





Land Administration Challenges

- Incomplete cadastre
- Moving from paper to digital
- Ensuring data are up-to-date and accurate
- Quality Improvement
- Delivering New Products & Land Information Services
- Business models and funding

Trends in Land Administration

- Automated Workflows, Digital Submission, Connected Workers
- Systems Consolidation
- 3D Cadastre
- Cadastre as Basis for National SDI
 - Multipurpose Cadastre
- Standards Compliance
 - ISO; OGC
- Open Data
- "Fit for Purpose" Cadastre



What Should We Do Next?

Envision
What's Possible

Improve
Productivity
and Efficiency

Create Sustainable
Development

Make Cities
Smarter

Engage
Citizens

Protect
Biodiversity

Integrate
Environmental
Thinking

Design with
Nature

Keep Moving, Learning, and Understanding . . .

Leverage Our Best Technology





GIS Product Components
An Integrated & Comprehensive System

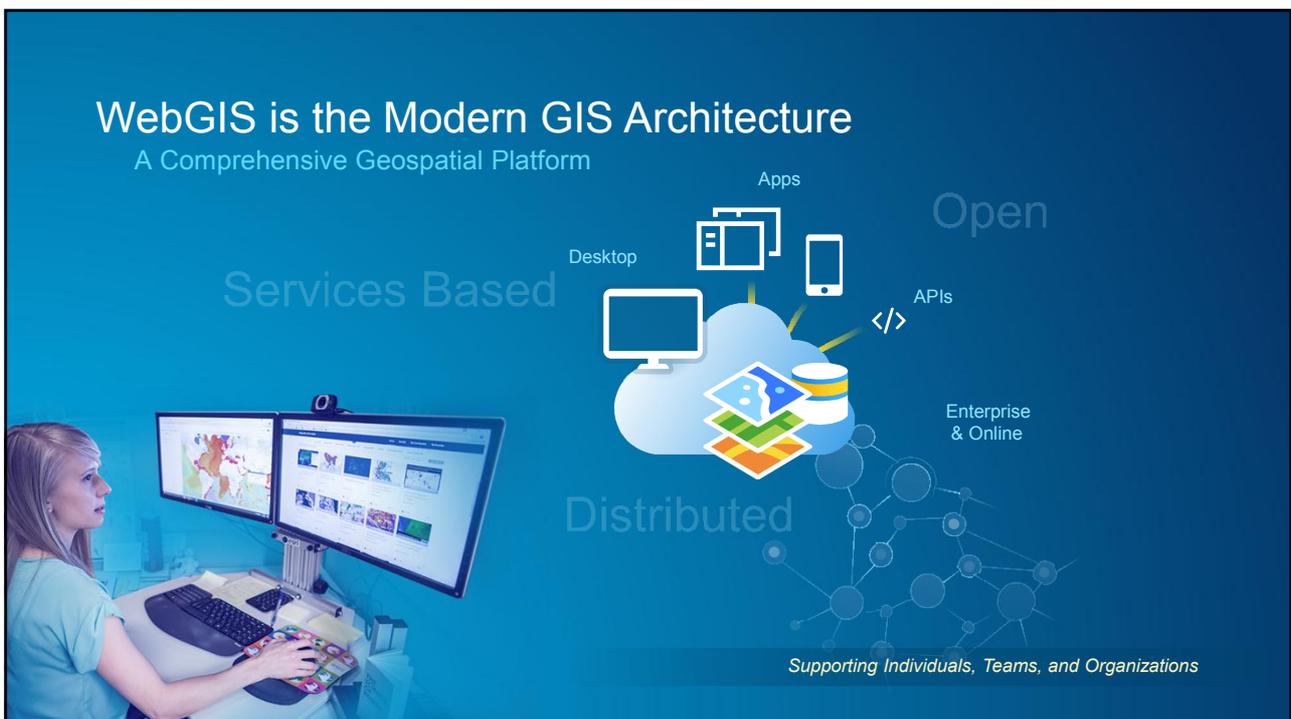
Monitoring of Newfoundland Bee Species

Bee Habitat Suitability Map for Newfoundland

High Habitat Suitability

Desktop
Enterprise & Online
Apps
APIs & SDKs
Content

The slide features a background of a hand holding a smartphone displaying a GIS map. To the left, a desktop monitor and a tablet also show the same GIS interface. The desktop monitor displays a map of Newfoundland with a legend for 'Bee Habitat Suitability' and a text box titled 'Monitoring of Newfoundland Bee Species'. The legend includes categories for 'High Habitat Suitability' (green) and 'Low Habitat Suitability' (yellow). The text box contains information about the 'Bee Habitat Suitability Map for Newfoundland' and mentions 'The Bee Atlas'.



WebGIS is the Modern GIS Architecture
A Comprehensive Geospatial Platform

Services Based
Distributed
Open
Enterprise & Online
APIs
Desktop
Apps

Supporting Individuals, Teams, and Organizations

The slide features a background of a woman sitting at a desk with two computer monitors displaying GIS maps. The background is a gradient of blue and green. The text 'Services Based', 'Distributed', 'Open', 'Enterprise & Online', 'APIs', 'Desktop', and 'Apps' is arranged around a central cloud icon. The cloud icon contains a map, a database cylinder, and a code symbol. A network diagram is visible in the bottom right corner.

