3D Web Mapping

Yes, We Can!

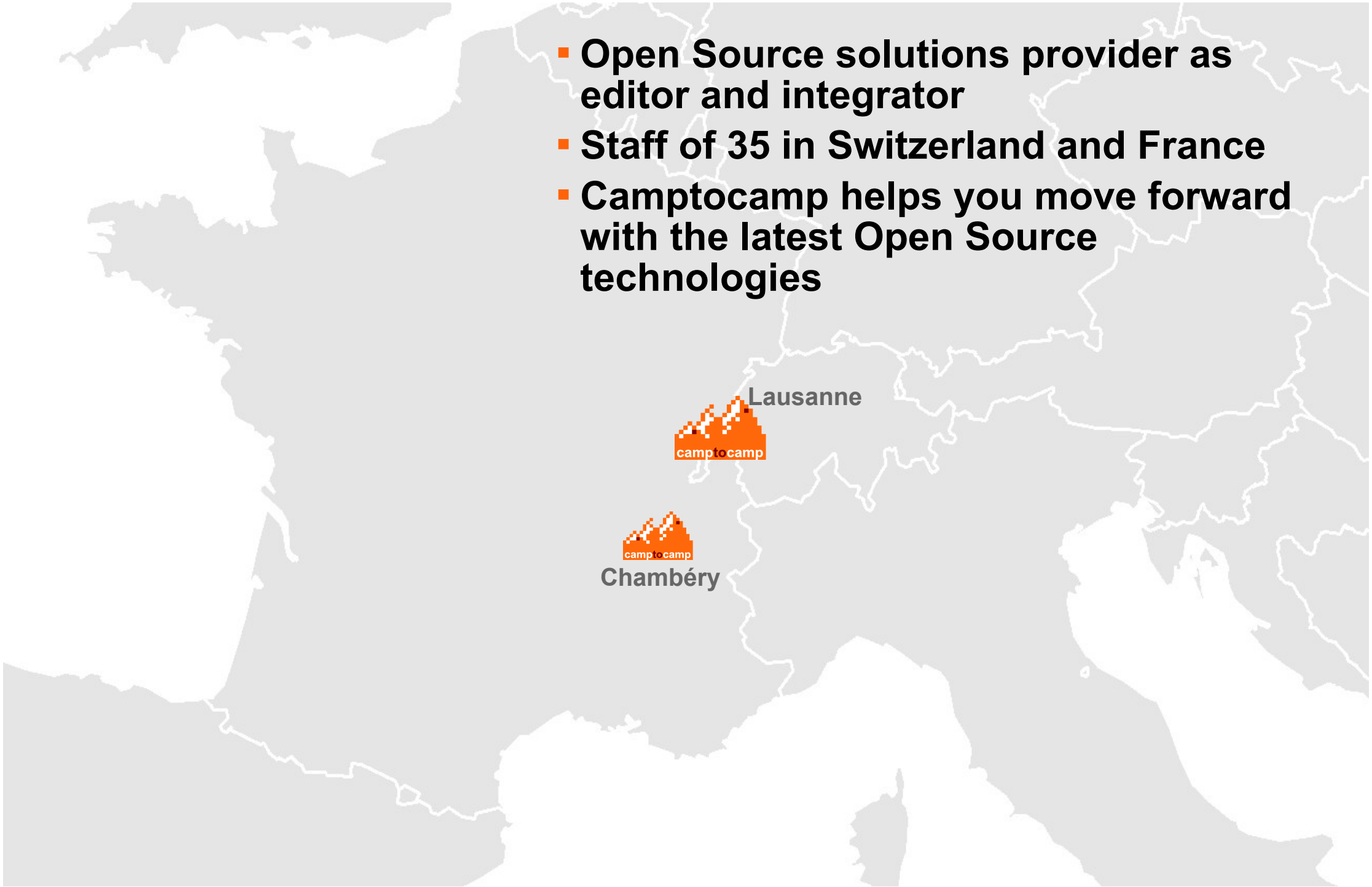
FOSS4G 2010

camptocamp SA / www.camptocamp.com / info@camptocamp.com

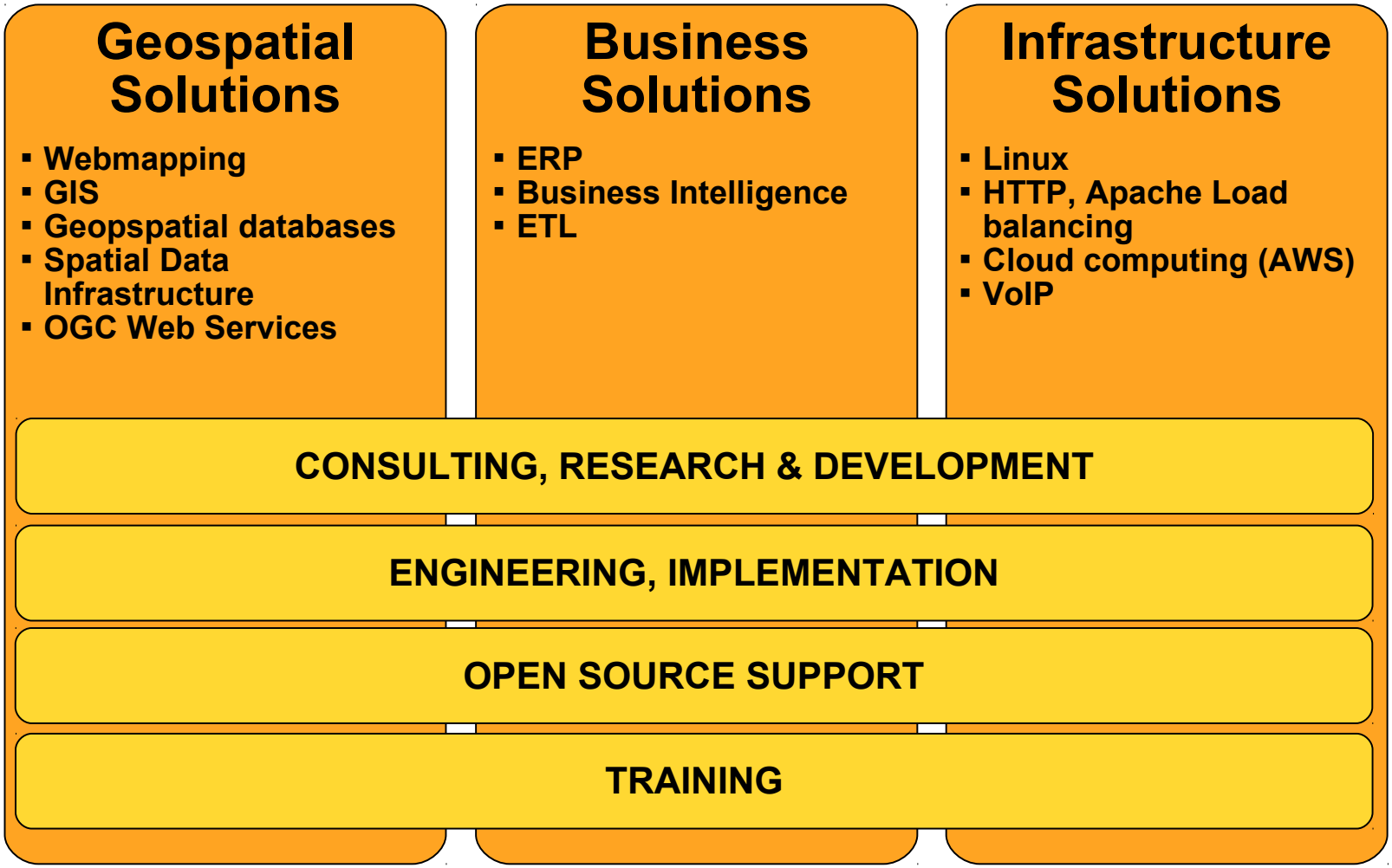
Agenda

- Camptocamp
- Why 3D Maps?
- 3D Models With Textures
  - ✔ Data acquisition
  - ✔ 3D models
  - ✔ Textures
- 3D Web Viewer
  - ✔ Integration
  - ✔ Interaction with 2D maps
- Questions

