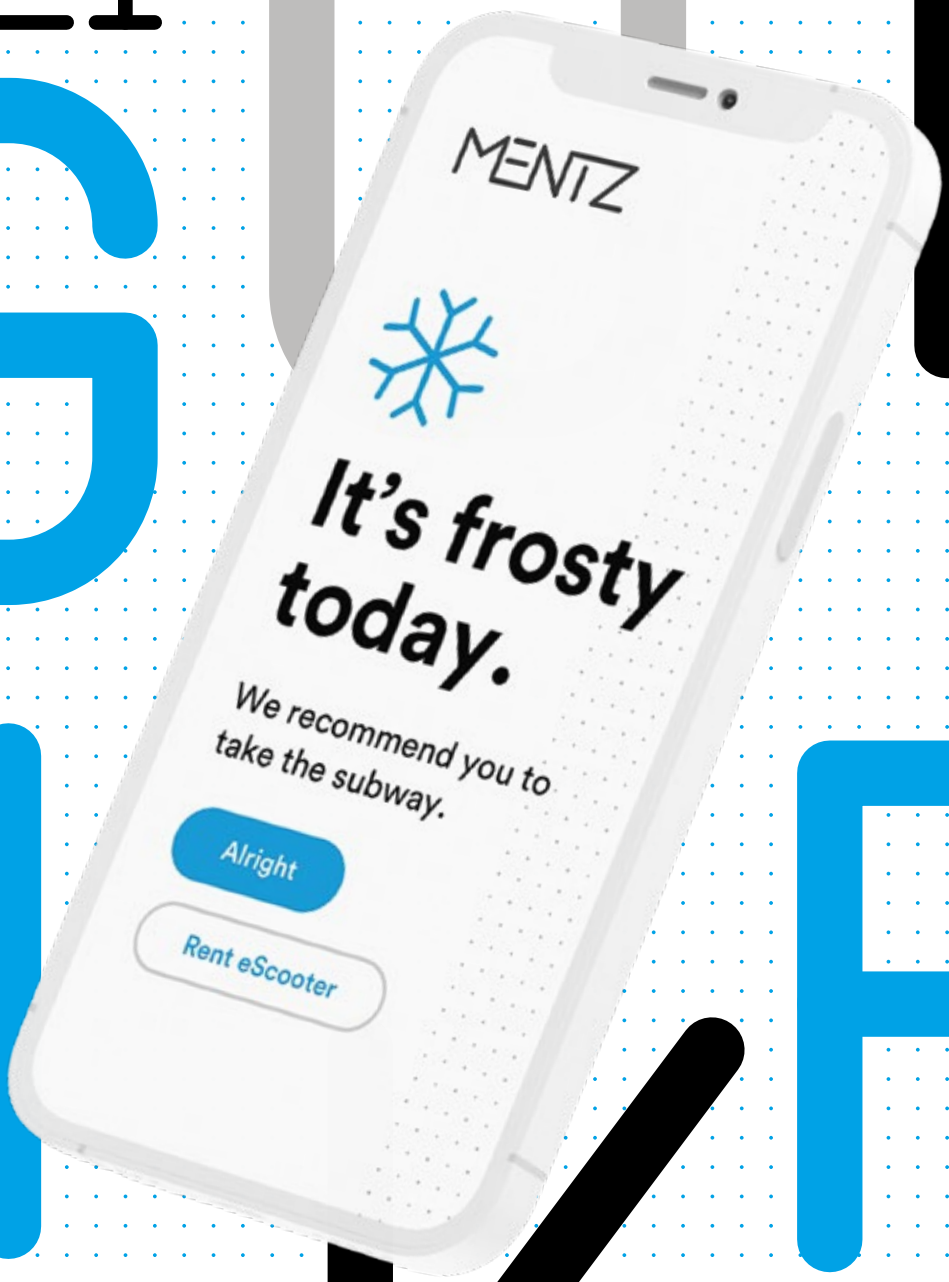
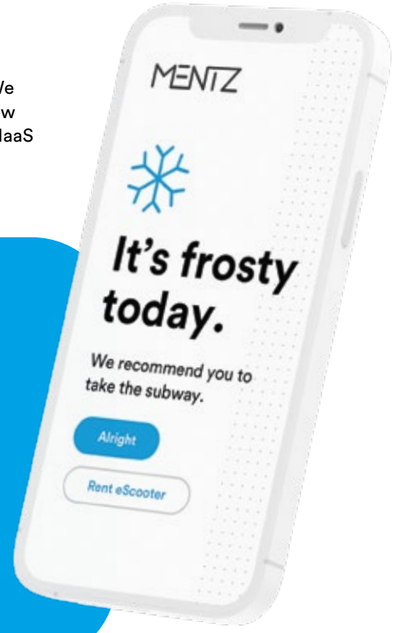
MENTZ

MAGAZINE 2/21





Doing More With Data

Dear Readers,

This fall, we presented our latest mobility app Gullivr. It was the result of your feedback and help and our attention to detail. Participants at our user group confirmed that we were on to something – with Gullivr we want to set new standards for mobility-as-a-service, intuitive user guidance, user-centered design, and data minimization. Read on pages 4–7 how we were able to accomplish these goals and say hello to Gullivr!

Public transport passengers rely on comprehensive and timely information. One way to achieve this is to pool information from various databases and systems. On pages 14–18, we present several different networking concepts. One particular project, the DEEZ project, involves the exchange of real-time data throughout Germany using our DDIP. For DEEZ, MENTZ is collaborating with the DELFI network and the Transport Authority of Bremen/Lower Saxony (VBN) in the next phase of expansion. VBN Project Managers Sandra Steinhübl and Raffael Rittmeier sat down to answer our questions about the project. The interview starts on page 19.

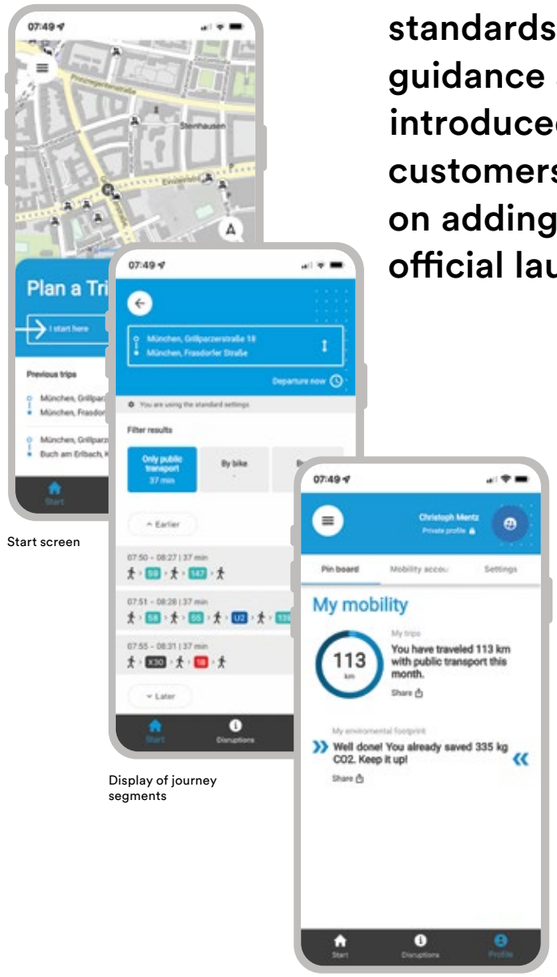
Searching for errors in process logs can be like looking for a needle in a haystack. So it is good to have a little help when large amounts of data need to be systematically examined. On the technical side, we use OpenSearch to troubleshoot in large error logs. As a consequence, we are able to see issues before they arise and thus make EFA even better. On pages 8–13, we describe how we use OpenSearch in practice.

