



Quick and Dirty – do pilots and testbeds challenge research?

Smart routes and intelligent traffic - for you





Some key objectives from FTA's strategy

- anticipate future needs
- encourage open innovation and experimentation
- carry out active dialogue with private and public sectors
- promote development by pilots
- share know-how and best practices

- improve efficiency in services, maintenance operations and infrastructure development
- develop intelligent infrastructure
- increase the lifecycle of infrastructure

- develop proactive traffic management
- reduce traffic emissions
- improve safety
- develop the transport system to respond to the changing needs of society
- use advanced technology for data collection and analytics



Pilots, testbeds and research are tools for getting answers to questions

- Do we know?
- Do we understand?
- Can we develop?
- Can we verify?
- Can we implement?
- What are the costs?
- What are the effects?
- What are the benefits?



Topics of ongoing pilots, testbeds and research at FTA

design
logistics
construction
modelling
traffic
mobility
modes
safety
materials
emissions
recycling
sustainability
rail
road
maritime
public transport
impacts
efficiency
data
analytics

networks
system
vehicles
service level
pavements
environment
energy
surveys
sensors
behaviour
friction
materials
lifecycle
intersections
navigation
shipping
arctic

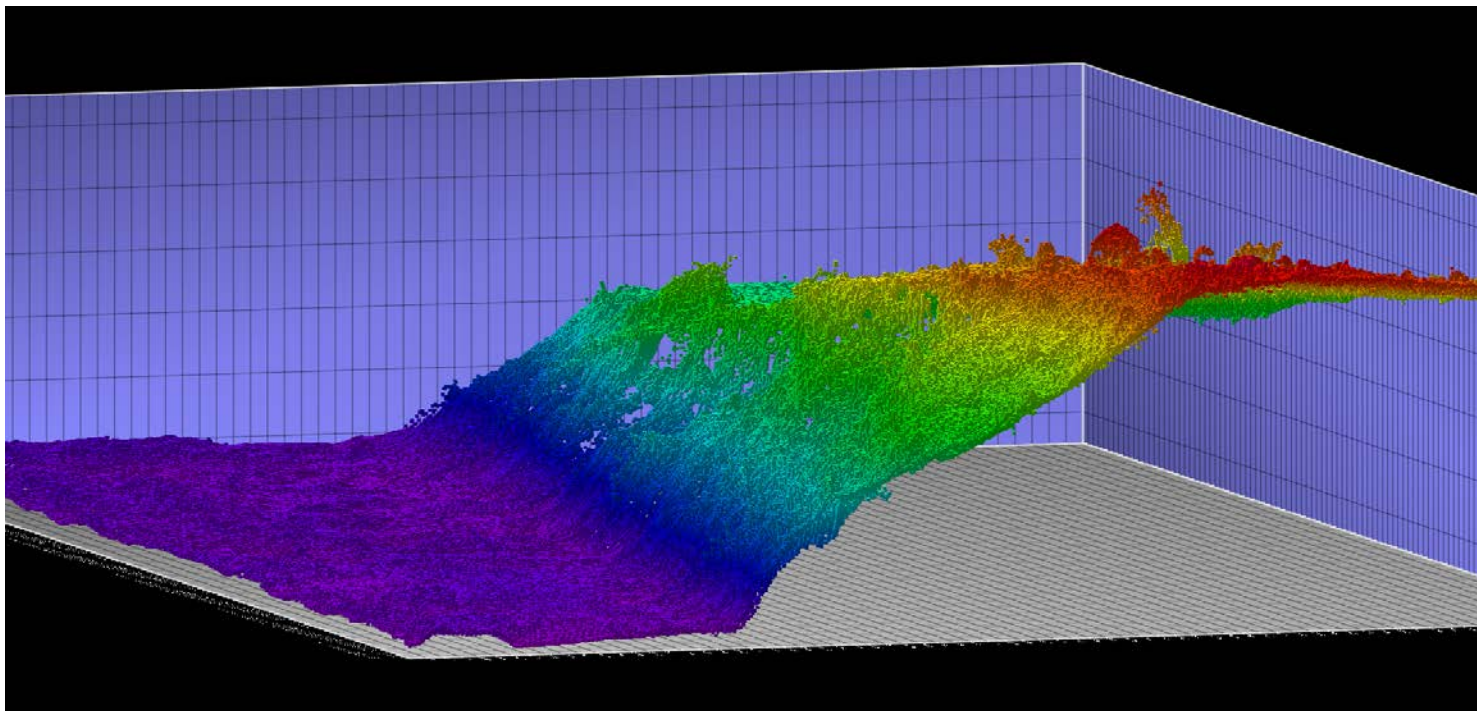


Pilots, testbeds, research, studies, POCs...

