Position Paper 2: Initial Registration of 3D Parcels

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Participants

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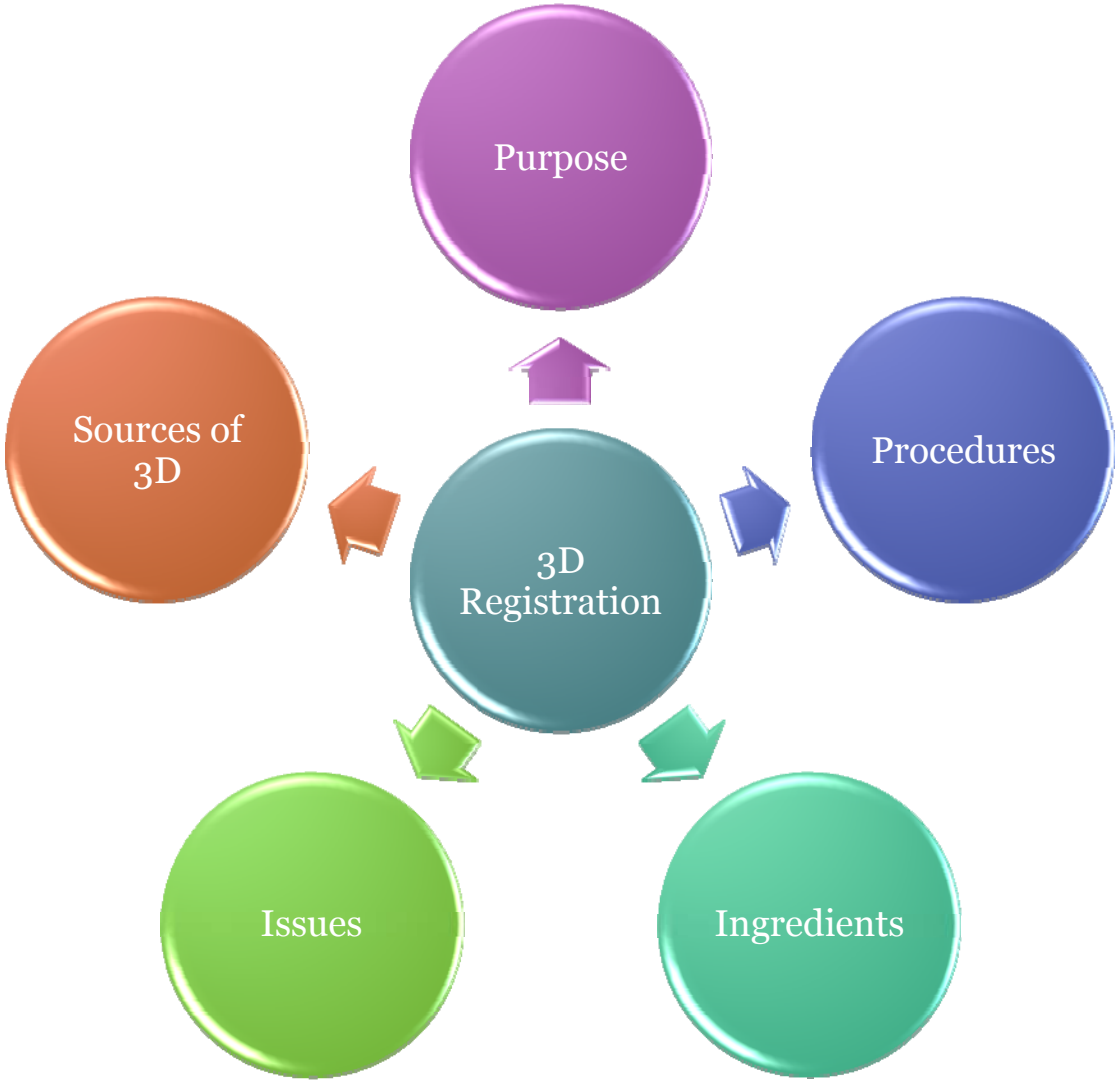
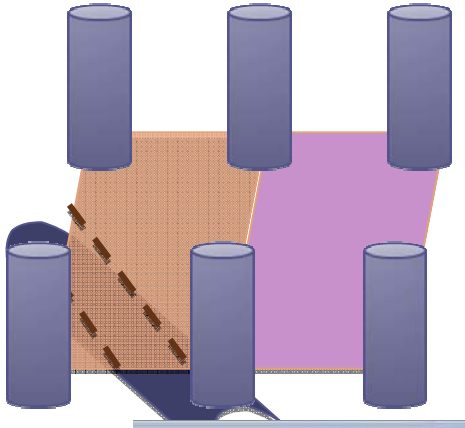
Discussion Framework

