

Value Chain Mapping

Urban Planning Use Case

The Added Value of 3D Geo-information

Introduction.

- Purpose: why look at urban planning?
- Approach: what we did.
- Results: what we achieved
 - Value chain
 - Qualitative Benefits
 - Reference material

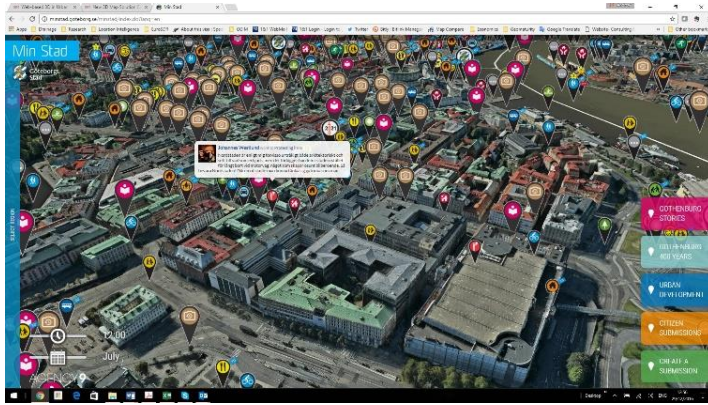
- This will be an introduction to the later session on Cost-Benefit Analysis

Why Urban Planning?

- EuroSDR 3D SIG collective project decision.
- Increasing proportion of population choosing to live in urban areas
 - Predicted to rise to 60% by 2050
- Housing demand outstripping supply leading to lack of affordability in many cities
- Pressure on land in most major urban areas in Europe leading to increasing demand for high rise buildings
- Informed planning decisions in a 3D environment require 3D geo-information
- Citizens and professionals are better able to understand and engage in planning their environments through visualisations in 3D

Scope: Urban Planning-driven City Model Projects

Gothenburg: Public engagement



Helsinki: urban planning



Berlin: Inward Investment



St Helier: urban planning



Approach

- Workshop in Dublin
- Representatives from:

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Approach

- Workshop in Dublin

What we learned in respect of Urban Planning

Savings for Local Area Plan Revisions

Visual Impact Assessments

Reduced time to make decisions

Fire Safety rescue services.

