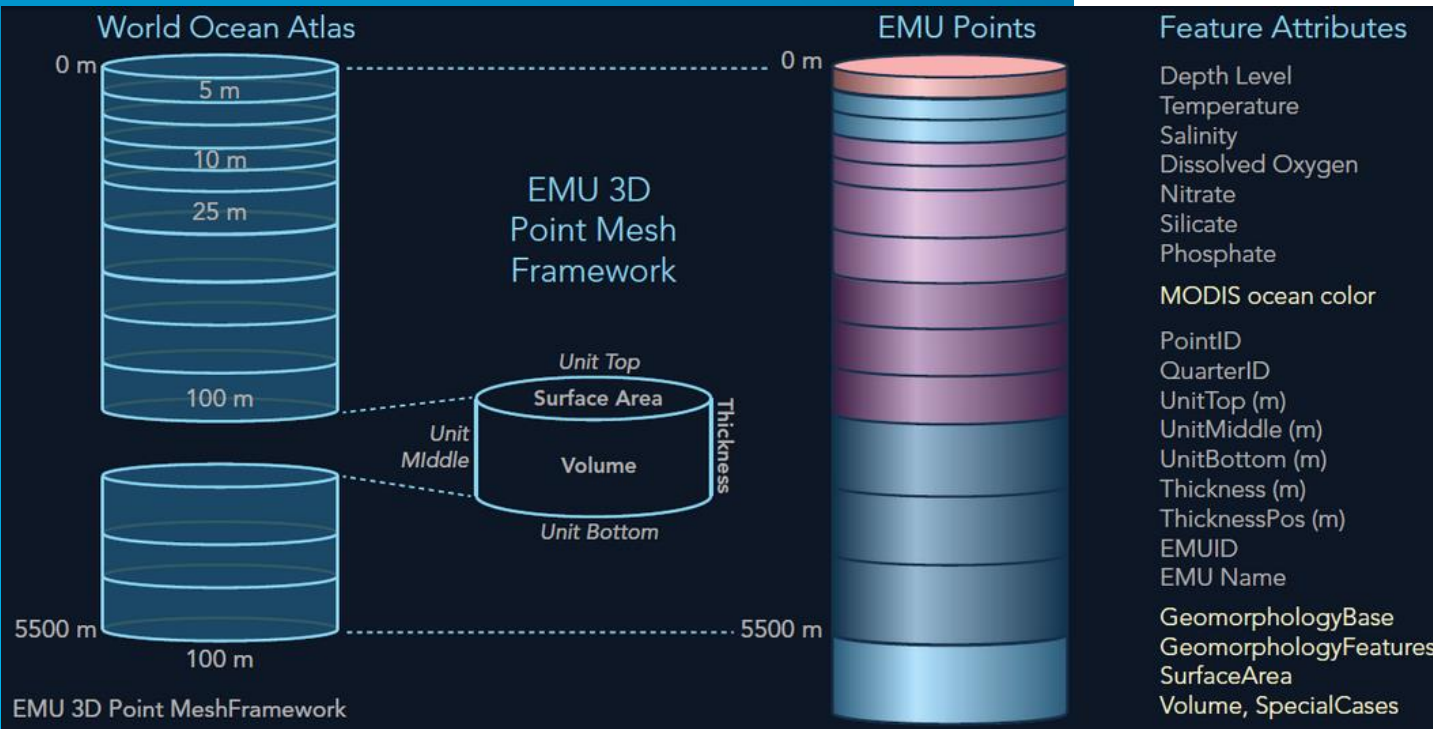
Ecological Name: Hot Semi-Dry / High Mountains / Metamorphics / Broadleaved and deciduous forest closed to open (>15%)



# Global Ecological Marine Units



Science Team





# Landsat Explorer

Landsat Explorer    Rendering: Agriculture    Imagery Date: December 21, 2017

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   X  
Show search results for **new york**

Search result  
New York  
[Show more results](#)  
[Zoom to](#)    ...



