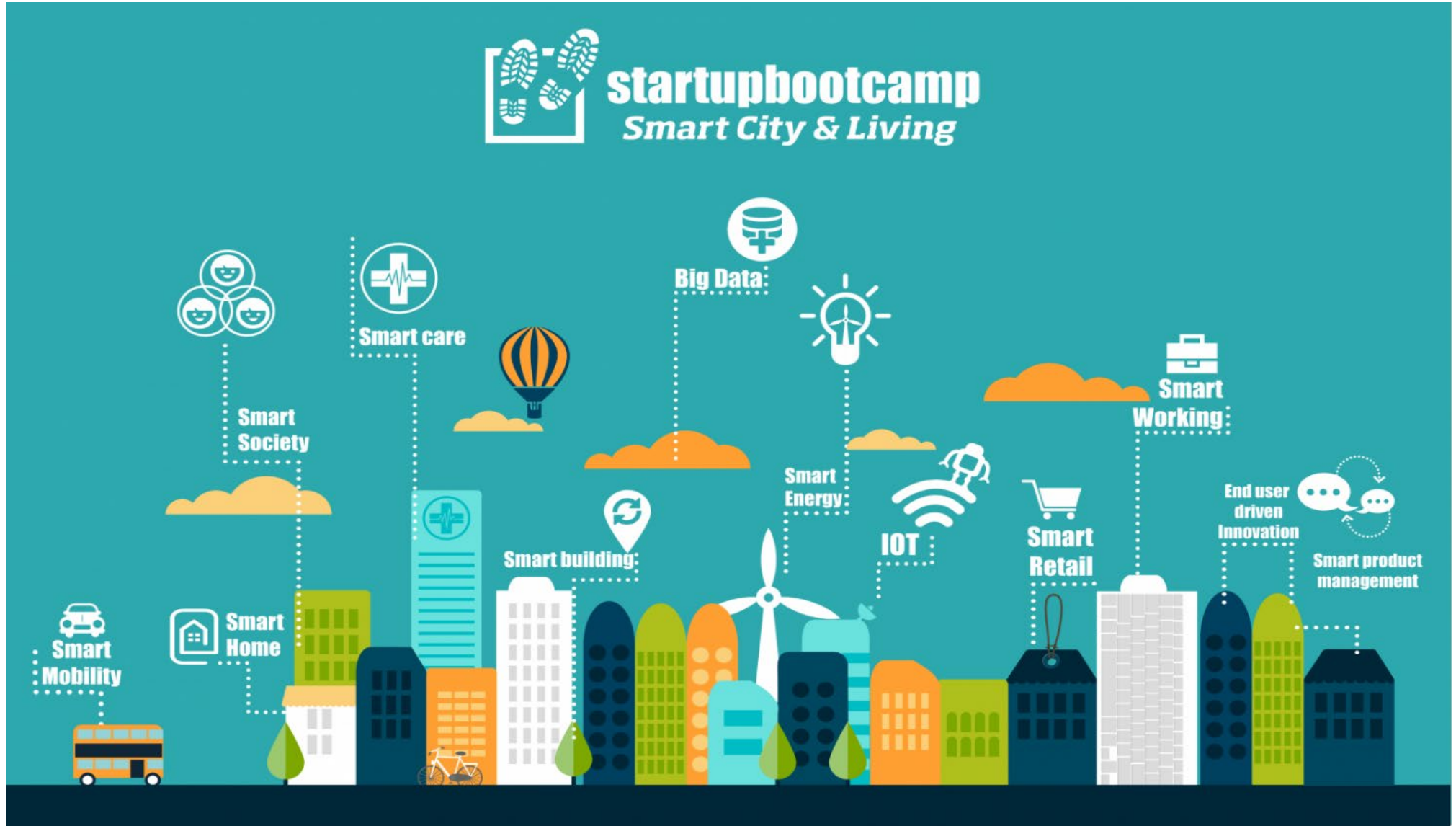# Spatial Digital Twins
