



## Geospatial & Statistics - Collaboration in Ireland

*Lorraine McNerney, General Manager*



**Ordnance  
Survey**  
*Ireland*

## Geospatial & Statistics collaboration in Ireland

- Context for collaboration
- Our approach to collaboration
- What we agreed to collaborate on
- What geospatial brings to the relationship
- What we've achieved to-date
- Takeaways



# Geospatial & Statistics collaboration in Ireland



- Ireland's National Mapping Agency
- Established in 1824
- Operates under the Ordnance Survey Ireland Act, 2001

**Mandate:** *"To provide a national mapping service in the State... creating and maintaining the definitive national mapping and related geographic records"*

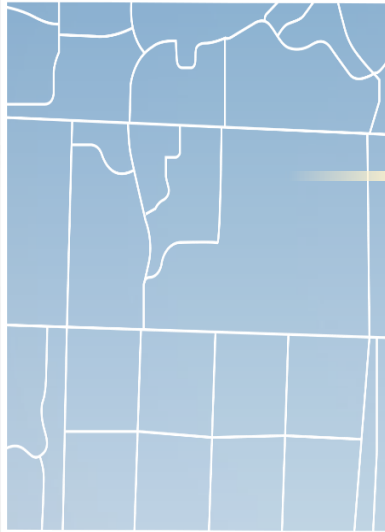


- Ireland's National Statistical Office
- Established 1949
- Operates under the Statistics Act, 1993

**Mandate:** *"The collection, compilation, extraction and dissemination for statistical purposes of information relating to economic, social and general activities and conditions in the State"*

# Location as a common framework

## Boundaries



## IDs

GUID	Area
1203501750071	42.3
1203501750072	34.8
1203501750073	26.9
1203501750074	51.2

## Statistics

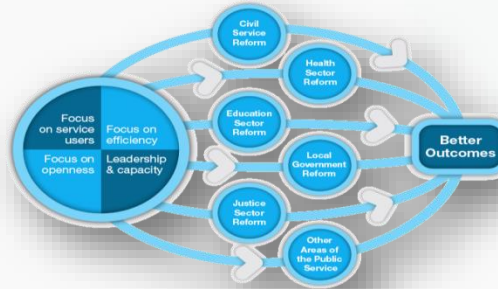
EA Id	Population	Male	Female
1203501750071	432	209	223
1203501750072	502	240	262
1203501750073	525	258	267
1203501750074	494	251	243

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

# Context for Collaboration



## Public Service Reform Plan 2014-2016



### Strategic Reforms

- Focus on Service users
- Focus on efficiencies
- Focus on openness
- Leadership & capability

## Public Sector ICT Strategy

### Strategic Pillars

- Build shared infrastructure
- Drive digitisation & innovation
- Support data sharing
- Improve governance
- Increased capabilities

*"Delivering better outcomes and efficiency through innovation and excellence in ICT"*







## OSi/CSO MOU, October 2016

**Aim:** To establish a closer working relationship to maximise CSO and OSi data and assets for our mutual stakeholders and in support of the Government's Public Sector Reform agenda.

1. Establish joint **CSO/OSi technical working group** to develop data visualisation.
2. Develop technical solution to fulfil Ireland's **reporting responsibilities** under the United Nations 2030 agenda for Sustainable Development.
3. Collaboration in developing **new data dissemination channels**.
4. Promote the **statistical potential of geospatial** data as part of the wider development of the National Data Infrastructure.

