Release Notes

CIVIL DESIGN AND ENGINEERING

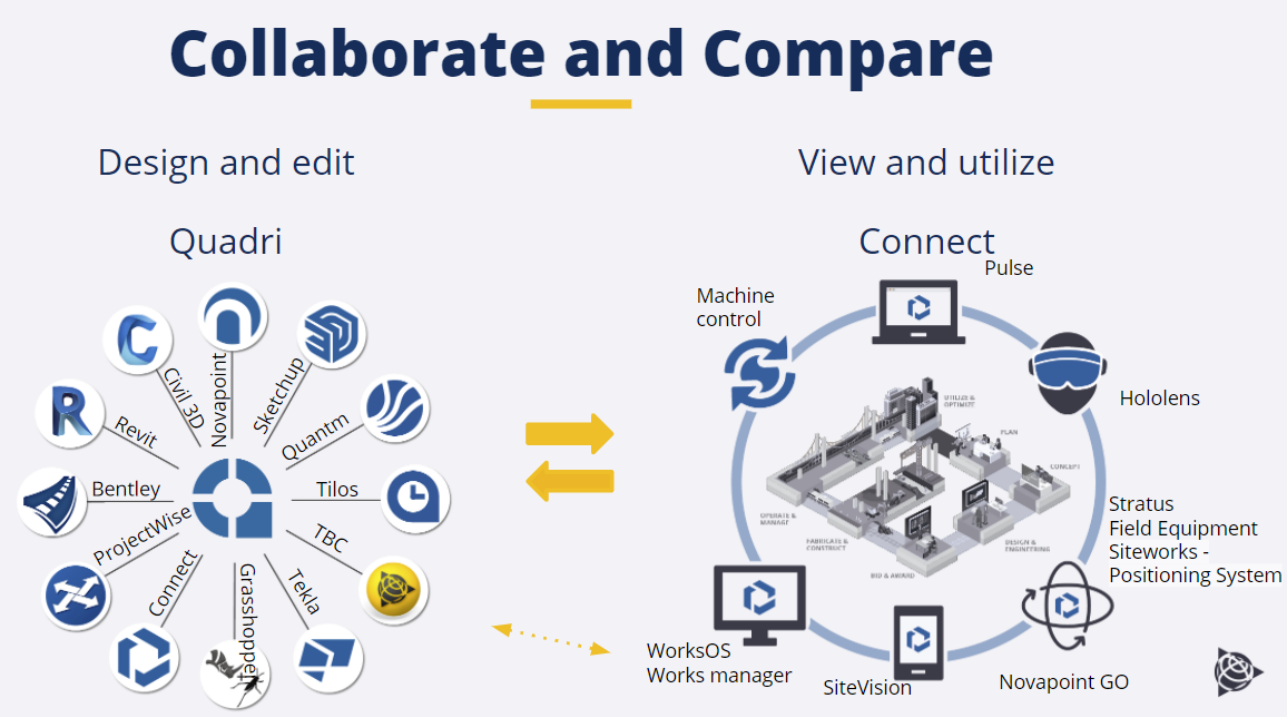
April 2021

Quantm 2021

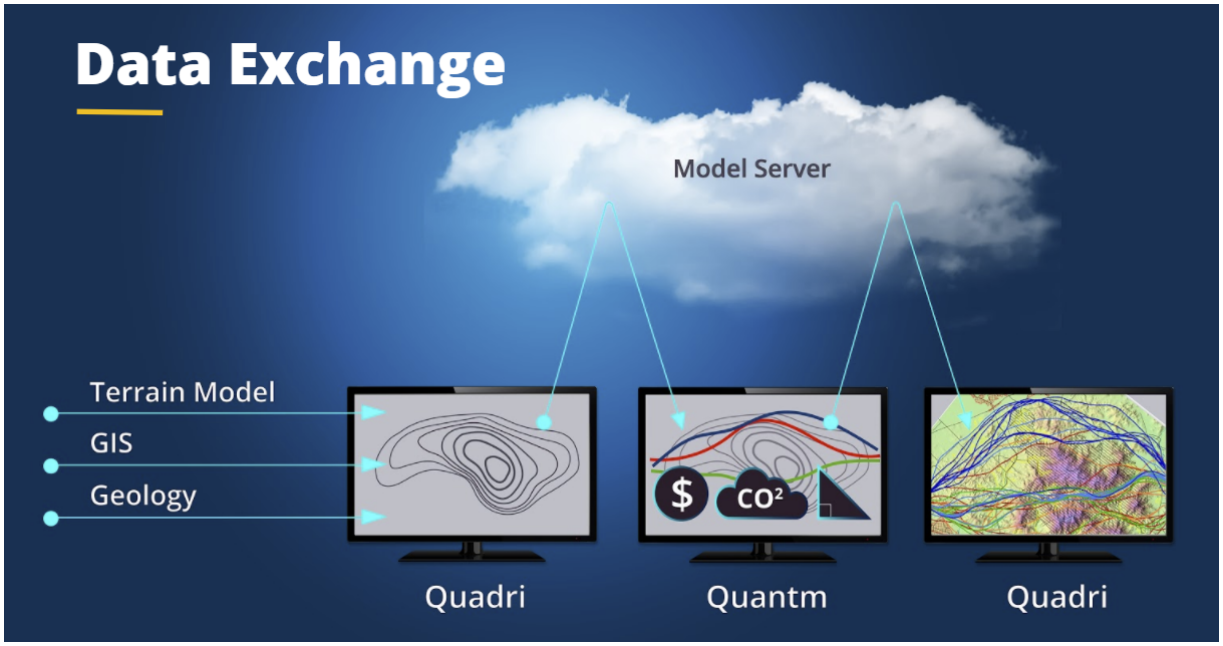
New Integrations & Workflows

Quantm - Quadri - Novapoint

- **Trimble Connected Construction Workflow** - The new bidirectional connectors reduce total planning time and provide faster integration between scoping, concept, feasibility, scheduling, detailed design, visualization, construction and maintenance.