On behalf of the MENTZ team and my family, I wish you a happy and above all peaceful time during the holidays and a happy new year!

Sincerely,
Christoph Mentz

Christoph Mentz
Managing Director
MENTZ GmbH

With Gullivr, We Are Setting New Standards in MaaS



Start screen

Display of journey segments

Mobility overview

Our new app Gullivr has mobility in its blood. It offers a range of completely new, innovative functions that simplify modern mobility. But it also sets standards in efficiency, intuitive user guidance and design. In August, we introduced a test version to interested customers. Now we are currently working on adding features and preparing for official launches.

Topic
Modern, multimodal MaaS app

Product
Mobile

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We chose to take an open approach to development, which means that our customers are involved in the design process from a very early stage. In fact, before designing first drafts, we had asked our customers to select their priorities for a new mobility app. The feedback we received played a central role in Gullivr's development.

Since the first test version was distributed, our customers have been greatly involved in improving and developing Gullivr. Using a specially created page, "feature voting" is coordinated where potential customers can suggest improvements and developments and vote for ideas they might like to see implemented. It is a good way to keep track of what our customers want and which features we should prioritize for development. Using a specially created page, we coordinate "feature voting," where potential customers can suggest improvements and developments and vote for ideas they might like to see implemented. If others approve, it will become a permanent tool with which development can be calibrated and coordinated.

A range of features related to mobility and Mobility as a Service (MaaS) are under development and which form the core of Gullivr. Both the single sign-on profile (SSO profile) and integrated booking are currently being optimized in a user-centric process in which we are working in close collaboration with users. This is what we can report so far: they are already as excited about Gullivr as we are and are working on implementing the app. We are particularly proud that, according to current plans, Gullivr will be launched for the first customers at the end of this year.

Gullivr's innovative design was developed in cooperation with a team from renowned design agency KMS. We deliberately aimed for a user-centered design that breaks conventions in a few spots to naturally depict modern mobility in user-friendly way. Markus Sauer, who is part of the design team at KMS, was kind enough to answer our questions about Gullivr's interface and user experience within the app.

Designing and developing an innovative app is a challenge. What were the key areas of development for Gullivr's design?
Currently, a lot is going on in the world of mobility apps. New standards in user guidance and user experience are being set all the time. What more, there are a variety of options for smart functionalities that are able to set new benchmarks.
In this dynamic environment, our goal was to design an app that makes the best possible use of the latest functionalities. At the same time, we were cautious not to overload the various displays in the app with too many functions. It should remain intuitive to use, meet the latest user experience standards and usage habits, and provide added value with new services. In short, it should be easy and fun to use.

Markus Sauer, Digital Design Director KMS TEAM

To meet these goals, we concentrated on user flow, like in journey planning, but also on completely new ideas, like weather-based journey recommendations or point-of-interest suggestions. We also explored new options for individualization, for example, like creating an individual mobility profile based on kilometers traveled and its related CO_2 savings. Using these and other gamification features, we want to see an increase in public transport usage, and as a consequence, increased use of the Gullivr app.

How is developing a design for a licensed product different from developing a customized solution?
A licensed product needs to leave room for customization, like offering different colors, fonts, and scalable navigation structures. As this is the case, several application scenarios and design variants have to be considered more strictly than with a customized solution. However, with regard to scalability, Gullivr has been conceived in a manner that covers as many requirements as possible. That said, a white label solution should never appear boring or limit itself to mapping the various functionalities. An app should attempt to be sleek even in the smallest of details, like with micro-animations, page transitions, and everything that contributes to a seamless user experience. These details remain the same regardless of customization. In the end, they make the difference in the quality of experience, the specificity of an application, and often decide a user's overall impression of the app and whether they will use it.

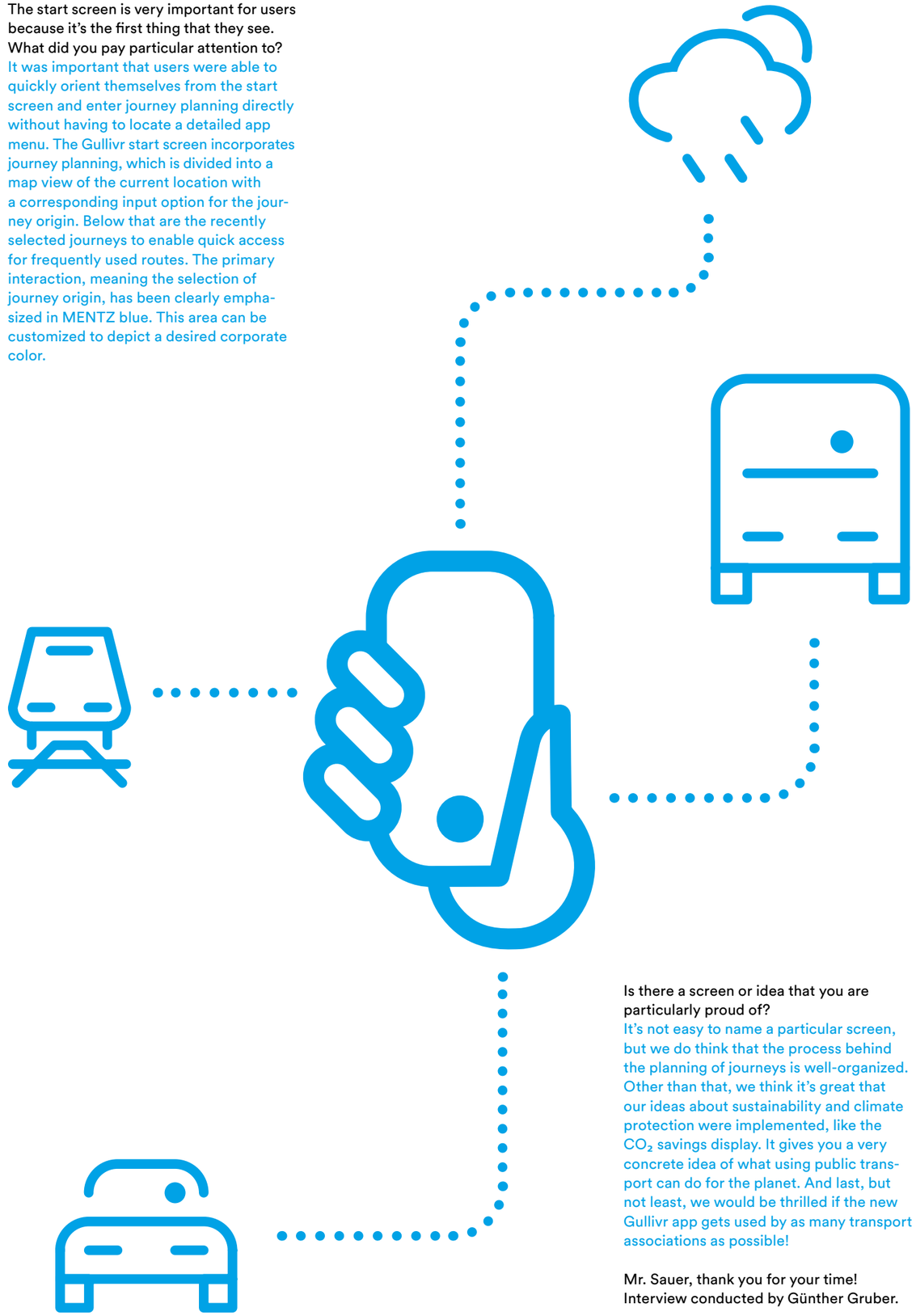
Quality of experience is what we strive for here at MENTZ. This is also why the white-label variant clearly depicts the MENTZ brand and was not kept completely neutral. After all, MENTZ's corporate design system allows precisely for this detailed work to be on display.

