KV4.0 - Digital data hub of combined transport
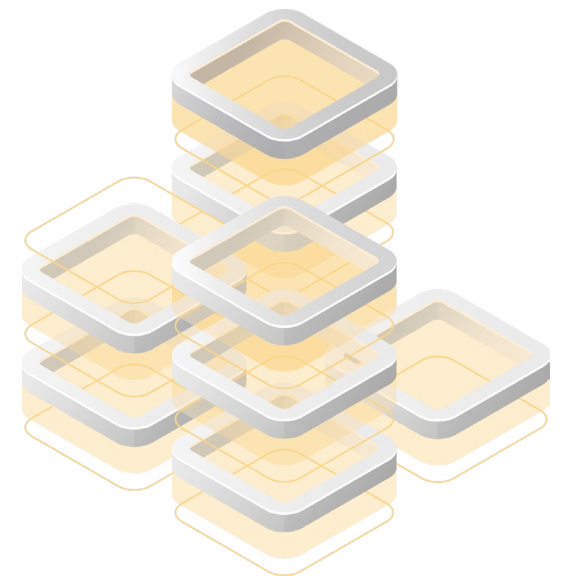
The European Integrated Data Hub

Munich, 10.05.2023

DXI

Agenda

- Introduction
  - KV4.0 Data Hub
  - Process coverage & standard interfaces

- Main benefits for the CT shareholders

- DX Intermodal Company

- Q&A

Starting situation

The complexity of intermodal supply chains is one of the biggest challenge of combined transport compared to other transport methods

Many parties and electronic data interfaces (Terminals, LSP, RU, etc.)

Elaborated organization of intermodal transports

Digital standalone solutions of the parties involved

Complex end-to-end information chain

Objectives

Common data hub for the exchange of bookings, timetable and shipment status data

Consolidation of all data within the intermodal supply chain

Real-time data

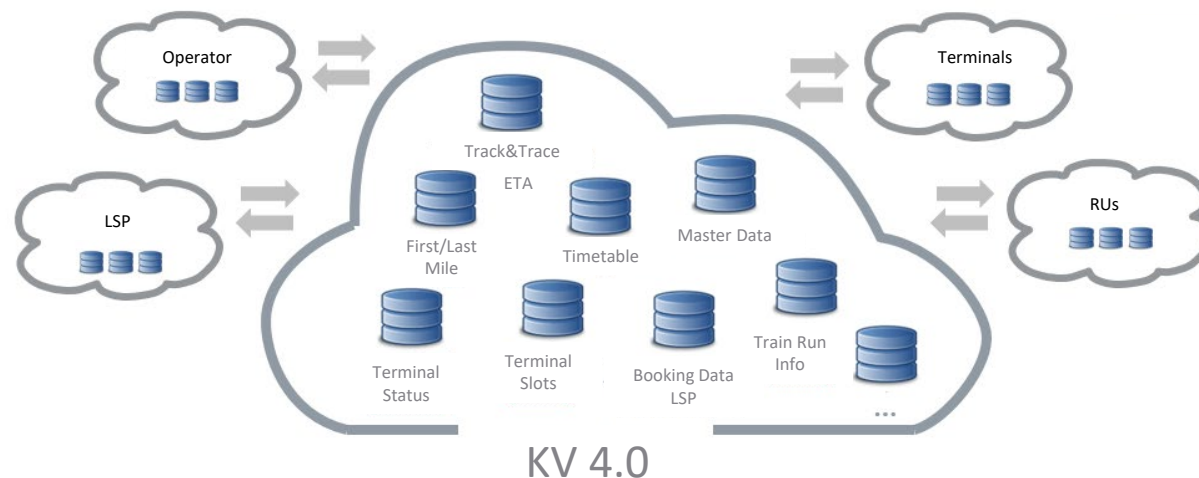Harmonization of the electronic data interfaces

Data available and usable for all authorized parties involved

Supply chain transparency

KV4.0 Data Hub

> The **KV4.0 Data Hub is the result of the KV4.0 Project** implemented successfully in 2017-2020 and financed by German Ministry of Innovation

> The KV4.0 Data Hub is an **open integrated data hub** increasing transparency across the entire intermodal transport chain

> KV4.0 Data Hub is a **modern cloud-based solution**

> **DXI Company founded in 2022** with the objective to manage the KV4.0 Data Hub

> All **participating partners provides the relevant order and transport-related information (based on standard XML EDIGES format)**

KV 4.0

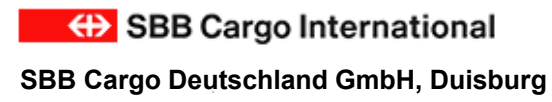# KV4.0 Data Hub is the result of KV4.0 Project
KV4.0 Project Partners

