



NEWS FROM RAMBOLL RST





Laser RST

New platforms

RMT – Road Marking Tester v2.0

Now 7 systems operating in 5 countries



RMT - Now in version 3.0

All surveys for road markings made mobile – EN 1436

- Retroreflection dry
- Retroreflection wet
- Luminance coefficient (Qd)
- Friction
- *Width/Length/Gap/Design (wear - %)*



ACE - the concept for contractors

The link between technical issues and the financial decision making

OUR RESPONSIBILITY

**Make survey data reliable,
accessible and
understandable**

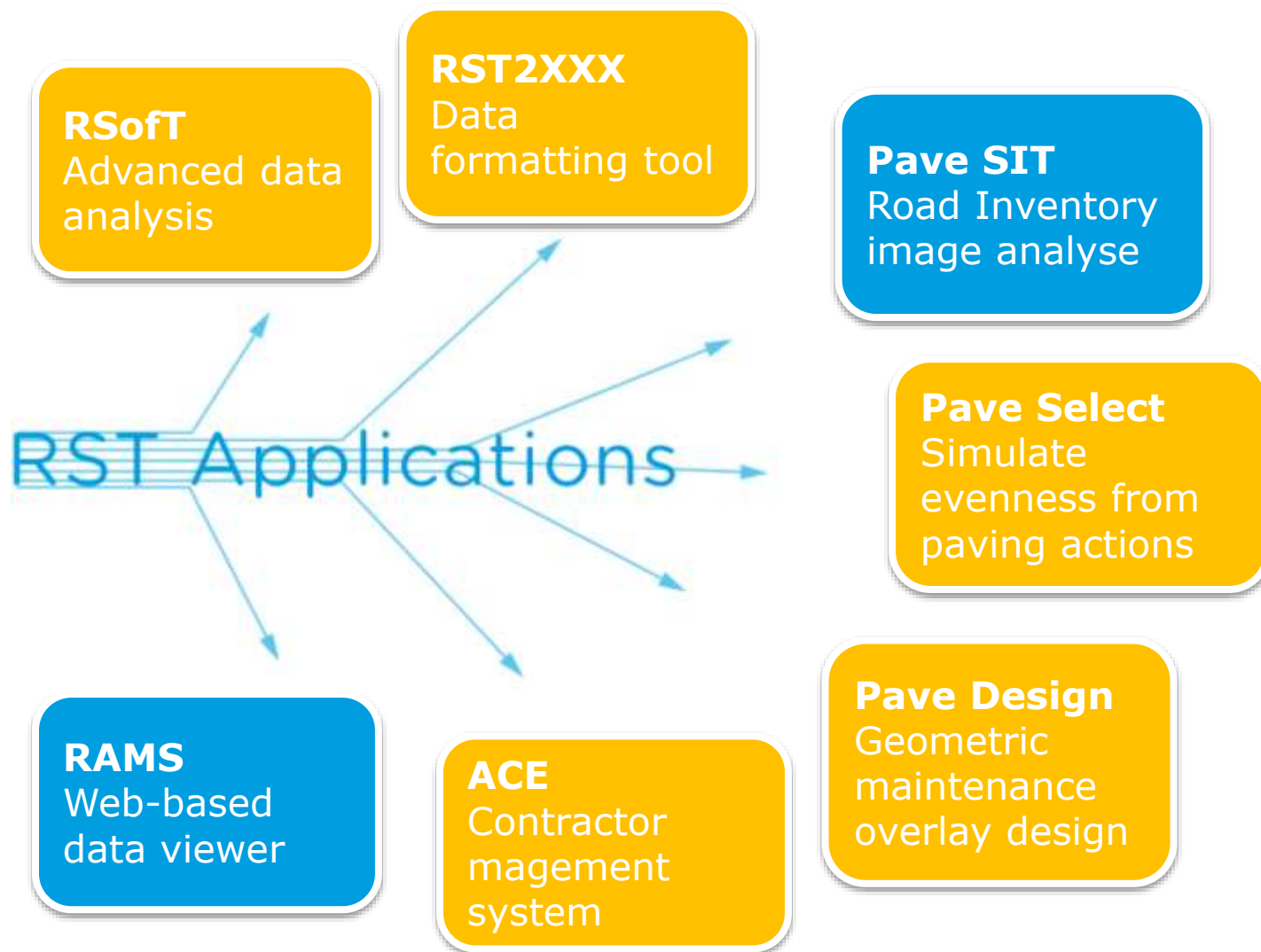
Assist in the process of:

