# COPERNICUS LAND COVER MONITORING

by

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*President - Irish Organisation for Geographic Information*

*Past President – European Umbrella Organisation for Geographic Information*

Copernicus Training and Information Day

NUI Maynooth

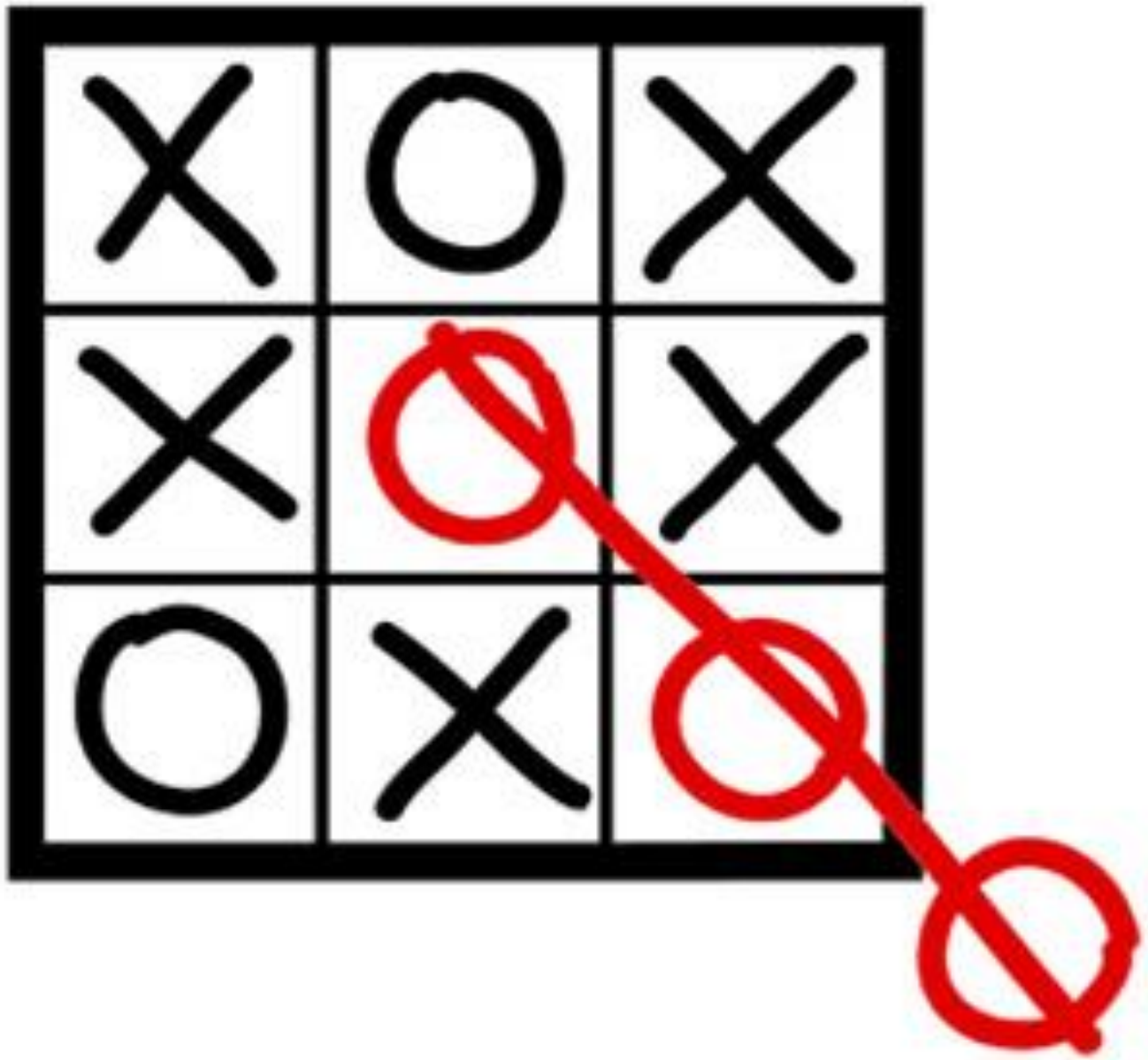
3 November 2017

EUROGI

IRLOGI

IRISH ORGANISATION FOR GEOGRAPHICAL INFORMATION

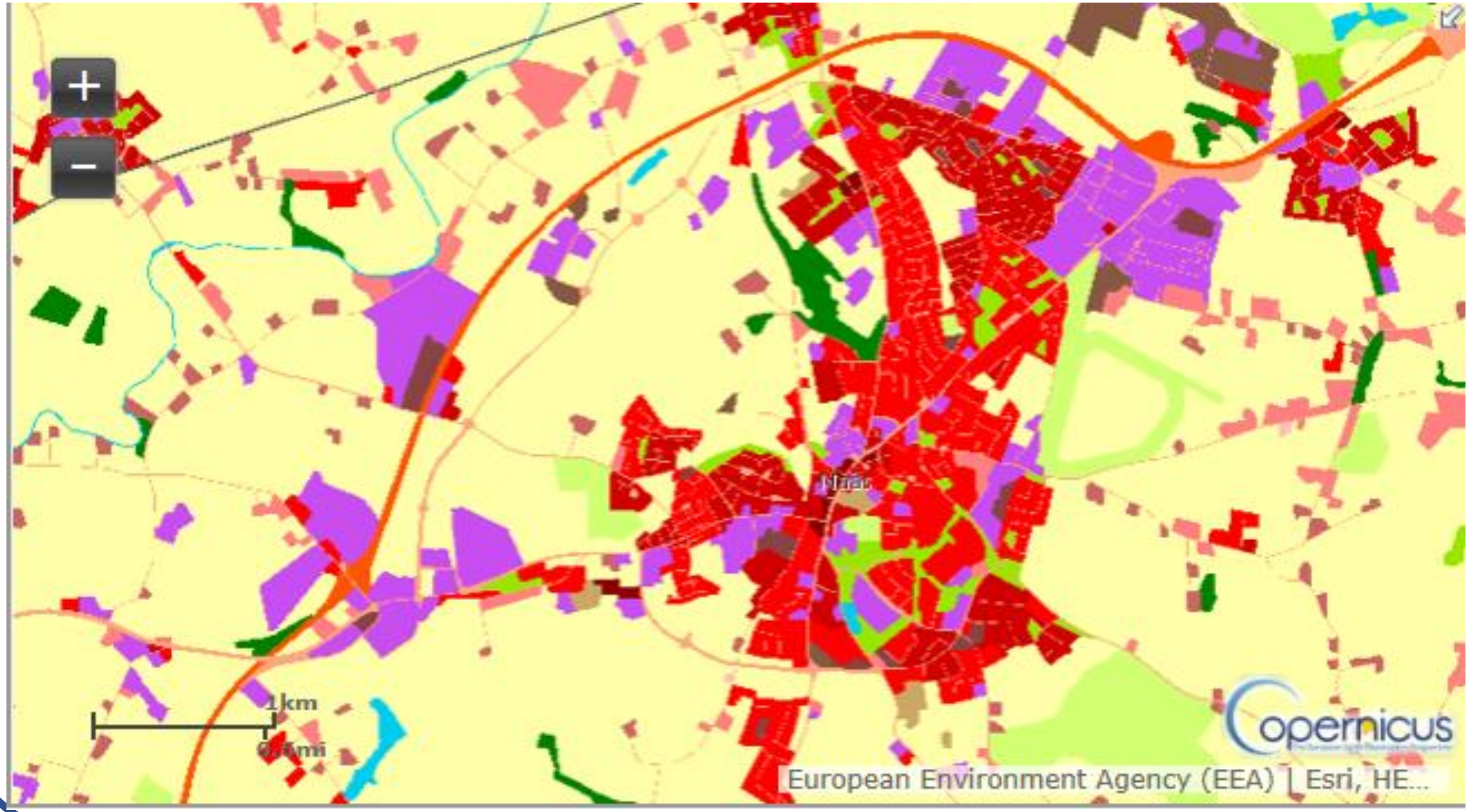
A LITTLE BIT



A LITTLE BIT