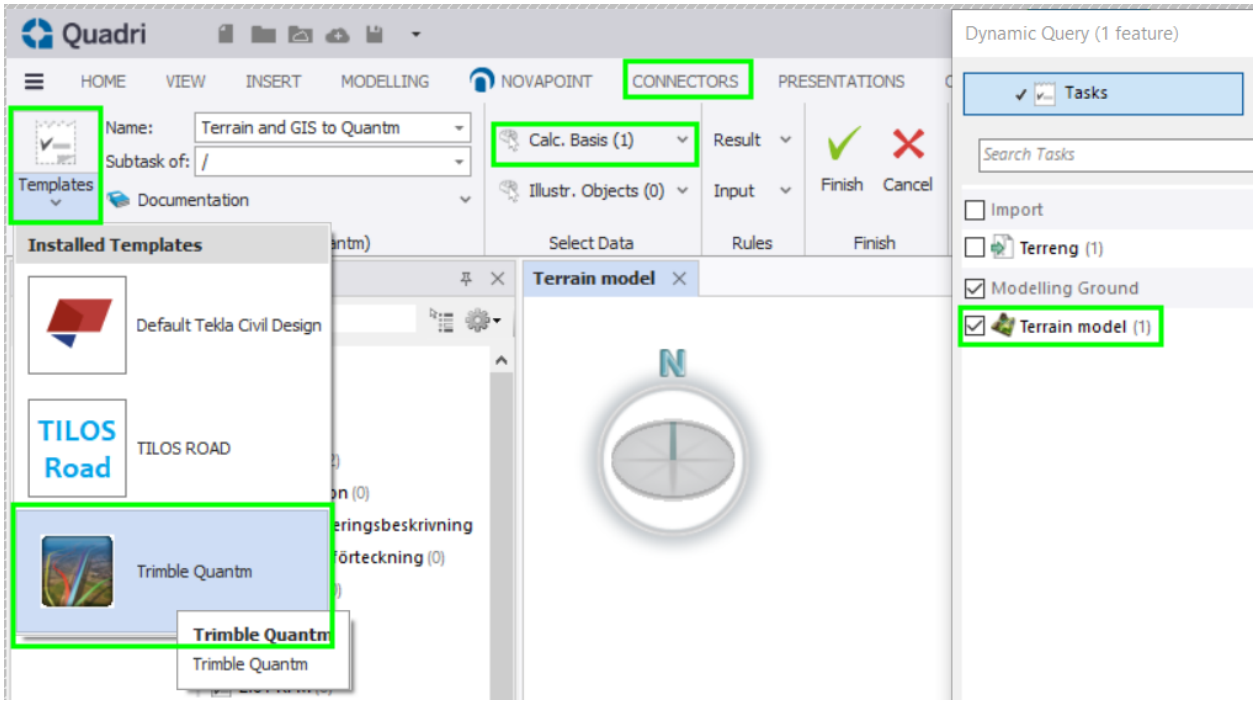


- **Quantm - Quadri Connector** - Using a bidirectional task integration, Quantm can read data, like terrain surface models and GIS information, stored in Quadri, as well as integrate with other tools in the infrastructure ecosystem. Quantm is now able to:
  - Receive terrain model (DTM) directly from Quadri
  - Receive GIS data directly from Quadri
  - Send alignments to Quadri

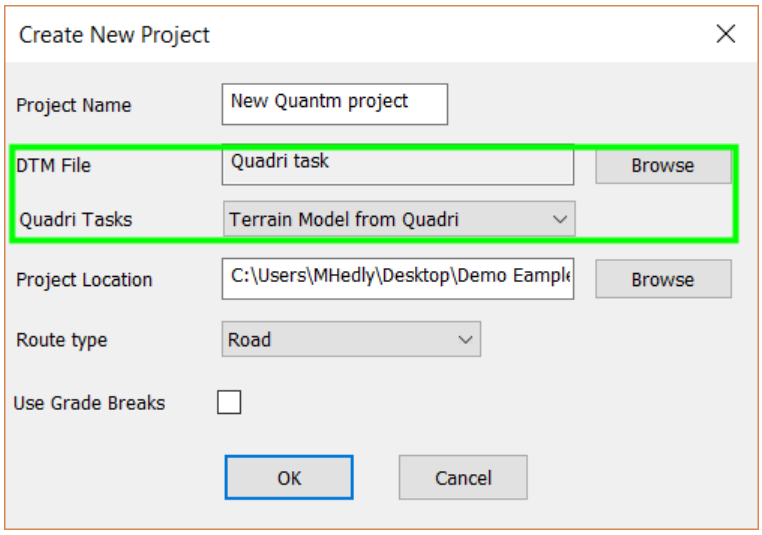


Set up the connection Quantm-Quadri

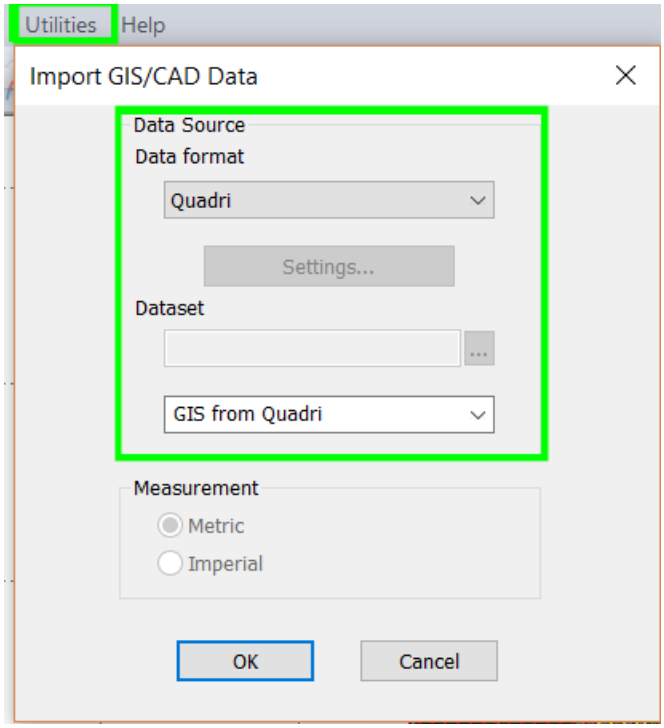
Have both software open. Create a task connector in Quadri with data to Quantm. Tips are to create one for the terrain model and one for the GIS data (multiple tasks can be created). In this case the terrain model is used.



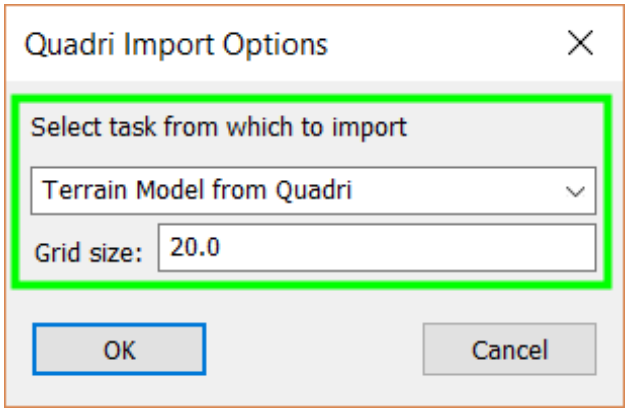
Create a new Quantm project. Read terrain model from Quadri via bidirectional task connector.