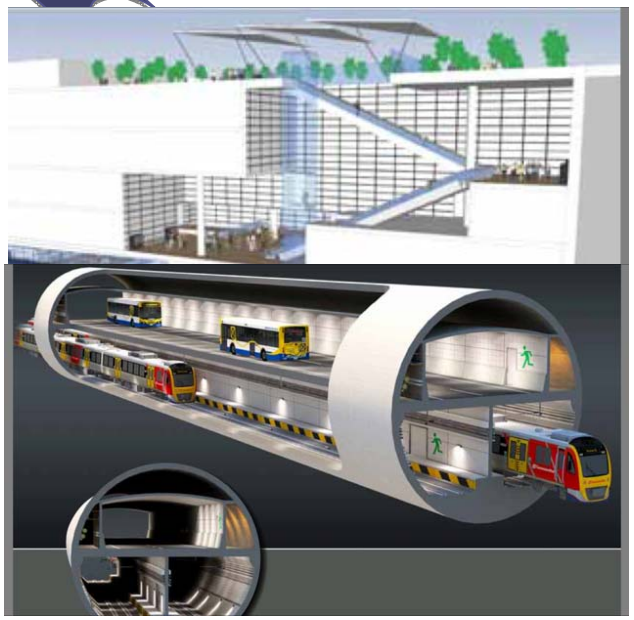


1.1 Purpose

Assist cadastral administration

- Administration – Implicit to Explicit, Utilisation of space
- Simplification – Current complex workarounds
- Documentation – Universally applied



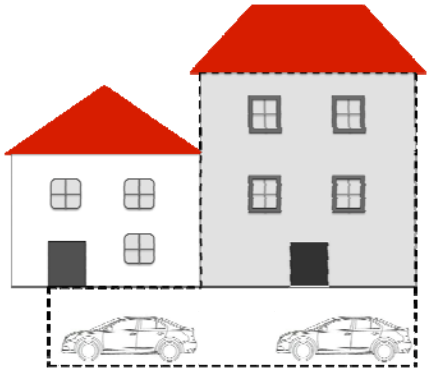


Conclusion 1: Role of administration and surveyor important

Conclusion 2: Surveyors need to be provided with proper "tools"

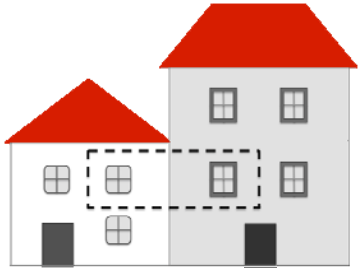
1.2 Purpose

Assist property owner



- Certainty – Security of ownership, Protection of rights

- Financial – Mortgage, Collateral, Valuation, Fair taxation



- Transactions – Registration, Transfers, Sub-division

Conclusion: Property owners more important than existing systems

2.1 Procedures

Plan Life cycle

- Current procedures analysed
- Include whole development chain?
  - Zoning plans, permits, finance etc.

Conclusion: All relevant, but focus should be on "core" registration of 3D

2.2 Procedures

2D/3D procedural differences

- Workflow – similar
- Registration – similar
- Concepts of 3D rights – well understood

- Data acquisition methods – potentially different
- Resulting information processing – very different

Conclusion: In principle, current 2D workflow should be suitable for 3D

3 Ingredients

What makes a 3D cadastre?

