

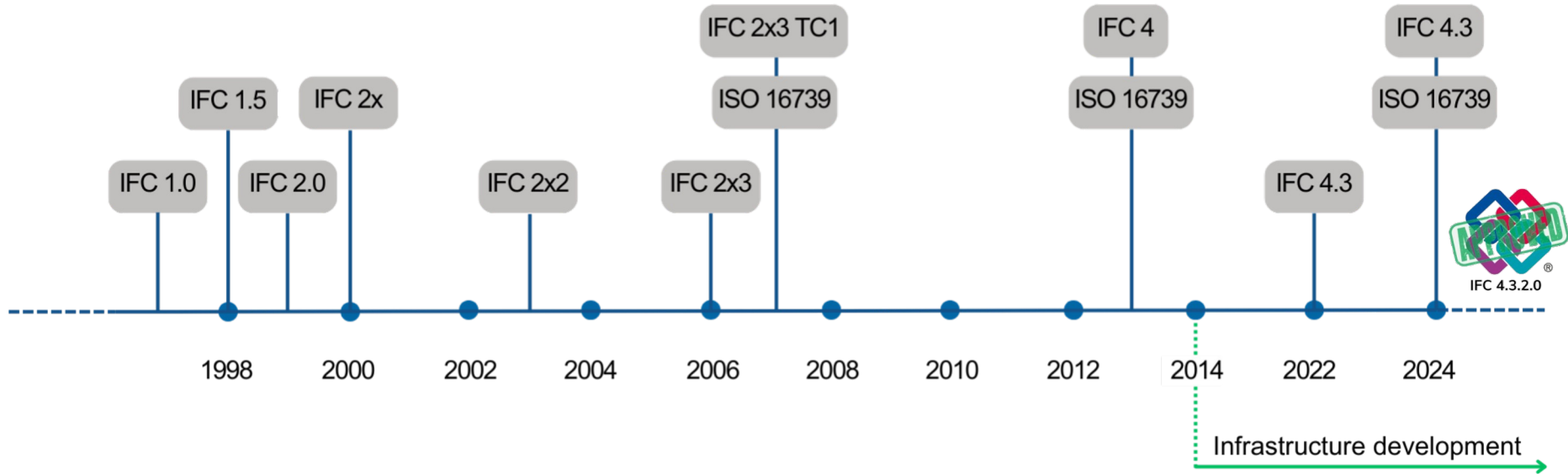
# Hva betyr IFC 4.3 for infrastrukturindustrien?



Presentert av: Marcin Pszczolka, MSc



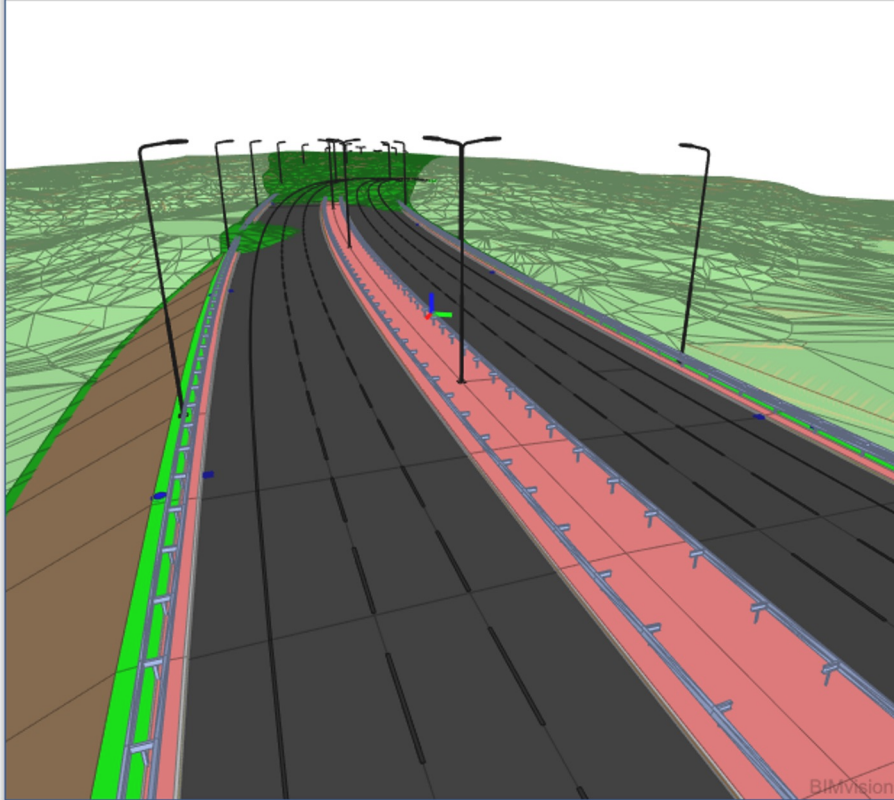
# IFC for Infrastruktur



IFC 4.3.2.0



# Pre-IFC 4.3 Infrastruktur Model



The image shows a 3D perspective view of a road infrastructure model. The road is dark grey with white dashed lines, flanked by a red curb and a green grassy area. Several black streetlights are positioned along the road. The terrain is rendered in shades of green and brown. The BIMvision logo is visible in the bottom right corner of the rendering.

IFC structure	
Type	Name
Project	TF201601
Site	Site
Building	Sample Road IFC Model
Building Storey	Series 100 - Geology
Building Storey	Series 200 - Earthworks
Building Storey	Series 300 - Chainage 000-010m
Building Storey	Series 300 - Chainage 010-020m
Slabs	
Slab	Stone mastic asphalt (SMA) surface courses
Slab	Stone mastic asphalt (SMA) surface courses
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Slab	Stone mastic asphalt (SMA) surface courses

Properties	Location	Classification	Relations
Name	Value		Unit
<b>Element Specific</b>			
Guid	2fXxbFJm3xMm04000004Q4		
IfcEntity	IfcSlab		
Name	Stone mastic asphalt (SMA) surface courses		
<b>ADT_Pset_Slab</b>			
BaseThickness	0,035		
<b>ADT_Pset_SlabStyle</b>			
IsBoundaryForAutomaticSpaces	Yes		
KeyNote	SMA 0/8		
<b>AS BUILT INFORMATION</b>			
Accessibility performance	The accessibility issue(s) which the object satisfies.		
Asset identifier	The identification assigned to an asset that		



