Value Chain Mapping

3D Cadastre and Valuation

The Added Value of 3D Geo-information

Richard Witmer, Kadaster NL, 30 March 2017

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Agenda

- Purpose: why look at 3D cadastre and valuation ?
- Approach: what we did.
- Results: what we achieved
  - Value chain
  - Qualitative Benefits
  - Reference material
- How can the deliverables be used

Approach

- Workshop in the offices of offices of Dutch Kadastre in Amsterdam
- Representatives from:

Jantien Stoter	TU Delft
Jørgen Skrubbeltrang	GST Denmark
Timco Toppen	TU Eindhoven, Cushman & Wakefield
Frank Kooij	Kadaster NL
Timo Erinkveld	Den Haag NL
Ruud Kathmann	Waarderingskamer NL
Andrew Coote	Consulting Where UK
Philip Knight	Consulting Where UK
Tina Svan Colding	SDFE Denmark

- What we learned

  See next slides

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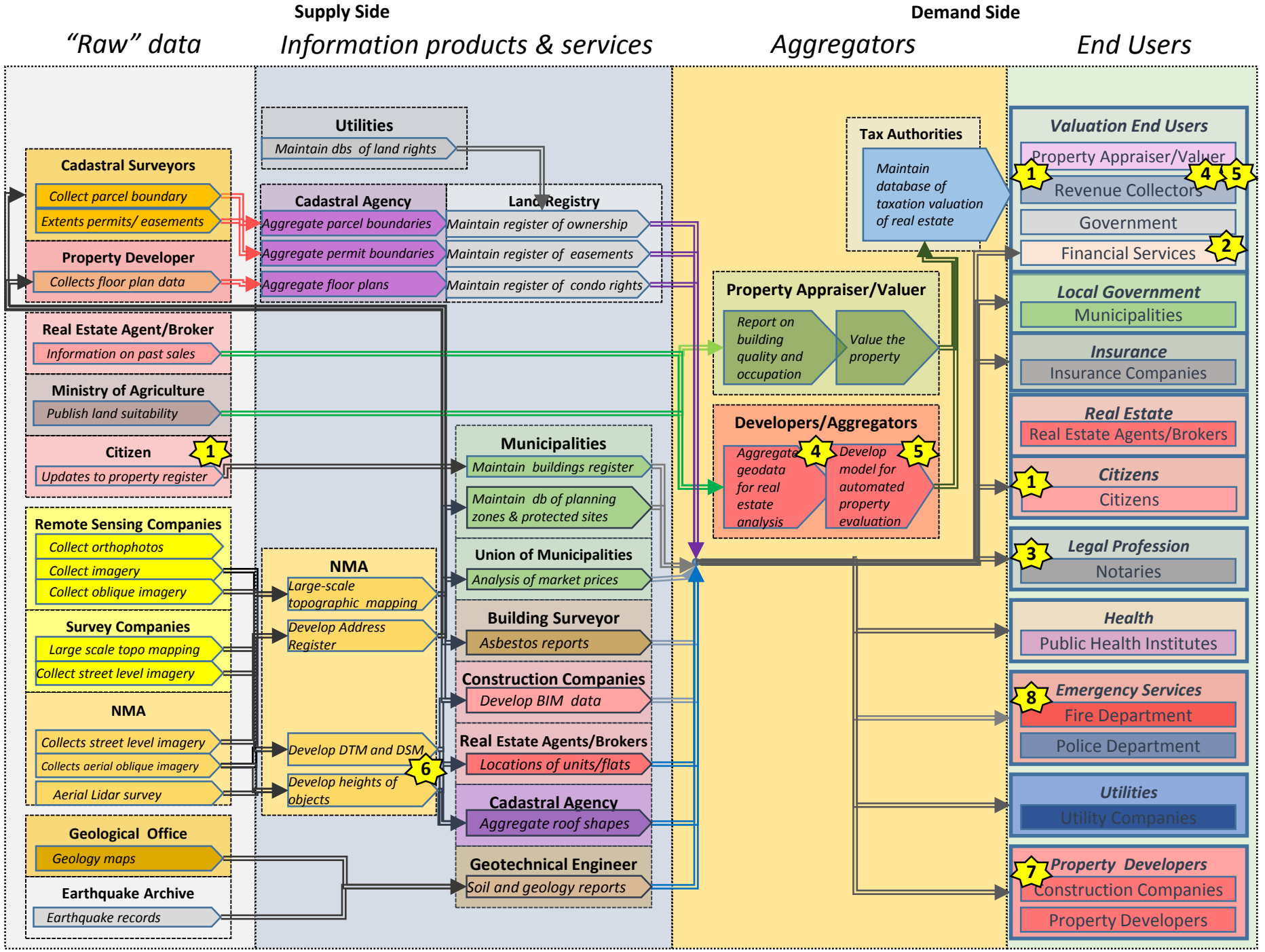
Scope of Use Case

- The uses of geo-information for land and property in:
  - land registration and administration;
  - land and property valuation;
  - valuation for taxation, also other purposes (insurance, resale, financial)
- Focused on the situation in Denmark and The Netherlands:
  - attendees at the workshop were from these two countries;
  - Denmark:
    - more advanced in development of a national 3D valuation model;
    - business case prepared, approved and being implemented;
    - main aim is for valuation to be more objective:
      - politically popular financed by Ministry of Finance.
  - The Netherlands also well advanced in terms of design:
    - well-developed state of linked key registers – Cadastre (BRK), buildings and addresses (BAG), Topography (BRT and BGT)
    - Lots of experience in yearly valuation, no use of 3D yet.



