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An efficient and integrated railway – the Swiss example

2nd European Rail Transport Regulation Forum

Florence, Italy

23 May 2011

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Overview

- Energy efficiency
- Efficiency in regional services
- Infrastructure efficiency
- Conclusion: efficiency advantages of an integrated railway

Example 1: Energy efficiency (I)

Energy efficiency:

- SBB has improved its efficiency in the area of energy in the past years, not only in the areas of locomotives, but also in the area of regenerative breaking.
- SBB has improved its energy efficiency through the use of double deck trains, which means that the amount of energy used per passenger km has improved.
- The number of journeys has increased dramatically, leading to higher energy efficiency.

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Example 1: Energy efficiency (II)

- In the last five years, energy usage has decreased by 10 to 8.2 kilowatt hours, in order to transport one passenger 100km, corresponding to one litre of petrol per 100 passenger km. Since 2008, SBB has been able to save 119 GWh/a – **the usage of 30,000 households.**

- Train drivers are schooled to drive trains in an efficient way, in order to increase energy regeneration. There has also been increased cooperation and information exchange between controllers (SBB infrastructure) and drivers (SBB passenger services) to optimise the process.

- **Through cooperation between the infrastructure and passenger services divisions, energy efficiency savings have been made possible.**

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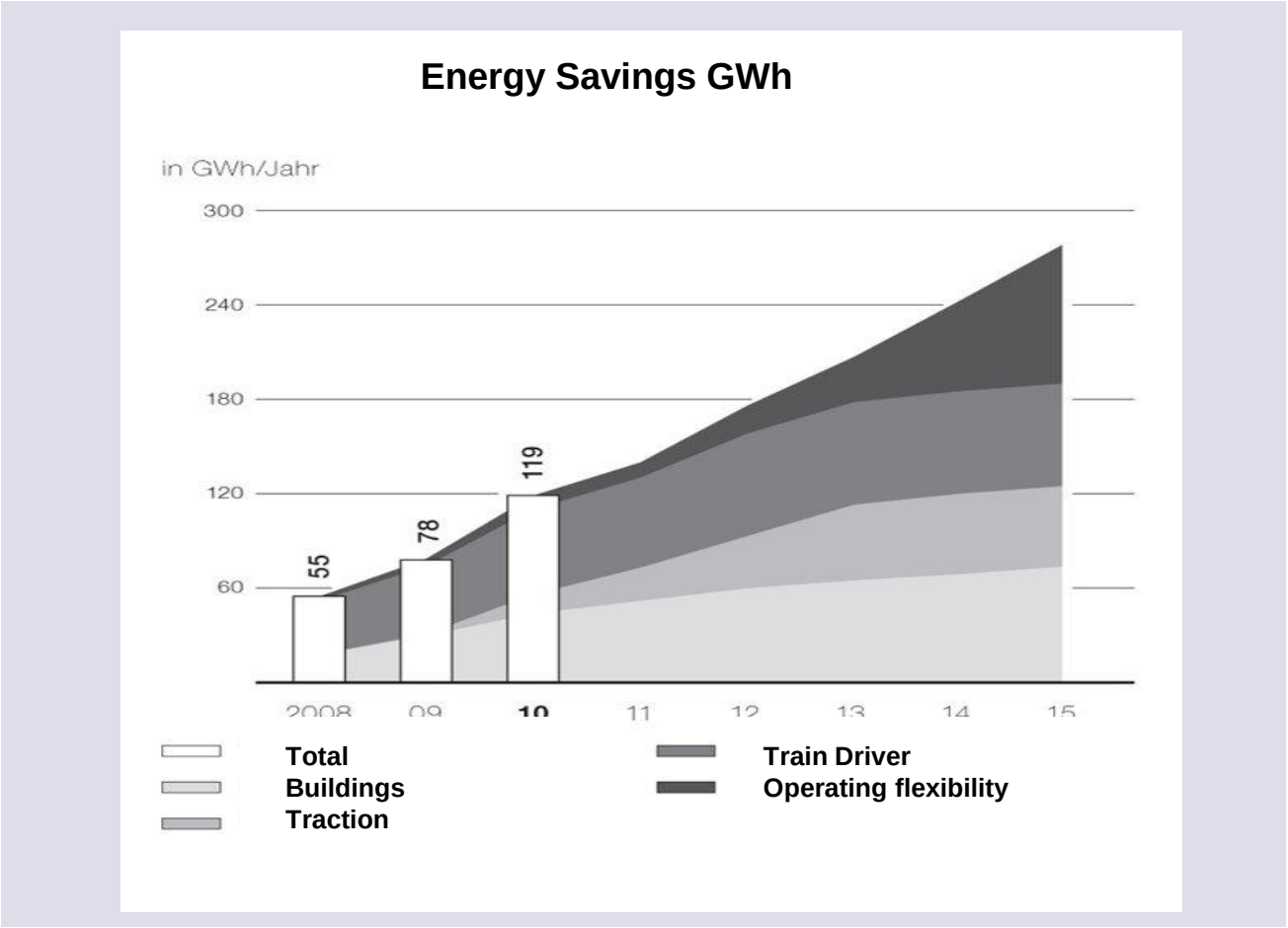
SBB planned energy savings 2008-2015