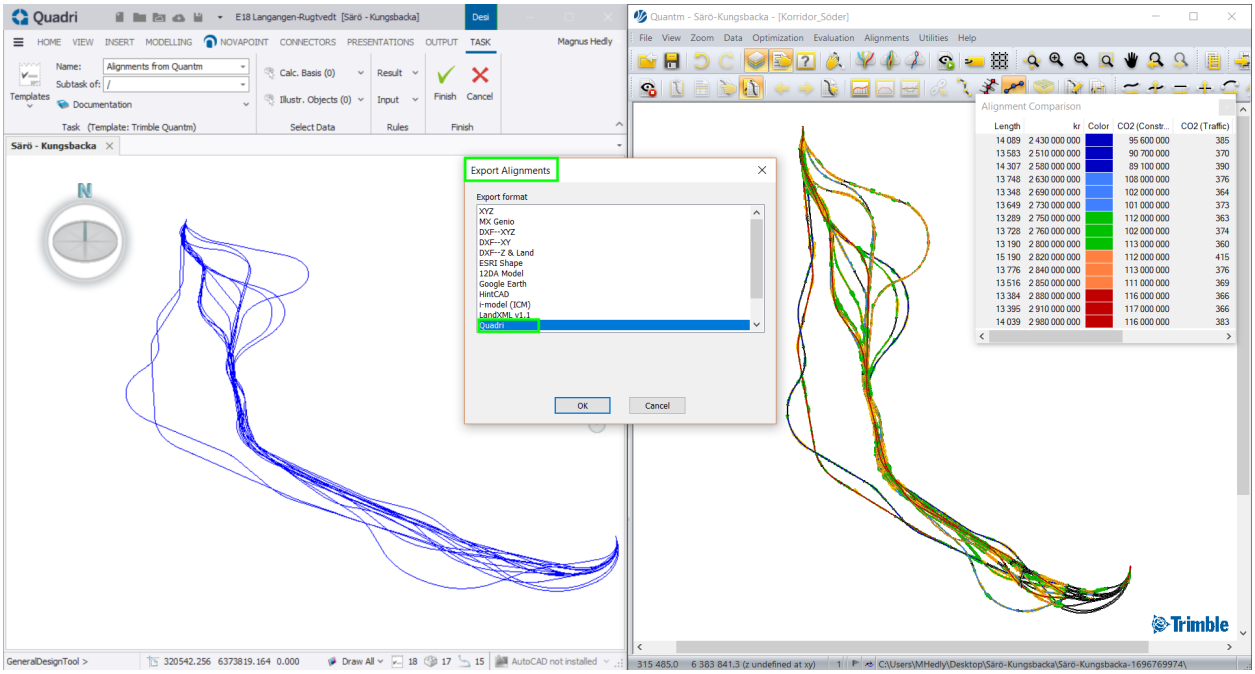
Receive GIS data from Quadri. First create the task connector in Quadri with the GIS data you will send to Quantm. Inside Quantm, go to utilities and import GIS/CAD.



- **Choose a DTM size** - When creating a Quantm project and reading the terrain model from Quadri, you can now choose the grid size density of the terrain model.



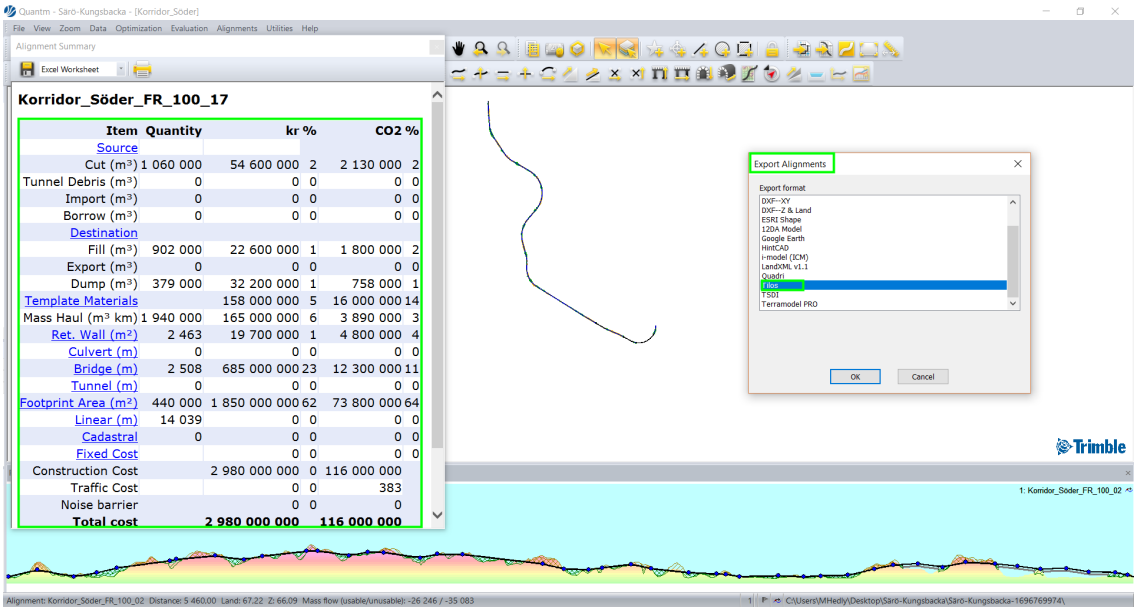
Send Quantm alignments directly back to the BIM platform in the Quadri model



- **Utilize optimized alignments** from Quantm, stored in Quadri, to do detailed design in Novapoint or other design applications.

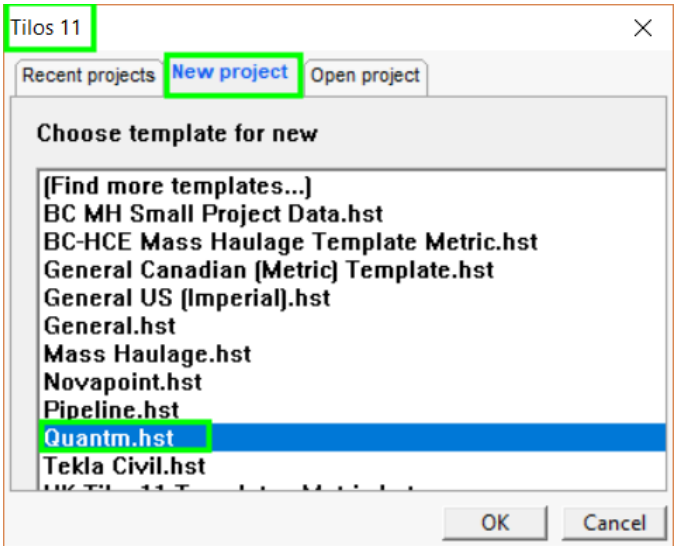
Quantm - Tilos

- **Send Quantm data to Tilos** - Send XML files with project details, such as road elevation, terrain elevation, earthworks, template materials, structures and quantities, from Quantm to quickly create a time-distance schedule in Tilos.