# Initiative 1 - linked open data

Created 20+ common national datasets as '5 Star' Linked Open Data

**data.geohive.ie**  
Serving Ireland's geospatial information as Linked Data.

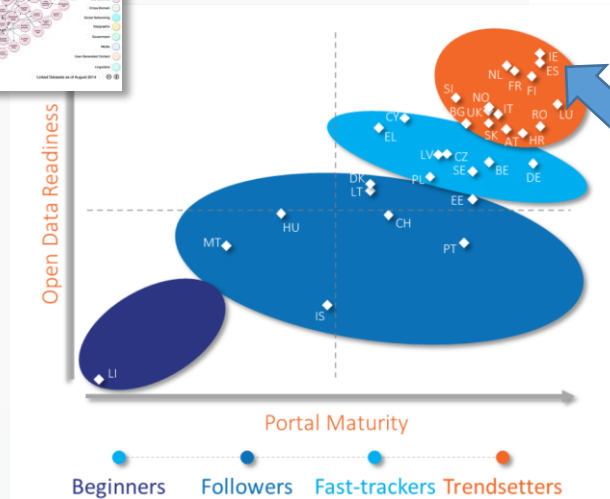
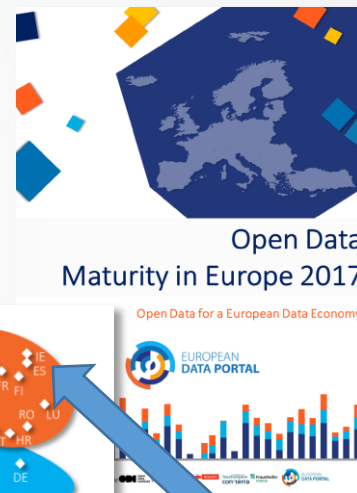
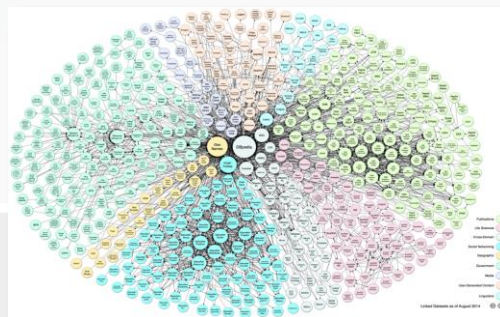
**About the Initiative**  
The goal of Ordnance Survey Ireland's (OSI) initiative with ADAPIT is to develop a platform to publish OSI's geospatial data as Linked Data on the Web whilst adhering to best practices in the domain of geospatial information. The publication of Linked Data enables third parties to explore and consume rich data in a meaningful manner via a combination of simple, standardized technologies (e.g., RDF and URI) that operate over the Web's existing HTTP infrastructure.

**Download and Query**  
Ordnance Survey Ireland's geospatial data is available both via Triple Pattern Fragments Server and web client, a Linked Data frontend (e.g., by following the HTTP URI of County Dublin) and as downloadable datasets for local use.

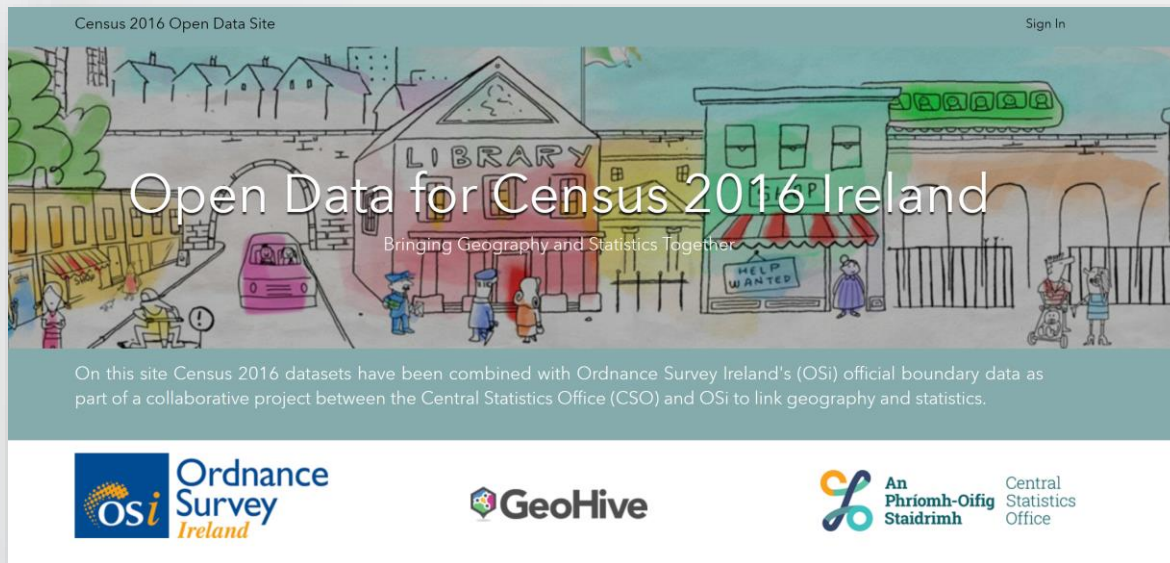
**Contact and Legal**  
Contact us:  
• Corporate  
• Geospatial  
Or send us an email via [geohive@osi.ie](mailto:geohive@osi.ie).  
Legal:  
• Corporate  
• Privacy  
• Terms of Use

**Logos:** Ordnance Survey Ireland, GeoHive, Trinity College Dublin

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# Initiative 2 – Geospatial portal for Census 2016



<http://census2016.geohive.ie/>

**census**  
**2016**  
**RESULTS**

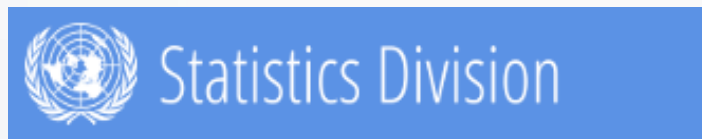
Statistical and boundary data fused together to provide  
over 500 layers of geo-statistical information.