Example 2: Regional services (I)

Efficiency in regional services

- Compensation from the government has decreased continually per train km over the past 10 years.
- There are two reasons for this: An increase in cost recovery over the past 10 years through increased passenger revenue (through an increase in new customers, increased travel by existing customers, as well as ticket prices), and an increase in productivity through better utilisation on the existing fleet, and shorter turnaround times.

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Example 2: Regional services (II)

- Optimising the deployment of the over 2300 train drivers in Switzerland has led to increases in productivity of 19% since 2006.
- The fleet in regional transport has increased by 20% since 2006. At the same time, SBB has been able to save 20% of costs on rolling stock maintenance.
- Through increased efficiency in ticket sales SBB has been able to achieve further efficiency, despite an increase of passengers by 4%-5% p.a. Examples include the increased use of ticket machines, as well as the use of the internet and mobile phones. Around 70% of ticket sales are made at a ticket machine.
- **These efficiency savings have been made without the option of competitive tendering for consessions or franchises**

Example 3: Infrastructure (I)

Infrastructure efficiency

- The recent network audit (2010) came to the conclusion that SBB infrastructure needs a further 850 MCHF (€680 M) p.a. because of a backlog in maintenance and renewals. This will be funded through increased subvention from the government, higher track access charges, and through measures to increase efficiency. In the coming years SBB will save 220 MCHF (€176 M) p.a. through productivity savings alone.
- SBB aims to achieve these savings through a variety of methods. Longer possession times, optimising technical standards, increased efficiency in the maintenance and renewal of overhead lines, better production planning will help SBB to achieve these savings.
- Reducing overhead costs could lead to cost savings of 58 MCHF (€46 M) alone.

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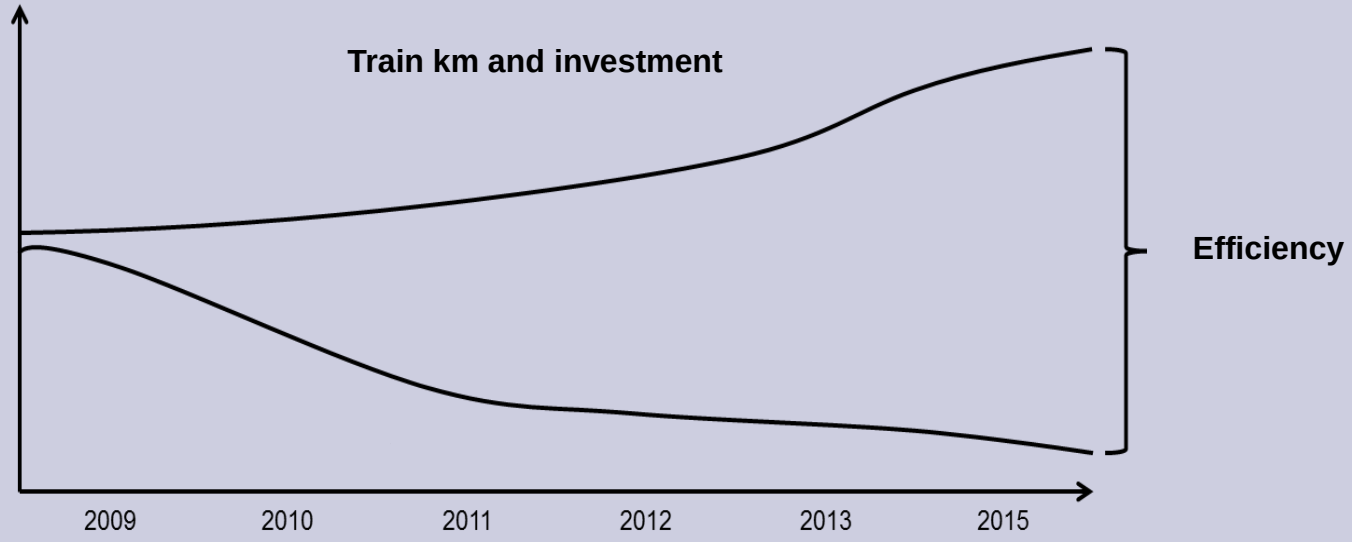
Railway traffic and investment vs. overhead costs