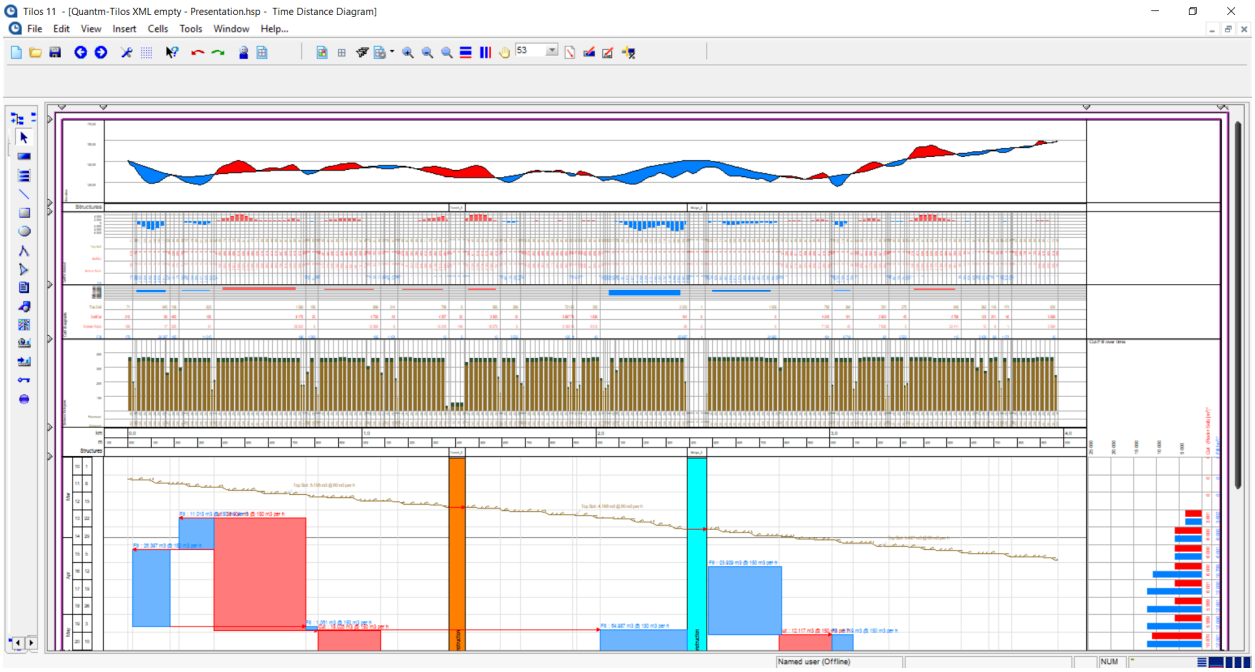


Item	Quantity	kr	%	CO2	%
Source					
Cut (m³)	1 060 000	54 600 000	2	2 130 000	2
Tunnel Debris (m³)	0	0	0	0	0
Import (m³)	0	0	0	0	0
Borrow (m³)	0	0	0	0	0
Destination					
Fill (m³)	902 000	22 600 000	1	1 800 000	2
Export (m³)	0	0	0	0	0
Dump (m³)	379 000	32 200 000	1	758 000	1
Template Materials		158 000 000	5	16 000 000	14
Mass Haul (m³ km)	1 940 000	165 000 000	6	3 890 000	3
Ret. Wall (m²)	2 463	19 700 000	1	4 800 000	4
Culvert (m)	0	0	0	0	0
Bridge (m)	2 508	685 000 000	23	12 300 000	11
Tunnel (m)	0	0	0	0	0
Footprint Area (m²)	440 000	1 850 000 000	62	73 800 000	64
Linear (m)	14 039	0	0	0	0
Cadastral	0	0	0	0	0
Fixed Cost		0	0	0	0
Construction Cost		2 980 000 000	0	116 000 000	
Traffic Cost		0	0	383	
Noise barrier		0	0	0	
Total cost		**2 980 000 000**		**116 000 000**	

Open Tilos version 11 (or newer) and import the XML from Quantm



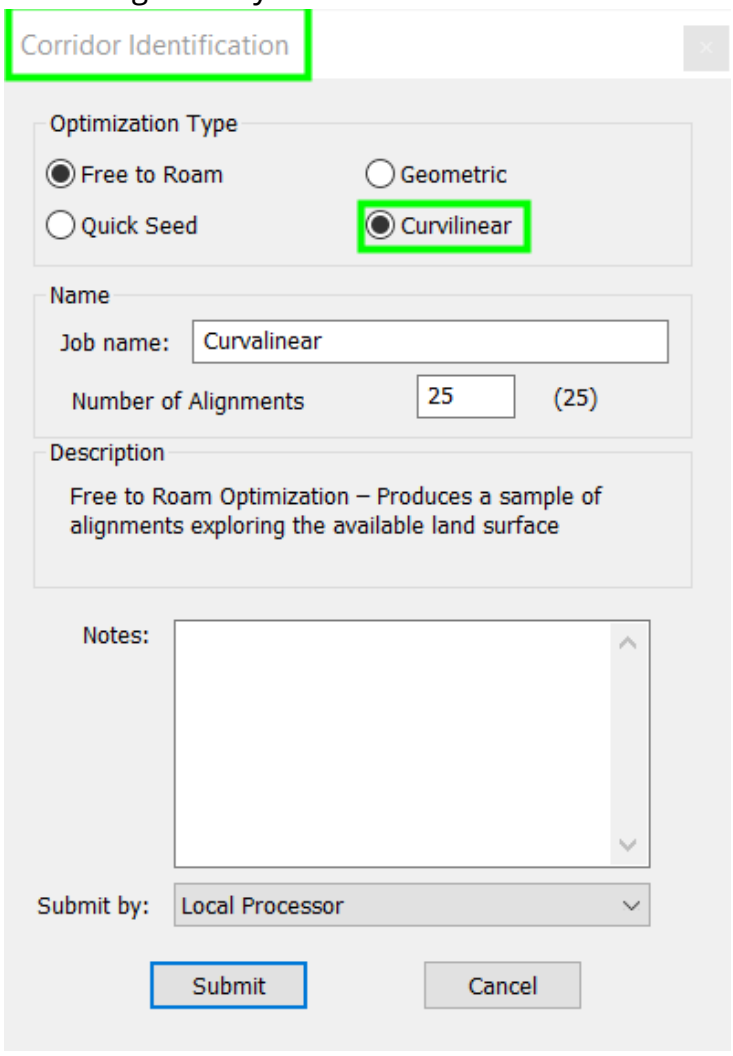
Display land and road/rail elevation information, cut and fill quantities, construction material, and structures with locations in a time-distance diagram or in a traditional Gantt chart. Use Tilos to create activities, links, plan resources, costs, CO_2 for decision making during tender, feasibility, design and construction.