GIS - Both a Comprehensive GIS and an Online Mapping and Location Platform



GIS A System of



GIS

Organizes and Manages All Aspects of Geographic Knowledge

Data, Information Products, Apps, Models . . .
. . . and People and Their Organizations



Catalog

Sites

Integrated User Experiences



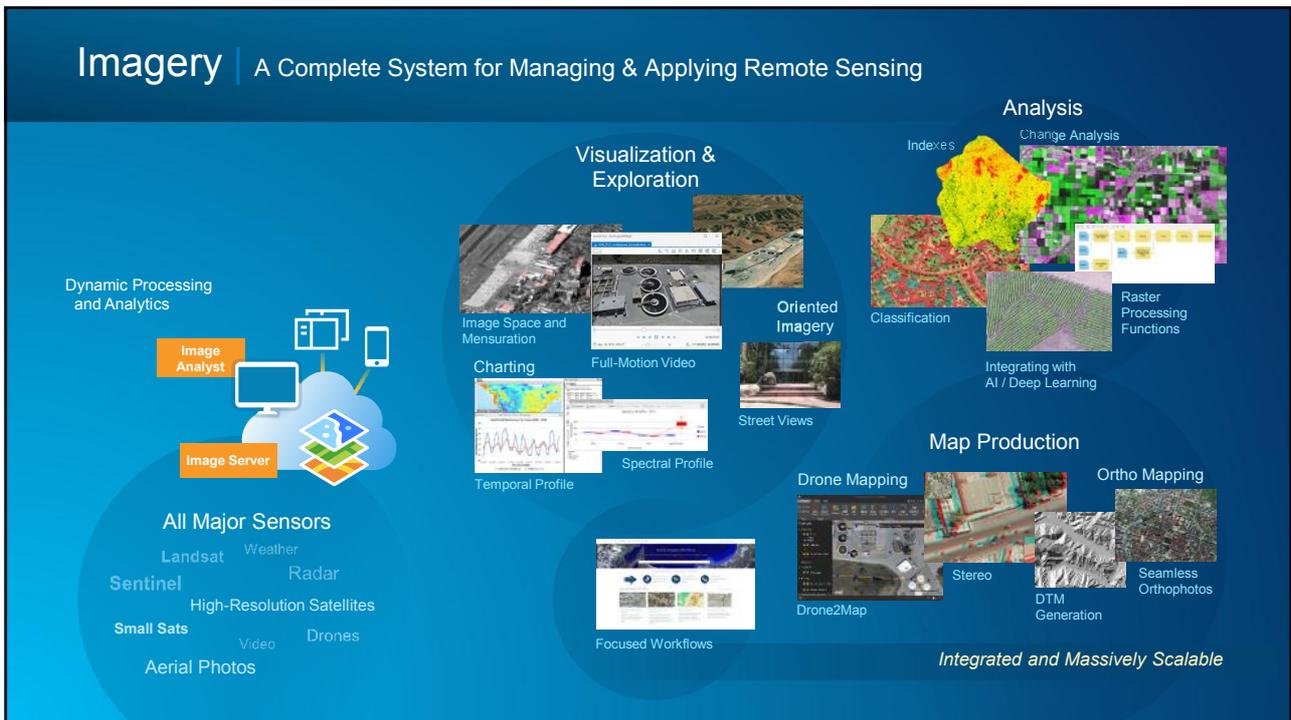
GIS

Integrates All Types of Data

Creating a Common Language

Maps, Scenes, Layers





Drone2Map | Integrated with GIS Capabilities

- Identifying Parcel Boundaries
- Edit Existing Boundaries
- Most up-to-date Source
- Authoritative Results

3D Mapping and Visualization

- Smart Mapping
- Mobile Apps
- Point Clouds
- ArcGIS Earth
- Revit Support
- Symbology
- Standards



