

# Tracking & Tracing as the Basis for new Logistic Services

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# Agenda

- **some slides of Gebrüder Weiss**
- **our requirements for a Track and Trace environment**
- **what technology we used and how we implemented a pilot**



# Gebrüder Weiss History

1921 **Ferdinand Weiss** takes over the management;

subsequently opening of offices in **Hamburg** and **Wels**

1989 After the fall of the „Iron Curtain“: **Expansion** into the neighbouring **Central and Eastern European countries** (CEE), expansion of a branch network in the neighbouring countries (Budapest, Prague, Brno, Bratislava, Maribor, Ljubljana) as well as in the **Far East** (Shanghai, Hong Kong, Qingdao)

1999 Declaration of intent and consequent possibility of establishing a **joint venture** between Gebrüder Weiss GmbH and **Röhlig & Co.**

# Gebrüder Weiss History

- 1999 *Extension of branch network* in the *Czech Republic* (Budweis, Hradec Kralove, Ostrava), *Hungary* (Győr, Kaposvar, Pápa, Szeged etc.) and in *China* (Nanjing)
- 2001 *Extension of branch network* in *Eastern Europe* (Croatia, Bulgaria, Romania) and in *China* (Dalian, Ningbo, Tianjin)  
Extension of branch network in China (Urumqi)
- 2003 *Joint Venture with Röhlig & Co* in the *USA* with 5 new locations (Chicago, New York, Houston, Los Angeles, Miami)

For the *location Shanghai* an *A-licence* was awarded permitting complete forwarding business activities

**2004** Gebrüder Weiss has opened two new branches in *Belgrade* and *Subotica*

With the GW partner Röhlig & Co a new *branch* was *opened in Dubai*, while in China the branch network was further extended (*Zhanjiang, Xiamen*)

**2005** In *Toronto*, Gebrüder Weiss commenced operation with its first Canadian location.

In China, Weiss-Röhlig offices were opened in *Shenzhen* and in *Xian*.



# Gebrüder Weiss History

**2006** The company's largest logistics facility in *Maria Lanzendorf* (AT) was commissioned.

GW acquired the Slovakian firms *M&G Expres Spedition* and *M&G Spedition*.

New branch offices were opened in Constanța (RO), Kiev (UA), Koper (SI), San Francisco (USA), Chengdu (China) and in Ulan-Baator (Mongolia).

**2007** The *Memmingen location is tripled*. New locations were opened in *Taipei* (Taiwan) and *Montreal* (Canada).

**2008** New locations in *Sarajevo* (Bosnia) and Hajduboszormeny (Hungary).



## Gebrüder Weiss Holding AG

Lauterach (AT)

## Gebrüder Weiss GmbH

at 47 locations\* in Austria

### GW Switzerland

Altenrhein, Zurich, Basel

### GW CEP services

DPD Austria, primetime, EuroExpress

### GW Germany

Memmingen, Lindau, Passau,  
Nuremberg

### GW Specialised Logistics

Rail cargo  
Fair, furniture and arts transports  
Fashionet textile transport company

### GW International

39 CEEC locations\* in  
HU, CZ, SK, SI, HR, BG, RO, SCG, UA

### GW Consulting & IT

xlwise innovative logistics  
inet logistics  
dicall – call center

### GW Air & Sea and Overseas

Joint venture companies in China,  
Hong Kong, Singapore, USA, Canada,  
Germany, Italy, UAE, Taiwan and Japan