Tilos 11 - [Quantm-Tilos XML empty - Presentation.hsp - Time Distance Diagram]
File Edit View Insert Cells Tools Window Help...
Named user (Offline)
NUM

New Enhancements & Features

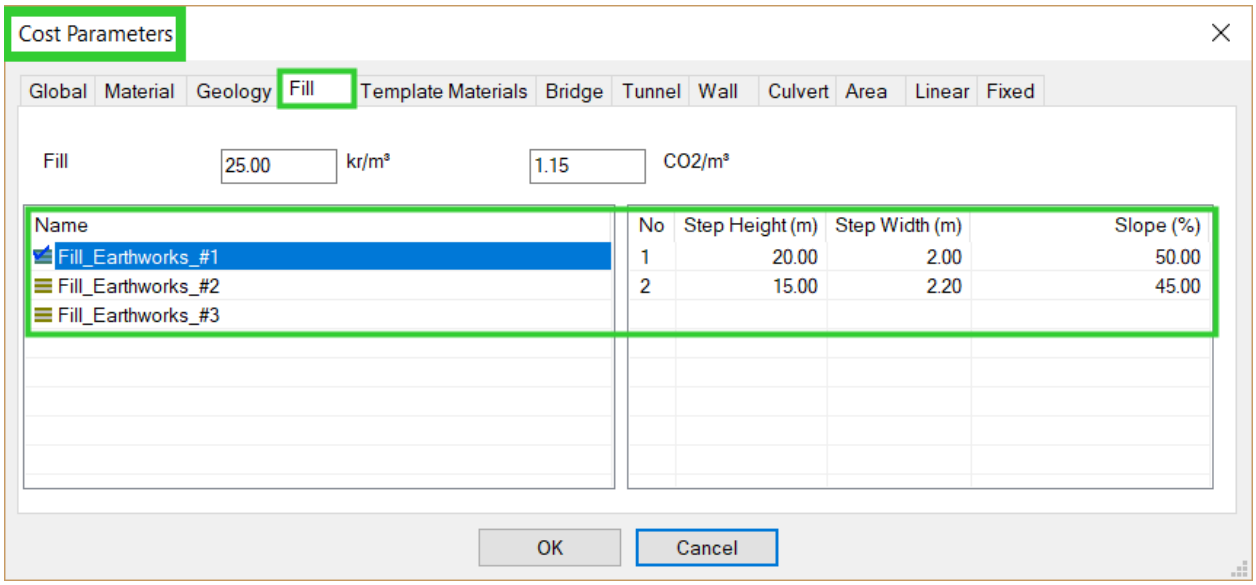
- **Curvilinear optimization**

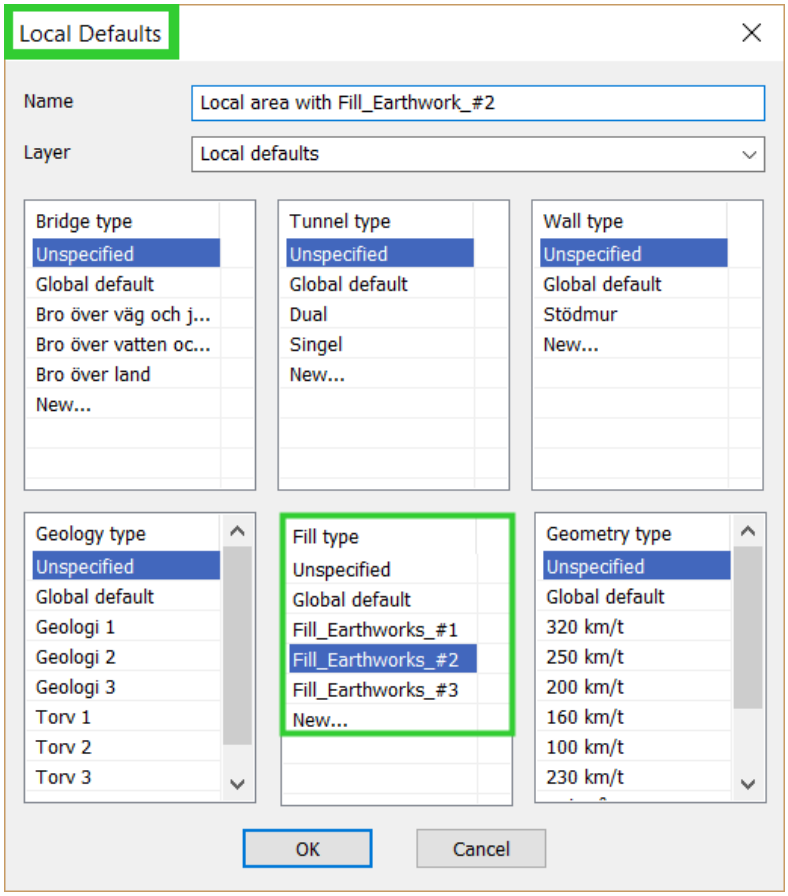
  Use ‘Curvilinear’ optimizations for better speed and spread of results without accurate geometry.



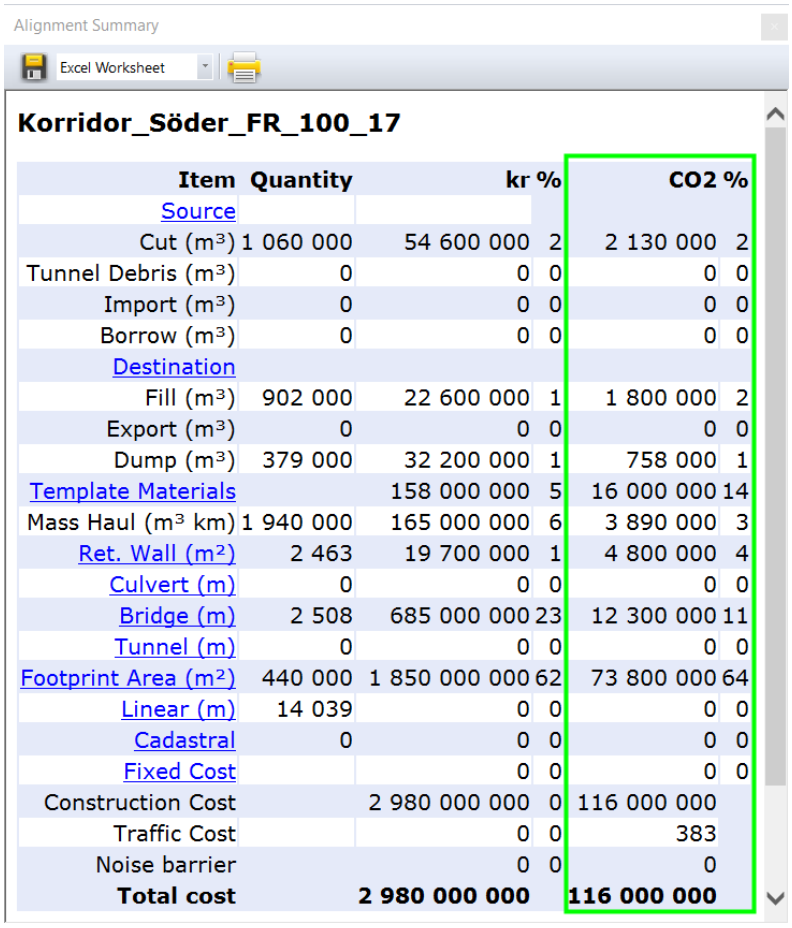
- **Varied fill**

  Ability to have varied fill cost zones within a scenario.





