



Cartographic Automation – OSi's latest innovation

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Cartographic Automation – OSi's latest innovation

- Role of National Mapping Agency
- The challenge
- The solution
- The outcome

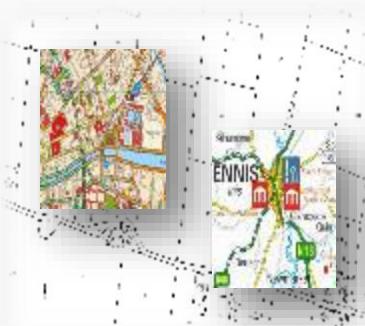
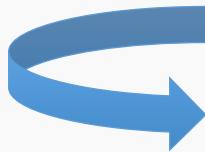
Role of National Mapping to date



Lithographic Stone



Copperplate Printing



Multi Resolution
Cartographic Tiles



From 80 million
cartographic
elements to 50
million real-world
objects





Prime 1

Cartographic
Spaghetti Lines

No Attribution
Tile Based

Prime 2

Real World
Polygons

Rich Attribution
Seamless





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The Challenge

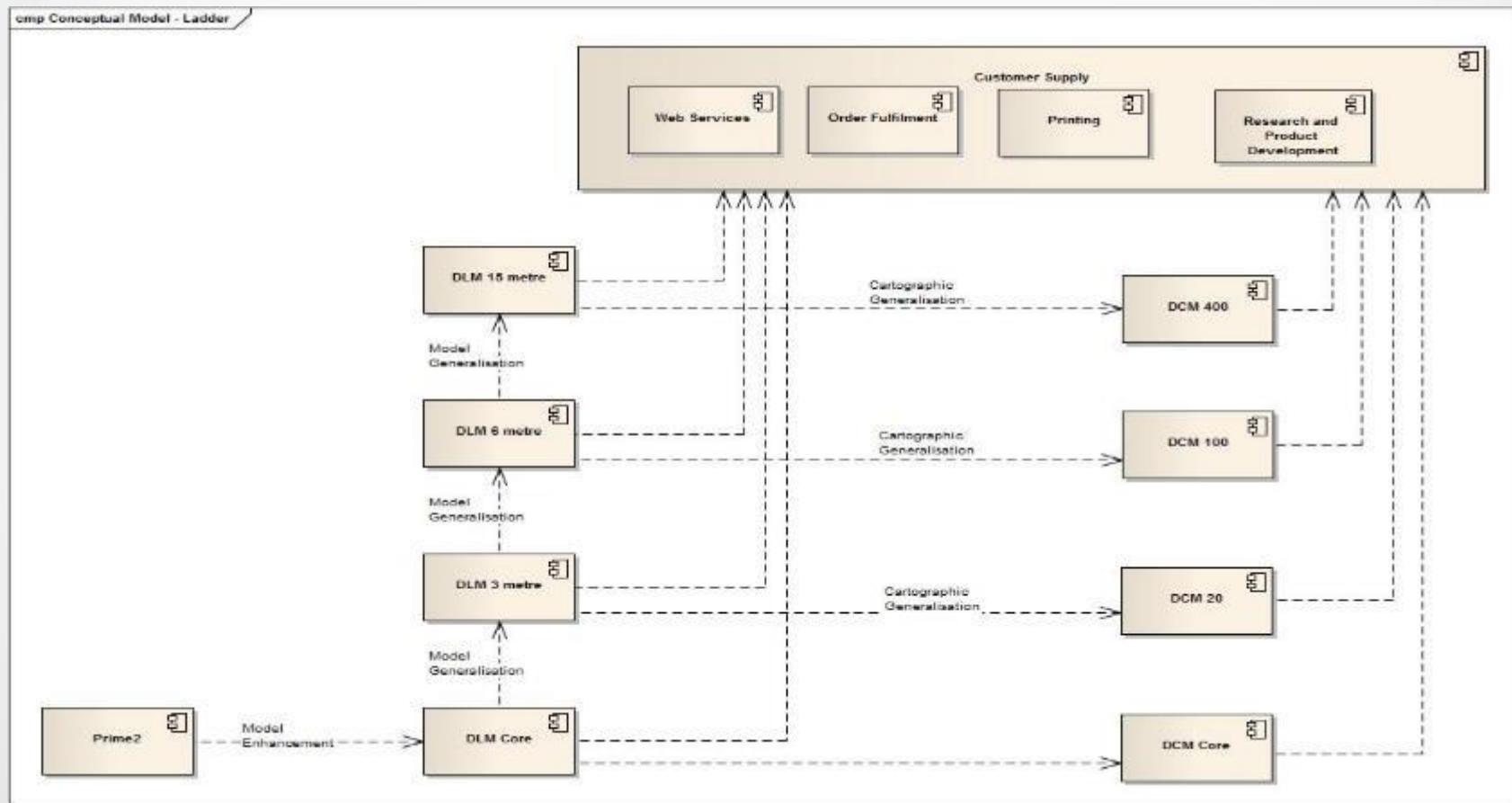


MRDS – What is it?

- Take a concept and make it a reality
- The concept – a single data source (Prime2/DLM_Core) to produce all hard & soft copy digital output
 - i.e. 'capture once – use many'



Architectural scope – issued in RFT (August 2014)



