

# Eisenbahnbetriebslabor Schweiz Railroad Operations Laboratory Switzerland

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## 1 Introduction

The unique railroad operations laboratory will open at the end of May 2022 and will be available to universities from Germany and abroad, industry and railroads for training, research, development and simulation.

## 2 Plattform

The unique platform to:

- Test processes and systems
- Run training
- Reduce operating costs  
increase safety
- Explore new technologies

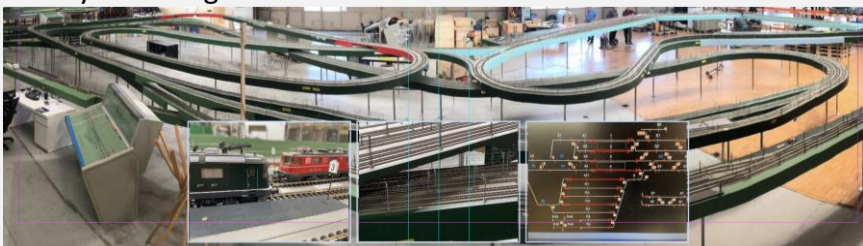


Part of the Innovation Park Switzerland, directly in the airport Dübendorf at the Air Force Center

## 3 Materials

The railroad operation laboratory consists of two facilities, which exactly replicate the original "railroad". The stations are operated via various signal boxes and control systems.

Around 56km of track on a scale of 1:100 are available. The two layouts are operated with 14 signal boxes. Modern presentation media and partly separate training rooms support trainings and seminars. A restaurant and various accommodation facilities round off the offer, especially for foreign universities.



## 4 Results and discussion

- Research and development in the rail sector - whether operational processes, interlocking technology, maintenance processes, planning, BIM;
- Testing and inspection of safety-relevant components and processes in rail transport;
- Education and training of various professional groups in the railroad sector;
- Developing, reviewing and testing software in various areas of public transport, including cyber security;
- Raising public awareness about the functioning and complexity of public transport



## 5 Future Development

- Additional new lines for 240 km/h
- ETCS Level 2 and higher
- Automatic train operation
- Train positioning system via GPS
- Locomotive simulators incl. ETCS
- Building Information Modeling
- Standard asset management software for railroads
- 3D Modeling
- Processes for communication, operations, and more



## References

[www.ebl-schweiz.ch](http://www.ebl-schweiz.ch)  
[LinkedIn ebl-schweiz](https://www.linkedin.com/company/ebl-schweiz)