TARC - 24.000 km Railway

Trimble Technology Solutions for modern infrastructure

Presented by: Magnus Hedly

Trimble

Agenda

01 Intro
TARC and Trimble participants

02 Infrastructure Challenges
What are your pains?

03 Trimble Solutions Overview
For infrastructure

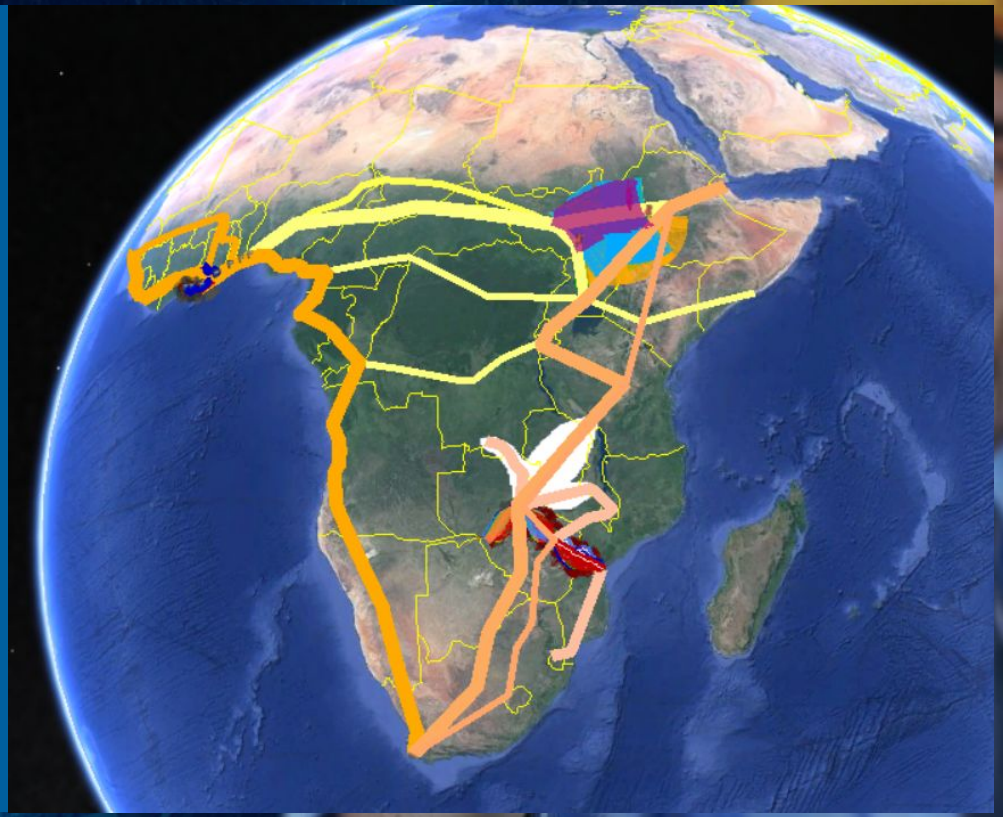
04 Quantm
Feasibility

05 DEMO

02

Infra Challenges

Pain points in Civil Engineering



Quantm - Ghana - [Ghana_250]

File View Zoom Data Optimization Evaluation Alignments Utilities Help

Layer View

Layer/Item	V...	A...
DTM	☑	
Satellite image	☑	
End Points	☑	
EW limits	☑	☑
Waystations	☑	☑
Area cost	☑	☑
Avoid	☑	☑
River	☑	☑
Water	☑	☑

Scenario Notes

- Ghana_250
- DTM_Ghana
- New_1
- New
- New_1_1
- Ghana_250_FR_1
- Test_100_linjer_300km
- Ghana_250_FR_2
- TEST_100_300
- Magnus