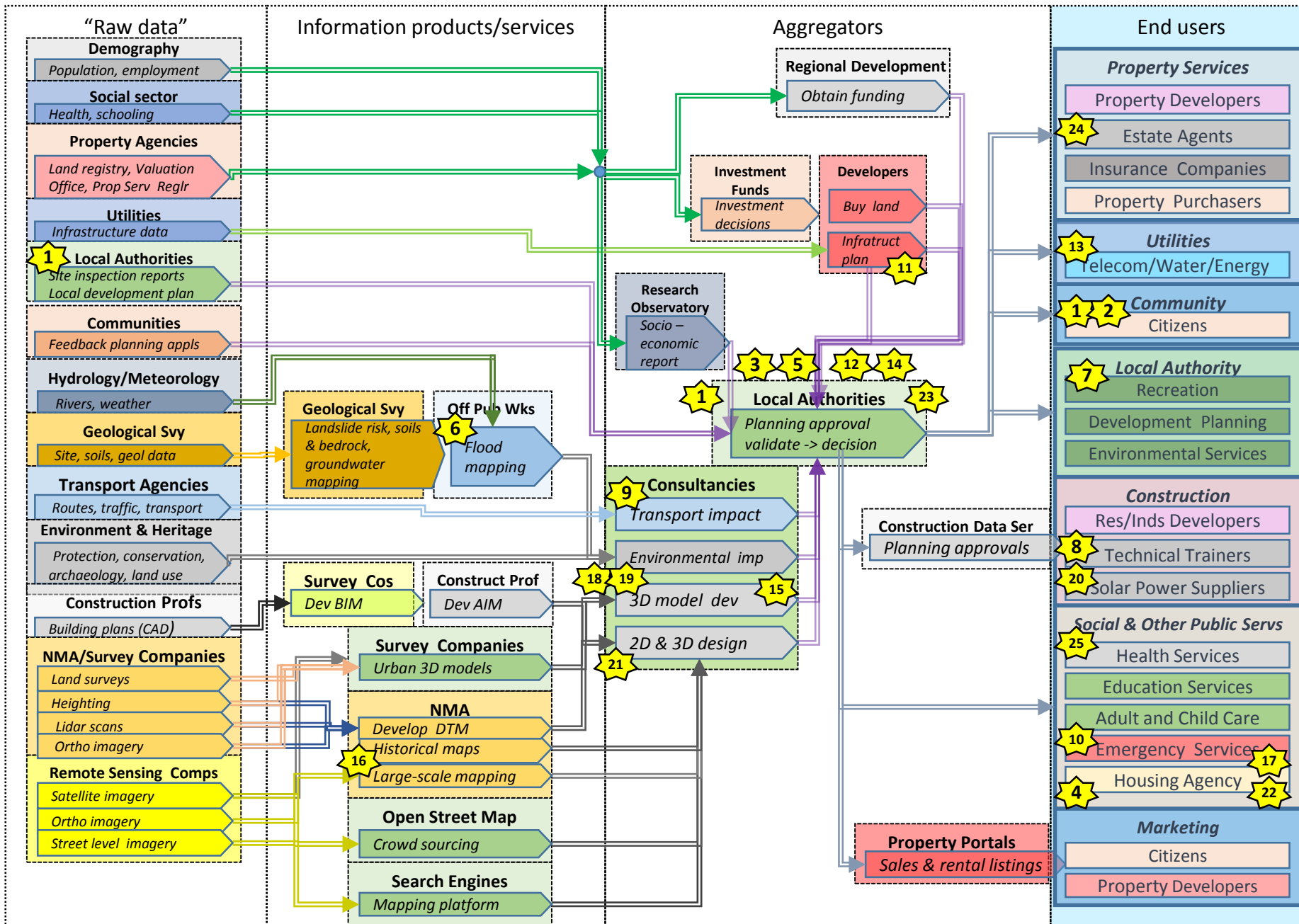
Smart Cities

Real Estate –better evaluation of property when you can visualise and understand building aspect in terms of views and position.

Insurance Market – Risks.

Results

Urban Planning - Value Chain



Key Learning Points

Supply side

- Inefficiencies resulting from multiple agencies creating or commissioning 3D geo-information to differing specifications and quality
- Inconsistency in terminology and concepts
- Rapidly changing capabilities of sensors and platforms

Demand side

- Irish market is small and this constraints the opportunities for consultancies and software developers to grow unless they develop internationally
- Urban planning has close relationship to other use cases
 - Flood management
 - Asset management
- Over 30 agencies are consultees – their views have to be considered
- Many of the benefits accrue to private sector and citizens

Top Qualitative Benefits

1. Complete city 3D coverage of Dublin – as the country’s biggest and most historic city, the availability of such data would allow more flexibility in the application of current planning regulations. For instance in relaxing current “blanket” restrictions on building heights and aspect in the Georgian core higher rise development could be approved in certain areas without damaging the visual ascetics of the city and generating more efficient use of available space, easing the current housing crisis and generating additional property tax.
2. Citizen engagement – the ability afforded by accurate 3D models for citizens to visualise the impact of new developments will lead to wider participation in consultations and less disputes by presenting a more coherent and easily understood evidence base.
3. Data interoperability - a standard information base of 3D information would reduce duplication in data acquisition, remove the need for Extraction, Translation and Loading (ETL) between the software systems used by the many actors in the consultation process.
4. The cost of analysis by local authorities considering new developments would be reduced by being able to answer complex questions relating to issues of environmental, traffic and visual impact semi-automatically using 3D-enabled software packages.
5. Faster decisions – for developers an quicker turnaround on planning consents will lead to better design (by virtue of considering more options), reduced borrowing costs and easier marketing (more virtual viewings) leading to quicker sales.
6. Integrating utilities infrastructure – utilities can more easily and rapidly plan and modify provision to new developments through accurate and integrated 3D building and underground data (soils and geological data)

Reference Material

- States of Jersey
 - 3D Model for St Helier since 2012
 - Modified planning application process to incorporate 3D model
 - Practical experience of a successful implementation
 - Video demonstration [Jersey](#)
- Helsinki
 - New applications
 - Noise mapping
 - Solar panel potential
 - Virtual reality gamification for planning
 - Video link to benefits [Helsinki City Planning](#)
- Socio-economic Benefits
 - 3D in stimulating housing market in Dublin [Ronan Lyon](#)
- Singapore Smart Nation¹

Summary

- Workshop
 - Well attended with excellent presentations
 - Local government, central government, private sector and academics represented
 - High level of engagement
- Value chain
 - Focussed on planning consents
 - Substantially complete, applicability to other geographies a concern
- Benefits Identification
 - Good - covers a wide range of actors
 - Economist input valuable
- Good reference material assembled
 - St. Helier
 - Helsinki

Thank You