How is Gullivr's design different from those of other mobility apps?
We think that Gullivr's design combines the modernity and freshness from the start-up world with all the advantages that come from the varied experience and technical expertise of a leading software solution provider. This combination is rather unique because it takes courage to go away from traditional or proven designs to take a leap in another direction. The deliberate simplification and reduction of complexity in the design – despite the expanded range of functions – is definitely a step forward.

The sequential input of origin and destination is different from other apps. What were the thoughts behind the decision to make the app this way?
Yes, this is a bit of a paradigm shift: in the past, it was important to put as many functions as possible onto one screen to offer users as many options as were possible. In more recent apps, the opposite is true – fast user flow plays a much more important role, like the ability to quickly understand the "next best action." The switch from one screen to the next is no longer an obstacle. On the contrary, it allows for more clarity as to the sequence of a particular process. Due to the greater range of functions, it was important to offer the proper functions at relevant points in a user's journey, instead of overwhelming them with a plethora of options. We looked at a number of internationally successful mobility apps, especially by start-ups, and feel that this simplified approach to design was the correct decision.

"It was important that users were able to quickly orient themselves from the start screen."

The start screen is very important for users because it's the first thing that they see. What did you pay particular attention to?
It was important that users were able to quickly orient themselves from the start screen and enter journey planning directly without having to locate a detailed app menu. The Gullivr start screen incorporates journey planning, which is divided into a map view of the current location with a corresponding input option for the journey origin. Below that are the recently selected journeys to enable quick access for frequently used routes. The primary interaction, meaning the selection of journey origin, has been clearly emphasized in MENTZ blue. This area can be customized to depict a desired corporate color.



Is there a screen or idea that you are particularly proud of?
It's not easy to name a particular screen, but we do think that the process behind the planning of journeys is well-organized. Other than that, we think it's great that our ideas about sustainability and climate protection were implemented, like the CO_2 savings display. It gives you a very concrete idea of what using public transport can do for the planet. And last, but not least, we would be thrilled if the new Gullivr app gets used by as many transport associations as possible!

Mr. Sauer, thank you for your time!
Interview conducted by Günther Gruber.

OPEN SEARCH

How Data Make Us Better – Using OpenSearch

We continually improve our software, services and processes using EFA data, but also by relying on OpenSearch.

Topic
Data collection, search, analysis, and visualization

Products
EFA, DIVA, DDIP, TDH

Contact
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Imagine a MENTZ employee called Thomas Odermatt is sitting next to you at your computer, scrolling through a log file so quickly that it is hard to follow. He is searching for a data error or a clue as to why the journey planner is not providing an expected result. Odermatt is an analytical ace and takes a strictly systematic approach to the issue – he narrows down the possibilities until he finally finds the error amongst hundreds of lines of text.

On any given work day, data technicians and support colleagues use small utilities to read error logs and detect anomalies. They monitor messages from an application or analyze log files in a text editor to find out why an application is not producing an expected outcome. If a deeper dive into the results is required, additional utilities are used to generate statistics to aid further analysis.

MENTZ provides numerous solutions for this scenario. And now, we have a focal point that collects information, analyzes and derives new information from it, and initiates various actions based on this newly obtained information. To extend this central service to our customers, MENTZ relies on the open-source software solution OpenSearch.

What is OpenSearch?

OpenSearch is a freely available search engine whose components enable data collection, search, analysis, and visualization in real-time. Although the OpenSearch project (https://opensearch.org) was officially launched in 2020, its roots date back to 2010 and have proven their worth: 10 years ago, under an open-source license, a company named Elastic (https://www.elastic.co) released a software solution it called “Elasticsearch” with web interface “Kibana.” OpenSearch was later launched by well-known backers like Amazon Web Services (AWS), SAP, and Red Hat and is based on an also open and freely available offshoot of an original project called “OpenDistro for ElasticSearch” (https://opendistro.github.io).

In 2019, this offshoot was bolstered by AWS and made specific features in “Elasticsearch” and “Kibana” freely available to the general public (like authentication, group and user permissions, etc.) that had previously been reserved only for commercial users.

Other Open-Source Tools in the Toolbox

The OpenSearch engine is made up of one or more database nodes, or “OpenSearch Nodes”, and a web interface called “OpenSearch Dashboard.” Using the web interface, it is possible to manage the database, to manage users, and to view, analyze, and visualize raw data.

The OpenSearch engine can be complemented with other freely available open-source tools which enable data to be imported from various sources (files, TCP/UDP network connections) in a variety of formats (CSV, JSON, XML). It is also possible to determine the operating states of remote host, virtualization, container, and software systems and make them available in the database.