Automated 1:1,000,000 cartography from 1:1,000 topography



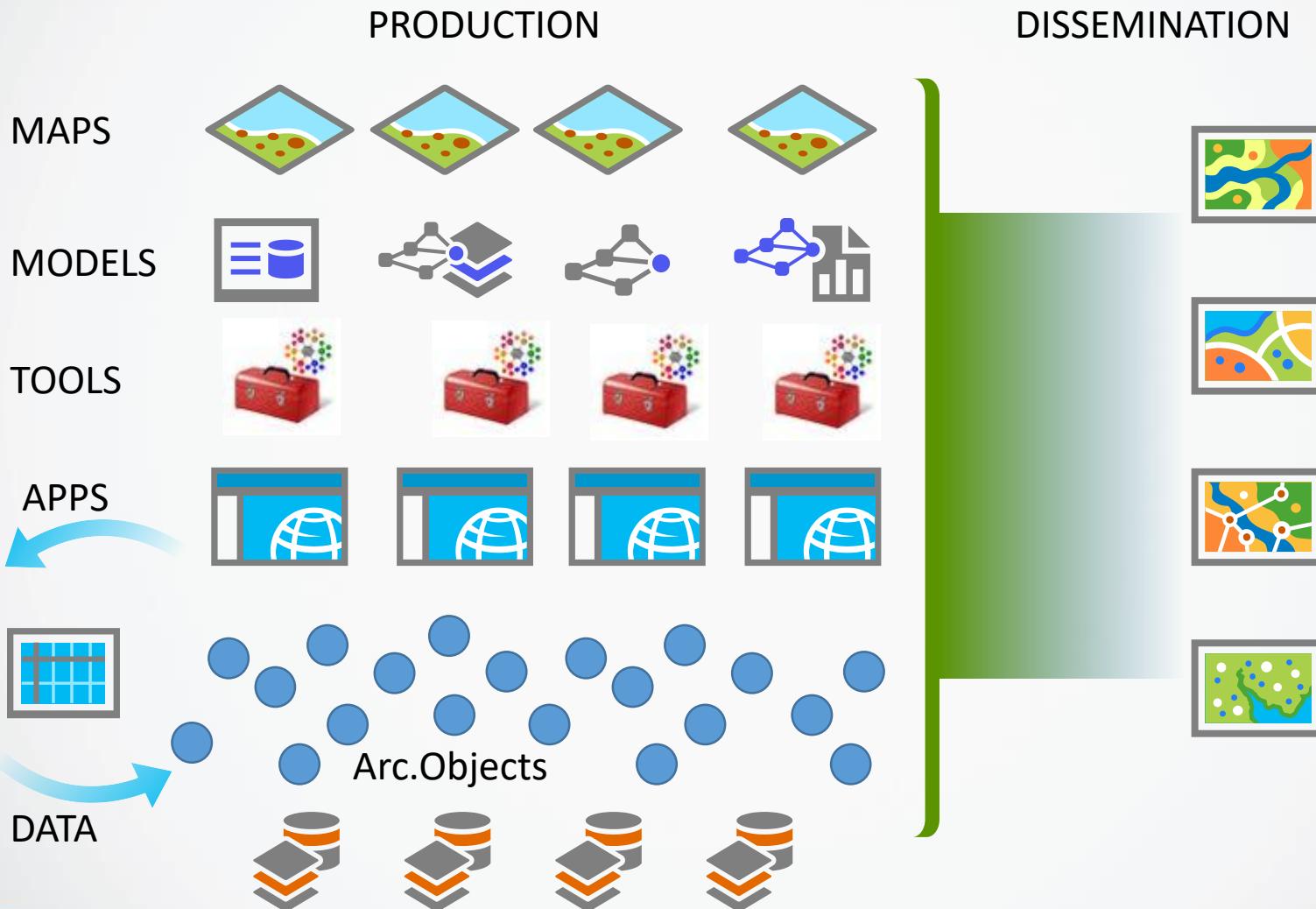


