

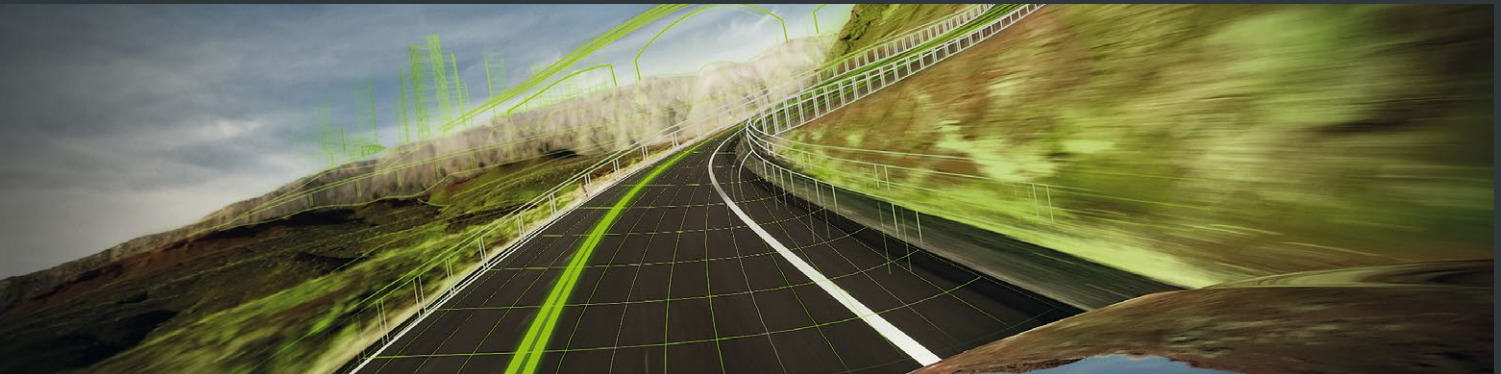


Elektrobit

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Scalable state-of-the-art navigation technology

EB street director



Industry leading high end navigation software solution EB street director

Since 2006 **several million drivers worldwide** utilize navigation provided by **EB street director** in their cars like **Audi, Fisker, GM, Mercedes Benz, Seat, Skoda, smart** and **VW**.

In order to create a better, connected driving experience, well known and established car makers trust EB street director which empowers them to sell more cars equipped with cutting edge infotainment solutions.

Due to its versatile and intelligent architecture, EB's experienced and specially trained developers are able to integrate new features and functions for fast project execution which saves development time and costs.

EB street director is equipped with a state of the art feature set including:

- ▶ Latest 3D map engines
- ▶ Integrated interfaces that allow drivers to gather location based services via navigation with minimized driver distraction and
- ▶ eHorizon that provides map data for advanced driver assistance functions.



Saving development time and cost: EB street director's one-core principle

Every navigation project completed by EB is different,
but all projects have one thing in common:
they are based on the same evolving navigation kernel.

We love our navigation core. That's why we use it again and again: in all markets, for entry level, mid-range and premium systems, for series, pre-series, R&D, and also on all available infotainment platforms. Always using the same navigation kernel guarantees

our customers will receive a permanently enhanced and improved product. The core of EB street director is also the perfect basis to develop scalable navigation systems for different carlines and models, sold worldwide.

With over two decades of development experience in navigation in addition to other areas, car makers and suppliers receive a product with advanced technology expertise.



