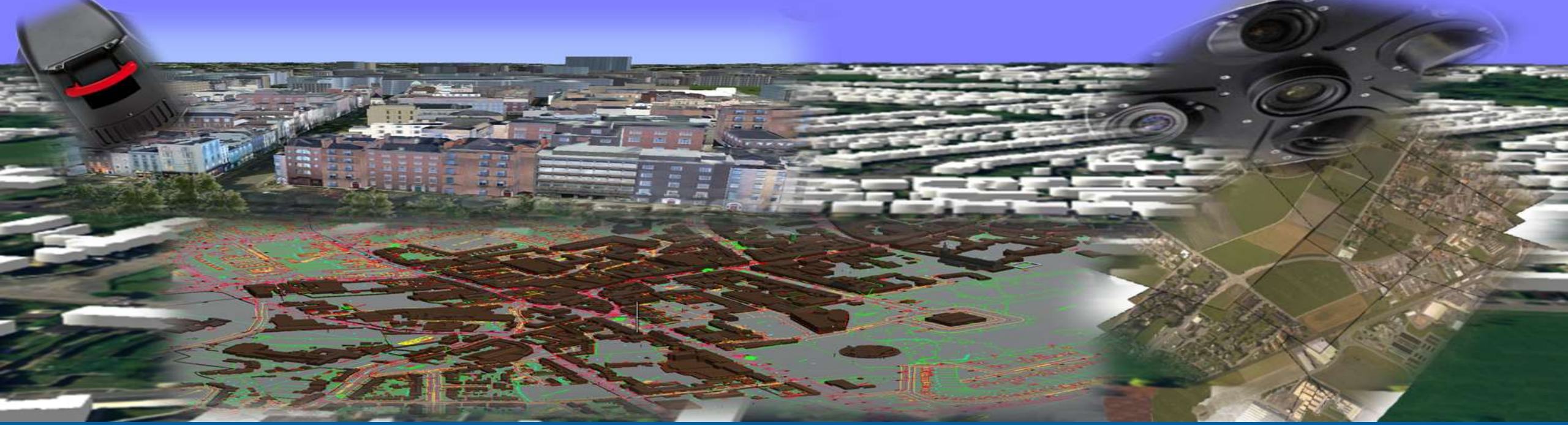

Ireland's approach to driving a Spatial Data Infrastructure

Lorraine McNerney, OSi General Manger

Geospatial World Forum, 27th May 2015

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OSi – The Irish National Mapping Agency

- Size: 70,000 km^2 / Population: 4.6m
- Established in 1824
- Create & maintain the definitive spatial reference information for the State
- Merging of OSi, Valuation Office & Property Registration Authority

Tailte Éireann
Clárúchán | Luacháil | Suirbhéireacht
Registration | Valuation | Surveying

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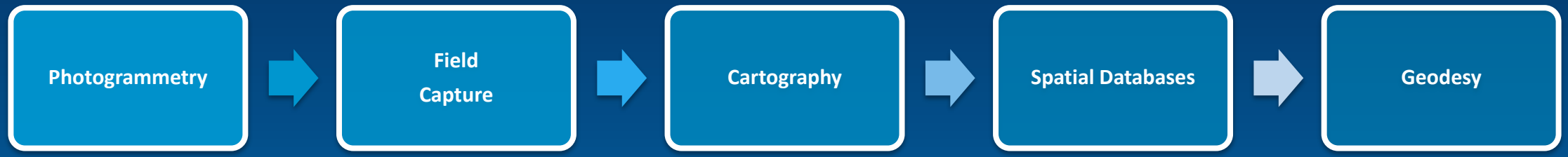
Data Collection Expertise



- Staff activity breakdown
  - 60% in production
  - 12% in field surveying
  - 18% in data and technology management
- Two leased aircraft piloted with OSi crews
- Fully digital workflows (ISO Certification for remote sensing flowlines)

