

Innovation@Kapsch: Telematics for Railways.

Wolfgang Leindecker, VP M2M & Public Transport.

UNECE, October 2013.

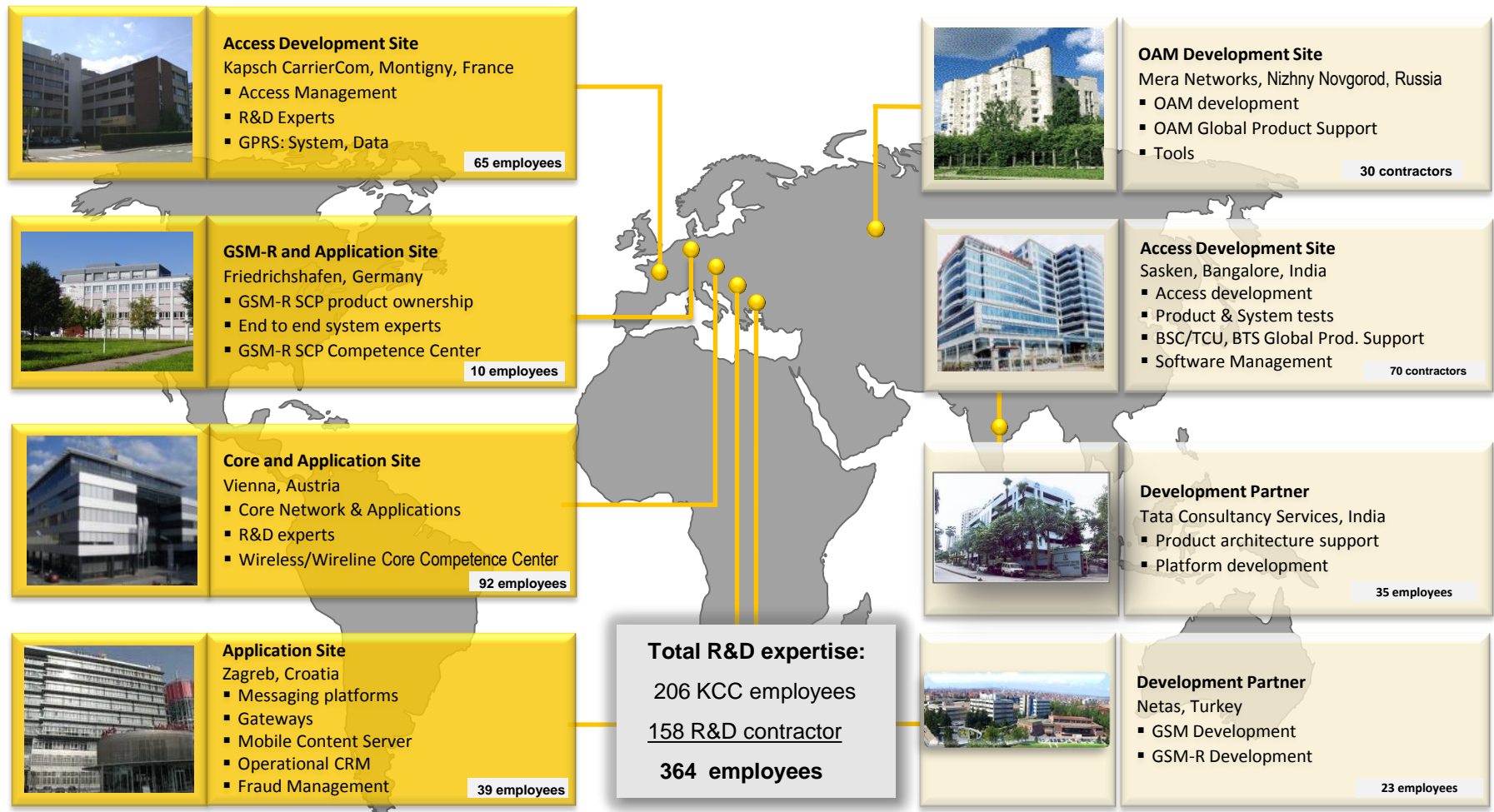


Our Company.