# Domener i IFC 4.3

BUILDINGS



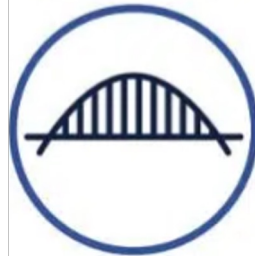
ROADS



RAILWAYS



BRIDGES



PORTS & WATERWAYS

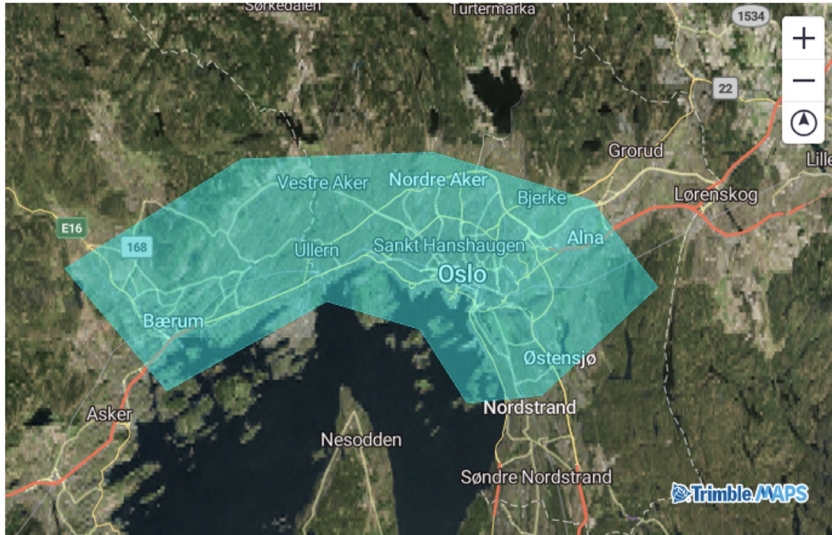




# Georeferansering

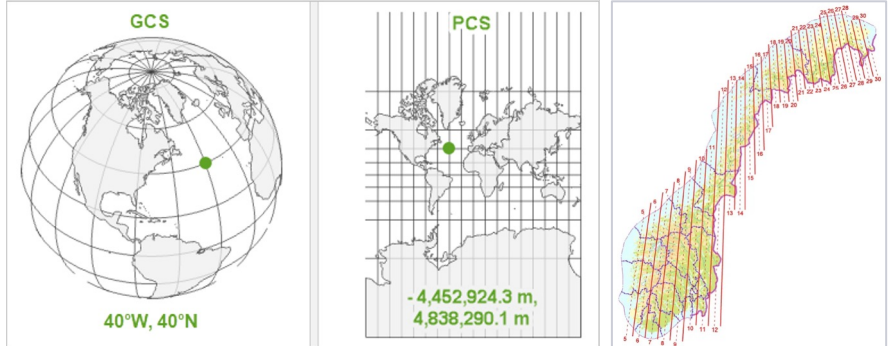
## Project Location & CRS

### Project Boundary



### Coordinate Reference System

Published coordinate reference system  
Norway/EUREF89NTM | NTM Zone 10 | EPSG: 5110



### Coordinate Reference System (CRS) Validation

#### The file contain CRS information - is it correct?

Select whether to continue with the original CRS info from the file(s) - or to set another CRS

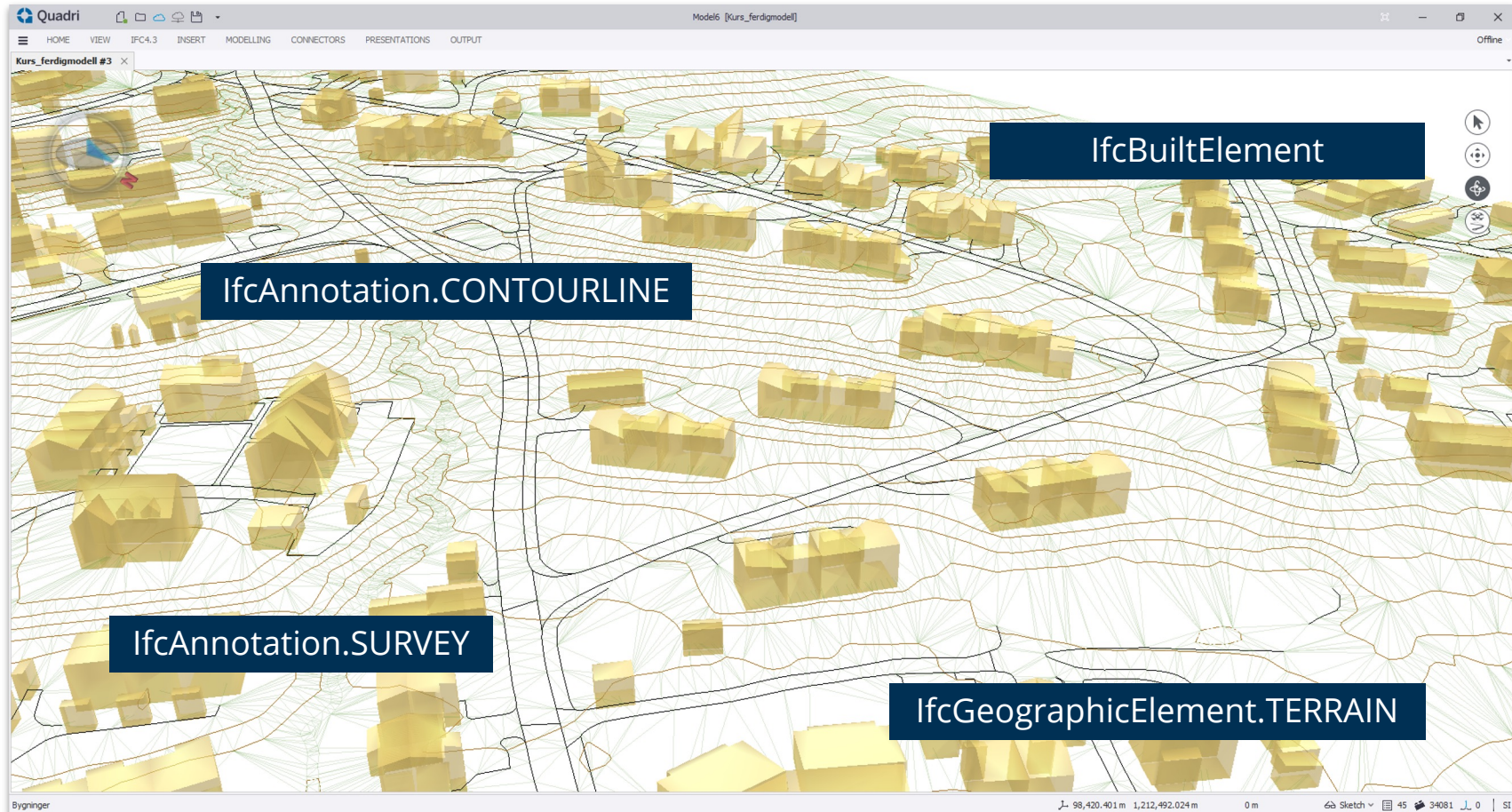
File CRS:	Model CRS:
Horizontal: 5110: ETRS89 / NTM zone 10	3844: Romania/Pulkovo 1942/Stereo 70
Vertical: 5941: NN2000 height	5773: EGM96 (Global)