0    5    10km     -74.541 40.759 Degrees



# Web GIS Enables New Types of Collaboration

Connecting Individuals, Organizations and Communities



**Individuals**

**Organizations**

**Communities**

Breaking Down  
Barriers

Sharing Knowledge

*... Creating New Connections and Opportunities*



# Web GIS Enables Community Engagement

Organizing and Managing Community Interactions

Providing Citizens Information . . .  
. . . And Leaders Input



Community GIS Hub

Policy Initiative Based

Citizen Communication

Citizen Surveys  
(Crowdsourcing)

Status Reporting

Open Data

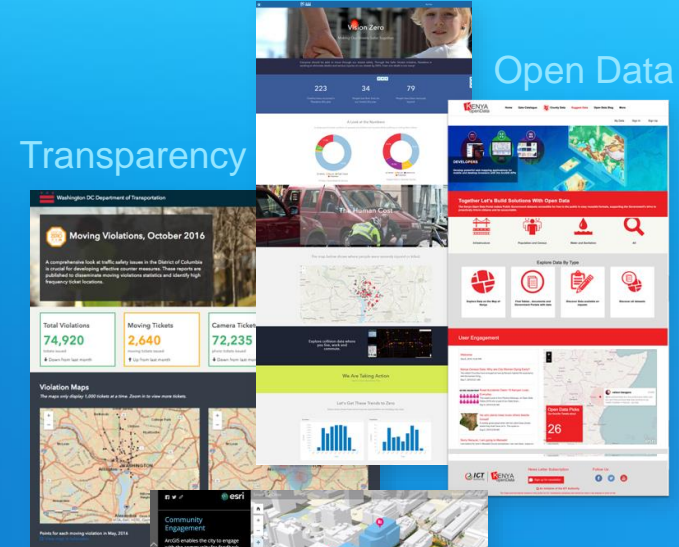
Storytelling

Demographic  
Information

Vision Zero

Open Data

Transparency



Urban  
Planning

Demographic  
Reporting

Using Shared Templates



# Connecting Everyone

Using Web Maps and Apps to Share and Collaborate

Supporting Communication  
and Real-Time Awareness

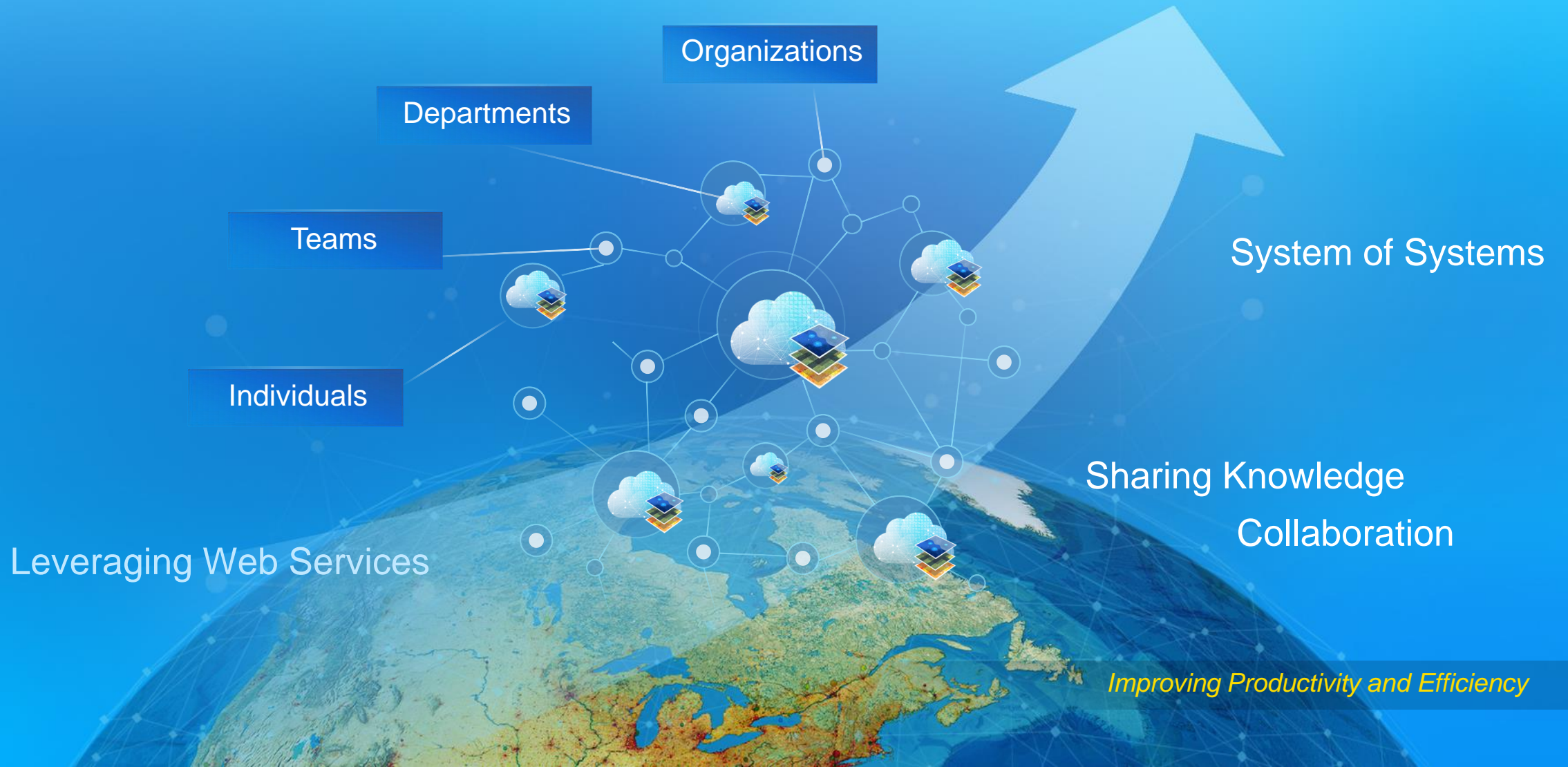


*Creating a System of Engagement*



# Web GIS Enables Whole New Scale of GIS

Helping Everyone do Their Work Better





# Promote A Culture of Sharing and Collaboration

Enable People to Work Together by Securely Sharing Data, Apps, and Knowledge



Data Producer