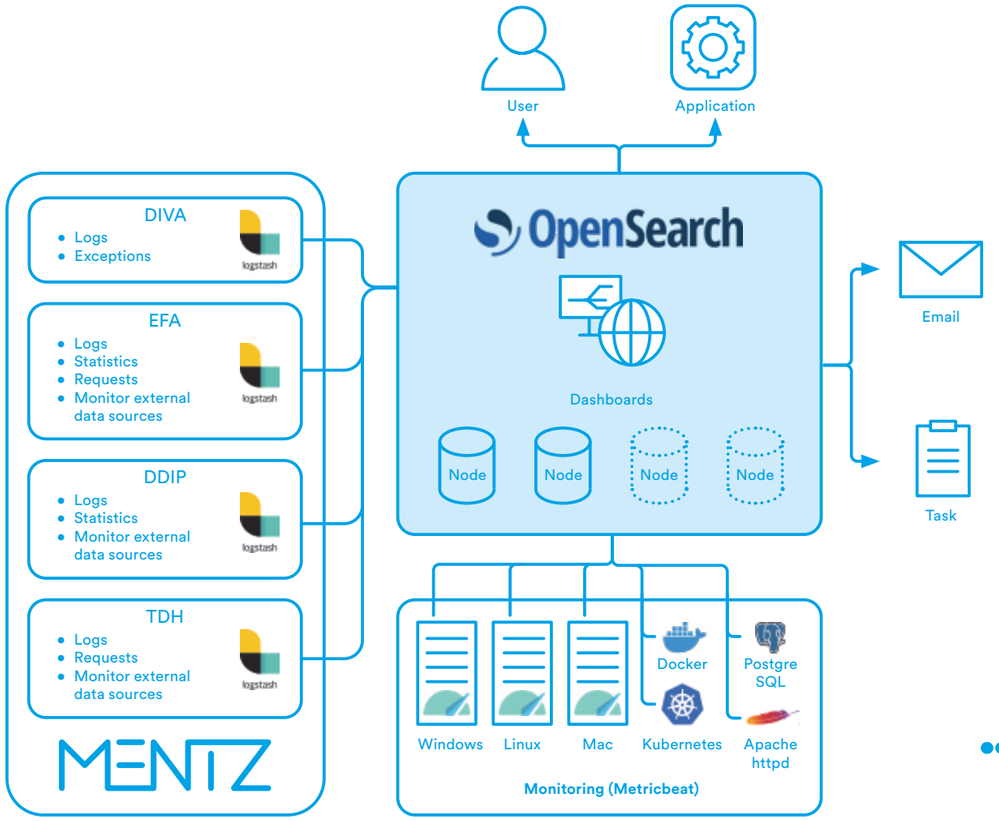
The OpenSearch software solution can be independently operated in a computing center or hired as a service from various cloud providers.

What can OpenSearch do?

OpenSearch works like a search engine that stores a searchable dataset in NoSQL format (JSON) and then makes it available for a deeper dive in real-time. Client connectivity, which provides data or generates search queries, occurs through a RESTful web interface that supports various authentication options and enables encrypted communication between sender and receiver.

The content deployed for a search is always transferred as a dataset in JSON data format. The transferred "documents" – as they are referred to in OpenSearch – are stored in the database in search indexes, which are subdivided further into subsections, or shards. Subdividing an index into multiple shards makes it possible to distribute and replicate subsections of a search index across multiple database nodes. This technique enables a scaling cluster whose nodes replicate data for increased reliability. Tasks can thus be processed simultaneously in a search index.

In OpenSearch, documents are imported through an API that is accessible via http(s) protocol. This interface provides the best way to have new documents in OpenSearch.



Beats and Logstash as Complimentary Apps

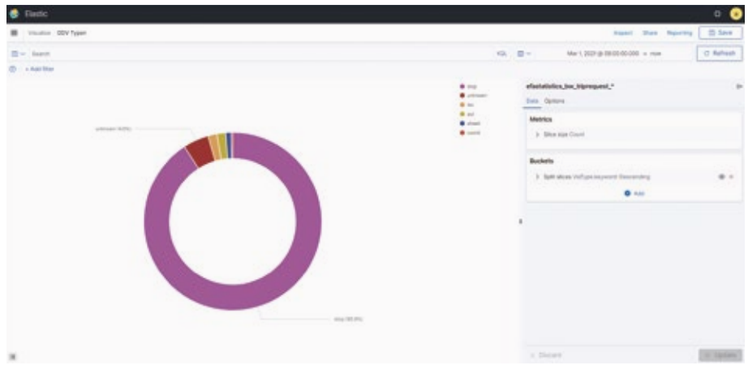
Numerous applications use this interface to provide information about the state of hosts, virtual machines, containers, networks and services in OpenSearch in real-time. This group of applications is referred to as beats (Heartbeat, Metricbeat, Filebeat) in Elasticsearch and OpenSearch.

Another application named "Logstash" makes it possible to process, standardize, convert, and forward content to OpenSearch from various data sources (files, http requests, TCP/UDP connections) in real-time. A benefit of using this application is that existing sources like log files can be searched without requiring too much effort.

More Clarity Thanks to OpenSearch Dashboards

How does one get more clarity on the datasets stored in OpenSearch? Web application "OpenSearch Dashboards" was built for this purpose – its web interface enables the following – the ability to manage search engine's nodes and indexes, to set up authorizations for users and groups, to view the data collected and to set up separate dashboards for visualization. Ongoing analysis of data streams can serve to alert users via email or message or trigger additional actions if something unexpected happens. The process behind such data stream analysis can learn continuously from the documents viewed and even improve detection of anomalies.

OpenSearch grants access to the data via a RESTful web interface, which enables external applications to access and use massive databases.



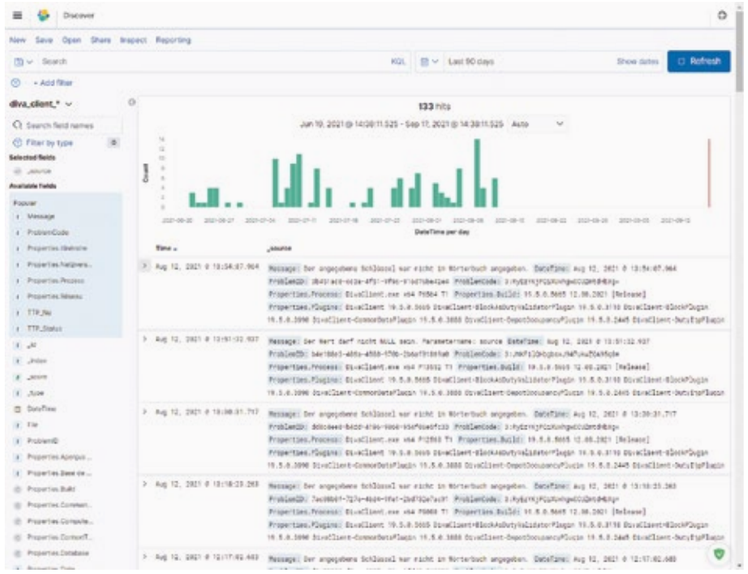
How does MENTZ use OpenSearch? Advanced EFA Statistics

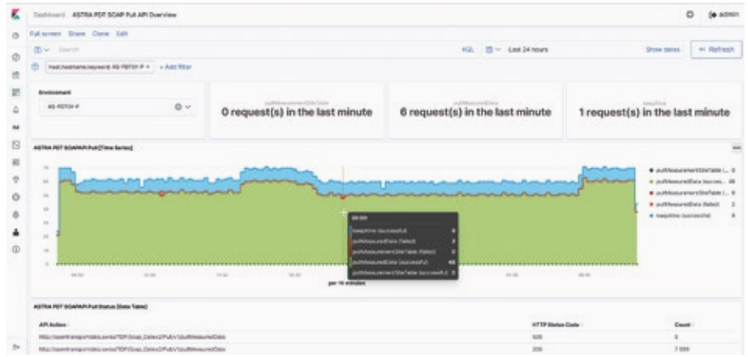
One way we use OpenSearch is for advanced EFA statistics. The "statistics" module is part of the new service portal and helps system managers gain more insight into the usage patterns of the EFA journey planner. Beyond serving as central hub for journey planner metrics, OpenSearch also generates preconfigured visualizations based on these metrics using the web application "OpenSearch Dashboards." The images are then seamlessly integrated back into the web interface of the "statistics" module in the service portal. The "statistics" module provides selection from a list of different topics to display the corresponding information and metrics for a desired period of time.

