



The Global Language of Business

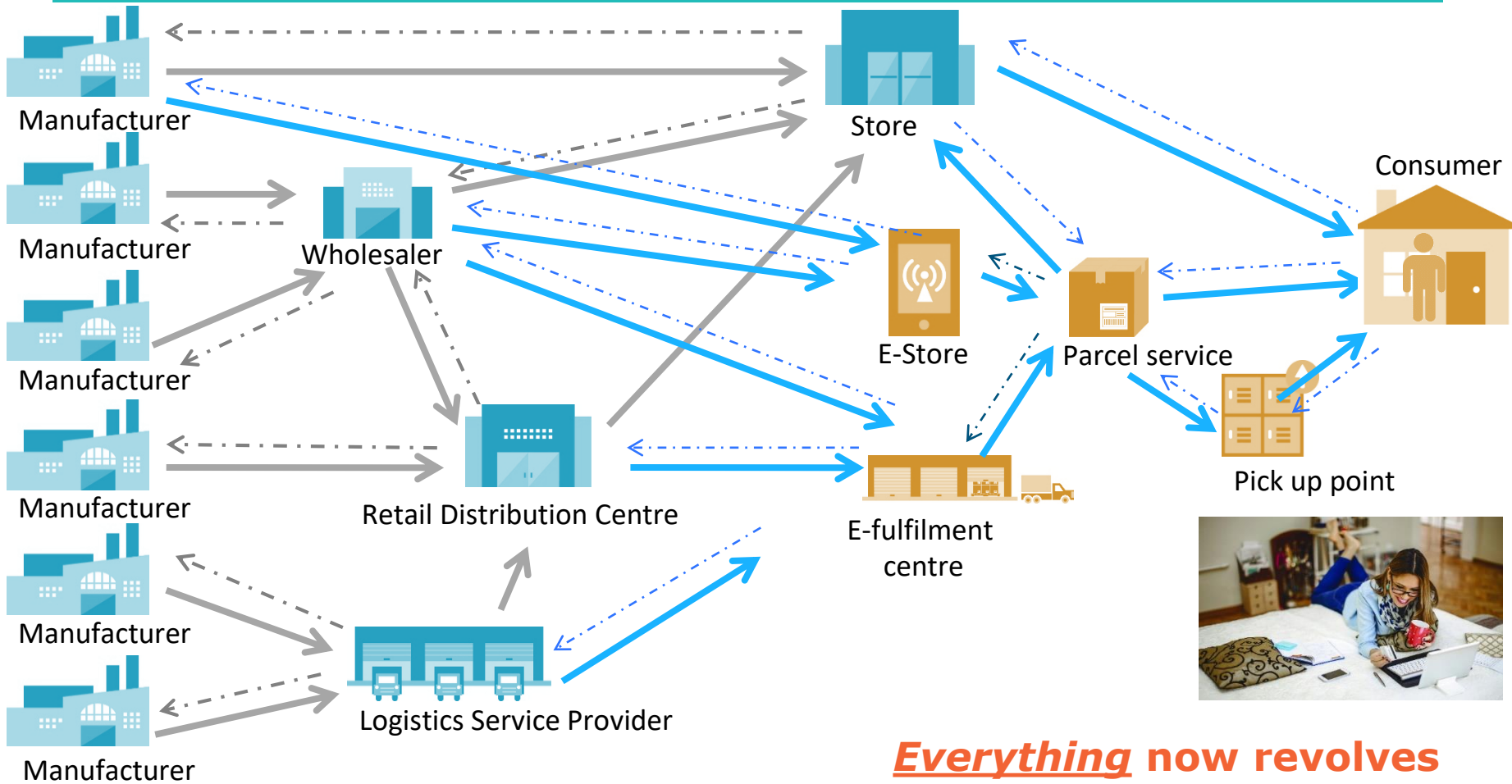
Workshop 1.2

Interconnected Ecommerce logistics

Intro

Jaco Voorspuij, Sr. Manager Transport and Logistics, GS1
4th July 2017, International Physical Internet Conference, Graz

