PROJECT: ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW
2020-1-RO01-KA203-080223

THE USE OF 3D SCANNING
FOR THE INVENTORY OF BUILDING

Universitatea Transilvania din Brașov

Centro Tecnológico del mármol, piedra y materiales

UNIVERSIDAD DE SEVILLA

ROMANIA GREEN BUILDING COUNCIL

POLITECHNIKA POZNAŃSKA POZNAN UNIVERSITY OF TECHNOLOGY

FPiP CALIFICAT.RO

Rybaki17 Zespół Szkół Budownictwa Nr 1

Co-funded by the Erasmus+ Programme of the European Union

ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW

Co-funded by the
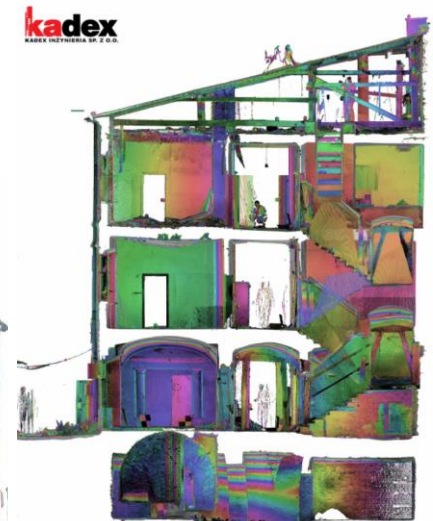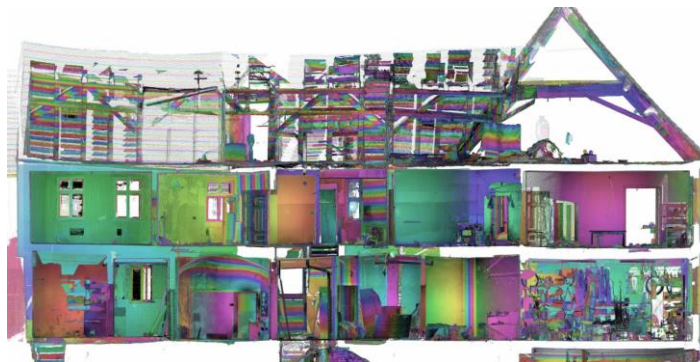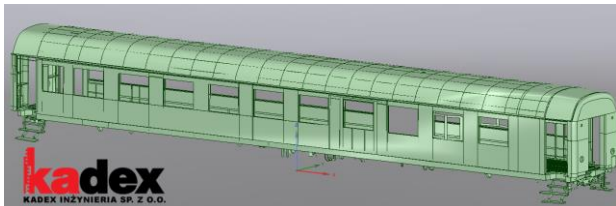Erasmus+ Programme
of the European Union

GENERAL CONTENT

1. **Laser scanning of building**
2. **Outputs of scanning**
3. **Import point cloud**
4. **Point cloud editing**
5. **Export point cloud**
6. **Import point cloud to Revit**
7. **Scale and change position of point cloud**
8. **Use the point cloud for 3D modeling**
9. **IFC export**

Laser scanning

- Spatial

- 3D model

- Small amount of time

THE USE OF 3D SCANNING FOR THE INVENTORY OF BUILDING

ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW

Co-funded by the
Erasmus+ Programme
of the European Union

1. Laser scanning of building

Scan the elevation of building from several different stations

ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW

Co-funded by the
Erasmus+ Programme
of the European Union

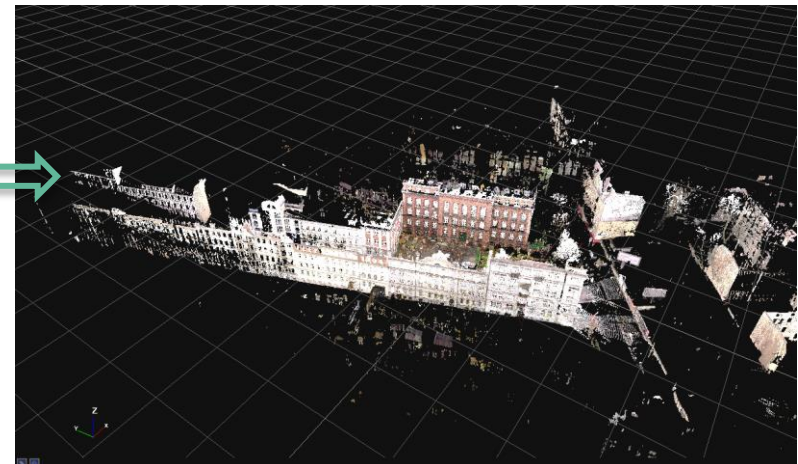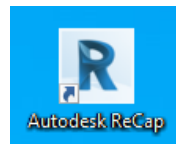# Why many different positions of scanner?

