



Swiss Federal Railways (SBB), Bern, Switzerland. Used with permission.

How Do You React to Power Peaks without Any Passengers Noticing?



SBB CFF FFS



“Load balancing allows us to manage peak power demand, **enabling us to significantly reduce our costs.**”

Daniel Koch, Head of Energy, SBB



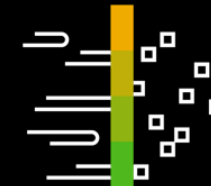
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reduced investment costs



Reduced

energy costs for rail transport



Digital

software investment instead of expensive hardware

SBB collaborated with SAP Innovative Business Solutions to develop a unique solution, powered by SAP HANA streaming analytics. In real time, it determines which loads should be reduced and conveys this information to other systems that automatically turn off heaters in train cars and on railroad switches. This enables SBB to better utilize its existing power capacity.



SBB CFF FFS

Improving Energy Demand Response with SAP HANA® Streaming Analytics



Company Name

Swiss Federal Railways (SBB)
Bern, Switzerland
www.sbb.ch

Industry

Travel and transportation

Products and Services

Passenger and cargo
transportation

Employees

33,000

Revenue

€7.9 billion (2016)

SAP Solutions

SAP HANA
SAP HANA streaming
analytics

Implementation Partner

SAP Innovative Business
Solutions

As part of its long-term load management program, SBB worked with SAP Innovative Business Solutions to create a smart, real-time power demand management platform based on SAP HANA® streaming analytics. The solution will automatically decrease peak loads and is expected to reduce SBB's energy costs. After a successful proof of concept, SBB now has the foundation for its ongoing energy management transformation.

Before: Challenges and Opportunities

- Manage constantly fluctuating energy demands more efficiently
- Respond to frequent, sudden peak loads during rush hours and in winter when heating is at maximum
- Implement a system that monitors power demand in real time and automatically reduces load by proactively switching off energy-consuming appliances, such as heaters

Why SAP

- Implement standard software with SAP HANA streaming analytics to form the smart core of a complex signal processing solution and provide a proven foundation for future innovation projects
- Close collaboration between SAP and SBB, working as one unified team in Switzerland from the proof of concept to development of SAP-specific system components
- Using agile methodology, the SAP Innovative Business Solutions team delivered a proof of concept in just six weeks

After: Value-Driven Results

- Postponed investments in new energy infrastructure by leveraging existing assets
- Savings in peak energy costs expected
- Increase the reliability of energy supply
- New opportunities to control other energy-consuming appliances in the future, such as train traction (engines)

“By realizing our power demand management platform, we’re building the foundation for future business cases.”

Markus Halder, Head of Power Demand Management Program, SBB

Dynamic

power demand management

Real-time

responses to power peaks

6 weeks

rapid prototyping to deliver
proof of concept

[Learn more >](#)



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