

Axpo Hydro Digital – Robotics Services

Digital as-built documentation of structures and terrain

Precise, fast and transparent

For construction projects on existing plants, reliable information on the current condition of the building is crucial. Especially in the hydropower sector, many projects are being carried out on existing plants, with the actual construction and conversion work only being documented on the basis of scanned copies of analog plans. As a result, often uncertainties as to the actual condition of a structure or site often arise.

The use of modern imaging technologies based on drone-assisted laser scanning or photogrammetry can remedy this quickly and efficiently. A building or site's current condition can be captured from the ground or from the air as required and reconstructed three-dimensionally. The point clouds and 360° images obtained then enable inspection and analysis functionalities on a PC that even non-experts can get to grips with, and can also serve as a basis for BIM modelling.

We offer a complete service package



Flexible deployment

No long lead times, even during individual construction phases



Secure data collection from the air or the ground

Drone-based or terrestrial – depending on the area of application



Detailed 3D point clouds and 360° images

For planning, analysis, and visual inspections



Further modelling

If necessary

Details on the service package

Three-dimensional imaging enables fast and detailed documentation of a building or site's current condition and provides the basis for precise further planning. The data recorded is provided in digital form and individually tailored to your requirements. On request, our specialists can also create BIM models from the data collected. If we do not have the right solution at hand, we are also happy to advise you in deploying third-party companies.



Detailed results

- Point clouds (geo-referenced)
- "Walkable" models for non-experts (similar to street view)
- Basics for BIM modelling

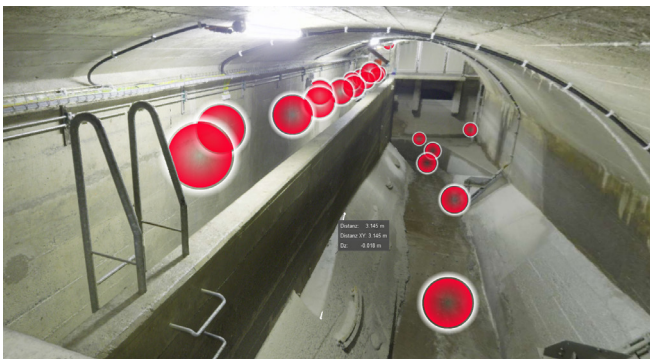
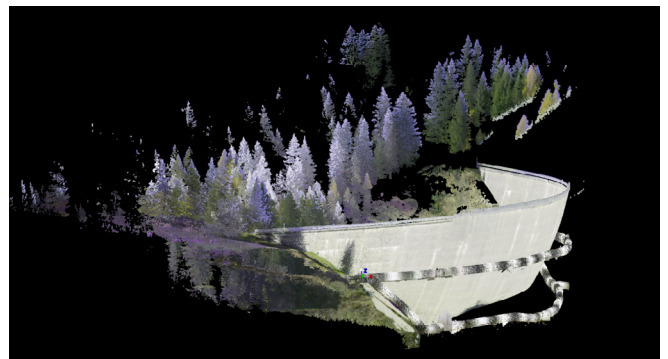


Individual imaging solutions

Axpo imaging and generation

- Using terrestrial laser scanning
- Drone - assisted laser scanning
- Drone - assisted photogrammetry

Advice and support for special surveys (e.g. volume monitoring of bulk cargo)



References

„The laser scans provided a precise basis for our 3D modelling. This is a major advantage, especially in confined spaces. At the same time, we were able to check the plausibility of the existing plans, identify deviations at an early stage, and make the modelling process much more efficient overall.“

Manuel Binda - Construction Department, Axpo Power AG

„The resulting 3D model provides important details about the existing structures and enables very precise and efficient planning. All information is available at all times without having to enter the structure.“

Pietro Garbani Nerini - Dams Department, Axpo Power AG



Want to know more?

**Renovations and Remodeling:
Digital, reliable and flexible**

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