The GII indicators are grouped into innovation inputs and innovation outputs. The table below show Switzerland’s rankings over time.

<table>
<thead>
<tr>
<th>Switzerland’s ranking over time</th>
</tr>
</thead>
<tbody>
<tr>
<td>GII</td>
</tr>
<tr>
<td>2018</td>
</tr>
<tr>
<td>2017</td>
</tr>
<tr>
<td>2016</td>
</tr>
</tbody>
</table>

- Over the last eight years, Switzerland upheld its first place in the GII. It also ranks number 1 in the innovation outputs since 2012.
- In innovation inputs, Switzerland improves its rankings, ranking 2nd globally, up from the 3rd position in 2017 and the 6th in 2016.
- Switzerland ranks 1st in the world in the Innovation Efficiency Ratio, which means that Switzerland is among the most efficient world economies in translating innovation inputs into innovation outputs. The Innovation Efficiency Ratio has constantly improved over the last years, moving up from the 2nd spot last year and the 5th in 2016.

1st Switzerland is ranked 1st in the GII 2018 since 2011.

1st Switzerland is ranked 1st among the 47 high-income countries in the GII 2018.

1st Switzerland is the most innovative country in Europe.

Note that year-on-year comparisons of the GII ranks are imperfect and influenced by changes in the GII model and data availability.
Benchmarking Switzerland to other high-income countries and the Europe region

Switzerland’s scores by area

High-income countries

Switzerland has high scores in 6 GII areas – Human Capital and Research, Infrastructure, Market Sophistication, Business Sophistication, Knowledge and Technology Outputs, and Creative Outputs, in which it scores above the average of the top 10 countries in the GII.

Top scores in GII areas such as Research & Development (R&D), Information & Communication Technologies (ICTs), Trade, competition & market scale, Knowledge workers, Knowledge creation and Intangible assets are behind this high ranking.

Europe region

Compared to other countries in the Europe region, Switzerland performs above average in all GII areas.

Switzerland’s innovation profile

Strengths

- Switzerland has strengths in the Global Innovation Index, Innovation Output Sub-index, and Innovation Efficiency Ratio in which it ranks 1st globally. The country also has strength in the Innovation Input Sub-index in which it ranks 2nd.

- In Institutions (11th), Switzerland has strengths in the area Political environment (2nd) and in indicator Government effectiveness (2nd).

- In Human capital and Research (5th), it exhibits strengths in the area Research & development (R&D) (2nd) and in indicators R&D expenditures, Global R&D companies expenditures, and Quality of universities, all ranking 3rd.

- In Infrastructure (8th), Switzerland has strength in the area Ecological sustainability (3rd) and in indicators ICT use (2nd) and Environmental performance (1st).

- In Market sophistication (8th), the variable Applied tariff rate (1st) is marked as a strength.

- In Business sophistication (4th), it exhibits strengths in two of its components – Knowledge workers (3rd) and Innovation linkages (3rd) – as well as in indicators Knowledge-intensive employment (3rd), University/industry research collaboration (1st), and Patent families in two or more offices (1st).
Switzerland also presents a rather exceptional number of comparative strengths in the innovation output side of the GII. Both areas that capture innovation outputs, Knowledge and Technology Outputs and Creative Outputs (both ranking 1st), are strengths.

In Knowledge and Technology Outputs, strengths are found in two areas: Knowledge creation (1st) and Knowledge diffusion (3rd). The country also demonstrates strength in several indicators: PCT patents by origin (1st), Scientific and technical articles (2nd), Computer software spending (3rd), High and medium-high-tech manufactures (2nd), Intellectual property receipts (1st), and FDI outflows (1st).

In Creative Outputs, Switzerland shows strengths in indicators ICTs & business model creation (1st), Entertainment and Media market (3rd), and Country-code TLDs (1st).

Weaknesses

- In Institutions (11th), Switzerland has relative weakness in indicator Ease of starting a business (59th).
- In Human Capital and Research (5th), indicator Expenditure on education (50th) is identified as a weakness.
- In Infrastructure (8th), indicators Government's online service (64th) and E-participation (70th) are relative weaknesses.
- In Market Sophistication (8th), Switzerland demonstrates relative weaknesses in indicators Ease of getting credit (61st) and Ease of protecting minority investors (92nd).
- In Business Sophistication (4th), it exhibits weaknesses in indicators R&D financed by abroad (43rd) and High-tech imports (59th).
- In innovation outputs, Switzerland demonstrates relative weaknesses in Productivity growth (84th) and Printing & other media (48th).

The following figure presents a summary of Switzerland’s ranks in the 7 GII areas, as well as the overall rank in the GII 2018.
Expected vs. Observed Innovation Performance

The GII bubble chart shows the relationship between income levels (GDP per capita) and innovation performance (GII score). The depicted trendline gives an indication of the expected innovation performance at different levels of income. Countries located above the trendline are performing better than what would be expected based on their income level. Countries below the line are Innovation Under-performers relative to GDP.