#### Click on your preferred choice

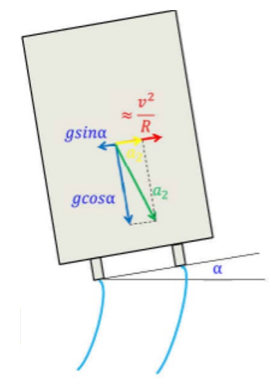
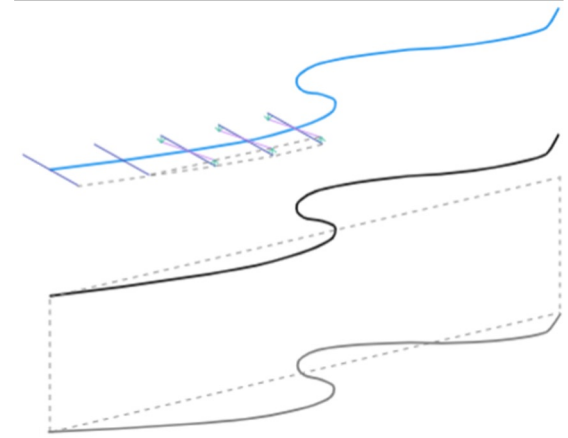
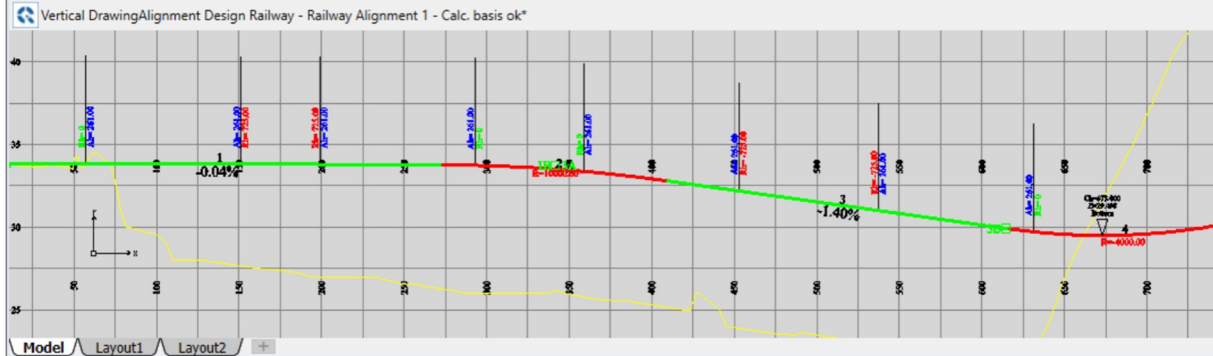
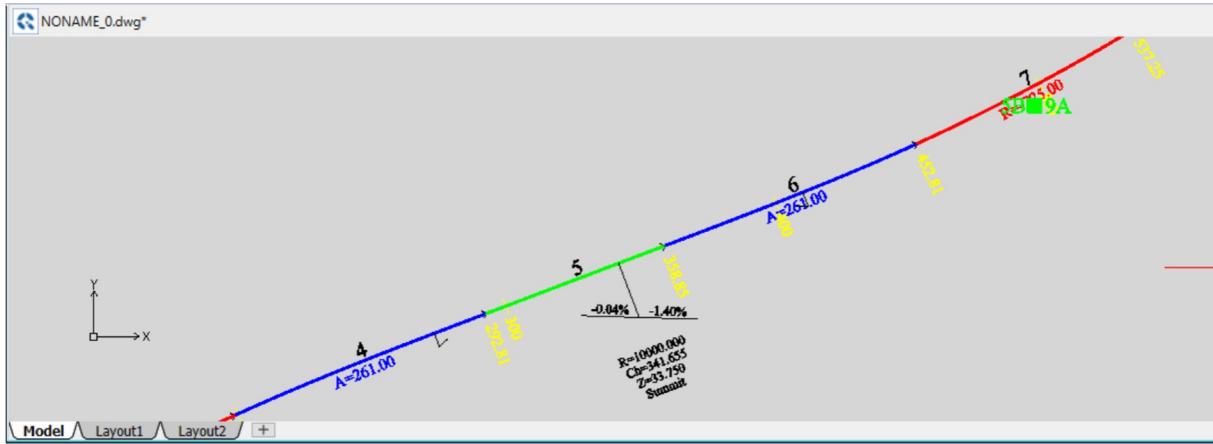
- CRS is correct - continue
- CRS is wrong - set a different CRS
- Cancel import