During setup, an administrator needs to specify one or more EFA servers as data source through the web interface of the service portal. The required data is stored by EFA on individual servers in special CSV files for each day. The data is forwarded to OpenSearch for indexing using the "Logstash" application.

Identifying Issues Before They Appear DIVA4 Client Exception Tracking

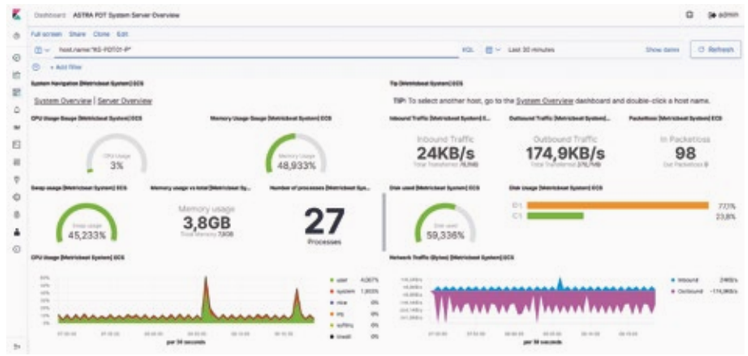
OpenSearch can be used to monitor systems, but it can also help the DIVA4 Client team detect issues with the software early on in the development process. With permission from customers, an issue that has been identified in DIVA4 Client, including additional information for the developer, can be reported directly to an OpenSearch instance. DIVA4 Client developers are able to receive and react to reports on issues in real-time. In most cases, a new version of the Client with bug fix is available for installation even before a customer was able to report an issue. It goes without saying that the ability to report anomalies directly not only improves the quality of our software, but makes it more reliable as well.





TrafficDataHub Monitor

The TrafficDataHub (TDH) monitor also relies on OpenSearch. Developed by MENTZ, the TDH collects, evaluates, aggregates, and provides data for motorized individual traffic in real-time. OpenSearch, or its predecessor “OpenDistro for Elasticsearch”, is used to monitor the servers, processes, and incoming and outgoing data streams.



Software as a Service Makes OpenSearch Sustainable

Due to the popularity of OpenSearch and the willingness of some well-known software companies to support it as an open-source project, ongoing development and bug fixes are virtually guaranteed in the near future. Another argument that supports usage of OpenSearch is called “Software as a Service” (SaaS), which can be purchased at low cost. This eliminates procurement of hardware in a company’s computing center and enables quicker implementation of projects.

OpenSearch gives us the option to incrementally replace a variety of software solutions developed for a specific use case with an open and freely available search engine with a central and reliable data archive. But that is not all. Using OpenSearch not only reduces complexity in the system landscape, it also provides the ability to search, analyze, and visualize data across systems in real-time. Data technicians and support colleagues like Thomas Odermatt appreciate and understand its importance.

OpenSearch gives us the option to incrementally replace a variety of software solutions developed for a specific use case with an open and freely available search engine that has a central and reliable data archive.

“Pooled Dataset” vs. “Distributed Journey Calculation” – What’s the Difference?

Application users expect a great deal of information for a simple journey between two locations: current timetables, forecast times and incident information, access to and the best way to depart from public transport stops, which includes maps, fare information and availability of sharing vehicles and much more. In many systems, this information is available locally, but it may not always be practical to store information locally due to limited capacity (data volume) or issues with data maintenance or the frequency with which data is kept up-to-date. In what follows, we introduce some important concepts that can be applied to procure a range of different data, sometimes from different sources, without users noticing the difference.

Topic
Multiple system architectures for passenger information

Products
EFA, DDIP

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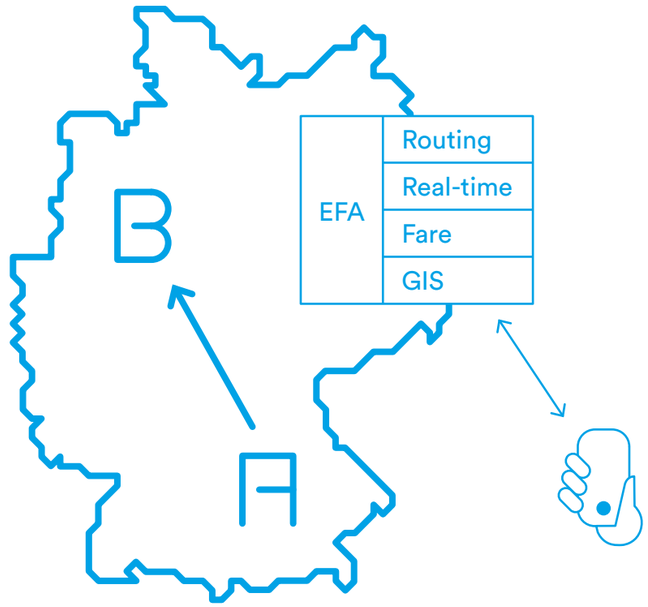


Pooled Dataset

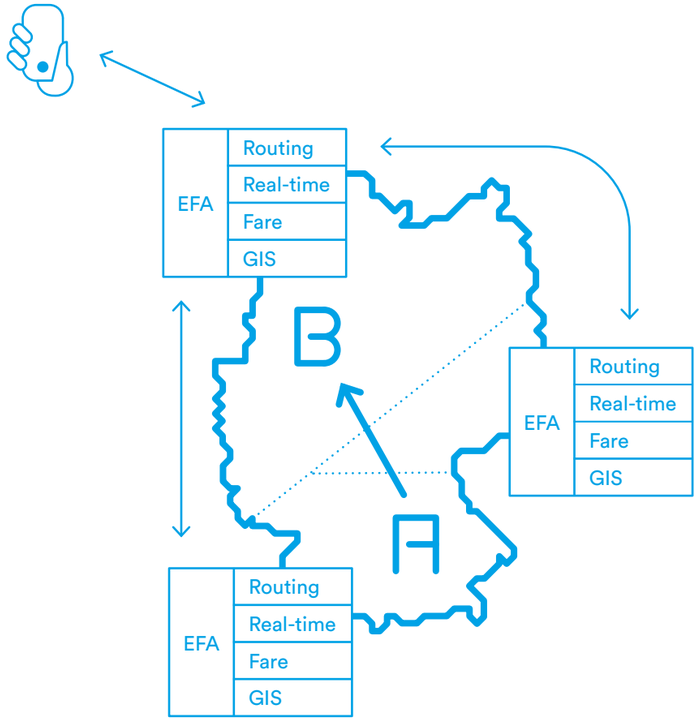
When a system has timetable data for the area which it calculates journeys, it is considered a pooled dataset (or pooled journey planning system). In other words, an integrated data pool of timetables exists, which means that the timetables are connected by common stops and interchange relations. In order for routing to use real-time information, such common data must be supplied to the system for all services in operation. One possible data source is a central data hub that collects and bundles this information. This approach is being applied to Germany-wide collection and supply of real-time data in the DEEZ project (see interview).

