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A new integrated cartographic visualisation framework at the Swiss Federal Statistical Office

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Abstract:

Maps have always been a popular and visually appealing method for the visualisation and dissemination of statistical data. The Statistical Atlas of Switzerland, established in 2009 and permanently available online, for instance, is an efficient platform where all maps can be published, shared and used by third-party providers for their websites and own publications (including our own website as consumer).

In recent years, the number of data visualisations in statistics, quantitative and qualitative data, has increased immensely with newly available open data and sophisticated tools. Interactive diagrams with a wide range of visualisation methods are published on publication specific websites, in a web catalogue, or integrated, in web publications and dashboards. With the combination of a map and a diagram a dashboard represents a new and powerful integrated data visualisation. Hence, for the publication of Statistical Data, Cartography becomes more and more part of the superior discipline Data Visualisation. This leads to a new internal organisation and framework, to new services, and, last but not least, to new and enhanced products.

A new visualisation strategy defines new map types that meet the requirements of the new integrated data visualisation platform. All existing maps and visualisation methods are subject to a critical examination and analysis, based on a catalogue of criteria, such as Accessibility, Anatomy, Usability, Readability, Level of detail, Storytelling aspects, and so on. An important aim is also the modernisation and optimisation of the maps for the respective target audiences, corresponding to the different levels of knowledge. The complexity of the map content, for instance, needs to be reduced as far as possible for the average statistical consumer and better adapted to the respective visualisation scale. This also applies to the degree of generalisation of the cartographic bases and the density of the base map content.

Which visualisation methods or map types will (still) be used in the future, and which will be omitted? Which best fits and corresponds with other statistical methods of representation, in a website or dashboard context? And which new visualisation methods or map types will the FSO offer?

The proposed contribution provides an insight into the current work at our statistical institution and shows examples for best practice visualisations with the new integrated cartographic visualisation framework. It also valorises the input that cartography in general can give to the fast developing field of data visualisation.

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