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swissTAMP

Track Analysis & Maintenance Planning for a pro-active asset management

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Track asset mangement
Intelligent Rail Summit Naples
23.11.2016

Facts SBB track asstes

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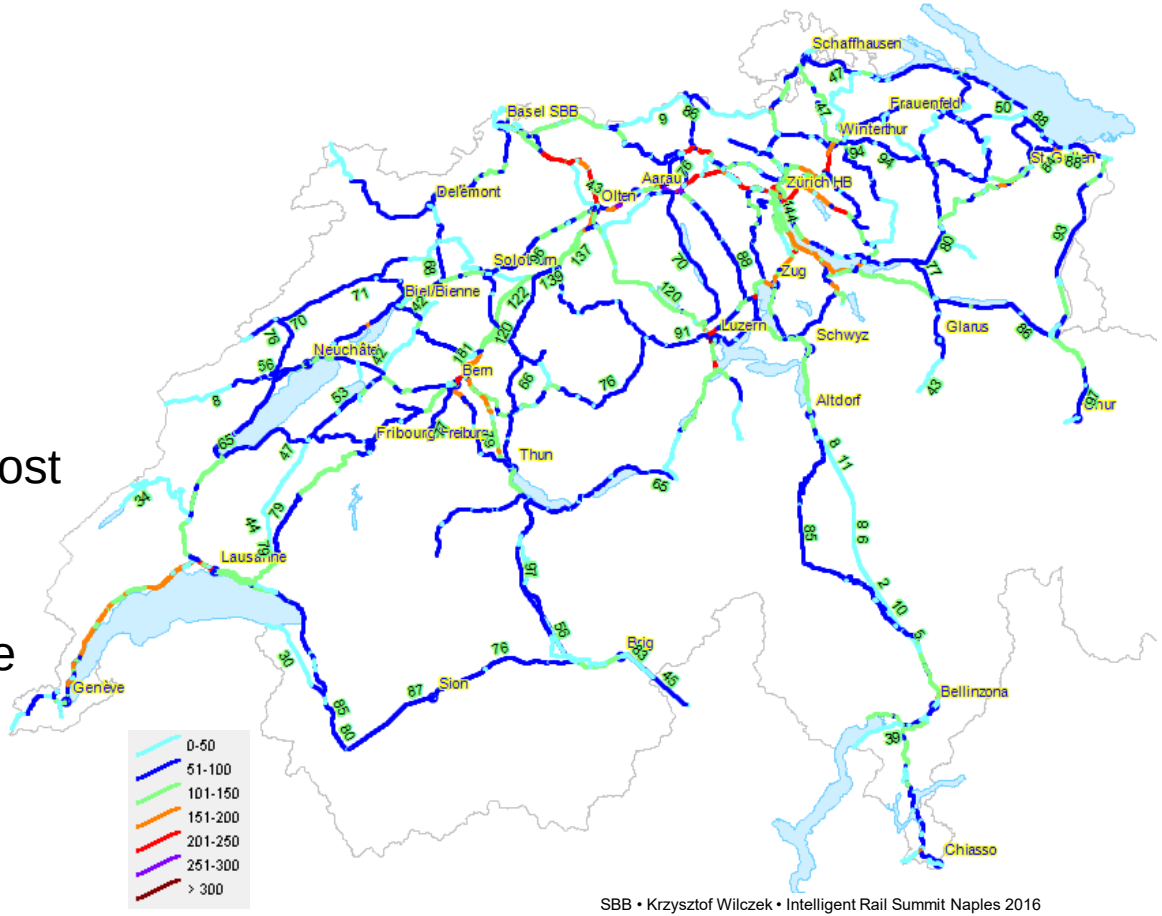
6.600 km tracks

13.000 switches

20 Mrd. CHF replacement cost

480 Mio. CHF/a renewal

330 Mio. CHF/a maintainance



Performance

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Since 1982

+70%

Transport performance

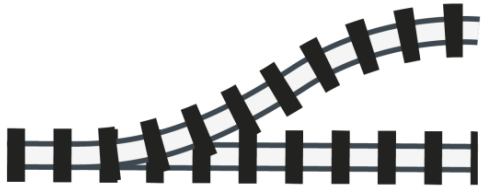
(ton kilometers)