Value Chains are disrupted



Everything now revolves around the Consumer

Key Ecommerce Logistics Questions



- **WHAT** objects are we talking about?
 - **WHERE** exactly is the action taking place?
 - **WHEN** exactly did or are actions to take place?
 - **WHO** exactly is involved in the actions?
-
- Martina will cover the WHO and WHERE.
 - Michael will cover the WHERE also.
 - I will focus on the WHAT.
 - All of us will also link to the WHEN question.

Let's not forget about WHY





Delivering the Consumers Wishes *much more than completing a business transaction*





Over to Martyna

GLN standard within hyperconnected logistics

Graz, IPIC 2017

Market research:

- Individual address databases
- Improper use of GLN numbers by GS1 members
- Database update problem
- Low awareness and knowledge about GLN as a physical location identifier
- No clear business model - Value proposition
- The need for cooperation of retail chains and logistics operators



Logistics market trends



Supply chain digitization



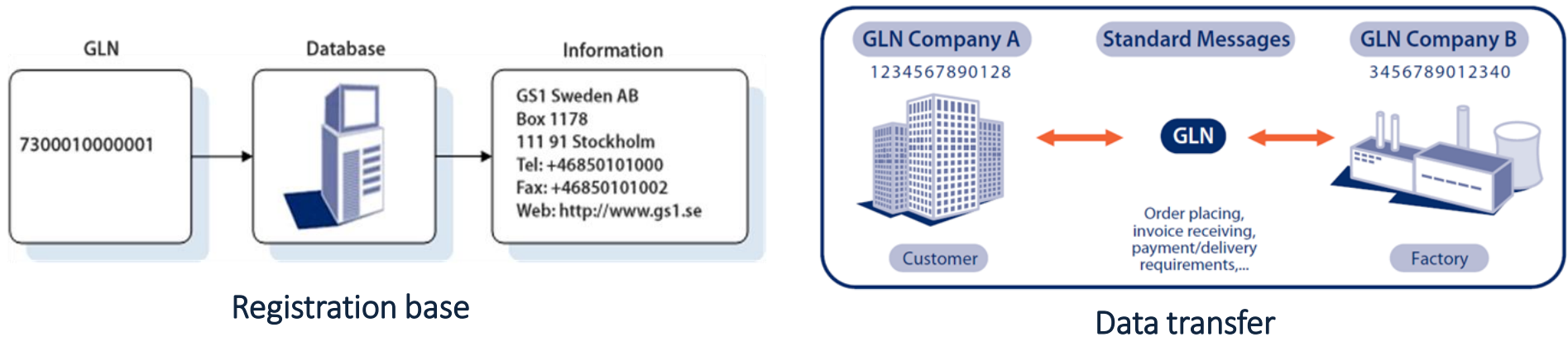
Industry 4.0



Physical Internet

Global Location Number – characteristics:

- GS1 Standard - 13 digit code
- It allows unambiguous identification of entities and their locations
- A globally unique number that can be used to access basic physical location data
- Recognize any location (physical, digital, functional or legal) that needs to be defined to realize the processes in the supply chain
- Identify companies in business transactions such as order shipping and invoicing



GLN standard within hyperconnected logistics

– SWOT analysis:

Strengths

- All the benefits of the GS1 standards: global, international, simple structure, different coding (EAN, RFID) - one database
- Allows you to reduce returns and costs due to incorrect delivery address information
- Possibility to extend GLN to addressing internal locations
- The ability to easily "connect" local route planning systems to the registry



Weaknesses

- To get GLN you must be a GS1 member
- Currently no use for private sector or carrier services (Singapore case)
- Lack of knowledge and awareness of good practice in GLN
- A large flexibility in assigning numbers within prefix, lack of mechanisms to control (except for providing unique number) of the information contained under no clear structure (everyone can construct any name, description)
- No global public database available