Note

Alignment Comparison

Alignment na...	Start Ch...	Finish C...	Length	€	Color	CO2 (Constr...	CO2 (Traffic)
Ghana_25...	0	339475	339 475	2 380 000 000		988 000 000	9 220
Ghana_25...	0	333061	333 061	2 480 000 000		972 000 000	9 040
Ghana_25...	0	327059	327 059	2 620 000 000		970 000 000	8 880
Ghana_25...	0	333829	333 829	2 620 000 000		1 010 000 000	9 060
Ghana_25...	0	328408	328 408	2 650 000 000		937 000 000	8 920
Ghana_25...	0	323847	323 847	2 660 000 000		938 000 000	8 790
Ghana_25...	0	370130	370 130	2 720 000 000		1 080 000 000	10 000
Ghana_25...	0	327704	327 704	2 740 000 000		918 000 000	8 900
Ghana_25...	0	333635	333 635	2 910 000 000		1 000 000 000	9 060
Ghana_25...	0	327541	327 541	2 960 000 000		948 000 000	8 890
Ghana_25...	0	334240	334 240	2 990 000 000		996 000 000	9 080
Ghana_25...	0	334631	334 631	3 080 000 000		951 000 000	9 090
Ghana_25...	0	327551	327 551	3 230 000 000		933 000 000	8 890
Ghana_25...	0	331804	331 804	3 250 000 000		1 040 000 000	9 010
Ghana_25...	0	335281	335 281	3 360 000 000		1 160 000 000	9 100
Ghana_25...	0	338743	338 743	3 460 000 000		1 050 000 000	9 200
Ghana_25...	0	329107	329 107	3 510 000 000		954 000 000	8 940
Ghana_25...	0	395041	395 041	3 530 000 000		1 090 000 000	10 700
Ghana_25...	0	325750	325 750	3 580 000 000		990 000 000	8 850
Ghana_25...	0	330911	330 911	3 600 000 000		948 000 000	8 980
Ghana_25...	0	327821	327 821	3 610 000 000		940 000 000	8 900
Ghana_25...	0	329112	329 112	3 650 000 000		1 030 000 000	8 940
Ghana_25...	0	328235	328 235	3 720 000 000		930 000 000	8 910

800000 750000 700000 650000

500000 550000 600000 650000 700000 750000 800000 850000 900000 950000 1000000

Trimble

Profile View

1: Ghana_250_FR_1_07

494 419,3 724 335,1 (xy outside terrain model)