\* all branches, subsidiary companies and customs offices  
are locations



# Facts and Figures

**950,0**

*Turnover in millions of euros (2007)*

**129**

*Number of GW locations worldwide*

**13**

*Number of countries in which GW is represented by its own offices.*

# Facts and Figures

**300**

*Number of regular  
service routes  
worldwide.*

**4.400**

*Number of GW employees  
worldwide (yearly average)*

**250.000**

*Storage area in square metres*

## Facts and Figures

**2.000**

*Average number of GW trucks on the road on any given day.*

**7.300.000**

*Average number of consignments forwarded by GW worldwide annually*

**35.800.000**

*Number of parcels handled via the DPD Austria System (2005)*

# Company - the orange way

Gebrüder Weiss 

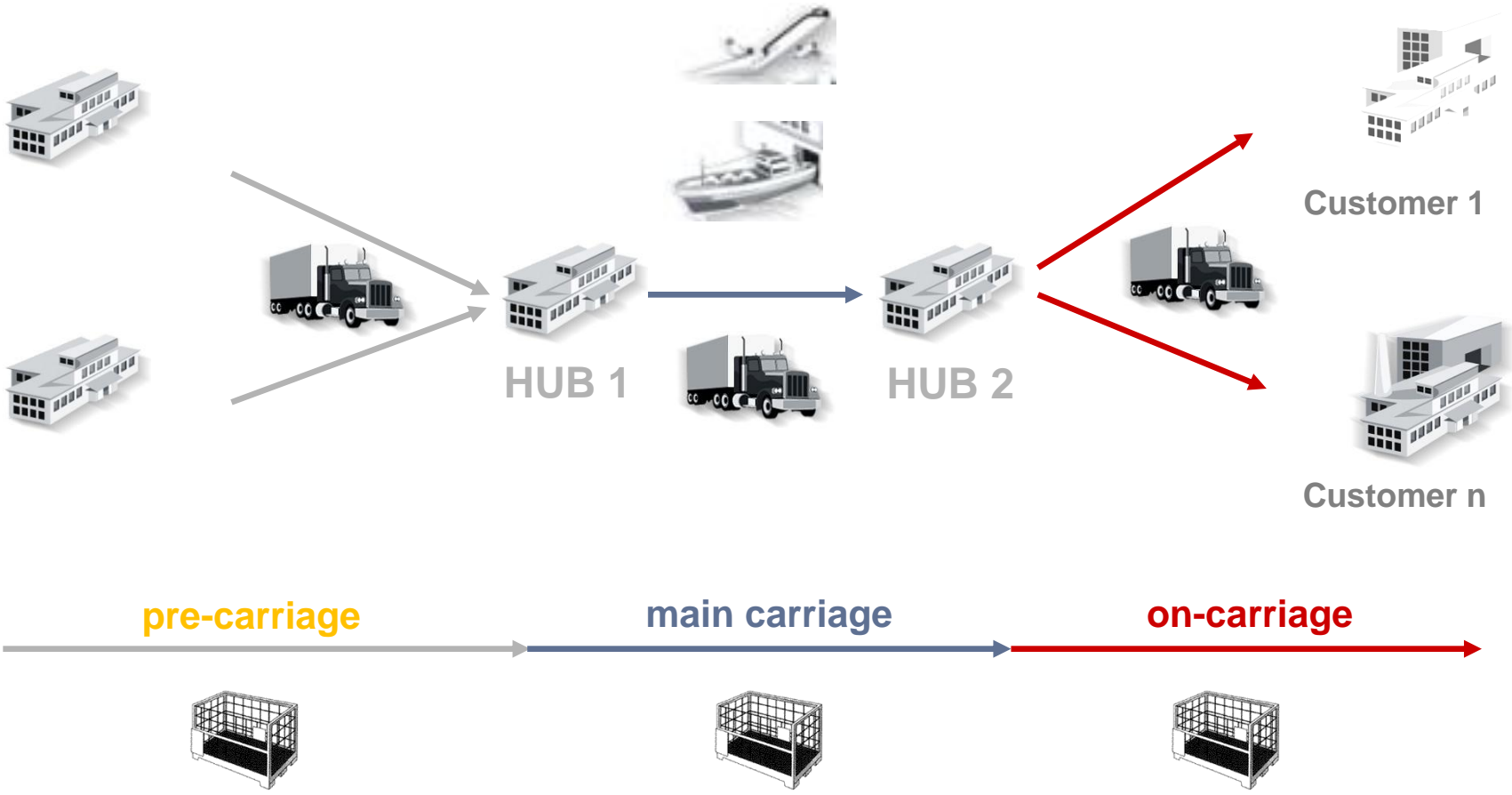
*Because we've been  
around for 500 years.*