# Grunnlagsmodell

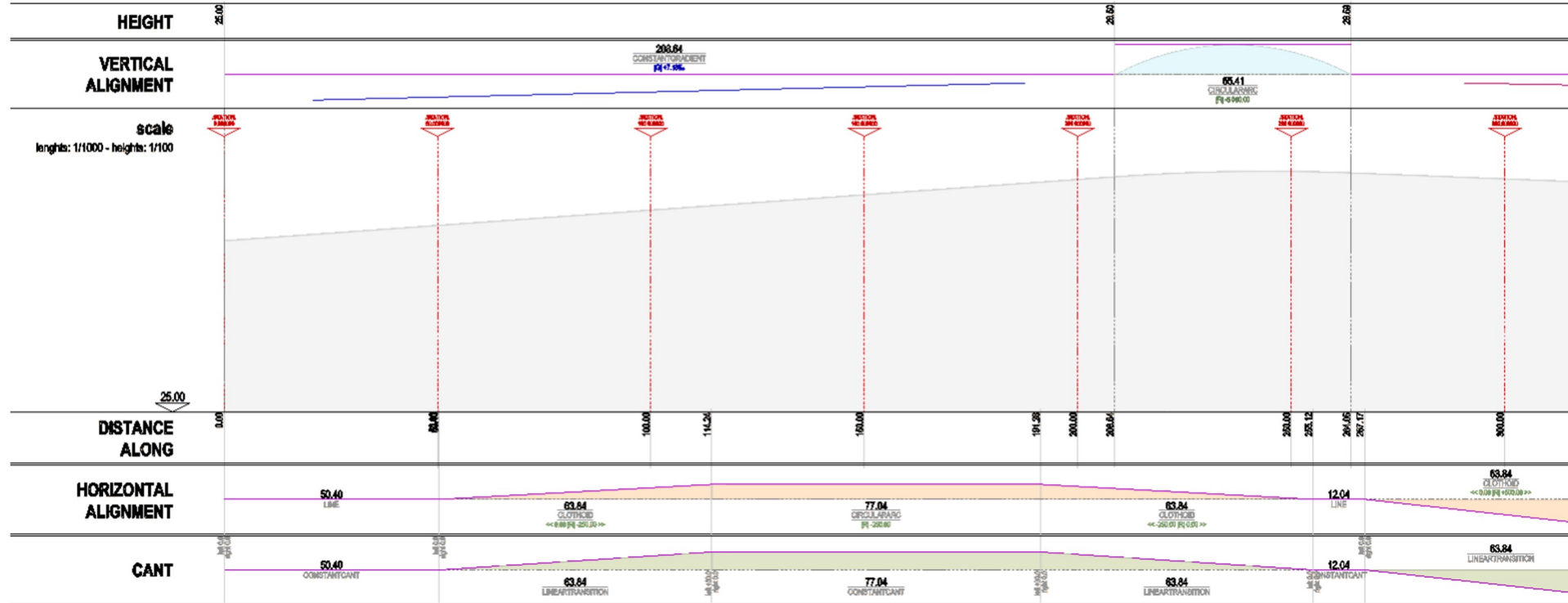


# Alignment + Cant



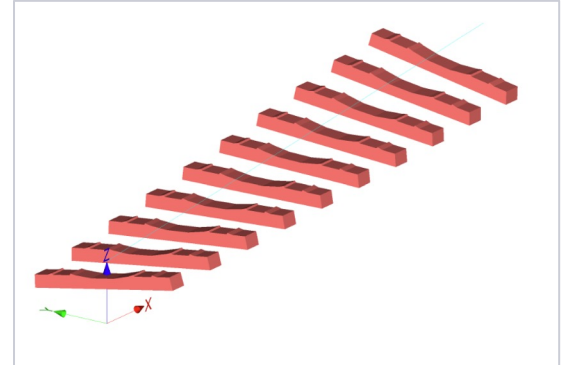
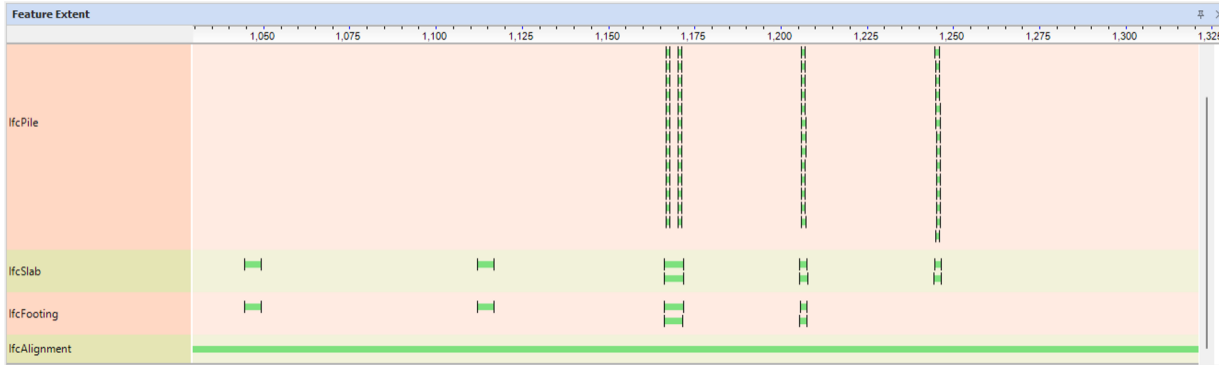
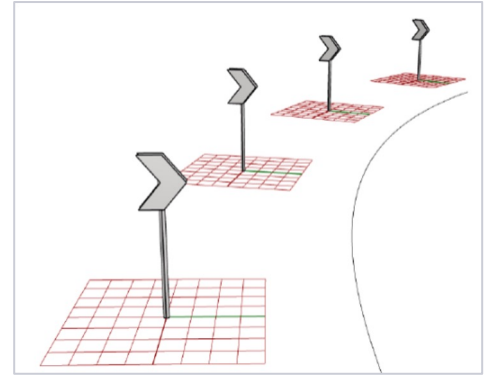
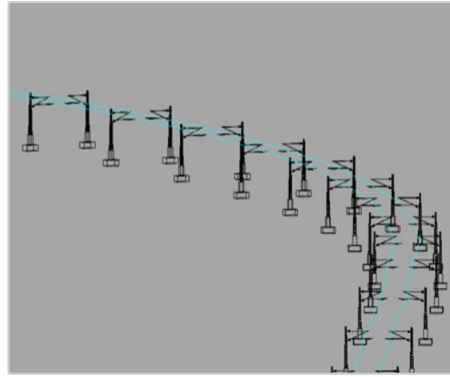
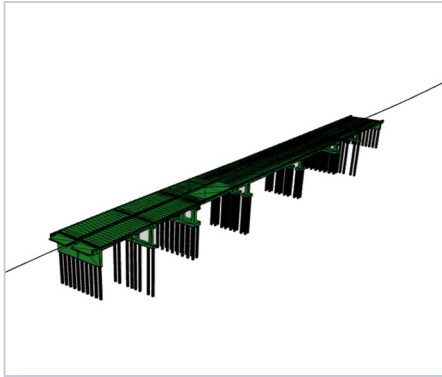
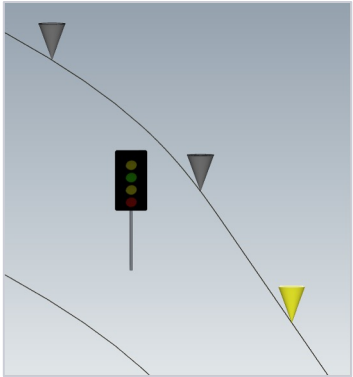
# Tegningsgenerering