0 C:\Data\Quantm\Prosjects_Utlandet\Africa\West\Ghana\Ghana-1769056182\

03

Trimble solutions

BIM for the entire lifecycle - working in an common data environment

Trimble BIM Continuum through the lifecycle

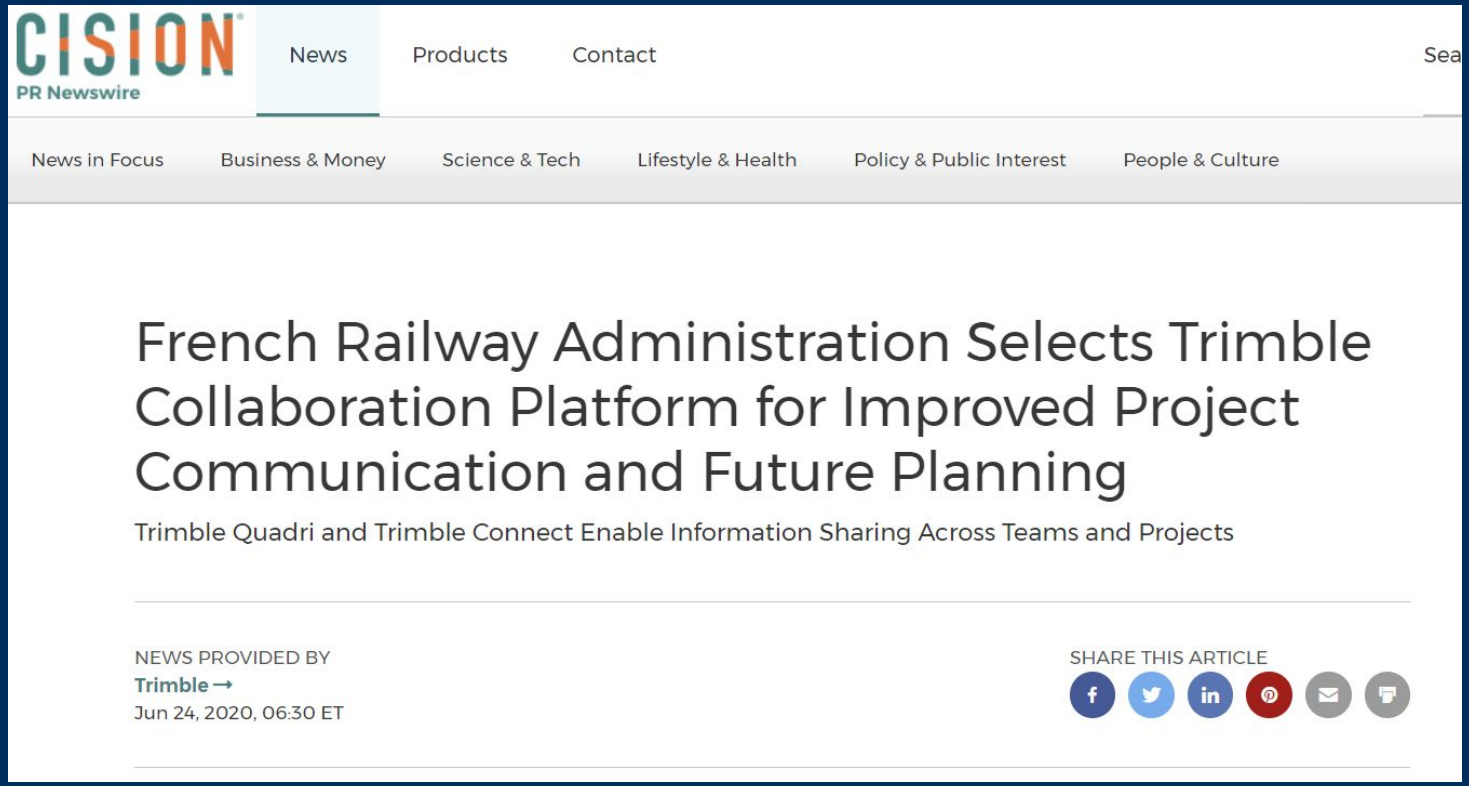
CONCEPT & DESIGN

OWN, OPERATE & MAINTAIN

SCHEDULE & PROJECT MANAGEMENT

EXECUTE CONSTRUCTION

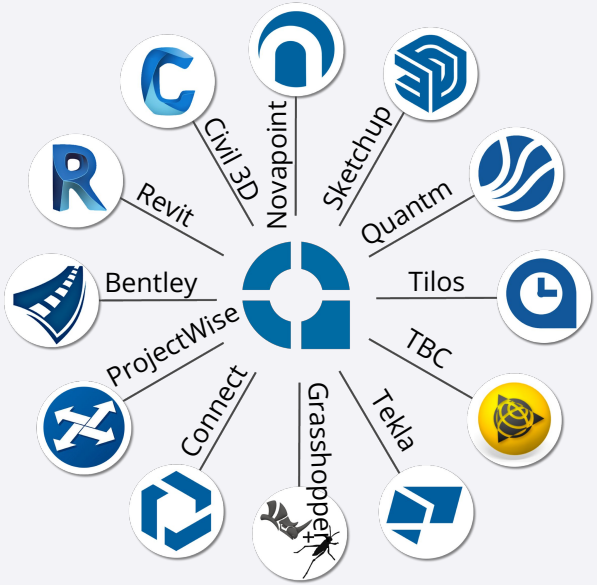
SNCF - Choose Trimble BIM Continuum



Collaborate and Compare

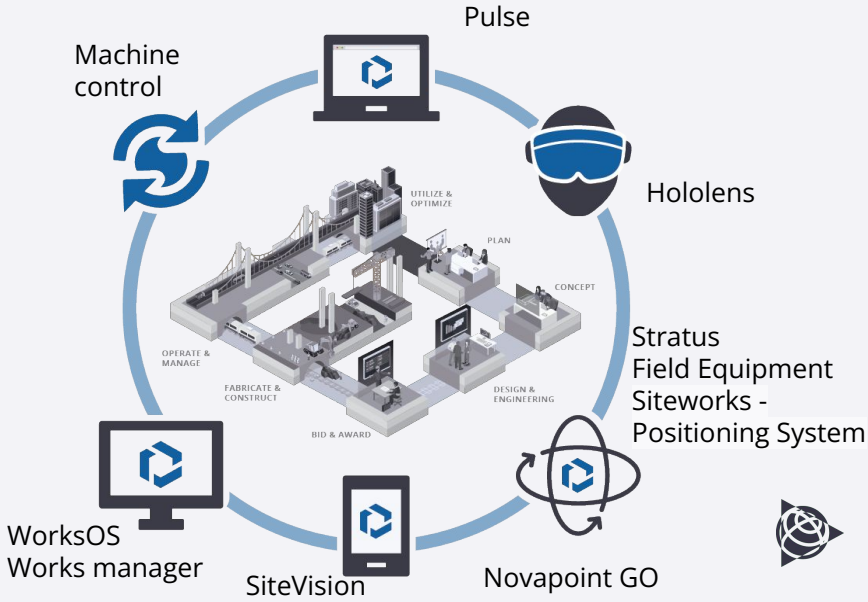
Design and edit