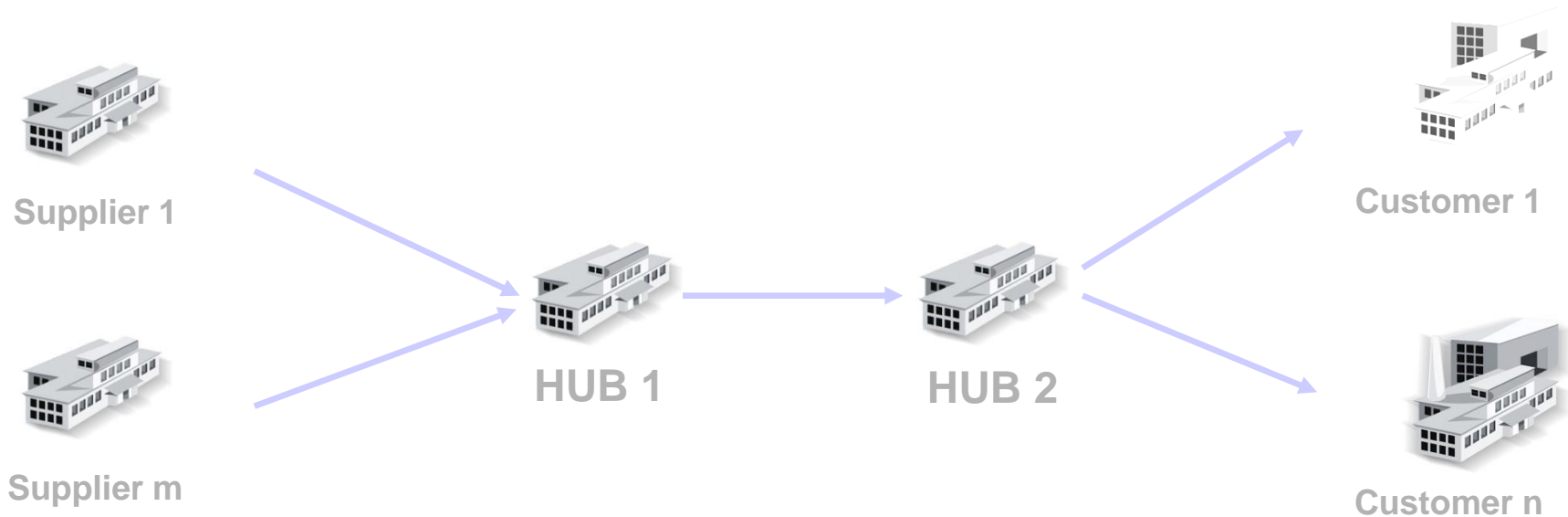
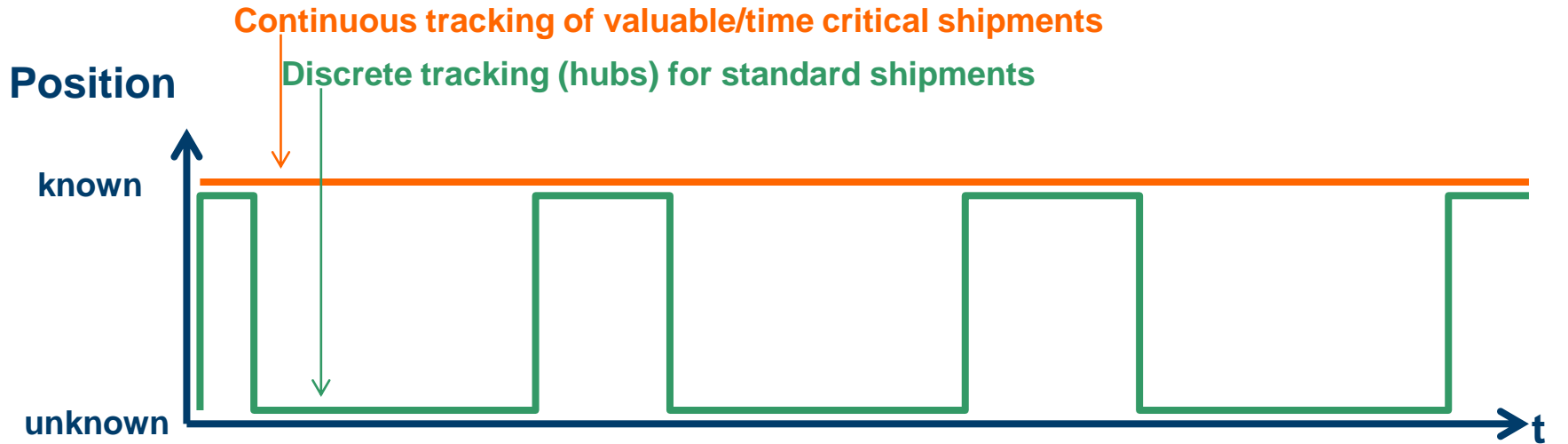
# Agenda