Alignment: Railway Alignment 1  
 Schema: IFC4X3\_ADD2

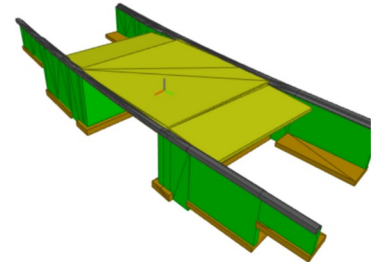
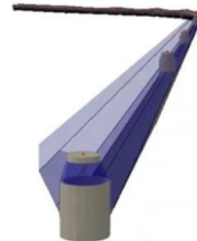
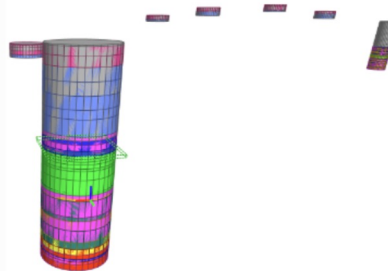
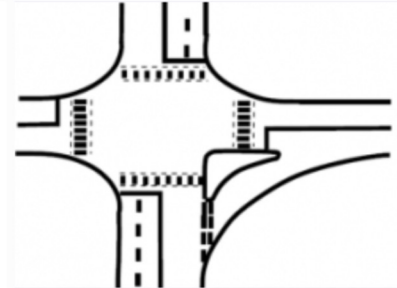
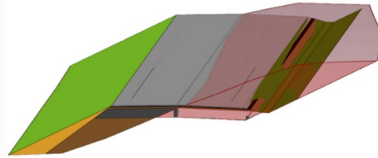
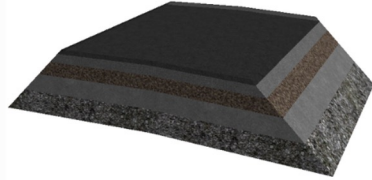




