PROCESS MAPS
Example of short A4 instruction describing the process step by step

For all processes involving non-bim persons simple instructions were created explaining the process step by step.

Instructions and manuals described among others:
- making quantity take-offs
- BCF exchange
- Documentation approval
- defect management processes
Earthworks analysis

**DESCRIPTION**

The terrain, water levels and geotechnical profiles were created in Civil 3D.

Based on this geometry volumes were created in Civil 3D and exported as 3D solids to IFC for visualization and analysis together with all the calculations.

Earthworks IFC model proved to be a great way to visualize complex problem and scenarios in a simple way and enabling all site crew to understand the impact of their decision and in the long run save money.

**Process**

1. **First iteration (Cut and Fill)**
2. **Last iteration**
   - + Earthworks technology
   - + Phasing
   - + Geotechnical profiles

- More detail with every iteration
IFC structure models of 3 separate buildings were imported to Synchro Pro and connected with schedule from MS Project via XML format. All the model elements were automatically matched to corresponding tasks in the schedule via predefined codes which were written into IFC properties. The 4D model visualized the division into construction parts and specific element categories, which proved to be of great value when analyzing the works sequencing.
QTO – from tender to invoice

**Process**

1. **TENDER PHASE**
   - Finding the subcontractors
   - BIM Engineer
   - Site Crew
   - Getting specific data from IFC model
   - Sending invitation to tender

2. **FINANCIAL SETTLEMENTS**
   - Finding works done and invoice checking
   - BIM Engineer
   - Site Crew + Subcontractors
   - Getting specific data from IFC model
   - Checking the data with subcontractor

3. **Analyzing the offers**
   - Preparation of comparison tables
   - Sending information to Contract Manager

4. **Contract Manager**
   - Selection of subcontractor

5. **Site Crew**
   - Establishing the quantity of works completed
   - Sending information to Contract Manager

**Examples**

- 3D models of buildings and construction sites.
The process consists of a few flows. First of all, the designers uploaded documentation on the Box module. Secondly, the documentation is verified by our team, with respect to each responsibility. If the documentation is agreed to be handed over then it becomes available for all subcontractors. If it needs correction, then it is rejected and the whole process starts from the beginning.
Field data management

Processes

INTERNAL
BETWEEN GENERAL CONTRACTOR AND SUBCONTRACTORS

BIM Engineer
Site Crew

Collecting data in Dalux Field platform – responsible subcontractor, photo, localization, description
Sending the data via Dalux Field to subcontractor

Sending the response about the issue

Subcontractors

EXTERNAL
BETWEEN INVESTOR, GENERAL CONTRACTOR AND SUBCONTRACTORS

Investor

Collecting data in Dalux Field platform – photo, localization, description
Sending the data via Dalux Field to General Contractor

Sending the response about the issue

General contractor Mostostal Warszawa

Sending the data via Dalux Field to responsible subcontractor

Sending the response about the issue

Subcontractors

Examples
Every morning we have to report the number of subcontractors’ workers on the site. Normally, one of the managers has to call all of them, which is time-consuming. So we decided to simplify this process and we obliged our subcontractors to report their number of staff on our platform. The gathered information can be exported to Power BI and visualized as shown on this slide.
To make the site more safe, we prepared forms in Dalux Field, where the issues can be categorized and then analyzed which parts need to be improved. For that approach, when it came to the OHS inspection, we get additional points in "Leadership, policy and participation in OHS". It also encouraged our OHS Department to develop using Dalux to evidence and coordinate the process.