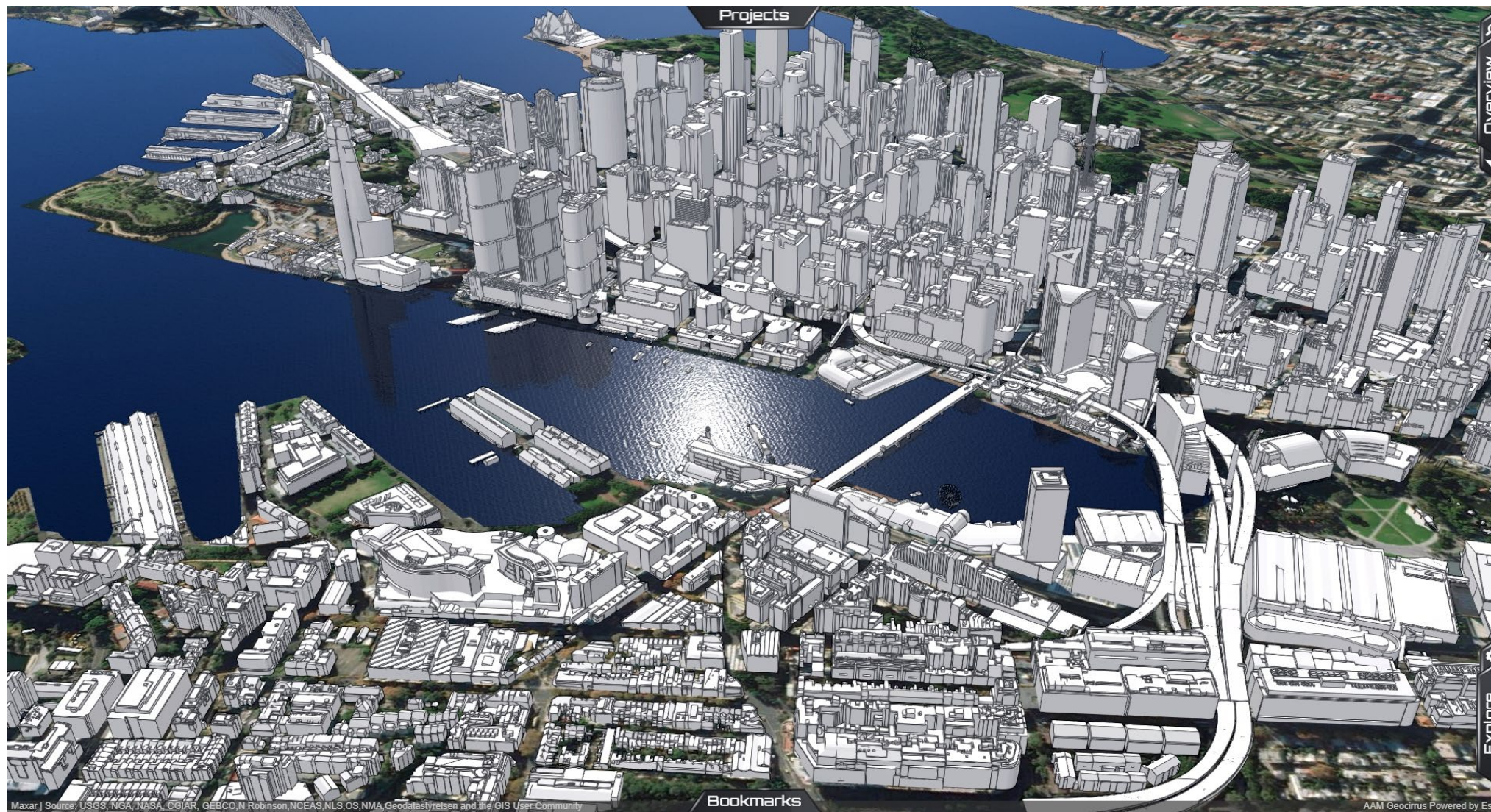## *... enabling the Smart City*

