SmartShuttles in Sion: One year of operation

The shuttles have transported **21 500 passengers.**

80% of manual interventions by the safety drivers were **due to incorrectly parked cars.**

The shuttles travel at an average speed of **6 km/h**.

The shuttles have travelled **4,500 km** – that's the equivalent of going from Switzerland to Egypt..

The shuttles have travelled for roughly **1500 hours** in Sion.

The shuttles have been viewed by **specialists from around the world.**

Operator	PostBus, Berne, Switzerland
Vehicle manufacturer	Navya, Villeurbanne, France
Length	4.75 m
Width	2.05 m
Height	2.55 m
Empty weight	2,400 kg
Number of places	11 seated and 4 standing
Top speed	45 km/h
Top speed during the project	20 km/h
Power	33 kWh
Range	The shuttle can operate for 8 to 10 hours. The range also depends on the temperature, topography of the route and number of passengers (weight).
Battery charging time	6 to 8 hours
Comfort	The two shuttles are air-conditioned and heated.
Limited mobility	The SmartShuttle can also carry people with limited mobility and prams. As an added convenience, the vehicles are each accompanied by an assistant. The assistant can help with entering and leaving the vehicle where necessary.

Safety	During the test period, there will always be one assistant on board who can stop the vehicle at any time. There are two emergency stop buttons and one camera fitted on the vehicle.
Technical equipment	Satellite navigation (GNSS)
	2 stereo-vision cameras located in the lower area of the windscreen to monitor the road and detect traffic lights and signs.
	6 LiDAR sensors as core elements of the vehicle. They scan the vehicle surroundings in a radius of 360° (2 sensors) and 180° (4 sensors) from 50 to 100 metres. LiDAR telemetering is a technology that analyses the light beams which are scattered back to the sender.
How does the Shuttle find its way?	Each planned route is recorded in advance. To do this, a person steers the vehicle manually with a console. The vehicle maps its surroundings with the help of the sensors (3D map). The shuttle can then determine its own position when automatically driving the route and detect any obstacles. The vehicle drives as if on virtual rails. If it has to deviate from the programmed route because of incorrectly parked cars for instance, the assistant intervenes manually using the console. The fleet management software from Swiss company BestMile communicates in real time with the Navya software installed in the shuttle. The Navya software in the bus steers the vehicle, determines the speed and applies the brakes. From an operating center, a teleoperator monitors the shuttles and can also take control immediately from a distance to stop the bus at the next stop or send it to the charging station.
Fleet	PostBus has four vehicles of the same type (as of June 2017): The shuttles Valère and Tourbillon are undergoing testing in Sion from June 2016 to autumn 2017, another vehicle is based in Berne, and a fourth in Lyon at CarPostal France. The shuttles in Berne and France are operated for demonstration purposes at company premises or events.
Links and contact	www.smartshuttle.ch www.youtube.com/user/PostAuto1906
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