- **Open Source solutions provider as editor and integrator**
- **Staff of 35 in Switzerland and France**
- **Camptocamp helps you move forward with the latest Open Source technologies**



Camptocamp Domains of Activity



Why 3D Maps?

- Because it's cool (and clients like cool stuff)

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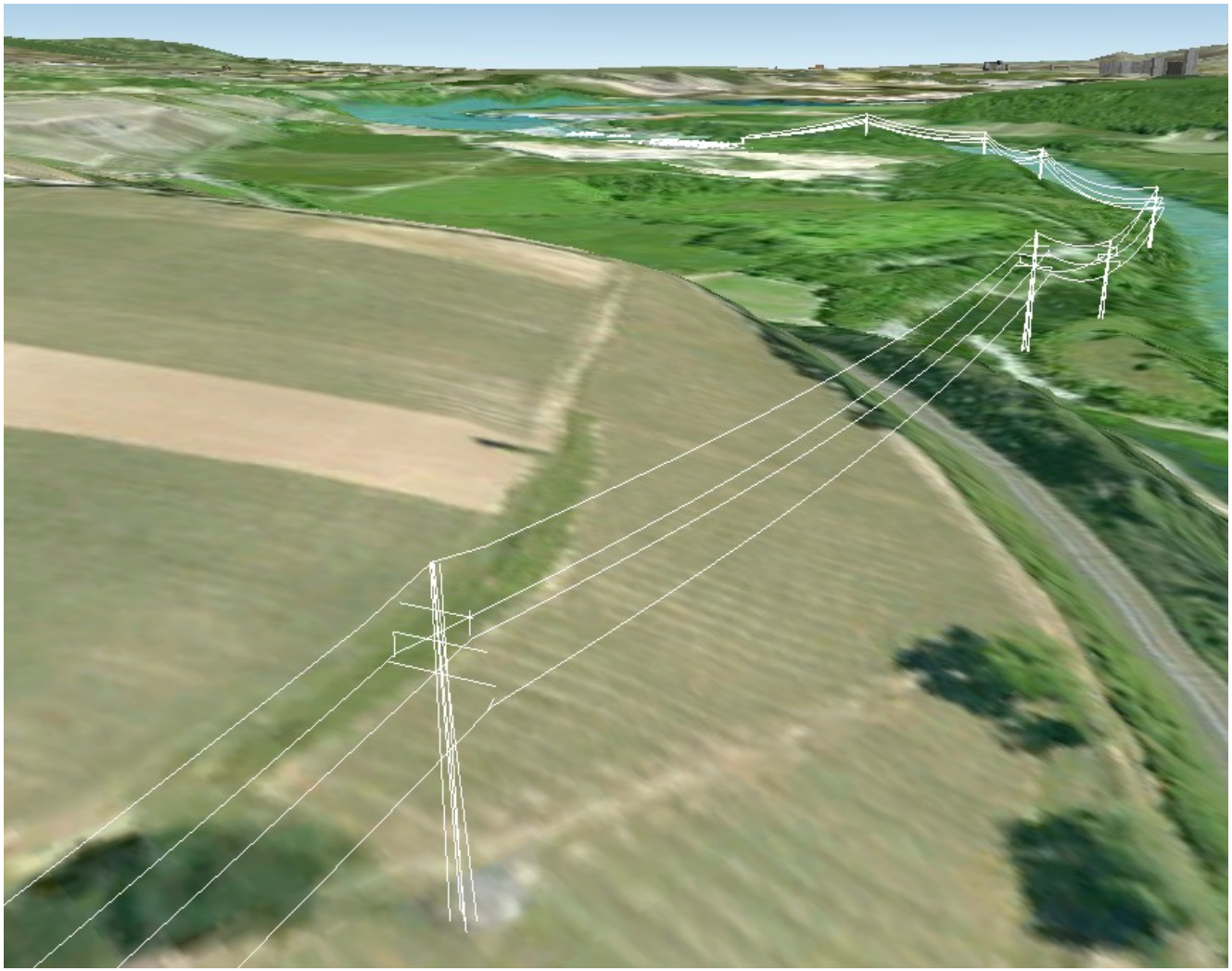
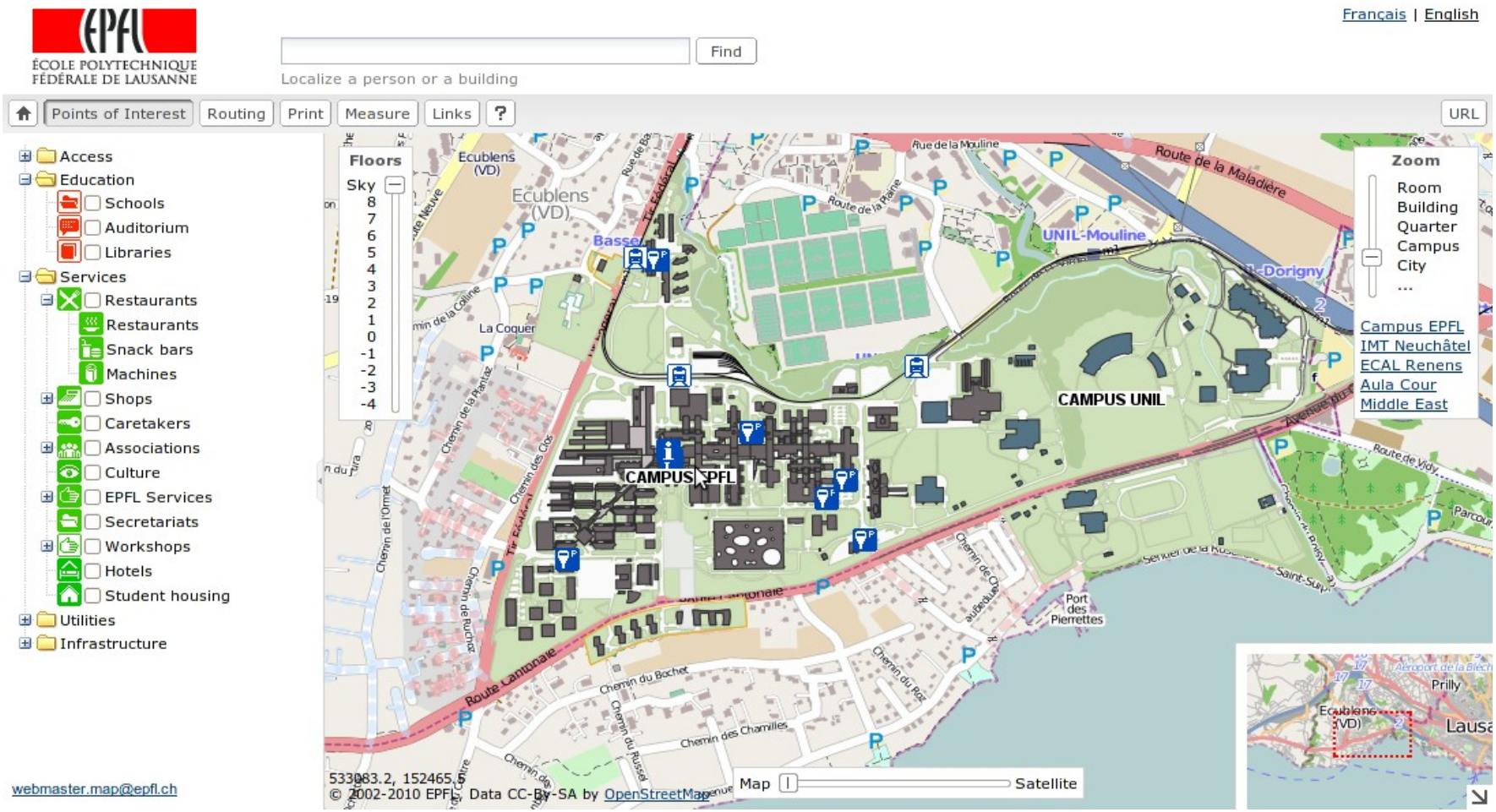
Why 3D Maps?