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The Solution



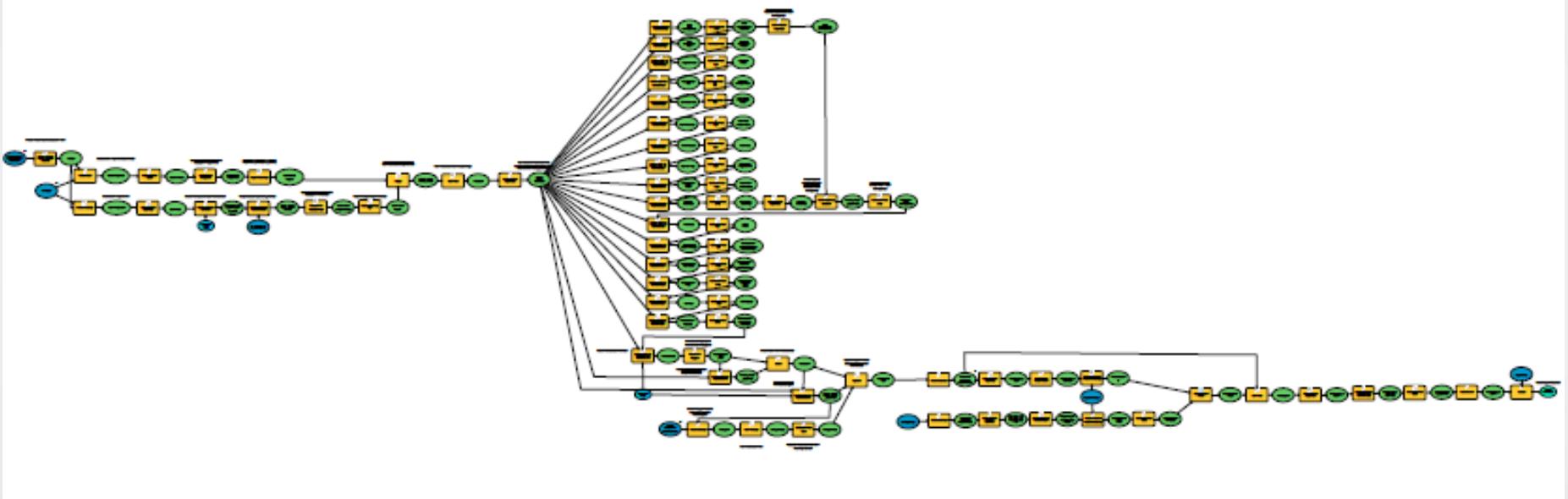
The Solution – the ArcGIS Platform



