

# Infrastructure

Objekttyp: **Group**

Zeitschrift: **Annual report / Swiss federal railways**

Band (Jahr): - **(2003)**

PDF erstellt am: **18.04.2024**

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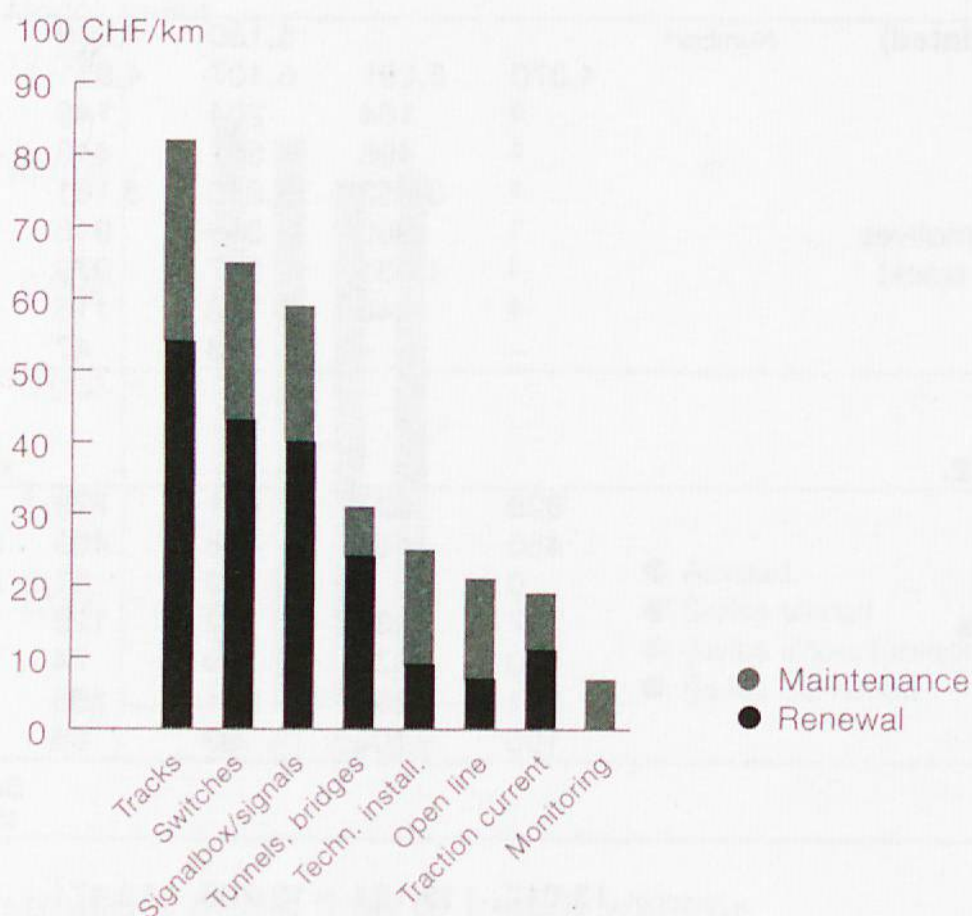
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## What an SBB line kilometre costs