- Globally operating technology group with Austrian roots.
- Headquarters in Vienna – founded in 1892.
- Three independently operating entities:
 - Kapsch TrafficCom
 - Kapsch CarrierCom
 - Kapsch BusinessCom
- Products and solutions addressing future markets:
 - Intelligent Transportation Systems (ITS)
 - Railway and Public Operator Telecommunications as well as
 - Information- and Communications technology (ICT)
- More than 40 subsidiaries on five continents.
 - ~ 930 Mio. EUR revenues
 - ~ 96 Mio. EUR R&D

Our Development Centers - Core and Access.



Kapsch CarrierCom: **Portfolio.**

Creating end-to-end telecommunications solutions.

Public Operators



- Supplier and system integrator of telecommunication solutions for fixed and mobile operators, utilities and cable companies

Railways



- Global manufacturer and systems integrator of end-to-end telecommunication solutions for railway operators

Public Transport



- Supplier of critical communications networks and intelligent transport solutions for public transport organizations worldwide

Machine Networks



- Supplier of end-to-end solutions that enable customers to optimize the use of assets by means of machine-to-machine communication

Our leading innovation, your sustainable solution.

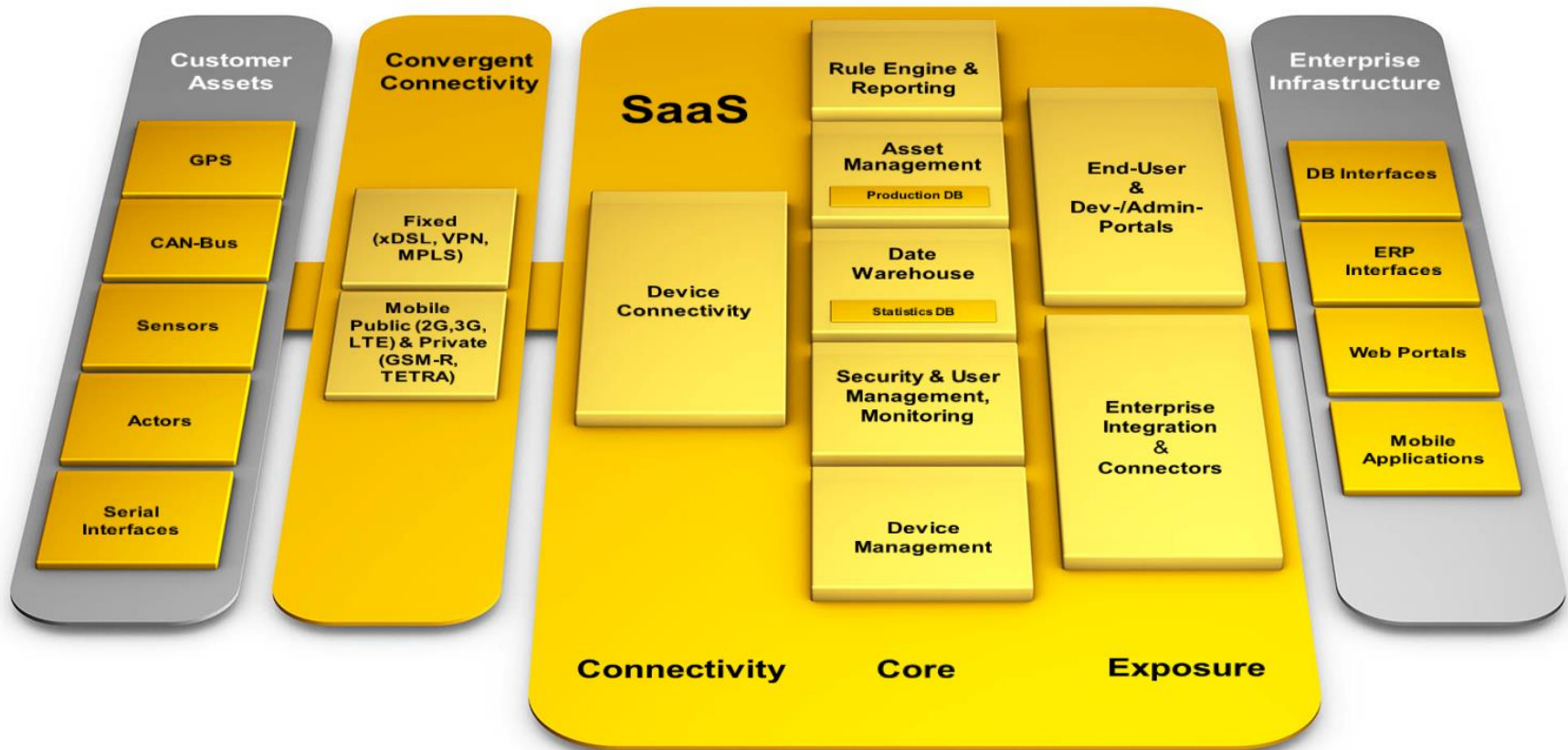
Our Customer References.