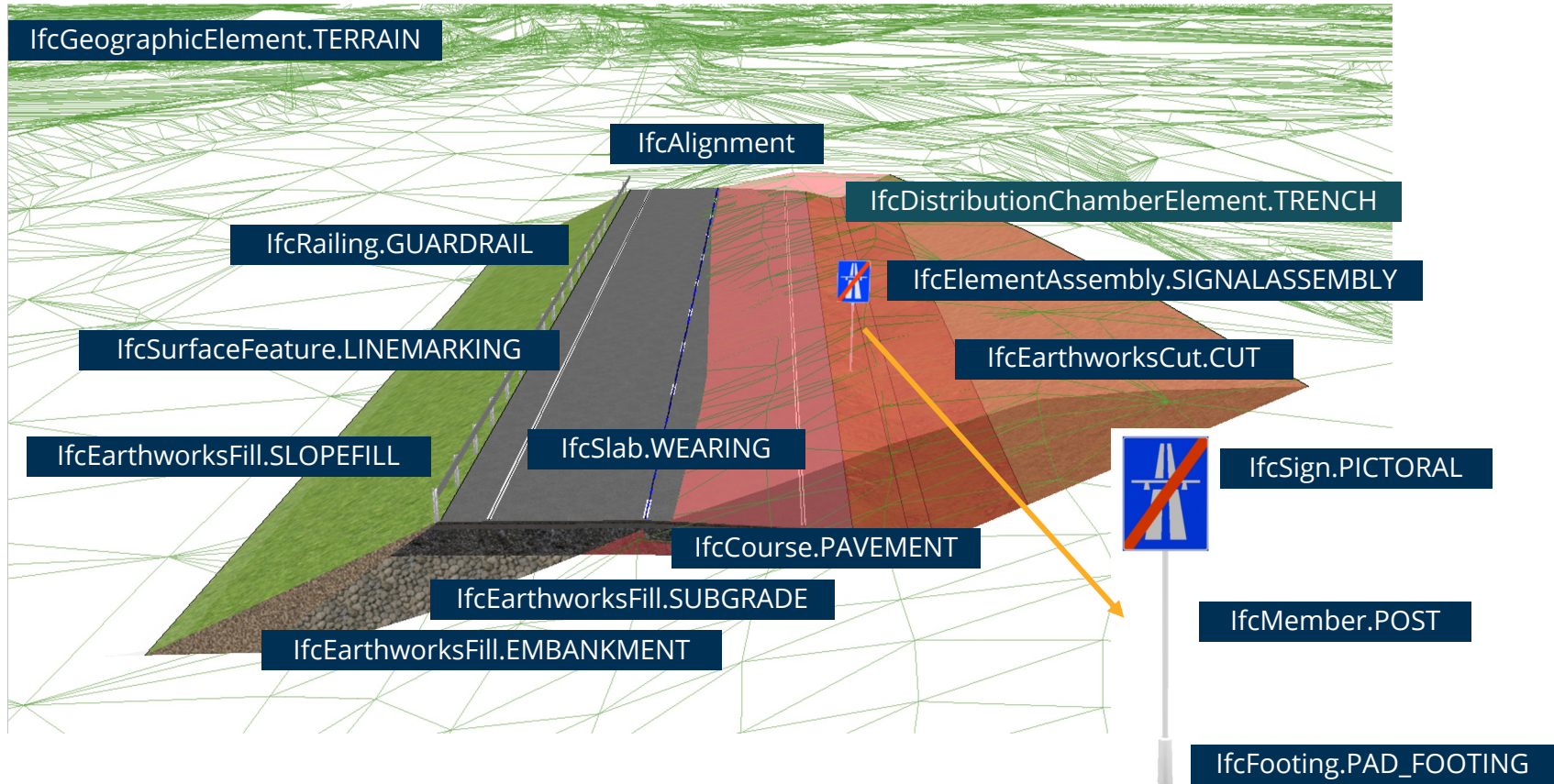
# Lineær referanse



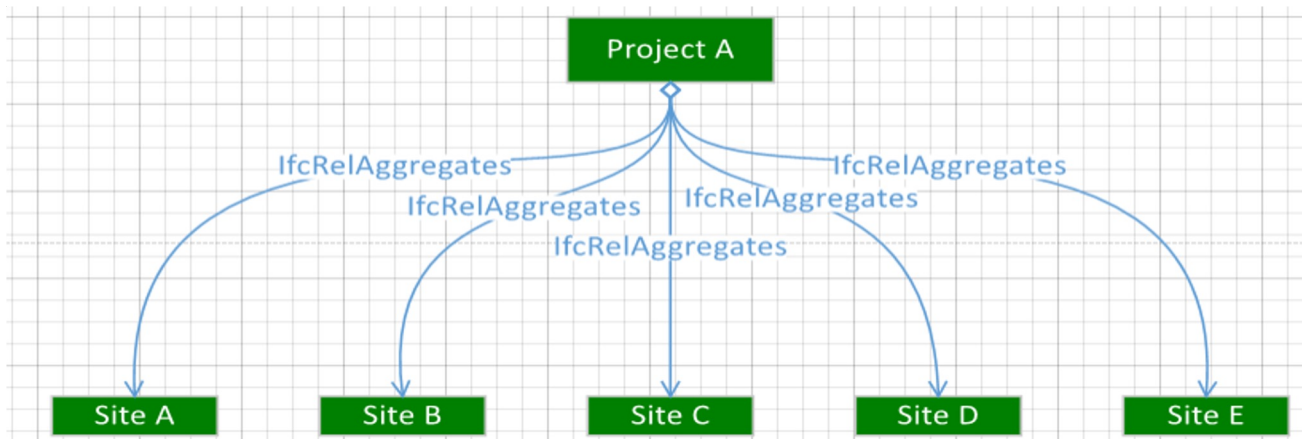
# Infrastruktur fysiske objekter



# Veimodell (IFC 4.3)

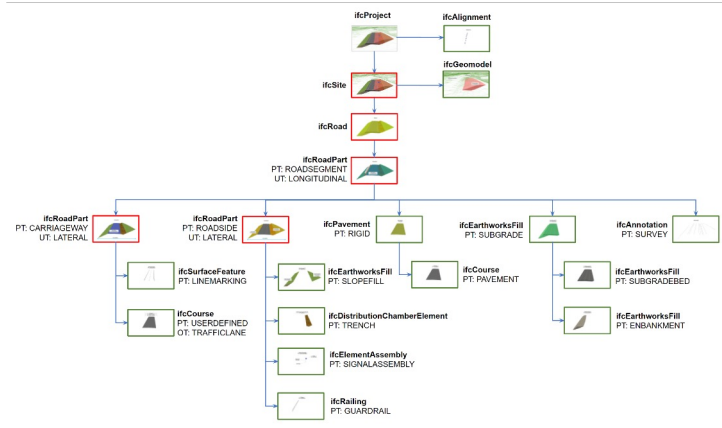
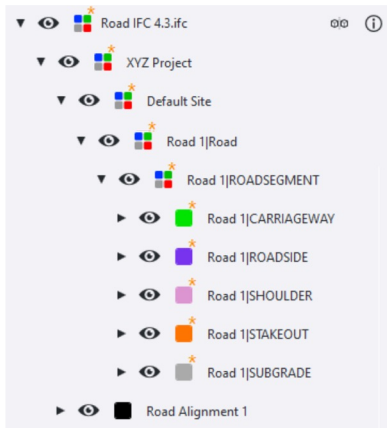
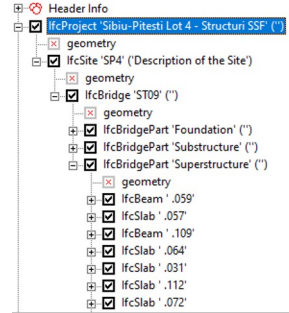
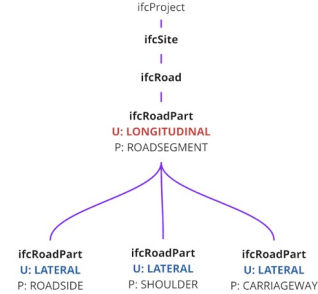
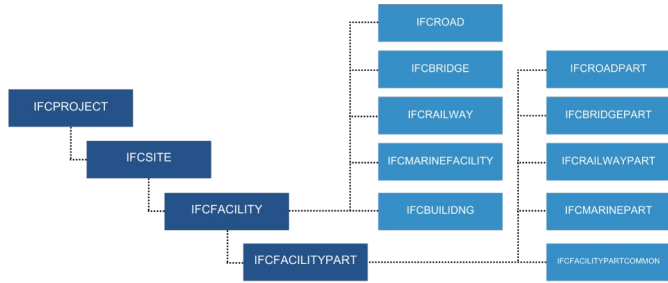


# (Prosjekt) Nedbrytningsstruktur





# Romlig nedbrytningsstruktur



Active	Type	Name	Description
<input checked="" type="checkbox"/>	Project	TRV HDMI	Road project
<input checked="" type="checkbox"/>	ifcAlignment	T616AAC0	
<input checked="" type="checkbox"/>	ifcAlignment	T636AAC0	
<input checked="" type="checkbox"/>	ifcAlignment	GC 636	
<input checked="" type="checkbox"/>	Site	Default Site	
<input checked="" type="checkbox"/>	Infrastructure		
<input checked="" type="checkbox"/>	ifcRoad	Road 636 USERDEFINED	
<input checked="" type="checkbox"/>	ifcRoadPart	Road 636 ROADSEGMENT	
<input checked="" type="checkbox"/>	ifcRoadPart	Road 636 CARRIAGEWAY	
<input checked="" type="checkbox"/>	ifcRoadPart	Road 636 SHOULDER	
<input checked="" type="checkbox"/>	ifcRoadPart	Road 636 ROADSIDE	
<input checked="" type="checkbox"/>	Element Assembly	Road 636 STAKEOUT	
<input checked="" type="checkbox"/>	ifcEarthworksFill	Road 636 SUBGRADE	
<input checked="" type="checkbox"/>	ifcPavement	Road 636 RIGID	
<input checked="" type="checkbox"/>	ifcRoad	Road 616 USERDEFINED	
<input checked="" type="checkbox"/>	ifcRoad	GC 636 USERDEFINED	
<input checked="" type="checkbox"/>	ifcGeomodel	Geomodel	Description of GeoModel



# Informasjon i IFC

The screenshot displays the Trimble Connect software interface. The central view shows a 3D model of a road with a blue centerline and green shoulders. The left sidebar shows a tree view of the project structure, with 'Road 1 | Road' selected. The right sidebar shows the properties of the selected object, including 'Reference Object', 'Properties', and 'Product'.

**Models**  
Selected models

- Road IFC 4.3.ifc
  - XYZ Project
    - Default Site
      - Road 1
        - Road 1 | Road**
          - Road 1 | ROADSEGMENT
            - Road 1 | CARRIAGEWAY
            - Road 1 | ROADSIDE
            - Road 1 | SHOULDER
            - Road 1 | STAKEOUT
            - Road 1 | SUBGRADE
          - Road Alignment 1

**Road 1 | Road**

**FAVORITE PROPERTIES** Collapse all

**Reference Object** ^

- File Format IFC ★
- Common Type ROAD ★
- + Show all

**PROPERTIES** Expand all

**Presentation Layers** v

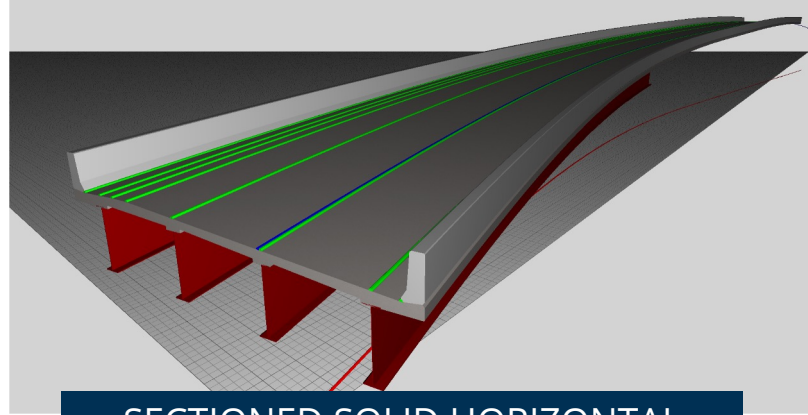
**Product** v

- e Pset\_Common** ^
  - MMI 100 ☆
  - Status In progress ☆
- Pset\_Road Design Criteria Common** ^
  - Design Speed 80 ☆
  - Design Traffic Volume 2000 ☆
  - Lane Width [UNKNOWN] 3,5 ☆
  - Number Of Through Lanes 3 ☆
  - Road Design Class IV ☆