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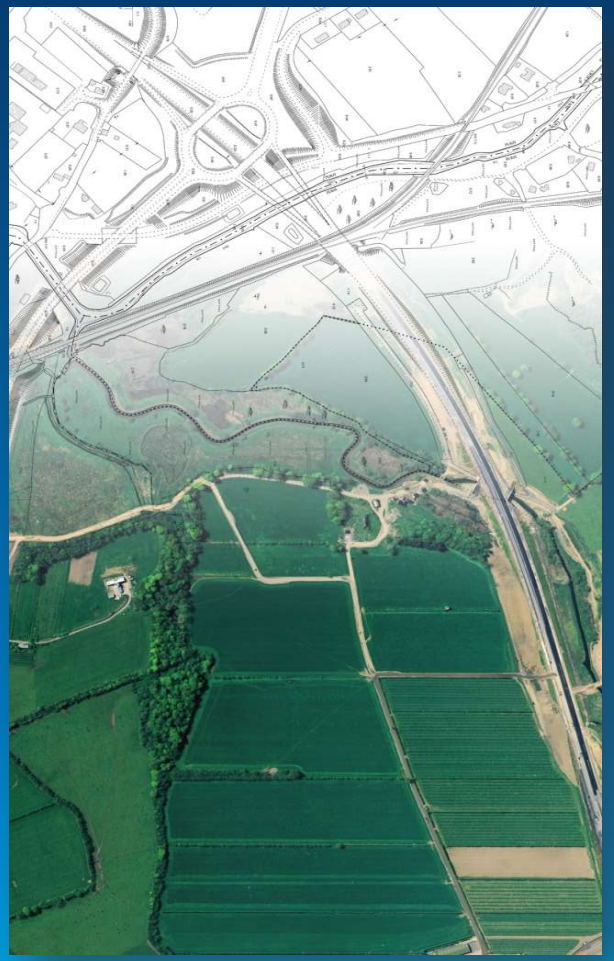
Data Management Expertise

- Manage 50+ million uniquely referenced features
- Digital data from 1824 - 2015
- Partner approach with key technology vendors
- European reference site for Oracle Spatial and Graph Technologies
- Hybrid Cloud deployment
  - Private Cloud for Production & Supply Data
  - Public Cloud for OSi WebServices



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Our Products & Services

Updated every 1, 3 and 5 years

Large Scale Data

1:1,000, 1:2,500 and
1:5,000 PLACE Maps

Medium Scale Data

1:10-15,000 Digi-City
1:10,000 Digi-Town
1:50,000 Discovery

Small Scale Data

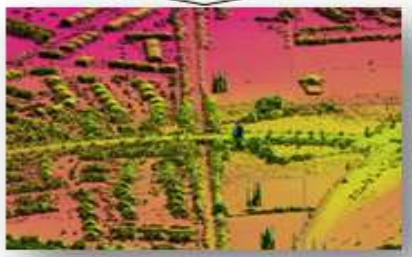
1:210,000 Holiday
1:450,000 Ireland
1:600,000 Ireland

National Imagery

1m per pixel ortho-photography

Cities & Towns

LiDAR Data



Digital Terrain Model
Digital Surface Model

City & Town Imagery

25cm per pixel ortho-photography

Boundary Data

County
ED
Townlands
Small Area

Services

osi map genie at your service

Online Shop
Public Viewer
Environmental Reports
Web Services

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OSi's Strategic Vision

1. Making the data more **usable**
   - Standardisation and quality of spatial information.

2. Making the data more **accessible**
   - On-line access to spatial information.

3. Enabling the **integration** and sharing of national spatial information
   - Implementation of national portal infrastructure.