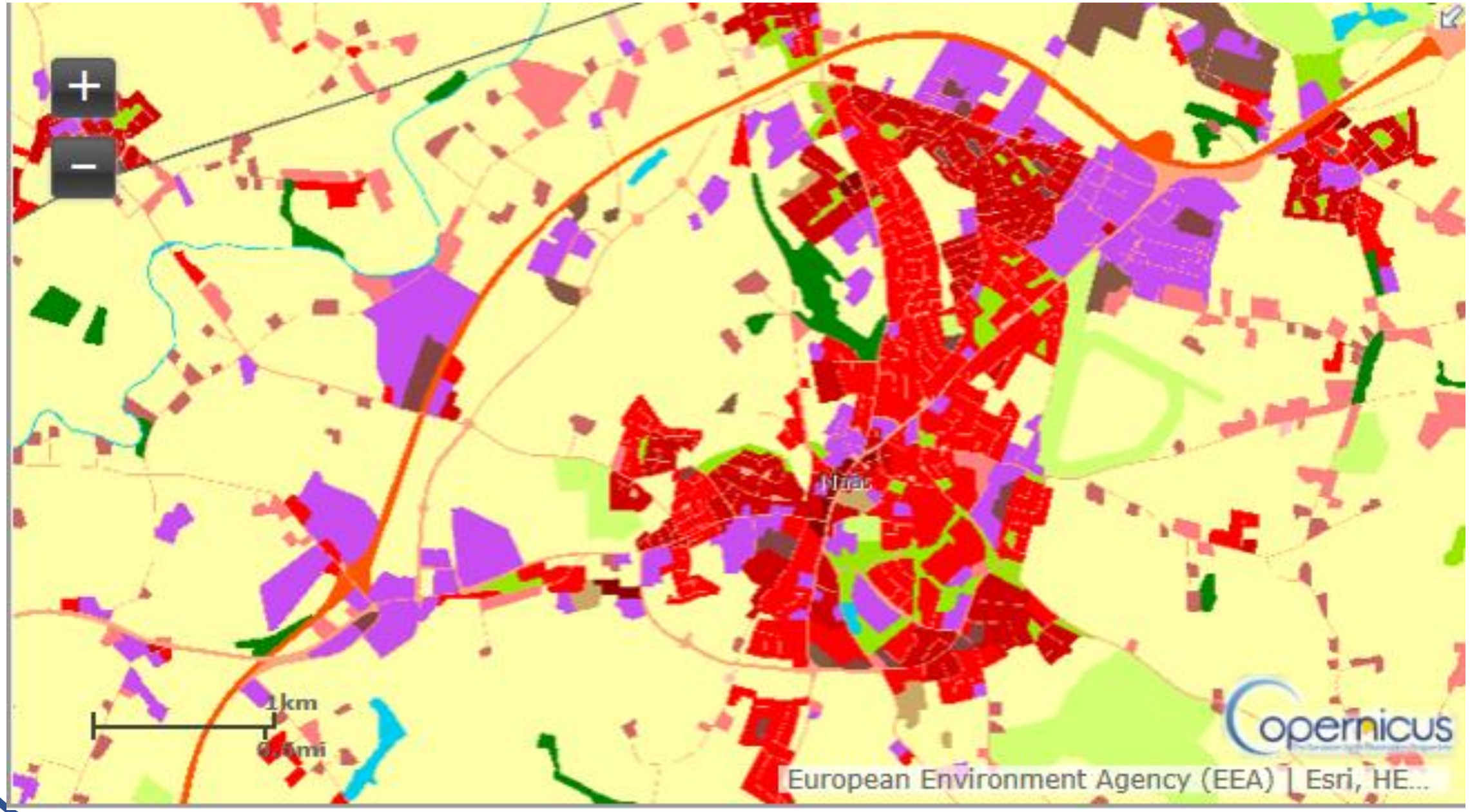
*THE BOX*

# ‘STANDARD’ STATIC 2D REPRESENTATION OF LAND COVER


1 km
0.6 mi
opernicus
European Environment Agency (EEA) | Esri, HE...

*LAND COVER*

THE ‘THINGS’ WHICH COVER THE LAND CLASSIFIED IN SOME WAY (OR NOT CLASSIFIED!)