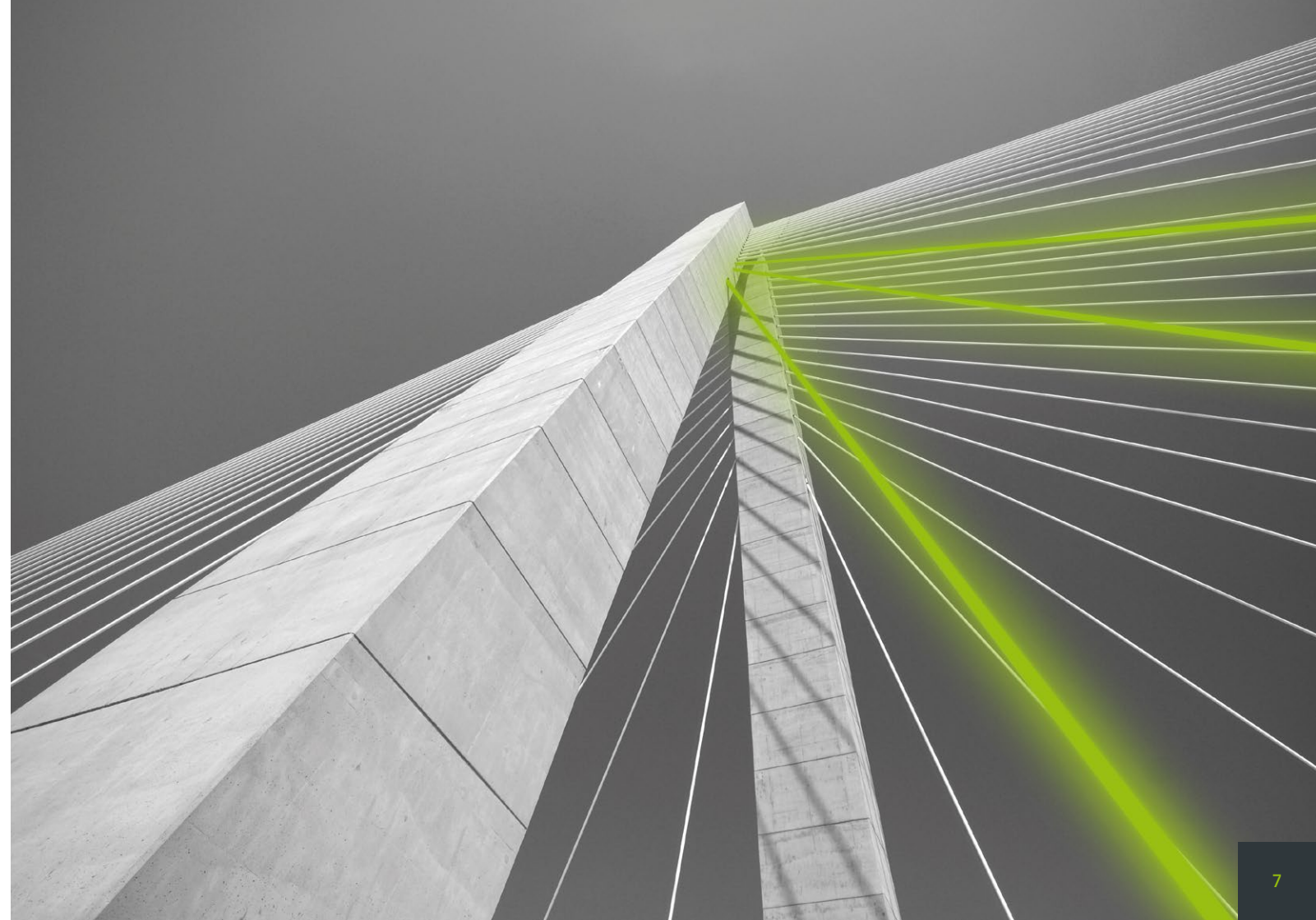
The key to fast innovation: EB street director's versatile architecture

We want to be **as flexible as possible** for our customers.
That's why we created navigation software architecture that
allows **adding and changing new features** and **easy integration**.

EB street director's architecture is modularly designed. It is easy to develop and integrate new features and functions. Defined interfaces allow integration without any difficulties.

At EB, we are familiar with agile development processes. Weekly delivery cycles and incremental development processes ensure fast customer feedback and minimize project risks.

Car makers reduce costs and benefit from a navigation system which is on the edge of the latest technology. Expectations for time, quality and costs are delivered.



High software quality: Sophisticated tooling and mature validation process

EB guarantees high software stability. Car makers can be sure to receive individualized solutions within **agreed upon time, quality and cost.**

EB delivers a weekly software release to customers during the development phase. Before we deliver our navigation software, we thoroughly test it. Every day, we are running more than 15,000 automated tests on our software and that number is constantly growing.

Our specially trained test teams are driving approximately 10,000 km or over 6,000 miles per week. We do parallel field testing at EB sites in Europe, United States, and China. The validation process is additionally supported with sophisticated tooling to analyze system freeze and software crashes, multi-channel tracing, recording and replaying of real world scenarios.

