Road Marking Tester – RMT®

Peter Ekdahl
The purpose of condition surveys

• Secure traffic safety

• Minimize negative user effects

• Effective maintenance planning/prioritisation

• Keep track on our infrastructure value and preserve our invested capital
Cost of Poor Quality
Traffic fatalities/100 000 persons (Sweden)
2+1 barrier separated roads
Profiled road markings
Noise profiles
The importance of high quality markings

- **Visual guidance** a quality roadmarking supports the road user by outlining the direction and design of the road, enabling the car driver to plan a comfortable and safe ride.

- **Preview time** optical performance and geometry of roadmarkings are providing a safe reaction time during driving

- **Traffic safety** road markings help the road user to stay in the intended lane

- **Law enforcement** roadmarkings are a part of – and act as - a reinforcement of the traffic regulations

- **New technology** quality roadmarkings constitutes an essential support for new technology.....
….. new technology, like:

**Driver Support Package**

- Collision Warning with Auto Brake
- Adaptive Cruise Control
- Distance Alert
- Lane Departure Warning (LDW)
- Driver Alert Control (DAC)
- Blind Spot Information system (BLIS)
Systems for Autonomous driving
Roadmarking performance for road users
EN 1436

Daytime visibility, $Q_d$

Nighttime visibility, $R_L$ (in dry and wet condition)

Chromatic colour coordinates

Skid resistance, SRT
Control methods

By portable instruments, according to statistical test methods

Skid resistance
A dynamic control is more efficient and safer

• Increased safety for the survey operators and the other road users.
• Restrictions regarding the use of handheld portable instruments.
• Control of maintenance contracts
• Continuous control of all the relevant parameters.

...a safer alternative
All of the performance parameters with RMT3.0

- Night time visibility, Retroreflection dry
- Night time visibility, Retroreflection wet
- Day time visibility, Luminance coefficient (Qd)
- \( \beta \) (Luminance factor)
- Friction
- Width/Length/Gap/Design/Wear
- Thickness of the marking
VTI validation

\[ \text{RL(dry), } R^2 = 0.96 \]

\[ \text{RL(wet), } R^2 = 0.86 \]
VTI validation

Qd, $R^2=0.83$

Friction SRT, $R^2=0.88$
Length, tests 2016 \((R^2=0.99)\)
Width, tests 2016 \( (R^2=0.99) \)
Coverage, tests 2016 \((R^2=0.96)\)
Ramboll RMT survey volume 2017

400 projects and 54 000 km

10 RMT systems in operation in 6 countries