1 km
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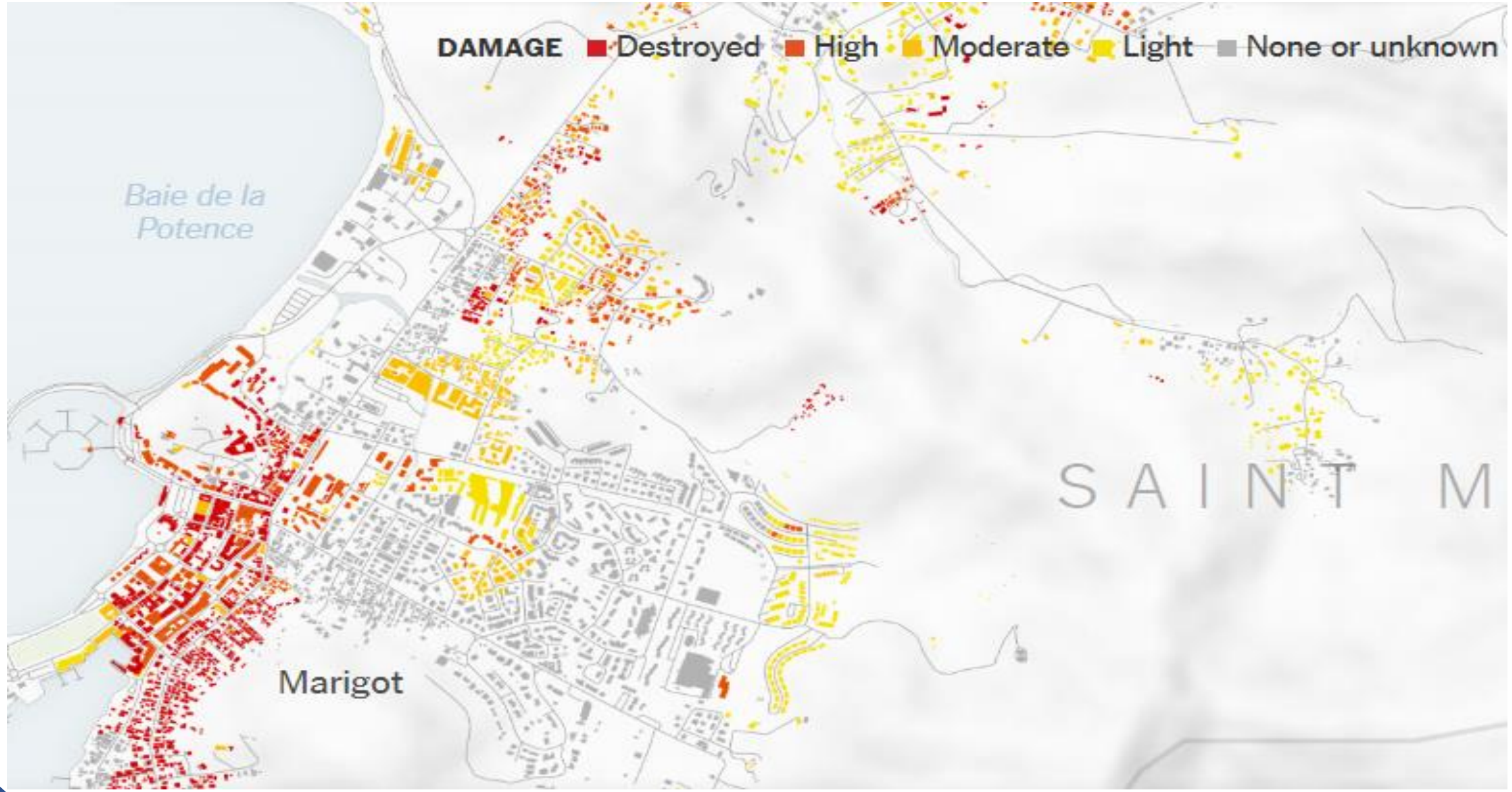
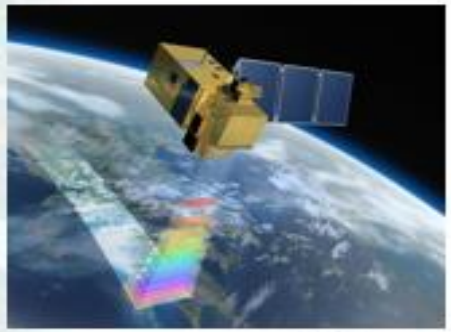

DAMAGE
Destroyed
High
Moderate
Light
None or unknown
Baie de la Potence
Marigot
SAINT M

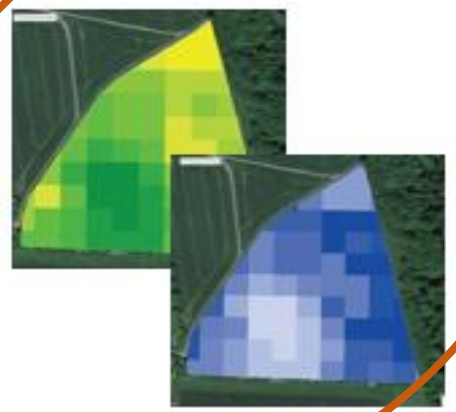
# Fertilizer application based on data from Sentinel-2A

