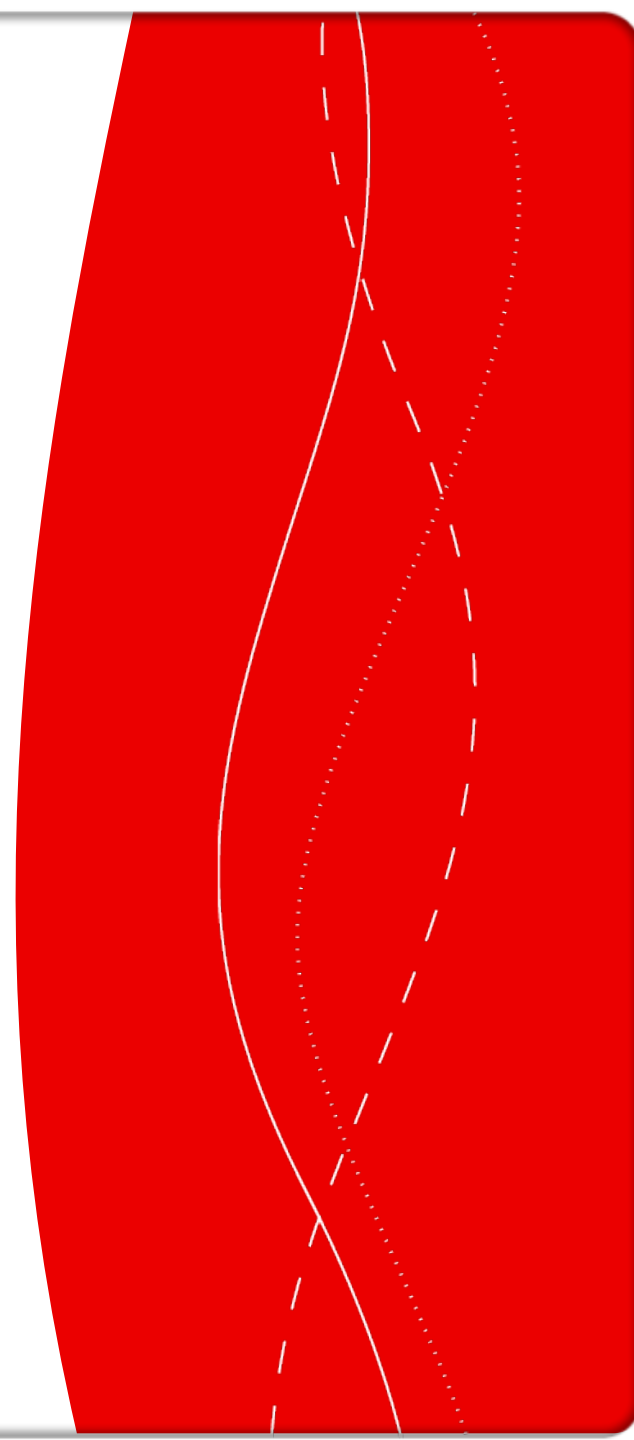




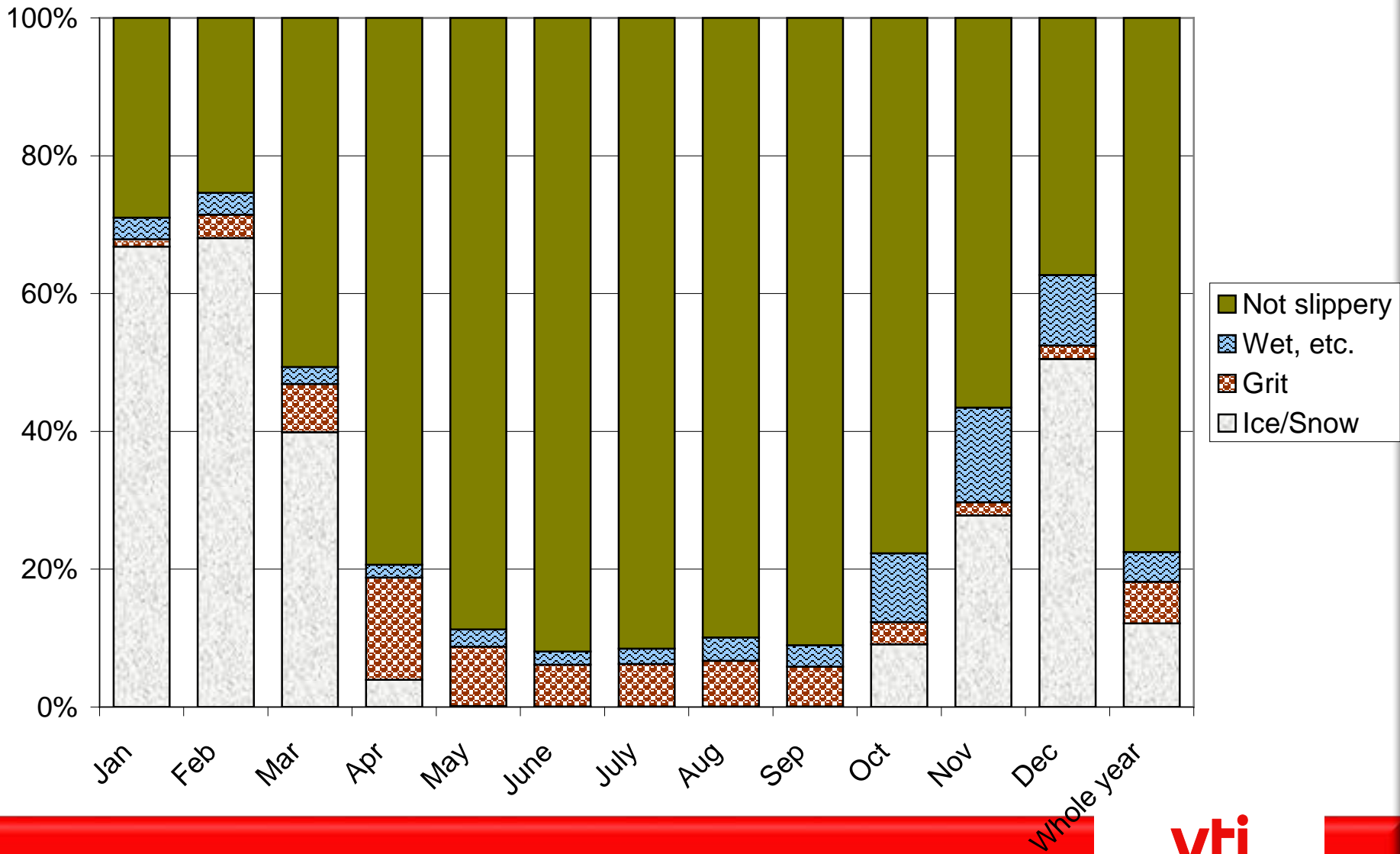
Skid Resistance – Important for Bike Safety

Anna Niska, Mattias Hjort; Göran Blomqvist

ICSC, Gothenburg 19 nov. 2014



Single Bicycle Crashes due to Skidding



Why Bike in Winter?