Shadow Elimination
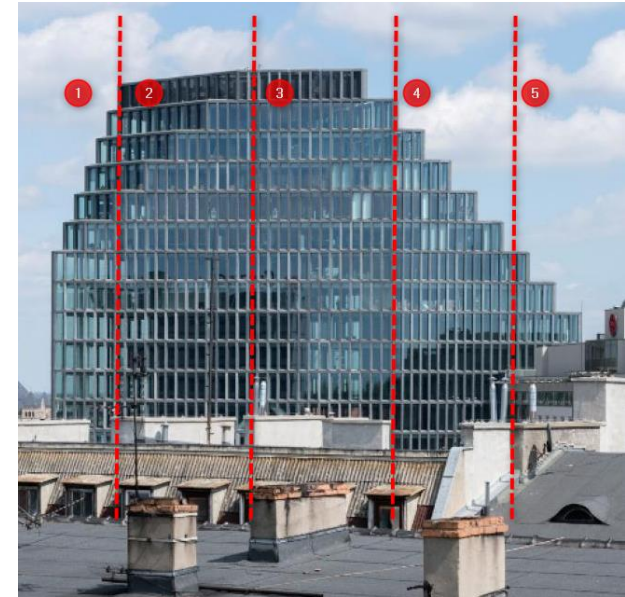
In case of bigger building
a numerous of scanning stations
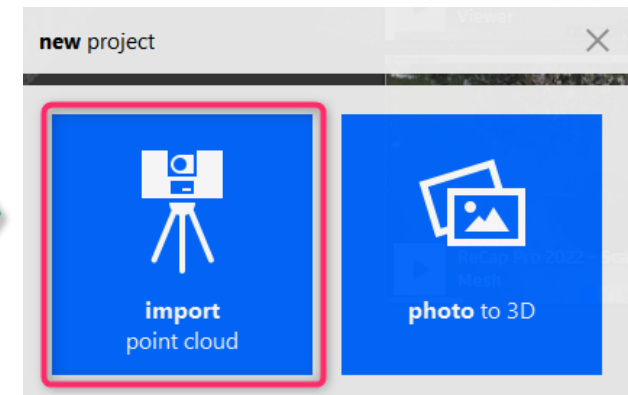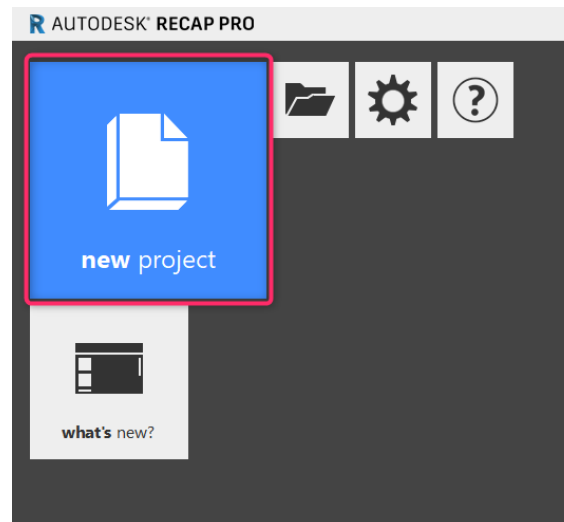might be required to inventor
a whole building

ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW

Co-funded by the
Erasmus+ Programme
of the European Union
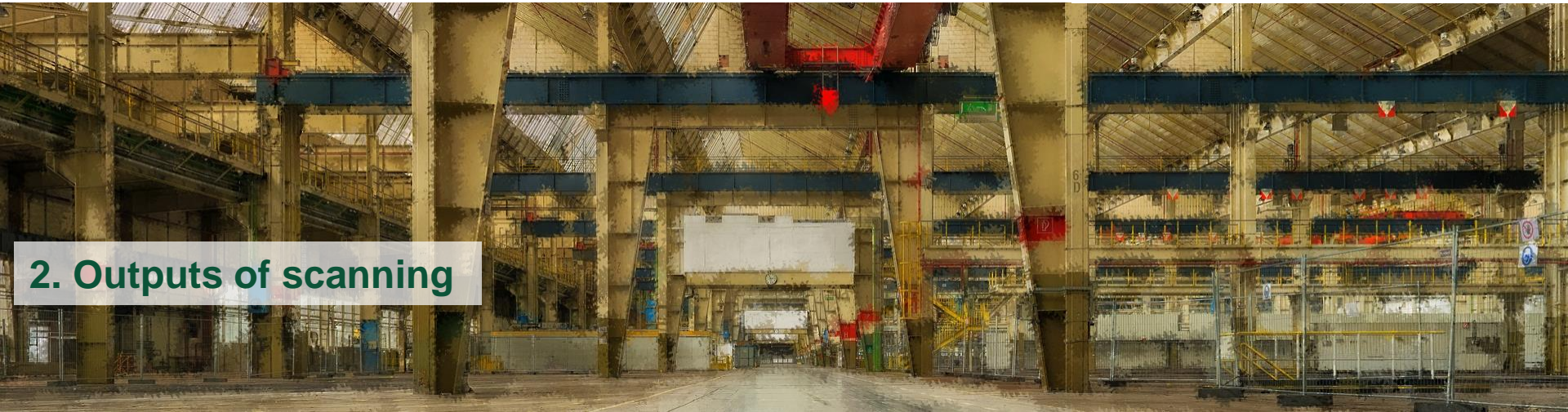
2. Outputs of scanning

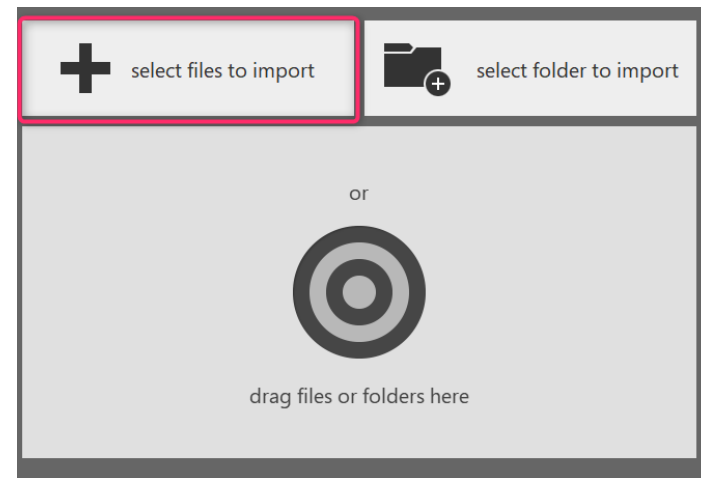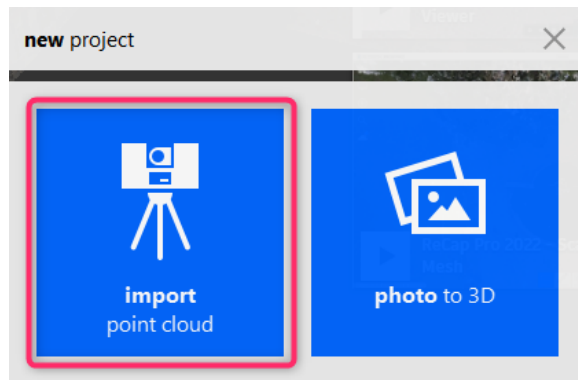|			
Rybaki.pod	18.01.2022 09:14	Plik POD	815 855 KB
Rybaki.pts	18.01.2022 09:04	Plik PTS	3 167 507 KB
Rybaki	13.01.2022 12:06	Autodesk ReCap Project file	2 980 KB
Rybaki_1.e57	18.01.2022 09:16	Plik E57	2 738 182 KB

Autodesk ReCap

THE USE OF 3D SCANNING FOR THE INVENTORY OF BUILDING
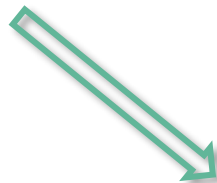
3. Import point cloud

How to open file *.e57 using Autodesk ReCap software ?