- **some slides of Gebrüder Weiss**
- **our requirements for a Track and Trace environment**
- **what technology was chosen and how was it applied in the pilot project**
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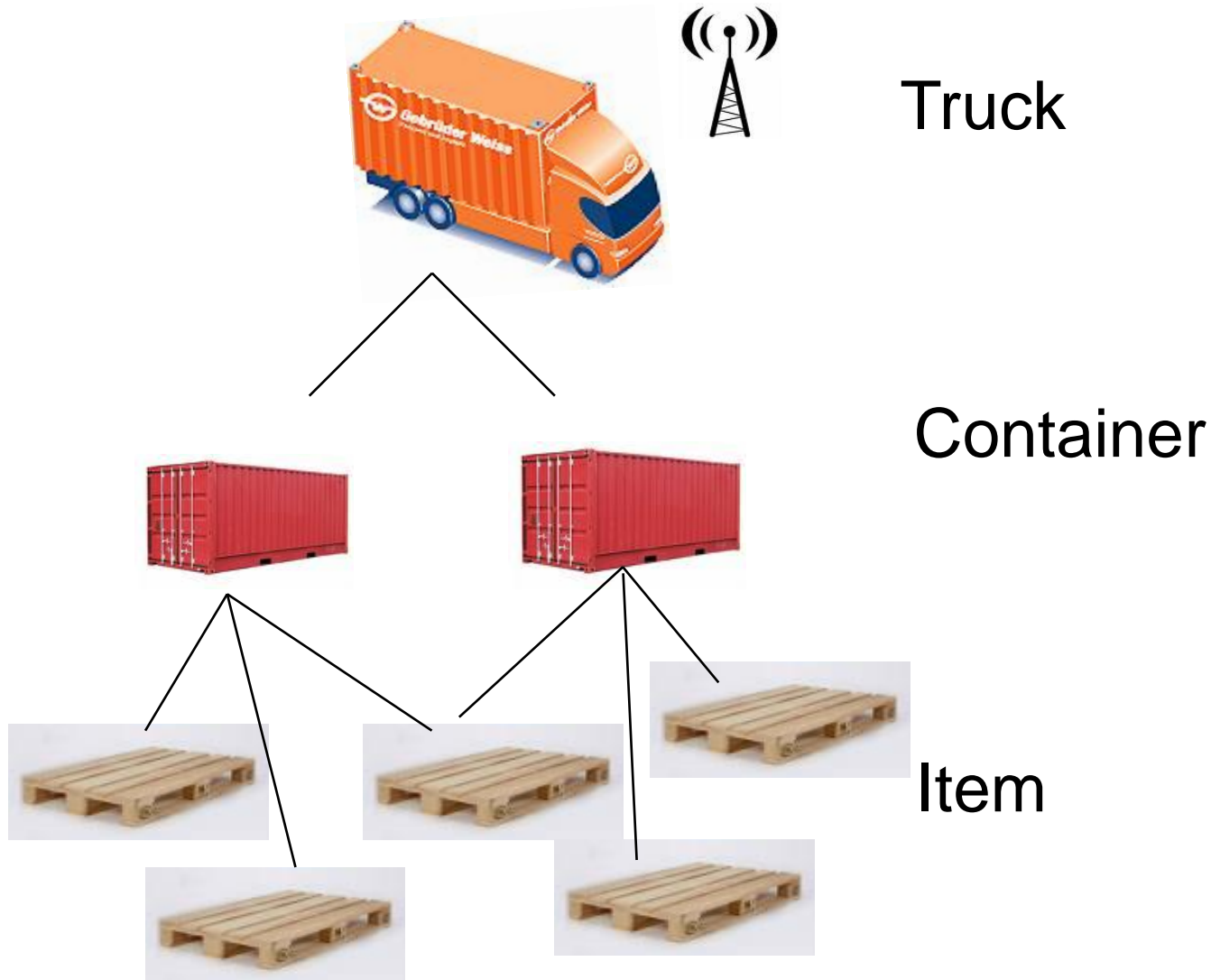
# typical process for groupage



