

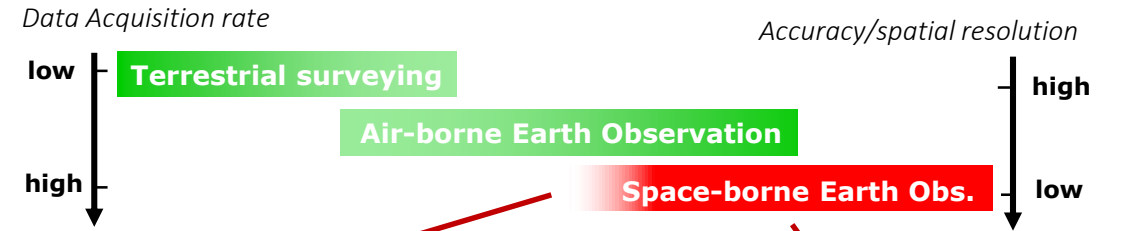
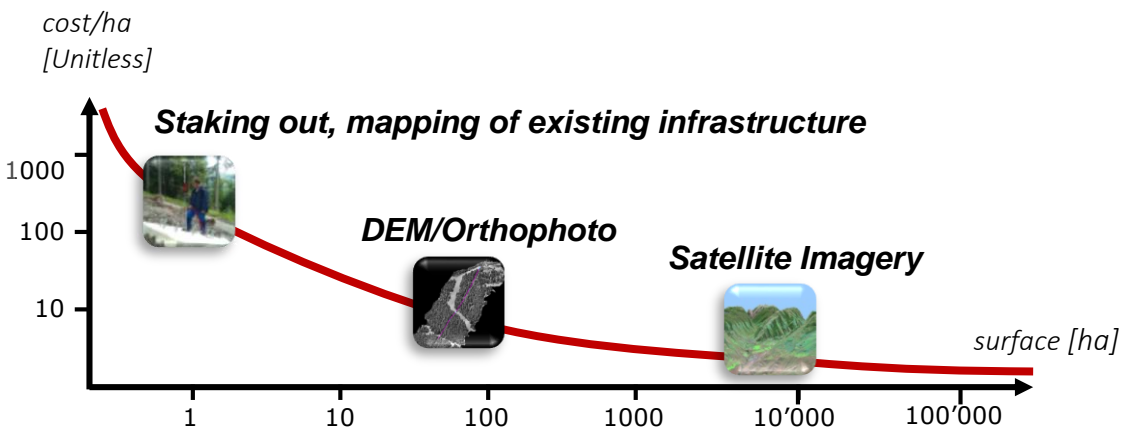
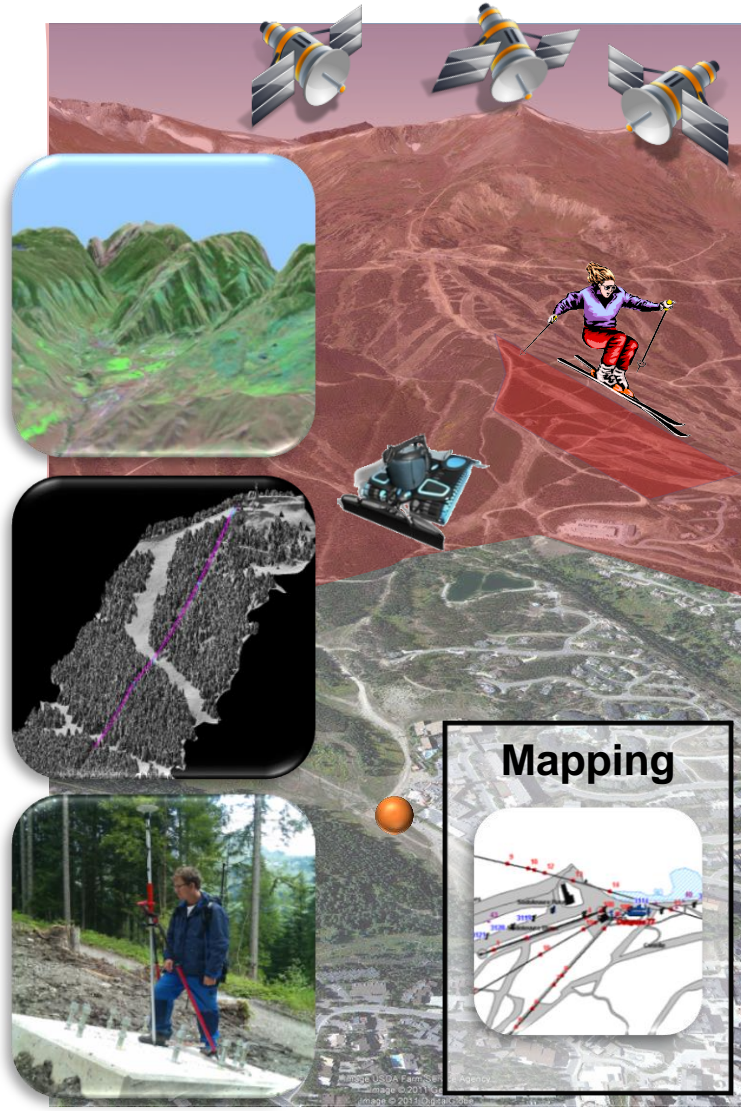
Who is Geosat