GIS and BIM | Providing Direct Product Integration and Interoperability

Design & Engineering

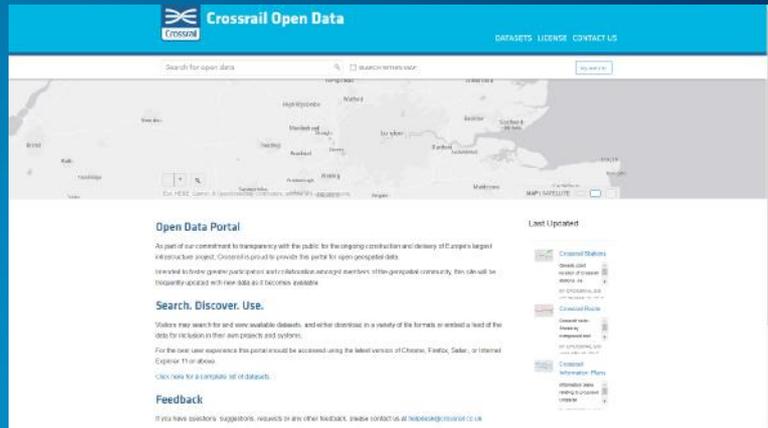


... Integrating Design and Planning Workflows

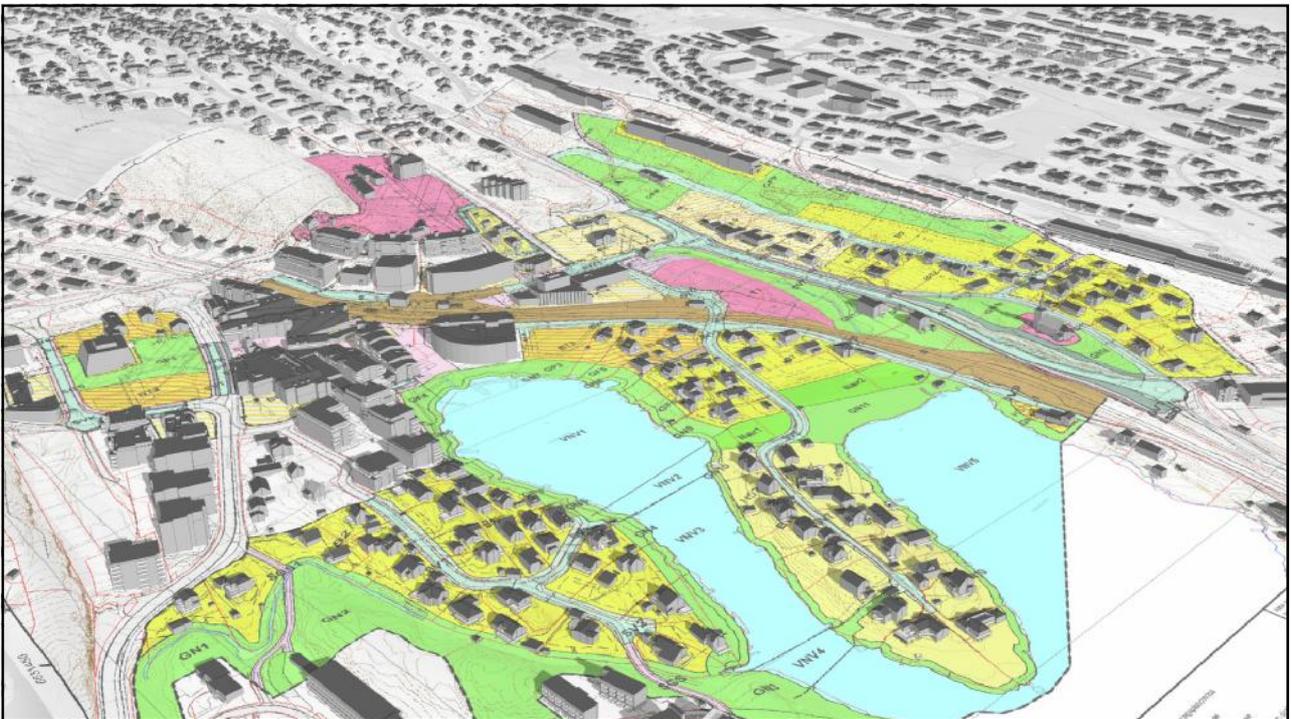
GIS & BIM

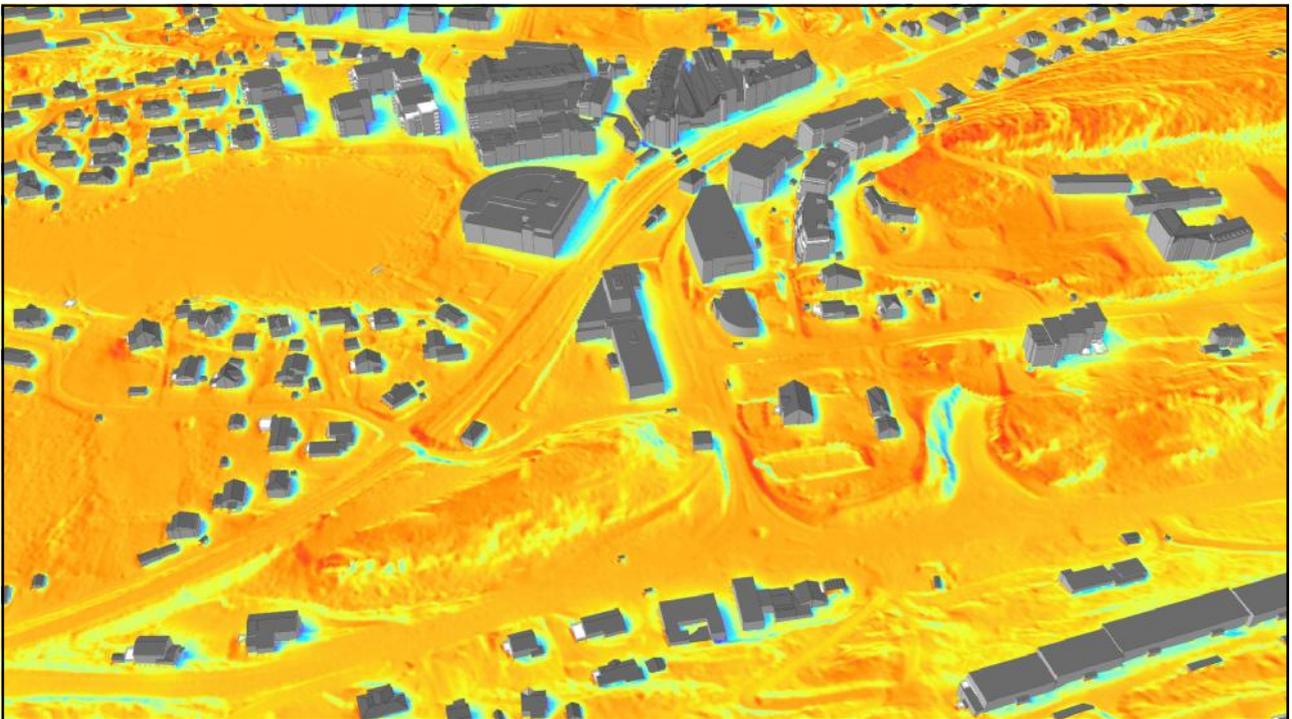
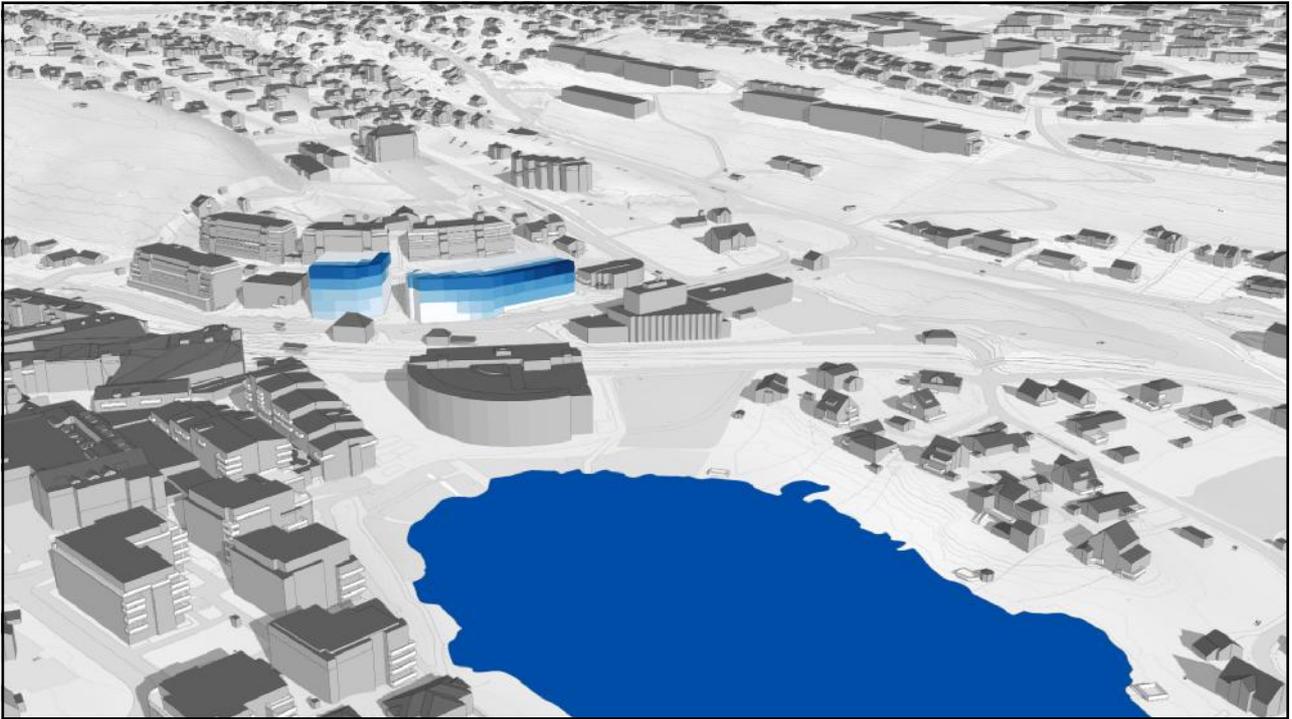
Cross Rail London