- Because it can help understand current and future 3D data



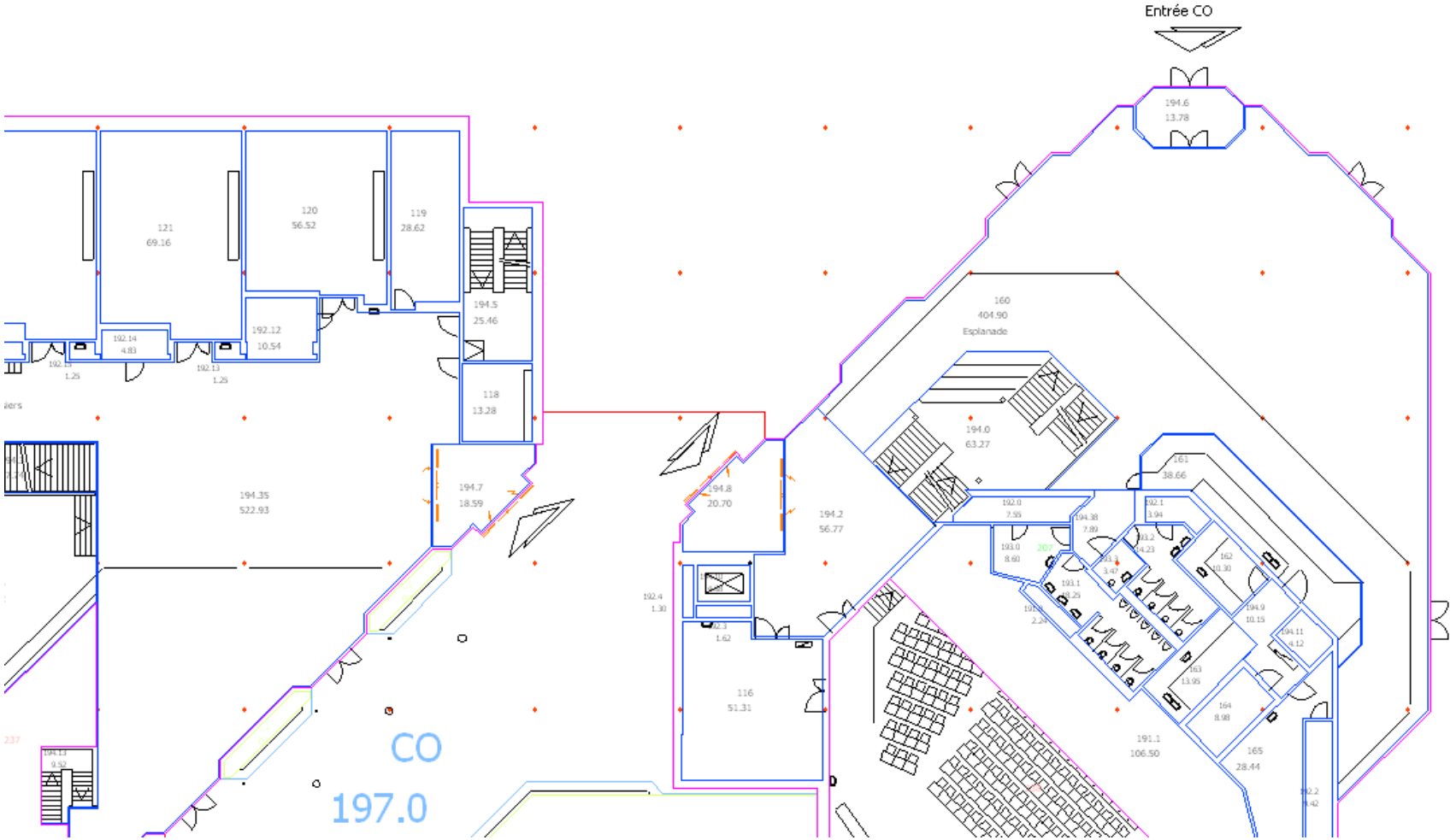
3D Models With Textures

- An example: EPFL campus in Lausanne, Switzerland



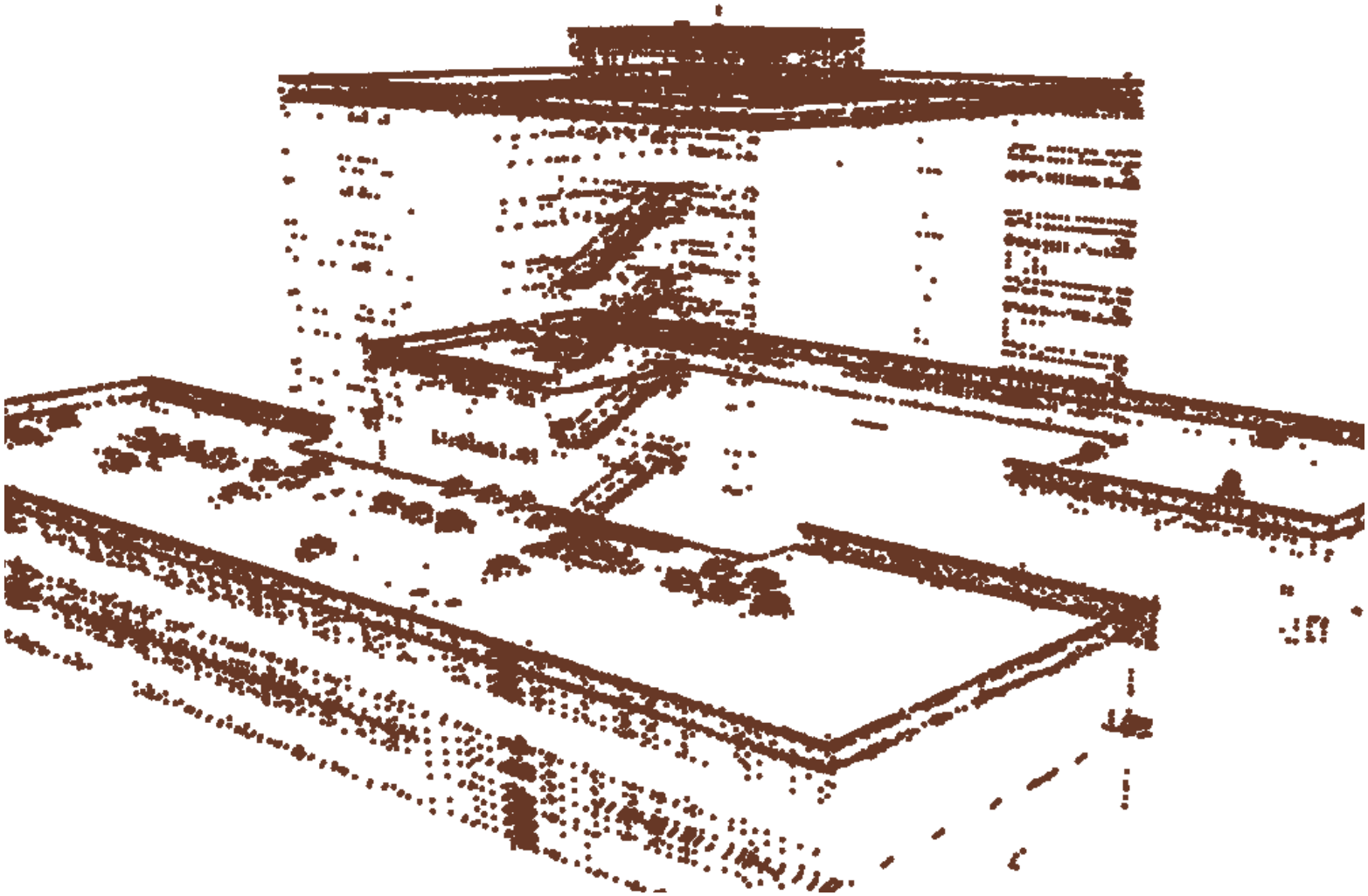
Data Sources

- Architects floor plans and meta data