- Reducing maintenance costs
- Decreasing user costs
- Increasing traffic safety
- Risk reduction
- Financial decision making

OUR MISSION

Increase the contractors' competitiveness

- Identify the performance quality with different work crews, machines, materials and work processes – **Best practice**
- Define potential risks in performance contracts before disputes. [ACE](#)
- Identify evenness risks during the production phase. Choose the correct solution in relation to the demands. [Pave Select](#)
- Minimize asphalt volumes at overlay maintenance/reconstructions. [Pave Design](#)



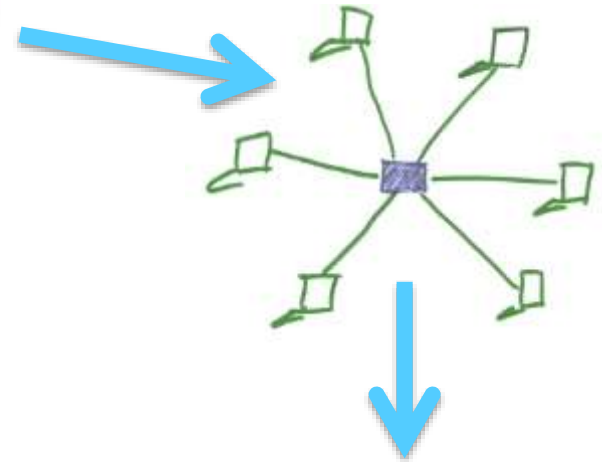
Document the projects

THE PROCESS

Contractor has paving projects nation wide



All data gathered in a central data base



Contractor

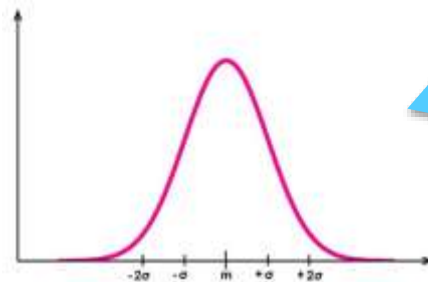
Easy access through a www-address
ACE



Improvement plan



Analyze of the projects



CONTRACTOR PRODUCTION CONTROL

- Identify the quality (evenness&texture in real-time (e.g IRI och MPD)
- Get feedback on each individual layer
- Use PAVE Select for identification of "risk sections"
- Find sections with separations by using macro texture



INFO ABOUT ALL THE CONTRACTORS' PROJECTS - ACE

The screenshot displays a web-based GIS application interface for project management. The interface includes a map, a sidebar with filters, a main panel with project details and a line graph, and a search panel. A data popup is visible over the map.

Teckenförklaring

- Objekt från förra året
- Objekt från detta året
- Objekt
- NVDB alla vägar
- NVDB Riksvägar
- PMS3
- PMS3 - Med

Objekt information

Kontraktstyp: I-förändringsprojekt
Region: Region Syd
Väg: 115
Från: 4588
Till: 6768
Namn: Argåge - Sverstad
År: 2015
Datum: 13.04.2015
Metod: korv, masslaggning
Reläggningstyp: AS - Aufbereitung, stark
Läggerlag: --
Kalkvärde: --
T80: --
Skikttyckle: 80
Tyckle: 8 mm
Mängd: 0 kg/m²
Stensortsk: 0
Kalkmassvärde: --
Åttumenty: 70/100
Stämning: --
Komponenter: --

Körbanor

Körbana	Namn	K1	K2	Från	Till
Med	Ostgärde	6585	6768		
21.04.2015	0.0	20	2180		
Med	Västgärd	4588	6768		
21.04.2015	0.0	20	2180		

Resultat

K1: 20 21.04.2015 21.04.2015 Tvärtal

K2: 20 21.04.2015 21.04.2015 Tvärtal

Graph showing results for K1 and K2 over a distance of 0 to 2000. The Y-axis ranges from 0.0 to 2.0. A red horizontal line is drawn at approximately 1.8. The green line shows fluctuations between 0.5 and 1.8.

Sök projekt

Väg:

Namn:

År byggd: 2015

Kontrakt typ: Alla

Visa resultat från tidigare år

Resultat

År byggd: 2015 Väg Namn: 115 Argåge - S

Resultat

Ladda ner resultat [här](#).

Info

Hitta objekt med olika skickstyper på vägnumret. Objektet öppnas i matrisresultatet. År avsett på kartan som en CSV-fil till din egen arbets...