Quadri



View and utilize

Connect



Horizontal

Infrastructure

Concept, Design, Scheduling, Visualization, Construction and Maintenance

Quadri

Common Data Environment

Store, receive, share, design open data via connectors

Børge Lundhaug
Project Manager, Nye Veier

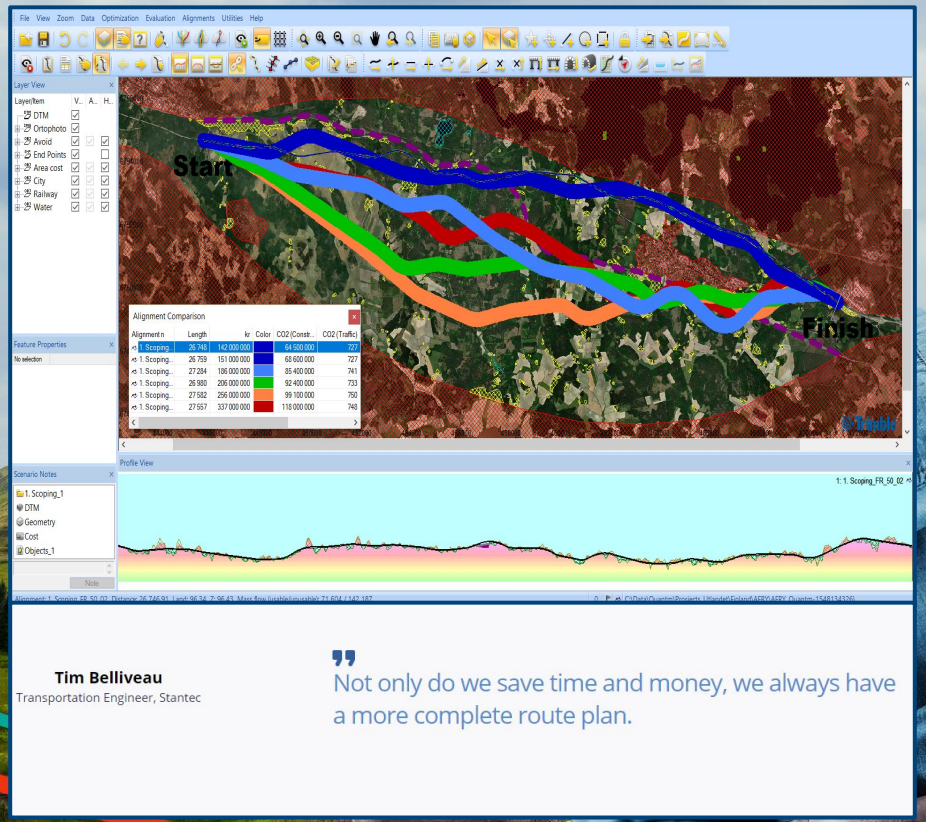
> We needed a platform where we could receive project data from the design engineer and the contractor in a coherent and effective way, throughout the design- and construction phase

