



# Final Event INDID

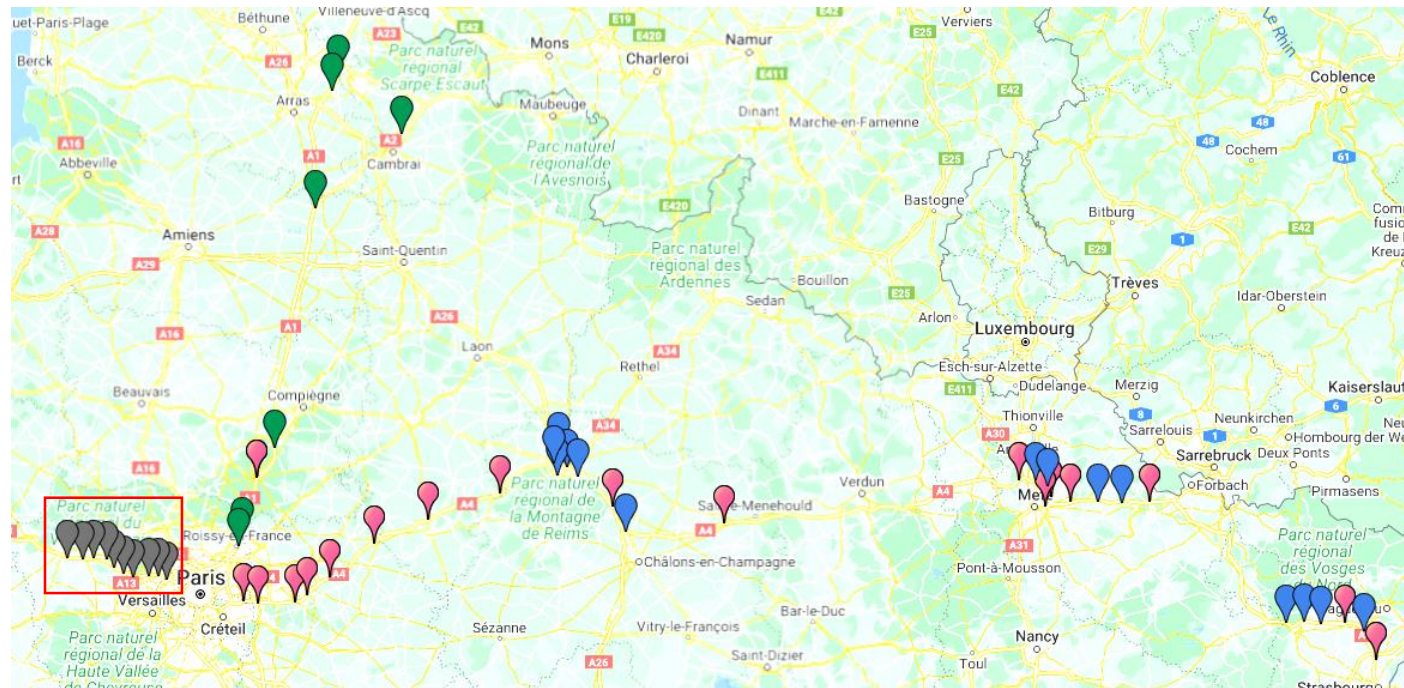
11 et 12 Juin 2024 / UPHF Valenciennes

# North site / Sanef

Malalatiana RANDRIAMASY

# Sanef - Location

- Motorway management company, operating 1957km of network in France: mainly in Normandy, the Hauts-de-France, and the Grand-Est regions
- Missions: financing, maintaining the network, keeping it safe for the customers and the road operating agents.