Data popup:

- Data file name: 1040_103616_103205.mxd
- Line ID number: 1500
- Date of measure: 20150618
- Report distance (from section start): 1580
- RI: 1.11
- RII: 1.04
- WGS84 latitude: 55.493186564
- WGS84 longitude: 13.027726930

Vägbeskrivning: [Här](#) - [Här](#)

Node point 1002

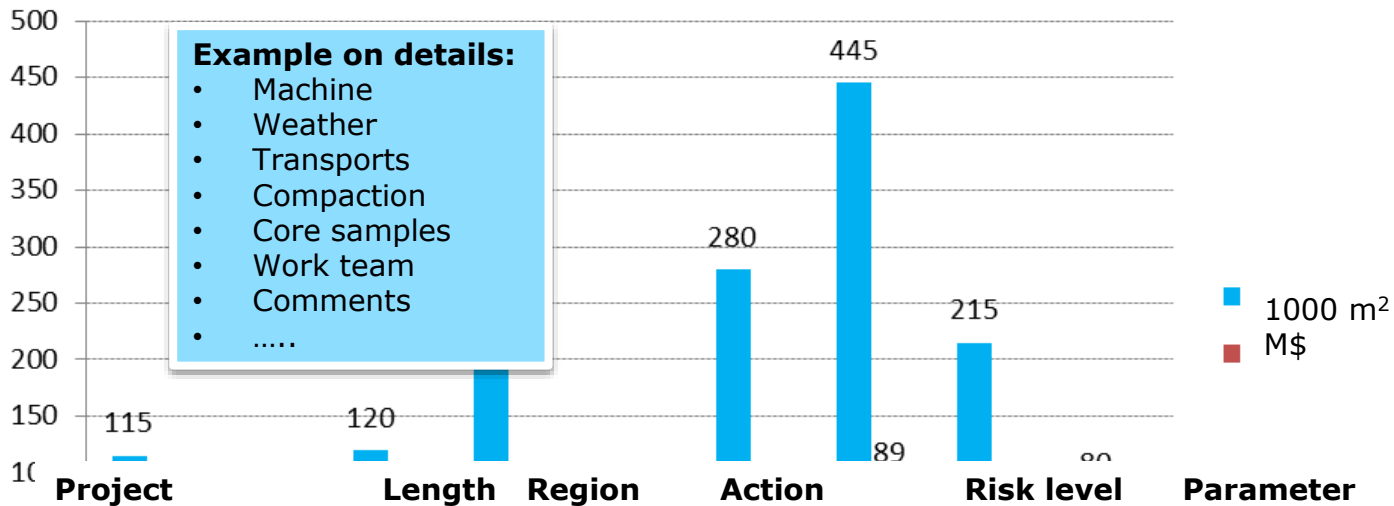
ACE – RISK EVALUATION

Risk volume

Financial risk

Per class

Details



Example on details:

- Machine
- Weather
- Transports
- Compaction
- Core samples
- Work team
- Comments
-