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Making the data more usable

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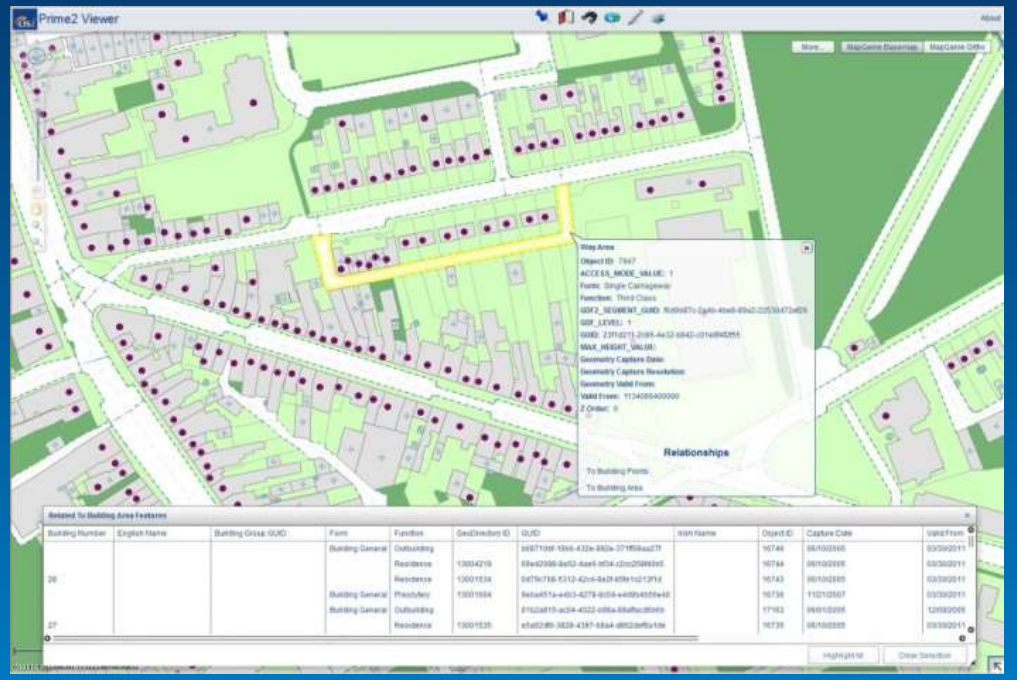
‘Spatial Platform’ – Unique Object Referencing

- Key Project Phases
  1. Data modelling (2007 – 2010)
  2. Data re-engineering (2011 – 2013)
  3. Systems & Infrastructure (2013 – 2014)



- Real World Object Orientated data model
  - Globally Unique ID (GUID)
  - Non-proprietary
  - Based on industry standards
  - OSi’s version of the real world, but extensible
  - Capture once, use many - single point of truth