# different quality requirements

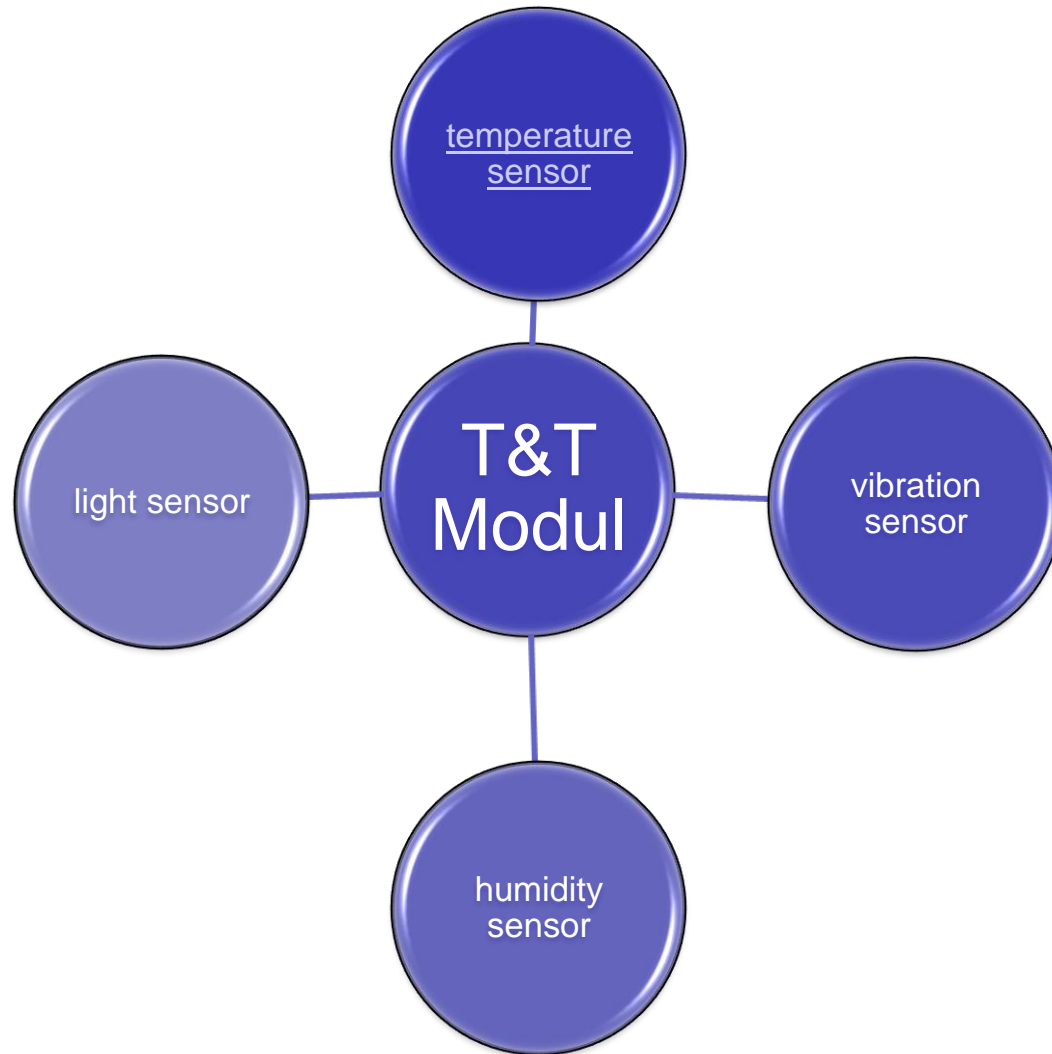


# A scalable System is needed





# A modular concept is needed for cost-efficiency



# Agenda

- **some slides of Gebrüder Weiss**
- **our requirements for a Track and Trace environment**
- **Choice of technology and implementation of a pilot project**