- anything goes

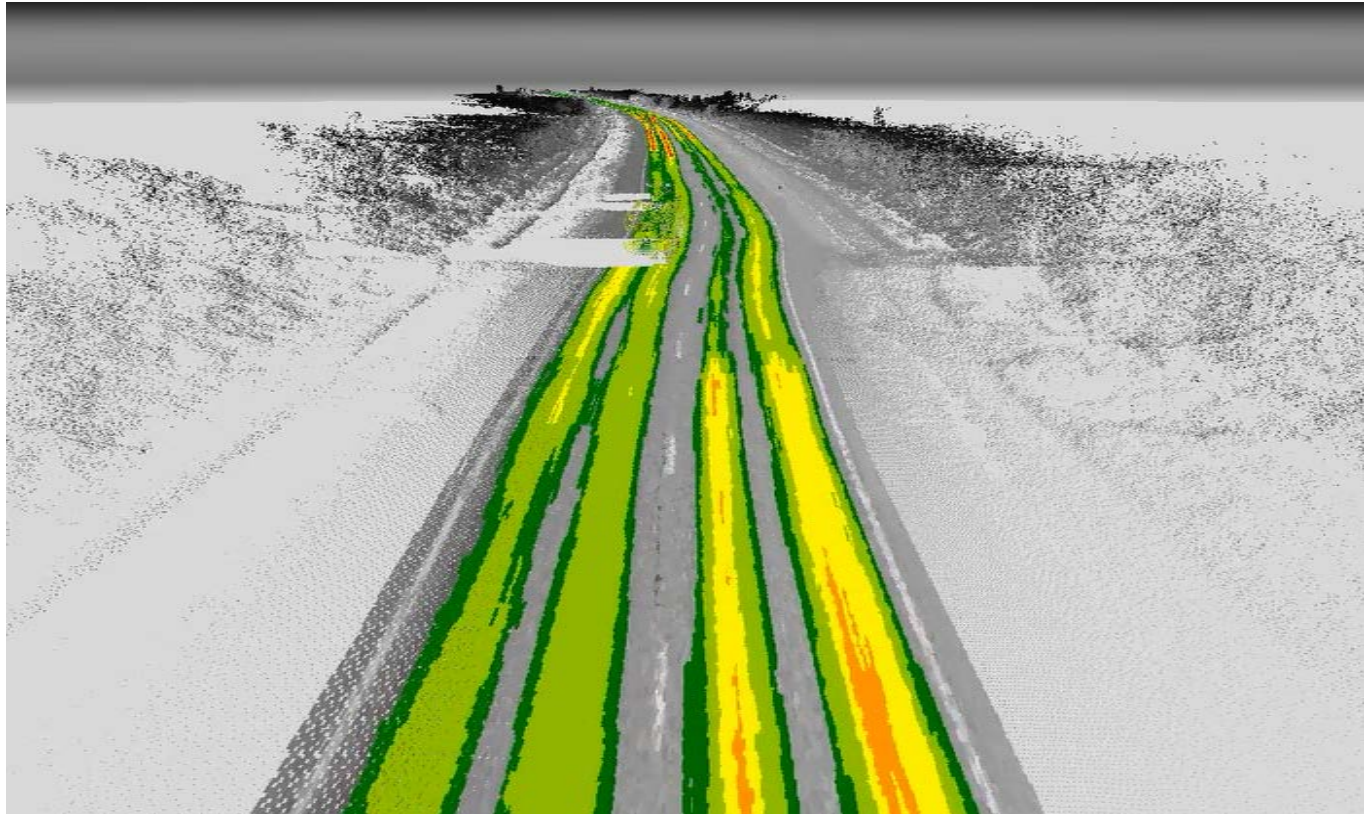


New Data



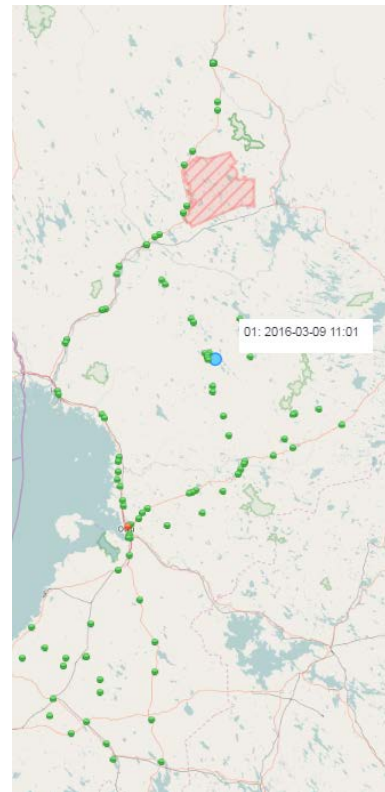
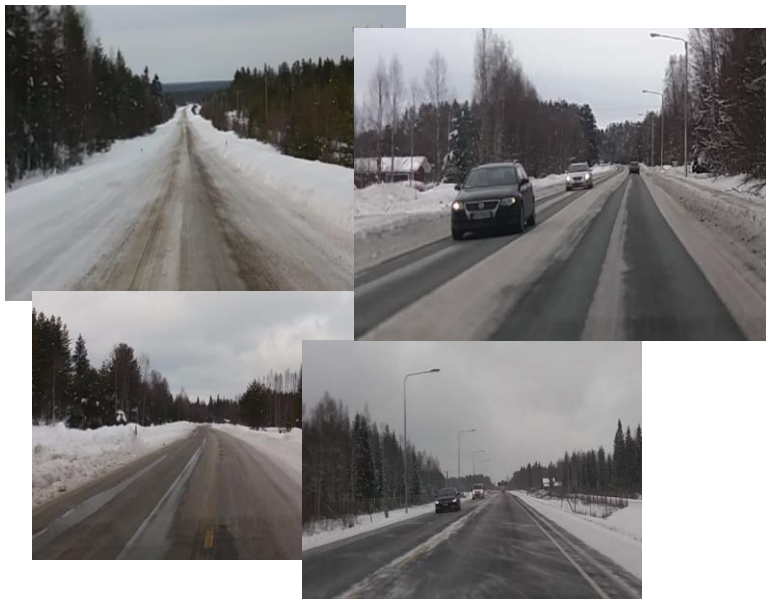


New Analytics





New Visualizations





New Specifications

Quality Requirements

	Is	I	Ib	II	III
Friction requirement	0,30	0,28	0,25	Roughened surface, problem locations are spot sanded	Roughened surface, problem locations are spot sanded