- Procedures and workflow
  - Data capture, data submission, validation, storage, visualisation, dissemination, analysis

- Support jurisdiction's cadastral purpose
  - Legal, Fiscal, etc. (But should also assist the local real estate market, Property owner)

Conclusion: The existing implicit 3D cadastre should be made explicit

4.1 Issues (Legal and Technical)

Legal

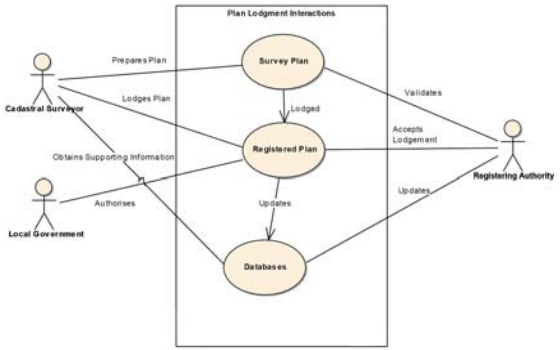
- Spaces where rights are attached to
  - (ideally related to physical space)
- Fit in the current procedures
- Fit in the cadastral fabric
- Administrative will and governance

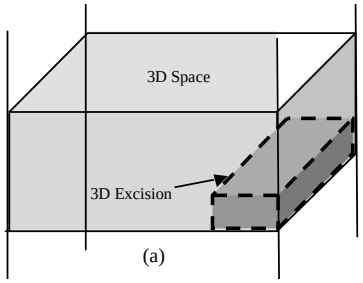
Conclusion: Existing 2D is probably enough, "minor" improvements needed

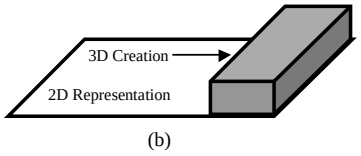
4.2 Issues (Legal and Technical)

Technical

- Data
  - Acquisition (BIM, Laser, 2D Floor Plans, Surveys)
  - Validation (Single plus Fabric)
  - Submission (Formats)
  - Processing (Storage)
  - Discovery (Dissemination, Visualisation)







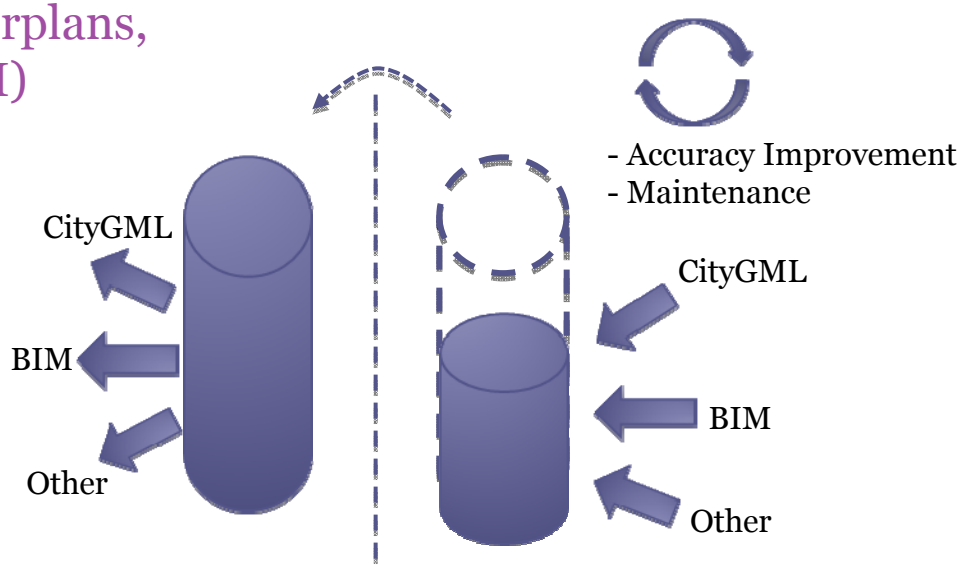
Conclusion 1: An uncomplicated 3D system can be built relatively easily

Conclusion 2: Except acquisition, none should prevent 3D implementation

5.1 Sources of 3D

Cost effective 3D data?

- Existing information (3D topography, CityGML, Lidar, 2D Floorplans, BIMs, Laser scans, some surveys, VGI)
- Infrastructure projects
- Sporadic updates



Conclusion 1: A cost-effective solution will help establish 3D quicker

Conclusion 2: Complex solutions not required for initial implementation

5.2 Sources of 3D

Future complexities?

- Refresh cycles
- Systematic upgrades
- Progress to complex solutions
  (Representations, validation, storage, submissions and dissemination, visualisation)
- 3D survey data capture

Conclusion: Implications for mixed (accuracy, 2D/3D) maintenance

Future

- Identification of drivers of (3D) data collection - surveying rules, procedures
- Formats for input (survey or GIS oriented) vs. output (visualisation oriented)

Thank You

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