Bentleyuser Årsmøde 2022
Import of DanDasgraf to Drainage & Utilities.

2022-11-08
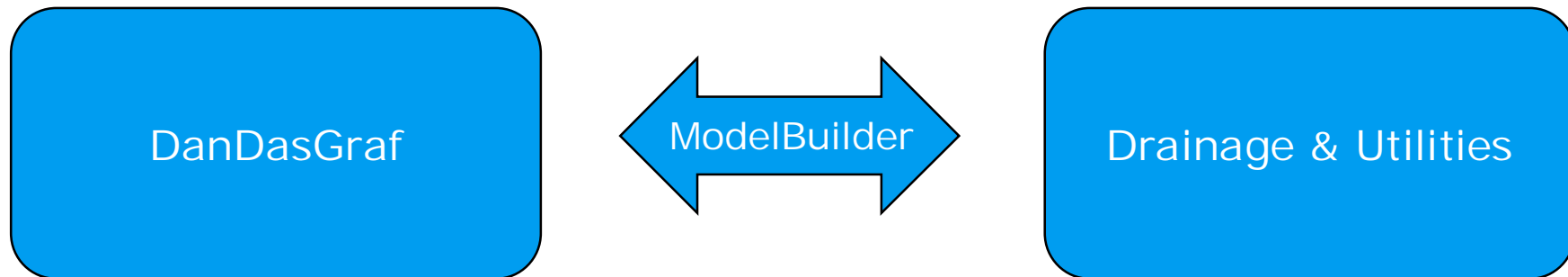
Jens Ring-Andersen

Mail: jra@ramboll.dk
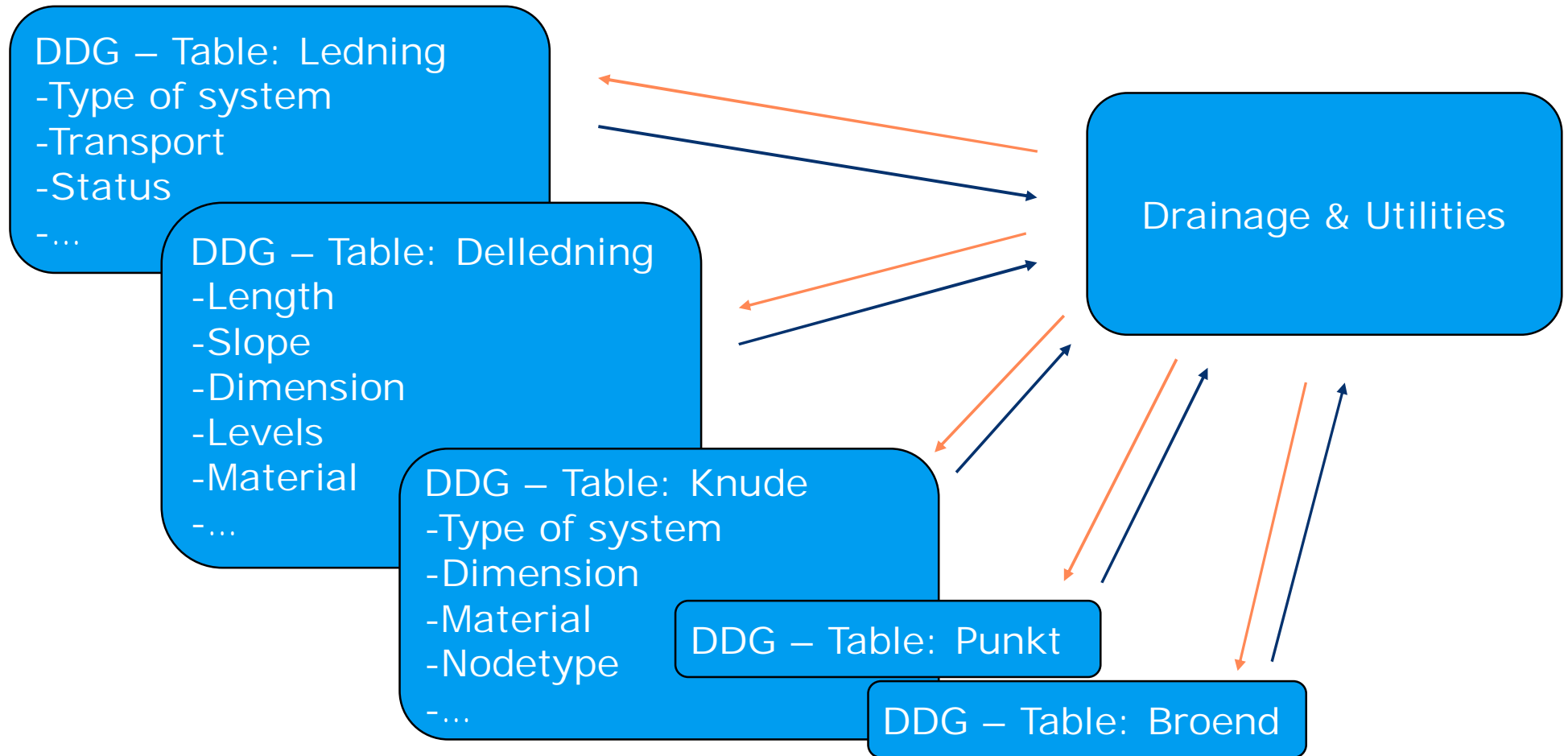
RAMBØLL

The idea

DanDasGraf ◄──► ModelBuilder ──► Drainage & Utilities

The data

DDG – Table: Ledning
-Type of system
-Transport
-Status
-…

DDG – Table: Delledning