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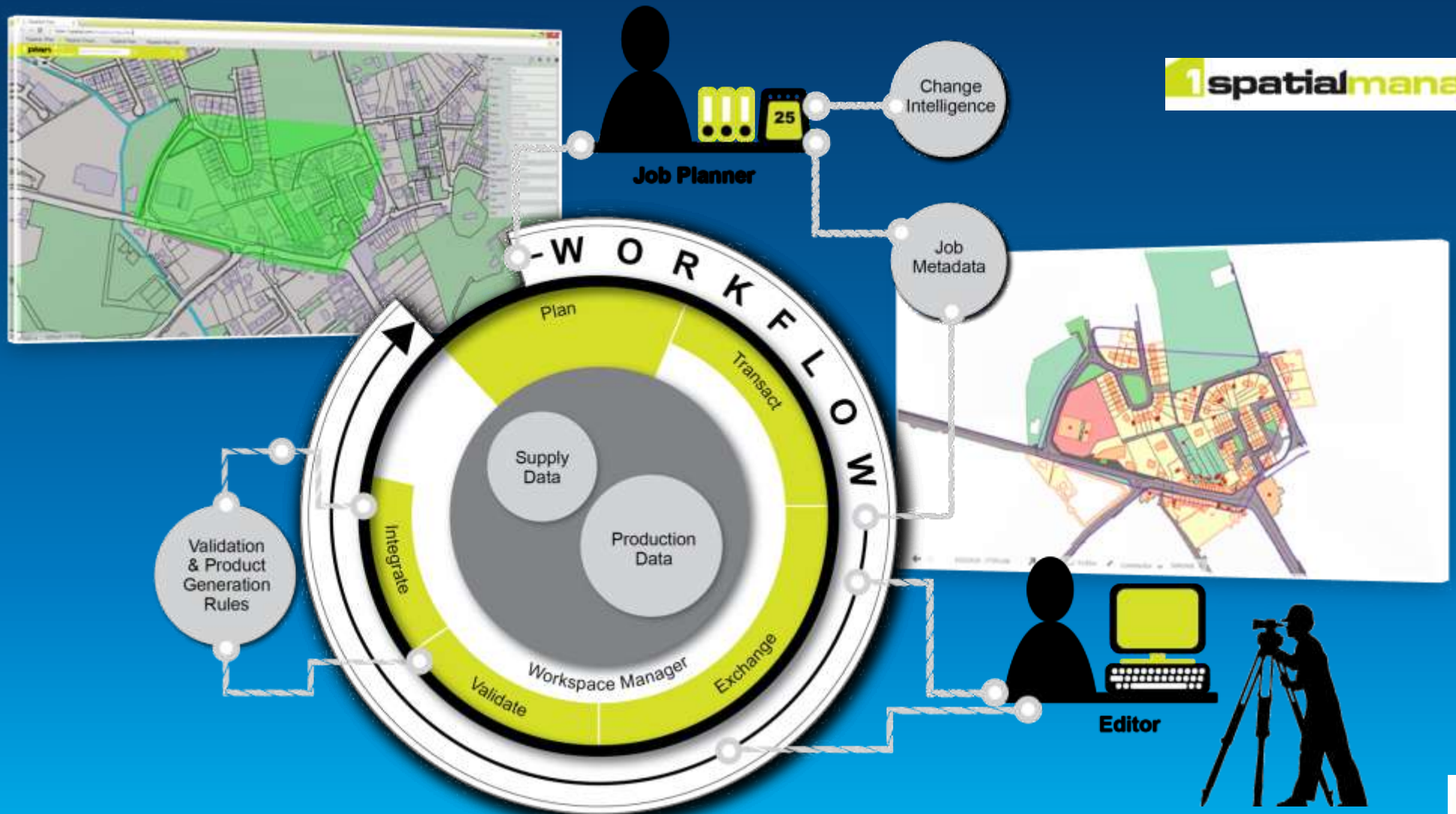
Object-based Production Workflow



1spatial management suite

ORACLE Weblogic Server

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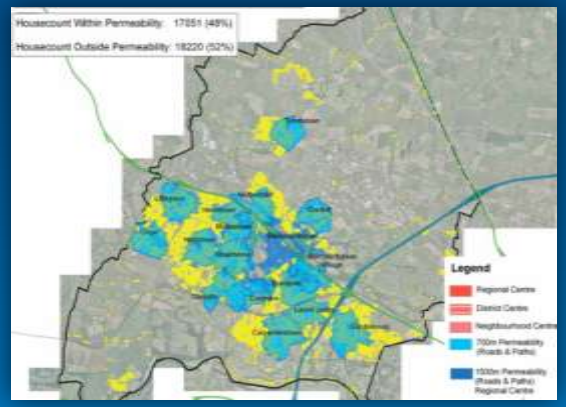
Prime2 matters to Government and the Citizen

More detail for reporting on EU Directives

Better Planning



Improved Citizen Services

Planning | Environ-ment | Housing | Heritage | Comm-unity | Rates | Water | Enterprise | 3rd Party