Average expenses for maintenance and renewal of the rail infrastructure



## Key projects

|                                         | Overall costs<br>CHF mn | Start of constr.<br>Year | End of constr.<br>Year | Part under constr.<br>CHF mn | Part completed<br>CHF mn |
|-----------------------------------------|-------------------------|--------------------------|------------------------|------------------------------|--------------------------|
| <b>Network of the future</b>            |                         |                          |                        |                              |                          |
| Rail 2000, 1 <sup>st</sup> phase        | 15,900                  | 1988                     | 2007                   | 3,100                        | 2,300                    |
| Seven S-Bahn systems <sup>2</sup>       | 1,594                   | 2002                     | 2007                   | 32                           | 16                       |
| "Facelifting" of stations               | 340                     | 2002                     | 2016                   | 24                           | 41                       |
| AlpTransit Gotthard                     | 19,233                  | 1996                     | 2014                   | 1,554                        | 0                        |
| Rail 2000 2 <sup>nd</sup> phase         | 5,900                   | 2011                     | 2022                   | 0                            | 0                        |
| <b>New technologies</b>                 |                         |                          |                        |                              |                          |
| Automation of signalboxes               | 1,700                   | 2002                     | 2010                   | 670                          | 100                      |
| European Train Control System ETCS      | 830                     | 2005                     | 2017                   | 0                            | 0                        |
| Global System Mobile for Railways GSM-R | 375                     | 2003                     | 2008                   | 20                           | 0                        |

1 Forecast of end costs.

2 1<sup>st</sup> phase, without link Genève–Eaux-Vives–Annemasse and without second through station Zürich HB.

## Financial matters<sup>1</sup>

|                        |        | 2000    | 2001    | 2002    | 2003    | 03-02<br>± % |
|------------------------|--------|---------|---------|---------|---------|--------------|
| Operating revenues     | CHF mn | 3,041.1 | 3,092.9 | 3,105.0 | 2,954.1 | -4.9         |
| -Use of infrastructure |        | 668.5   | 616.0   | 540.9   | 540.2   | -0.1         |
| Operating expenses     |        | 2,854.3 | 2,902.7 | 3,023.6 | 3,065.9 | 1.4          |
| Operating result       |        | 186.8   | 190.2   | 81.4    | -111.8  | -237.4       |
| EBIT                   |        | 227.3   | 184.4   | 143.7   | -69.9   | -148.6       |
| Annual profit          |        | 986.9   | 1 019.7 | 1 100.3 | 850.3   | -22.7        |
| Gross investments      |        | 1,565.0 | 1,767.2 | 1,936.5 | 1,674.8 | -13.5        |

## Operating performance

|                     |         |       |       |       |       |      |
|---------------------|---------|-------|-------|-------|-------|------|
| <b>Normal gauge</b> | mn trkm | 130.8 | 132.9 | 135.5 | 138.0 | 0.8  |
| SBB                 |         | ...   | 129.4 | 131.1 | 133.2 | 0.6  |
| - Passenger trains  |         | ...   | 96.5  | 99.0  | 102.9 | 0.7  |
| - Freight trains    |         | ...   | 30.3  | 28.9  | 28.4  | -1.6 |
| - Service trains    |         | ...   | 2.6   | 3.2   | 1.9   | -5.6 |
| Third parties       |         | ...   | 3.5   | 4.4   | 4.8   | 2.3  |
| - Passenger trains  |         | ...   | 2.7   | 3.1   | 2.9   | -7.8 |
| - Freight trains    |         | ...   | 0.7   | 1.2   | 1.9   | 2.3  |
| - Service trains    |         | ...   | 0.1   | 0.1   | 0.1   | ...  |
| <b>Narrow gauge</b> |         | 1.5   | 1.6   | 1.6   | 1.6   | 0.8  |
| SBB                 |         | ...   | 1.4   | 1.4   | 1.4   | 0.6  |
| - Passenger trains  |         | ...   | 1.3   | 1.3   | 1.3   | 0.7  |
| - Freight trains    |         | ...   | 0.1   | 0.1   | 0.1   | -1.6 |
| - Service trains    |         | ...   | 0.0   | 0.0   | 0.0   | -5.6 |
| Third parties       |         | ...   | 0.2   | 0.2   | 0.2   | 2.3  |
| - Passenger trains  |         | ...   | 0.2   | 0.2   | 0.2   | 2.3  |
| - Freight trains    |         | ...   | 0.0   | 0.0   | 0.0   | ...  |
| - Service trains    |         | ...   | 0.0   | 0.0   | 0.0   | ...  |