Cycle time/anti-skid treatment	2 h / 0 h*	2 h	3-4 h	6 h	8 h
Max. snow depth when snowing	4 cm	4 cm	4 cm	8 cm	10 cm
Cycle time/snow removal	2,5 h	3 h	3 h	4 h	6 h
Evenness requirement	-	1 cm	1,5 cm	2 cm	2 cm

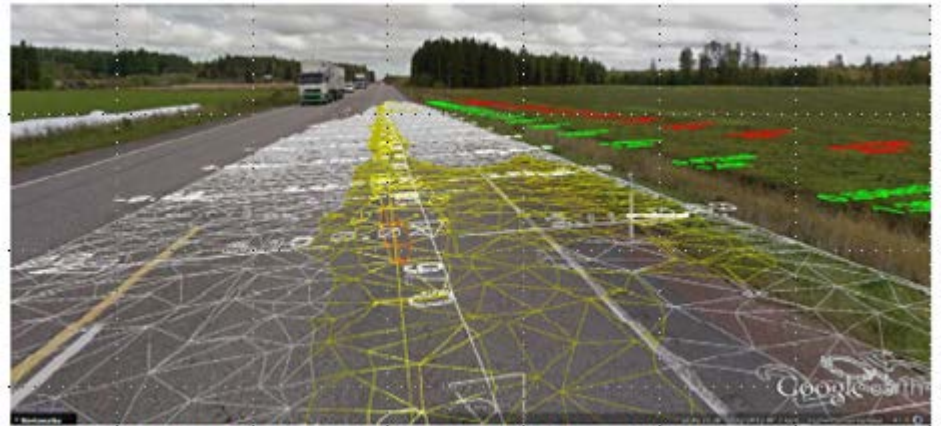
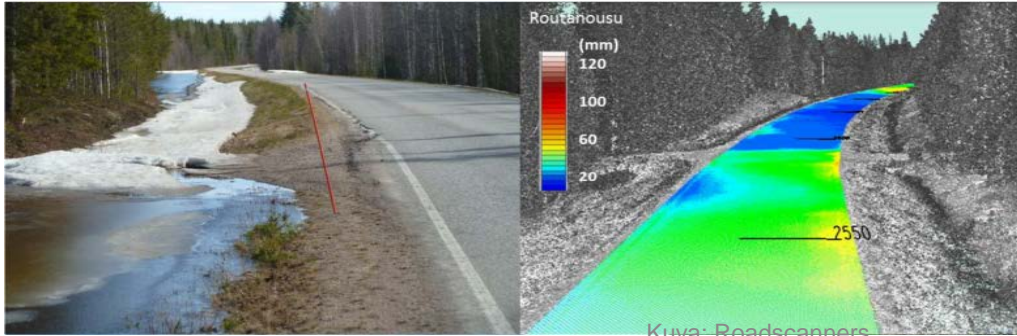
Cycle time in anti-skid treatment = the road is to be treated within the cycle time after becoming slippery.