- **CO_2 Calculator**
  - Add values with separators in the cost parameter input fields (, and .)
  - Ability to show CO_2 for all items (Construction and Traffic) in the Alignment Summary



Alignment Summary

Excel Worksheet

Korridor_Söder_FR_100_17

Item	Quantity	kr	%	CO2	%
Source					
Cut (m³)	1 060 000	54 600 000	2	2 130 000	2
Tunnel Debris (m³)	0	0	0	0	0
Import (m³)	0	0	0	0	0
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Destination					
Fill (m³)	902 000	22 600 000	1	1 800 000	2
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Linear (m)	14 039	0	0	0	0
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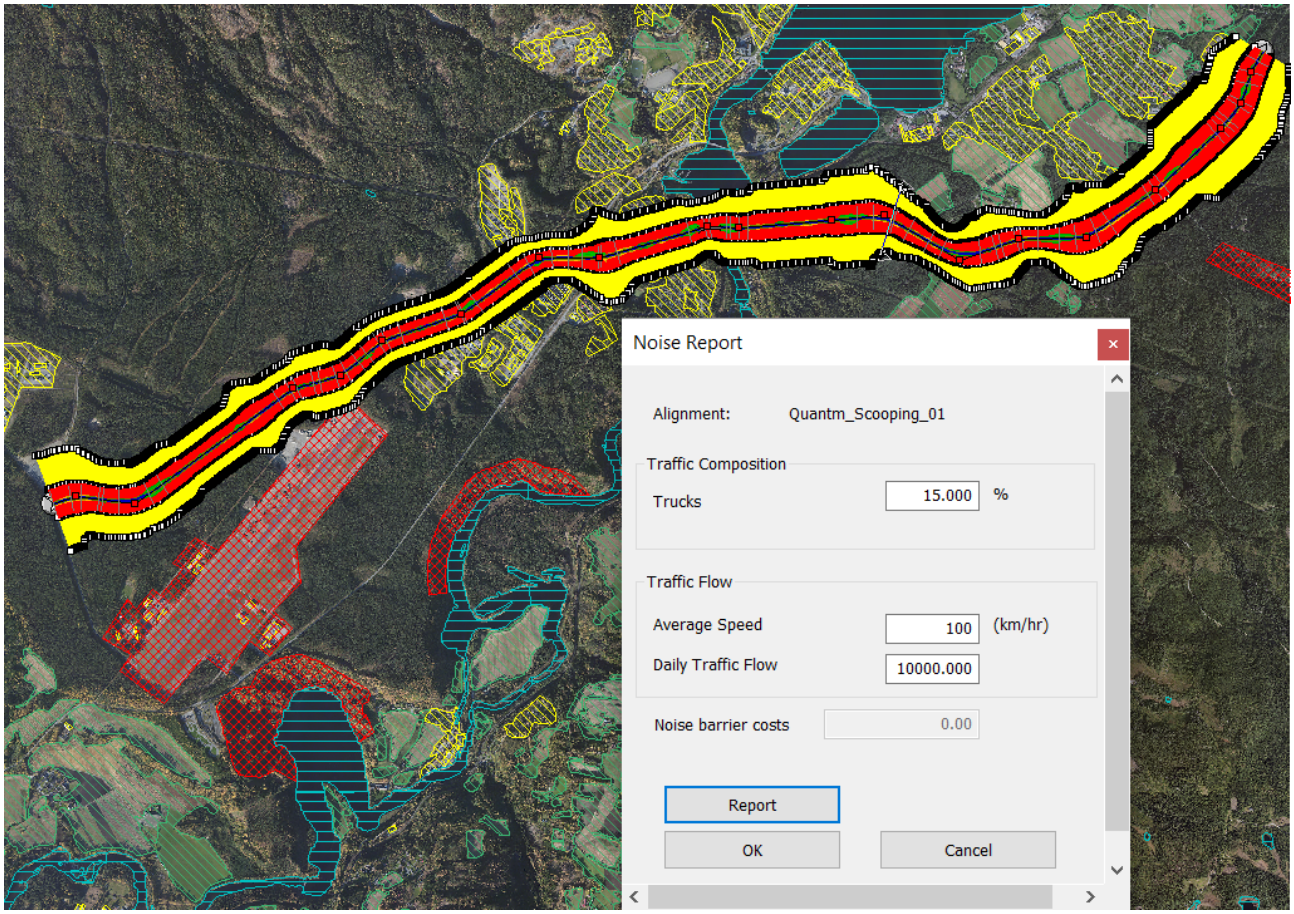
Fixed Cost		0	0	0	0
Construction Cost		2 980 000 000	0	116 000 000	
Traffic Cost		0	0	383	
Noise barrier		0	0	0	
Total cost		**2 980 000 000**		**116 000 000**	

- **Noise Indications**

  Audiovisual Noise Indicator. Noise Indication based on heavy traffic, speed limit, grade and daily traffic flow.