- ❖ Surveying office with 18 employees based in Sion (VS)
- ❖ Specialization
 - Geodetic surveying and mapping in alpine environment using land- and air-borne earth observation techniques
 - Developments of “geosmart” applications for municipalities and ski resorts

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- ❖ Examples: from meter-to-centimeter accuracy
 - Skier habits identification and analysis
 - Snow groomer fleet management system
 - Snow height management
 - Ski resort asset mapping by mobile imagery

Geodata for ski resorts: needs and applications



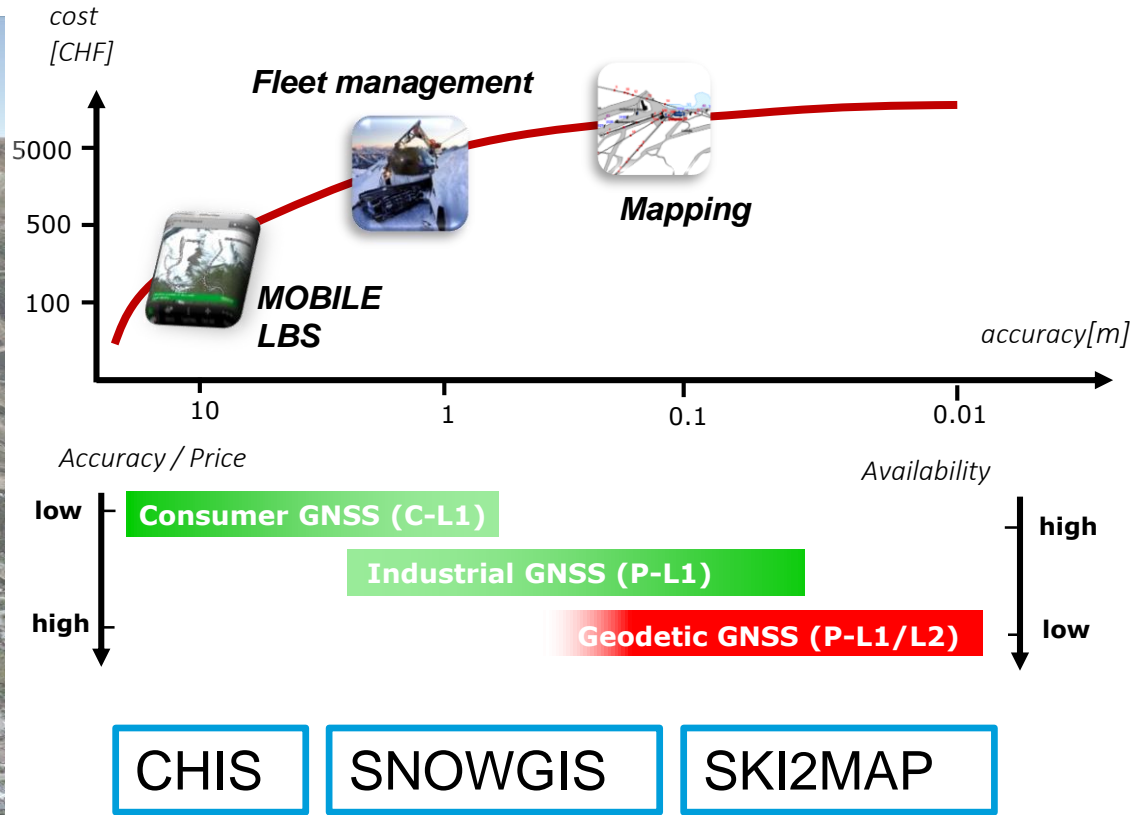
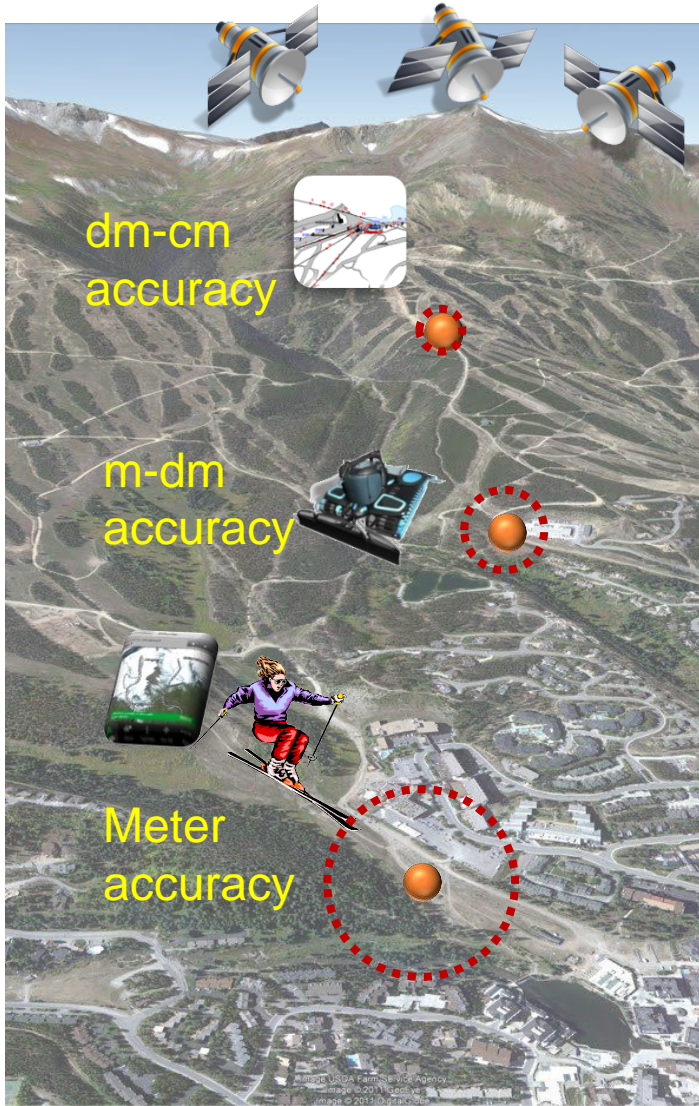
Tracking /Guidance