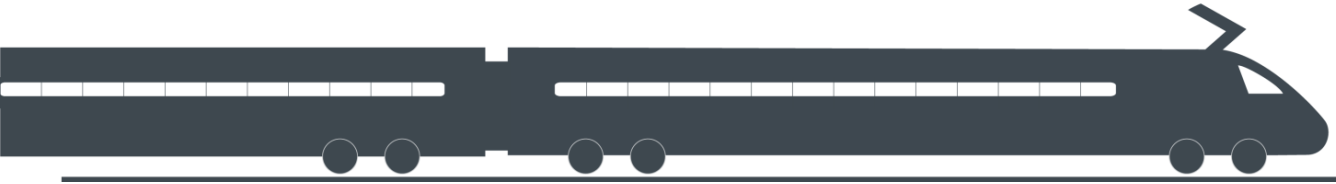
Since 1998

+36%

Network exploitation

(numbers of trains/track length)





Since 2004

+45%

Demand (passengers per day)

Backlog

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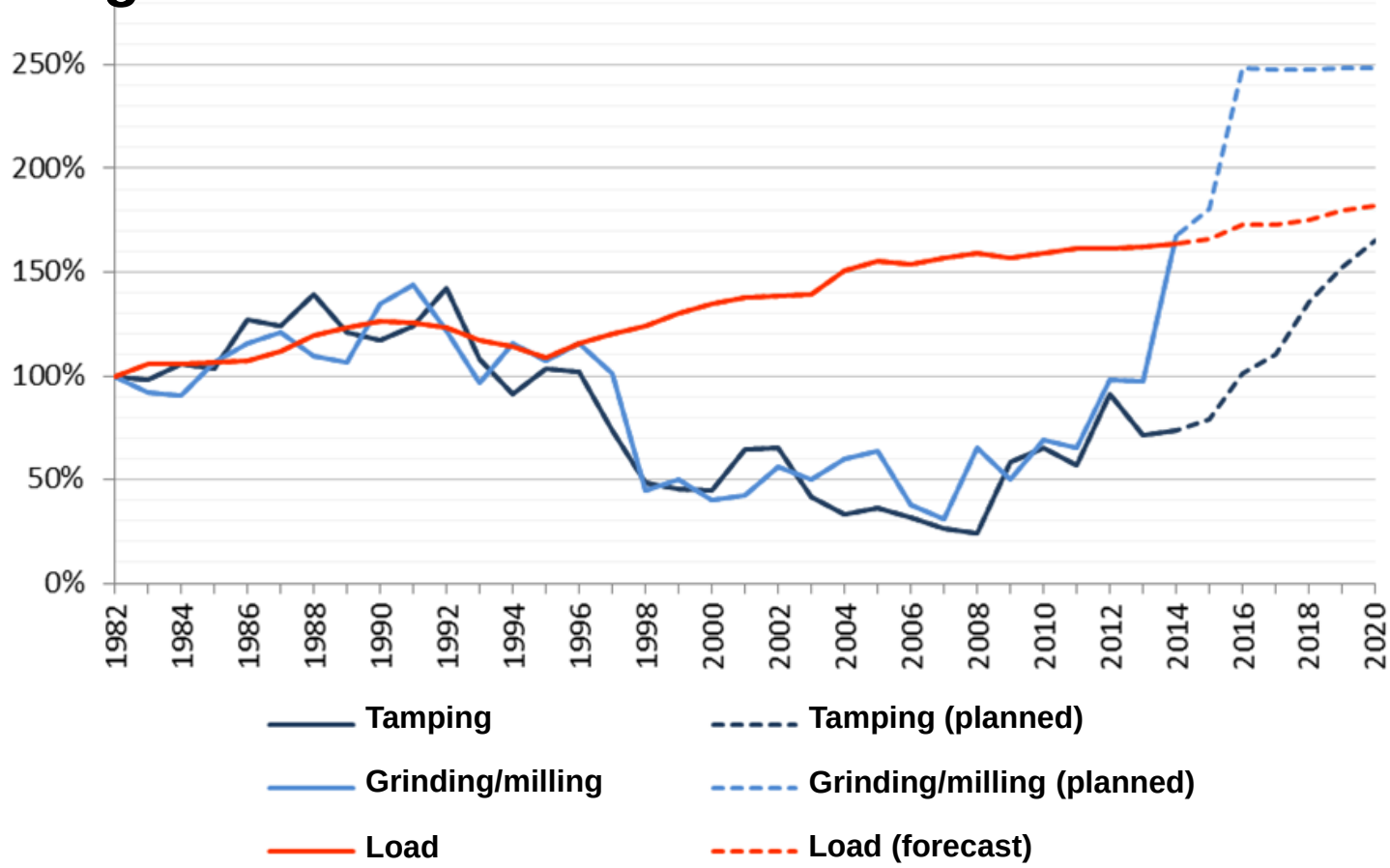