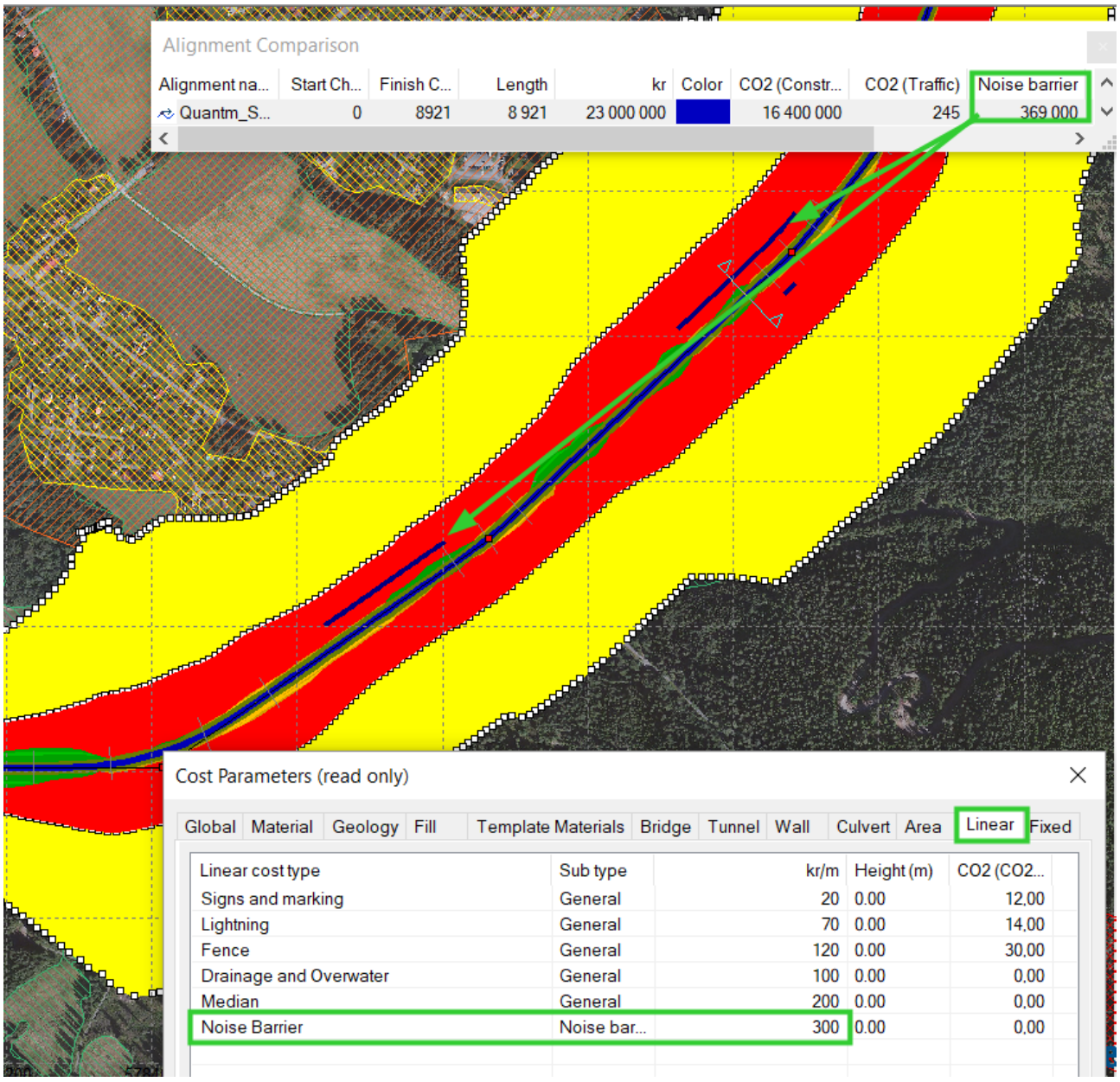
Red = > 65dBA

Yellow = 55dBa-65dBA

No color = <55dBA

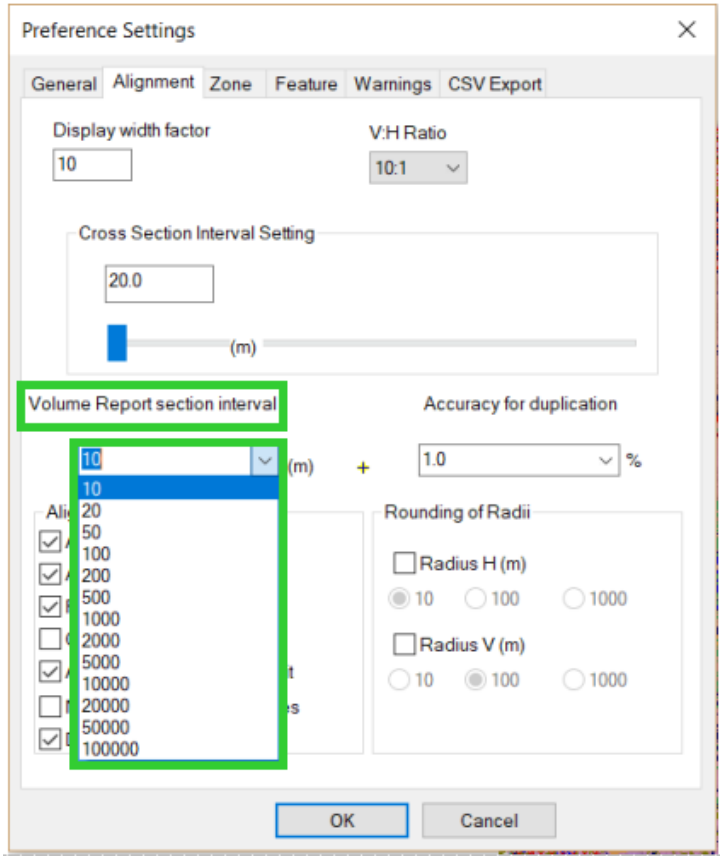
- **Noise barrier cost**

  Apply cost and CO2 to construct Noise measurements in the linear cost



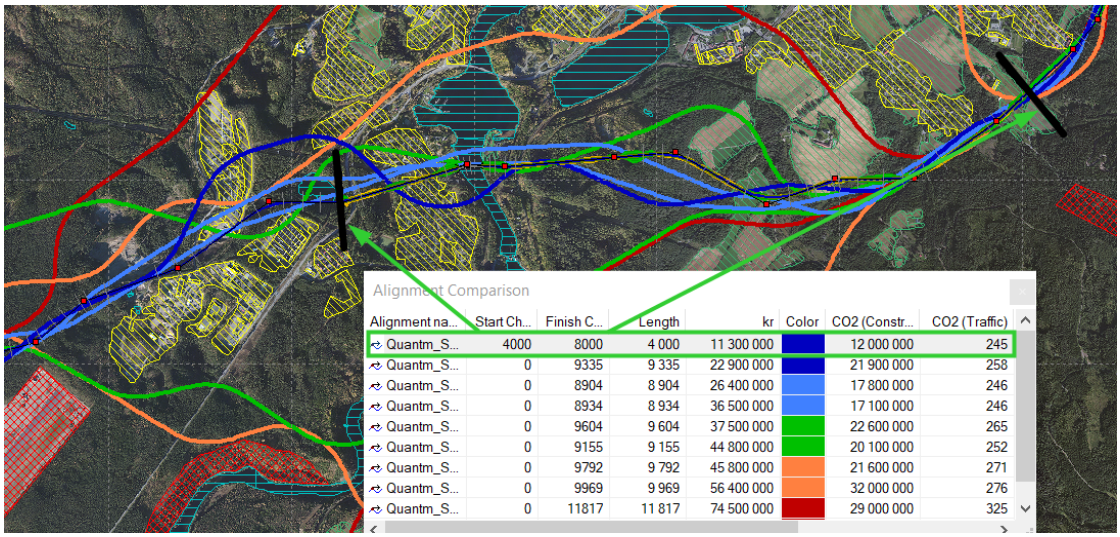
- **Volume report for detailed section**

  Volume calculations down to every 10 m. Adjust the section intervals in preference settings under the alignment tab. Cross Section intervall settings need to be larger than the volume report section intervall.