The Approach



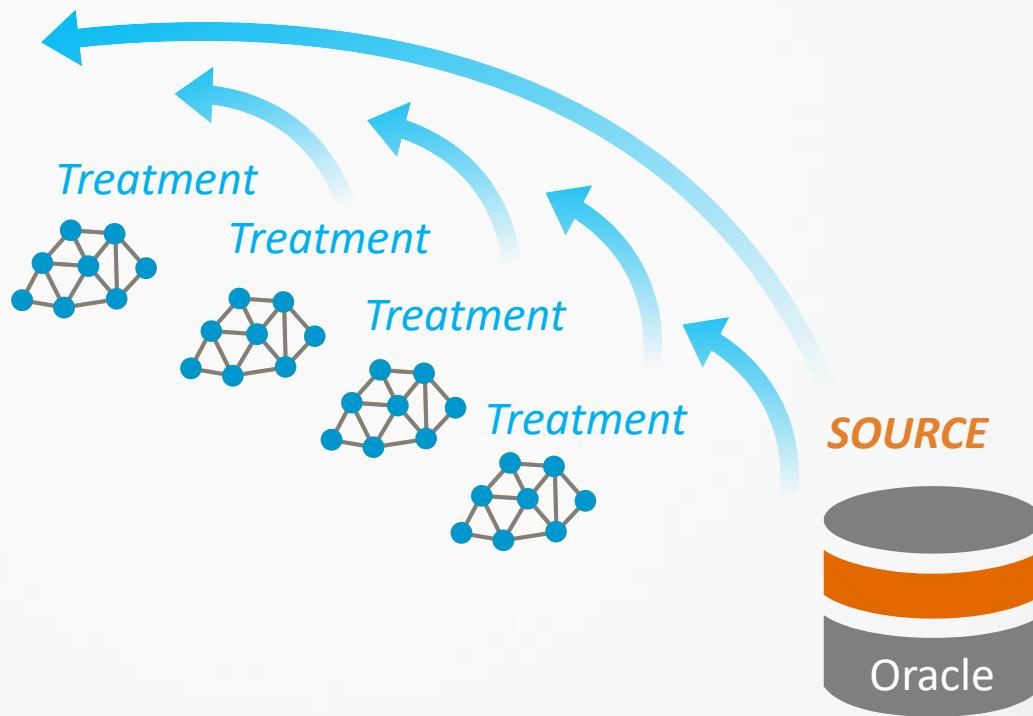
Example Model



OSI High-Level Flowline



TARGET



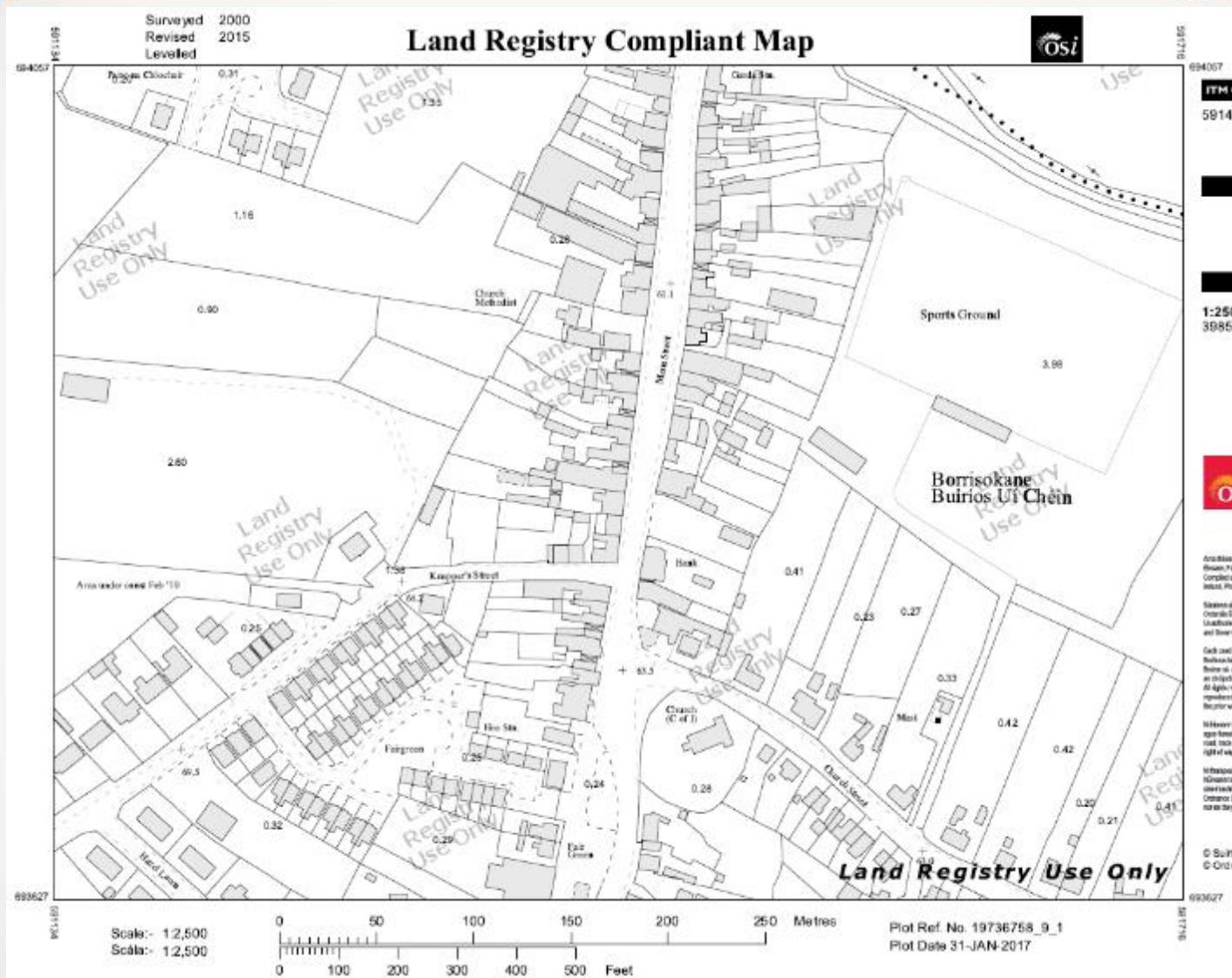


