EasyWay

DATEX II User Forum
20/21 March 2012 - Stockholm

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Strategic Routing – Requisite for Smart Urban Navigation

The nightmare of drivers and authorities

Let’s talk about…

- Initial Situation
- Objective and Challenges
- Technical Realisation
- Projects and Outlook

Let’s talk about…

Initial Situation

Objective and Challenges

Technical Realisation

Projects and Outlook

State of the art: GPS navigation and HR traffic info

- 20 million navigation systems in Germany[1]
- High-resolution (HR) traffic info even in urban areas
- No link between route planners and traffic management
- Dynamic routing takes control
- Drivers rely on navigation systems

GPS navigation is part of the traffic system

[1] source: ADAC e.V..

Expectations are sometimes conflicting

User optimum

Drivers expect routes to be

- fast & efficient
- safe & comfortable
- comprehensible
- consistently reliable

System optimum

Authorities intend traffic to

- stick to priority roads
- avoid sensitive areas
- follow signage
- satisfy ecological constraints

Current urban navigation makes both sides unhappy

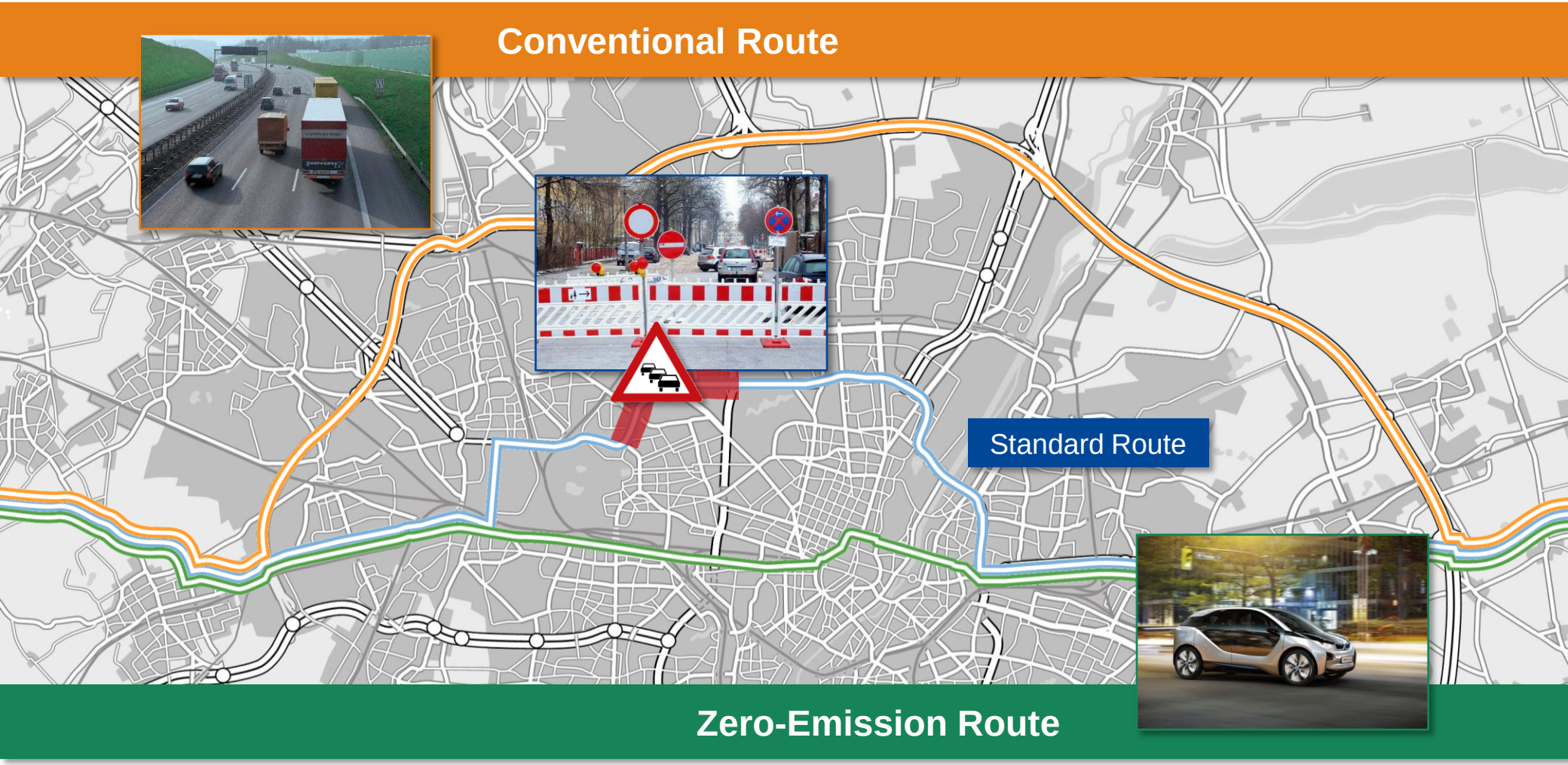
Strategic Routing is the key in complex traffic situations

