SBB Lab
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SBB Research Fund: Research Topics 2026

The topics listed below serve as an inspiration and shall give research teams an overview on our current fields of interest as well as challenges we'd like to conduct joint research on.

Product and production models in public transport

- Methods or approaches to cope with the population and demand growth given capacity restrictions in the future (for example trade-off of building new tracks vs. robustness/quality of existing infrastructure, capacity vs speed or direct vs multiple stop operation).
- Methods or approaches to cope with the increasingly diverse and fast changing demand types (commuting vs. Leisure traffic, "lean" passenger transport vs. Extensive sport equipment and personal cargo) and travel patterns (fast shifting peak hours)

Resilience and Efficiency in operation

- Methods and approaches to use automatization and AI to drive e.g. maintenance speed up and costs down (data of entire rail asset life cycle, IoT...).
- Methods to reduce/cope with network capacity losses due to maintenance and construction works or unplanned disruptions?
- Forecasts and strategies to handle climate change and extreme weather events including heat waves on transport infrastructure and operations
- Adaptive decision-support in data-driven railway ecosystems

Long-term strengthening of SBB

- Methods to balance future investments in infrastructure expansion and maintenance. Planning approaches in a multi stakeholder and political context.
- Alternative financing models for public transport operation and investment?
- Tendencies and trends affecting regulatory environment of public transport and strategies for swiss railways to prepare for them.

Sustainability

- Identification and Implementation of models and approaches of circular economy in different parts of SBB

Market Development: Exploring New Potentials and Increasing Modal Split

- Forecasting and strategies to cope with demographic changes and induced mobility needs in the context of door-to-door mobility?

Customer Experience & Customer Centricity

- The impact of digital technologies on customer experience and customer journey, and the conditions for their effective adoption
- Building Stronger Customer Relationships - strategies to build and maintain stronger relationships with customers over different stages of life?
- Optimising Customer Information, especially in disruption situations

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– Improving customer journey during extreme heat periods

Cargo Transport

– New Business models for sustainable cargo transport including rail in Switzerland

Human Resources

– Methods and approaches to implement new work models in SBB to increase attractiveness in labor market while maintaining culture, teamwork and internal egality.
– Work under extreme heat and other climate-related workplace stressors
– Resilience and health in modern work environments (mental and physical health), including the (re)integration and continued employment of employees experiencing mental health difficulties and workplace conflicts.
– Occupational health and safety in high-automation railway environments

For some research topics existing SBB data might be used. For a first impression on available data please check following documents:

– Facts and figures including time series you find here.
– Available raw datasets are categorized by SBB as follows:
  - Open data is available for download here.
  - Restricted data can be obtained for specific projects with specified regulatory restrictions.
  - Closed data is not available for research.
  - An overview on raw datasets is available here.

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