ACCESS FUNCTIONALITY ●●●●  
●●●●



Developer

ACCESS FUNCTIONALITY ●●●○  
●●●●



Manager

ACCESS FUNCTIONALITY ●●●●  
●●○○



Analyst

ACCESS FUNCTIONALITY ●○○○  
●●○○



Data User

ACCESS FUNCTIONALITY ●○○○  
●○○○





**The Uprooted**

War, sectarian violence, and famine have forced more than 50 million people from their homes—the largest number of displaced people since World War II.

Story sources: UNHCR, Airbus Defense and Space

**esri The Uprooted**

Introduction Syria Za'atari Camp Exodus How You Can Help A Story Map

A deadlocked civil war made Syria the largest source of refugees in 2014.

Number of refugees:

- Syria 3.9 million
- Afghanistan 2.6 million
- Somalia 1.1 million
- Sudan 666,000
- South Sudan 616,000

**REFUGEES**  
2014, by country of origin

**On the Front Lines of Famine**

In parts of Africa and the Middle East, conflict and drought are driving a food crisis of unprecedented scale

**esri On the Front Lines of Famine**

The Crises The Causes Resolving the Crises Take Action A Story Map

The dire conditions in these four countries encapsulate a watershed moment of violence, displacement, malnutrition, and disease. The number of people in need is unprecedented.