Data Sources

- LIDAR points clouds



Data Sources

- Helicopter images

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Data Sources

- Drone (UAV) images

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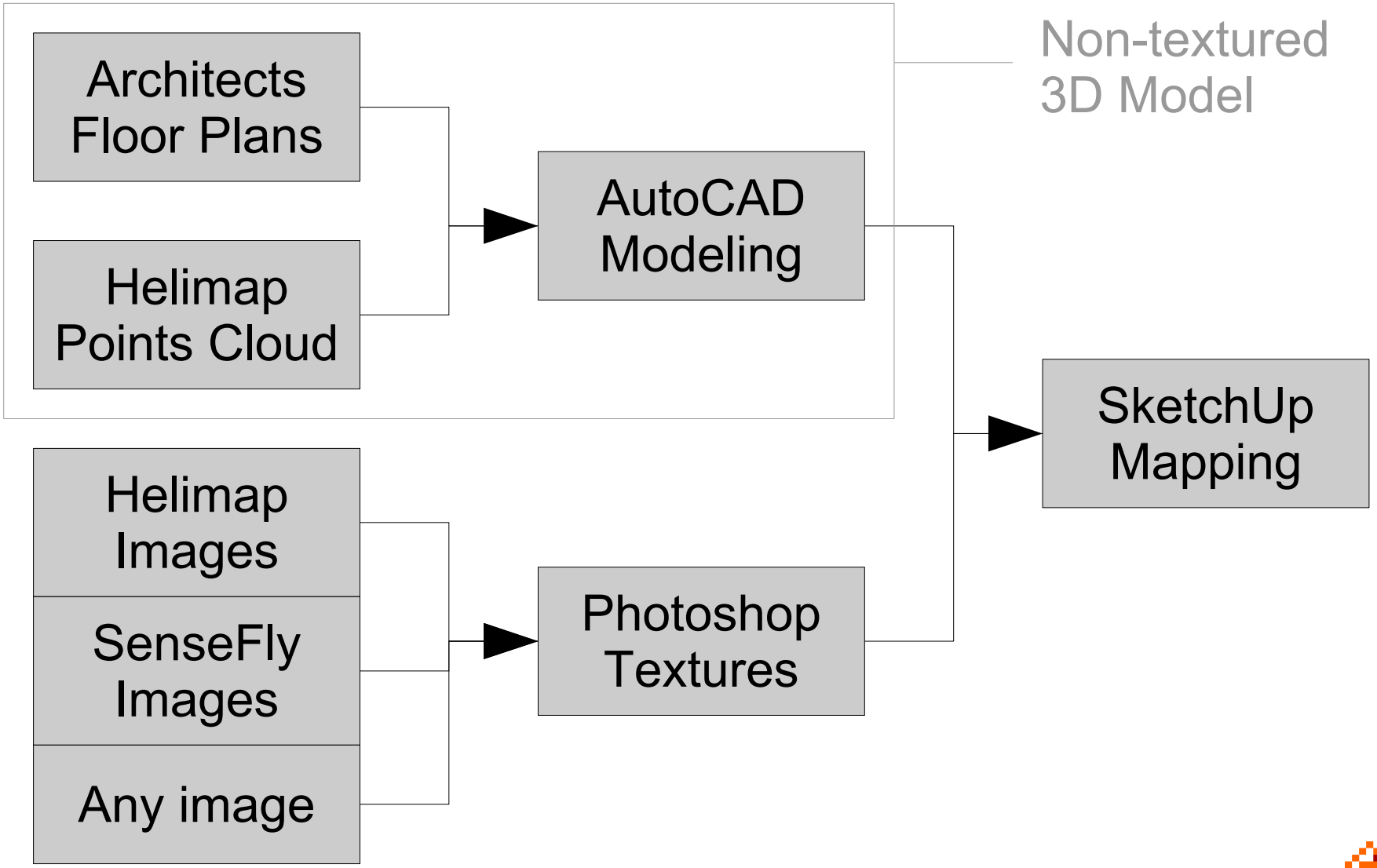
Partners