Tools for a proactive track asset management

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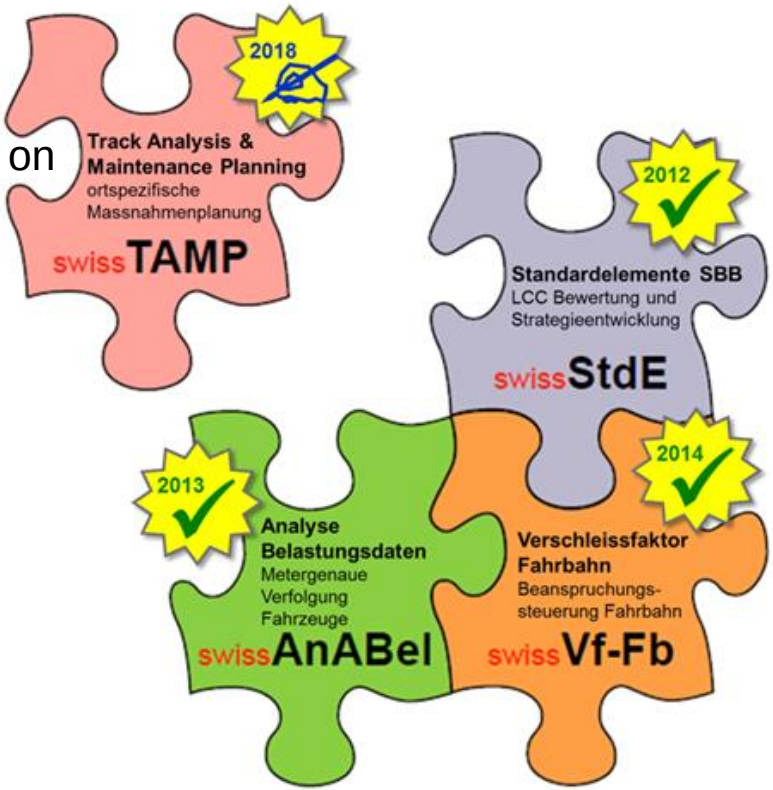
- Standard elements (StdE)
  Maintanence-plan for track and switches based on longtime experience of professionals on track
- ANABEL
  Archives of the traffic on track. For each vehicle on each track/switch and direction of movement
- Track wear factor (Vf-Fb)
  Introducing damage and wear depending incentives for each vehicle in track access charges.
- swissTAMP
  Track Analysis and Maintenance Planning



swissTAMP in a nutshell

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Embedding in SBB IT landscape

