

MULTIMODAL MOBILITY PLATFORM

Customer Project

Electronic Journey Planner for Mannheim

Mannheim, Germany

Customer

Rhein-Neckar Transport Authority
(VRN GmbH)

Project Scope

Installation of a mobility platform

Key Figures 2015

Passenger: 310 mil.
Area size: 9.970 sq km

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The Rhein-Neckar Transport Authority (VRN) developed an electronic mobility platform and has set new standards as a mobility service provider.

The 6th of October was a special day; the new web presence for the VRN in Mannheim was publically launched using the same address www.vrn.de. It was the highlight of a long journey that spanned from an idea in 2015, to implementation during 2016, and then to the live launch. The fact that everything was done in time for the important timetable change and also before Christmas was not by chance. During these times, clear and easily accessible transport information is especially important. Clarity is the focus of the new and responsive internet page, with which the VRN is strengthening its position as a mobility service provider in the region.

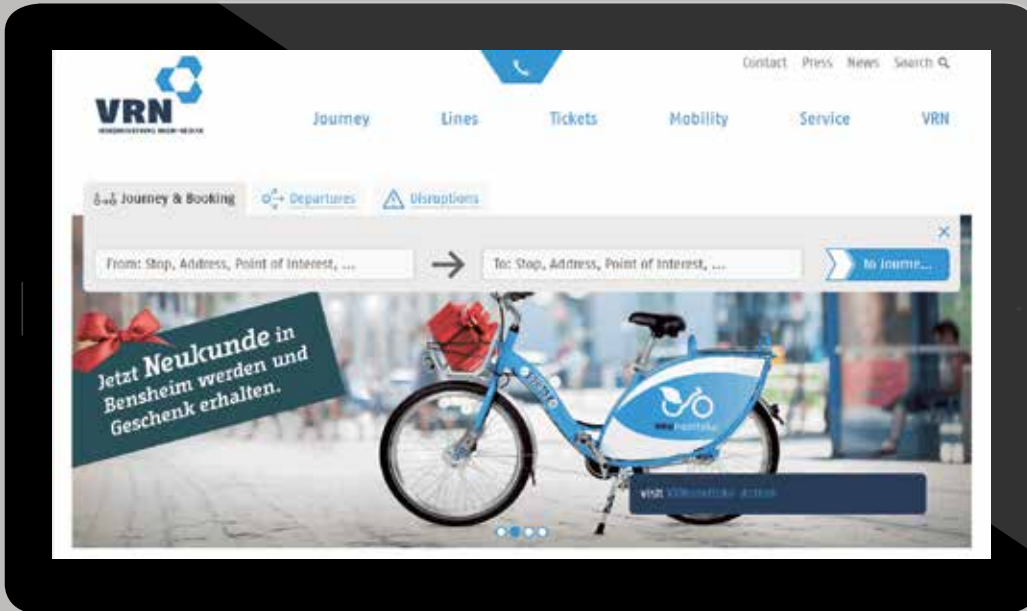


Figure: The VRN's new responsive internet layout (www.vrn.de)

The most important part of the new web appearance is the journey planner (EFA), which will be replaced in the first quarter of 2017 by the 'electronic mobility platform (EMA) as a marketing- and information tool. The multimodal system based on EFA, which is currently available to a limited circle of test users, includes new means of transport in addition to bus & rail such as car- and bike sharing. Sustainable modes of transport that complement the existing offering and are represented in Mannheim by providers like VRNnextbike, stadtmobil, Joecar and the ride-sharing company flinc, are becoming more important for VRN users and customers. In times in which even personal details are shared over social media about peoples' private lives, shared means of transport are viewed as modern mobility options, especially in fast-paced cities.



Figure: Mobile version of www.vrn.de

Both the VRNnextbike and car sharing options have background systems that provide the locations of available bikes and vehicle for the access from the mobility platform. The locations are used as origins and destinations for journeys. As

such, account is taken of which combination possibilities are possible so that no unnecessary journeys are calculated. This allows the system to create rules to allow variations that could contain the following sequences:

- Footpath → VRNnextbike → PT → VRN-nextbike → Footpath

Another typical rule defines the following sequence:

- Footpath → PT → Car-Share (floating or station-bound) → Footpath

Monomodal journeys can also be defined using rules:

- Footpath → Car-Share (floating or station-bound) → Footpath
- Footpath → VRNnextbike → Footpath

The list of modes of transport and combination options can be arranged in any way. The most important thing is that the set of rules can be easily expanded and set by VRN. The system that keeps the connection to the sharing background systems is a part of the MENTZ EFA service platform. The 'EFA Mode Sharing Server' requests the used shared services with corresponding plugins. The interfaces to the background systems are partly proprietary, but also partly based on quasi-standards like the IXSI interface, which is fully supported by the MENTZ EFA service platform.

In the first quarter of 2017, the multimodal part with bike- and car sharing (see figures to the right) will be made accessible to the public.

The EMA layout, which runs optimally on desktops, tablets and smart phones, is based on templates that are provided by the VRN. The installation and connection to the mobility platform (EMA) was conducted by MENTZ in iterative steps and in close collaboration with the VRN digital mobility team. The MENTZ development team implemented the EMA layout as a "single-page application" and used the JSON interface of EFA. Using the alternative interface to XML, depending on the request, 30-40% of the response size can be saved, which has a lot of advantages, especially in the area of mobile phones. The page works as a single page using AngularJS performant and is of optimal usability to keep the interaction of a customer relatively simple and, at the same time, to ensure high information transfer rates.

Try it out: www.vrn.de



Figure: mobile version of the new web presence