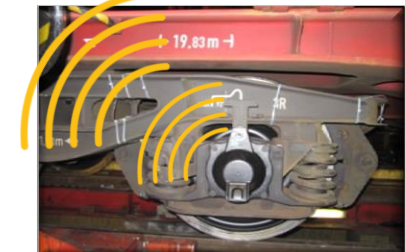
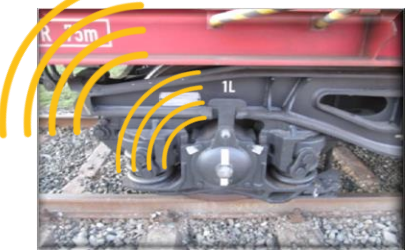
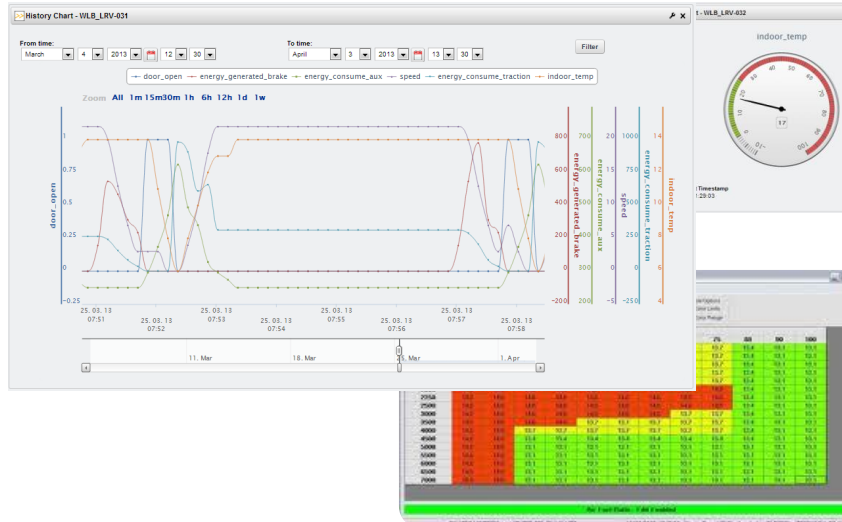
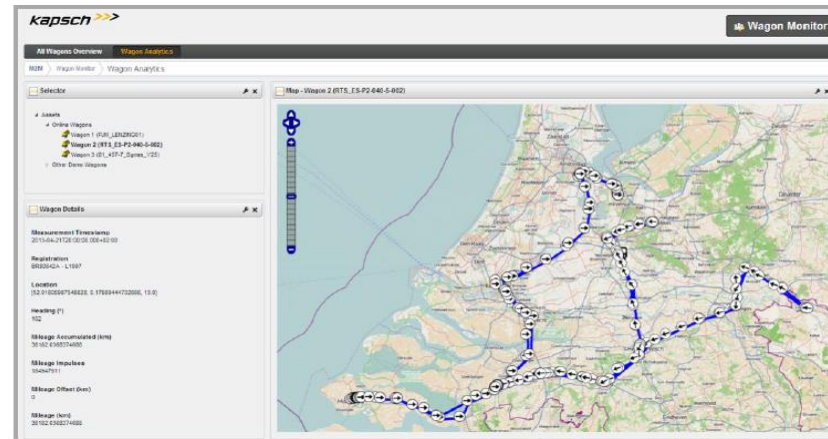


For us, the best solution is always the most **innovative**.