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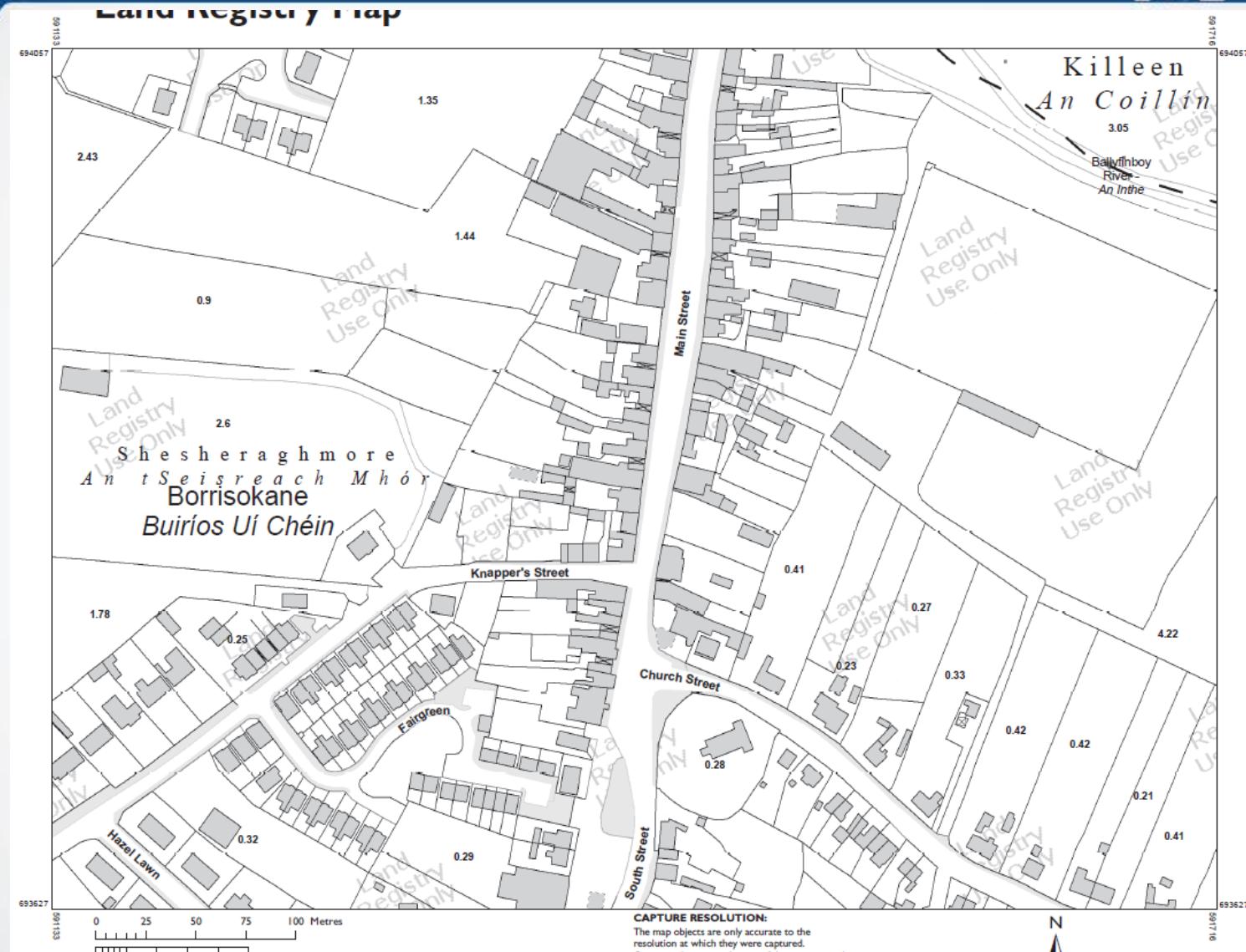
The Outcome