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Top 5 Qualitative Benefits

1. Citizens provide and review property data
2. More security for lenders by using 3D Information, lower interest rates for borrowers
3. 3D cadastral mapping improves information for notaries, speeding up transaction time and lowers associated costs
4. Better 3D Info gives more uniform assessment land tax payable.
5. More reliably useful comparables for taxation.

Key Learning Points

Supply side

- Main actors are the National Mapping and Cadastral Agencies (NMCAs) responsible for land administration and the national products and services.
- Private sector companies used to collect raw data or provide specialist processing services.
- Cadastral parcels recorded in 3D allow for more accurate recording of complex ownership.

Demand side

- Most significant user of property information will be taxation authorities for input to their models for automated property valuation. Key political driver for 3D in Denmark.
- Improved citizen trust and transparency in the valuation process stemming from uniformity of assessment, expected to result in reduction in complaints and time savings.
- Similar benefits available to private sector bodies for valuing properties for investment.
- Key users
  - Taxation Authorities
  - Other government agencies
  - Financial institutions
  - Property developers
  - Citizens
  - Municipalities

What next?

- Assess whether 3D cadastre is one of the strongest use cases for your country
  - Analyse value chain materials
  - Rank against political priorities

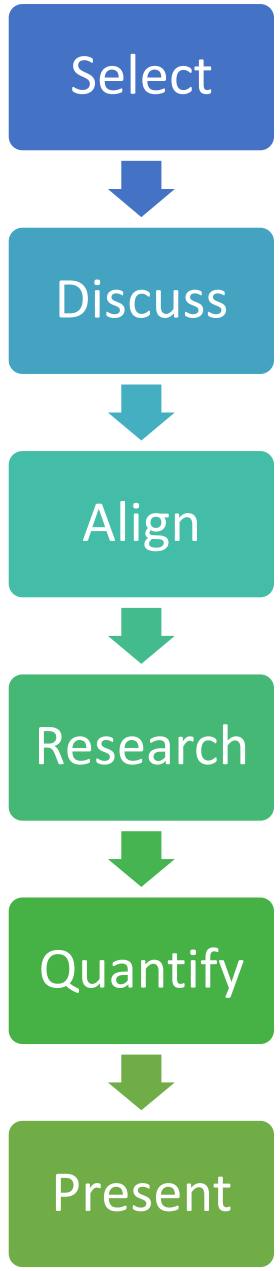
- Stakeholder Engagement
  - Organise business case workshop with public and private sector actors
  - Use Value Chain mapping exercise to facilitate consensus on benefits

- Align to official Government policy on land administration and valuation
  - Understand how 3D geo-information provides solutions and aid citizens and business

- Research reports into best practice in land administration
  - Evaluation of costs and benefits (candidate for further work by EuroSDR)
  - Benefits transfer – access to Australian work

- Prepare Business case
  - Strong emphasis on costs and benefits as good evidence from Denmark (if made publicly available)

- Presentation
  - NMCAs
  - Property valuers, developers, financiers



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Summary

- Well organised and attended workshop with very engaged and competent experts
  - Attended by experts from Netherlands and Denmark
- The value chain produced is substantially complete and relatively simple
  - It has been reviewed and suggested changes incorporated
- Spreadsheet of benefits clear and compelling
  - Benefits substantial to both public and private sectors
- Well developed business case for 3D geo-information for Valuation in Denmark
  - Likely to be accessible later in 2017 (TBC)
- Good reference material

Reference Materials

1. Documents about the workshop 3D Cadastre and Valuation (closed group) https://basecamp.com/1920286/projects/12214091/attachments/tagged/4989272
2. 5th International FIG Workshop on 3D Cadastres October 2016, www.gdmc.nl/3DCadastres/workshop2016/programme
3. 3D developments in cadastre registration: Stoter (on BaseCamp)
4. 4D-Cadastral registration of rights, restrictions and responsibilities: Oosterom (on BaseCamp)
5. 3D Cadastres and Beyond: Rajabifard (on BaseCamp)
6. Danish National Aerial Photography Tender Tender Notice
7. Queensland economic study on 3D Cadastre to be released in April 2017

Questions ?

Discussion

Thank You