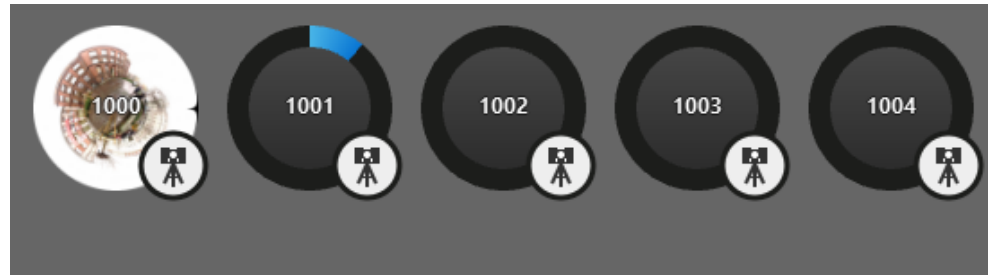ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW

Co-funded by the
Erasmus+ Programme
of the European Union

How to open file *.e57 using Autodesk ReCap software ?

ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW

Co-funded by the
Erasmus+ Programme
of the European Union

How to open file *.e57 using Autodesk ReCap software ?

All 5 stations needs to be imported – it can be time-consuming!

ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW

Co-funded by the
Erasmus+ Programme
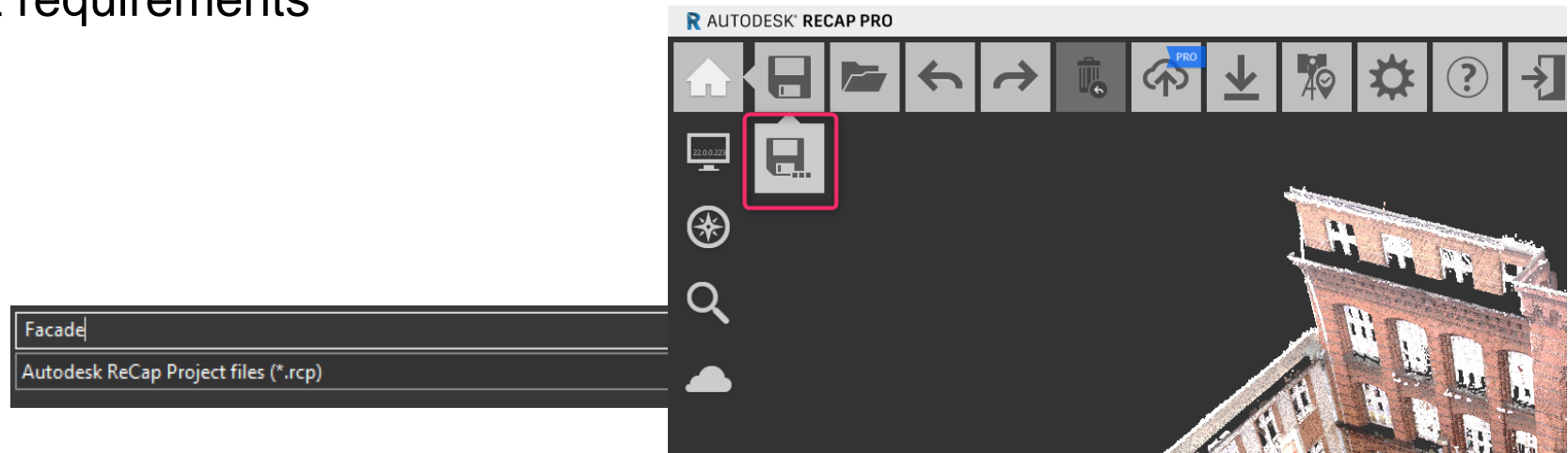of the European Union
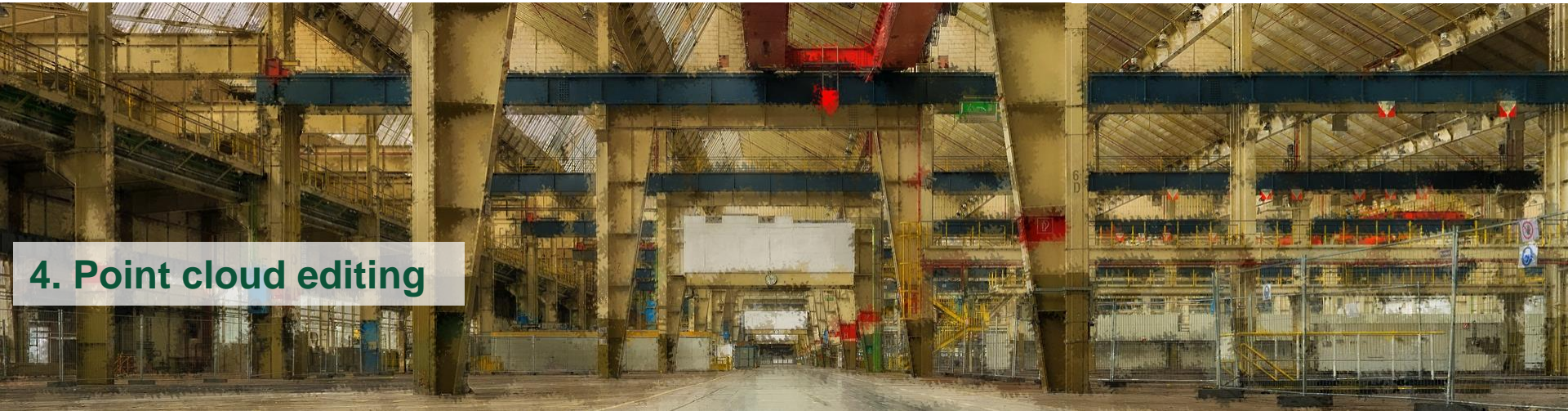
4. Point cloud editing

