

Modern Winter Service in Switzerland – Results and Examples of Swiss Expert Commission of VSS-Research and Standardization in the field of Road and Transportation

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1. INTRODUCTION

Requirement of road users for a safe and usable road network at all time

Increase of traffic volumes

Need of cost savings



2. CLIMATIC DIFFERENCES

Different requirements for winter service in Switzerland according to

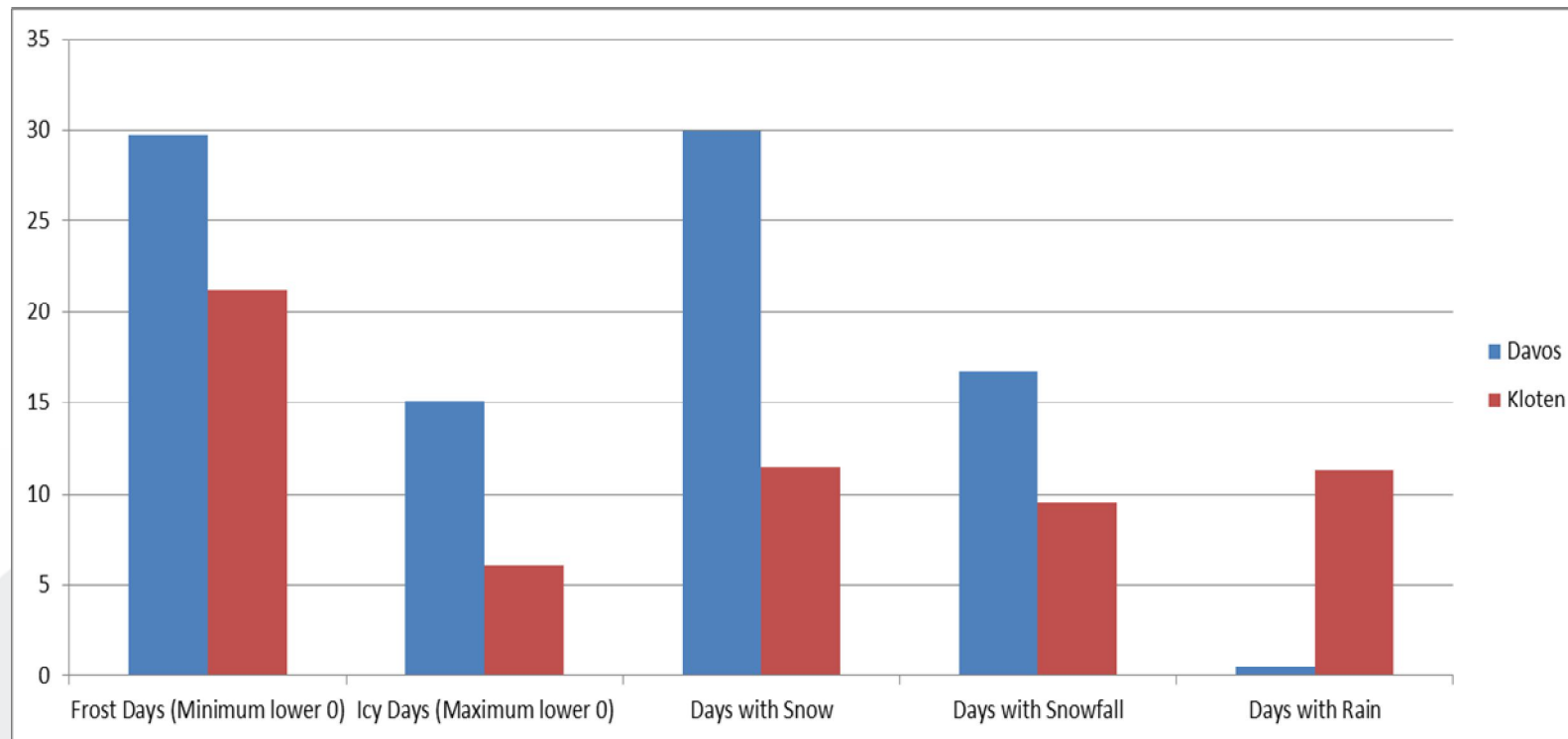
- Topography
- Traffic volumes
- Special areas as touristic villages in high mountains