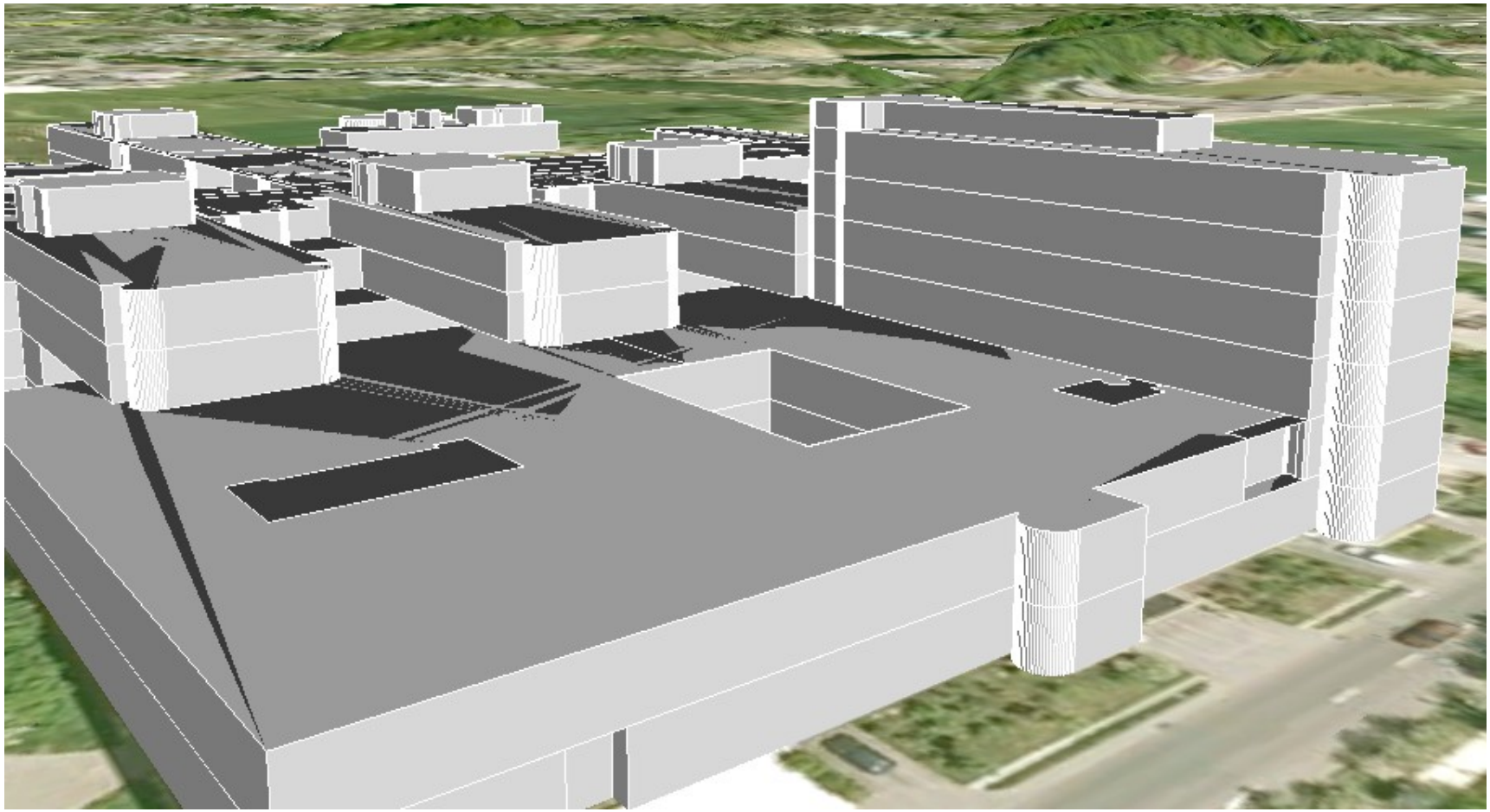
- EPFL
  - ✔ Floor plans, meta data — www.epfl.ch
- Helimap
  - ✔ Helicopter images and LIDAR points cloud — www.helimap.ch
- SenseFly
  - ✔ Drone images — www.sensefly.com
- CVLAB (Computer Vision Laboratory, EPFL)
  - ✔ Camera position and angle out of drone images — cvlab.epfl.ch
- IGN (Institut Géographique National, France)
  - ✔ Model textures and automatic model generation — www.ign.fr
- Camptocamp
  - ✔ Everything else! — www.camptocamp.com
  - ✔ Global project management

Classical Approach



Classical Approach

- Floor plans to 3D



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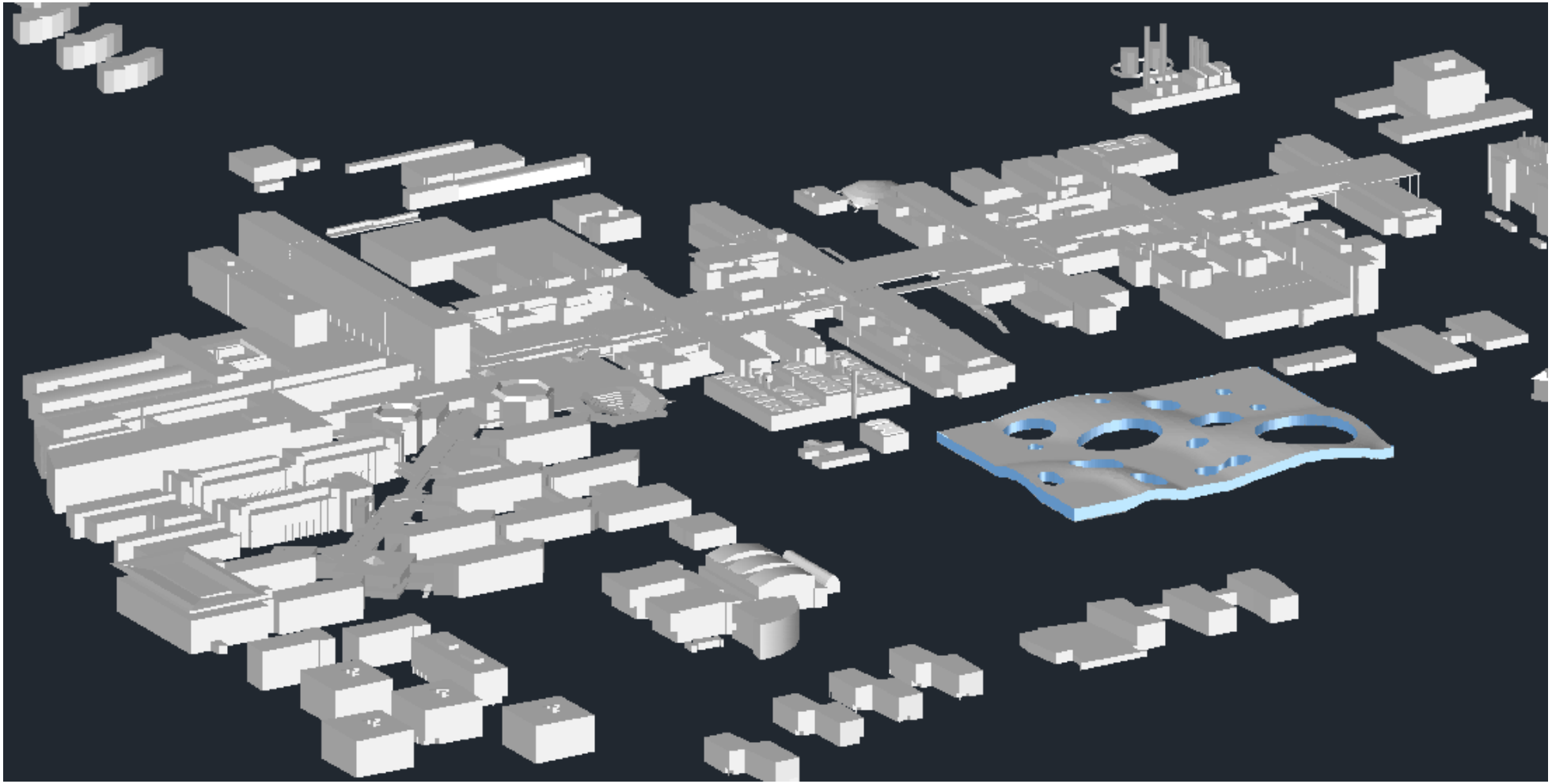
Classical Approach