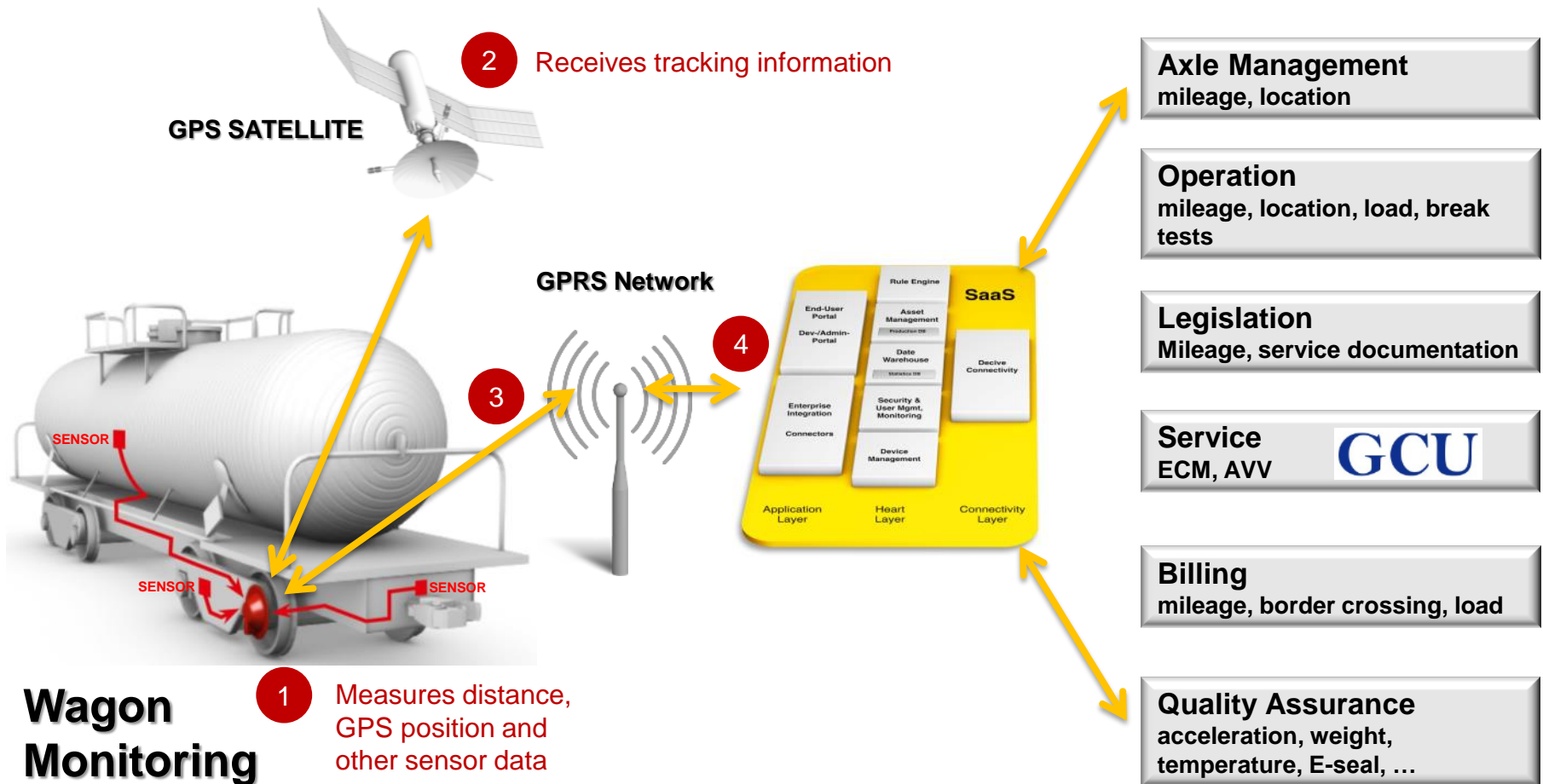
Our end-to-end **Telematics Solution.**



Wagon Monitoring Solution.