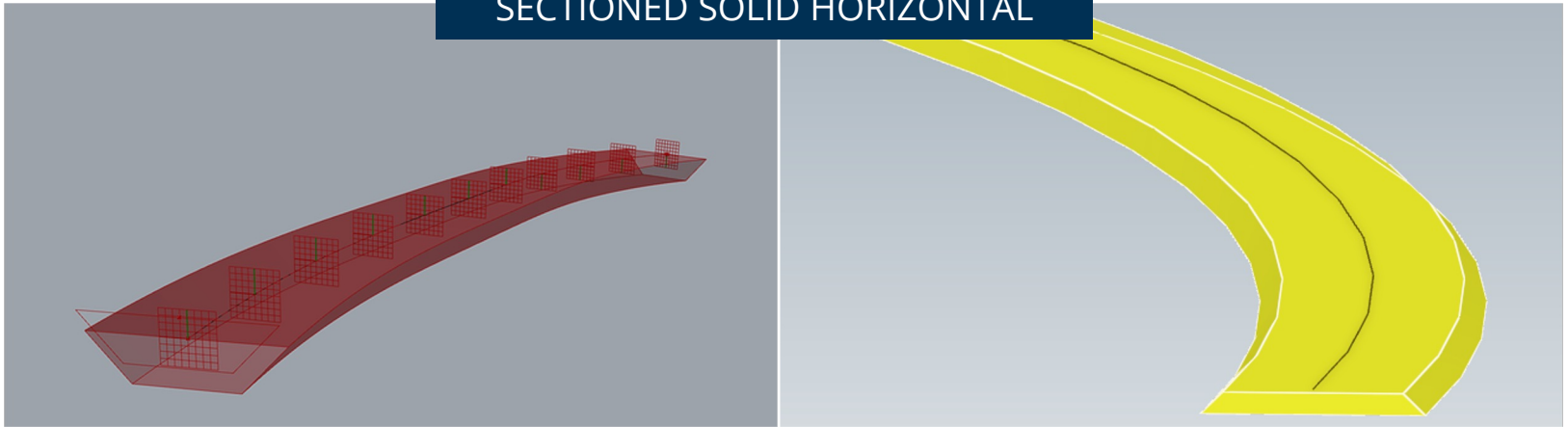
1 selected | Change visibility



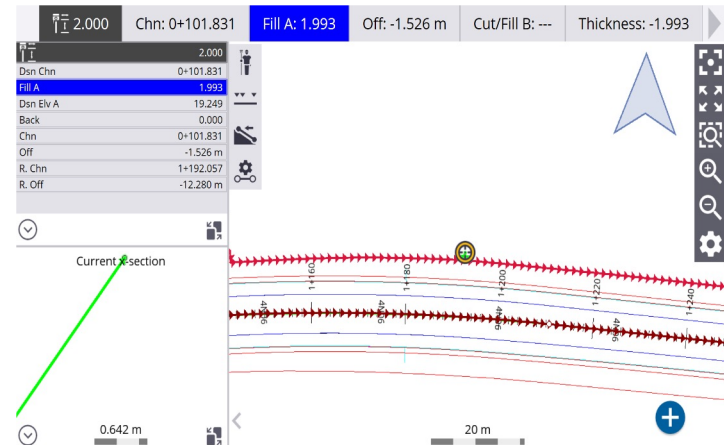
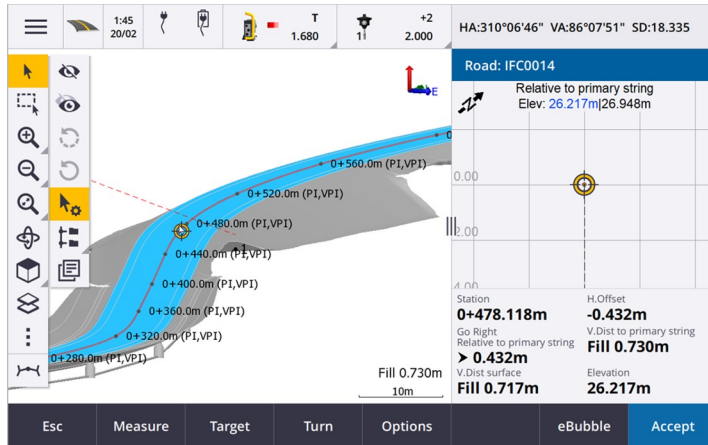
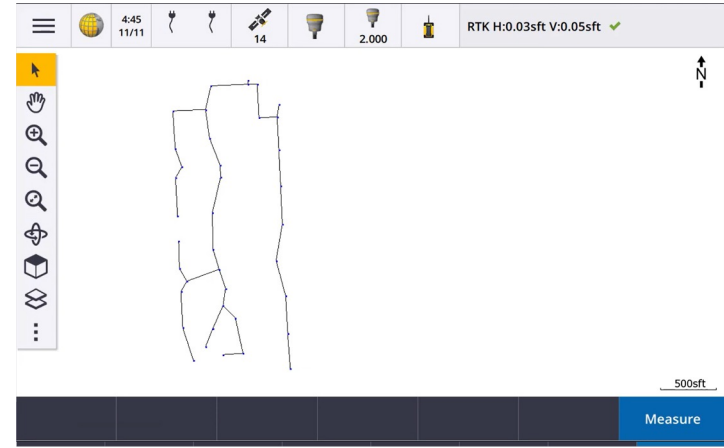
# Geometriske representasjoner i IFC 4.3