Example:

- Kloten (canton Zürich), 450 m over MSL
- Davos (canton Graubünden), 1.560 m over MSL

2. CLIMATIC DIFFERENCES

Meteorological data from 2003 – 2012

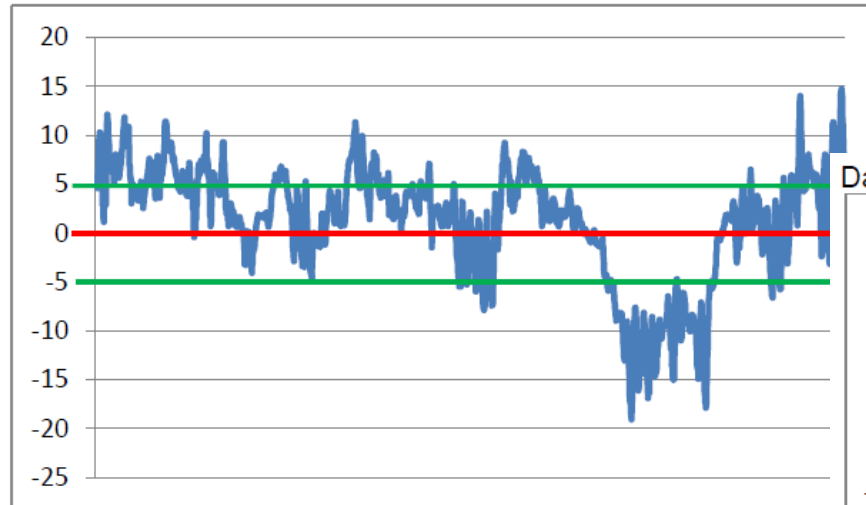


Source Sadro Auer

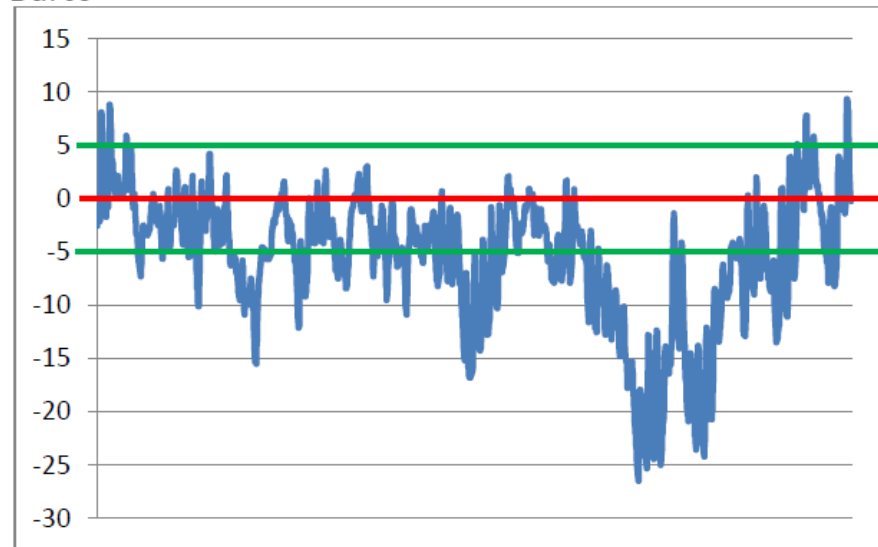
2. CLIMATIC DIFFERENCES

Temperatures December 2011 – February 21 2012

Kloten



Davos



Source Sadro Auer

3. WINTER SERVICE TREATMENTS

PASS OPENING



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3. WINTER SERVICE TREATMENTS