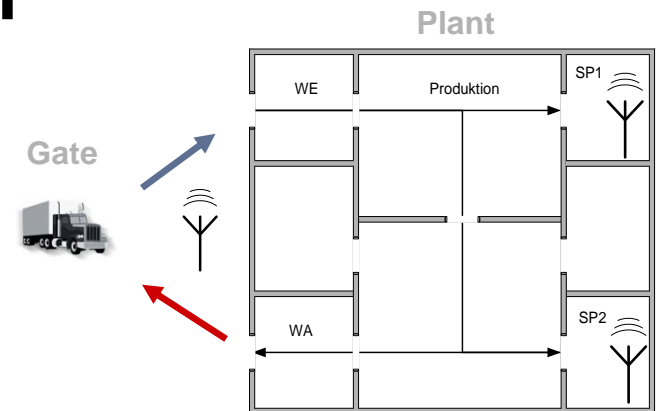
## Radio Frequency Identification

### ➤ Identification technology for goods

- electronic ID „Barcode“ or Auto-ID
- Enables contactless reading
- Memory for additional information (Good-, status-, transport-specific)
- Ability to read several tags at once (Bulk Reading)

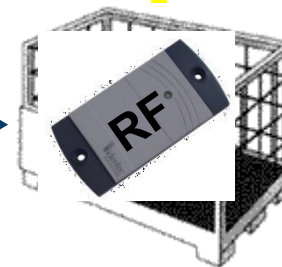
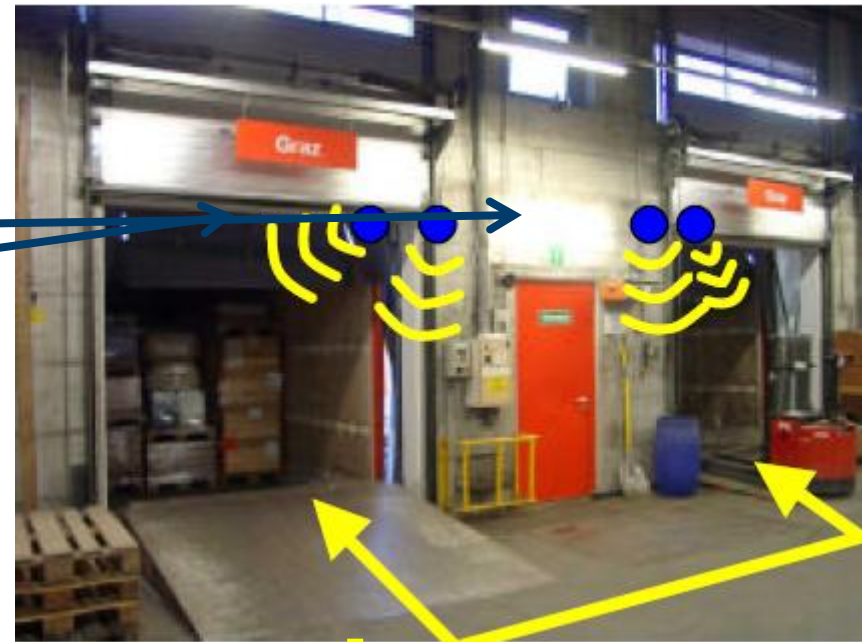
### ➤ Components

- Tag, Transponder, Smart Label (active/passive)
- Reader (stationary / Handheld)
- Antenna



# diskrete Track and Trace

- Shipment is labelled with transponder chips (RF)
- Reader devices at gates recognize shipments passing by (entry/exit)