-Length
-Slope
-Dimension
-Levels
-Material
-…

DDG – Table: Knude
-Type of system
-Dimension
-Material
-Nodetype
-…

DDG – Table: Punkt

DDG – Table: Broend

Drainage & Utilities

The setup

DDG – Query for Conduits

DDG – Query for Nodes
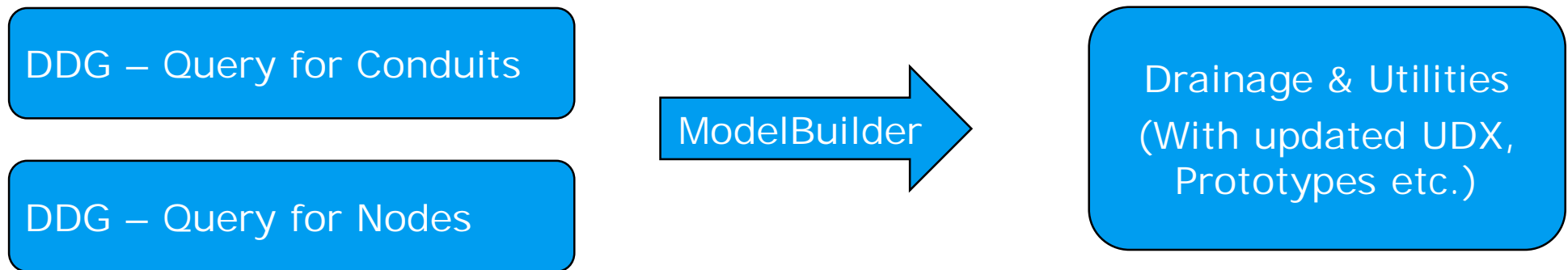
ModelBuilder

Drainage & Utilities
(With updated UDX,
Prototypes etc.)