USE OF WOOD CHIPS ON PEDESTRIAN WAYS

- Wood chips, 5 -20 mm
- Impregnated with brine
- Use on pedestrian ways in municipalities
- Long-lasting action



3. WINTER SERVICE TREATMENTS

USE OF TREATED WOOD CHIPS ON PEDESTRIAN WAYS



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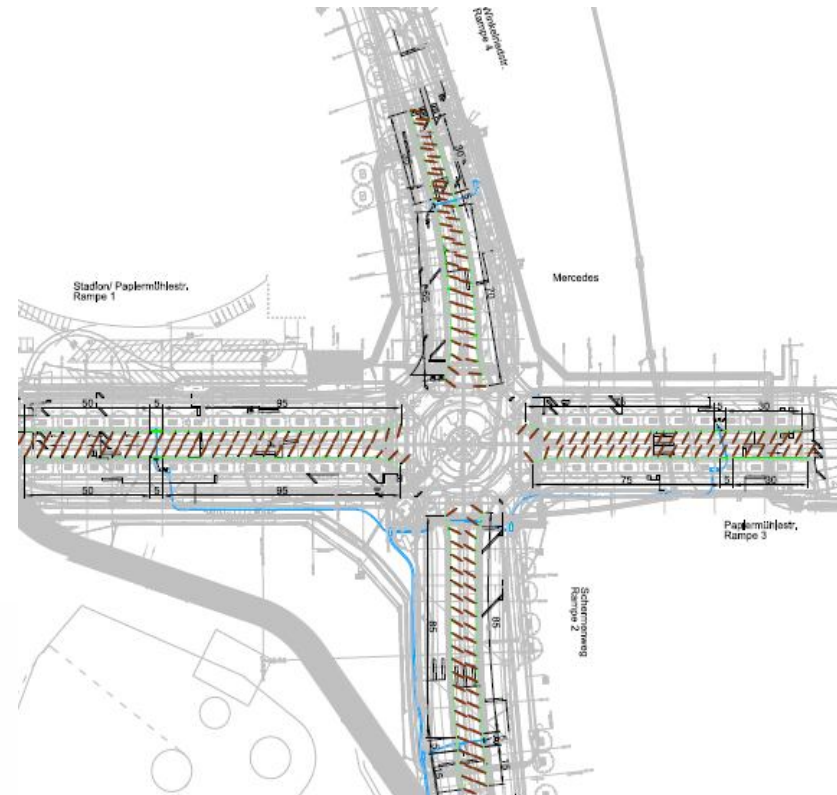
USE OF WOOD CHIPS ON PEDESTRIAN WAYS



3. WINTER SERVICE TREATMENTS

COMPLEX INNER-CITY JUNCTION

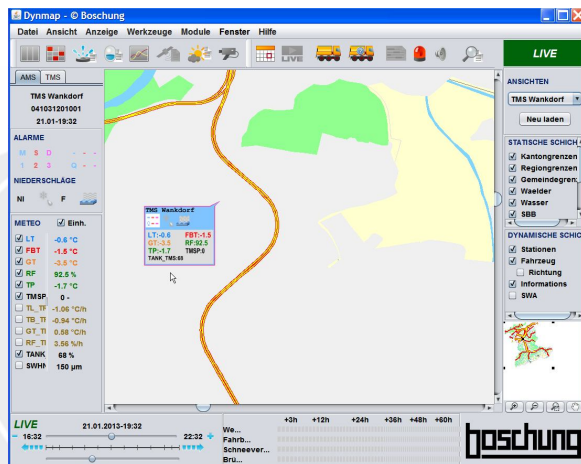
- Example Bern Wankdorf
- High traffic volume
- Use of fixed automated spraying system MicroFAST



3. WINTER SERVICE TREATMENTS

COMPLEX INNER-CITY JUNCTION

- Use of fixed automated spraying system MicroFAST
- Upcomming icing conditions detected by RWIS with active sensor technology
- Fully automated operation
- Works with all liquid de-icing agents



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THANK YOU FOR YOUR ATTENTION !

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