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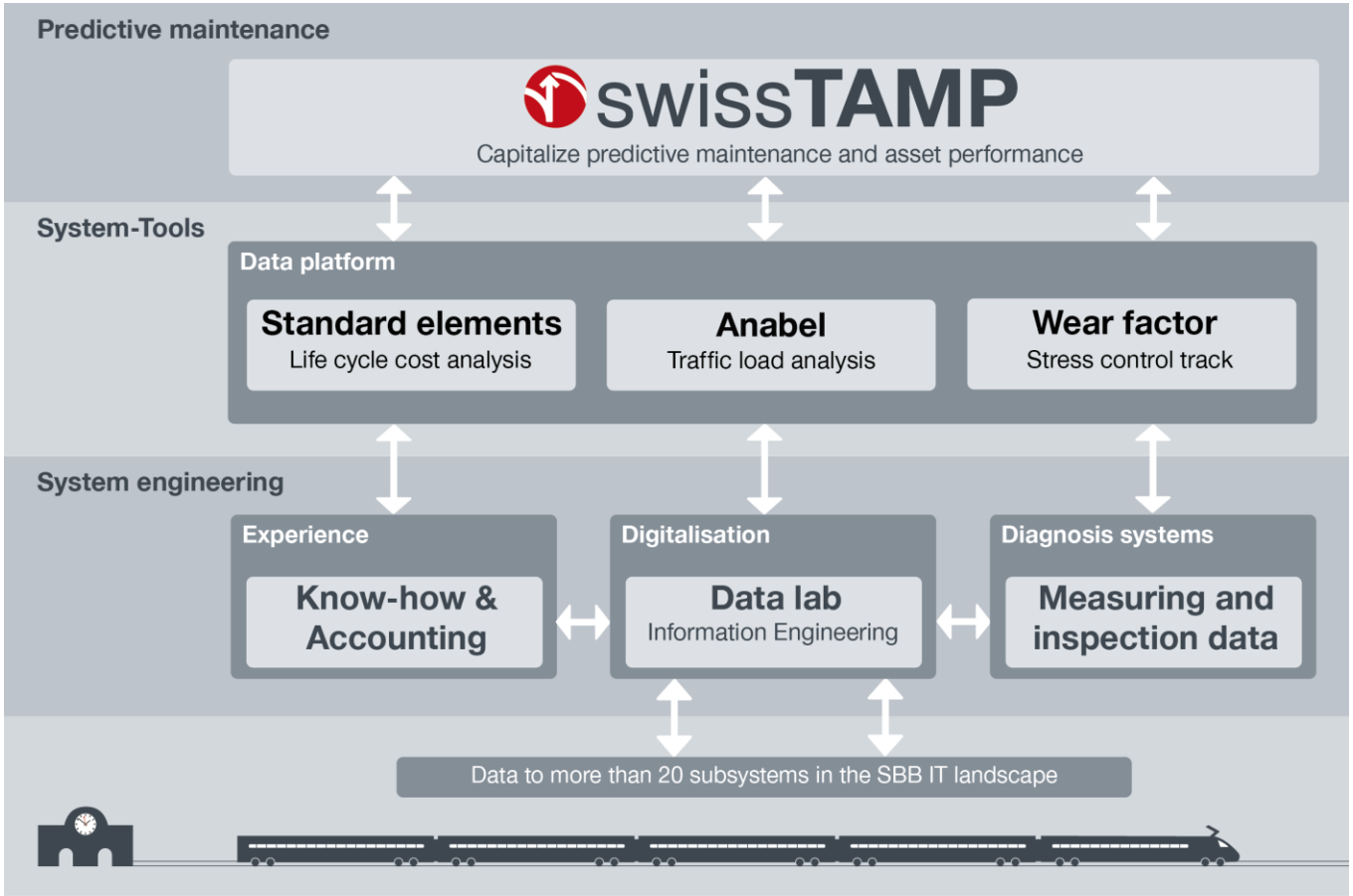