Data cloud to be edited.
All redundant points to be removed
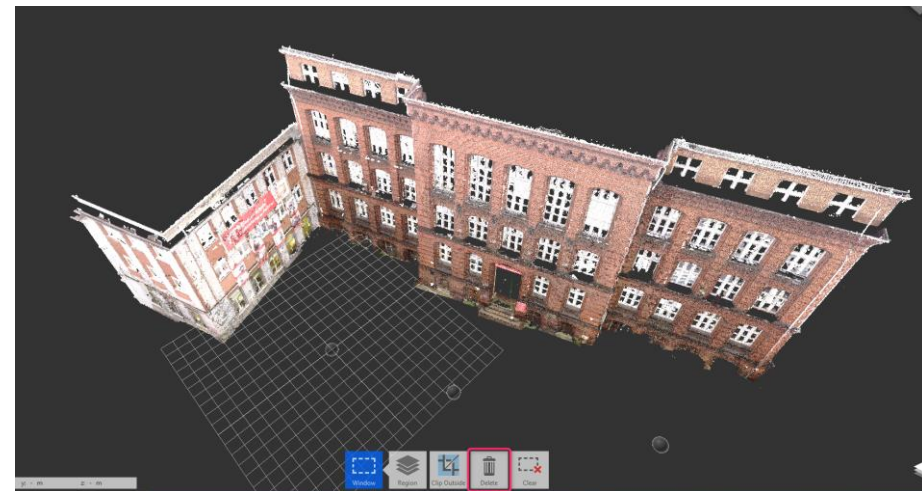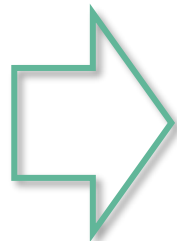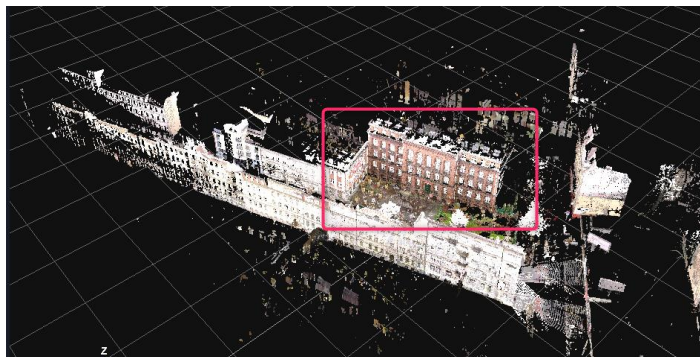
5. Export point cloud