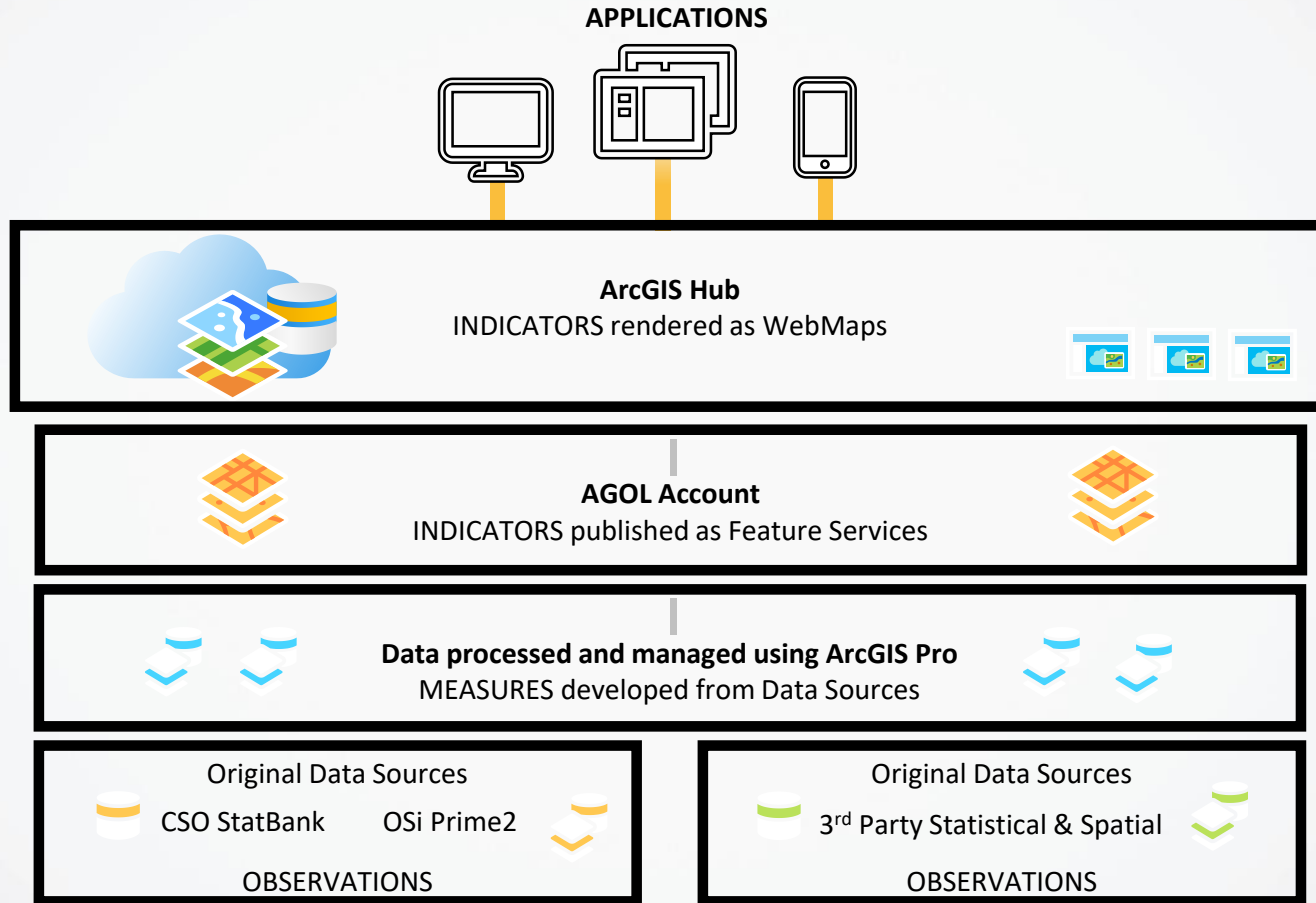


## UNSD/Esri Research Project (commenced May 2017)

- Project goal - new approach for monitoring UN SDGs using GIS
- Participation of 7 UN Members - Ireland, Mexico, Senegal, Philippines, Qatar, South Africa and Australia.
- OSi and CSO - participating in partnership with Esri Ireland.