Wagon Monitoring Solution.



Wagon Monitoring Solution.

- Railway certified product
 - Low installation cost, taking less than 15 minutes to install
 - Energy Harvesting: Long life-cycle due to the non-contact power supply (not battery based product)
 - low maintenance efforts
- Remote data updates based on timing interval & event driven
- Retrofitting of all European rail freight wagons (US version in testing phase)
- Real-time visibility of location of goods transported on freight wagons
- Reduce administration costs through automated billing and logistics processes
- Supports Service process for all stakeholders according to ECM (Entity in Charge of Maintenance), AVV



Always

Additional Infrastructure Services.

OS 025	23:20	51-85	A04	Bangkok	TO 1000
SU 264	00:30	85-99	A05	Moscow	
OS 9447	04:05	80-85	A06	Ankara	
OS 9485	04:30	80-85	A07	Dalaman	
HG 3636	05:00	112-125	B40	Ibiza	
HG 2980	05:35	112-125	A17	Ankara	
OS 9467	05:35	80-85	A04	Dalaman	
HG 1252	05:40	112-125	B35	Palma de Mallorca	

SU 2091	06:00	80-85		Hannover	
LX 1585	06:55	51-85	C08	Zurich	OS 8801
OS 915	06:55	51-85	B40	Innsbruck	TO 1000
SN 2910	06:55	126-129	C51	Brussels	
OS 191	07:00	51-85	B41	Cologne	LH 8371
OS 121	07:05	51-85	C80	Frankfurt	LH 8301 AC 9809
OS 311	07:05	51-85	B26	Stockholm	SK 3408
OS 351	07:05	51-85	C57	Brussels	SK 3408
OS 451	07:05	96	A08	London Heathrow	AC 9803 LH 8408 AZ 4001 BO 2001

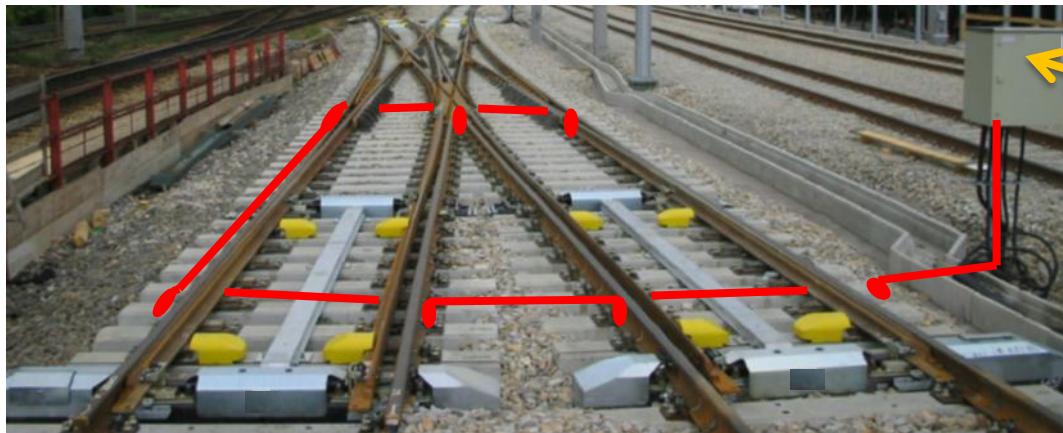
Flug	Plan	Info	Checkin	Gate	Nach
OS 271	07:10	51-85	B33	Berlin	LH 8371
OS 411	07:10	51-85	C52	Paris-CDG	AF 3009
OS 9609	07:10	96	C53	Catania	
OS 961	07:15	51-85	C56	Zurich	LH 8801 TO 1000
OS 703	07:15	51-85	B31	Prague	
OS 175	07:20	51-85	B32	Hamburg	LH 8301
OS 301	07:20	51-85	C54	Copenhagen	SK 3402
OS 971	07:20	51-85	B38	Geneva	LH 8801
OS 151	07:25	51-85	C62	Düsseldorf	LH 8303
OS 215	07:25	51-85	B36	Lipzig	LH 8801
OS 371	07:25	51-85	B30	Amsterdam	
OS 511	07:25	51-85	B27	Milan-Malpensa	TP 8711
OS 506	07:30	51-85	C81	Rome	
OS 603	07:30	51-85	A04	Moscow	
BA 699	07:30	7-26	A01	London Heathrow	
FHY 742	08:00	1-13	A18	Ankara	
AB 8358	08:05	10-125	B37	Berlin	
OS 825	08:10	51-85	B36	Warsaw	LO 8002