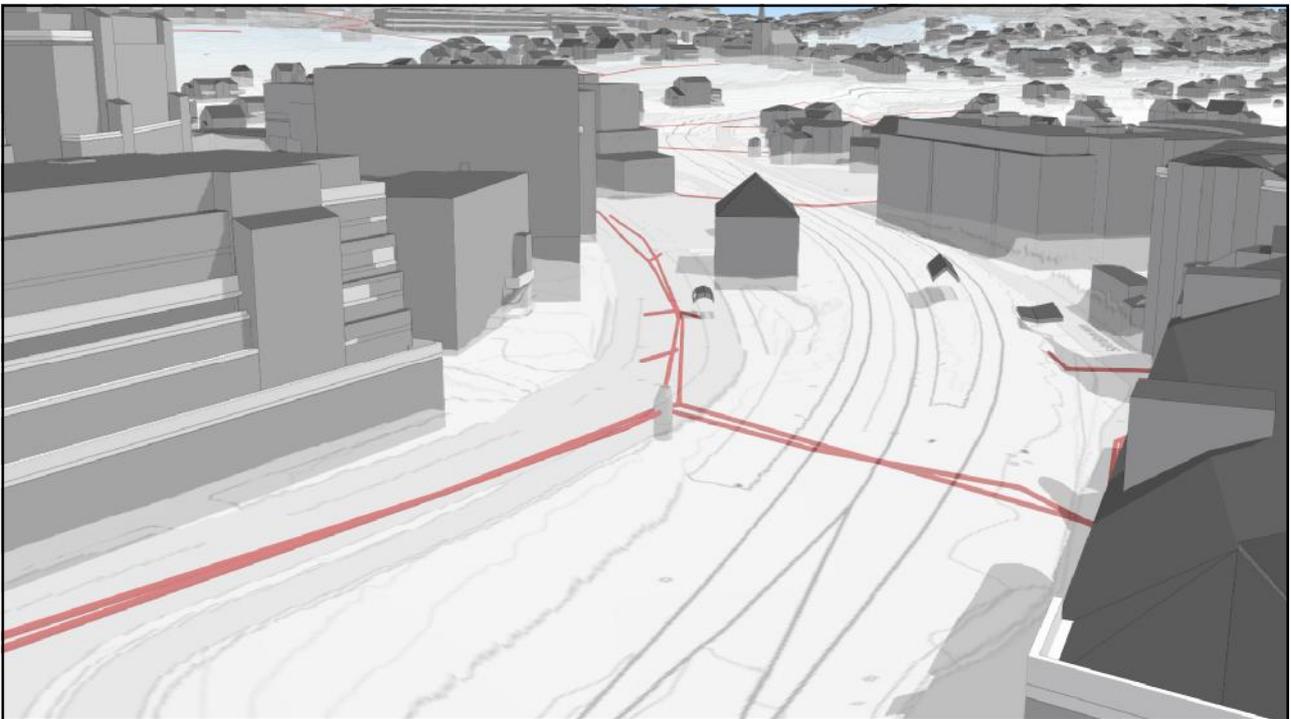
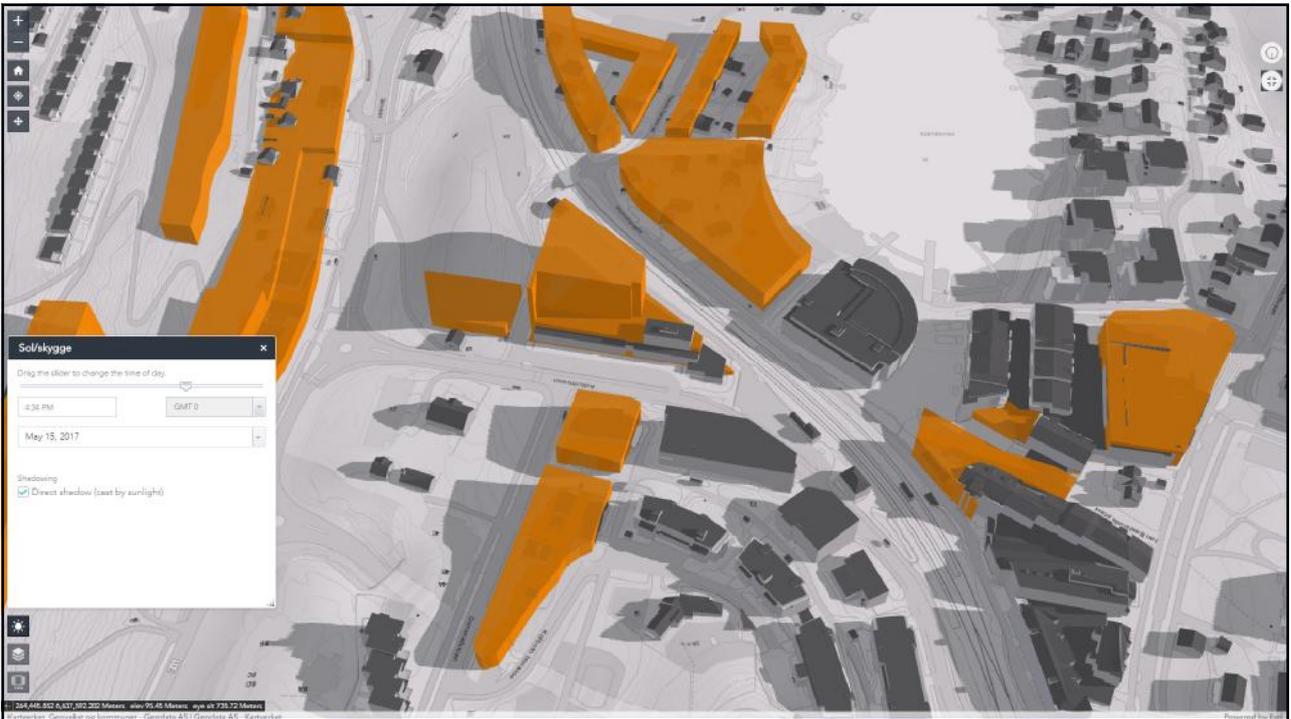
- GIS is the 'bridge' between CAD & Document Management Systems
- 5,000 Contractors
 - Variety of Apps
- Open Data Portal
 - 250,000 citizen visits