GLN standard within hyperconnected logistics

– SWOT analysis:

Chances

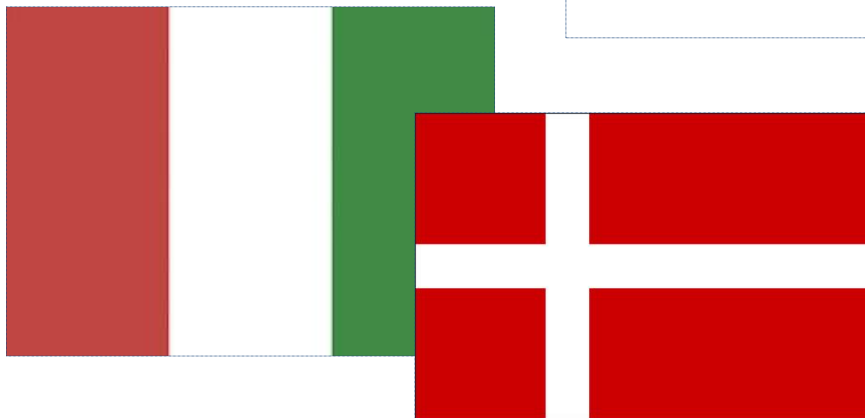
- Existing use cases - the opportunity to experience
- Low margin in TSL (every penny saved matters)
- Trend for digitization and standardization - Digital exchange of information
- The conviction of large units (eg commercial networks (cases requiring GTIN codes), offices - case number NIP, REGON) will cause the system to avalanche



Threats

- The potential users were not exposed to the topic, and the supplier (GS1)
- No coordination of GS1 Global (Global Location Register) for local operations
- The high cost of reaching the stage when GLN and the registry will be widespread and tangible benefits / incentives from accessing / using the system
- Expected "material resistance" if there is no tangible (mostly material) incentive

GLN standard – case studies:



GLN standard – information needs:

- Categories of materials stored (eg. Food, chemicals...)
- Accepted logistic units (eg. Pallets, containers, roles...)
- Ability to accept the goods with temperature control - frozen or fresh goods
- Storage temperature
- The possibility of storing ADR materials (eg. Gas, explosive substances and articles, flammable liquids...),
- Supported transport (eg. TIR, tanker, tilt, cold ...)
- The landing surface
- Types of ramps (eg. A simple, gear, stepped ...)
- Equipment of the ramps (eg. Crane, lift, loading bridges ...)
- Technical conditions of the ramps (eg. Turning radius, maximum load, height ...)
- Technical delivery conditions (eg. Pallets arranged by narrow side, the wide side, stackable acceptable...)



GLN standard – Business Model Canvas:



Value proposition

- reduction of costs associated with re-handling the point and the cost of lost benefits due to the lack of goods on time,
- discount on transport companies for use GLN (win-win situation),
- easy update of data visible to everyone in the database,
- access to full location information in one place,
- reduction of delays and increase of on-time deliveries,
- reduction of errors in the delivery,
- a positive impact on Customer Service rates,
- guidance on the selection of the vehicle by the carrier,
- the appointment of load (eg. Stacking pallets in AMAZON),
- guidance for on time delivery and advising,
- directions, coordinates

GLN standard – actions in Poland:

DACHSER
Intelligent Logistics



Instytut Logistyki i Magazynowania





Instytut Logistyki i Magazynowania



Thank You

Martyna Zdziarska

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PTV X SERVER

the mind of movement

IPIC

**Smart geocoding for accurate and reliable
delivery planning and execution**

TODAY'S CHALLENGES

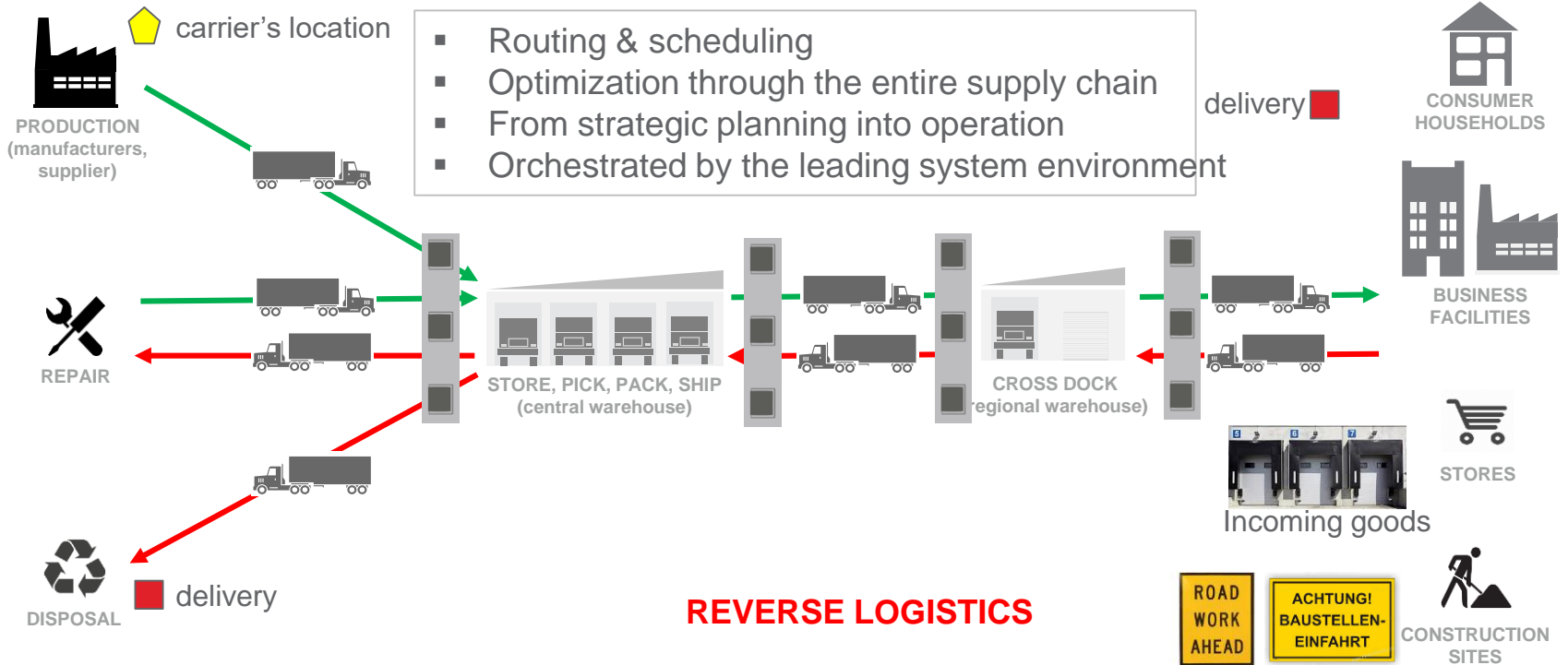
- ▶ Efficient transportation of goods through different transportation modes
- ▶ Fast growing population in urban cities
- ▶ Balancing of economical and ecological interests

Final goal: No contradiction between a healthy environment and a flourishing economy