Flug	Plan	Info	Checkin	Gate	Nach	22:10
HG 3682	05:45	112-125	A19	Hungate		
AB 8181	06:10	112-125	B36	Düsseldorf		
HG 8334	06:20	112-125	B36	Innsbruck		
LH 3543	06:35	51-80	C85	Frankfurt	LH 8888 OS 7201 SK 3730 LH 5767 AC 9181	
HG 8150	06:40	112-125	B37	Zurich	OS 8706 MH 6308 HG 1838 DL 8778	
KL 1836	06:40	27-31	B28	Amsterdam		
OS 583	06:40	51-85	B34	Altenrhein		
OS 111	06:45	51-85	C56	Munich	LH 8305	
OS 177	06:45	51-85	B39	Stuttgart	LH 8306	
BU 2861	06:50	85-99		Hannover		
LX 1585	06:55	51-80	C56	Zurich	OS 8801	
OS 915	06:55	51-85	B40	Innsbruck	TO 1000	
SN 2910	06:55	126-129	C51	Brussels		
OS 191	07:00	51-85	B41	Cologne	LH 8371	
OS 121	07:05	51-85	C80	Frankfurt	LH 8301 AC 9809	
OS 311	07:05	51-85	B26	Stockholm	SK 3408	
OS 351	07:05	51-85	C57	Brussels	SK 3401 TP 8721	
OS 451	07:05	96	A08	London Heathrow	AC 9803 LH 8408 AZ 4001 BO 2001	

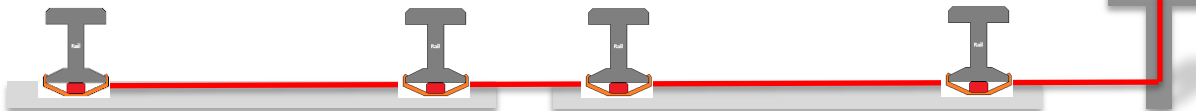
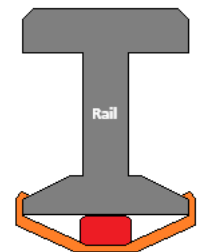
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OS 151	07:25	51-85	C62	Düsseldorf	SK 3403
OS 215	07:25	51-85	B36	Lipzig	LH 8801
OS 371	07:25	51-85	B30	Amsterdam	
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OS 603	07:30	51-85	A04	Moscow	
BA 699	07:30	7-26	A01	London Heathrow	
FHY 742	08:00	1-13	A18	Ankara	
AB 8358	08:05	10-125	B37	Berlin	
OS 825	08:10	51-85	B36	Warsaw	LO 8002

Rail-Switch Heating Monitoring.