Setup

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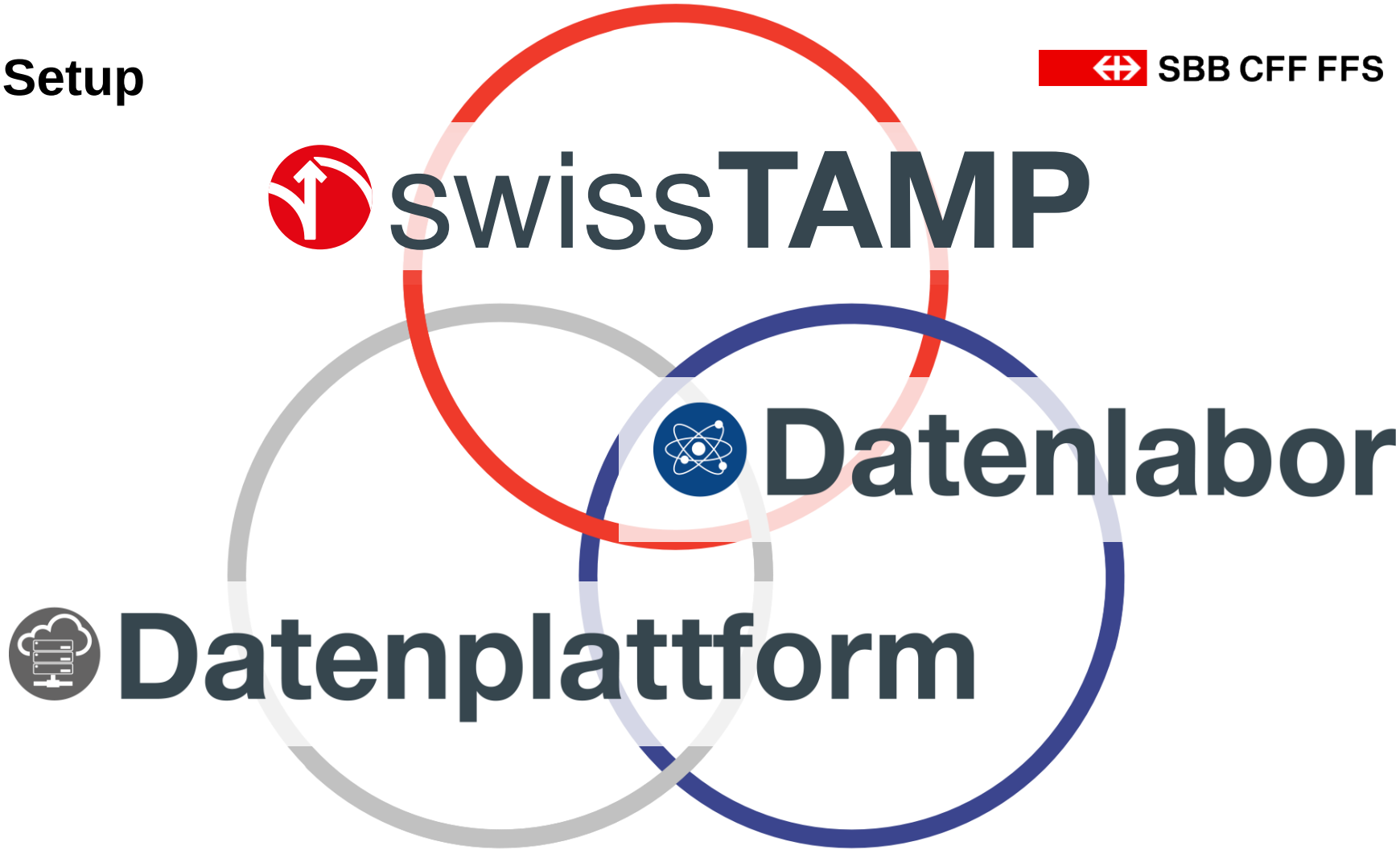

