

## **Modernisation of digital asset architecture for online dissemination**

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### **Presentation**

For some years, FSO dissemination has been faced with several **challenges**. Every day the Federal Statistical Office publishes dozens of digital assets and metadata on its various dissemination platforms: We publish tables, publications, diagrams, maps, press releases, web content, XML files and code books on our internet site, in web applications and interactive atlases as well as on the different social media channels and third party web sites.

Throughout the year we send out 525 news packets with a total of 17 951 assets in addition to the 156 711 assets in DAM. Over the past 12 months these assets have been downloaded 2201318 times via a website that had some 19 million visits in 2016. These numbers place heavy demands on the system.

### **Decentralised asset production**

Furthermore the FSO works within an extremely federal structure with statistical offices in the cantons and communes as well as in close cooperation with other federal offices. All of our partners have their own technical and organisational standards.

### **Modular Architecture and separation of data management and data presentation**

Considering the complexity of the environment, we had to find a modular solution in which we could integrate diverse databases and independent dissemination channels that were independent from one another while ensuring the flexibility and scalability of the system. We chose a classical multilayer architecture: data, logic and presentation layers.

Each asset-containing database is different and follows an independent development cycle. Each database is linked to the web services by its own connector, allowing each data layer physical and conceptual independence.

The dissemination platforms are independent and autonomously run. They have their own rendering and display needs but have to satisfy good practice requirements for dissemination such as respecting the calendar and embargos.

### **Asset dissemination steering**

To ensure that assets are correctly disseminated from the different data sources to the channels of presentation we have designed a web service platform.

On one side is a connection to different databases using connectors for each database to ensure the physical and conceptual independence of their data. On the other side is an API allowing access to data from the presentation layer using REST requests.

The hub of the web service platform is comprised of different web services in which the logic is organised to take into account the needs of each individual purpose. The component between the web services and the API means that access can be monitored and that security can be guaranteed to ensure the platform performs correctly.

This system enables us to deal with the diversity of input and output and to manage the large amounts of information on an industrial scale, while still coping with the complexity and interdependencies between systems.

## Visions

Today we disseminate statistical information that mainly comes from our office and almost exclusively as assets. In future, in order to concentrate resources, we wish to expand the content of our information while reducing the number of assets. In the coming years we would also like to invest in the dissemination of machine readable-data and metadata, for here lies the future.