ModelBuilder

- Live demo

What we learned

- Keep it simple and on a minimum of data needed in the beginning.
  - And then add later...
- Know your data – because you can only handle one table, sheet ect. at a time.
  - This goes both ways – import and export
- There are still some issues in the import, e.g. bends/curve on conduits.
  - It has to be done manually afterwards, because this can be listed in D&U at the moment.
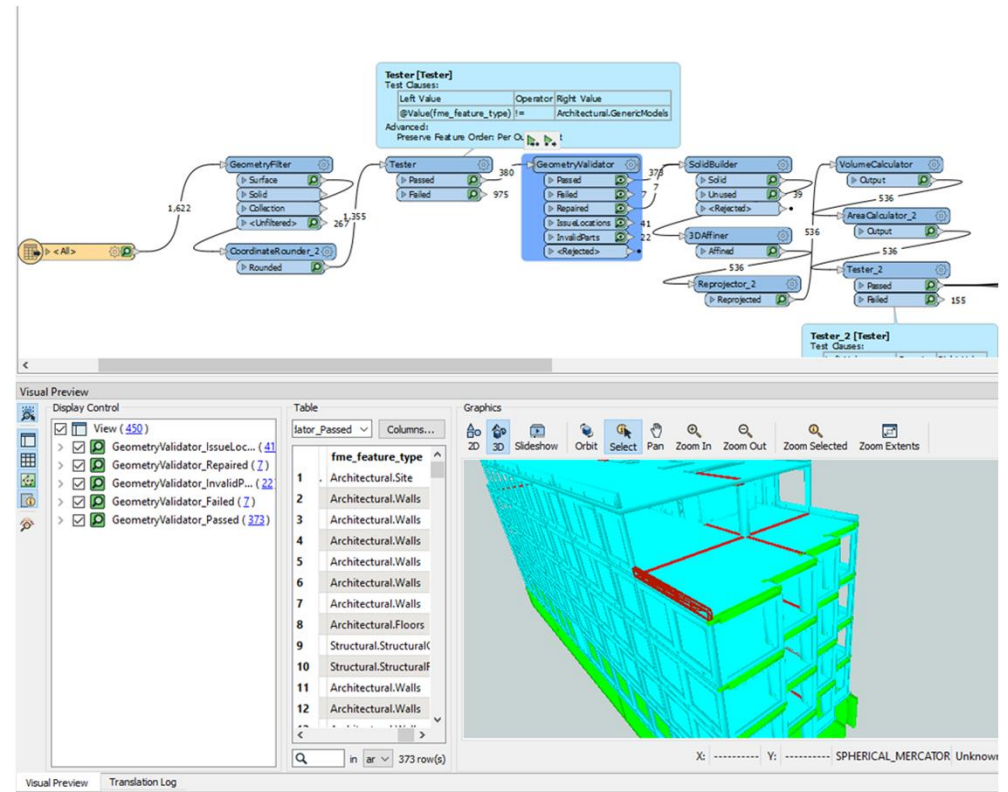
FME – data management program

FME:

- File conversion: CAD to GIS and vice versa

- Reads 300+ formats

- Visual programming workflow

Reason:

- Was chosen to translate the .shp from D&U(export from flextables) to DanDas-xml because we already had a setup between DHI programs and DanDas-xml.

Bentley - WaterObjects.net

Current situation

- In the current release of ORD, it is possible to access the tool WaterObjects.net

- To use the program, you need programming and coding knowledge

- WaterObjects.net is an API (Application Programming Interface) which can read the Drainage or the Utilities database

- The database needs to exist as a file on your hard disc, so you need to use Export Drainage Submodel or Export Utilities Submodel to create the database (*.sqlite)

- The API can also write to the databases, but you would then need to import the Submodel to update the DGN

Bentley - WaterObjects.net

Next release(Hopefully)

- In the next release of ORD, a new API will be included, which makes it easier to read the Drainage or the Utilities database

- It can read either database directly from the DGN file, so you don't need to export a database first

- The new API can also write to the databases directly in the DGN file, so you don't need to import the Submodel

- Writing code is easier, because the new API has a simpler interface

- With the new API, it should be easier to export/translate Drainage & Utilities to other formats, such as excel, xml etc., and therefore it also should be possible to translate it to DanDas-xml.

- A "translator" setup for e.g., DanDas-xml could be setup between the Danish users and Bentley if there are support from the Danish users for this.

- See more on:
  https://communities.bentley.com/products/hydraulics___hydrology/w/hydraulics_and_hydrology__wiki/17459/waterobjects-net---extending-the-capabilities-of-your-openflows-product

Questions?

D&U Sub Sig

Next meeting: 14th December 2022, at 13.00 – 14.00 (Teams)
Last planed meeting – normally every second month.

Send mail to jra@ramboll.dk if interested.