Relative to GDP, Switzerland performs well above its expected level of development.
Missing and Outdated Data

More and better data improves the ability of a country to understand its strengths and weaknesses and give policymakers greater capacity to plan and adapt public policies accordingly. The GII 2018 covers 126 countries that complied with the minimum indicator coverage of 35 indicators in the Innovation Input Sub-Index (66%) and 18 indicators in the Innovation Output Sub-Index (66%).

The following tables show data for Switzerland that is not available or that is outdated.

### Missing Data

<table>
<thead>
<tr>
<th>Code</th>
<th>Indicator</th>
<th>Country Year</th>
<th>Model Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.3</td>
<td>Microfinance gross loans, % GDP</td>
<td>n/a</td>
<td>2016</td>
<td>Microfinance Information Exchange, Mix Market</td>
</tr>
<tr>
<td>5.1.2</td>
<td>Firms offering formal training, % firms</td>
<td>n/a</td>
<td>2013</td>
<td>World Bank, Enterprise Surveys</td>
</tr>
<tr>
<td>6.1.3</td>
<td>Utility models by origin/bn PPPS$ GDP</td>
<td>n/a</td>
<td>2016</td>
<td>WIPO, Intellectual Property Statistics</td>
</tr>
<tr>
<td>7.2.1</td>
<td>Cultural &amp; creative services exports, % total trade</td>
<td>n/a</td>
<td>2016</td>
<td>WTO, Trade in Commercial Services</td>
</tr>
</tbody>
</table>

### Outdated Data

<table>
<thead>
<tr>
<th>Code</th>
<th>Indicator</th>
<th>Country Year</th>
<th>Model Year</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1.5</td>
<td>Pupil-teacher ratio, secondary</td>
<td>2012</td>
<td>2016</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>2.2.2</td>
<td>Graduates in science &amp; engineering, %</td>
<td>2015</td>
<td>2016</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>2.3.1</td>
<td>Researchers, FTE/mn pop.</td>
<td>2015</td>
<td>2016</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>2.3.2</td>
<td>Gross expenditure on R&amp;D, % GDP</td>
<td>2015</td>
<td>2016</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>5.1.3</td>
<td>GERD performed by business, % GDP</td>
<td>2015</td>
<td>2016</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>5.3.5</td>
<td>Research talent, % in business enterprise</td>
<td>2015</td>
<td>2016</td>
<td>UNESCO Institute for Statistics</td>
</tr>
<tr>
<td>7.2.4</td>
<td>Printing &amp; other media, % manufacturing</td>
<td>2013</td>
<td>2015</td>
<td>UNIDO, Industrial Statistics</td>
</tr>
</tbody>
</table>
### SWITZERLAND

<table>
<thead>
<tr>
<th>Output rank</th>
<th>Input rank</th>
<th>Income</th>
<th>Region</th>
<th>Efficiency ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>High</td>
<td>EUR</td>
<td>1</td>
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</table>

<table>
<thead>
<tr>
<th>GII 2017 rank</th>
<th>5,257.3</th>
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</thead>
<tbody>
<tr>
<td>GII 2017 rank</td>
<td>1.2</td>
<td>48</td>
</tr>
</tbody>
</table>

#### Institutions

<table>
<thead>
<tr>
<th>Score/Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>88.9</td>
<td>11</td>
</tr>
</tbody>
</table>

- **Political environment**
  - 95.4
- **Political stability & safety**
  - 95.2
- **Government effectiveness**
  - 95.5

- **Regulatory environment**
  - 95.9
  - 93.1
  - 97.2

- **Business environment**
  - 75.5
  - 88.4
  - 62.6

- **Human capital & research**
  - 64.0
  - 5.0
  - 2.0

- **Knowledge & technology outputs**
  - 74.9
  - 61.4

- **Creative outputs**
  - 59.4

#### Business sophistication

<table>
<thead>
<tr>
<th>Score/Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>62.6</td>
<td>4</td>
</tr>
</tbody>
</table>

- **Knowledge workers**
  - 76.7
- **Knowledge-intensive employment, %**
  - 52.5
- **Firms offering formal training, % firms**
  - n/a
  - n/a

#### Market sophistication

<table>
<thead>
<tr>
<th>Score/Value</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>67.5</td>
<td>8</td>
</tr>
</tbody>
</table>

- **Credit**
  - 68.3
- **Ease of getting credit**
  - 60.0

- **Domestic credit to private sector, % GDP**
  - 175.3
- **Microfinance gross loans, % GDP**
  - n/a

- **Investment**
  - 59.6
  - 92

- **Venture capital deals/bn PPP$ GDP**
  - 0.1

- **Trade, competition, & market scale**
  - 74.6

- **Applied tariff rate, weighted mean, %**
  - 0.0

- **Domestic market scale, bn PPP$**
  - 516.7

**NOTES:** ◊ indicates a strength; ● a weakness relative to the other top 25—ranked GII economies; ♦ a weakness relative to the other top 25;

* an index; ? a survey question. ◊ indicates that the country’s data are older than the base year; see Appendix II for details, including the year of the data, at http://globalinnovationindex.org. Square brackets indicate that the data minimum coverage (DMC) requirements were not met at the sub-pillar or pillar level; see page 7 of this appendix for details.