3D - CURRENT SITUATION IN SWEDEN

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BACKGROUND

- When we say 3D-data we mean vector data having X,Y,Z coordinates.
- Several pre-studies are made regarding 3D from 2013 and forward
- We have applied for financing for building up Geodata in 3D from our government. 250 MSEK (approx 24 MEuro) for 6 years. Not approved (yet!)

PLANNING FOR 3D

If we will get the financing we have applied for we need to decide:

- Which data will be collected in 3D
- How 3D-data will be collected, stored and disseminated
- What steps we need to take to start collecting data in 3D
- Establish basic principles for collection
- Define what we will provide and how (services/download data/3D-objects or data ready to make 3D objects from etc)

What do we do if we don't get financing or less then we applied for?

What has been done?

BASIC PRINCIPLES FOR OUR 3D-DATA

1. We need to be able to disseminate 3D-data using the newly established ”national framework for exchanging geodata”
2. Height needs to be handled the same way regardless of what kind of data it is, and relevant metadata must be present.
3. Data must be easy to update - avoid updating 2D and 3D data separately, instead use 3D-data to make 2D-products
4. Use data sources and collection methods that give us the best actuality on the data
5. Cooperate with others to avoid that several organizations collect the same data

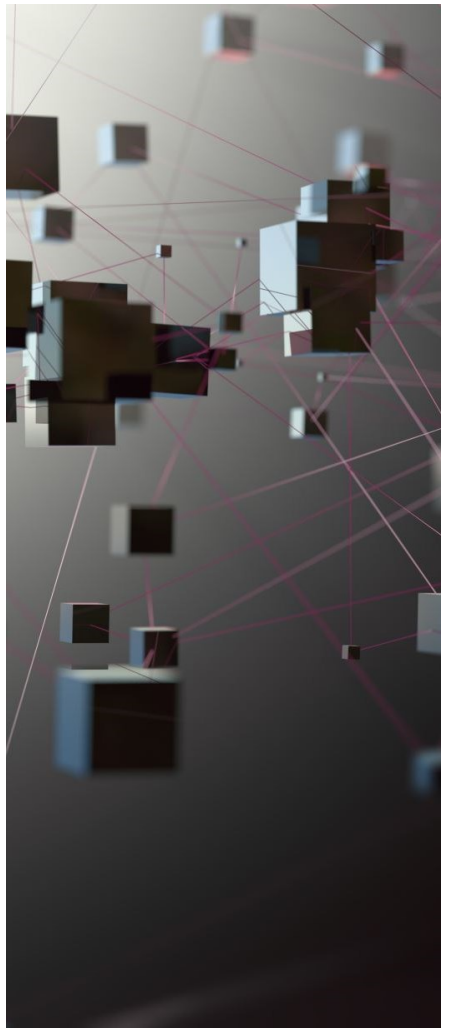
WHICH OBJECTS DO WE WANT TO COLLECT IN 3D?

Objects that we already handle in 2D:

- Buildings (first LOD1, later LOD2)
- Wind turbines, masts, towers, chimneys…

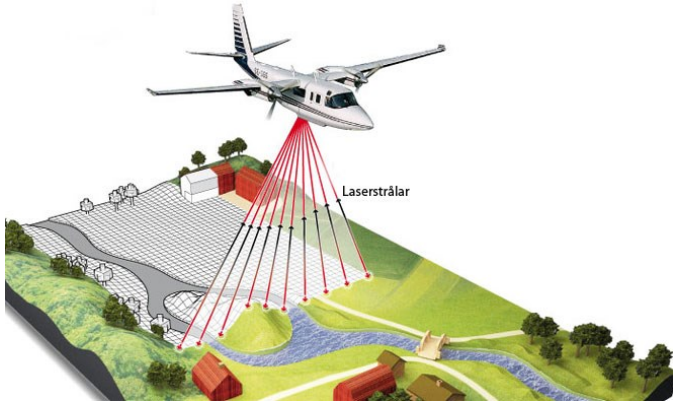
Other objects:

- Trees and vegetation (in cooperation with Forest authority and municipalities?)
- Power lines and cable transport (for cabins, gondolas, open chairs etc) (difficult to get accurate heights, use illustrative heights?)
- Bridges and tunnels (needs cooperation with municipalities and/or Swedish Transport Administration)



HOW WILL DATA BE COLLECTED AND UPDATED?

- We think that the collection methods we use for 2D will be almost the same with 3D:
  - Photogrammetry, LIDAR, cooperation with municipalities etc
- Methods needs to be adopted for 3D
- At present conditions Photogrammetry is best suited for maintaining a 3D dataset because the actuality of the data is much better (2-6 years vs 7 years)
- We think LIDAR has great potential, but we need higher point density and more frequent updates to be able to use it. Aerial photos and LIDAR collected at the same time would help a lot!



OTHER

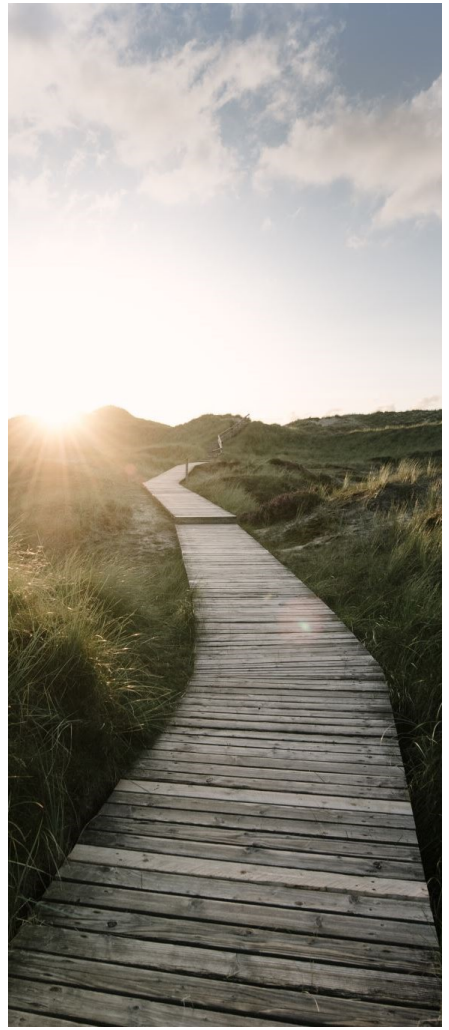
- We have identified what changes and adoptions we need to make in our data specifications and databases.
- A 3D-demonstrator has been made

WHAT ARE WE DOING NOW?

- ”Fast tracks”:
  - Start making buildings in LOD1 using building footprints and Surface model (from aerial photos)/LIDAR. Store heights and metadata in a separate table which can be joined with our 2D-dataset.
  - Setting up a test environment for collecting data in 3D using photogrammetry

WHAT DO WE HAVE AHEAD OF US?

- Legal obstacles (GDPR and Military interests)
- What kind of products will we provide?
- Can we do this within our existing IT-platform, or do we have to develop a new?
- Make changes in specifications and databases
- Tools for collection of 3D-data and interfaces for external providers of data




Thank you for listening