Cycle time in snow removal = the road is to be ploughed within the cycle time after end of snowfall.

* on busy roads (ADT > 15,000) 0 hrs



New Processes (proactive maintenance)



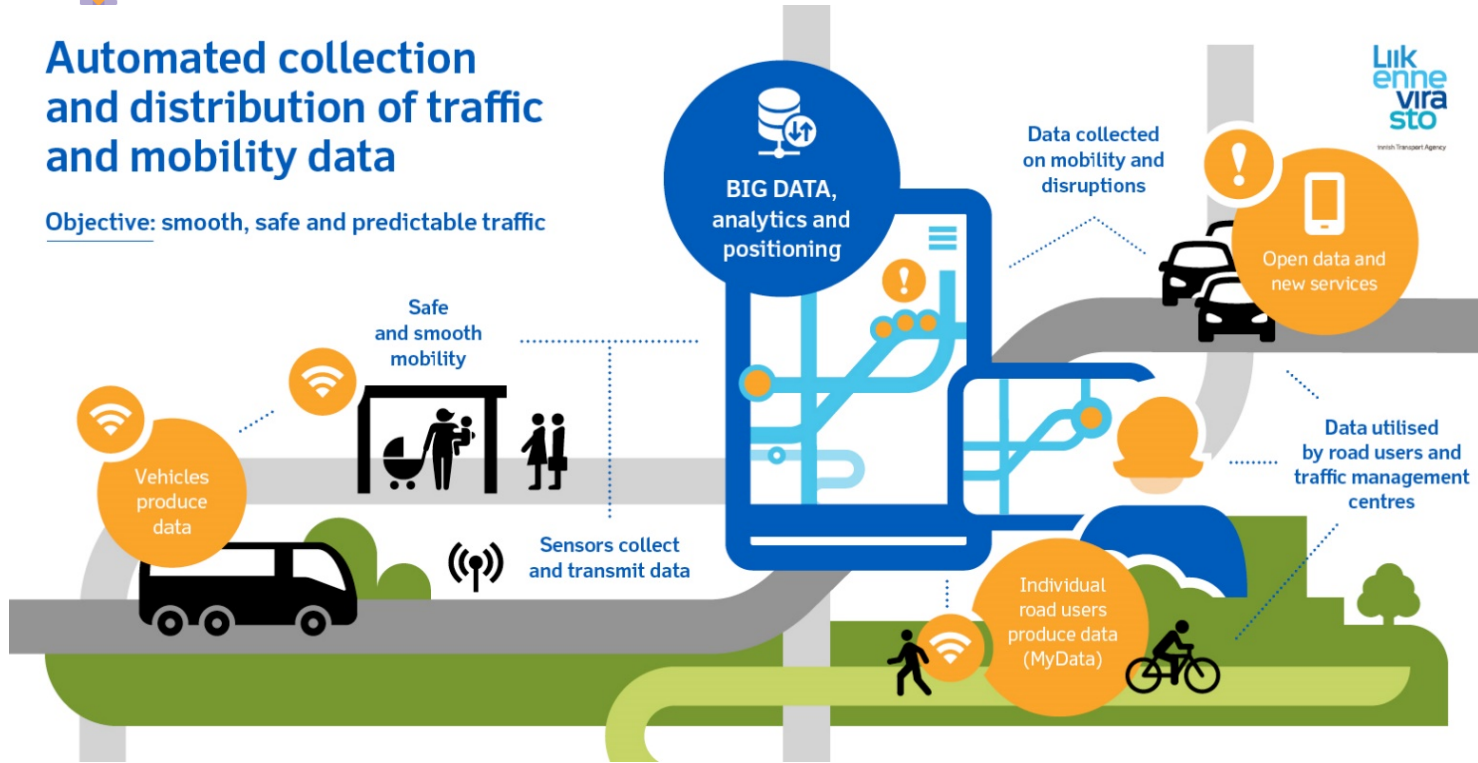
Kuva 15. Suunnitelma-aineiston esittäminen Google Earth street view tilassa (Petri Niemelä, Finnmap Infra Oy)