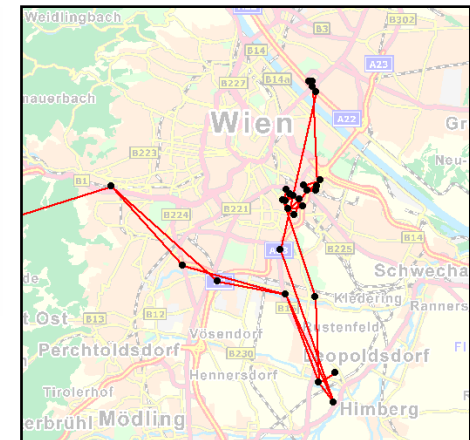
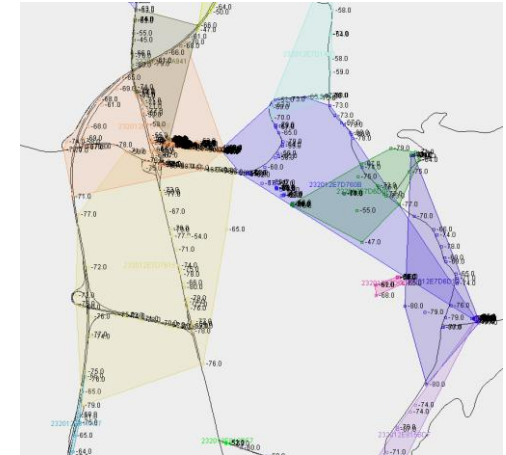


# GSM for continuous Track and Trace

## What is the advantage of GSM?

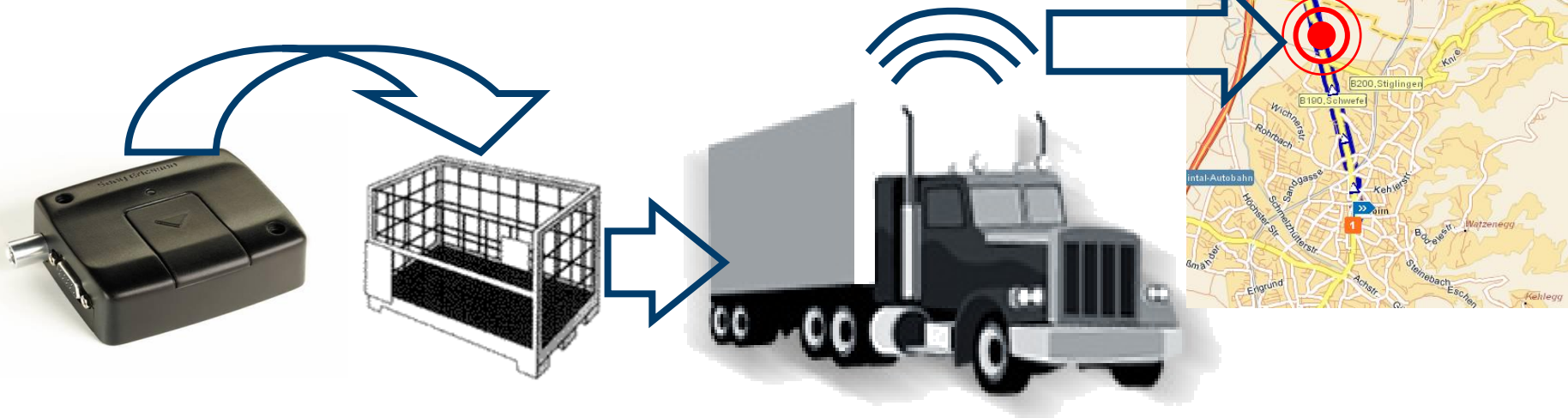
### GSM LBS (Local Based Services) Service

- **GSM capability**
  - GSM works everywhere (also in trucks, buildings)
  - GSM is standardized worldwide
- **Components**
  - GSM device without display and keyboard
  - industrial devices
  - interfaces for sensors
- **Disadvantages**
  - positioning accuracy 500 m
  - Battery lifetime

