

# Investigating the State of Play of GeoBIM Across Europe

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# Investigating the State of Play of GeoBIM Across Europe

- EuroSDR – research association of European National Mapping and Cadastral Agencies (NMCAs)
- Project Aim:
  - To develop coherent/uniform view on GeoBIM integration
    - What are the benefits and challenges for uptake
    - From and international and multi-stakeholders' perspective
  - Develop initial solutions for better integration
  - Develop best practice for Geo-data in BIM processes and software and best practice for BIM data in Geo-data processes and software

**BIM**

**3D Geo**

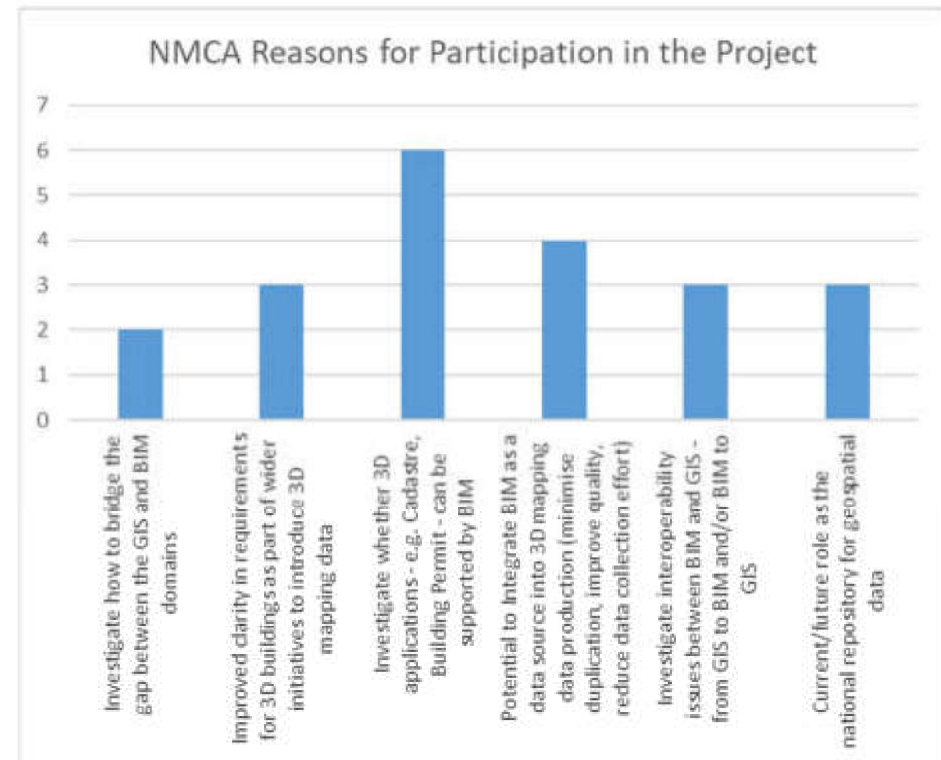
## Differences

1. LoD: Single house contains 1000 elements
2. Spatial data digital plan design&construction
3. Data management for project sites/ Focus on data functionalities in native software
4. Industry dominated
5. Sharing data complex; benefits for sharing are not always clear
6. Geometry is designed (parametrized)

1. LoD: house contains a few elements only
2. Spatial data is source of information
3. Focus on data flows within Spatial Data Infrastructure (data quality, validation, responsibilities)
4. Government dominated
5. Open data/sharing data is seen as public good
6. Geometry is measured (B-Rep)

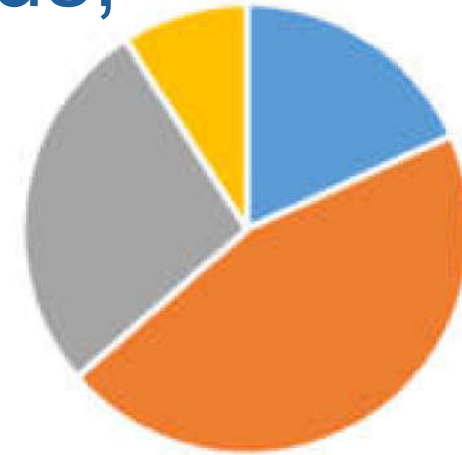
# Investigating the State of Play of GeoBIM Across Europe

- 11 participant countries
- Some similar projects – we are interested in the NMCA perspective
- 2-Phase Approach
  - Questionnaire (results reported here)
  - Use Case Development (ongoing)



# Questionnaire – Current Status, Awareness and Activities

- Mixed picture in terms of awareness
- Most countries see added value of linking Geo-BIM (research or governmental programmes)



- Limited awareness
- A few small initiatives
- Ongoing activity at regional/national level
- National level strategic activity

Fragmented picture in terms of activities – very little centralised GeoBIM integration strategy work at national level

More work being done at project/company level

# Questionnaire – Relevant Standards, Research and Case Studies



IFC - Mentioned by 7 NMCAs



CityGML

Mentioned by 8 NMCAs



Mentioned by 5 NMCAs

# Questionnaire – Opportunities



# Questionnaire – Challenges

- Non-Technical Challenges:
  - Lack of GeoBIM Awareness and Knowledge
  - Lack of Investment
  - Lack of clarity about the NMCA Role in BIM
  - Disciplinary Divide: Geographers, Architects, Engineers
- Technical Challenges:
  - Lack of Standards
  - Different Conceptual Models
  - Interoperability Challenges
  - Lack of BIM Data Sources
  - Lack of Software to support both BIM and Geo



# Overall Conclusion:

- *“A lack of knowledge (both of issues and potential benefits) is seen as number one challenge by the questionnaire respondents, to better align BIM and Geo processes”*
  - Lack of awareness of what happens ‘the other side of the fence’

Additionally

- How can NMCA data be better utilized?
- How can NMCAs benefit from BIM data?

# Next Steps

- Developing 2 Use Cases to
  - Raise awareness
  - Increase our understanding
    - Building Permit Process:
    - Asset Management

# Thanks to the Project Partners

- Ordnance Survey UK
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- Kadaster, Netherlands
- ICGC, Catalunya
- Agency for Data Supply and Efficiency, Denmark
- GUGiK, Poland
- IGN, France
- Lantmateriet, Sweden
- National Land Survey, Finland
- Kartverket, Norway

## Other active partners:

- Lund University
- University College London
- College of Engineering and Built Environment, Ireland
- TU Delft



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