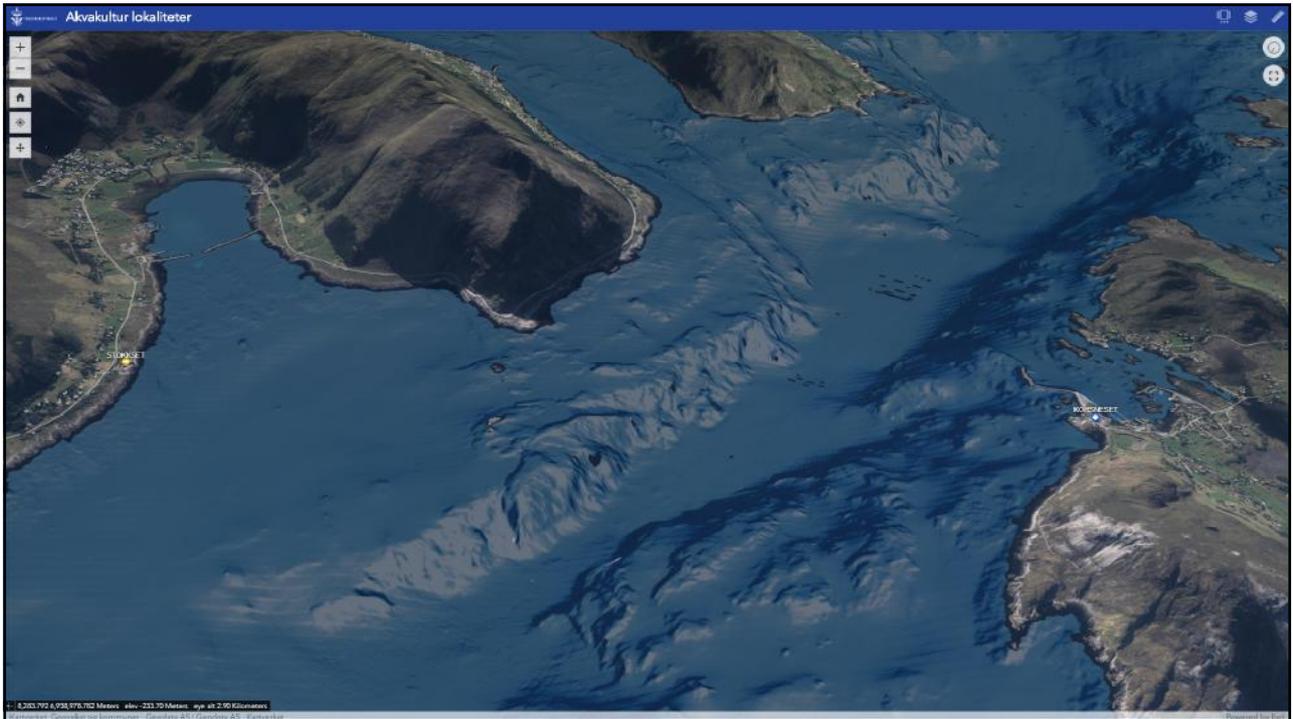


3D Analysis







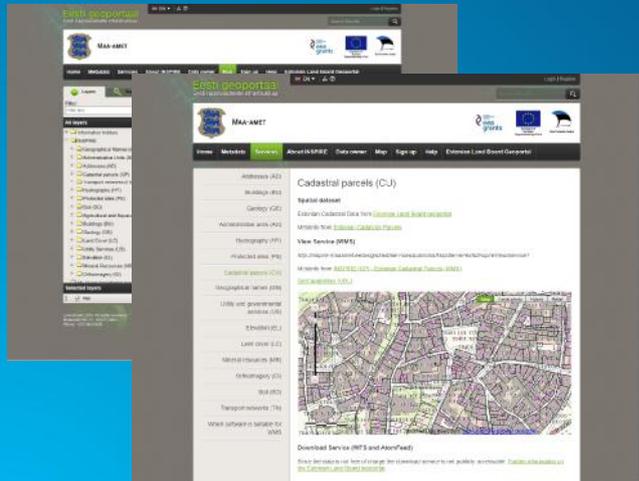


Cadastre and National Spatial Data Infrastructure (NSDI)

- Land Cover & Land Use
- Addresses
- Cadastre
- Imagery
- Topographic
- Terrain
- Geodetic Network

A collage of various spatial data maps. From left to right: a satellite image of a coastal area, a street map of a city, a topographic map of a mountainous region, a map of Europe showing major cities and countries, and a detailed street map of a city grid.