3D Models With Textures



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Classical Approach

- Preparing textures

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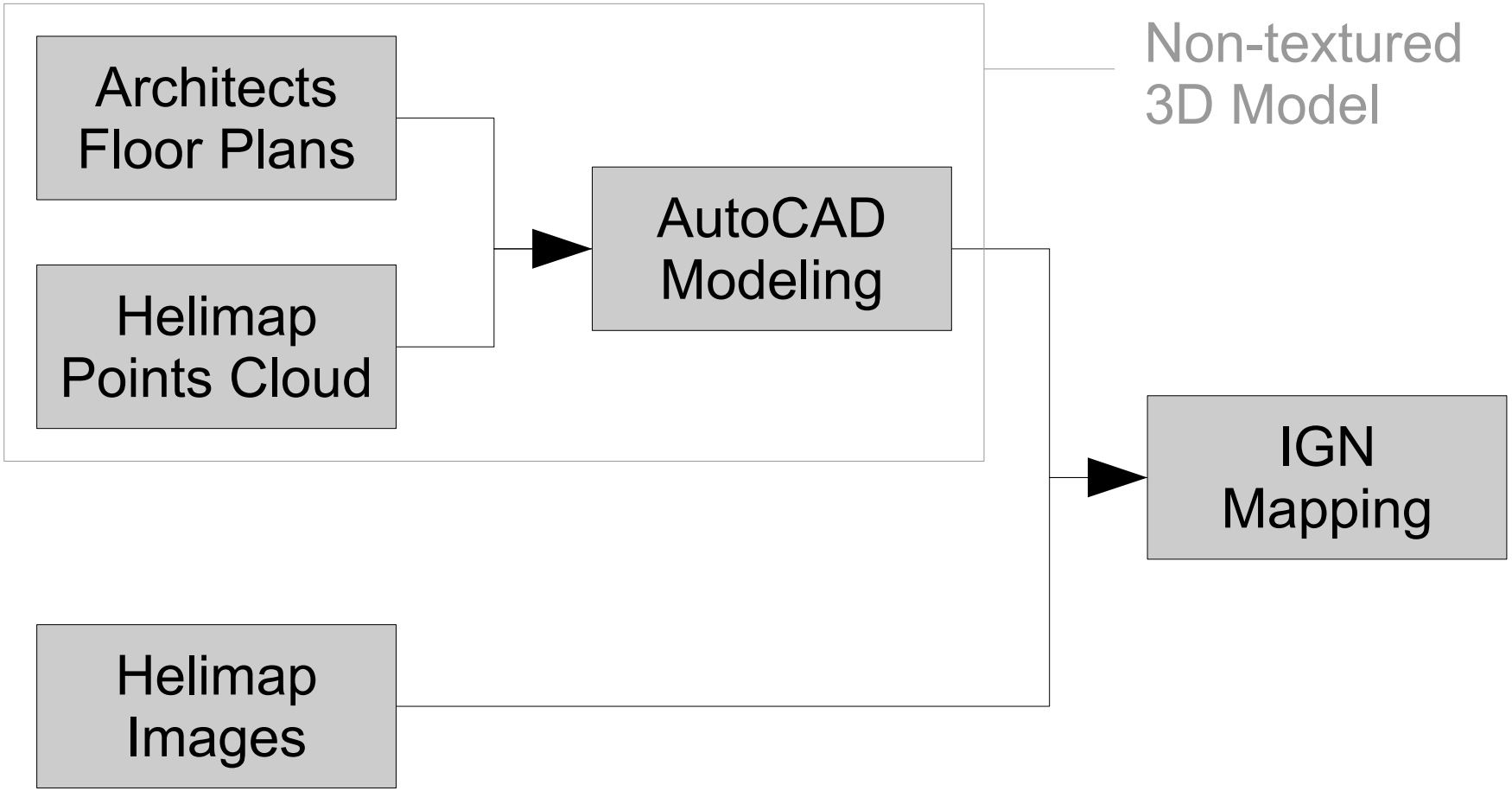
Using Helimap Images