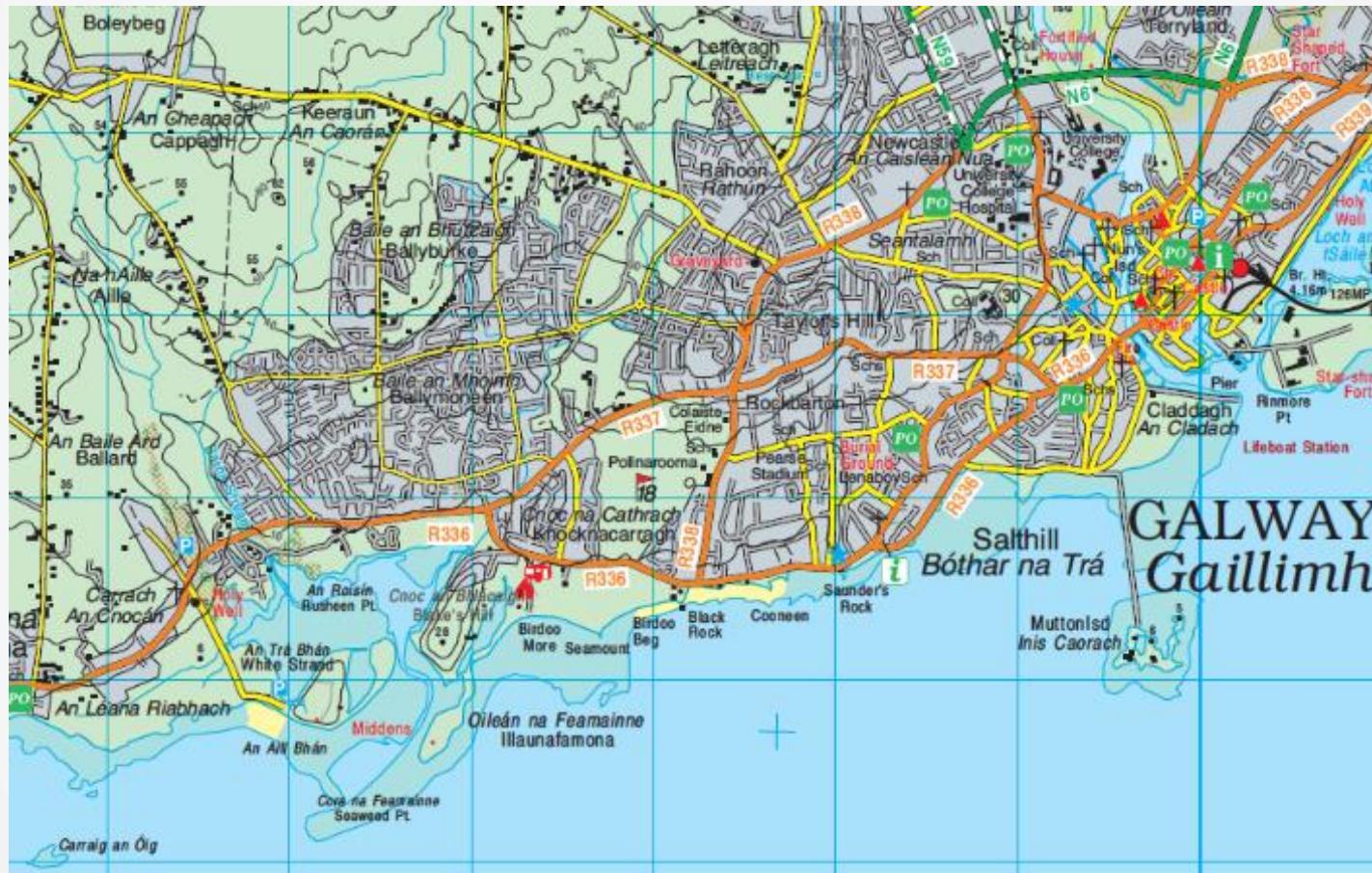
1: 1000 Mapping from Prime1 Cartographic database