Read More

Quantm

Feasibility study

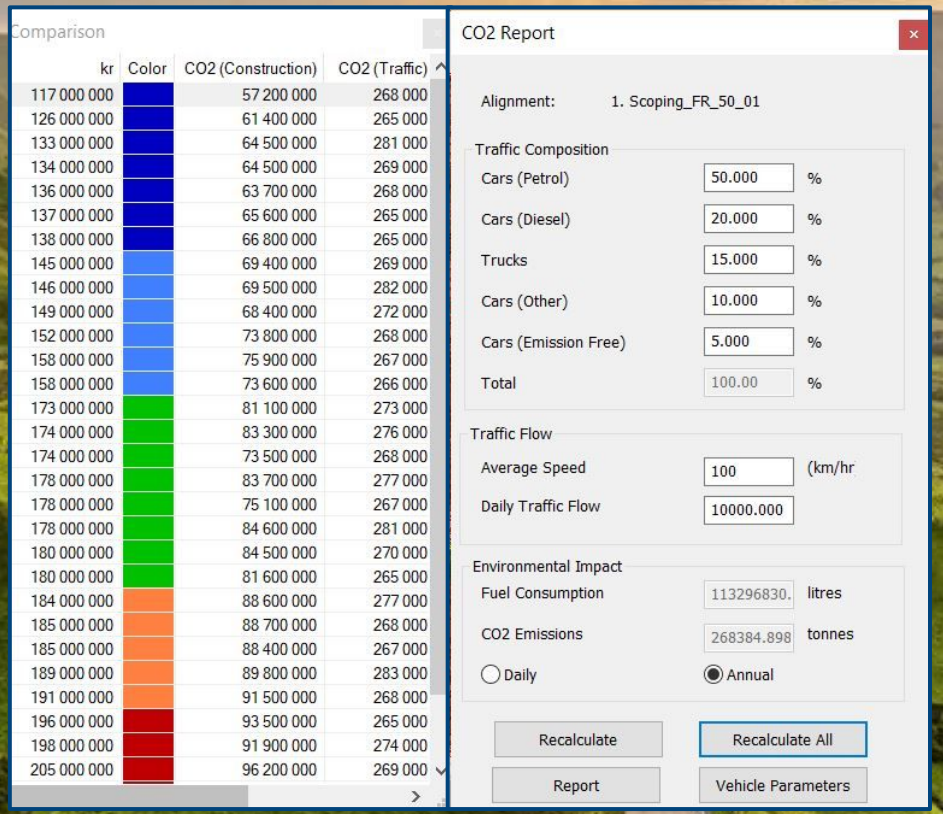
Validate, compare & optimize



CO2

CO2 Carbon Calculator

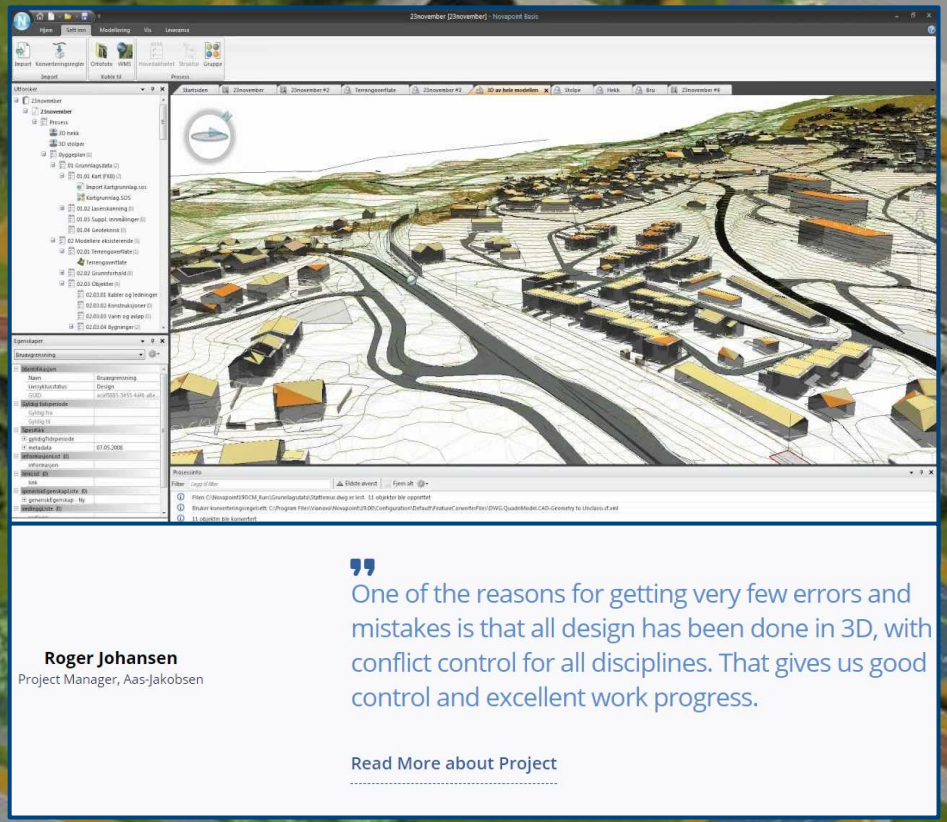
Reduce CO2 footprint from construction and future traffic