## Productivity

|                                                       |        |      |      |      |      |      |
|-------------------------------------------------------|--------|------|------|------|------|------|
| Train path revenues<br>per line-km                    | CHF mn | 0.22 | 0.21 | 0.18 | 0.18 | -3.3 |
| Train path revenues<br>per train path km              | CHF    | 5.05 | 4.58 | 3.94 | 3.87 | -1.9 |
| Operating grant<br>per train path km                  |        | 4.44 | 3.60 | 3.61 | 3.33 | -7.9 |
| Share of train path revenues<br>in operating expenses | %      | 23.4 | 21.2 | 17.9 | 17.6 | -1.5 |

1 Segment account. Intra-group revenues and expenses not eliminated.



## Power generation

|                                      |         | 2000  | 2001  | 2002  | 2003  | 03-02<br>± % |
|--------------------------------------|---------|-------|-------|-------|-------|--------------|
| Total produced and used              | GWh     | 4,684 | 4,337 | 3,465 | 3,951 | 14.0         |
| Use for train traction ex substation | GWh     | 2 004 | 2 057 | 2 069 | 2 080 | 0.54         |
| – from renewable sources of energy   | %       | 99.8  | 96.9  | 87.2  | 88.6  | 1.6          |
| – SBB network                        |         | 1,821 | 1,871 | 1,878 | 1,898 | 1.06         |
| – Other networks                     |         | 183   | 186   | 191   | 182   | -4.48        |
| Specific energy use of SBB           | kWh/pkm |       |       |       |       |              |
| – Passenger traffic                  | kWh/tkm | 0.090 | 0.106 | 0.094 |       | -100.0       |
| – Freight traffic                    |         | 0.079 | 0.079 | 0.073 |       | -100.0       |