Data house

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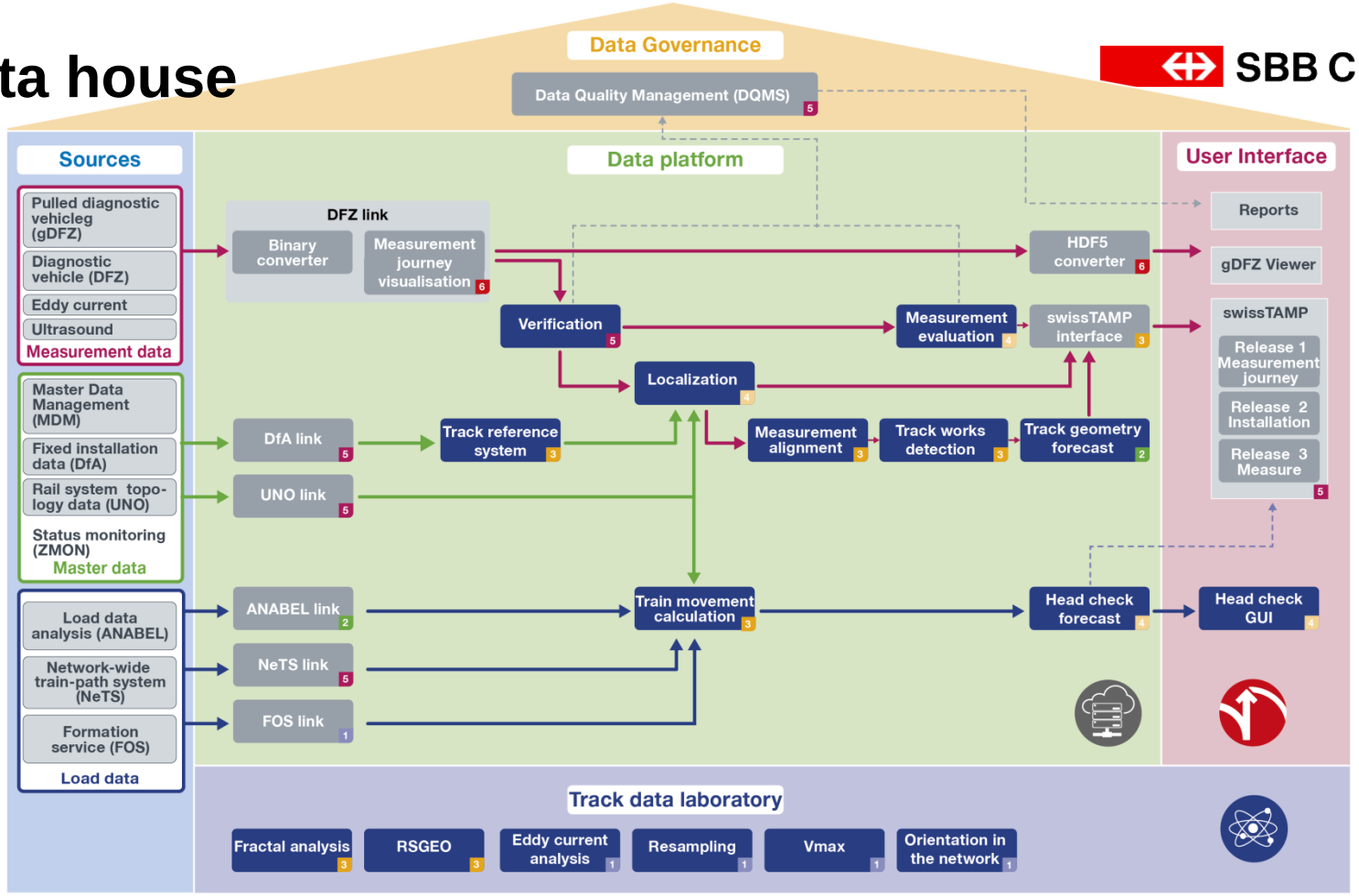

16:40
16:50
17:00
17:10
17:20
17:30
9213 +6
1528
8461 +1
18358 +2
19963
19260
18365 +2
2277 +2
8663 +2
60568
8665
19963
19263
18360
18365 +2
1528
726
576
825
49154
36670L
92023 -17
527 +9
2377
19265
62577 -7
50561
8462
19045 +1
62776
?50575 -15
8563
19262
28537 +24
8463
29677
579
725
62776
62950 +1
44682 -17
1529 +4
530
42908565
8664
62373
19267
19964
18369
8465
62629 -8
18564 +1
1529 +4
1530
19267
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18362 +1
18367
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4532

Rolling contact fatigue

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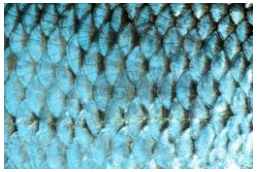
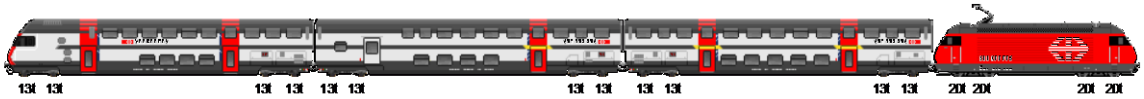