Strategic Route

Standard Route

Dynamic Route

Strategic Routing as part of traffic management



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Dissolving conflicting interests by cooperation

- Cooperate with city and road authorities
- Acquire their store of local knowledge
- Establish link to traffic management centres
- Integrate content into the routing service
- Deliver optimal and environmentally adaptive routes

Strategic Routing creates win-win situation

Drivers and authorities benefit from Strategic Routing

Routes conform to strategic road network

Routes incorporate dynamic strategic deviations

Routes take advantage of traffic measures

Routes avoid congestion pro-actively

Routes are aware of road events

Identifying the main challenges to be overcome

- Terms and conditions for sharing traffic data
- Worldwide data acquisition
- Adaptation of routing algorithms
- Standardisation of protocols for data exchange

BMW is contributing to DATEX II enhancements

Let’s talk about…

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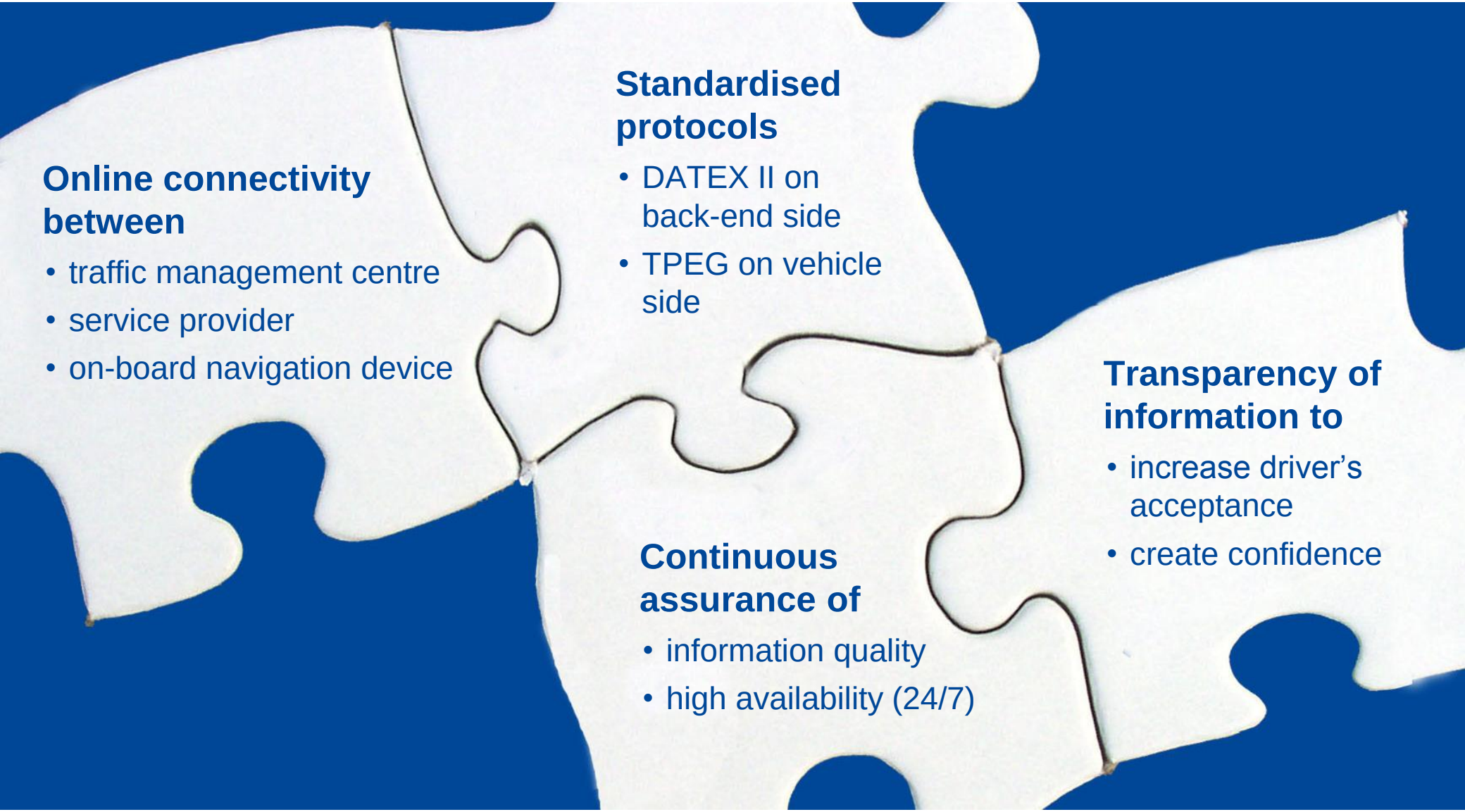
Putting together the puzzle pieces for Strategic Routing