Mobile LBS Fleet management

Monitoring

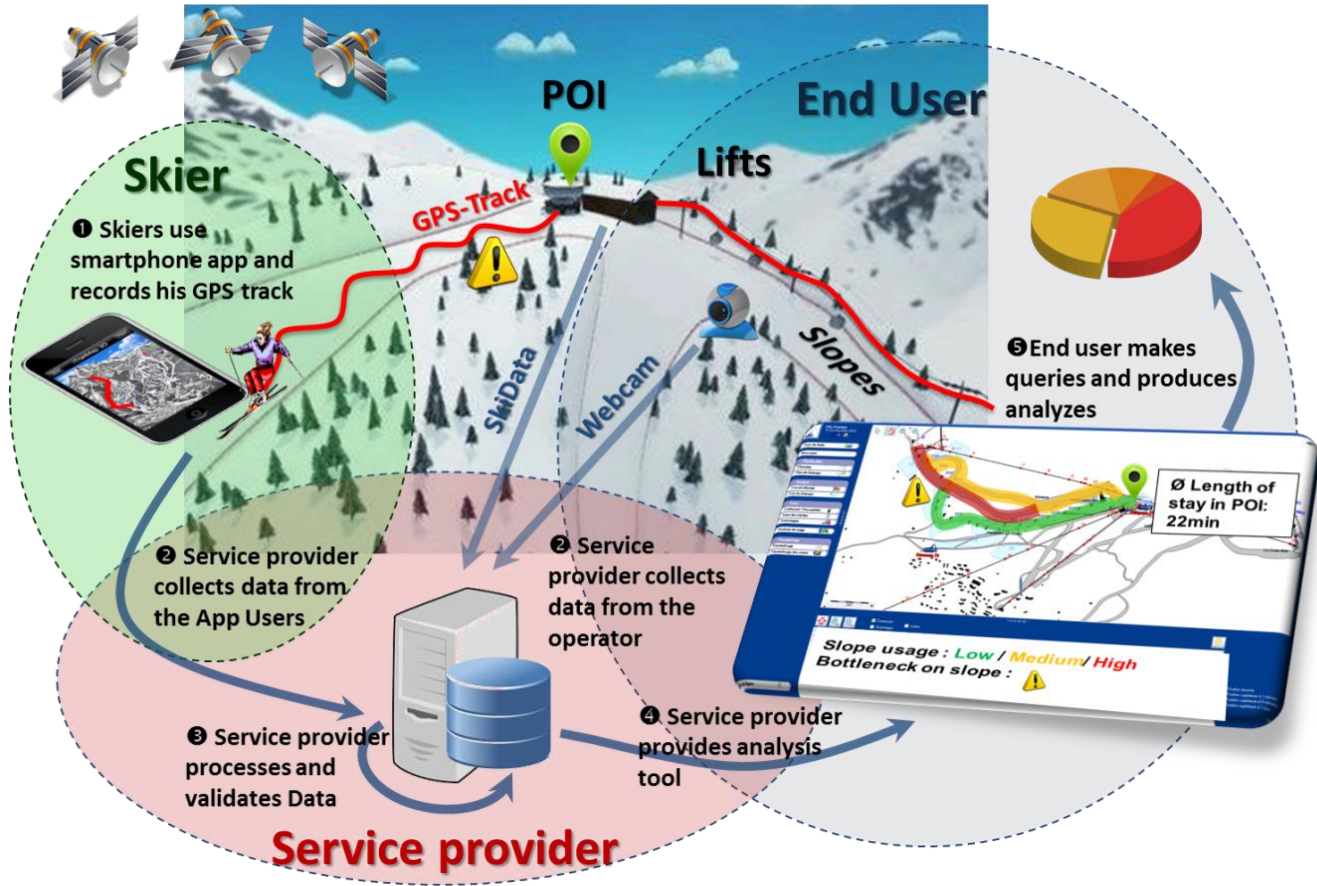
Weather Deformation

GNSS for ski resorts: needs and applications



CHIS: Consumer Habits Identification Service

ESA ARTES 20 – IAP / DEMONSTRATION PROJECT “SAFESKI”



- Collect data from individual users
- Correlate with data from ski resort
- Provide Analysis tool for ski resort for optimization and marketing
- Feedback of info to user

DEMO SKI RESORT SCHLADMING

DEMO: CHIS for Schladming ski resort

BASEMAP

- Austria
- OpenStreetMap

VECTOR LAYERS

- POI
- Lifts
- Slopes

Trajectory 1-186-34-195019

Trajectory for ticket ID 1-186-34-195019

height[m]

