NIEVE – A New Era of Data Visualization at Swissgrid

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Data visualisation project

Introduction of modern visualisation technologies as an important instrument for more rapid and better decisions
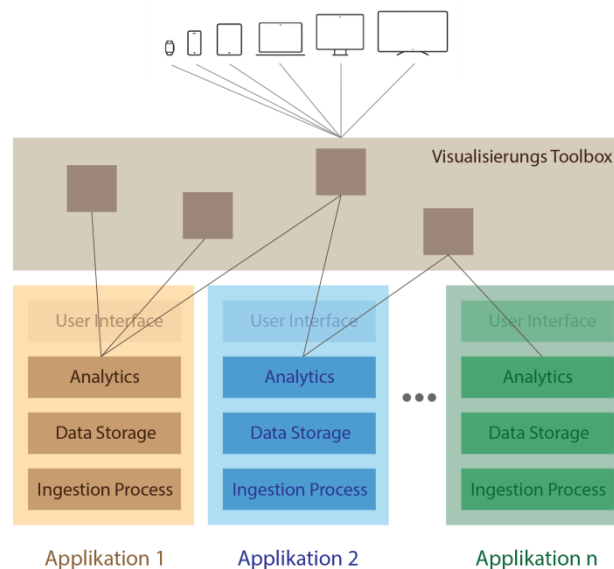
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Data visualisation project description

Target description

Responsive Netzzustands-Visualisierung
Quelle : scp Januar 2018

- Use of modern interactive visualisations in system operation to support decisions

- Uniform design, cross-application

Solution

Visualisierungs Toolbox

User Interface	User Interface	User Interface
Analytics	Analytics	Analytics
Data Storage	Data Storage	Data Storage
Ingestion Process	Ingestion Process	Ingestion Process
Applikation 1	Applikation 2	Applikation n

- Decoupling of visualisation from core applications

R&D project period: July 2019–Feb 2021

Procedure

1. Concept phase with technology scouting

2. Realisation of two complementary pilot projects (A, B) with external partners

A Interactive visualisation

Partner: Macrofocus

Development of a front-end/back-end software prototype (SaaS)

Visualisation of voltage values and load flows on a new modern and schematic grid representation

B Static creative visualisation

- Partner: Visual Cinnamon

- Artificial abstract data visualisation of grid data

- Trying out of new approaches in the data visualisation of grid data

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Abstract – data visualisation project

Initial situation

More data and information than ever before are available in system operation. Using these systematically and in a timely manner for decisions is becoming more challenging as time goes on. Modern visualisation technologies are an important instrument for more rapid and better decisions. This potential is currently exploited very little in system operation.

Question

The focus of this project is to enable visualisations of the current system state, with the aim of transferring data from different applications visibly and comprehensibly onto various end devices (large screen display, monitors, tablets and mobiles).

Procedure

1. Identification and specification of two relevant use cases that illustrate the potential of up-to-date system state visualisations

2. By means of technology scouting, identification of the technology level, of products, tools on the market and interesting suppliers

3. Implementation of use cases as a prototype in collaboration with a suitable partner

Methods applied

The development of prototypes based on modern UX/UI standards and using technology components established on the market.

Expected benefit

Thanks to data being made visible and comprehensible with the introduction of up-to-date visualisations on system state, decision-making is supported and interpretation errors are avoided. Through the introduction of standard cross-application visualisation standards, Swissgrid employees will be able to find their way around more quickly and future visualisation requirements will be able to be implemented faster. Because visualisations will automatically adapt to the browser-based output device, location-independent access to prepared information is enabled, e.g. on-site in a substation, and so information transparency is established.

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