Making the data more accessible

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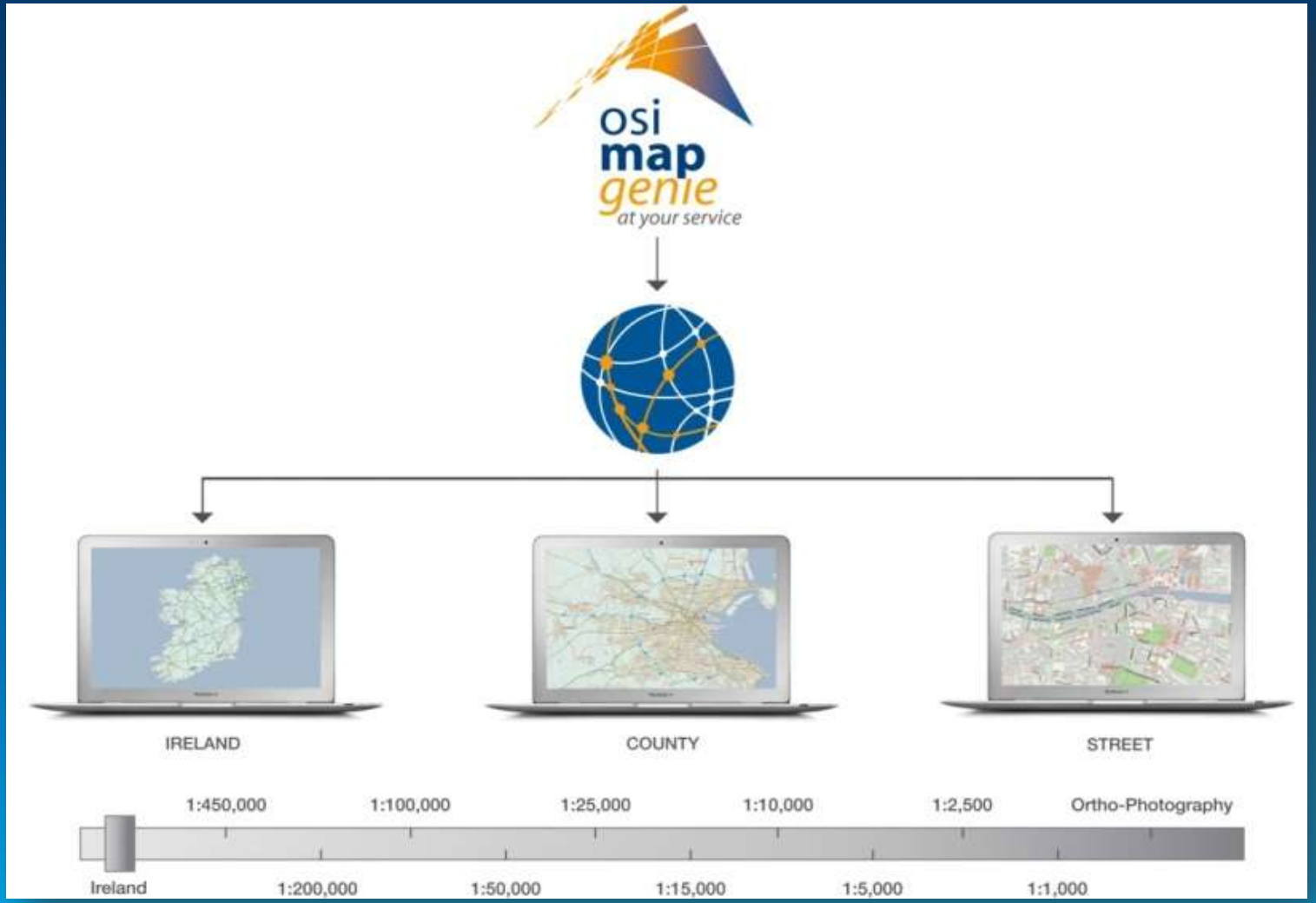
OSi's MapGenie WebService



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Irish Revenue Project using OSi WebServices

From service request to launch = 6 weeks

Up to 60m hits per day

Max requests on launch day 166,000 / per minute

Ireland's most used authoritative web mapping service to date

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Integrating and sharing spatial information

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The initial challenge = INSPIRE compliance

GEOportal
IRELAND'S INSPIRE PORTAL

- The central INSPIRE Portal services for:
  - ✓ Discovery
  - ✓ View
  - ✓ Download
  - ✓ Transformation

