

## Guiding Switzerland's railway system into the digital future

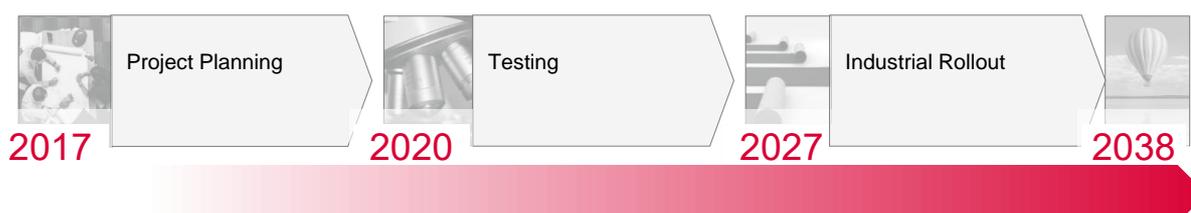
**Key railway production systems will be reaching their end of life within the next few years and will therefore need to be replaced. These include interlocking, control technology, trackside installations, data transmission systems and traffic control systems. Digitalisation and new technologies also offer opportunities to make rail operations more efficient, which is absolutely essential facing the growing intermodal and digital competition.**

The Swiss rail sector is tackling this challenge with the smartrail 4.0 programme. Customers will benefit from more trains, denser timetable intervals, fewer disruptions, faster wireless connectivity and better information in the event of a disruption.

The project planning phase, which is scheduled to run until the end of 2019, will involve investigating new technologies and systems in terms of their functionality and requirements for homologation. These will then be tried out on pilot systems in field tests in preparation for the industrial rollout starting in 2027. The development work is being carried out in collaboration with partners from industry, universities and international committees and railway companies.

**In implementing the “smartrail 4.0” programme, the rail industry is aiming to gradually further enhance capacity and safety, make more efficient use of railway infrastructure and save costs. This is the only way to ensure that rail transport remains competitive on the long run.**

Objectives compared to the current situation:	
<b>Reduction in external installations</b>	- 70%
<b>Sustained improvement in results</b>	CHF 450 million p.a.
<b>Increase in track capacity across the network</b>	+ 15%–30%
<b>Increase in availability of safety installations</b>	+ 50%
<b>Reduction in probability of collisions (shunting &amp; construction)</b>	- 90%
<b>High data communications capacity for customers</b>	Throughout >20 MBit/sec



## Rail customers stand to benefit from modernised rail travel at lower costs

Rail customers will feel the full benefits of the new technologies, including:

- An improved cost-benefit ratio thanks to the reduction in infrastructure costs.
- More frequent services thanks to lower headway times and higher network capacity.
- Customer information in real time and continuous online access thanks to highly available connectivity.

**Smartrail 4.0 is divided into six sub-programmes. There is a high degree of interdependence between these sub-programmes, which is why the Swiss rail industry set up an overall programme led by SBB.**