Logistic Service Providers

Hoyer GmbH, Hamburg

Paneuropa GmbH, Vechta

Bertschi AG, Dürrenäsch

Intermodal Operators

Kombiverkehr KG, Frankfurt

Hupac Intermodal SA, Chiasso

Railway Undertaking

DB Cargo AG, Mainz

SBB Cargo Deutschland GmbH, Duisburg

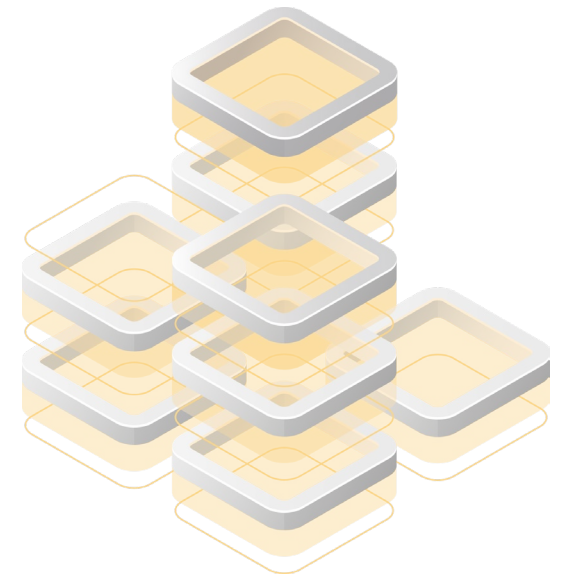München

Intermodal Terminals
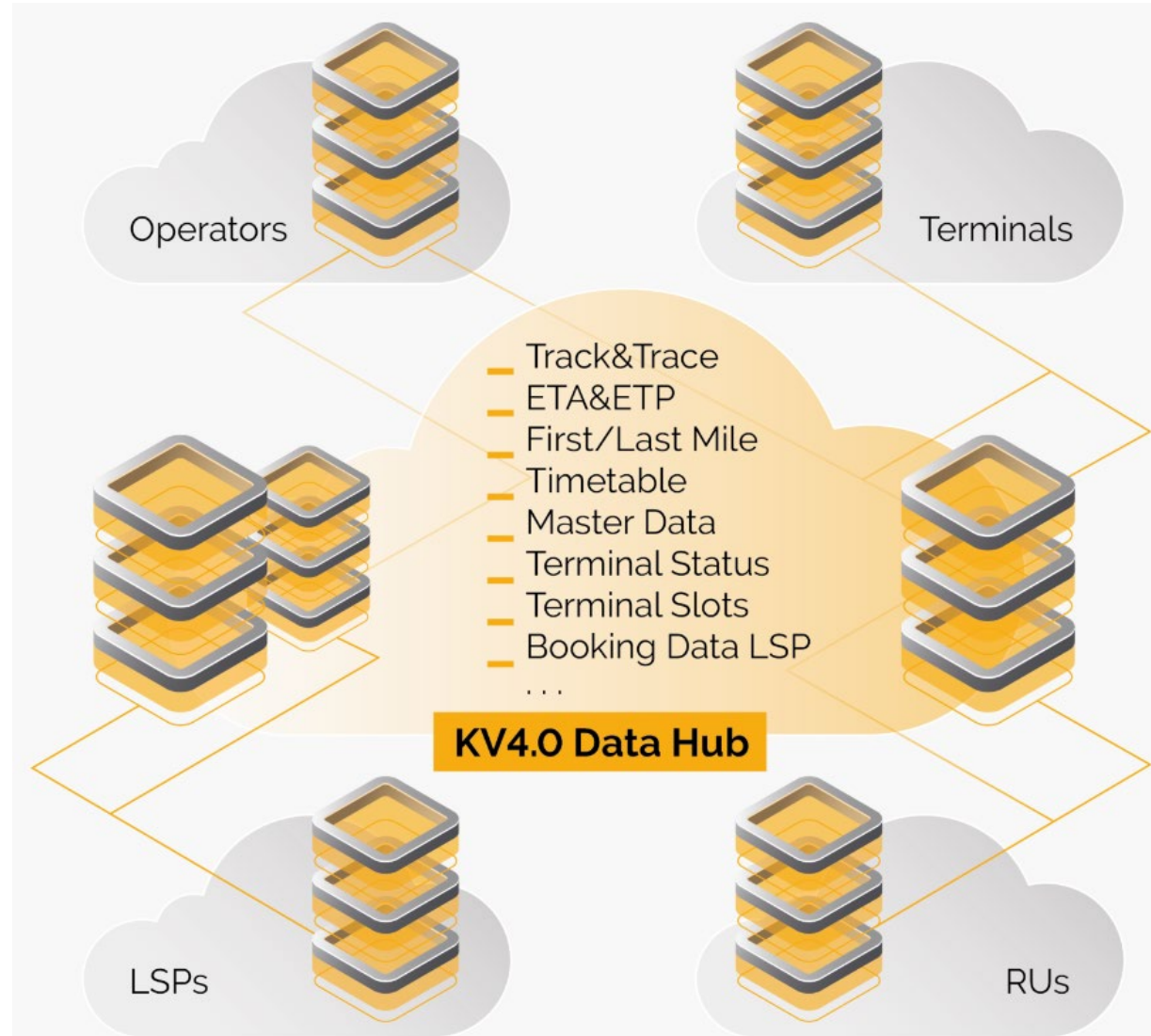
Hupac SpA, Busto

Technical Partner

What is the KV4.0 Data Hub?