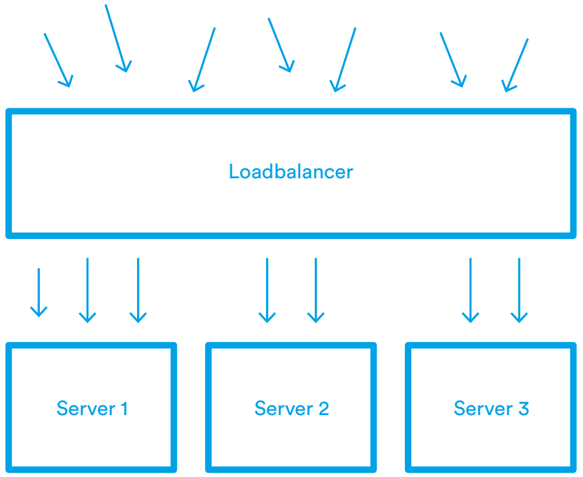
In the EFA system, the EFA conversion creates a pooled dataset that is subsequently used by the EFAPTKernel to calculate journeys.

Distributed Journey Calculation

In addition to a pooled dataset, a journey planning system can increase the area for which it provides information by using the technique of distributed journey calculation. When this technique is applied, an origin-destination relation is divided up into smaller sections that can each be distributed to other journey planning systems for calculation in their pooled datasets. The individual calculations for these various sections are subsequently combined into an optimal solution. In some cases, the system that was originally queried might not even have timetable information at all; it only functions to divide the journey request into computable sections and reassemble the responses from the other systems. However, a word of caution must be mentioned because the advantage of enlarging the area for which journeys can be planned can be accompanied by a number of disadvantages: greater complexity, longer times for computation, and the effort required to adjust the data and the algorithms of the servers involved.

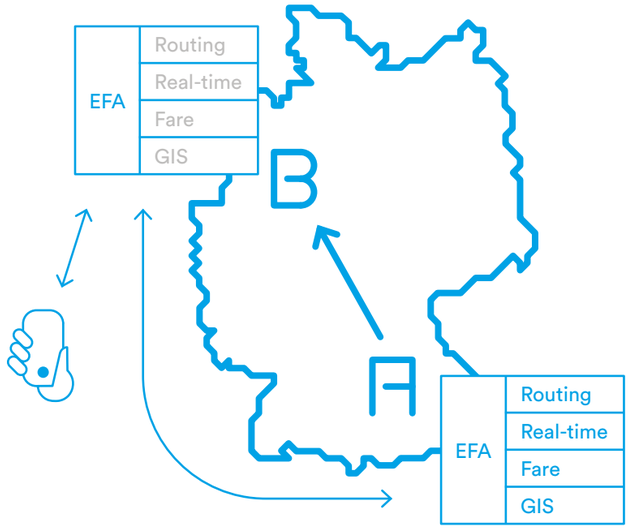
In the EFA system, the EFA controller is able to divide a journey request into sections and have them calculated by connected journey planners.





Load Balancing

Distributed journey calculation should not be confused with load balancing. Load balancing is a general technique used to distribute a large number of simultaneously arriving requests to different servers so that users' requests do not queue up. This technique is widely-used in many other domains. Hardware-based load balancing is used in numerous EFA systems using special network components. It ensures that individual EFA servers receive a relatively equal share of the total request load.

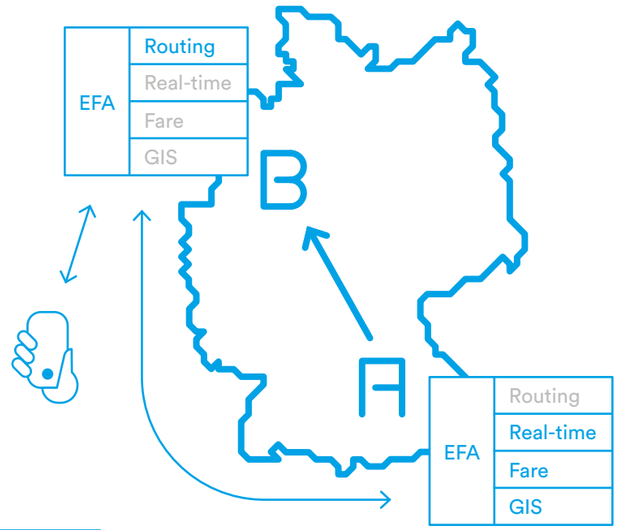


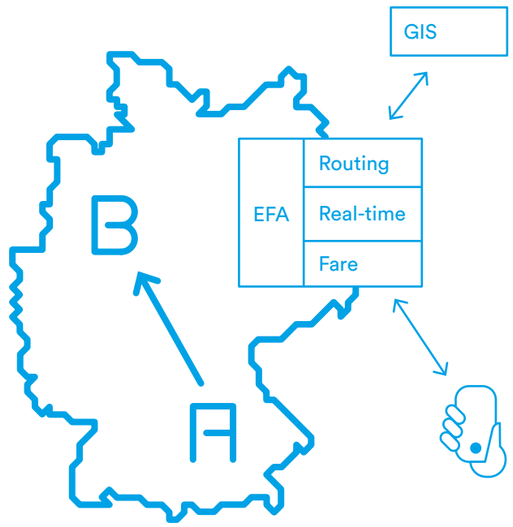
Delegation

In a journey planning context, delegation involves the forwarding of a request to a remote system when the remote system is better able to handle it. An example of a situation in which forwarding makes more sense is when a particular (remote) system's data has been updated more recently (like real-time data). In the above case, although a local system is able to calculate the journey, the request can be delegated to the remote system. Users won't notice the difference because delegation occurs in the background.
In the EFA system, the EFA controller delegates to other systems.

API Calls/Enrichment Function

Information can be retrieved from other systems using API calls (application programming interface). This includes fare information, availability of sharing vehicles, or occupancy data, which can be used to add further details to enrich journey planning. APIs frequently exchange data as XML or JSON content. And communication can be synchronous or asynchronous. The advantage of asynchronous transmission is that users can receive and read initial content while additional content is still being loaded. APIs are used quite often in the EFA system.