Sentinel 2



© ESA

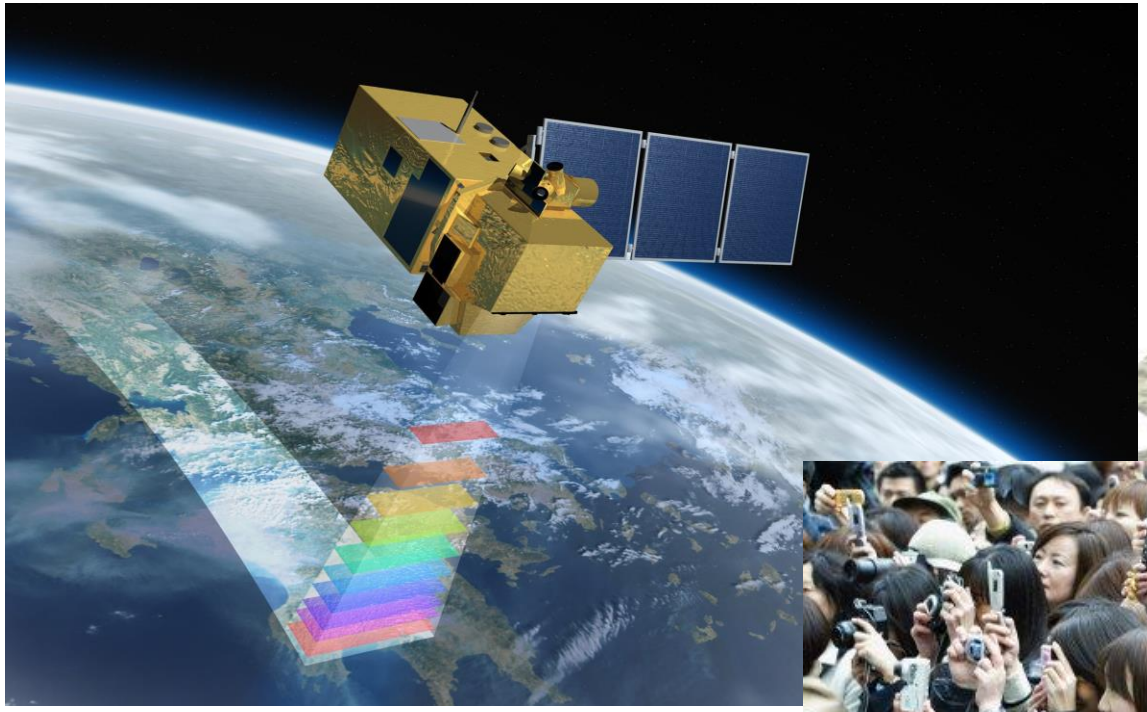
Vegetation map

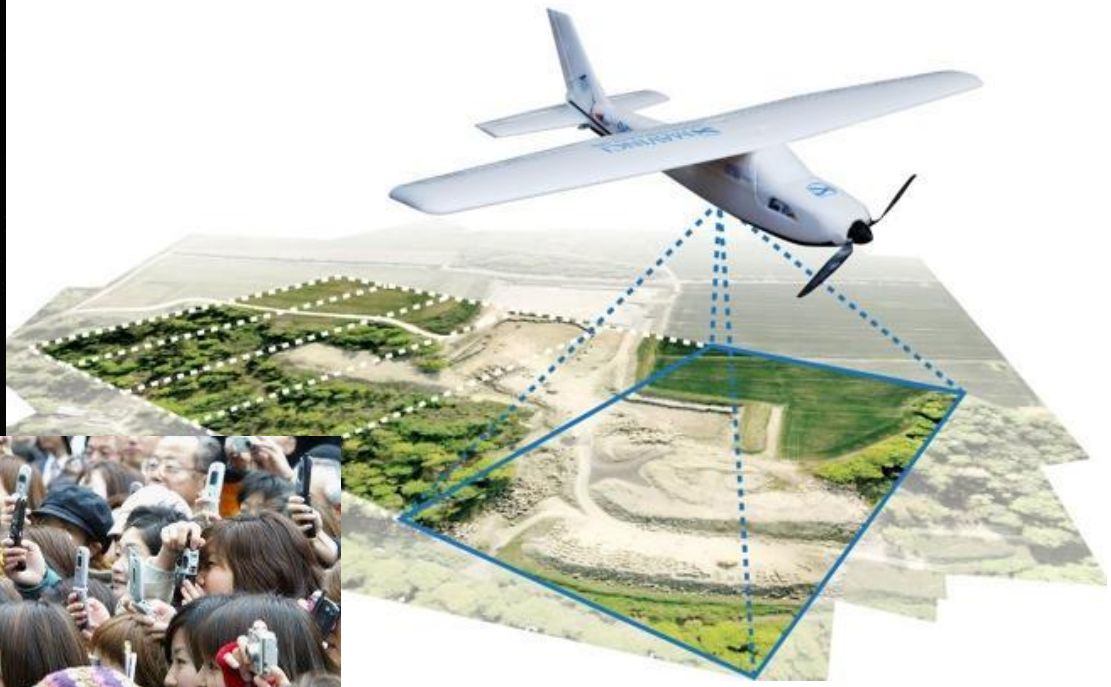


Fertilizer variable rate application

Presentation prepared by Rita Hørfarter, SEGES, Denmark

LAND COVER ≠ LAND USE





Google maps
Street View

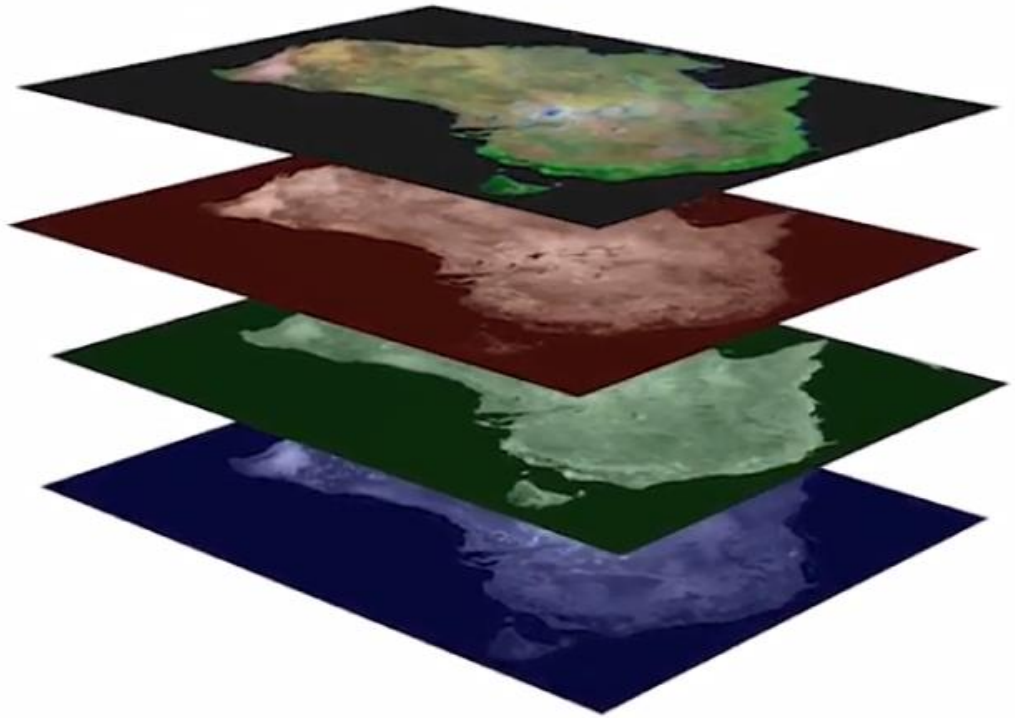
9 Hillcrest
County Kildare
Google, Inc.
Street View - Jul 2009
19 Hillcrest
Hillcrest
©2017 Google