- No Web platform (Web View) but an **electronic data hub**

- **Central distributor** for all messages of the intermodal supply chain

- Communication with the hub via **standard REST API** (URL, user, password and token)

- **PUSH** procedure for delivering data to the hub

- **PULL** procedure for collecting messages from the hub

- Uniform XML standard for data exchange: **EDIGES 4.1**

- **Validation rules** for conformity with the current EDIGES format

- Only the **sender determines the respective recipients** of the data

- **No storage** of data on the hub
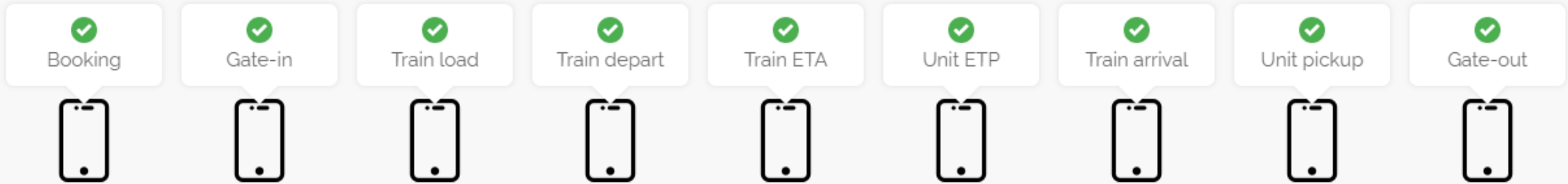
KV4.0 Data Hub – Overall Concept

Standard intermodal process

Intermodal operator
Terminal to terminal or Door to door

Consignor	Carrier	Terminal / Port	Railway Co.	Shipping Co.	Terminal / Port	Carrier	Receiver
Dispatch	First mile	Terminal treat.	Train running (incl. gateway)	Sea transport	Terminal treat.	Last mile	Reception

Main EDIGES messages

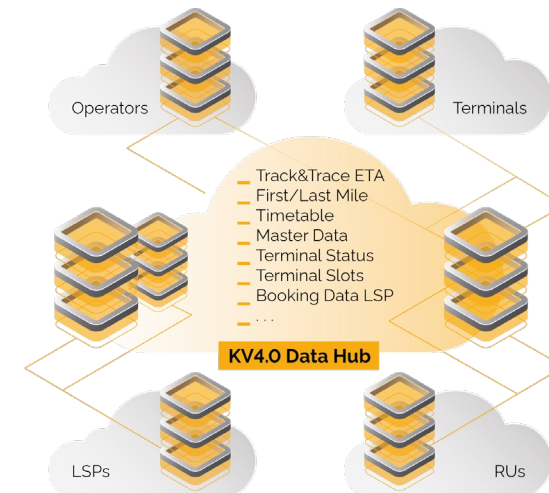| Booking	Gate-in	Train load	Train depart	Train ETA	Unit ETP	Train arrival	Unit pickup	Gate-out

Main benefits for the CT shareholders

Main Benefits

- Data **transparency** from the booking to the collection of the loading unit

- Transport units **booked through a single interface** for the LSP

- Optimized **forecast data** (ETA and ETP) in the event of irregularities

- Planning of the **terminal slots** is improved by the timely knowledge of planned shipment

- Improved **allocation of truck arrivals** and departures in the terminal

- Up-to-date **timetable data** of all connected operators

Main Characteristics

- **Single point for direct access** to transport-relevant data of combined transport

- **Optimized data exchanges** costs thanks to a single interface

- Easy access via **standardized interfaces** with EDIGES

- Modern **cloud-based** solution

Operators

Terminals

Track&Trace ETA
First/Last Mile
Timetable
Master Data
Terminal Status
Terminal Slots
Booking Data LSP
. . .

KV4.0 Data Hub

LSPs

RUs

Current status of DXI activities

- Foundation of the **company DXI GmbH** (October 2022)

- Completion of the KV4.0 Data Hub **productive version** (February 2023)

- First **commercial use** (March 2023)

- Support of the first users in connected to the hub

- Promoting the data hub to other players (LSP, EVU, TO, IO)

- Currently **message types provided by the users:** commercial timetable, booking, ETP, ETA, train running, terminal status, terminal master data, DB Netz network disruption

- Connection of **further message from the users ongoing** (e.g. operational timetable)

How to get connected to KV4.0 Data Hub

Interested to get connected?

Contacts

Aldo Puglisi – Director DXI

apuglisi@dx-intermodal.com

Christoph Büchner – Director DXI

cbuechner@dx-intermodal.com

www.dx-intermodal.com