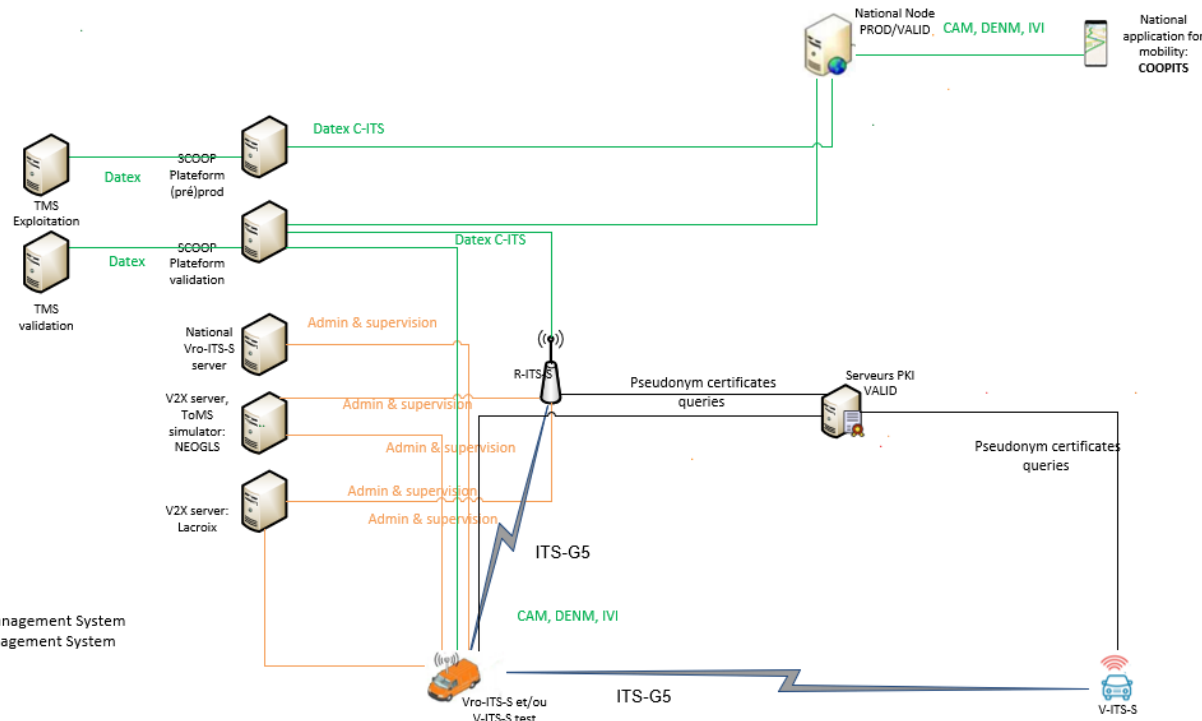


# Sanef : technologies - architecture - suppliers

- ITS-G5
- Hybridation: National Node - COOPITS

## Suppliers / Integrator:

- R-ITS-S by Neogls
- Vro-ITS-S, V-ITS-S for test by:
  - Neogls
  - Mercura Standby with Lacroix