Using Helimap Images

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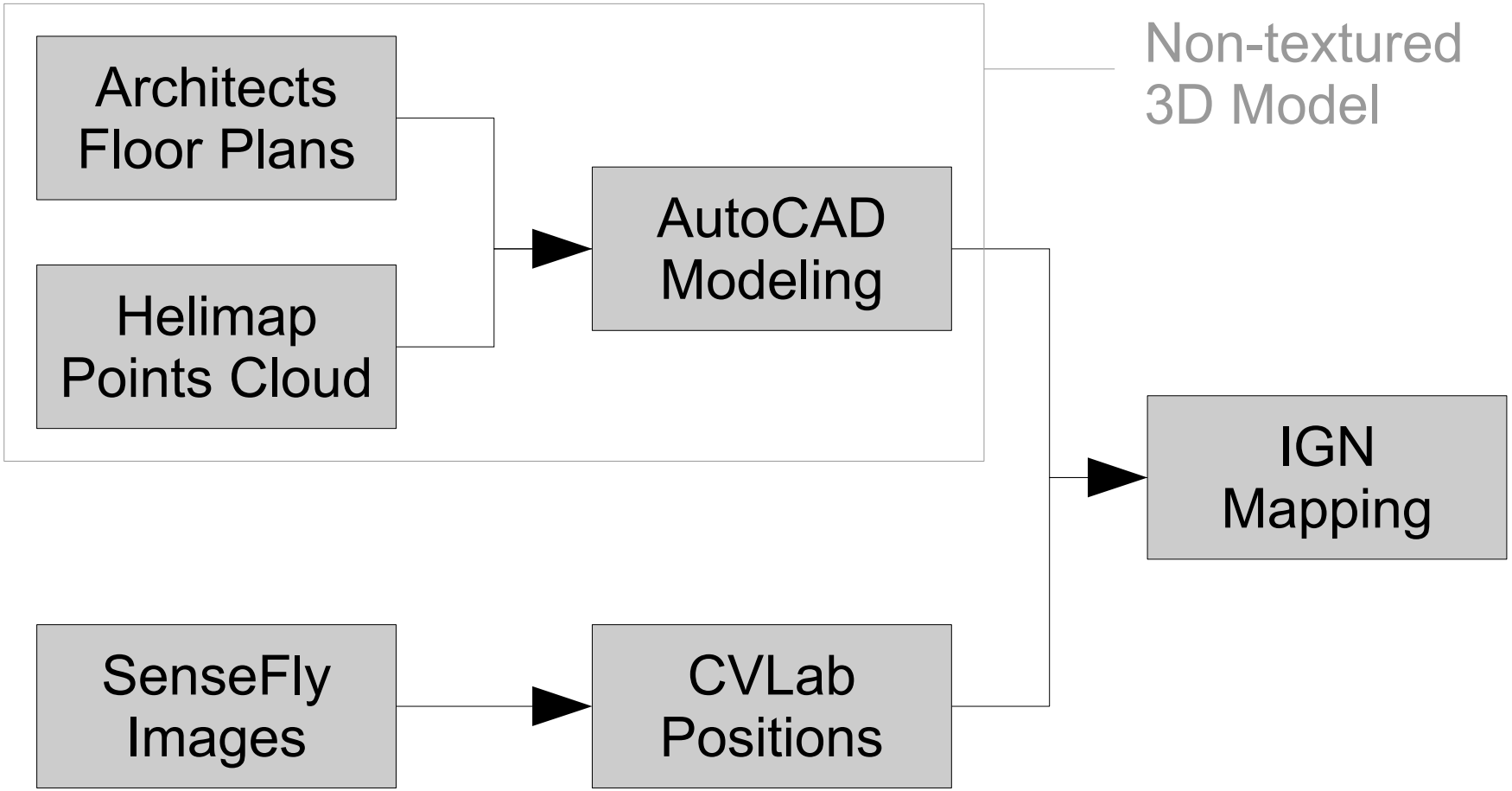
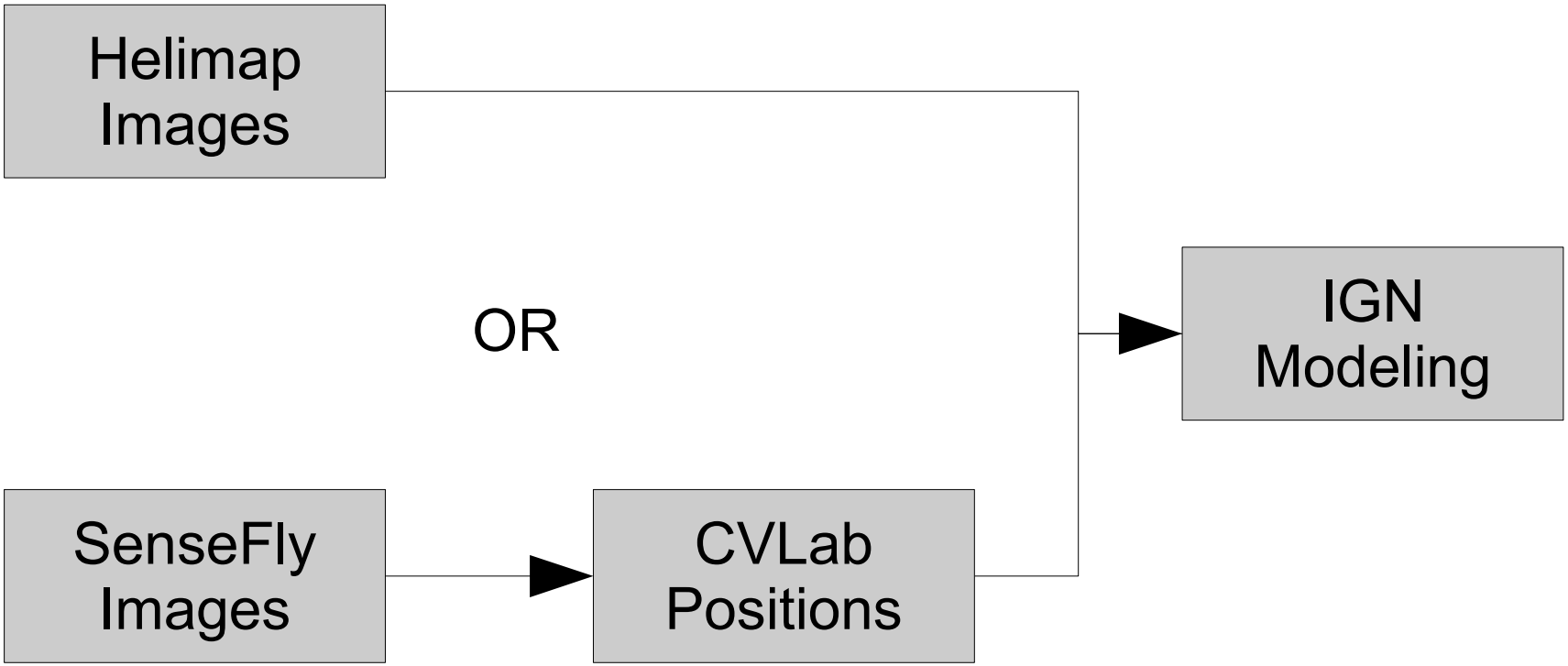
Using SenseFly Images (beta)



Using SenseFly Images (beta)