Spatial Digital Twins enable a Smart City

*"**HD3D** Geospatial data are the building blocks of a Smart City"*

3D Building Models

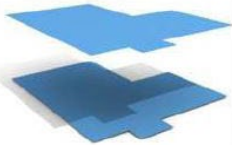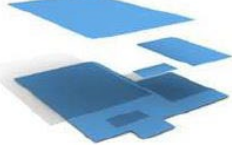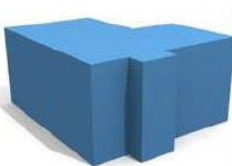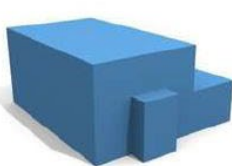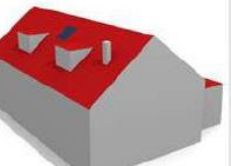# Object Models with high Levels of Detail (LOD)

LOD0   LOD0.0   LOD0.1   LOD0.2   LOD0.3
LOD1   LOD1.0   LOD1.1   LOD1.2   LOD1.3
LOD2   LOD2.0   LOD2.1   LOD2.2   LOD2.3
LOD3   LOD3.0   LOD3.1   LOD3.2   LOD3.3

Refined Levels of Detail (Biljecki et al., 2016a)

City GML v3 – 3D modelling Standards - Open Geospatial Consortium (OGC)

aamgroup.com

LOD3
Building Models

AI for 3D Models

2D Footprint Detection – the 'easy' part ....

LOD2 procedural building models (AAM/Blackshark)