Traffic management meets personal navigation

Traffic Situation

Road Works

Special Events

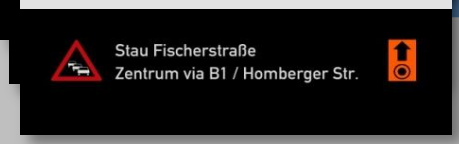
Traffic Management Center

Infrastructure

Priority Networks

Traffic Measures

Route Recommendations



DATEX II

Service Provider

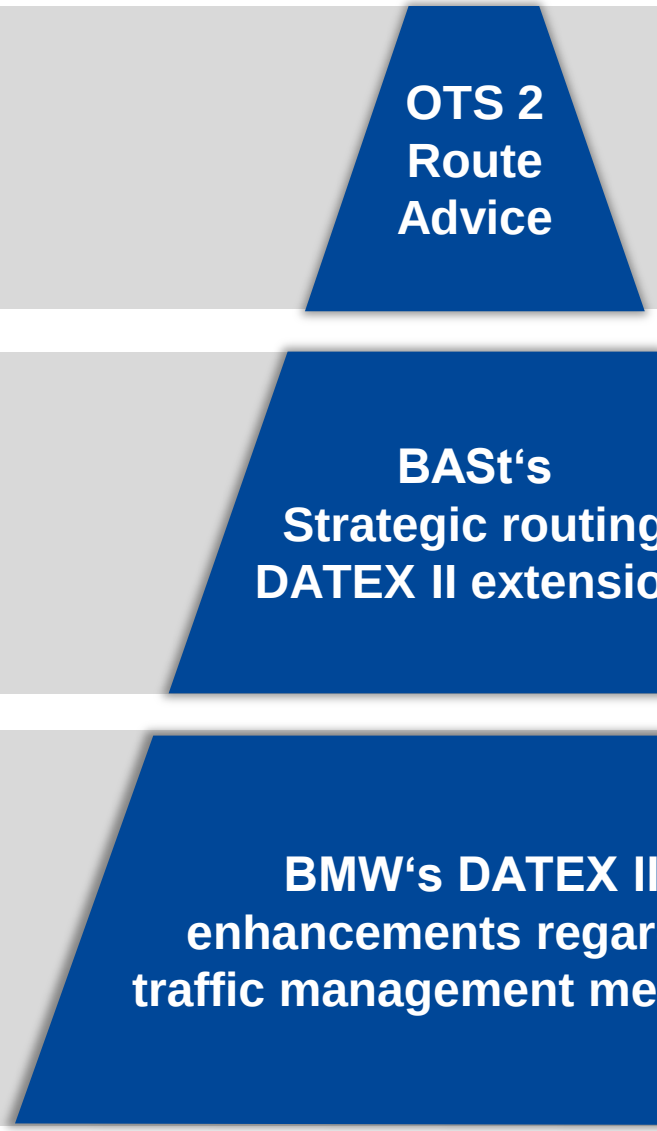
Backend Routing Service

TPEG

STRATEGIC ROUTING

On-line Alternative Route

BMW is participating in DATEX II standardisation



- Developed in Dmotion
- TMC location reference
- Special use case

- Migration of OTS 2 route advice to DATEX II
- Greater flexibility

- Lane Management
- Traffic Light Management
- Capacity Management

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Extract of past, current and future projects

- Munich Red Routes (1996) & Invent (2005)
- Duesseldorf in Motion (2009)
- BASt's Mobility Data Market (2012)
- Transport for London & Olympic Games (2012)
- ITS Vienna Region & ITS WC (2012)

What's next

- Continue cooperative projects with cities & road authorities
- Spread vision of Strategic Routing
- Promote DATEX II as uniform interface
- Extend DATEX II for further use cases
- Transfer prototypes to productive system

Bring Strategic Routing onto the road

Thank You for Your Attention!

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