3D Models With Textures

Other Buildings



Other Buildings

3D Models With Textures

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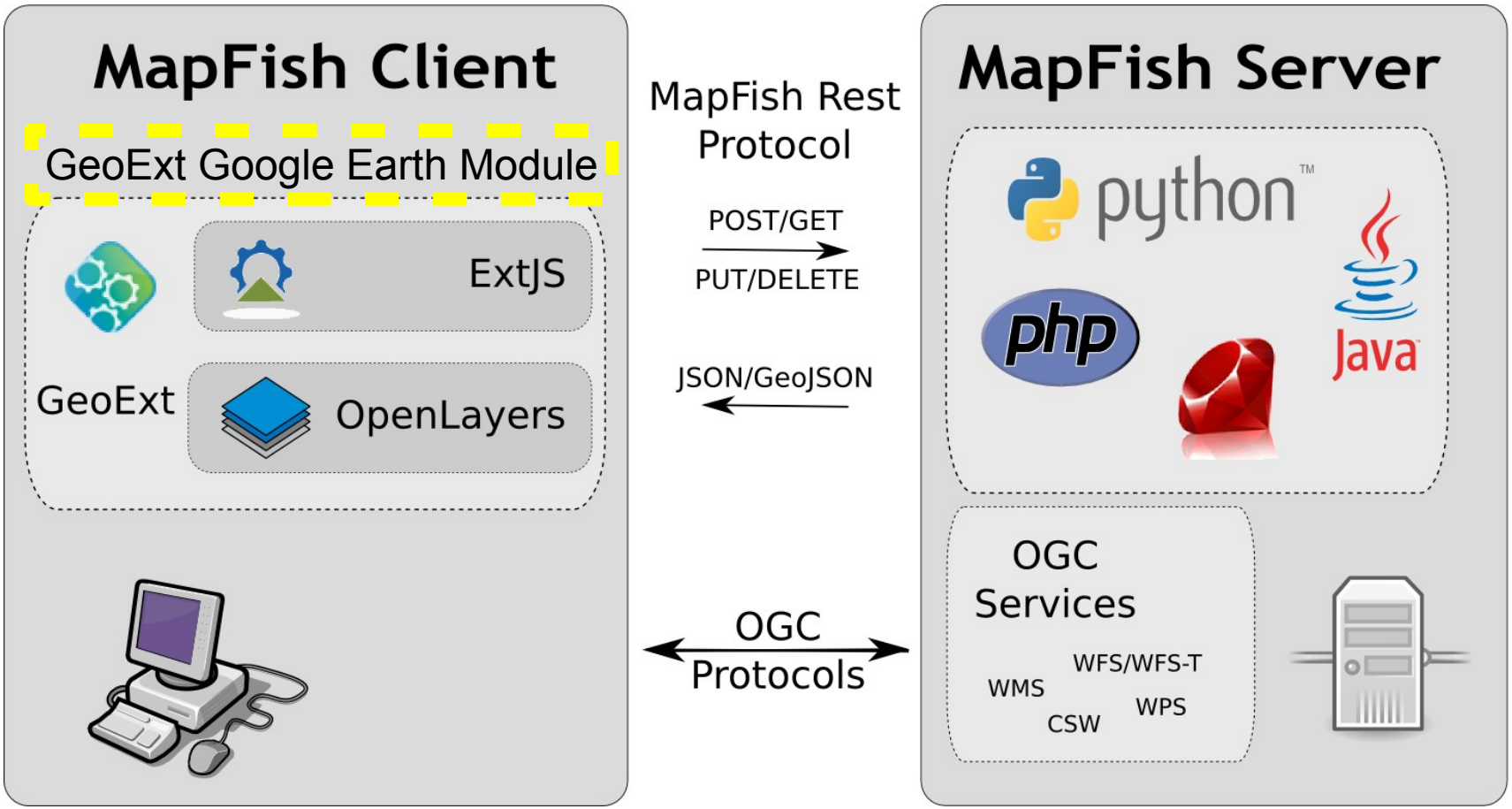
3D Web Viewer

- MapFish architecture



MapFish architecture

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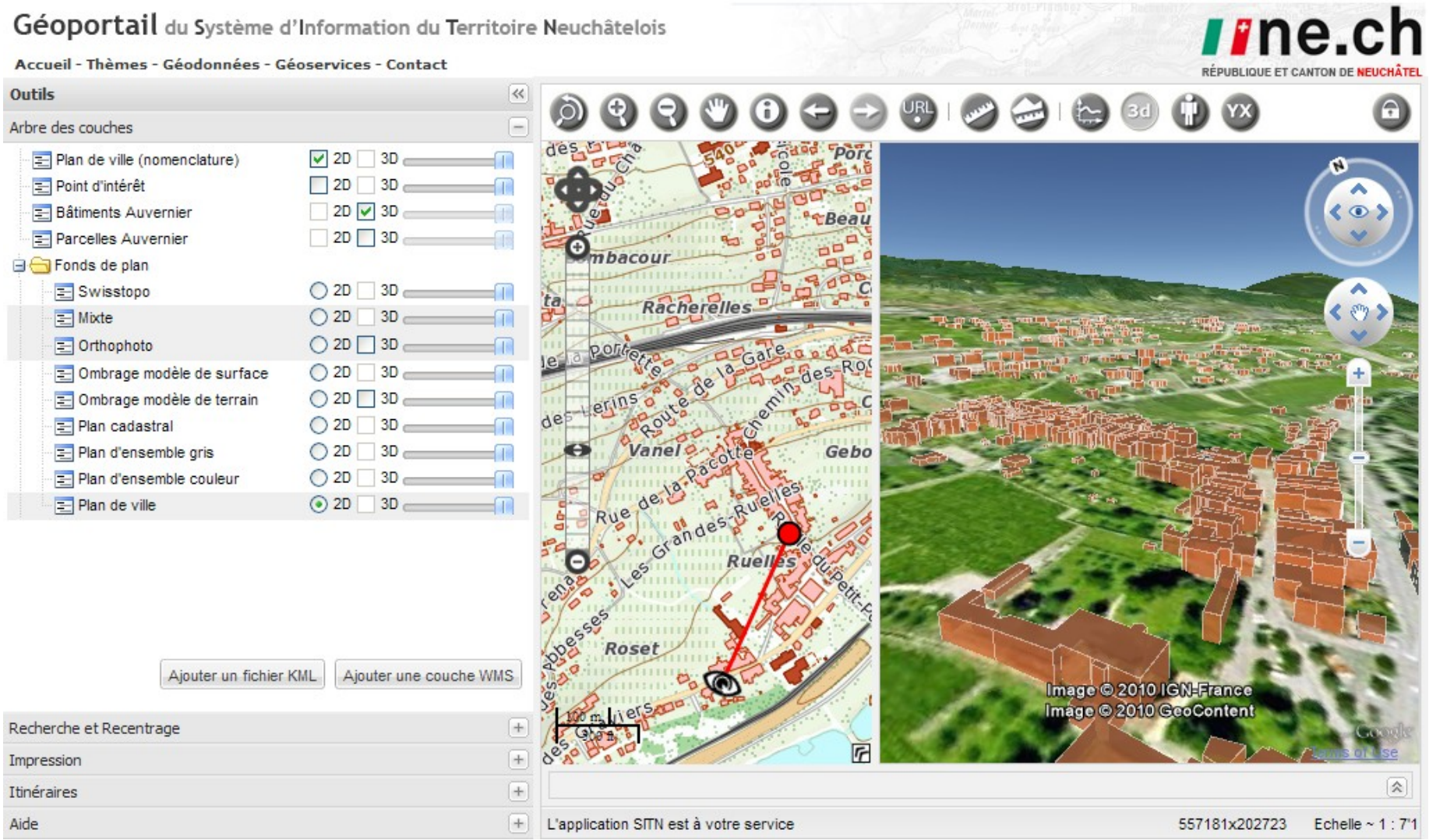
EDF Project

3D Web Viewer

SITN Project

3D Web Viewer



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Thank you for your attention

Camptocamp SA

info@camptocamp.com +41 21 619 10 10 +33 4 79 44 44 94