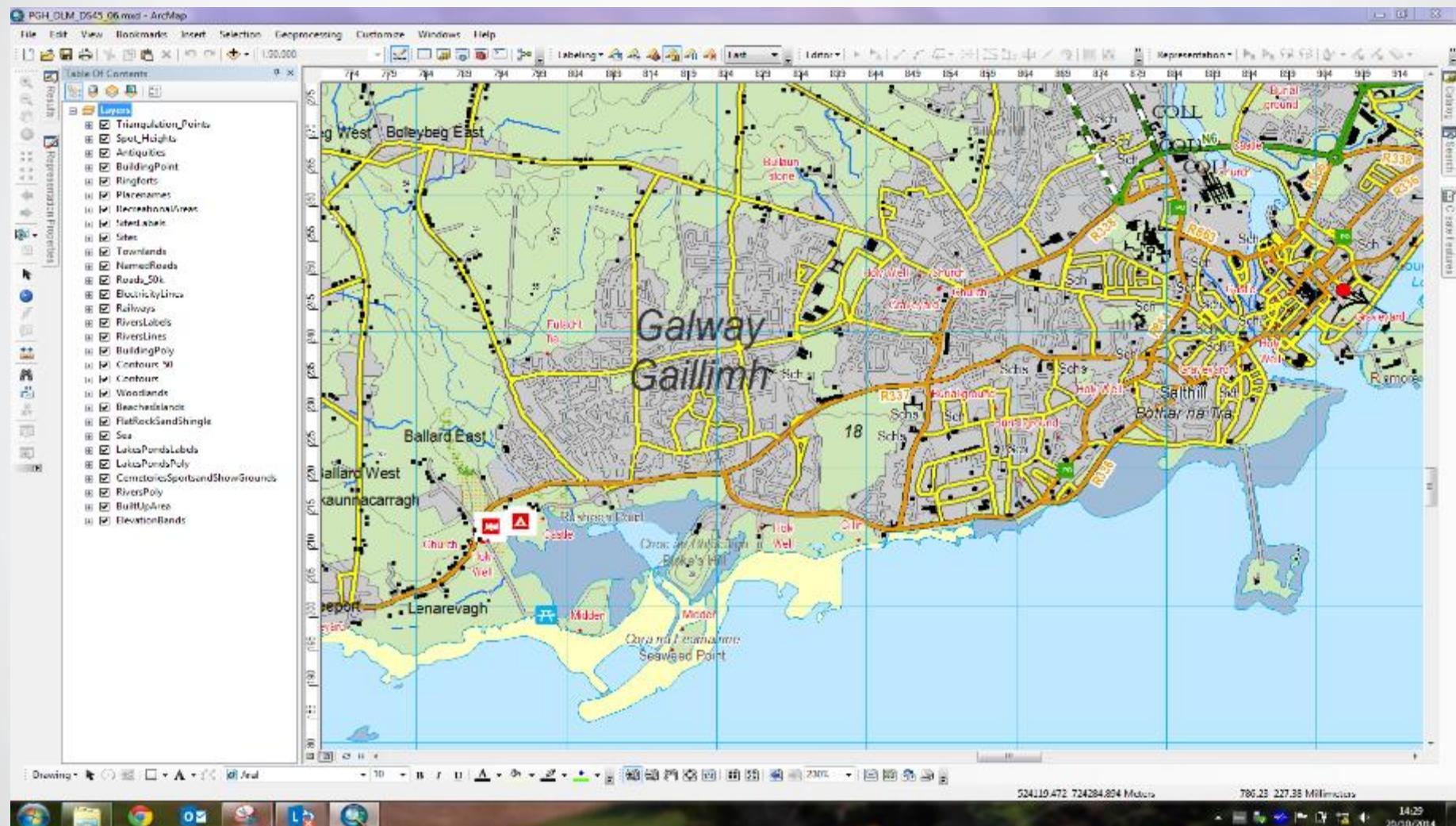
1: 1000 from Prime2 Object Oriented Database