# Technical Architecture – ArcGIS Open Data & Hub



# Developed & launched Ireland's UN SDG Data Hub

<http://irelandsdg.geohive.ie/>

- Established a joint OSi/CSO **data governance team.**
- We've been working on 12 of the 17 SDG Goals and have developed **indicators and datasets** at NUTS 3, county and local area geography.



# Ireland's UN SDGs Data Hub – Explore Data




# Ireland's UN SDGs Data Hub – Data Access





5

GENDER  
EQUALITY

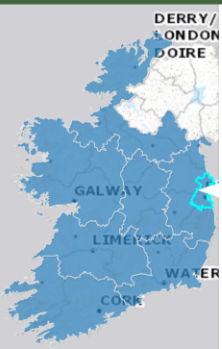
5. Gender Equality

 Ireland, Sustainable Development Goals

Find   My Data Sign In

+

-



Overview Data API Explorer

(1 of 2)

SDG 5.5.1, NUTSIII, Proportion of Seats Held by Women in Local Government, 2014, Local Government Elections & OSi

OBJECTID	6
NUTS1	IE
NUTS1NAME	Ireland
NUTS2	IE06
NUTS2NAME	Eastern and Midland
NUTS3	IE061
NUTS3NAME	Dublin
Shape__Area	2597391756.7597656

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SDG 5.5.1, NUTSIII, Proportion of Seats Held by Women in Local Government, 2014, Local Government Elections & OSi

☆ Favorite

Download Data

APIs

Showing 1 to 8 of 8

Hint: Click on ▼ to filter columns.

▼ OBJECTID	▼ NUTS1	▼ NUTS1NAME	▼ NUTS2	▼ NUTS2NAME	▼ NUTS3	▼ NUTS3NAME	▼ Shape__Area	▼ Shape__
1	IE	Ireland	IE04	Northern and Western	IE041	Border	33976428463.48242	4334486.
2	IE	Ireland	IE04	Northern and Western	IE042	West	40510973141.15039	4736892.
3	IE	Ireland	IE05	Southern	IE051	Mid-West	28529686404.691406	1508101..
4	IE	Ireland	IE05	Southern	IE052	South-East	19344366248.70215	1609152..
5	IE	Ireland	IE05	Southern	IE053	South-West	32387562750.646972	4373512..



# Ireland's UN SDGs Data Hub – APIs and Documentation



 Ireland, Sustainable Development Goals

Find   My Data Sign In

Overview Data API Explorer

 PORTLAOINE ATHY WICKLOW

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## SDG 9.2.2, NUTSIII, Manufacturing Employment as Percentage of Total Employment, 2017, Ireland, CSO & OSI

[★ Favorite](#) [Download Data](#) [APIs](#)

No license specified 7/6/2017 Spatial Dataset 8 Rows

Explore this dataset's API by completing the fields below. The fields will populate the query URL and the output will appear in the JSON box below. If you'd like to know more about the API, please refer to the full [REST API documentation](#).

### Query

Parameter	Value
-----------	-------

Where	No Active Filters
-------	-------------------

Out Fields	<input checked="" type="checkbox"/> OBJECTID <input checked="" type="checkbox"/> NUTS1 <input checked="" type="checkbox"/> NUTS1NAME <input checked="" type="checkbox"/> NUTS2 <input checked="" type="checkbox"/> NUTS2NAME <input checked="" type="checkbox"/> NUTS3 <input checked="" type="checkbox"/> NUTS3NAME <input checked="" type="checkbox"/> GUID <input checked="" type="checkbox"/> Shape__Area <input checked="" type="checkbox"/> Shape__Length <input checked="" type="checkbox"/> MaleTotal <input checked="" type="checkbox"/> FemaleTotal <input checked="" type="checkbox"/> TotalIndustryEmployment
------------	---

The fields to be included in the returned result set.