This in depth testing allows us to fix bugs quicker guaranteeing our customer's software is delivered within the agreed upon time, quality and cost specifications.



Keeping driver needs in mind: green driving technology

Today's drivers are expecting more and more **energy saving technologies**. That's why we offer technologies like **green routing** and **range assist** to our customers.

Besides routing options that provide the shortest or fastest route, we have developed a green routing option. This function provides an energy saving and emission optimized route, based on pre-compiled map data in-

formation, adjustable vehicle characteristics, car sensors and connected content like real time traffic. It enables energy profiles and predicts energy consumption for all possible routing options.

Our range assist technology shows the vehicle range in map view taking into account geographical conditions (slopes, bridges, coast lines, road class, curvature, ferries, etc.).



Advanced Driver Assistance Systems (ADAS) powered by eHorizon

Drivers trust in **modern ADAS functions** to arrive at their destination safely and more comfortably. Our **eHorizon** allows car makers to offer **navigation map based ADAS functions**.

EB street director supports map based driver assistance functions like adaptive head lights, traffic sign recognition and fuel efficient driving. For this purpose, EB offers an eHorizon provider and an eHorizon reconstructor

providing map data like road geometry and speed limit profiles. This will be the basis for a growing number of functions which benefit from this technology.

All modules that are essential for the quality of major ADAS functions are provided by EB.

- ▶ In-dash navigation core
- ▶ Automotive grade dead reckoning
- ▶ eHorizon provider
- ▶ eHorizon reconstructor



Bringing consumer electronic trends into the car: Live Maps

Today's drivers use smart phones and other consumer devices and expect a similar experience in their cars. **EB's Live Maps** covers current technologies like **3D map display** and **partial map updates**.

EB street director's smooth 3D map engine with more than 25 frames per second (fps) intrigues drivers and brings the latest in 3D city models, 3D landmarks, satellite imagery and hybrid map technology into the car. As well as high definition terrain models, global

views, animated freeway exits and inner city junction views help drivers quickly and easily orient to their surroundings due to the real portrayal of these views. Partial map updates save costs and time. Instead of updating a complete continent, the update will be done

only for defined regions e.g. Germany-East. With an SD card and a home PC, internet updates are easy and fast to complete. It is also possible to receive updates spontaneously during driving, using mobile communication.