INSPIRE - Infrastructure for Spatial Information in Europe

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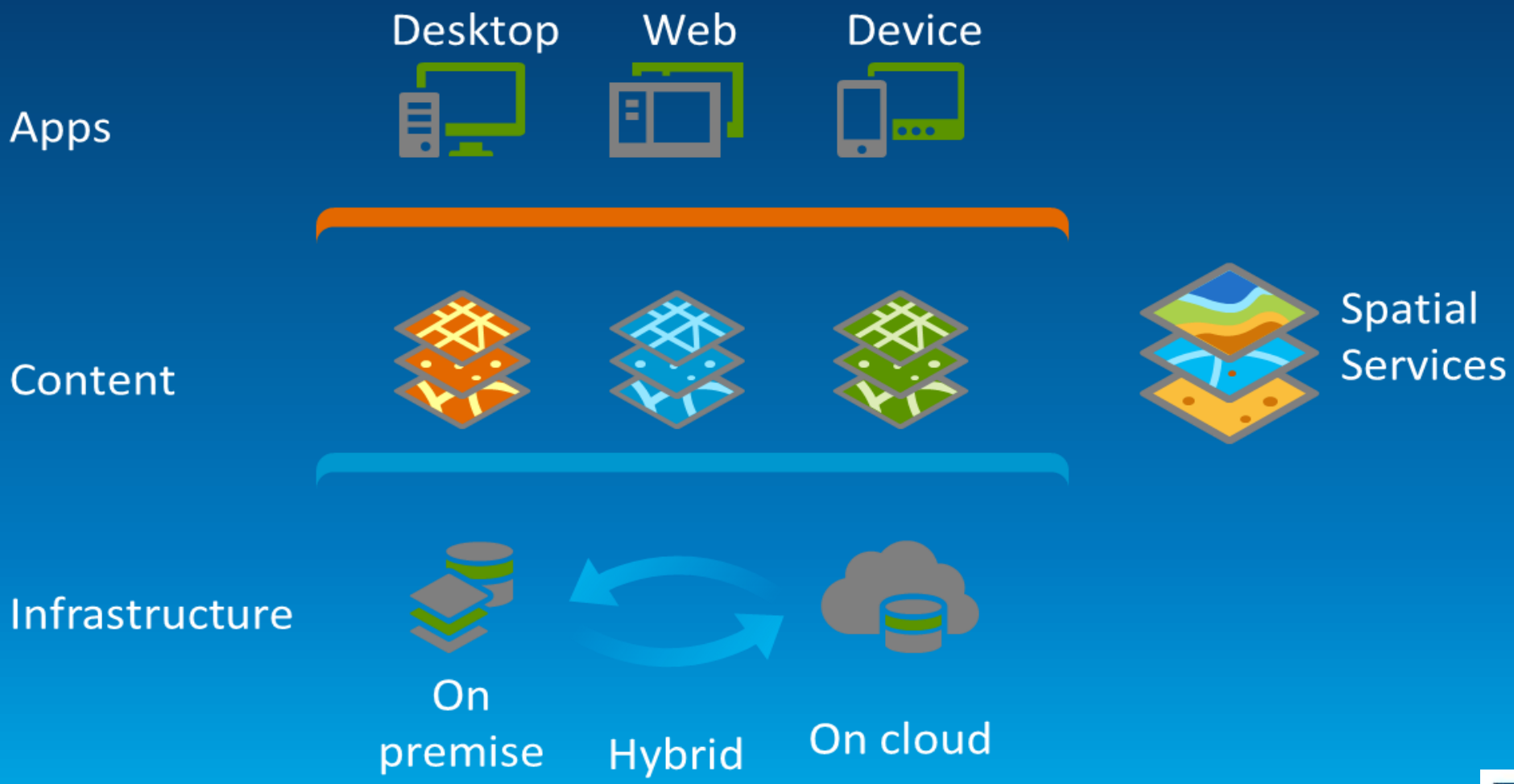
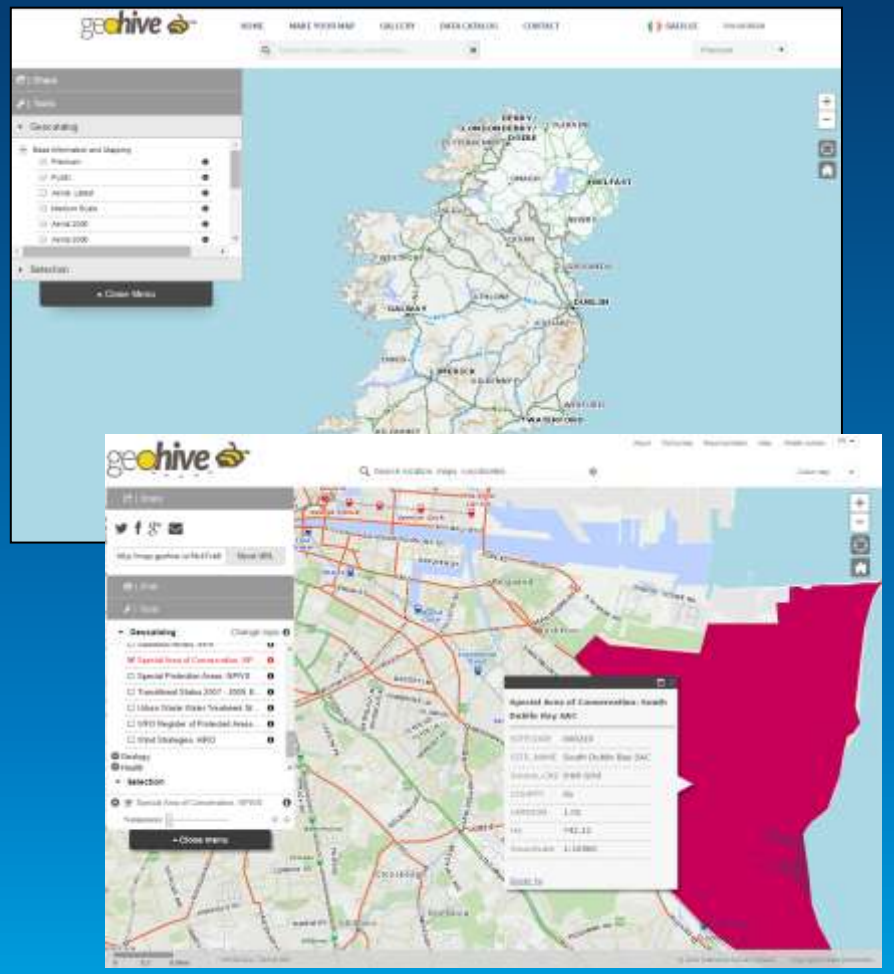
Developing Ireland's NSDI Platform