Country	People in need
Yemen	18.8m
Northeastern Nigeria	8.5m
South Sudan	7.5m
Somalia	6.7m

Data: UNOCHA (March - June 2017)

According to its UN definition, "famine" is not declared lightly:





# The Changing Patterns of Unemployment and Poverty in Ireland, 2011-2017

This Story Map illustrates changes in Ireland in relation to unemployment and poverty throughout the last decade. The Story Map has been developed to inform efforts in reporting Ireland's status in relation to achieving United Nations (UN) Sustainable Development Goals.

UN countries have adopted a set of 17 goals to end poverty, protect the planet and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to help achieve the goals set out in the agenda by 2030.



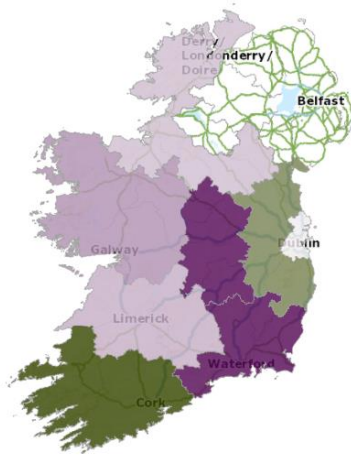
## The Changing Patterns of Unemployment and Poverty in Ireland, 2011-2017

### National Unemployment Rate?

The data displayed represent SDG 8.5.2 Unemployment Rate for Ireland and supports the efforts to achieve goal number 8 which aims to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

According to the latest figures Ireland's unemployment rate stands at 6.2%. The figures are produced by the Central Statistics Office as part of the Quarterly National Household Survey (QNHS). The QNHS is the official source of employment and unemployment statistics in Ireland.

The International Labour Organisation (ILO) Unemployment Rate (source QNHS) is used for national reporting and is available at NUTS 3 (Regional) level. The map displays the ILO Unemployment Rate at NUTS 3 level across Ireland, 2017 Q2.

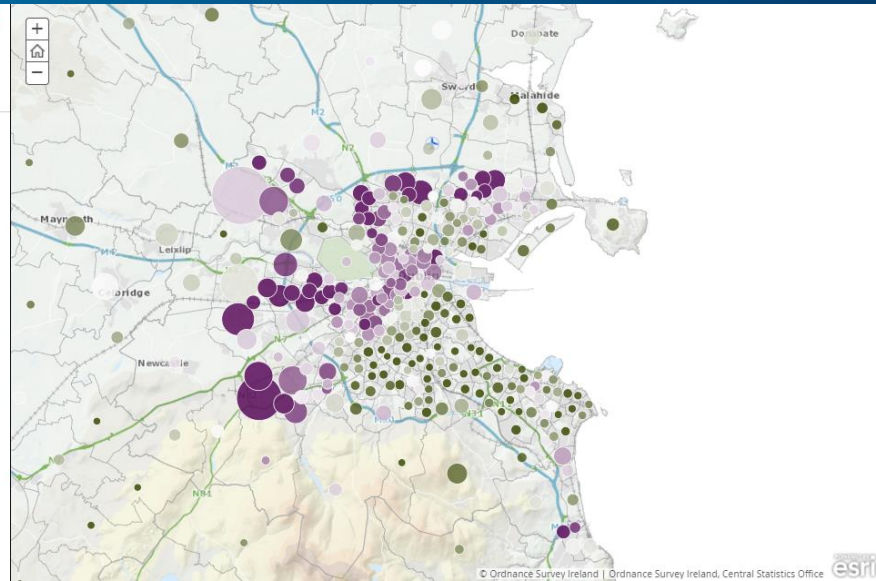
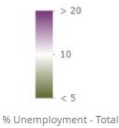


## The Changing Patterns of Unemployment and Poverty in Ireland, 2011-2017

### A focus on cities

The map displays unemployment rate and total unemployed population from the Census 2016 at ED level. A closer look at Dublin illustrates varying unemployment rates within the area.

Data at this level provide a detailed representation of unemployment trends. This visualisation highlights the divide (North East, South West divide) in high and low levels of unemployment.





*GIS Now Provides  
the Means . .*



*. . for collaboration  
and data sharing*