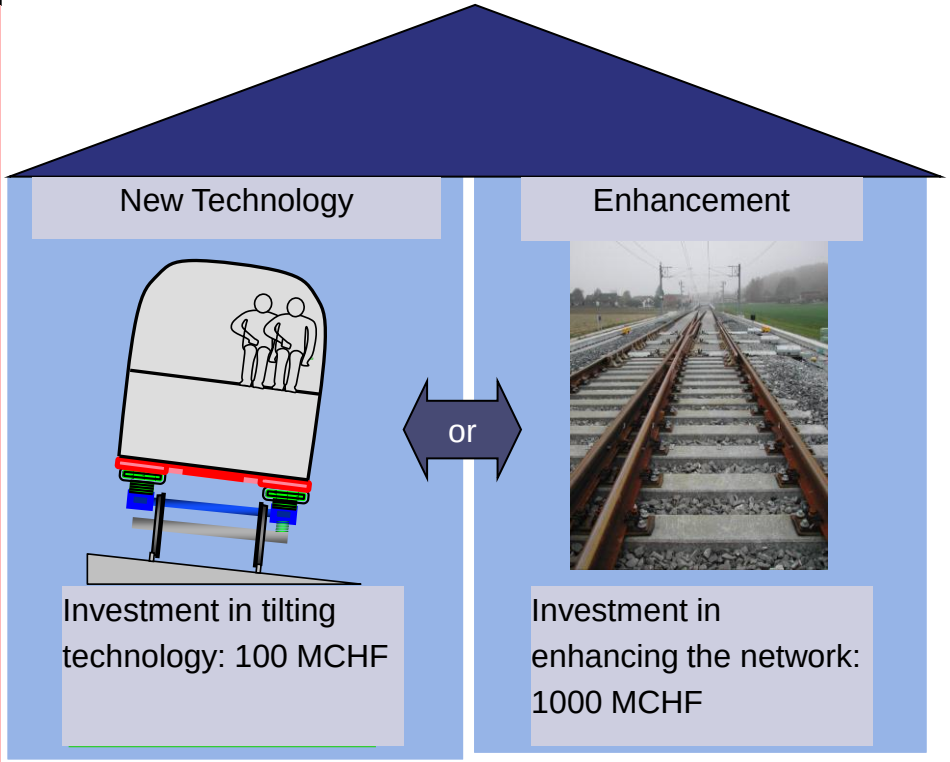
Traffic and investment in the network are set to increase, overhead costs to decrease – The synergies created through an integrated railway are an integral part of making this possible

Example 3: Infrastructure (II)

Economic perspective

Eliminating bottlenecks on the network

- Rolling Stock: Tilting technology allows for greater speed (but limited to single deck coaches)
- Infrastructure: Responsible for the elimination of bottlenecks and enhancement of the network
- New technology: 100 MCHF (€80 M) investment in new technology for double deck trains vs. 1000 MCHF (€800 M)for enhancement of the network
- Efficiency is generated through saving on costly enhancement projects **due to the integrated railway**



Conclusion

- An integrated railway allows for greater productivity for the entire system through:
  - I. smaller number of key players
  - II. less bureaucracy
  - III. easier to reach a consensus on policy
  - IV. fewer transaction costs
  - V. through synergies; not only more productivity, but also a higher amount of innovation
- The Swiss example shows that increased efficiency can be achieved without liberalisation or competition

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***Many thanks for your attention*!**

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