1000 m²
M\$

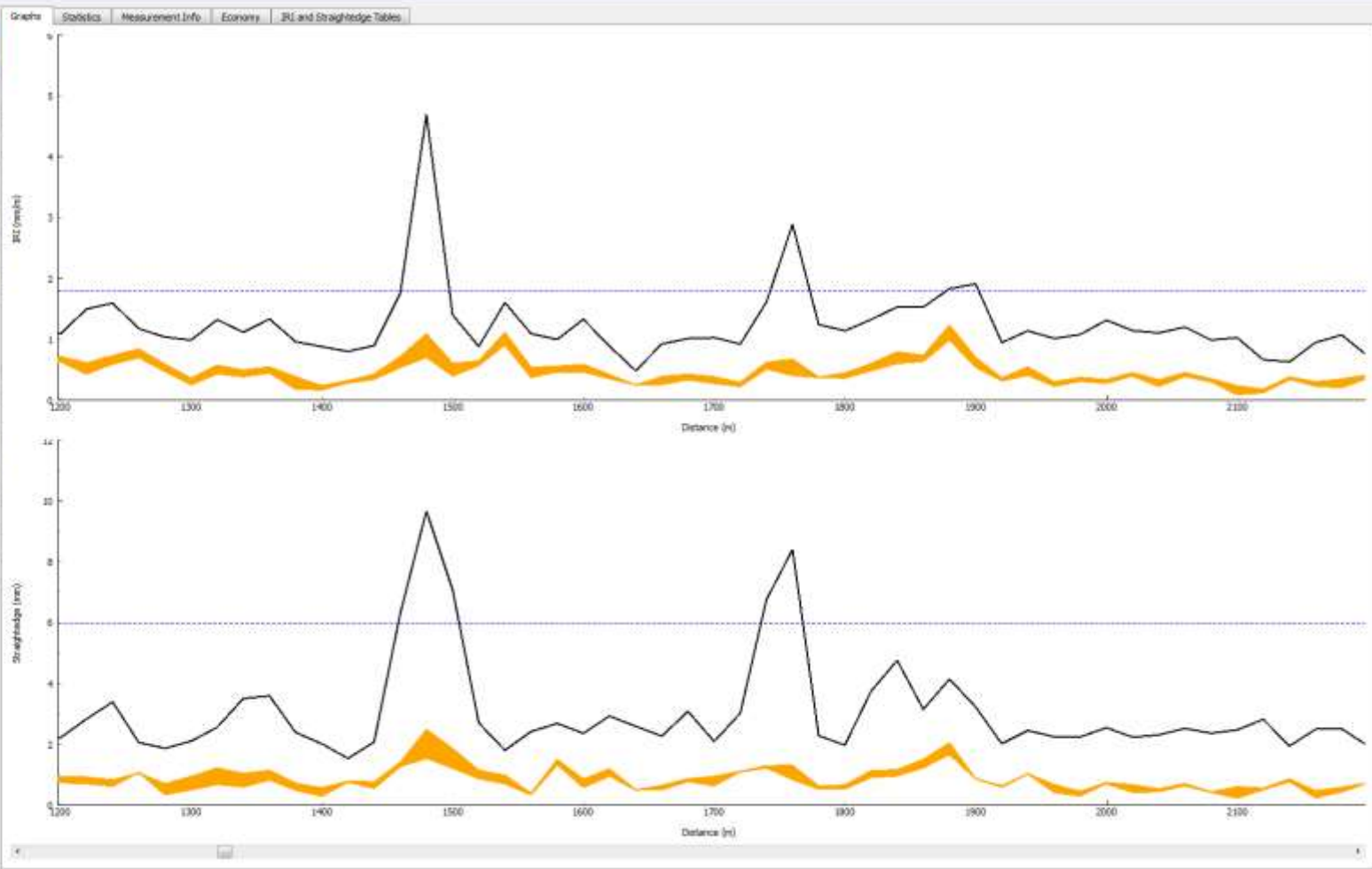
Project	Length	Region	Action	Risk level	Parameter	Risk (\$)	Survey	Warranty
E4 Åstorp-Örkelljunga	3,1	x	45 mm ABS 16 100/150	0		0	2013-06-05	maj-18
422 Kosta-Mulle	7,1	y	45 mm ABS 16 100/150 50 mm Abb 11 80/100	0		0	2013-05-05	apr-20
611 Halmstad Mellbystrand	2,4	x	50 mm ABS 16 50/70 Abb 16 80/100, 70 mm AG 16 100/150	0	IRI ³	0	2013-08-23	mar-19
E22 Hurva-Rollsberga	4,2	y	50 mm ABT 11 80/100	0		0	2013-08-09	jun-22
E4 Åstorp-Örkelljunga	2,9	x	45 mm ABT 11 80/100 50 mm ABS 16 50/70	1	IRI ³	650	2013-07-01	jun-20
108 Stafanstorps-Bara	7,9	y	ABb 16 80/100	1	Spår	1 750	2013-09-30	aug-17
11 Veberöd-Sjöbo	8,1		50 mm ABT 11 80/100	3	IRI	2 351	2013-10-07	jun-22

4751



Analyze

Parameter	Value
Object	
File	030hy111.mea
Section	0
Length	8.19 km
Profile	Prof_pp_R0_@2350
Pavement Work	
Method	Conventional
Thickness	30 mm
Max Stone Size	16 mm
Pavement Work (Advanced)	
Analysis Settings	
Requirements	
IRI	1.8 mm/m
Straightedge	6 mm
Cost Estimation	
Road Width	8 m
Asphalt Density	2.4 ton/m ³
Cost / m ²	75
Currency	sek
Report	
Report Rate	20 m
Use Decimeter Values	<input type="checkbox"/>
View	
Distance Shown	1 km



PAVE Select **Simulate the evenness**

Milling

	Top	Max	Min	Mean
L	1,02	23 mm	8 mm	15 mm
R	0,98	23 mm	0 mm	16 mm
-	2,00			

Projected

	Crossfall	Existing	Width	Measurement
L	-2,8	(-3,2)	5,46	-5,46
R	-3,2	(-3,0)	5,17	5,17