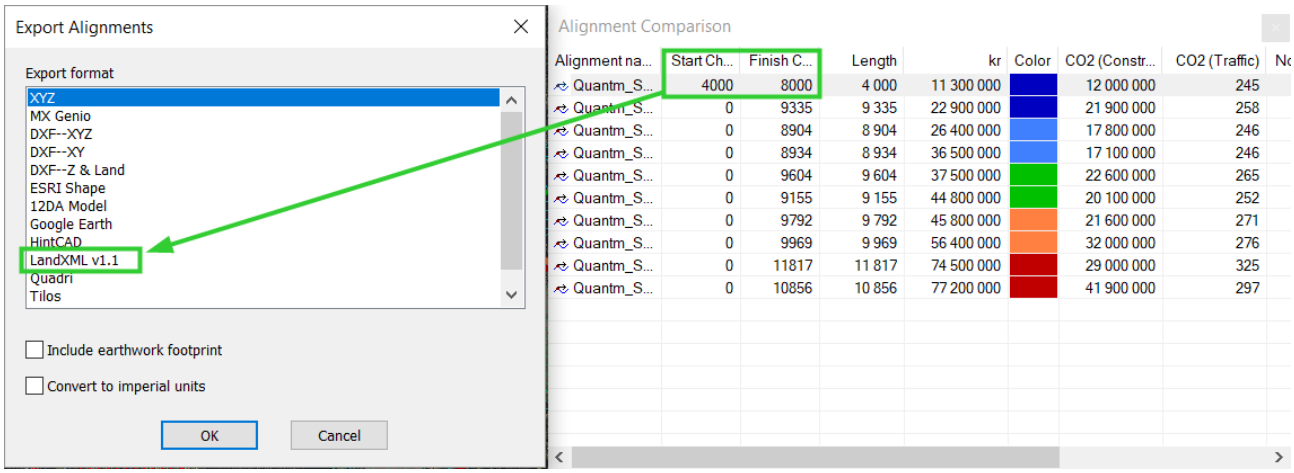
- **Cost part of alignments**

  Update/calculate cost for the selected sections or parts of the alignment. Visualize the start- and end chainage of the cutted alignment in plan and profile view.



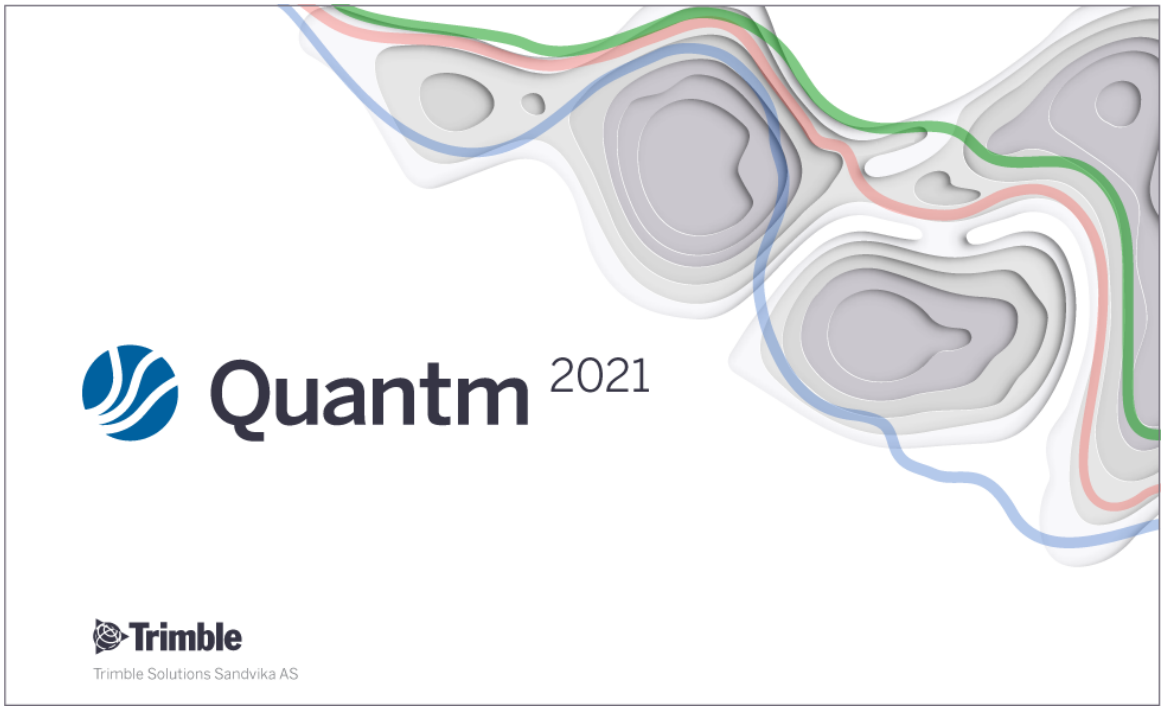
- Export part of alignment by LandXML to design tools

  Make sure the start- and end change is not placed in a transition curve.



Quantm Interface (UI) & Settings

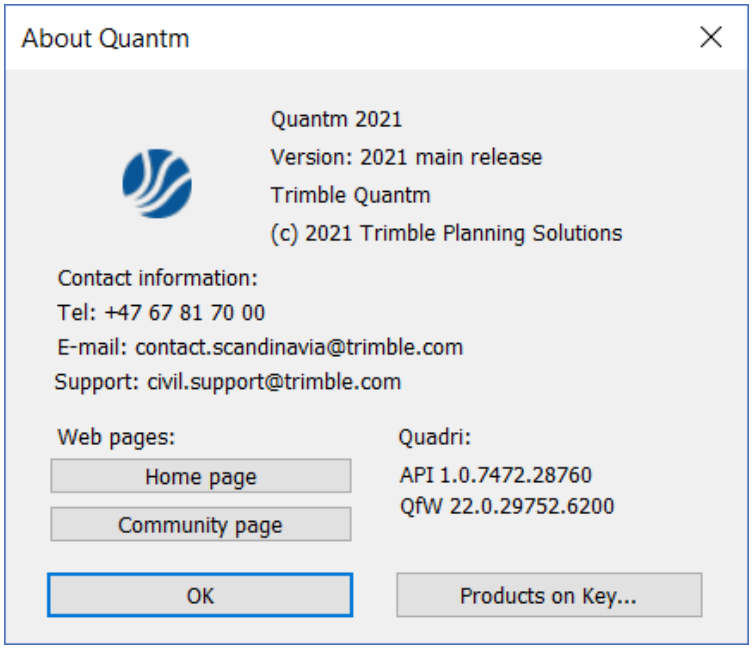
- **New splash screen** - Modernize the startup splash screen



- **New Desktop Icon** - Modern Trimble desktop Icon aligned with the Connected Construction.

- **Quantm Icon** - inside the software updated (up left corner).

- **About Quantm** - Updated information
    - link to new web page
    - Link to new community page.
    - Quadri version (If Quadri is open)
    - Contact information



Fixed

- **CO_2 decimal bug** - The value in cost parameters for CO_2 under tab “Materials and Linear Cost” could not handle decimals. Now any number is allowed.
- **GIS data are checked for issues** - Zones and features are checked for issues even when they are not active.
- **Quantm import Parabola Curves** - Allows alignment created with parabolas to be correctly imported.
- **Importing alignment crest error (R=3000m)** - The crest of imported alignments will follow the nativ created crest radius and not automatically be converted to R=3000m.
- **Indian Rupee** - Now possible to export Excel alignment reports
- **Help menu** - Updated
- **Progress bar** - When exporting alignments summaries to Excel
- **Portougees Brazilian** - Language enhancements

Reaching Sales, Support, and the Community

For more information, please use these resources:

Quantm Resource Center

Search for release notes, learning guides, and technical articles, and more in the Quantm Resource Center!

Quantm Support mail

civil.support@trimble.com

Trimble Connected Construction

Read more here.