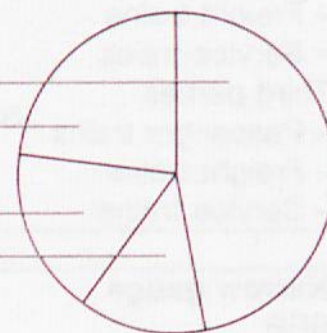
### Source

Own and co-owned power plants<sup>1</sup> 47%

Purchased 23%

Partner plants<sup>2</sup> 17%

Purchased in exchange 13%



### Use

SBB train operation 48%

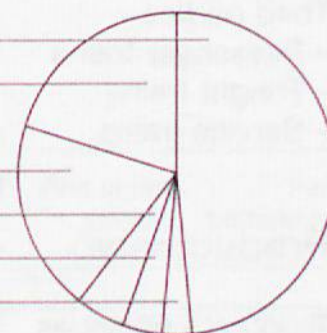
Sale of electricity 21%

Delivered in exchange, pump operation 19%

Other railways 5%

Own use, losses 4%

Supply of SBB stations 3%



1 Amsteg, Ritom, Vernayaz, Châtelard-Barberine, Massaboden, Trient, Etzel, Göschenen, Wassen, Rapperswil-Auenstein.

2 AKEB.



## Workforce, fixed installations, stations, rolling stock

|                                             |                     | 2000   | 2001   | 2002   | 2003   | 03-02<br>± % |
|---------------------------------------------|---------------------|--------|--------|--------|--------|--------------|
| <b>Personnel</b>                            |                     |        |        |        |        |              |
| <b>Workforce (consolidated)</b>             | Number <sup>1</sup> |        |        | 10,271 | 9,478  | -7.7         |
| <b>SBB AG, Infrastructure div.</b>          |                     | 10,166 | 10,247 | 10,256 | 9,469  | -7.7         |
| Central offices                             | 2                   | 2      | 1,317  | 1,683  | 1,688  | 0.3          |
| Sales                                       | 2                   | 2      | 31     | 18     | 5      | -72.2        |
| Production                                  | 2                   | 2      | 4,327  | 4,153  | 3,594  | -13.5        |
| Maintenance                                 | 2                   | 2      | 4,405  | 4,180  | 3,985  | -4.7         |
| Other                                       | 2                   | 2      | 167    | 222    | 197    | -11.3        |
| <b>Subsidiaries</b>                         |                     | -      | -      | 15     | 9      | -40.0        |
| <b>Fixed installations</b>                  |                     |        |        |        |        |              |
|                                             |                     |        |        |        |        | ± 03-02      |
| <b>Operated lines</b>                       | km                  | 2,973  | 2,986  | 2,982  | 3,080  | 98           |
| - not electrified                           |                     | 17     | 17     | 17     | 0      | -17          |
| - for freight traffic only                  |                     | 95     | 94     | 89     | 70     | -19          |
| - Narrow gauge                              |                     | 74     | 74     | 74     | 74     | 0            |
| Own lines                                   |                     | 3,000  | 3,008  | 3,003  | 2,982  | -21          |
| - Single-track lines                        |                     | 1,390  | 1,394  | 1,389  | 1,356  | -33          |
| Length of tracks overall                    |                     | 7,364  | 7,377  | 7,372  | 7,224  | -148         |
| <b>Level crossings</b>                      |                     |        |        |        |        |              |
|                                             | Number              | 1,503  | 1,447  | 1,388  | 1,395  | 7            |
| - Protected by technical means              |                     | 766    | 762    | 754    | 834    | 80           |
| - For private use                           |                     | 533    | 494    | 464    | 431    | -33          |
| - For pedestrians only                      |                     | 233    | 220    | 208    | 201    | -7           |
| Switches                                    |                     | 14,850 | 14,575 | 14,300 | 14,202 | -98          |
| Signals for train runs                      |                     |        | 25,250 | 26,860 | 28,408 | 1,548        |
| Tunnels                                     |                     | 294    | 296    | 298    | 304    | 6            |
| - Length                                    | km                  | 228    | 230    | 231    | 243    | 11.4         |
| Railway bridges                             | Number              | 5,768  | 5,858  | 5,898  | 5,982  | 84           |
| - Length                                    | km                  | 89     | 89     | 89     | 89     | 0.5          |
| <b>SBB stations, big and small</b>          |                     |        |        |        |        |              |
|                                             | Number              | 790    | 792    | 809    | 842    | 33           |
| - For passenger traffic <sup>2</sup>        |                     | 729    | 734    | 737    | 765    | 28           |
| - For freight traffic                       |                     | 473    | 475    | 475    | 459    | -16          |
| Mean distance<br>between passenger stations | km                  | 3.95   | 3.94   | 3.92   | 3.93   | 0.01         |
| <b>Rolling stock</b>                        |                     |        |        |        |        |              |
|                                             | Number              | 4,324  | 4,063  | 3,817  | 3,676  | -141         |
| Traction vehicles                           |                     | 520    | 505    | 513    | 480    | -33          |
| - Diesel powered                            |                     | 501    | 486    | 494    | 461    | -33          |
| Service cars and wagons                     |                     | 3,804  | 3,558  | 3,304  | 3,196  | -108         |