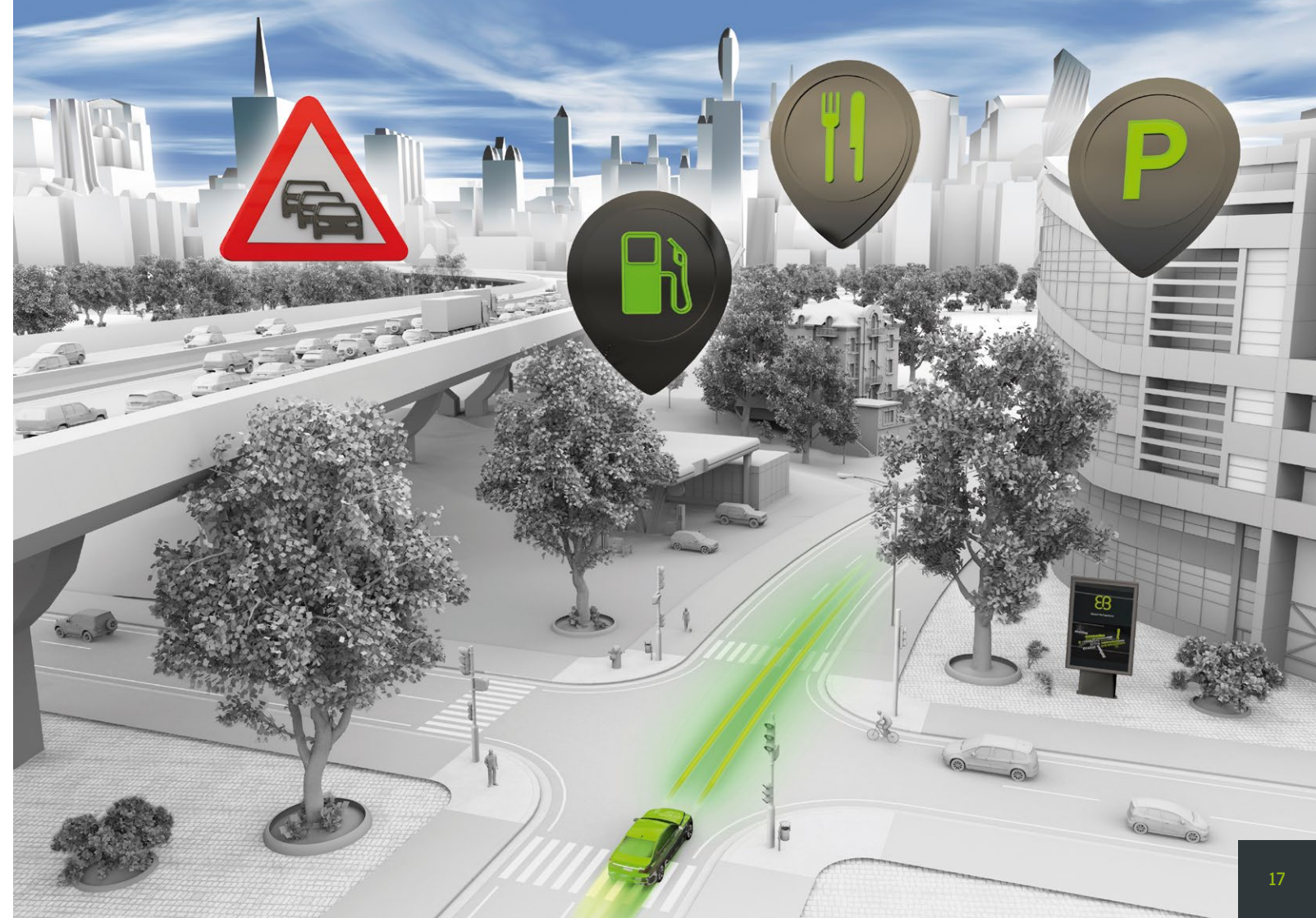
Connected services: Total solution provider with best in class partner ecosystem

We know drivers rely on **location based services** because they want to know more about their environment. That's why we offer a **turnkey connected solution** for our customers.

EB is your partner for turnkey connected solutions. Together with its specialized partners, EB delivers a connected end-to-end solution and all entities:

- ▶ Connected navigation, comprising of a dynamic POI interface, map updates, satellite imagery and an online traffic module.
- ▶ Location based services with content aggregation and administration.
- ▶ Customer relationship management including customer care and support, marketing and advertising, billing and invoicing.

Car makers enjoy an all-round carefree package as well as the latest connected services. It is also possible to integrate a single content provider or an OEM owned service.



Navigation is our passion and your key to today's driving experiences.

EB is your trusted partner to develop a perfect
state-of-the-art navigation solution.

- ▶ EB provides the industry leading high end navigation software solution which has already shipped in millions of cars. Its one-core principle helps you save valuable time and money.
- ▶ A broad ecosystem with well-known and experienced partners ensures capturing driver demands.
- ▶ EB street director's true automotive core integrates the latest features like high performance maps, green driving options, eHorizon with interfaces and information for advanced driver assistance functions, along with the possibility to offer connected solutions.

EB is constantly thriving for the highest standards in quality to support car manufacturers and automotive suppliers worldwide with creative, scalable software solutions and integration services. EB street director, the versatile navigation solution from EB, is shipping in millions of vehicles across the globe, in over 25 car models. The ultimate goal of EB is to deliver on the promise of developing flexible, customizable, connected navigation solutions.



Contact us

USA

Germany
France Austria Romania

China

Japan

EB is a global company with branch offices all over the world.

About EB Automotive

EB Automotive is established internationally as one of the most important suppliers of embedded software solutions for the automotive industry. In addition to the development of products, we also specialize in services and consulting for the automotive industry, supplying implementations of serial software solutions for a broad range of AUTOSAR and FlexRay, Functional Safety, Infotainment, Navigation, HMI and Driver Assistance systems. EB continues to invest in feature integration and development tools so that the in-vehicle devices get to market more quickly and ship in volume sooner.



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