

## 3D Laser Scanning

**We have extensive experience in the field of measuring methods of 3D laser scanning. We can use them in order to draw a project: architectural, industrial, forensic, and more.**

**We create spatial 3D models, longitudinal and transverse sections, orthophotoplan. With our precise laser scanners and specialized software can accept any challenge.**



### [Church from 18th century](#)

Field works associated with creating documentation of the church was conducted by two scanners: Leica C10 and Z + F 5006i. The completion was accompanied by the control total station measurements. Because the object was expanded two times our coverage immensely helped in the design and revitalization of the church. As a result the customer had the documentation of architectural construction handed over.

[Read more ... Church from 18th century](#)



### [Central Asia - Convention Center](#)

In the last month we started working in one of the Asian capitals. At the newly emerging property we performed more than 650 scans, which will be used by our company to create a 3D model and to comply

with the documentation necessary for further design.

[Read more ... Central Asia - Convention Center](#)



[Central Asia - Logistics Center](#)

3D laser scanning as well as the traditional tachymetric measurement are the basis for creating the necessary maps for architects in the design process. In the unknown territory of Asian steppe, on the surface of several dozen hectares, we map along with a digital terrain model.

[Read more ... Central Asia - Logistics Center](#)



[As-built survey of supporting structure](#)

Another example of using scanning for monitoring of different objects. We have conducted a full as-built survey of supporting structure with a span of 50x50 and created a 3D model of rope carriers. In the complex measuring points, benchmarks and feeler gauge were installed with the aim of further observation of the object.

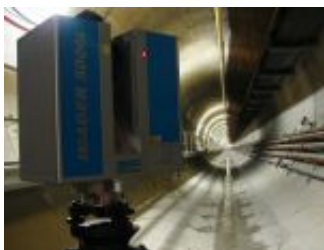
[Read more ... As-built survey of supporting structure](#)



### [As-built survey of undergrounds C10 "Rondo ONZ" station](#)

We developed as-built documentation of state of construction C10 "Rondo ONZ" station. We took almost 80 scans, which were connected into one point cloud and achieved average error 2mm. 54 cross-sections was made, on which the deviation of the position of the project were determined.

[Read more ... As-built survey of undergrounds C10 "Rondo ONZ" station](#)



### [As-built survey of undergrounds tunnels](#)

We have scanned next sections of tunnels of second line Warsaw underground. We have measured northern tunnels among C10, C11, C12 and C13, C14 stations. Overall length of this tunnels is 1840m.

We are scanning tunnel layer in order to determine the deviation of the position of the project. We have scanned a total of more than 5.0 km of tunnels. The accuracy of calculating the position of the point in the cloud does not exceed 7 mm.

[Read more ... As-built survey of undergrounds tunnels](#)



## [As-build survey of a cubic subject](#)

We did the scanning of the entire facility. Elevations were done, projection of each floor, vertical sections. We prepared more than 600 scans which have been combined into one spatial 3D model. Object consisted of 5 parts with different height (from 8,6m to 15,6m) and different amount of floors (from 2 to 4). Gross covered area amounts  $3.150\text{m}^2$  and cubature  $36.000\text{ m}^3$ .

[Read more ... As-build survey of a cubic subject](#)



## [Water reservoir sedimentary](#)

We make monthly as-built surveys that allow precise volume of material that has been worn out. We use the long-range scanner. Area of sedimentary amounts  $86.400\text{m}^2$  and its depth 9m.

[Read more ... Water reservoir sedimentary](#)

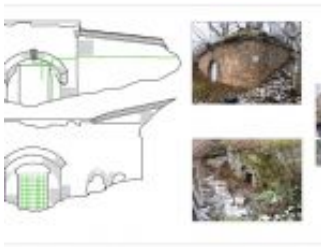
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## [Shopping center](#)

We made several scanning elevation malls. As the final products, we submitted spatial 3D elevation

models which were used to expansion of malls. On the given models there were shown essential constructional elements, such as: floors height or expansion joints. Overall length of developed models exceeds 650m and its height is between 9m and 18m.

[Read more ... Shopping center](#)



## [The historic forts](#)

On the basis of the cloud of points architectural documentation with vector models of over 200m ancient fortifications' elevation was developed. Cubature of fortifications amounts  $7.000\text{m}^3$ .

[Read more ... The historic forts](#)

## [The church during the construction](#)

3D laser scanning of the whole object was done. As a result projections, cross-cuttings and 3D model of the whole body of the building was prepared. Gross covered area amounts  $1.250\text{m}^2$  and cubature  $21.000\text{m}^3$ .

[Read more ... The church during the construction](#)



## [Coal Mine](#)

Laser scanning was performed on the excavation of the shaft. We investigated deflection of guides and developed cross-cuttings of shaft excavation.

[Read more ... Coal Mine](#)

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## [Urological Hospital](#)

Scanning the object from the outside was done. The view of 200m elevations in vector format, and 3D spatial model of the whole body of the building was prepared. Cubature of hospital amounts  $23.500\text{m}^3$ .

[Read more ... Urological Hospital](#)

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## [Industrial Space](#)

Based on a cloud of points we have developed the projections of steel structure of the space  $2.600\text{m}^2$  and its height 15m. Overall we have done 42 projections.

[Read more ... Industrial Space](#)



## [The hall of the castle of the 14th century](#)

We made architectural documentation of the northern hallway. Orthophotoplns walls, cross-sectional and longitudinal and vector model of the west wall was developed.

[Read more ... The hall of the castle of the 14th century](#)



## [The historic church of the eighteenth century](#)

We scanned the church from the outside and the inside of the tower. We compiled a horizontal and vertical cross-sections of the dome of the church.

[Read more ... The historic church of the eighteenth century](#)



## [Supporting structures](#)

We compiled geometric documentation of columns to renew them during the upgrade process. Horizontal projection and vertical cross-sections of 16 columns were made.

[Read more ... Supporting structures](#)



## [Chapel](#)

We measured a chapel built in the center of the religious cult. On the basis of the obtained cloud of points we developed a 3D model of the chapel.

[Read more ... Chapel](#)

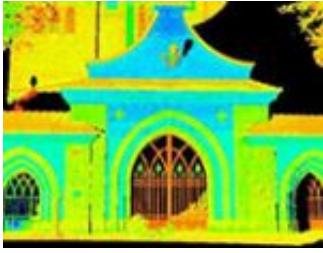


## [Cubic measurements dumps](#)

We perform periodic measurements of volumes of different types of materials collected in heaps in silos and tanks.

[Read more ... Cubic measurements dumps](#)





## [Documentation monuments](#)

With high-resolution clouds of points we are able to hold historical records, such as statues, sculptures, paintings.

[Read more ... Documentation monuments](#)

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## [Forensic Documentation](#)

The material that we have received, we used to study evidence secured at the scene. As a result, we were able to determine the size and location of an unknown, until now, subject to investigators analysis, which was a car visible from archival footage being part of police records.

Published review was used with the identification of the examined object.

Measurement and analysis of the traces left at the crime scene is just one of the applications of 3D laser scanning. With the help of this modern technology one can i.e. expertise during construction disaster investigation, crashes and road accidents, obtaining material for analysis in a rapid, accurate, non-invasive way.

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