Filed to be exported in line with Autodesk
Revit requirements

ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW

Co-funded by the
Erasmus+ Programme
of the European Union

6. Import point cloud to Revit

So prepared file can be imported to Autodesk Revit software
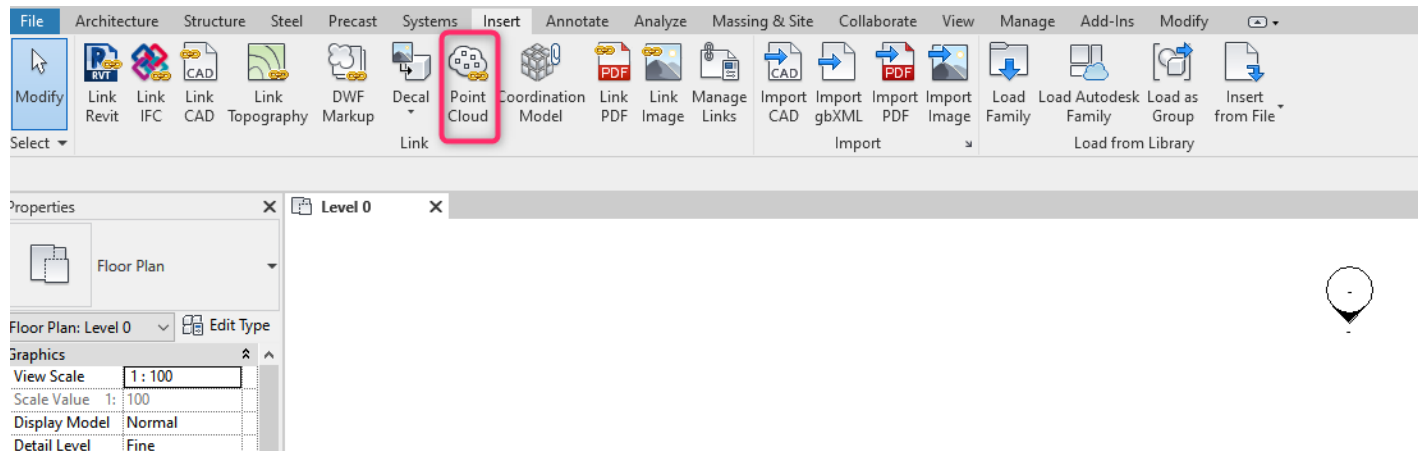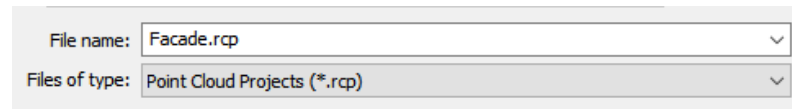
ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW

Co-funded by the
Erasmus+ Programme
of the European Union

So prepared file can be imported
to Autodesk Revit software

ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW

Co-funded by the
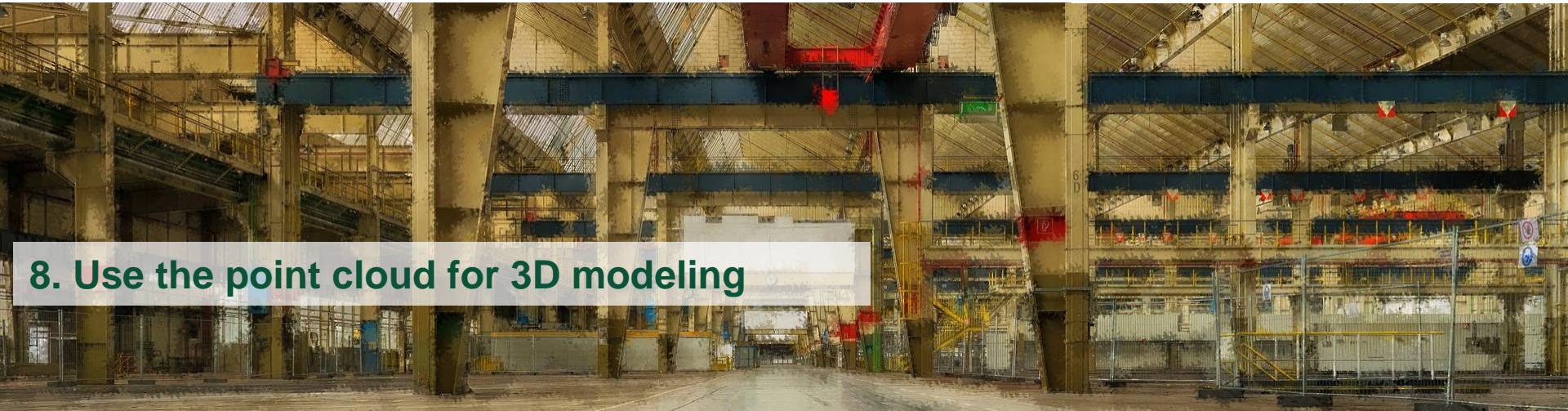Erasmus+ Programme
of the European Union
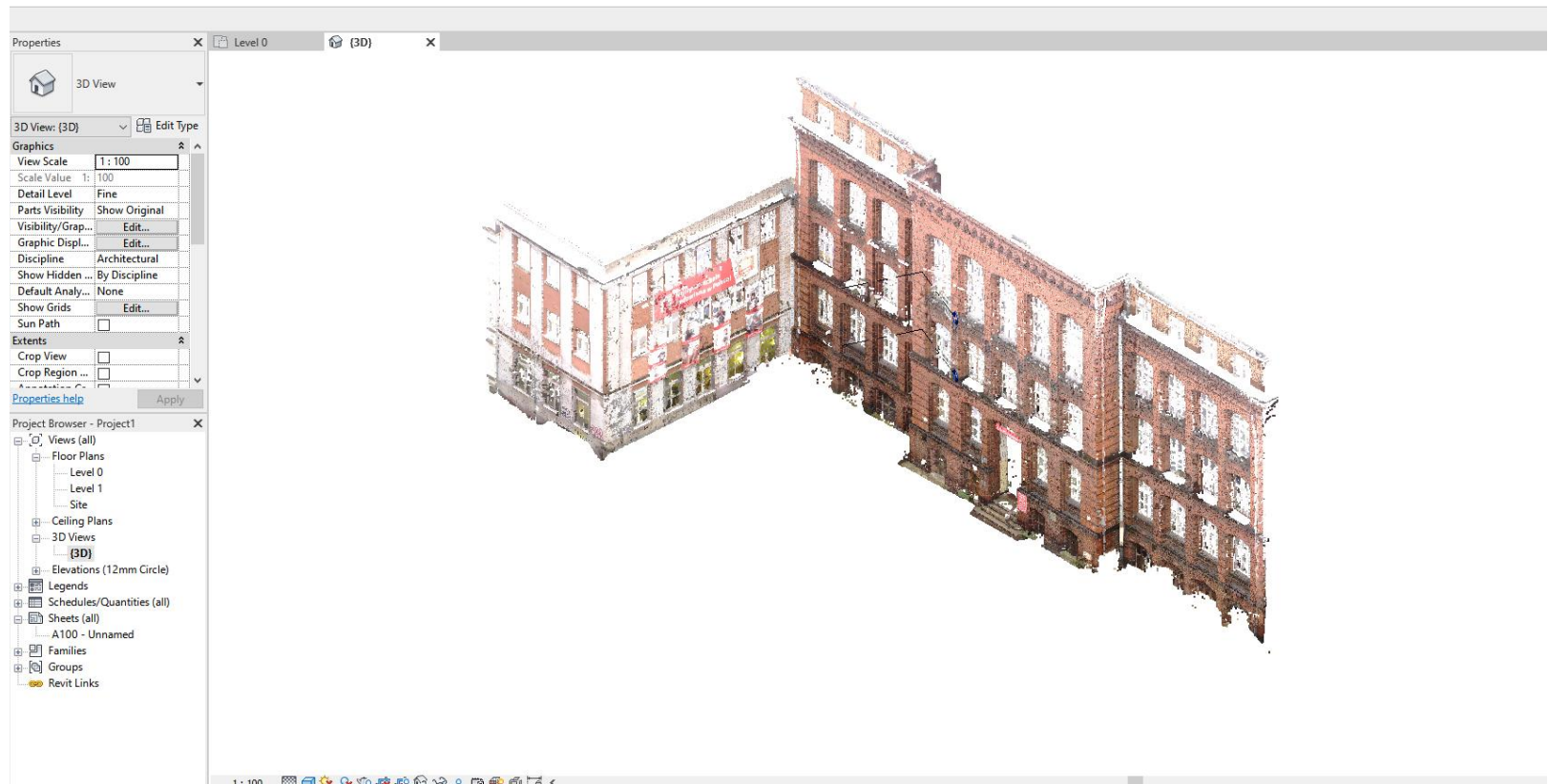
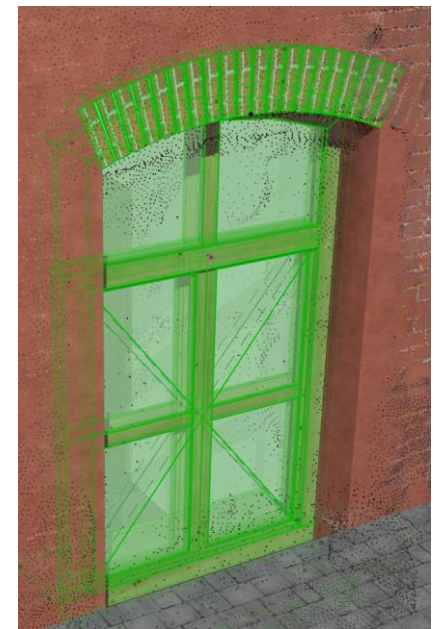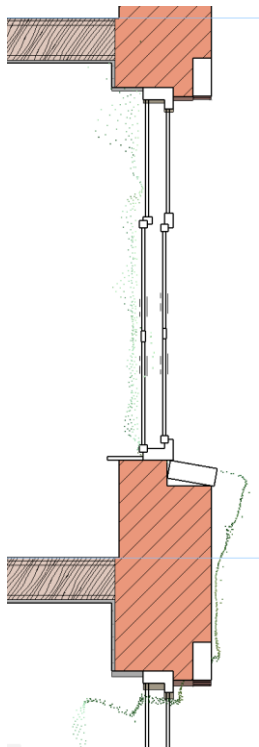## 7. Scale and change position of point cloud