### Query URL

```
https://services7.arcgis.com/XKcQKuJi18yGgE6/arcgis/rest/services/SDG_9.2.2,_NUTSIII,_Manufacturing_Employment_as_Percentage_of_Total_Employment,_2017/FeatureServer/0/query?where=1%3D1&outFields=*&outSR=4326&f=json
```



## 9. Industry Innovation & Infrastructure

Spatial Inputs

Output Options

[Try It Out](#)

[Reset](#)

# StoryMaps – providing a narrative on Ireland's SDGs



Ireland, Sustainable Development Goals

Sign In

## Explore the Sustainable Development Goals via Story Maps

Click any Story Map below to access an interactive narrative on a Sustainable Development Goal for Ireland.



The Changing Patterns of Un...







Ireland's Life on Land



The Status of Ireland's Rivers

# StoryMap # 1 – Ireland's Life on Land





## Ireland's Life on Land

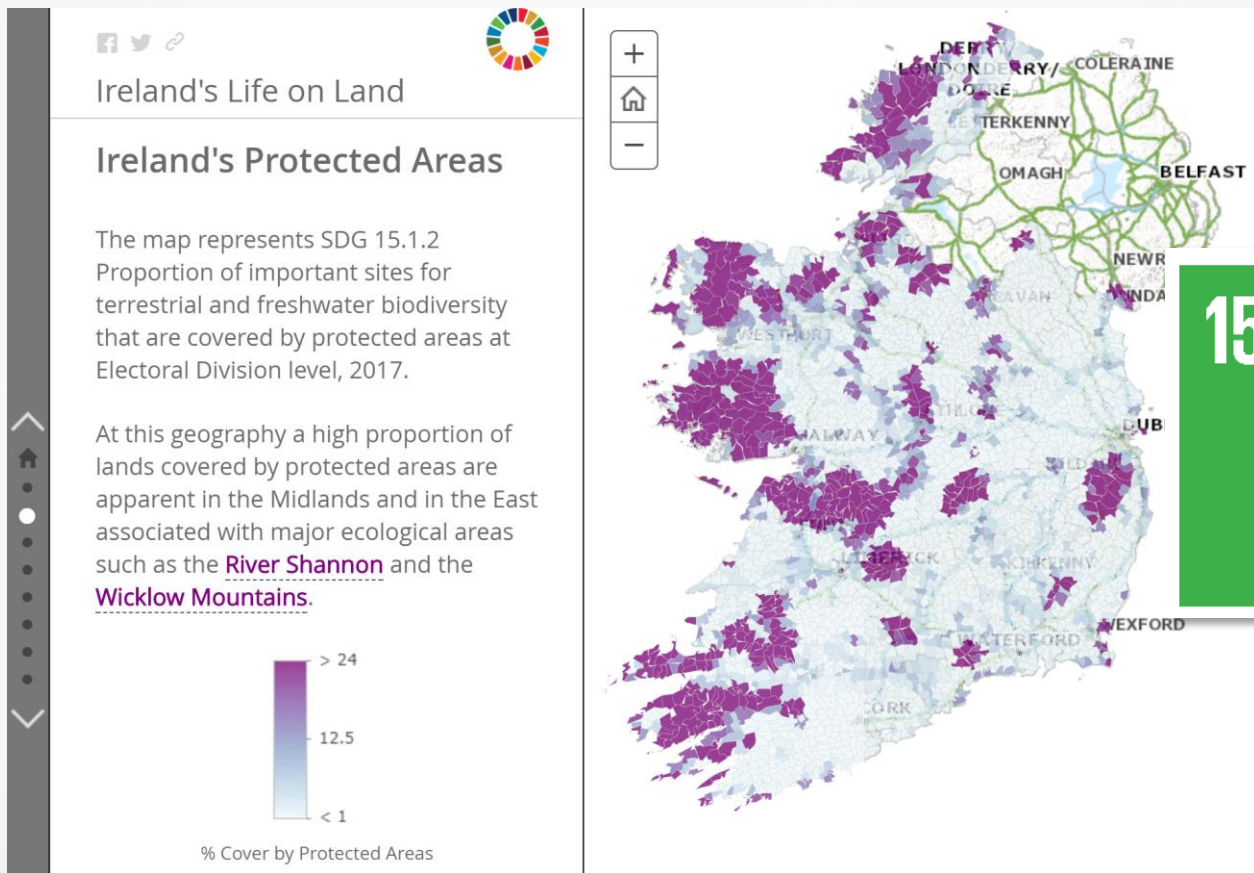
This Story Map explores Ireland's Life on Land by taking a look at protected areas across Ireland, habitat types and national initiatives to protect and enhance biodiversity. This story map has been developed to support efforts of reporting Ireland's status in relation to achieving United Nations (UN) 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 indicators illustrated below provide an insight into Ireland's progress towards sustainable Development Goal numbers 6 and