Adjustment

Adjustment Height L - Cross fall - R Ridge L - Edges - R

57 mm -2,80 % -3,20 % 0,00 m -5,46 m 5,17 m

Milling Height L - Cross fall - R Ridge

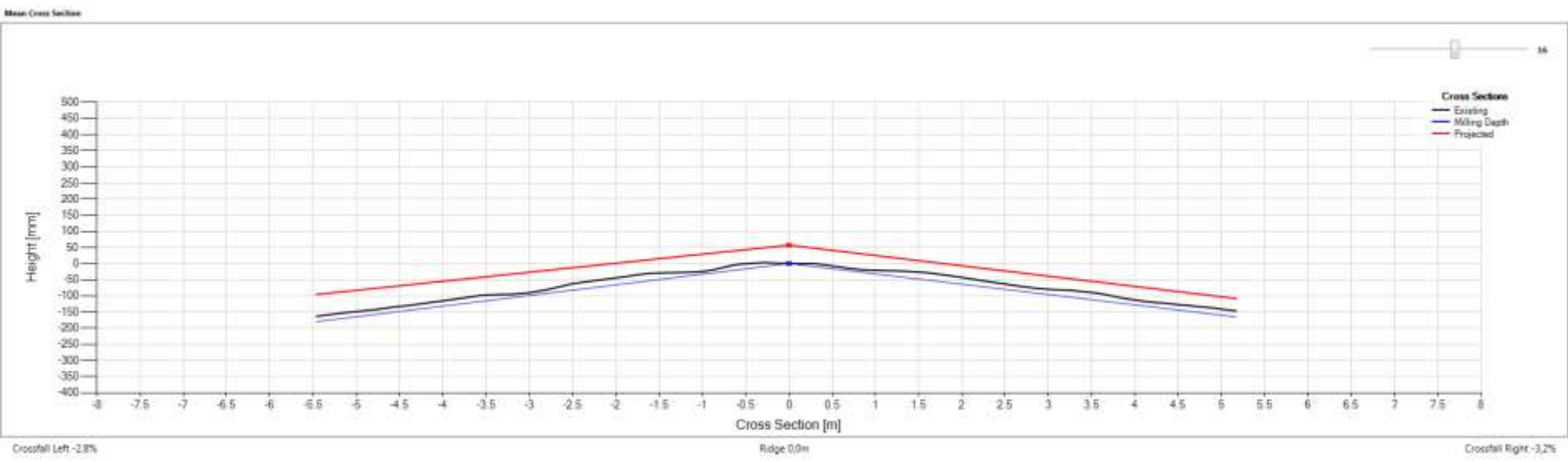
0 mm -3,80 % -3,20 % 0,00 m

Milling max (mm): 70 Adjustment min (mm): 50

Copy settings to next Autosave on next **Next**

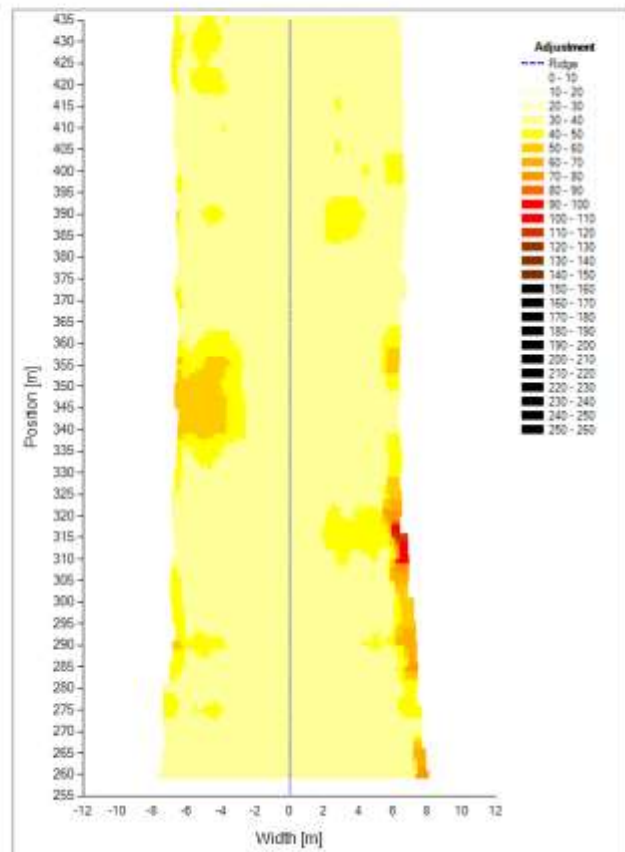
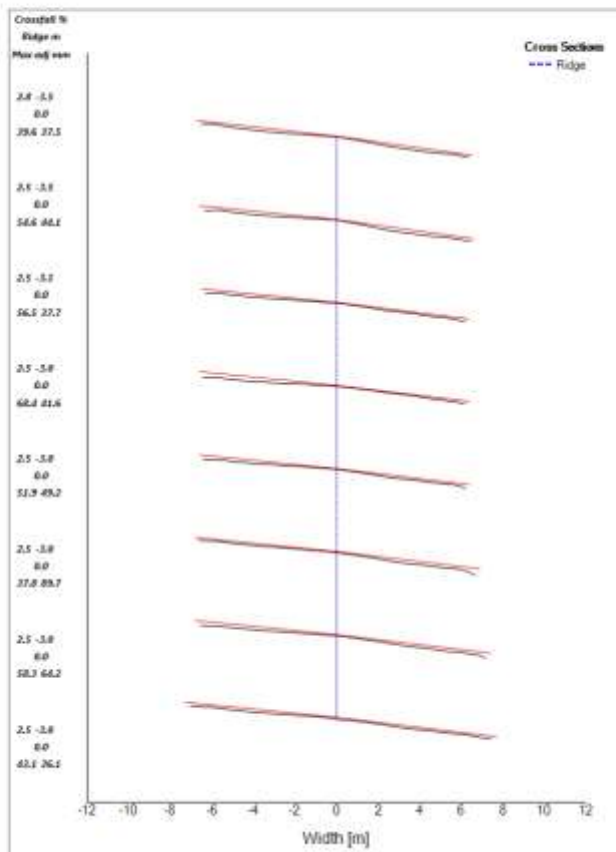
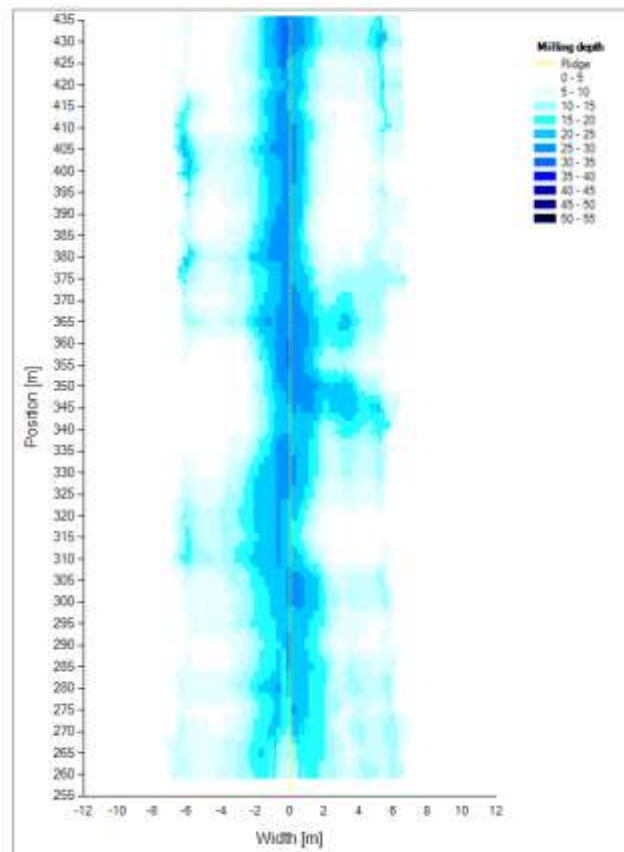
Adjustment

	Top	Adj.	Max	Min	Mean
L	3,28	1,35	84 mm	59 mm	71 mm
R	2,09	0,42	57 mm	57 mm	57 mm
-	6,37	1,78	Top: 6,15		



PAVE design **Optimize the overlay design**





PAVE design Visualize the volumes

WATCH THE MOVIE AT WWW.RST.SE

The Ramboll logo is a blue rounded rectangle with the word "RAMBOLL" in white, bold, sans-serif capital letters. The letter 'O' is stylized with a white lightning bolt shape pointing downwards from its top right. The logo is centered over a background of a road winding through a green field under a cloudy sky.

RAMBOLL

Your partner in road management

02:36