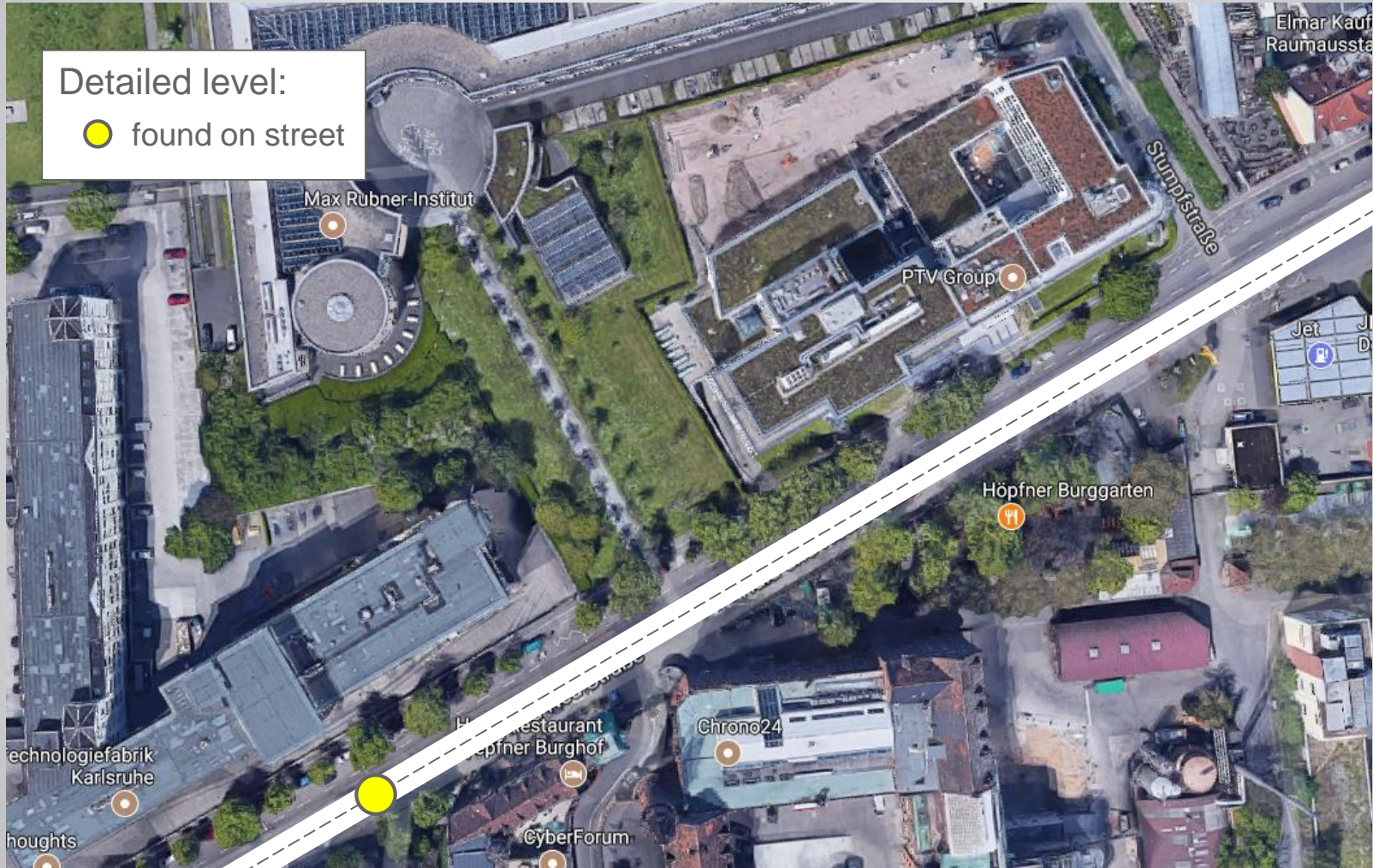
- ▶ Key factors:
 - ▶ Digitization
 - ▶ Globalization and harmonization of IT system environment
 - ▶ Knowledge-based geocoding systems