Novapoint

Detailed design

Railway, Road, Utilites



Roger Johansen
Project Manager, Aas-Jakobsen

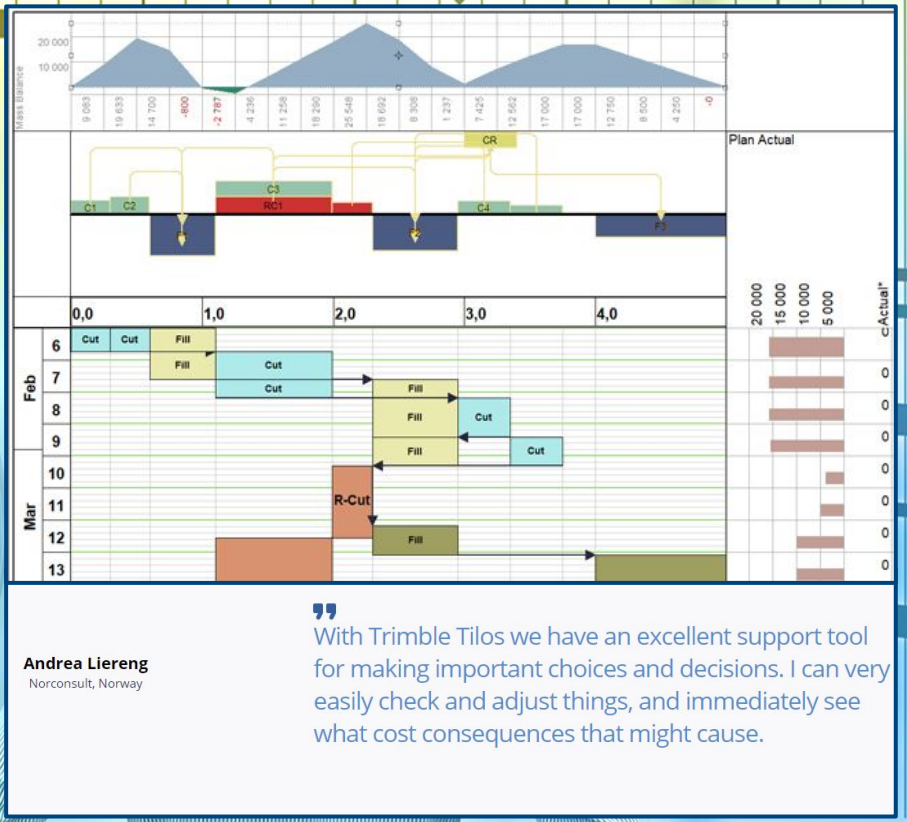
> One of the reasons for getting very few errors and mistakes is that all design has been done in 3D, with conflict control for all disciplines. That gives us good control and excellent work progress.

Read More about Project

Tilos

Time-Distance

Scheduling



Andrea Liereng
Norconsult, Norway

"With Trimble Tilos we have an excellent support tool for making important choices and decisions. I can very easily check and adjust things, and immediately see what cost consequences that might cause.

SiteVision

Visualization

At site with phone and GPS

5

Q/A

Thanks for us - Looking forward to collaborating with you!