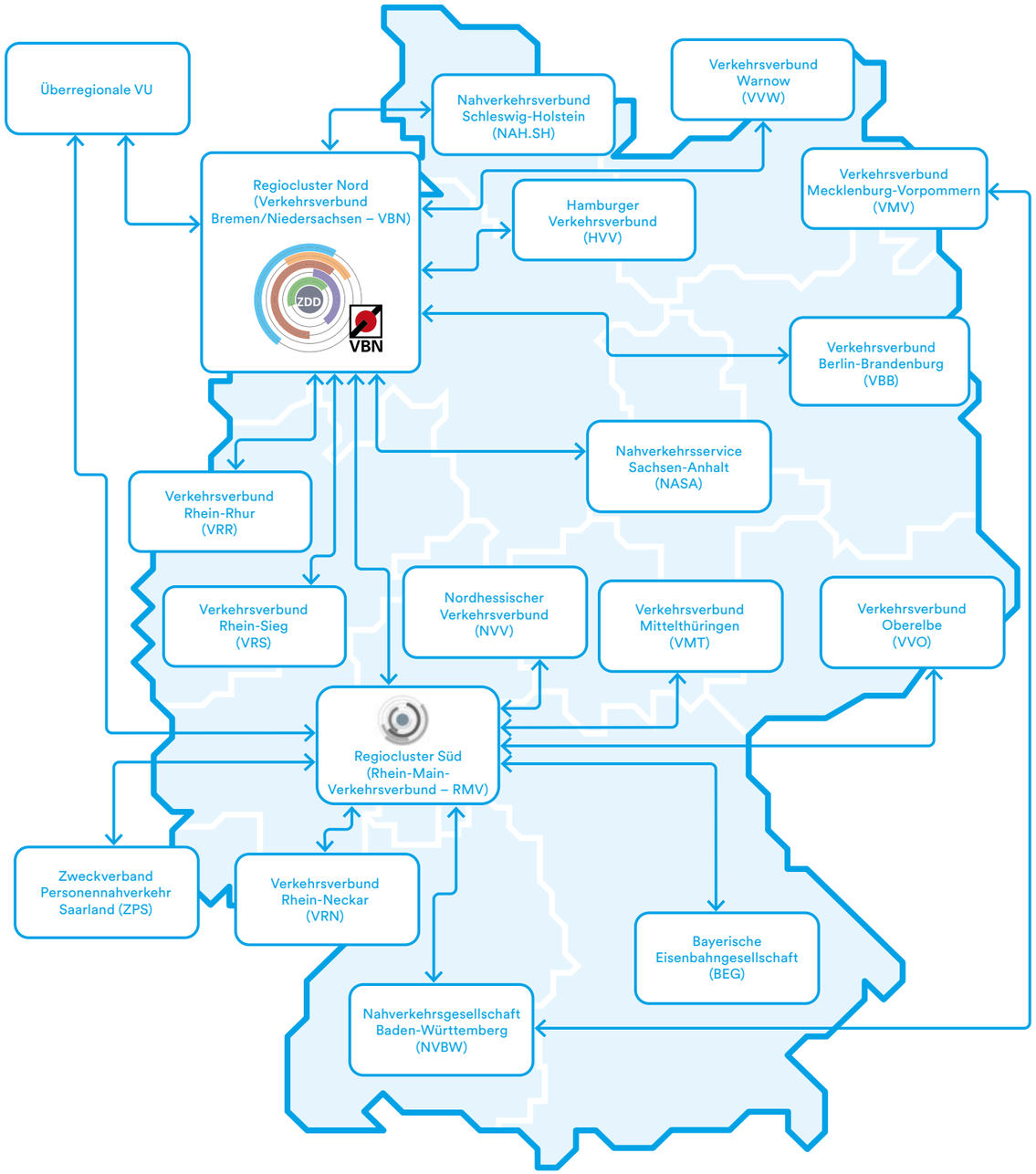


GIS as a Service

GIS as a Service (GIS, geographic information system) is example of an API call which involves the transfer of GIS and map data. Since GIS data can have very large volumes and therefore require corresponding increases in hardware capacities, this data should be bundled and used in multiple places (through API calls).

In the EFA system, GIS as a Service is available as a basic package and is subject to ongoing enhancement.

DDIP in the DEEZ Project



DDIP for DEEZ

The Dynamic Data Integration Platform (DDIP) Enables Germany-wide Real-time Public Transport Data

The Transport Authority of Bremen/Lower Saxony (VBN) has been successfully operating a data hub for real-time public transport data from the Bremen/Lower Saxony region and neighboring areas for some time. MENTZ's Dynamic Data Integration Platform (DDIP) has been used from the start.

A project called "Germany-wide real-time data" (DEEZ) represents an expansive next phase regarding data volume and system performance. The following interview with VBN experts Sandra Steinhübl and Raffael Rittmeier provides insight into the project.

Interview with Sandra Steinhübl and Raffael Rittmeier

What does DEEZ stand for and what is its goal?

Sandra Steinhübl:
DEEZ stands for "Germany-wide Real-time Data." The project aims to strengthen the competitive position of public transport and to support a transition to more public transport by improving passenger information. To achieve these goals, all of Germany's real-time data is collected into two data hubs called RegioClusters. The project is based on the so-called "2-RegioCluster model" of the Network for the Promotion of Continuous Electronic Passenger Information (DELFI e.V.) in which existing local and nationwide data hubs are connected to one of the two RegioClusters.

Raffael Rittmeier:
The two RegioClusters will be connected, which makes it possible to retrieve real-time data for all public transport in Germany. At the same time, the DEEZ project signifies a key element for future real-time offerings and projects.

Who are the project stakeholders?

St: RegioCluster North is maintained by the Transport Authority of Bremen/Lower Saxony (VBN). The Rhein-Main Transport Authority (RMV), which is supported by the Rhein-Main- Transport Authority Service Company (rms), is responsible for RegioCluster South. Because of the project's relevancy throughout Germany, it is funded 50% by the German Federal Ministry of Transport and Digital Infrastructure (BMVI) and 40% by DELFI e.V. There is also strong collaboration with supply companies.

Why did the VBN promote itself as RegioCluster North?

Ri: Expansion of the VBN's existing journey planning and real-time systems is constantly being advanced. The VBN already plays a key role for regional and interstate passenger information. Our DDIP already works for the whole of Bremen, Lower Saxony, as well as for the Transport Authority's of Hamburg (HVV) and Warnow (VVW). Using the knowledge that we have been able to gain from other projects, our long-term aims are to improve services for customers and simplify access to real-time information.

What volume of data is being processed?
St: Including AUS and REF-AUS (editor's note: AUS and REF-AUS are the specialized services for the transmission of real-time and reference data for journey planning systems as defined in VDV 454), the volume of data at the VBN currently amounts to approx. 5 GB. The volume of data supplied throughout Germany in the RegioClusters is approx. 70 GB+ per day.

What development does this require of the DDIP?
Ri: Large amounts of data – a lot of work: to this end the license feature "rule-based transformation" is to be implemented to reduce the large number of "transcoding tables" and to be able to change metadata with rules. This feature will allow flexible rules to be defined for data transformation in the DDIP and allows "transcoding" to be dropped.

To achieve higher performance, we are in the process of switching to Linux. Other DDIP customers may want to do the same because, in addition to increased performance, license costs are lower for this operating system.

St: Beyond that, VDV 454 3.x (XSD version 3.0.a) will be used in addition to VDV 454 2.x. Interfaces VDV454 AUS and REF-AUS 3.x will also be added to the DDIP.