Head checks

Squats



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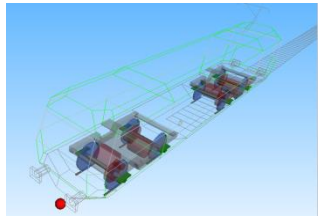
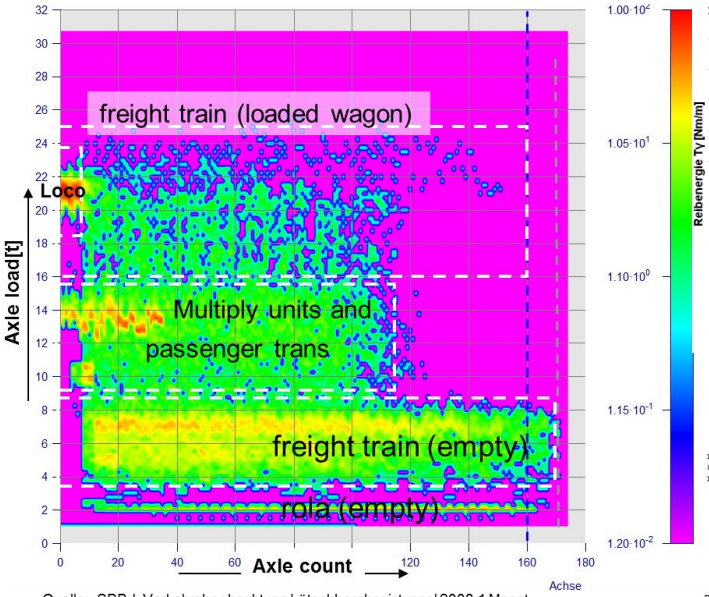
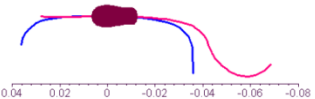
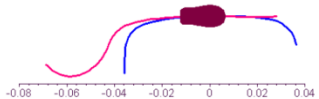




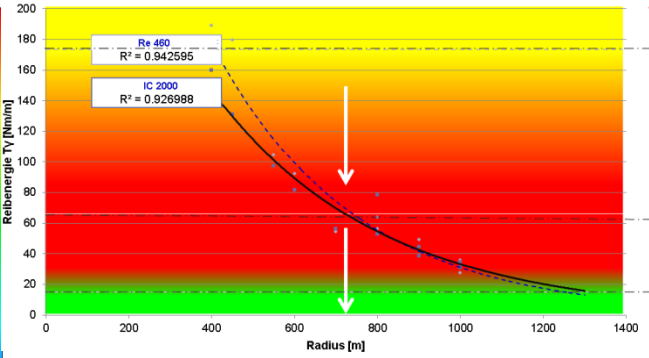
Quelle: SBB-I, Verkehrsbeobachtung Lötschbergbasistunnel 2008,1 Monat
Matrixbesetzungshäufigkeit in % (logarithmisch aus Darstellgründen