Point cloud to be suited to orthogonal coordinate system and agreed grid lines

Note: Scaling of object can be required

8. Use the point cloud for 3D modeling

THE USE OF 3D SCANNING FOR THE INVENTORY OF BUILDING

ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW

Co-funded by the
Erasmus+ Programme
of the European Union

9. IFC export

IFC model and documentation in other required formats can be made on the base of imported point cloud.
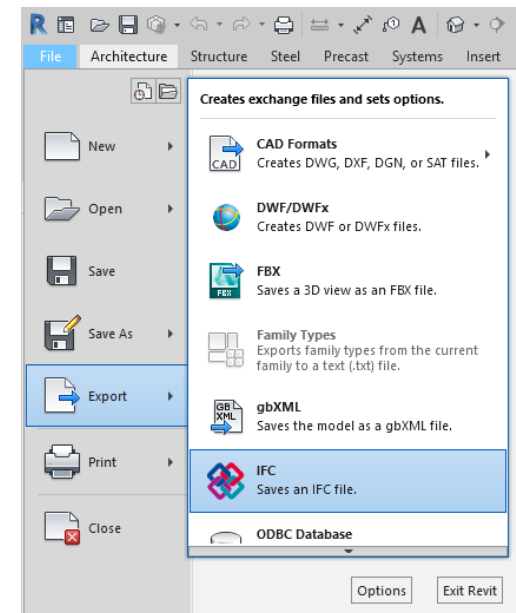
ECOLOGICAL AND INNOVATIVE TECHNOLOGIES FOR RECOVERING INDUSTRIAL AREAS FROM LCA AND ENERGY EFFICIENCY POINT OF VIEW
2020-1-RO01-KA203-080223

CONTACT

www.recoverind.eu