1 Workforce, yearly average, expressed in full-time jobs.

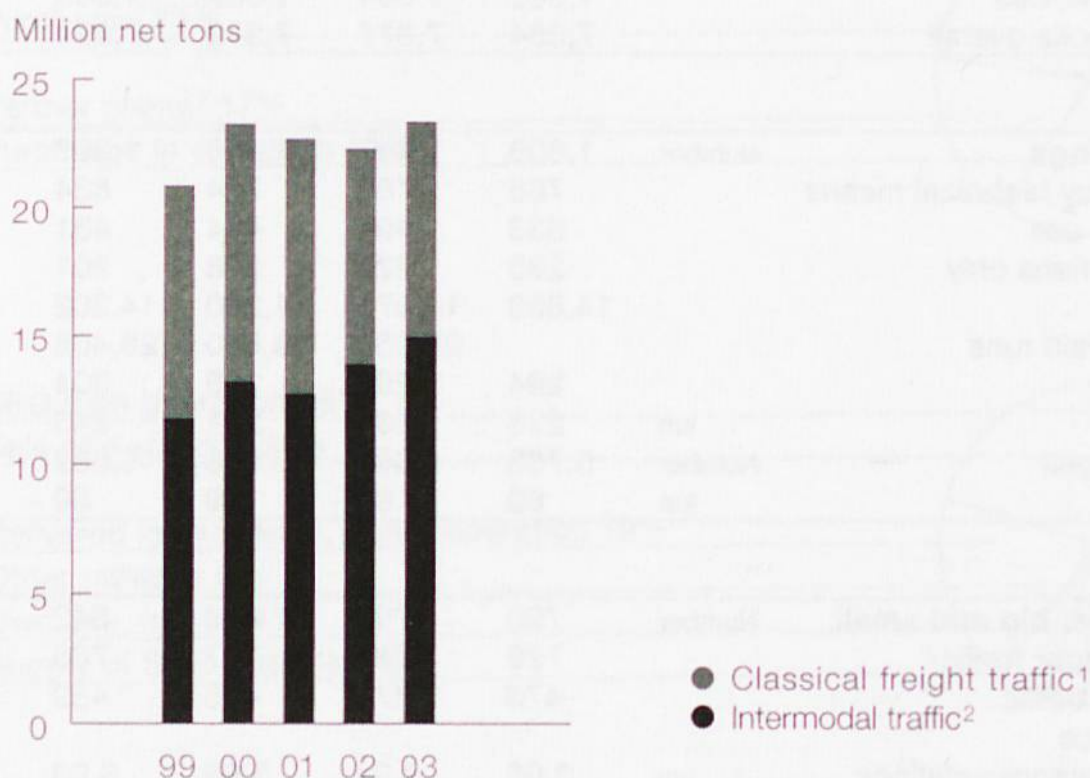
2 Stopping places on the network, including STB and Thurbo.



## Transalpine railfreight traffic

|                                        |      | 2000 | 2001 | 2002 | 2003 | 03-02<br>± % |
|----------------------------------------|------|------|------|------|------|--------------|
| in net tons                            |      |      |      |      |      |              |
| <b>Gotthard</b>                        | mn t | 20.4 | 19.0 | 17.4 | 17.3 | -0.3         |
| Classical freight traffic <sup>1</sup> |      | 6.9  | 6.8  | 6.0  | 5.8  | -4.0         |
| Intermodal <sup>2</sup>                |      | 13.5 | 12.2 | 11.4 | 11.6 | 1.6          |
| <b>Simplon</b>                         |      | 3.8  | 4.6  | 5.8  | 7.0  | 20.9         |
| Classical freight traffic <sup>1</sup> |      | 3.6  | 3.6  | 2.8  | 3.1  | 8.9          |
| Intermodal traffic <sup>2</sup>        |      | 0.2  | 1.0  | 3.0  | 4.0  | 32.0         |
| <b>Total</b>                           |      | 24.2 | 23.6 | 23.2 | 24.4 | 5.0          |
| Classical freight traffic <sup>1</sup> |      | 10.5 | 10.4 | 8.8  | 8.8  | 0.1          |
| Intermodal traffic <sup>2</sup>        |      | 13.7 | 13.2 | 14.4 | 15.5 | 7.9          |

## Transalpine railfreight traffic



1 Weight of the payload (net weight) without tare weight of the wagons.

2 Net tons, including the weight of the containers and road vehicles transported also.

Statistics of intermodal traffic that eliminate the weight of the loading equipment (containers, swap bodies, semi-trailers) and road lorries, and which list accompanied and unaccompanied transports separately, are maintained by the Federal Office for Spatial Development (ARE). They can be ordered under tel. 031 322 40 60, Fax 031 322 78 69, or viewed in the Internet: <http://www.are.admin.ch/are/de/verkehr/alpinfo/index.html>