Google
Image capture: Jul 2009 © 2017 Google Ireland Terms Report a problem

LAND COVER
CHALLENGES

# No. 1
# AUTOMATING LAND COVER MAPPING MACHINE LEARNING

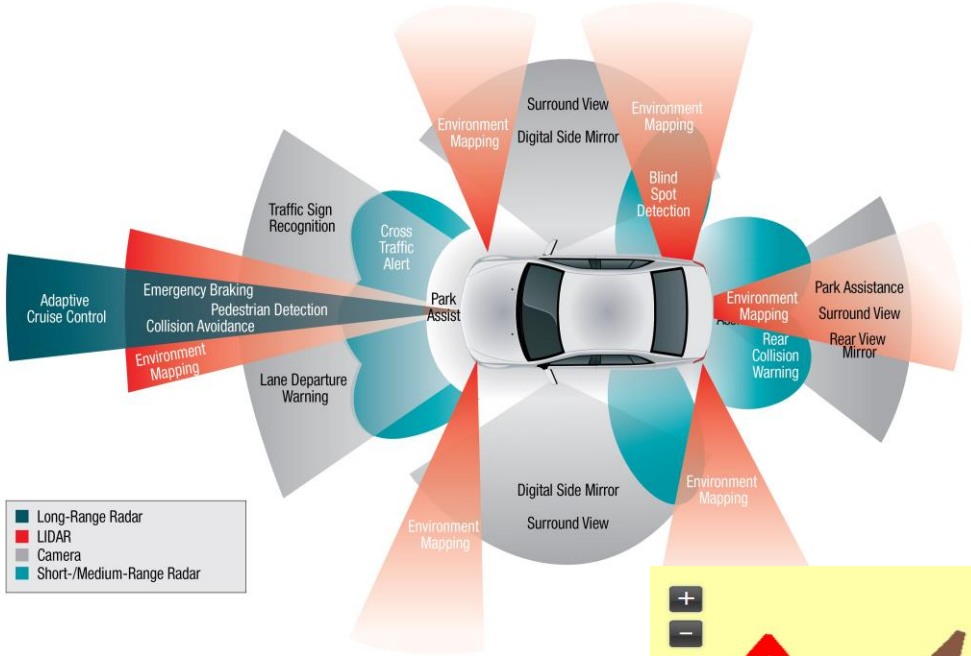
European Commission
Land cover detection using Sentinel-2
Copernicus for Entrepreneurs and Developers
Copernicus
Europe's eyes on Earth
Space
Copernicus EU
Copernicus EU
Copernicus EU
www.copernicus.eu