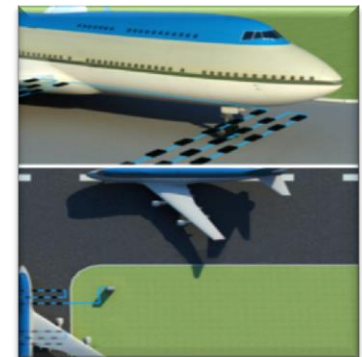
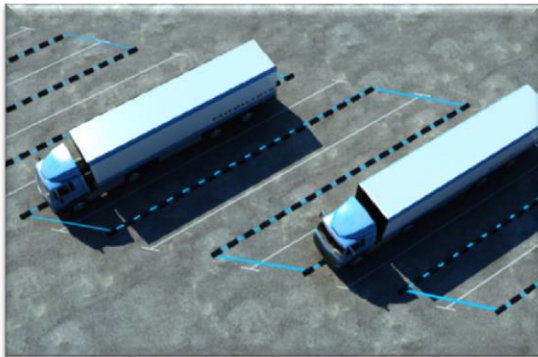
- Rail switch temperature in real-time
- Energy efficiency
- Correlation with weather data and heating-status



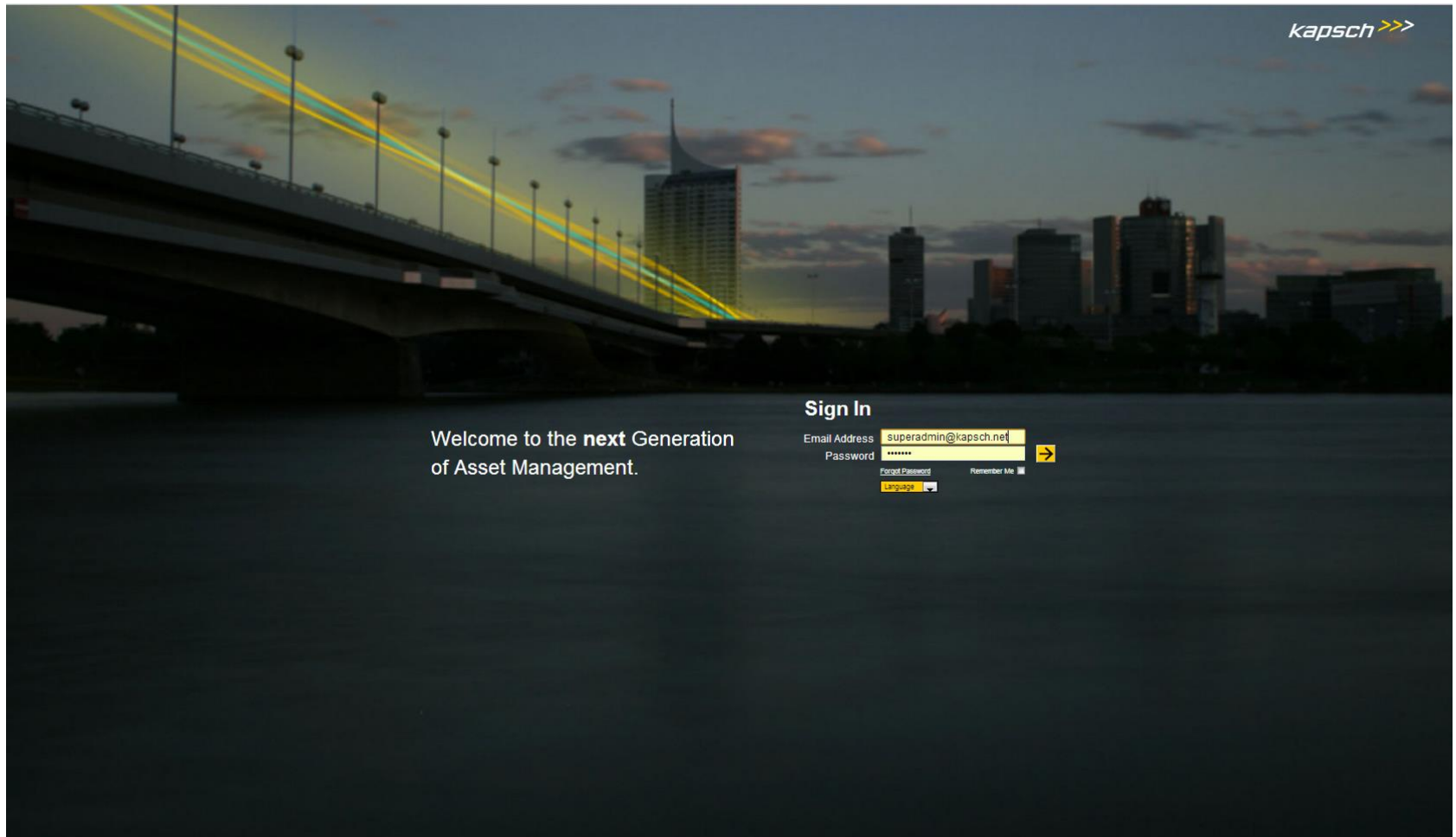
Power und Housing



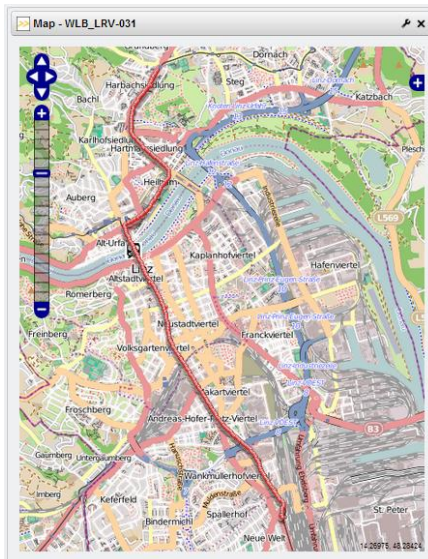
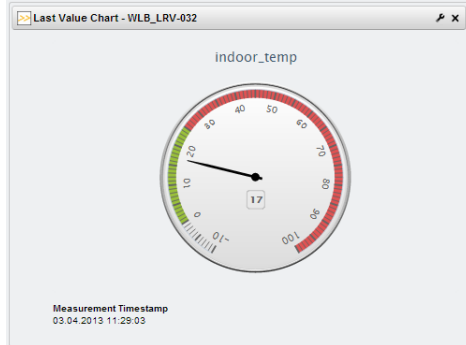
Parking Lot Management.



Welcome to the **next** generation of **Asset Management**.



End User Portal.



History Table - WLB_LRV-031

Measurement Timestamp	door_open	energy_generated_brake	location	energy_consume_aux	speed	energy_consume_traction	indoor_temp
25.03.2013 08:28:02	0	0	[48.32737373, 14.28511914]	328	18	656	12
25.03.2013 08:27:42	0	0	[48.32723166, 14.28495329]	440	10	608	10
25.03.2013 08:27:32	0	0	[48.32709048, 14.28478566]	494	4	904	8
25.03.2013 08:27:22	0	0	[48.32692268, 14.28469626]	622	0	980	6
25.03.2013 08:27:12	1	0	[48.32681086, 14.28460836]	470	0	0	8



Geofence Alert.

LRV_Service_Center

View Update Remove

Geofence Details

M2M ID / Graph ID
7370570648992815085 / 216

Blocked
false

Name
LRV_Service_Center

Description

Location
Latitude: 48.1522855339
Longitude: 16.3373207169

Radius [m]
65



Map 7294683583484386574



! 📧 📄 📁 From

Subject

📅 Date: Today



m2m-platform@kapsch.net

Check geofence for asset LRV-032



m2m-platform@kapsch.net

Check geofence for asset WLB_LRV-032

Mi 03.04.2013 13:53

Check geofence for asset LRV-032



m2m-platform@kapsch.net

Sent: Mi 03.04.2013 13:46

To: 📧 Kerschbaummayr Engelbert

Geofence check result - Service_Center: IN

We have it covered. **End-to-end.**



- Savings through improved efficiency in processes and energy consumption
- Increased reliability and service quality
- Innovation leadership for your market
- Improved customer satisfaction and loyalty
- One solution for all stake holders

Your Contact.

Wolfgang Leindecker

VP M2M & Public Transport

Kapsch Aktiengesellschaft

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