SDIs in Europe Estonia & Cyprus



<http://inspire.maaamet.ee/>

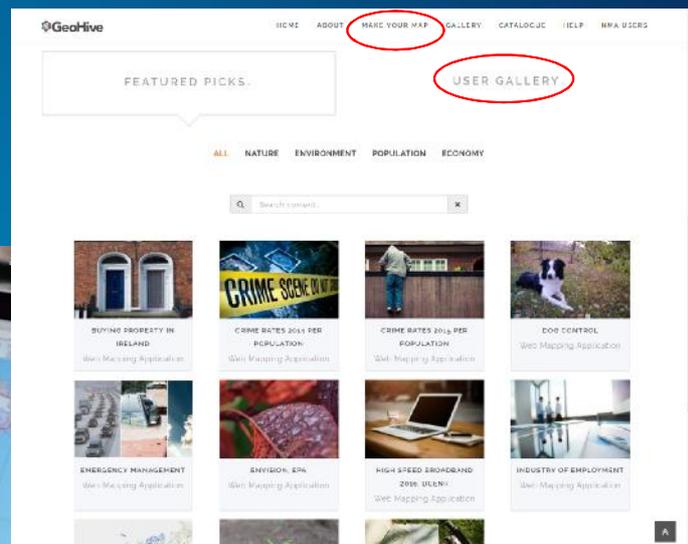
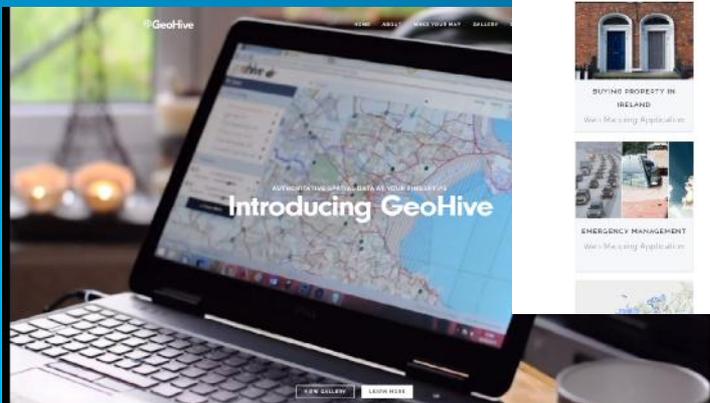