Aerial LiDAR

High *point densities of 8 to 20 points per square metre* ... producing huge datasets.
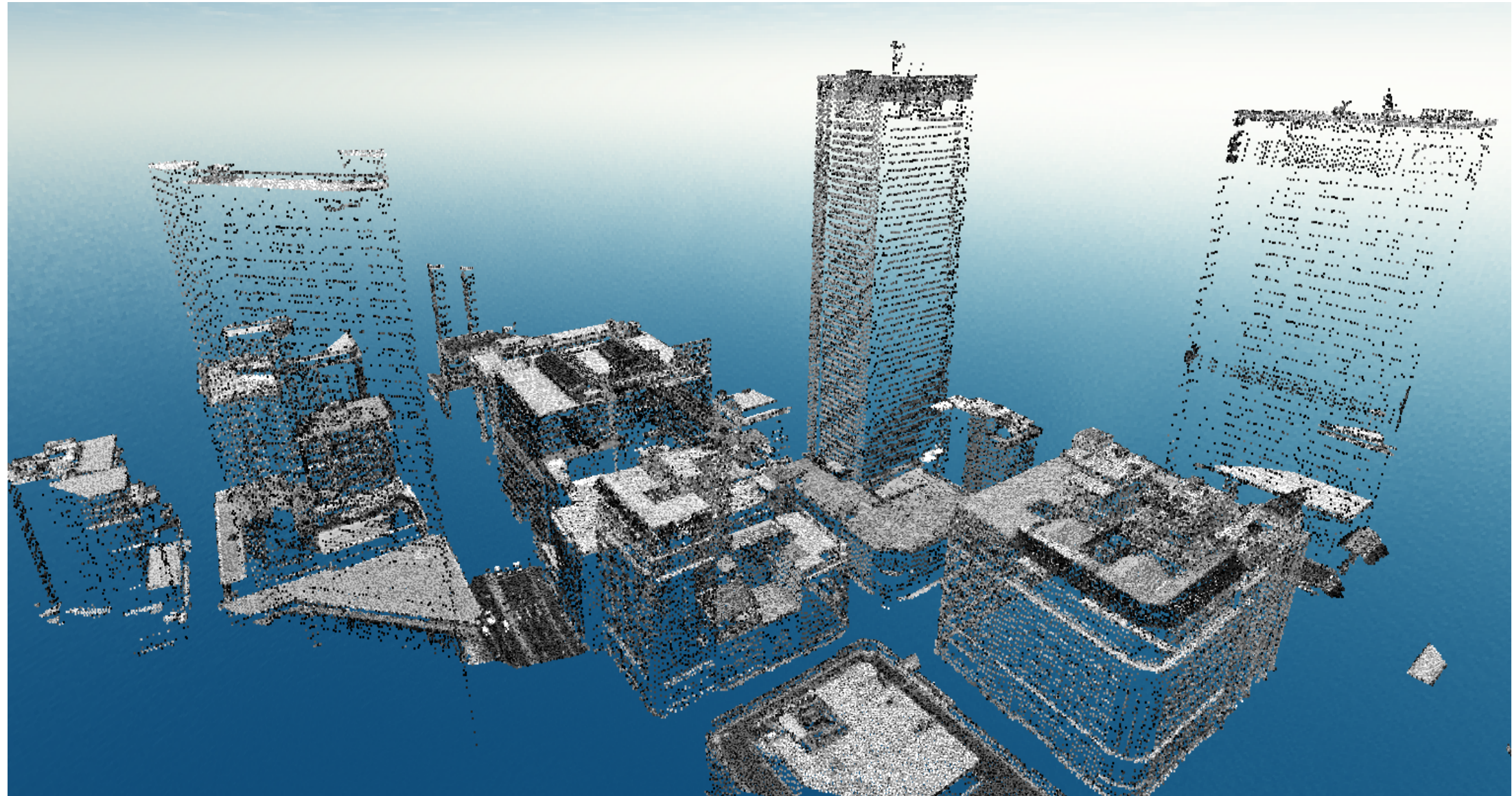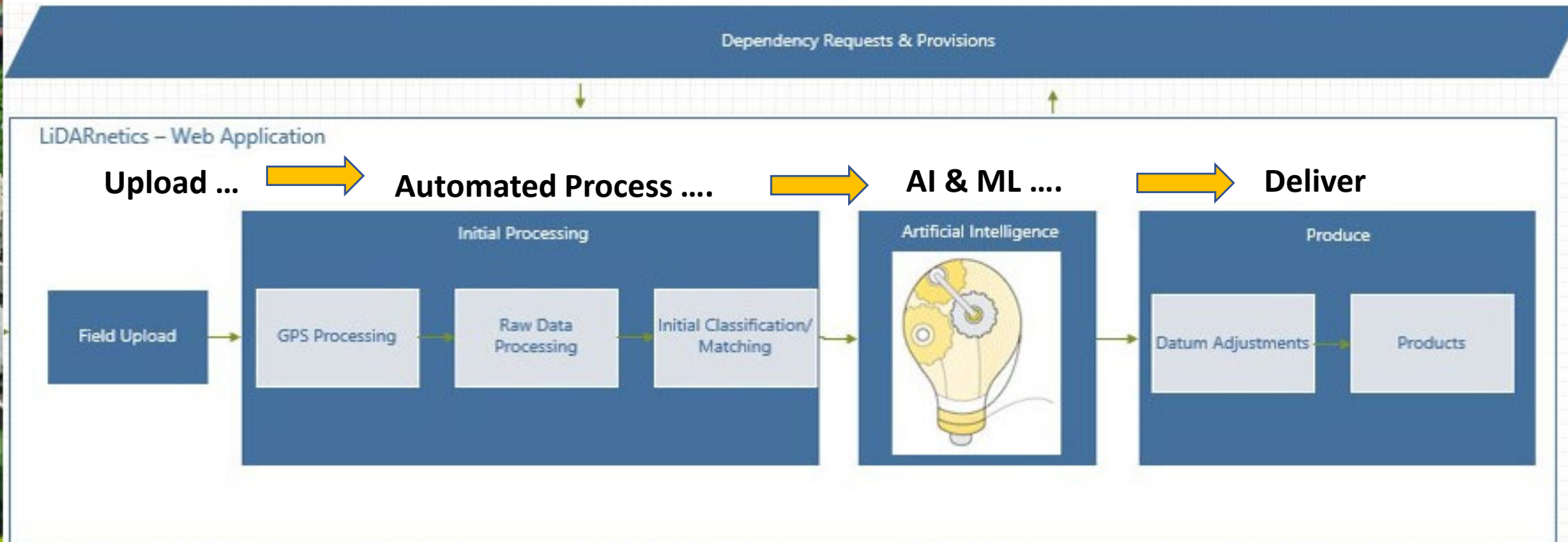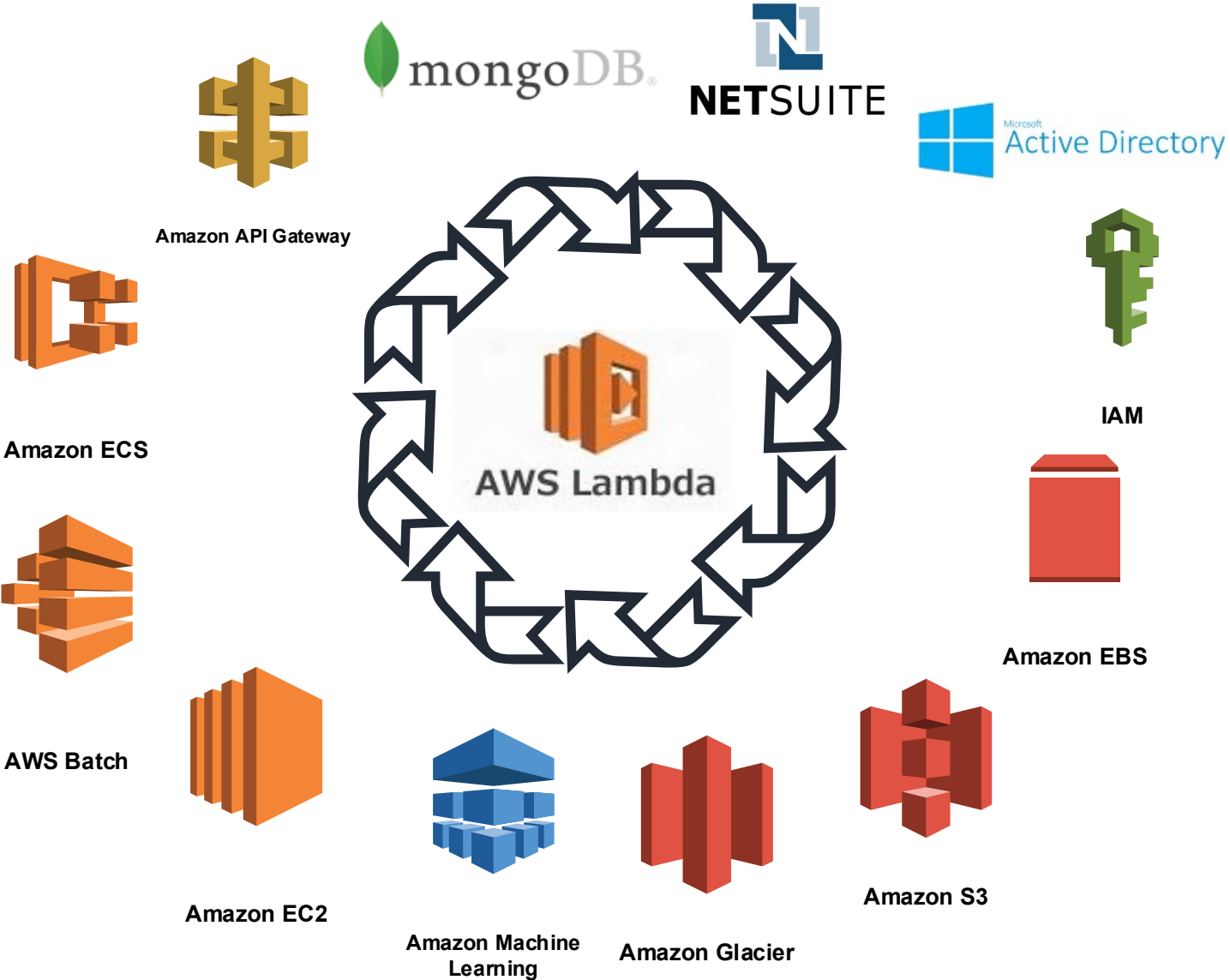
LiDARnetics

A *single web application portal* for the *entire LiDAR workflow* from field data acquisition to client deliverables

LiDARnetics

Amazon API Gateway

Amazon ECS

AWS Batch

Amazon EC2

Amazon Machine Learning

Amazon Glacier

Amazon S3

Amazon EBS

IAM

AWS Lambda

mongoDB.

NETSUITE

Microsoft Active Directory

Thank you

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