Locations of Vro-ITS-S UC



Vro-ITS-S UC



Vro-ITS-S antennas

# Sanef – Use cases

		Developed		
In-Vehicle Signage	Traffic Management / In-Vehicle Signage Traffic Signs (IVS – TS)	/		
	IVS -Embedded VMS "Free Text" (IVS-EVFT)	C3		
	In-vehicle dynamic speed limit information (IVS - DSLI)	C2		
	Toll station approaching: orientation of drivers	C4		
Hazardous Location Notification	Toll Barrier Crossing for automated vehicles	C8		
	Hazardous Location Notification Accident Zone (HLN – AZ)	D5		
	Traffic Jam Ahead (HLN – TJA)	E7		
	Stationary broken vehicle (HLN – SV)	D4b		
	Weather Condition Warning (HLN – WCW)	D6-E6		
	Temporarily slippery road (HLN – TSR)	D1		
	Animal or person on the road (HLN – APR)	D2	Prototypes Only	
	Obstacle on the road (HLN – OR)	D3		
	Emergency or Rescue/ Recovery Vehicle in Intervention (HLN – ERVI)	L2	Hybrid	
	Emergency or Prioritised Vehicle Approaching (HLN –EPVA)	D12		
	Railway Level Crossing (HLN – RLX)	K1-K3		
	Unsecured Blockage of a Road (HLN – UBR)	D8		
	Alert Emergency Brake Light (V2V)	D10		
	Alert end of queue	D11		
	Emergency vehicle approaching	D12		
	Alert Slow Vehicle (HLN - SLV)	D14		
	Alert Wrong Way Driving (HLN – AWWD)	D7		
	Public Transport Vehicle Crossing (HLN – PTVC)	/		
	Public Transport Vehicle at a Stop (HLN – PTVS)	I5		
	Alert temporary mountain pass route closure	D9a		
	Alert approaching a closed mountain pass route	D9b		
	Road Works Warning	Road Works Warning Lane Closure (RWW – LC)	B1	
		Road Closure (RWW – RC)	B1b	
		RWW -Road Operator Vehicle Approaching (RWW-ROVA)	B2a	
		RWW -Road Operator Vehicle in Intervention (RWW-ROVI)	B2b	
		Alert operator vehicle in patrol	B2c	
		Alert end of queue by a road operator vehicle	B2d	
		Road Works – Mobile (RWW – RM)	B1c	
		Winter Maintenance (RWW – WM)	B3	
		Dangerous vehicle approaching a road works: warning to the dangerous vehicle	B4/C11	
		Dangerous vehicle approaching a road works: warning to workers	B5	
		Signalised Intersections	Signalised Intersections Signal Phase and Timing Information (SI – SPTI)	G1b
Green Light Optimal Speed Advisory (SI – GLOSA)	G1a			
Imminent Signal Violation Warning (SI – ISVW)	G3			
Traffic Light Prioritisation (SI – TLP)	G2			
Emergency Vehicle Priority (SI – EVP)	G2			
In-vehicle signage at a merge for vehicles on the entry slip road	G5			
In-vehicle signage at a merge for vehicles on the main road	G6			
HD cartography extended services	G7			

		Developed
Automated Vehicle	Automated Vehicle Guidance SAE Level Guidance (AVG – SAELG)	/
	Platoon Support Information (AVG – PSI)	/
Probe Vehicle	Probe Vehicle Data Vehicle Data Collection (PVD – VDC)	A1
	Event Data Collection (PVD – EDC)	A2-A3
Data	Wrong way users detection	A5
	Information on parking lots location, availability and services	F1
Information Parking	Information P+R in order to modal transfer	F5
	Information on street parking spaces for person with reduced mobility and goods delivery service	F9
VRU	Facilitation and safety of specific pedestrians crossing at urban signalized intersection	G8
	Numerous Pedestrians at Signalized Intersection: warning to vehicles	I1b
	Road workers in the field	I3
	Vulnerable user at a public transport stop	I5
	Pedestrian crossing outside signalized intersection : warning to approaching vehicles	I6
	Cyclists riding contraflow in a one way road	I7
Rerouting	Rerouting	E2
Traffic Management Low Emission Zones	Permanent traffic ban to specific vehicles	H1
	Dynamic traffic ban to specific vehicles - Road closed	H2
Emission Zones	Dynamic lane management – reserved lane - lane closure	H4
	HGV overtaking ban	H6
Law	Flooded roads	H9
	Assigning a slot to a given vehicle for cross-channel traffic (New IT / Obsolete in France)	J3
Payment	Information on the site's access conditions / Identification of Loading Area (SP / Obsolete in France)	J4
	Stationary law enforcement vehicle	L2
	Payment service at a toll station	M1



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# Achievements and Difficulties encountered

## Sanef

- Achievements:
  - Fulfillment of Grant Agreement commitments:
    - Deployment of R-ITS-S (10)
    - Installation of Vro-ITS-S in FLU, FLR (moveable illuminated arrow signs), test vehicle (5)
    - Development of new use cases and Validation with some project partners
    - Participation and Contribution in various Working Groups of the project
  - Deployment of the hybridation link « COOPITS application » to the road users
- Difficulties:
  - Integration of C-ITS into the existing equipment
  - Lack of vehicles with C-ITS to test the developed use cases