# No. 2
# DATA CUBES

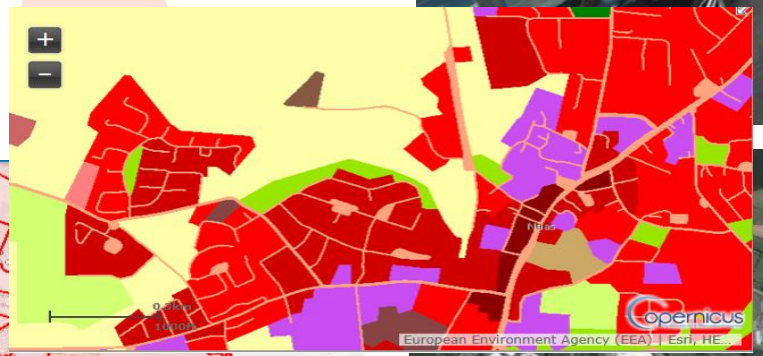


# No. 3
# DATA INTEGRATION

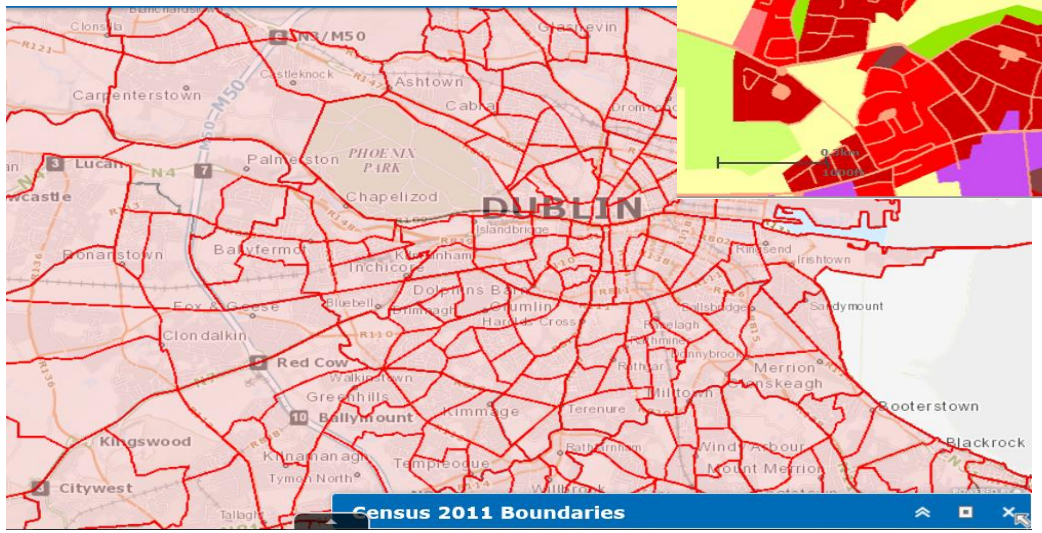
Driverless Vehicles




Google Streetview




Census




GeoDirectory

# OPPORTUNITIES

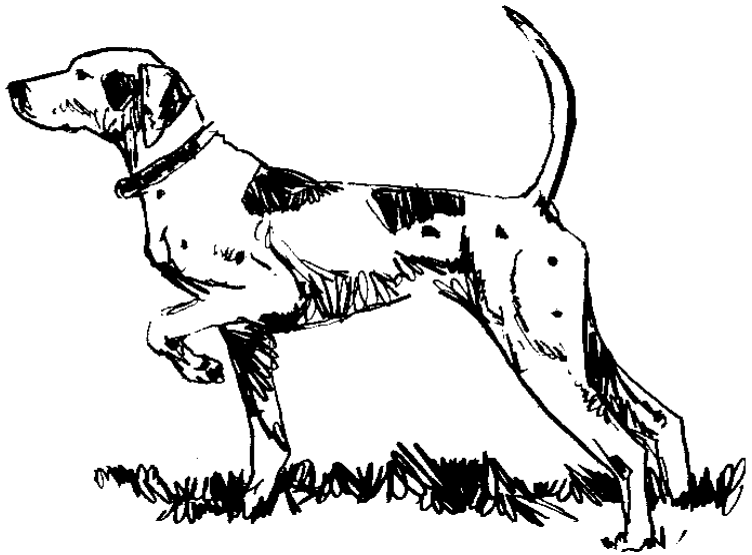
out there …. in the Real World

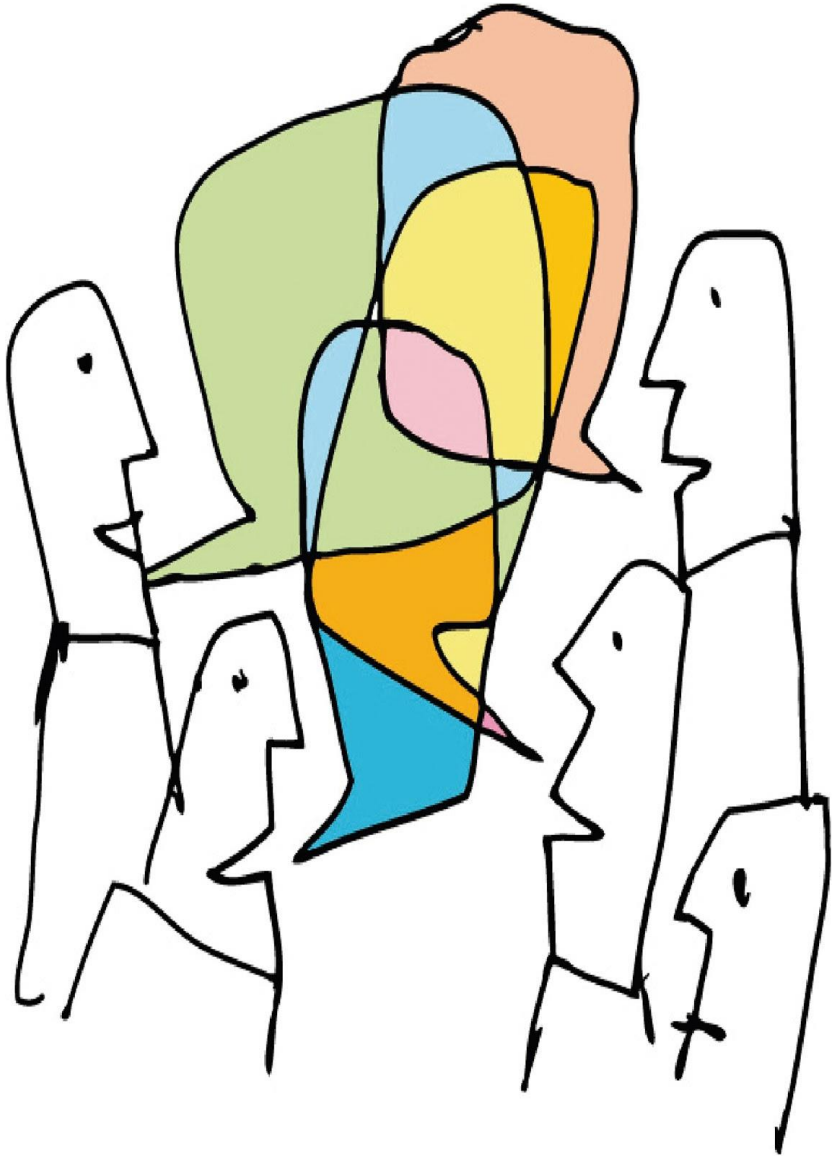
1, 2, 3, 4, 5, 6, 7, **8**, 9, 10, 11, 12, 13,
14, 15, 16, 17, 18, 19, 20, 21, 22, 23,
24, 25, 26, **27**, 28, 29, 30, 31, 32, 33,
34, 35, 36, 37, 38, 39, 40, 41, 42, 43,
44, 45, **46**, 47, 48, 49, **50**, 51, 52, 53,
54, 55, 56, 57, 58, 59, 60, 61, etc

**IMPROVED GOVERNMENT SERVICES …… and ….. SOME MONEY TO BE MADE**

# GIS

and AI and DCs and ……





**Opportunities Everywhere**

**Lets Talk … Lets Brainstorm … Lets Grab Them >>>>>>> join IRL 😎 GI**