# StoryMap # 1 – Ireland's Life on Land





# StoryMap # 2 – Changing Patterns



## 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 support 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.





# StoryMap # 2 – Changing Patterns

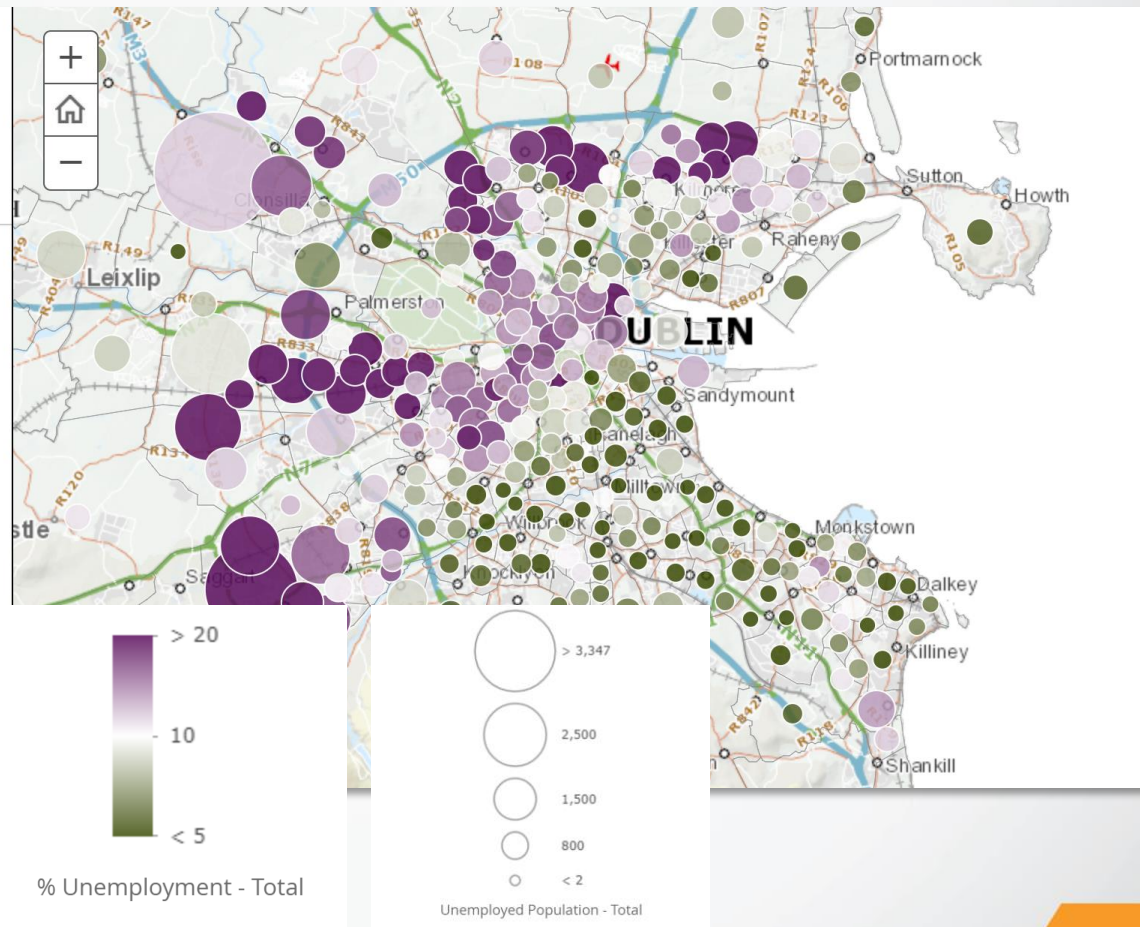


## The Changing Patterns of Unemployment and Poverty in Ireland, 2011-2017

### 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 that 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.



# Progress to-date in Ireland

- Formally launched **Ireland's UN SDG Data Hub in November 2017** where interested parties can openly access, visualise and download data related APIs
- Developed **56 indicators and 112 datasets** at various geographies
- Established a **data governance team** with key stakeholders

StoryMap for Ireland's  
official reporting on  
progress towards meeting  
national SDG targets.

<https://unstats-undesa.opendata.arcgis.com/>





Ordnance  
Survey  
*Ireland*

EuroGeographics Q-KEN Meeting  
Dublin, 23<sup>rd</sup> May 2018

Thank You