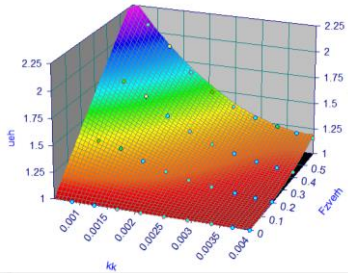


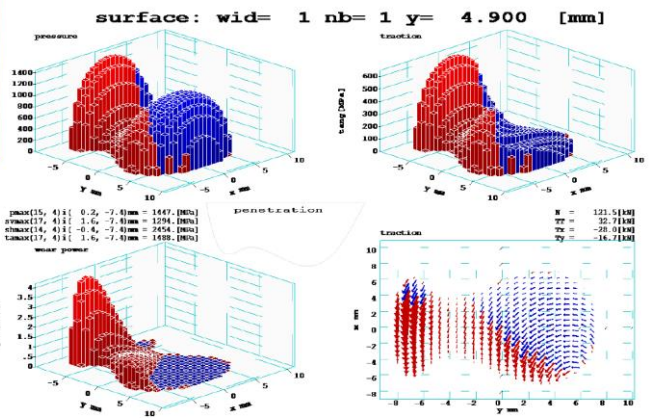


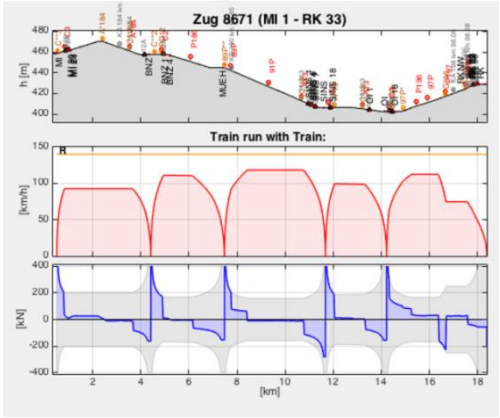
S1002.prf on UIC60.prf

Track gauge 1435 mm, Inclination 1/40









Application of HC prognosis

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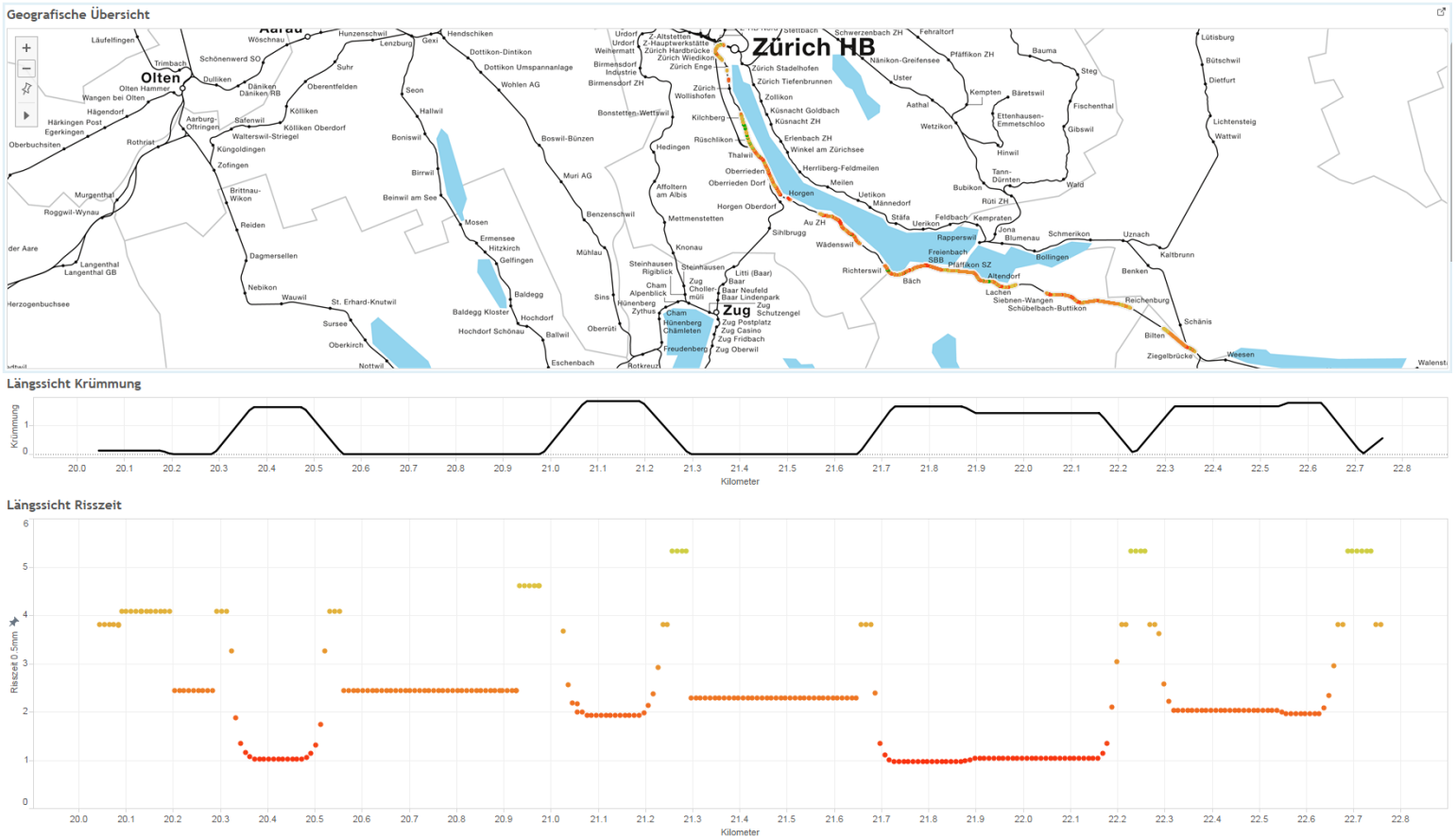

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Thank you for your attention