The messages can be accessed using an elastic search engine in order to simplify and improve the searchability of log files. This technology allows large amounts of data to be managed more quickly and easily.

The DDIP's web interface is being completely revamped to include the requirements of the project

What is the project's timeline?
St: The project began in November 2020 and is scheduled to run for 24 months, or until Oct. 31, 2022. The first phase of the project focused on conceptualization and planning, which included an analysis of requirements for existing systems. In the second phase of the project, which is ongoing, authorized system enhancements are being implemented. Additionally, the data hubs are being connected to the respective RegioClusters and the RegioClusters are being coupled to each other. Non-productive test operation is planned to last from November 2021 until the end of April 2022, and to be followed by a productive trial period until the end of the project. After that, the system will transfer over to regular operation.

What advantage do these changes bring to passengers?
St: Using connected journey planning systems, Germany-wide real-time data can be made available to passengers. This is particularly beneficial for customers who travel between or beyond the borders of a particular public transport network because they can now receive real-time data throughout their journey. Users familiar with a certain app, for example from their home region, can now be used for trips throughout Germany. Real-time information can thus be more easily accessed, even in places that are unfamiliar, like when changing trains in another region.

The EU Regulation also requires the provision of real-time data via national access points (NAPs). How is this related?
Ri: EU Regulation 2017/1926 requires that all EU member states provide a national access point (NAP) to retrieve mobility data. The DEEZ project processes Germany-wide real-time data. In effect, we are in the process of creating an ideal source to provide the NAP with data while maintaining compliance with all required organizational and legal regulations.

DELFI
RMV
rms
VBN

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News

Positive Feedback for MENTZ User Group 2021

Many positives could be taken from the MENTZ user group 2021. The virtual conference included five video conferences of 90 minutes and provided important impulses and detailed customer requests. This year's meeting focused on e-ticketing and e-ticket security, mobility-as-a-service (MaaS), optimization with Genios, dispatching and operational planning. MENTZ project managers presented current use cases and challenges from Australia and from MENTZ's core region – Germany, Austria, and Switzerland. Other topics involved sharing providers, modeling for improved accessibility, DELFI information services, CO_2 calculators, and planning for demand response transport.

During each video presentation, participants could pose questions directly to the presenters in a chat. This feature enabled a meaningful two-way conversation between MENTZ experts and software users. Customers who happened to miss a particular user group module or who wanted to hone in on specific details were able to access all video recordings in the customer-only area of MENTZ's website. Those interested in viewing the user group sessions can register and gain quick access to the videos using the following link: https://www.mentz.net/en/login-area/

MENTZ Developed Cycle Route Planner App for the Stuttgart Transport And Tariff Association (VVS)

The VVS cycle route planner is now available as a new app made by MENTZ. In collaboration the VVS and wegmeister gmbh, we completely redesigned the planner and introduced flutter-based technology that makes for fast and fluid performance. The most important innovation: beyond calculating cycle routes from point A to point B, the route planner provides an option to book sections of the route with sharing providers in Stuttgart. Also included are options for Bike&Ride routes and for cycle transport in vehicles. "Public transport has always been our core business at MENTZ, so it was a logical next step to implement a connection to the public transport system in the cycle route planner," said Peter Miller, Project Manager at MENTZ.

Information on rental bikes (RegioRad), rental cars (Stadtmobil, ShareNow, Flinkster) or electric scooters (Stella) are connected via interface and displayed in real-time: availability, location, and even precise charging status can be accessed directly in the cycle route planner. Additionally, the best VVS bike tours are offered, several stopovers (via) can be added, and a GPX file can be exported for other applications. The result of the complete revamping of the app is a sleek application with the best possible user experience, praised Miller; including the ability to share or save a cycle route with a simple tap. https://radroutenplaner.vvs.de/ (in German)

MENTZ at the ITS 2021 in Hamburg

MENTZ GmbH presented Gullivr, its latest mobility app, at the largest international industry event for intelligent transport systems, the ITS in Hamburg, Germany. At the booth for the Bavarian State Ministry of Housing, Construction and Transport, and in cooperation with the Bavarian Rail Company (BEG), MENTZ demonstrated the app's intuitiveness, light weight, and speed. New features include a single sign-on profile (SSO profile) for all bookings, and the integrated booking of public transport and sharing providers. Other in-demand features are the CO_2 calculator and the pinboard which displays current tickets (public transport and sharing providers). Liliane Abdul-Reda, Head of Business Development for Mobility and Sales Platforms, represented MENTZ at the ITS and gave a talk on check-in/be-out systems ("The next generation of mobile ticketing").

Events

IT-Trans Karlsruhe
8–10 March 2022

64. DIVA/EFA User Group
19–20 May 2022, Hannover

InnoTrans
The Future of Mobility
20–23 September 2022, Berlin

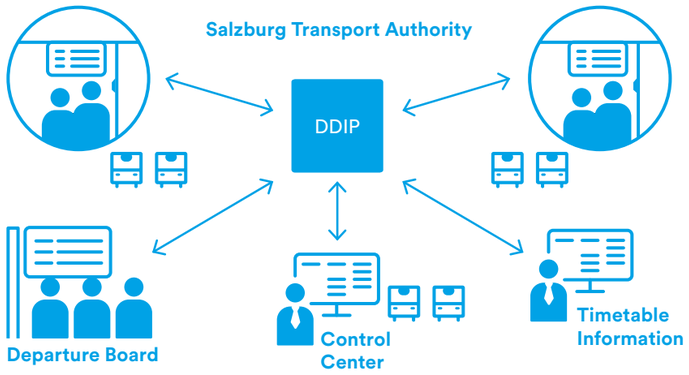
MENTZ WORLD WIDE

- Salzburg
- London
- Sydney
- Chicago
- Dubai

Salzburg Transport (SVV) Relies On MENTZ's DDIP

Salzburg Transport (SVV) put out a request for proposal for a real-time data hub and MENTZ won the tender with its Dynamic Data Integration Platform (DDIP). In the summer of 2020, the SVV wanted to procure a data hub to connect the various suppliers and consumers of real-time forecasts and vehicle positions within the State of Salzburg.

"Up until just recently, the infrastructure of a neighboring transport network was used for this purpose. We hit our target of having provided the SVV with its own platform for fast and reliable data exchange by the end of July 2021," reported Project Manager Annamaria Rittger. The SVV and its affiliated companies transport around 70 million passengers annually in and around Salzburg.



"Moving forward, we are able to provide passengers and customers in Salzburg with reliable and fast flowing information via the MENTZ data hub," said Rittger.

With the DDIP, the SVV has a proven, quality product. It is already in use with many customers and its ongoing further development ensures its value. "We started by integrating the VDV-453-VIS and VDV-454-(REF)AUS services. So far so good, but we also made sure to create the ability to connect additional interfaces and partners in the near future," emphasized Co-Project Manager Dr. Matthias Erven.

https://salzburg-verkehr.at/fahrplaene/salzburg-verkehr-app/

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