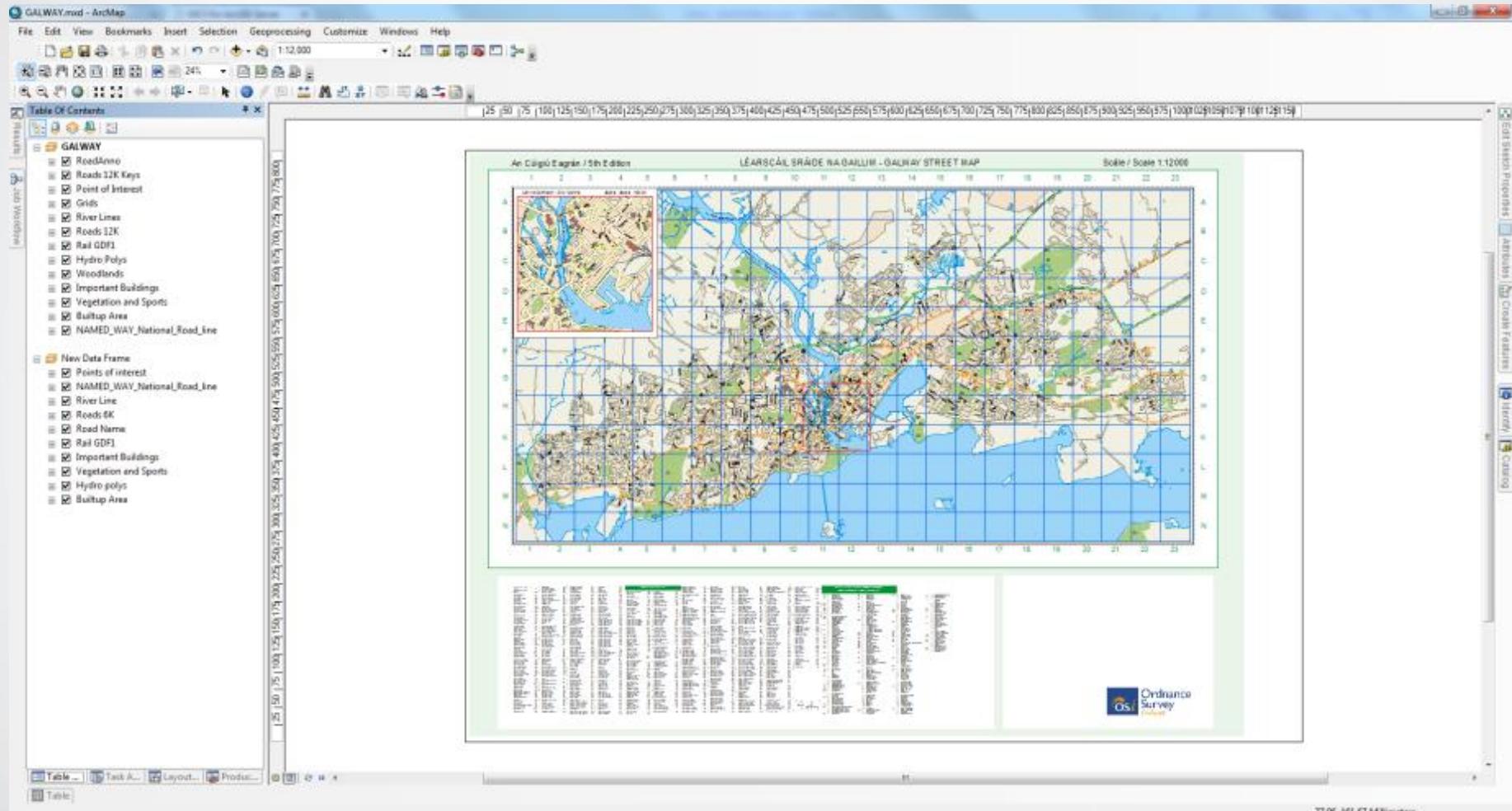
1: 50k Discovery Mapping from manual legacy flowline



1: 50k Discovery Mapping from new automated flowline



Additional functionality



- Generalisation process concepts
 - Aggregation; Simplification;
- Distribution Framework
 - Needed to be included in the ESRI Workflow Manager
 - Recently deployed in OSi; not fully tested at a National Level

- Automatically derives OSi products from core data holding
- Ensures data quality and consistency is persisted
- Fully exploits the capabilities of the Prime2 data model
- Delivers significant production efficiencies that will lead to further cost reduction
- Foundation for new mapping products
- Direct integration with supply channel through open web services, 'product on demand' capability, high quality vector output and more targeted geo-processing services





Thank You

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📍 Ordnance Survey Ireland
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