2500
2000
1500
1000
500

08:00 08:30 09:00 09:30 10:00 10:30 11:00 11:30 12:00 12:30 13:00 13:30 14:00

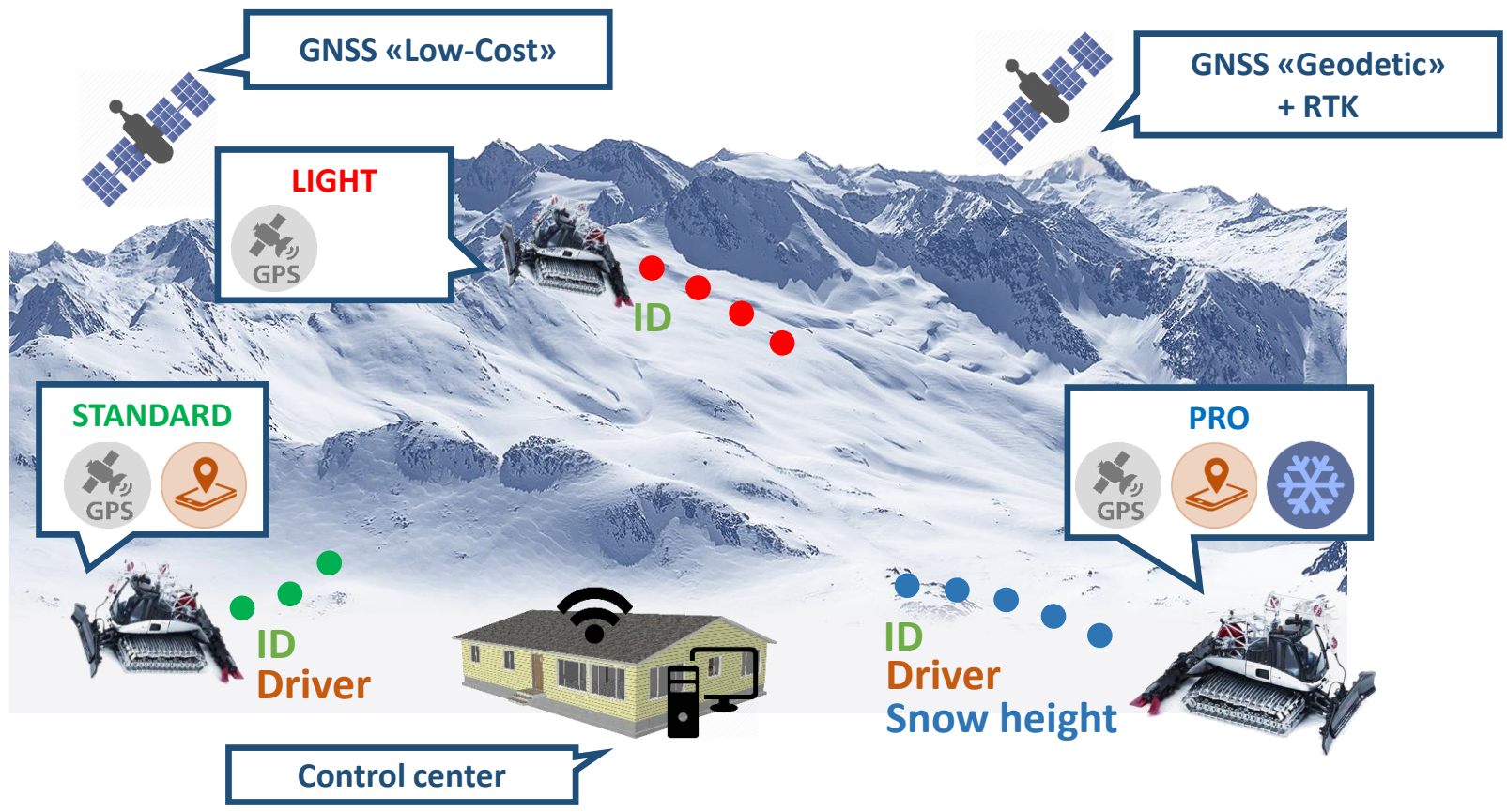
◆ ON SLOPE
◆ LIFT: Hauser Kaibling - Quattralpina
◆ LIFT: Hauser Kaibling - Höfi-Express II
◆ POI: Hauser Kaibling - 360° Panoramablick auf 2.015m
◆ WAITING AT LIFT
◆ LIFT: Hauser Kaibling - Gipfelbahn
◆ LIFT: Hauser Kaibling - Kaibling 6er
◆ POI: Hauser Kaibling - Schmiedhütte