<http://portal.dls.moi.gov.cy/en-us/homepage>

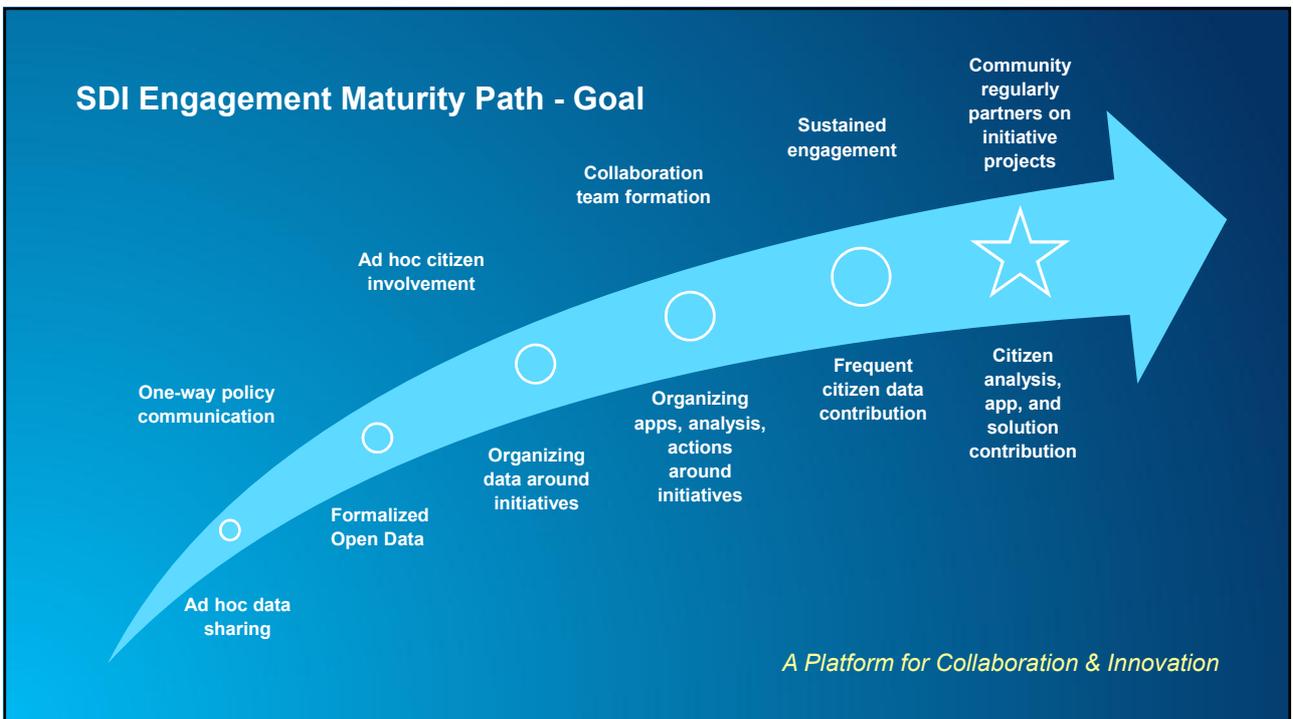
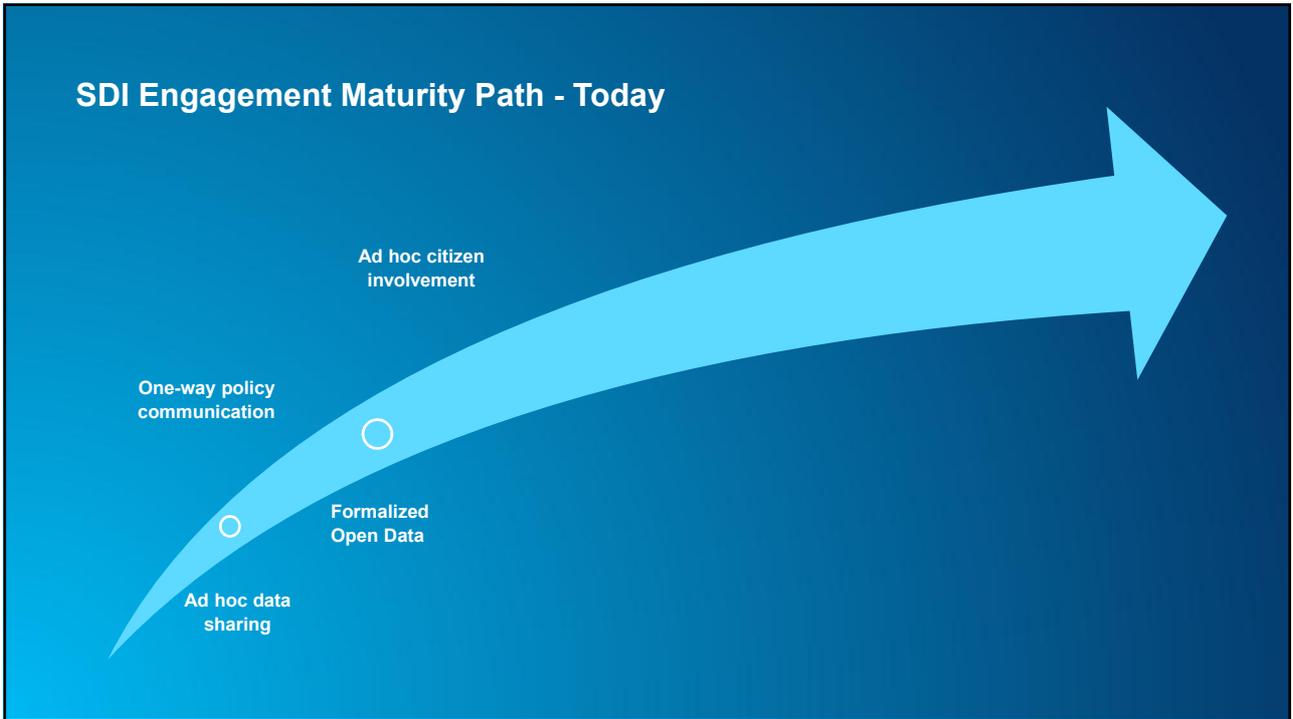
SDIs