Ireland's NSDI – "GeoHive"

- Single catalogue of published data sets
- Sharing and collaboration
- Data driven with INSPIRE as a subset
- Geo-processing and spatial analysis
- App development



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Geoportal Vs GeoHive

Geoportal	GeoHive
Log in	No log in
INSPIRE Metadata format only	INSPIRE + Other Metadata formats
INSPIRE data themes	Varied data themes including Open Data
Single MapGenie Basemap	Multiple MapGenie, Aerial & Historical Basemaps
60+ Datasets	200+ Datasets
No Save/Share options	Save and Share options
Not mobile compatible	Mobile compatible

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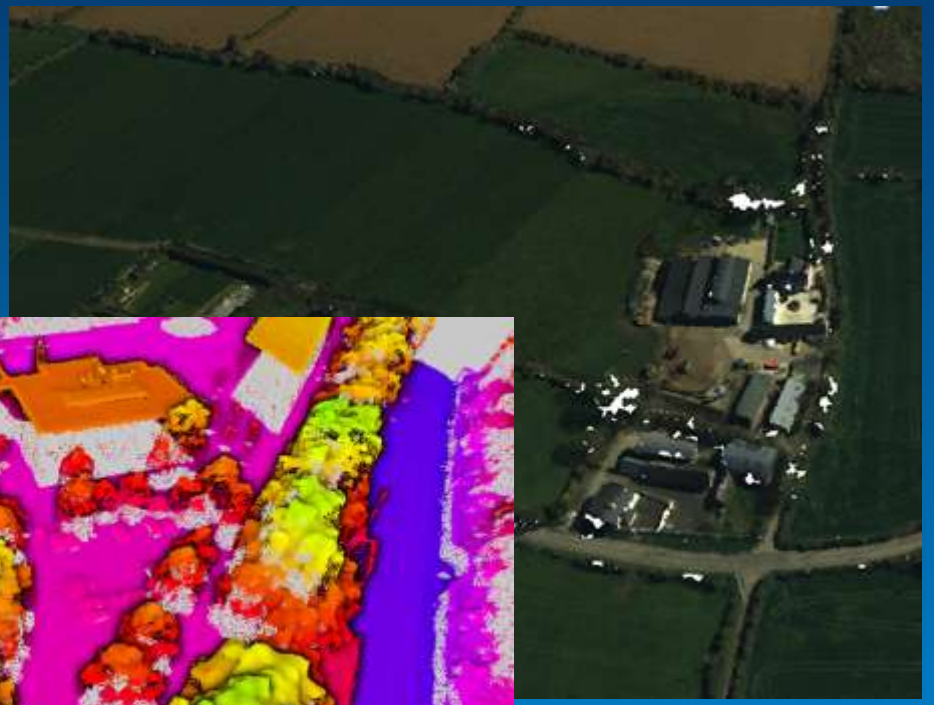
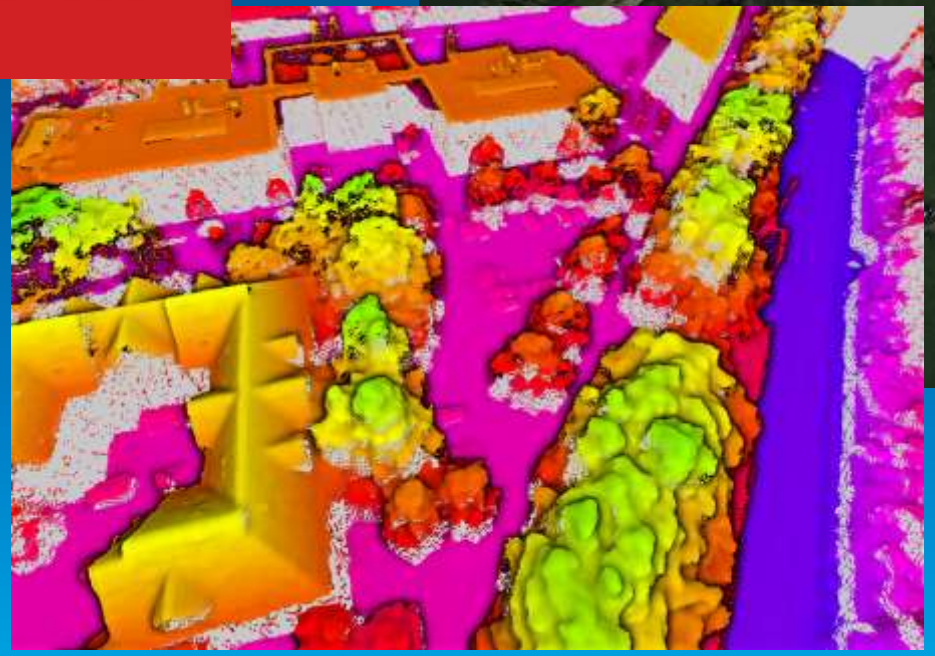
Current Strategic Initiatives

3D Point Cloud from image matching

ORACLE





HPI Hasso Plattner Institut

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Automatic Product Generation

Rules-based Data Management Workflows

Cartographic Generalisation from 1:1,000 to 1:1m scales

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Economic benefits

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