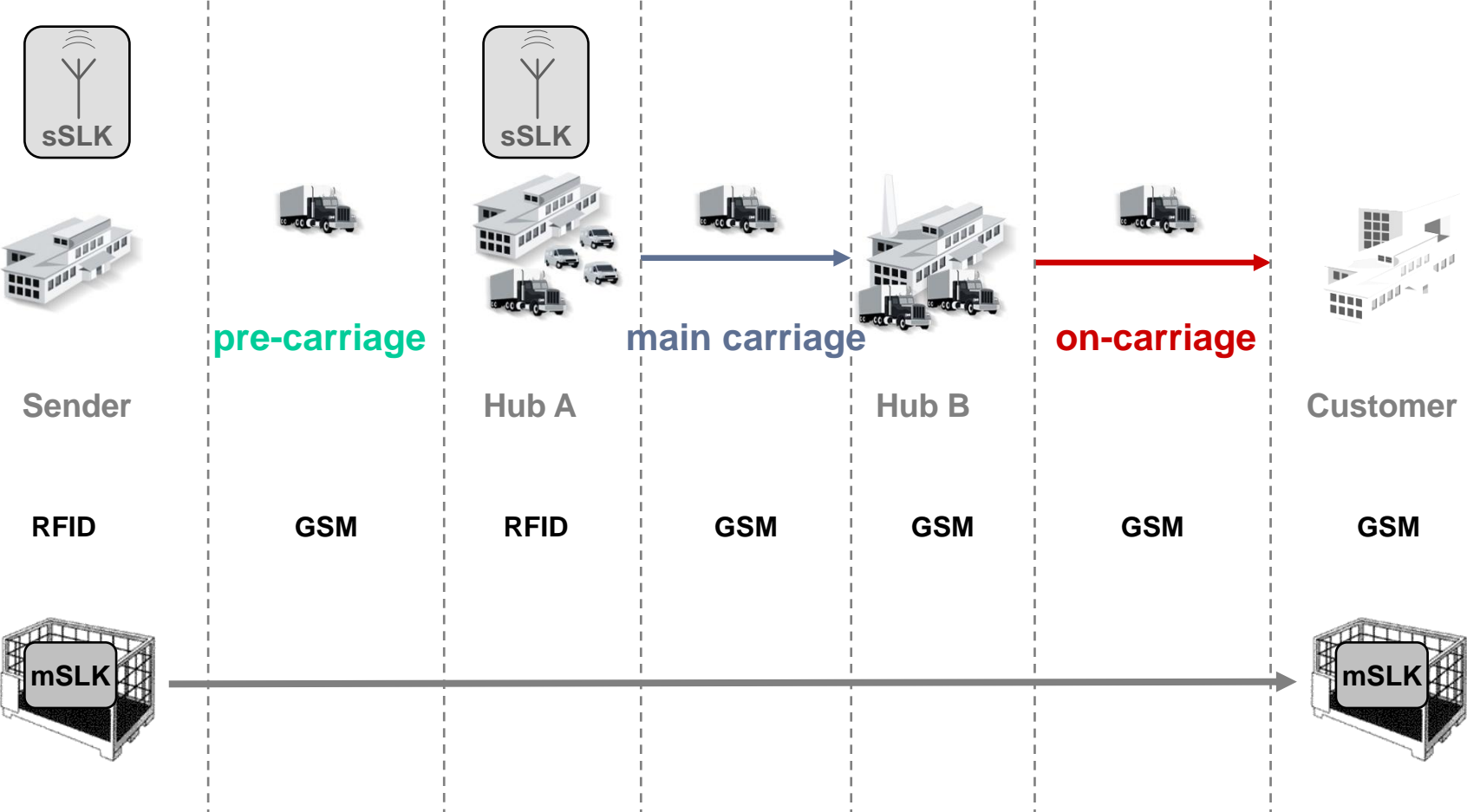


# continuous T&T

- **Shipment is equipped with mobile SLK**
  - Positioning Component for localizing the shipment
  - Communication component (GSM) for transmission of position- and status-specific information to the logistics server
- **Shipment is loaded and sent**
- **The SLK automatically determines its position in predefined intervals and sends this information to the central database**



# combine GSM and RFID



# Summary

- **Real time Track and Trace for all containers**
  - For predefined event points
  - online positioning using GSM-technology
  
- **Easy and quick implementation of new event points**
  - Plug&Play SLK
  - No need to integrate the different IT-infrastructures of the parties involved.
  
- **Independent of participating partners in the supply chain**





**Thank you for your attention!**

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