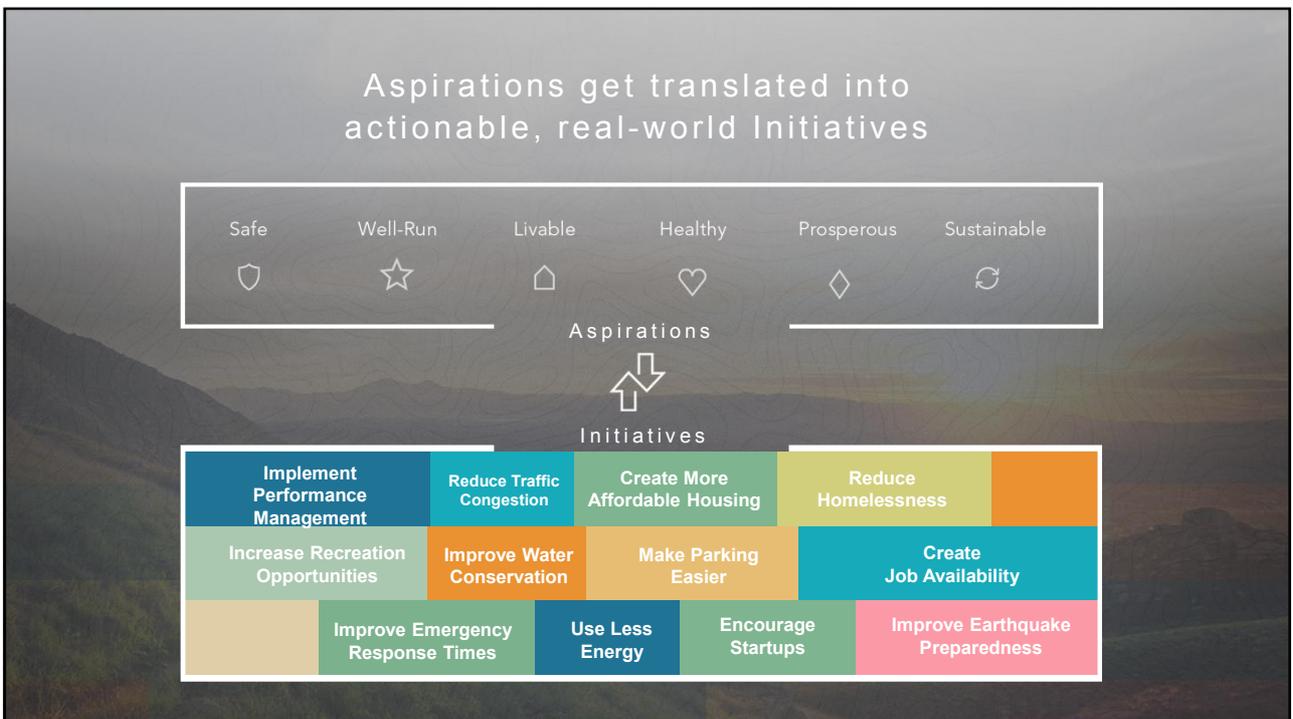
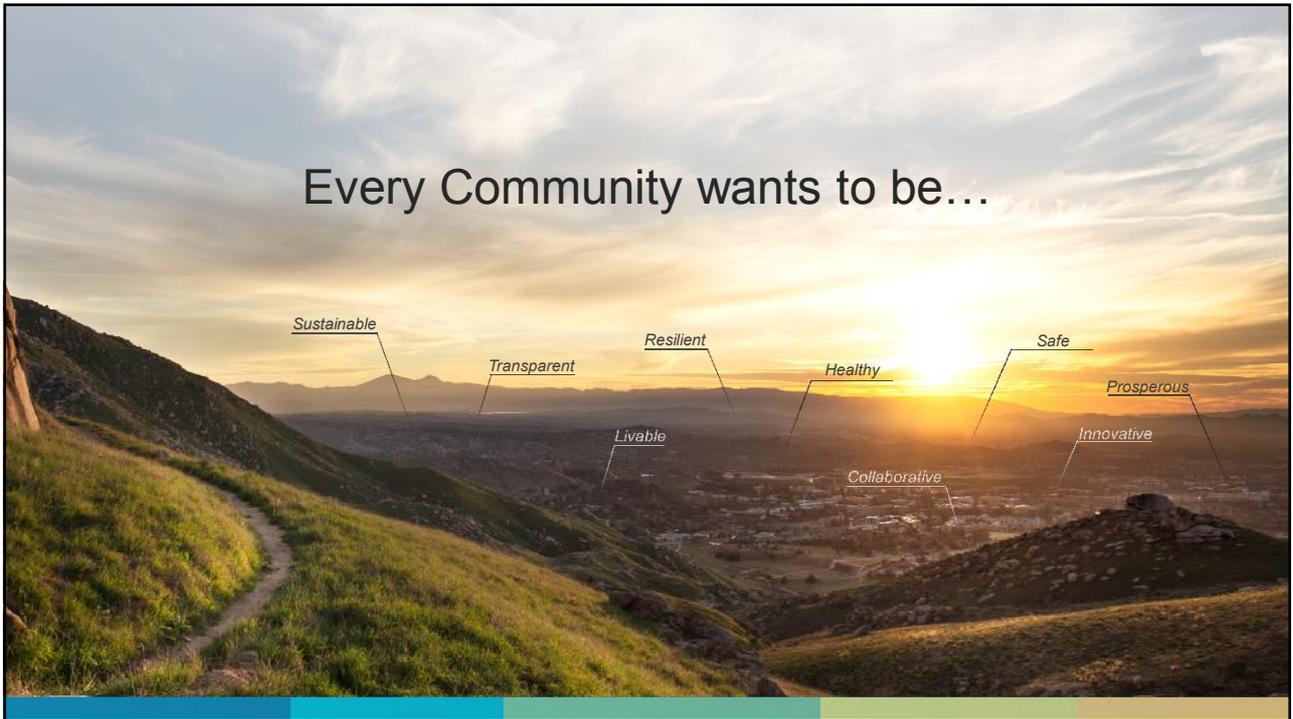
From "Compliance" to Use

- Open Data, Policy Focus
- Collaborative platform
- Cloud based



<http://geohive.ie>





Initiative Web Pages

Los Angeles Vision Zero Initiative page

The screenshot shows the Los Angeles Vision Zero Initiative website. The top navigation includes 'Data Catalog', 'Developer Resources', and 'News & Updates'. A search bar is visible. The main content area features a map of Los Angeles with the 'GeoHub' logo. Below the map is a section titled 'Putting Data to Work' with the 'VISION ZERO LOS ANGELES | 2015-2025' logo. A quote from Mayor Eric Garcetti is displayed: "Every year, more than 200 people are killed while trying to move around Los Angeles. Nearly half of the people who die on our streets are people walking and bicycling, and an alarming number of them are children and older adults. Our streets must be safer." A line graph shows 'Los Angeles Annual Traffic Fatalities and Severe Injuries' from 2003 to 2015, with categories for Vehicle, Pedestrian, Motorcycle, and Bicycle. A 'See Data in Action' button is present.

Labels on the right side of the image indicate the components of the web page:

- Banner
- Narrative
- Performance
- Apps
- Data Catalog
- Maps
- Ways to Engage
- Participating Agencies



Sustainable Development Goals (SDGs)

17 Goals to Transform our World

Government, businesses and civil society together with the United Nations achieve the Sustainable Development Agenda by 2030. Universal, indivisible and interlinked, the 17 Sustainable Development Goals (SDGs) are the blueprint to achieve a better and more sustainable future for all.

Ireland's Sustainable Development Goals National Implementation Plan approach to implement the 17 Sustainable Development Goals (SDGs).

This is Ireland's public platform for exploring, downloading and combining the European Union (EU) Sustainable Development Goals, Ireland's progress globally and EU agreed indicators and here you can search for, discover indicators.

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.

Explore our data for Sustainable Development Goals
Click on an icon below to access spatial indicators relating to a particular Goal.

GIS as the Platform for Land Administration

A System of

System of Record
Data Management and Integration

System of Engagement
Sharing, Collaboration, and Dissemination

System of Insight
Analytics, Models, and Data Exploration

... System of Systems ...

What's Next? Massive Transformation . . .

Interconnected Information, Processes, and Workflows . . .
... All Happening at the Same Time



The Role of the Surveyor?

Embrace Digital Transformation as Subject Matter Experts . . .
... Community Builder & Problem Solver