New Policies

Automated collection and distribution of traffic and mobility data

Objective: smooth, safe and predictable traffic

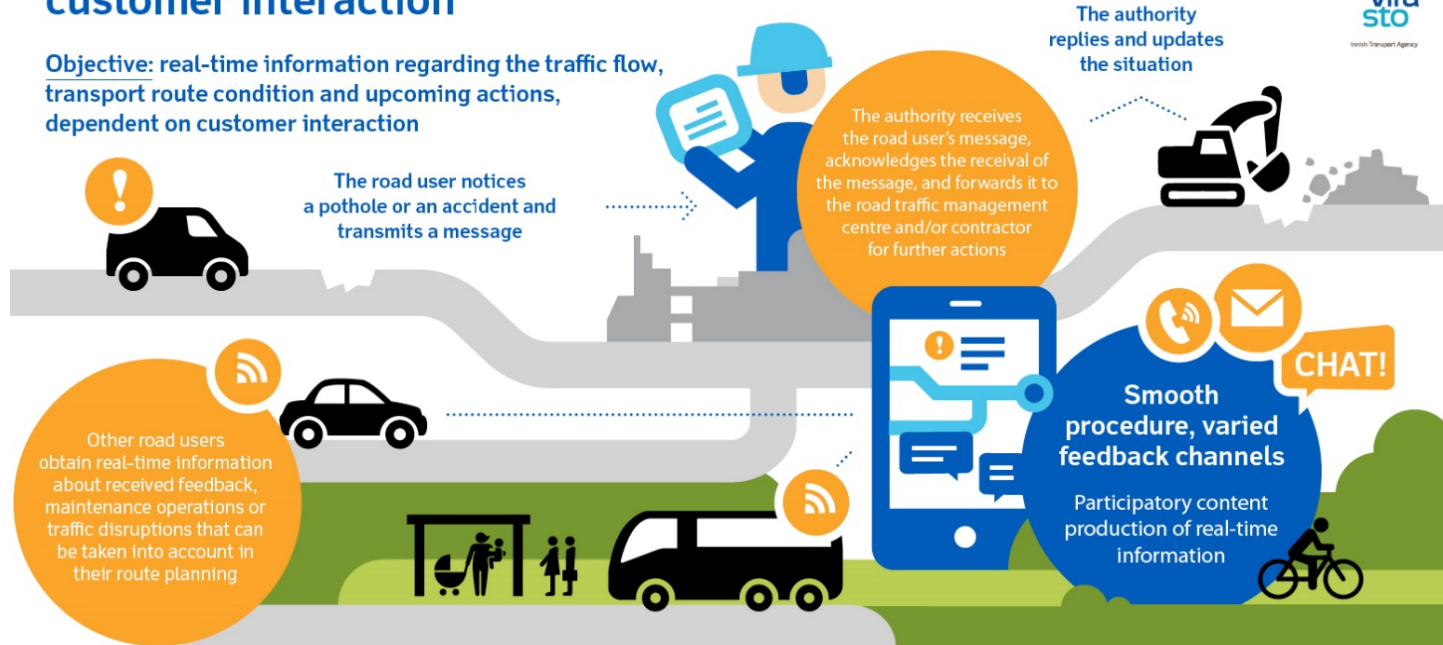




New Services

Digitalisation in customer interaction

Objective: real-time information regarding the traffic flow, transport route condition and upcoming actions, dependent on customer interaction





Digitalization at FTA

1



Traffic and mobility data

2



Railway network capacity management

3



Proactive road maintenance management

4



Proactive railway maintenance management and asset management systems

5



Smart marine fairways

6



Digitalization of customer interaction



Thank you!

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