SECTIONED SOLID HORIZONTAL



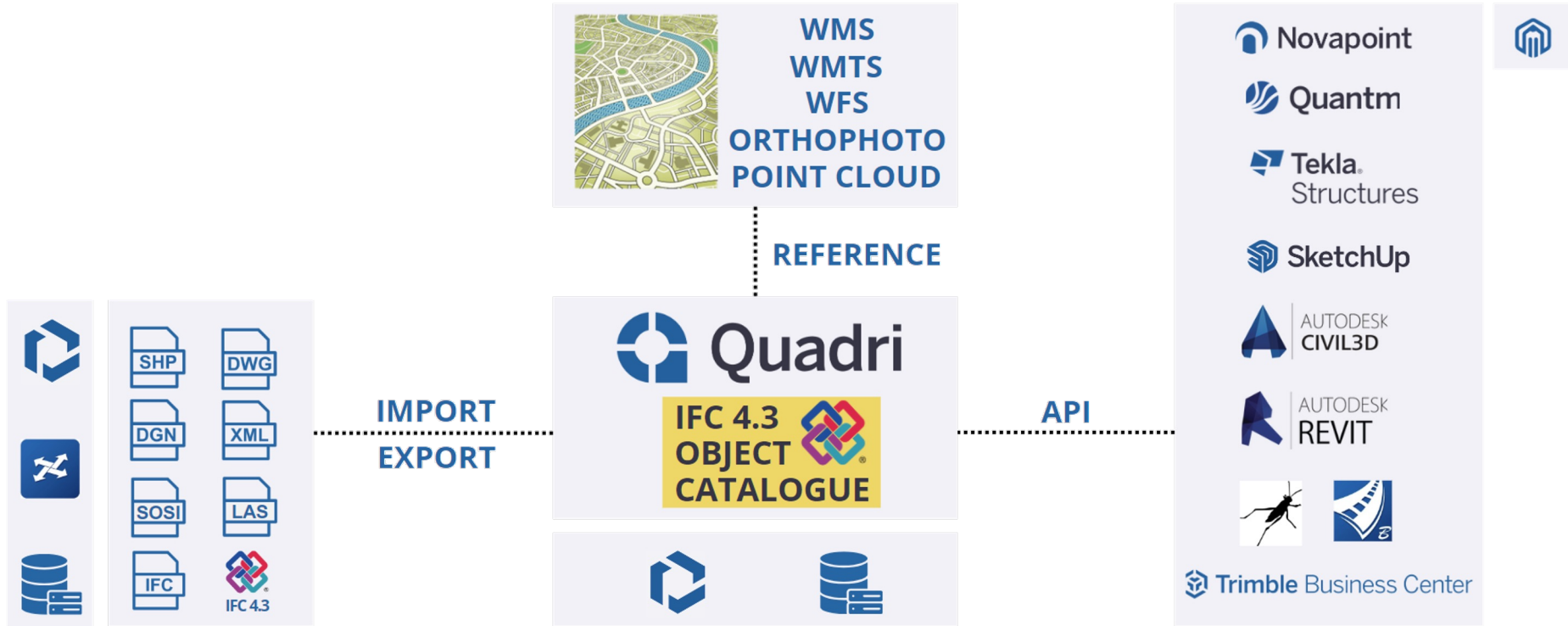
# Utsetting / Maskinstyring og kontroll



# Prosjektivssyklus



# Quadri og IFC 4.3





# Quadri og IFC 4.3

Quadri Bridge [Bridge] Marcin Psczorka

HOME VIEW IFC4.3 INSERT MODELLING CONNECTORS PRESENTATIONS OUTPUT

IfcProject System Editor Breakdown Structure IFC

IFC4.3

Explorer

Enter text to search...

- Bridge
  - Process 753
  - Features
    - IfcActorRole 2
    - IfcAlignment 8
    - IfcBeam 138
    - IfcBridge 1
    - IfcBridgePart 3
    - IfcClassification 1
    - IfcClassificationReference 6
    - IfcColumn 28
    - IfcFooting 16
    - IfcGroup 9
    - IfcMaterial 4
    - IfcPile 336
    - IfcProject 1
    - IfcSite 1
    - IfcSlab 121
    - IfcTask 70
    - IfcWall 6
    - IfcWorkPlan 1
    - IfcWorkSchedule 1
    - Network Elements 8
      - [Road]\_Bretea 1
      - [Road]\_Bretea 2
      - [Road]\_Bretea 3

Properties

IfcColumn

Internal System Attributes

Classification

Tasks

- Task (1) Import 4D IFC ST09.ifc.1
- Task (2) Locate along network 1

Identification

- Name .018
- designedOrExisting Existing (2)

Shared Bldg Elements Types

- Predefined Type COLUMN

Generic Property

- genericPropertyList 2 elements
  - PORR\_BridgesjAxis 20
  - PORR\_BridgesjTask\_Na... ST09\_ELEVATIE AX 20

Geometry

- IfcSolid Shell Only
- Volume 0
- Color 204, 204, 204
- Surface 1 1 TIN

Misc

- Parents (3)
  - Association 3
  - Axis 20
  - Pier
  - C35/45

Network Location

- Along Network 1 extents
- locatedAlong 9,402.5 m - 9,403.5 m @ -1501

Relationships

Spatial Breakdown structure

Enter text to search...

- Bridge
  - Sibiu-Pitesti Lot 4 - Structuri SSF
    - Result Features
      - SP4
        - Result Features
          - ST09
            - Result Features
              - Foundation
                - Contained In
                - IfcFooting
                - IfcPile
                - IfcSlab
              - Substructure
                - Result Features
                  - Contained In
                  - IfcColumn
                  - IfcWall
                - Superstructure
                  - Result Features
                    - Contained In
                    - IfcBeam
                    - IfcSlab

Sibiu-Pitesti Lot 4 - Structuri SSF

Property Set Editor: Information

Select Features Save to Template View content for: All items

Drag a column header here to group by that column

| Common       | Stations     | Column Common | Reference  | Status | Slope | Roll | Is External | Thermal T... | Load Beari... | Fire Rating |
|--------------|--------------|---------------|------------|--------|-------|------|-------------|--------------|---------------|-------------|
| FeatureTy... | FeatureNa... | From (m)      | To (m)     |        |       |      |             |              |               |             |
| IfcColumn    | .012         | 90,745.636    | 90,746.686 |        |       |      |             |              |               |             |
| IfcColumn    | .013         | 90,745.636    | 90,746.686 |        |       |      |             |              |               |             |
| IfcColumn    | .010         | 90,745.636    | 90,746.686 |        |       |      |             |              |               |             |
| IfcColumn    | .011         | 90,745.636    | 90,746.686 |        |       |      |             |              |               |             |
| IfcColumn    |              | 90,865.630    | 90,866.680 |        |       |      |             |              |               |             |
| IfcColumn    | .005         | 90,825.631    | 90,826.681 |        |       |      |             |              |               |             |

Feature Extent

472,612.541 m 402,909.087 m 0 m IFC Colored Basic 753 Start CAD

