"Kommune 2.0" – using data to set the right course for the future

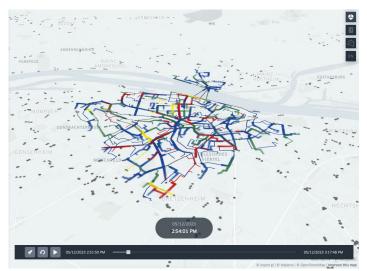DKSR, the data competence center for cities and regions, uses the Open Telekom Cloud as a basis

"With the Open Telekom Cloud, we have found the right basis for our open urban data platform – offering flexibility as well as data compliance."

Tim Cleffmann, Head of Business Innovation at DKSR

DKSR focuses on the future of municipalities ("Kommunen") and, in doing so, places a clear emphasis on the added value of data. "We are convinced that cities, municipalities, and regions can substantially benefit from using data. This data gives decision makers in the field of public administration completely new insights and creates a solid basis when it comes to reaching decisions and implementing measures. Smart cities can be created where life is more pleasant and sustainable", explains Tim Cleffmann, Chief Business Development Officer at DKSR.

DKSR was founded in 2021 as a joint initiative from five Fraunhofer Institutes, the [ui!] Urban Software Institute, axxessio, and Deutsche Telekom. The idea: Using open source technology as the basis, the idea was to create a central point for cities and regions to collect urban data (e.g., via IoT devices), to process it, and then use it for city and regional development – on a lasting and large-scale basis, across pilot projects. The projects and applications serve to create a more sustainable urban design whereby mobility is the most important aspect: Parking, electric charging infrastructure, intermodal transportation, and improved traffic management for fewer traffic jams and emissions are typical subjects that cities are addressing (or are having to address). However, municipalities are also pursuing initiatives to reduce their energy consumption.

And it is clear that this requires more than just data analytics from the perspective of data scientists. At DKSR, data experts work alongside developers, consultants with urban expertise, and communicators who accompany change processes – an interdisciplinary team with diverse skills, perspectives, and expertise. DKSR is therefore able to extensively advise its customers and develop suitable solutions.

A central element of DKSR's business model is the open urban data platform (OUP), developed on the basis of open source. It is the central hub for data, data analysis, and implementations to which the team also connects apps from third parties. "From the outset, we were clear that we wanted to concentrate on our original value creation with the OUP. This does not include the operation of sensor technology or proprietary applications. Everything we implement for municipalities is performed using an open source stack", explains Mr. Cleffmann.

As the business model expects continuously increasing data volumes and the agile further development of offered services, the team also needed an infrastructure able to keep pace with the dynamism. A high-performance cloud. This is where Deutsche Telekom's Open Telekom Cloud came into play. The team decided to become a Circle Partner, therefore benefiting from the Open Telekom Cloud partner support for its business.

Visualization of scooter trips

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Reference in detail

At a glance

- Concentration on development of the business model
- High requirements from customers with respect to data security and protection
- Reduction in infrastructure management tasks
- Search for a scalable and secure cloud
- Operation of the open urban data platform on the Open Telekom Cloud
- Full scalability for data growth and higher load
- Implementation of various offer packages
- Establishment on the market: Growth with successful customer projects
- Cloud supports growth
- Support via Circle partnership
- Less infrastructure-related costs
- Focus on further development of the offer and customer relationship

The challenge

"Data can be collected and processed in any cloud. But to be taken seriously as a partner for customers from the public sector, our services also need to meet the requirements of the administration bodies – across the complete IT stack", explains Mr. Cleffmann. DKSR therefore decided to establish a solid basis for its business model with a European cloud in order to avoid any complications from the outset. Furthermore, it was hoped that the European cloud would also offer the company sustainable growth. "The Open Telekom Cloud meets both requirements: it ensures that data compliance regulations are met and offers all features of a public cloud", explains the Head of Business Innovation.

The solution

DKSR found the right partner with the OpenStack-based, comprehensively-certified Open Telekom Cloud which is provided from German data centers and operated by European staff. The Berlin-based center implemented its service, which is also Open Source-based, on the Open Telekom Cloud and manages it as a platform as a service (PaaS) for its customers. The service is offered in various sizes and performance classes – depending on the customer's requirements. Over 160 standard connectors are included to connect various data sources as well as various third party evaluation and presentation tools such as Power BI, Jupyter Hub, or Grafana

With access to the cloud storage and computing resources, the open urban data platform is able to grow together with the demands of its customers at all times, there are no limits in terms of data volume, new connectors and evaluation options continuously increase the opportunities offered by the platform.

Customer benefits

DKSR is a success story made in Germany: In recent years, the team has successfully implemented over 30 customer projects for German cities and municipalities and, as a result, has established itself as a digitalization partner for the public sector on the market. The basis: A reliably available cloud made in Europe. "With the Open Telekom Cloud, we have found the right basis for our open urban data platform – boasting flexibility as well as compliance", explains Mr. Cleffmann. The team also benefited from the partner support offered by the Open Telekom Cloud and the usage-based billing model, which made a great contribution in terms of the establishment of the business.

With the open urban data platform, DKSR makes a decisive contribution towards the digitalization of municipalities and the implementation of the UN's sustainable development goals (SDG). The supported municipalities are now able to exploit the potential afforded by digitalization, make data-based decisions, and develop their urban areas for the citizens in a targeted manner while also meeting all expectations in terms of data protection and security.