Warm Wetted Sand in Umeå

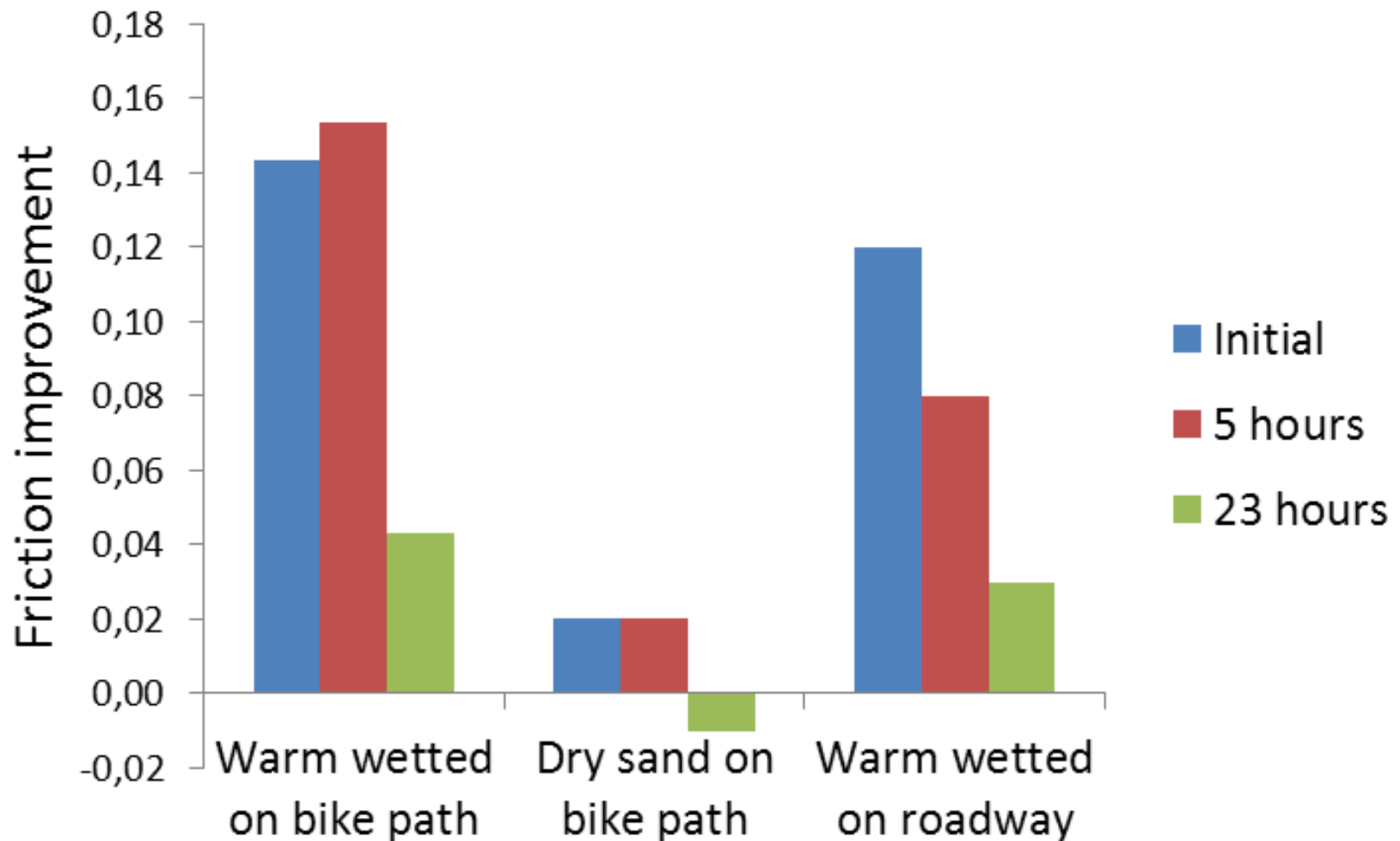


PFT – Portable Friction Tester



Bergström, A., Åström, H. and Magnusson, R. (2002). "Friction measurements on cycleways using a portable friction tester." *Journal of Cold Regions Engineering*, American Society of Civil Engineering, vol. 17, Issue 1, 37-57.

Comparing Results



Broom and salt in Linköping and Stockholm



Friction measurements



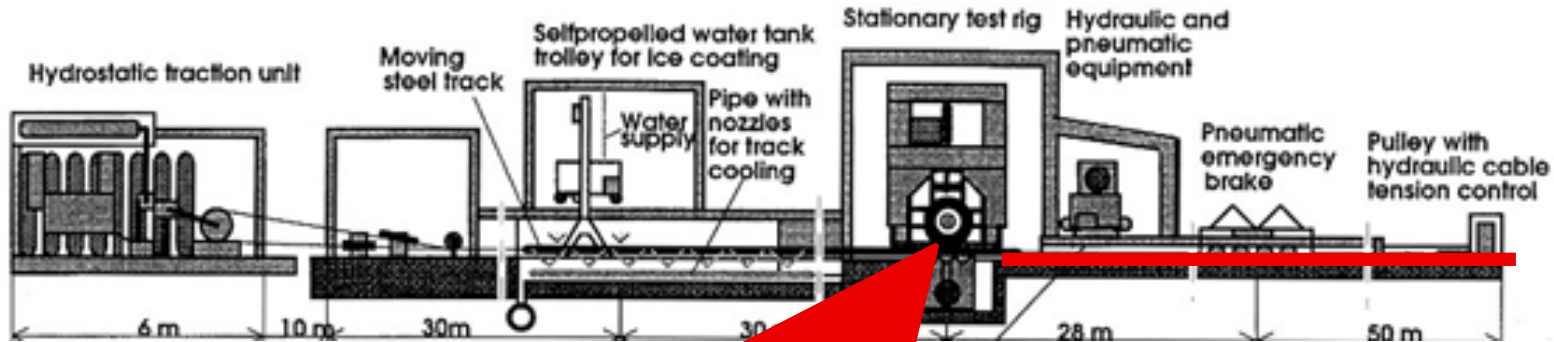


Features resulting in sudden changes in friction

- Damaged pavement
- Different types of paving material
- Inlet covers
- Road markings
- In crossings
 - Unsalted bike paths
 - Red-painted coat



Friction improvement using studded tyres?



Conclusions

- Skid resistance – important for bike safety
- Winter road condition and other road features greatly influence the level of friction
- Requirements based on friction
- Relate to friction levels for bicycle tyres



Thank you for your attention!



**Stockholms
stad**

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Seriously injured cyclists due to skidding