Sign Out

Request list

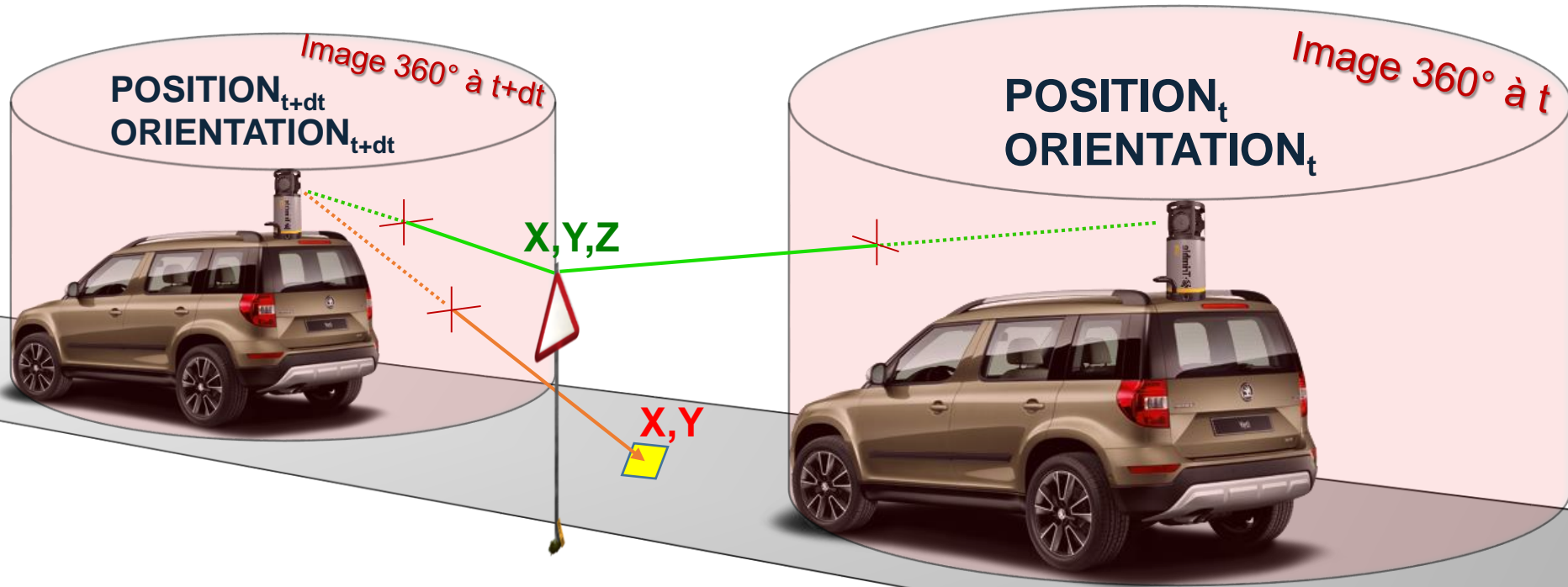
Person ID	Start	Stop	Ticket ID	Ticket related	Nb positions	Distance total [m]	Distance on slope [m]	Lift sequence	Action
604475de-8748-3db2-817a-2522ca0cd035	December 25, 2017 9:32 AM	December 25, 2017 2:09 PM	1-186-34-195019	1-186-34-195020	5878	54135	31523	48,51,51,55,55,50,51,55,51,52,51,55,51,55,51,55,51,55,55,55,55	[Icons]
e231c375-e773-3104-9da8-02a0836dbfab	December 25, 2017 9:15 AM	December 25, 2017 12:39 PM	1-186-34-194689	1-186-34-194693 1-183-11-59138 1-183-11-59139 1-183-11-59140	1312	15230	7153	48,52,51,50,50,50,51,54,54,54,54,53	[Icons]

SNOWGIS: Fleet management system



SKI2MAP: Image based mobile mapping

- Georeferenced 360°- images (position + attitude)
- Forward intersection from 2 images for 3D measure
- Overlay existing assets in 360° images



DEMO SKI2MAP AT TRACUET (Nendaz)

DEMO: ski2map – Nendaz ski resort

NVRM

Our vision: building up a "geo-smart ski resort"



Thank you very much for your attention



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