ENABLING COMPANIES TO ACT FAST ON CHANGES IN LOGISTICS AND TRANSPORTATION

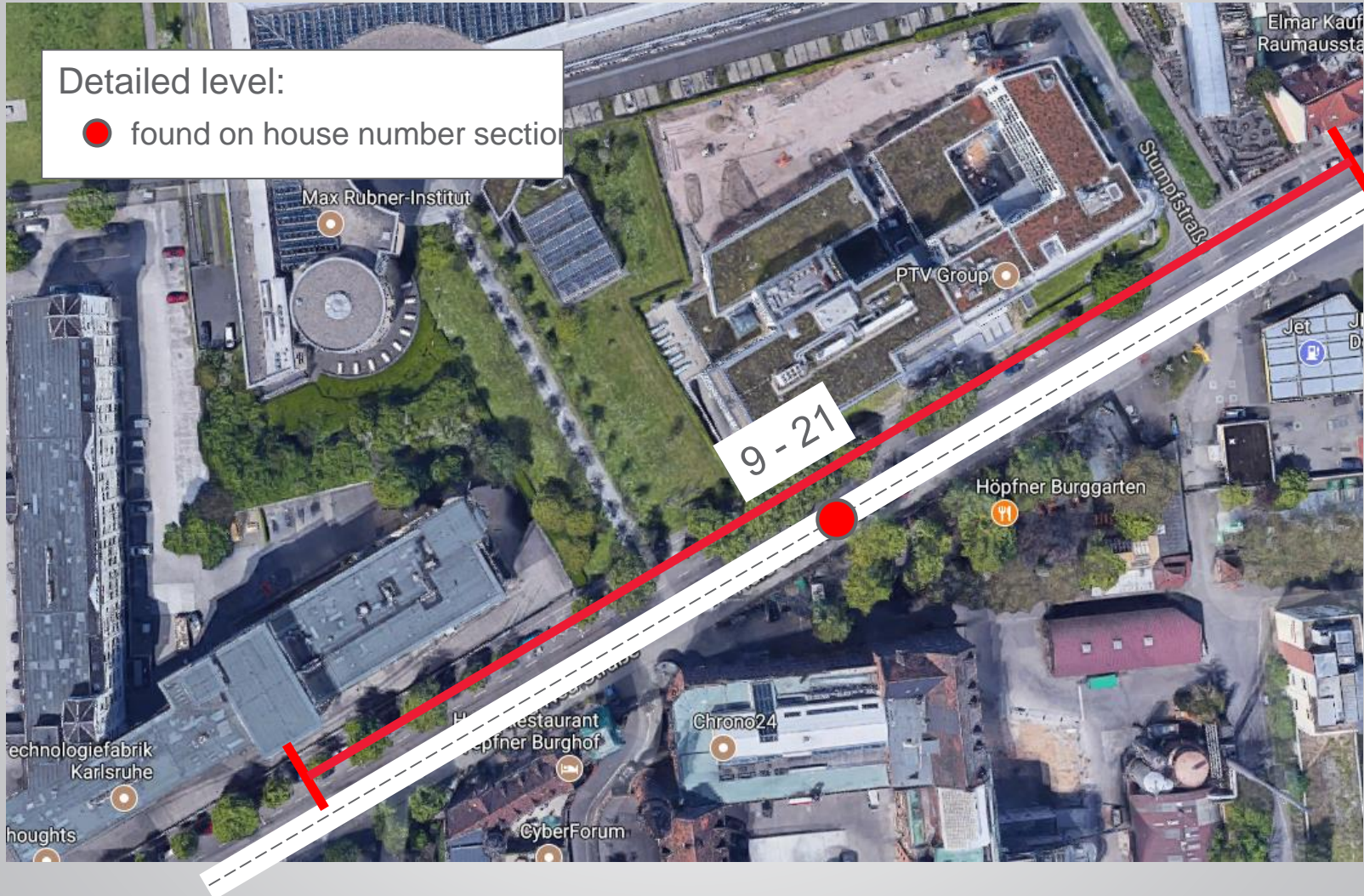
DISTRIBUTION LOGISTICS



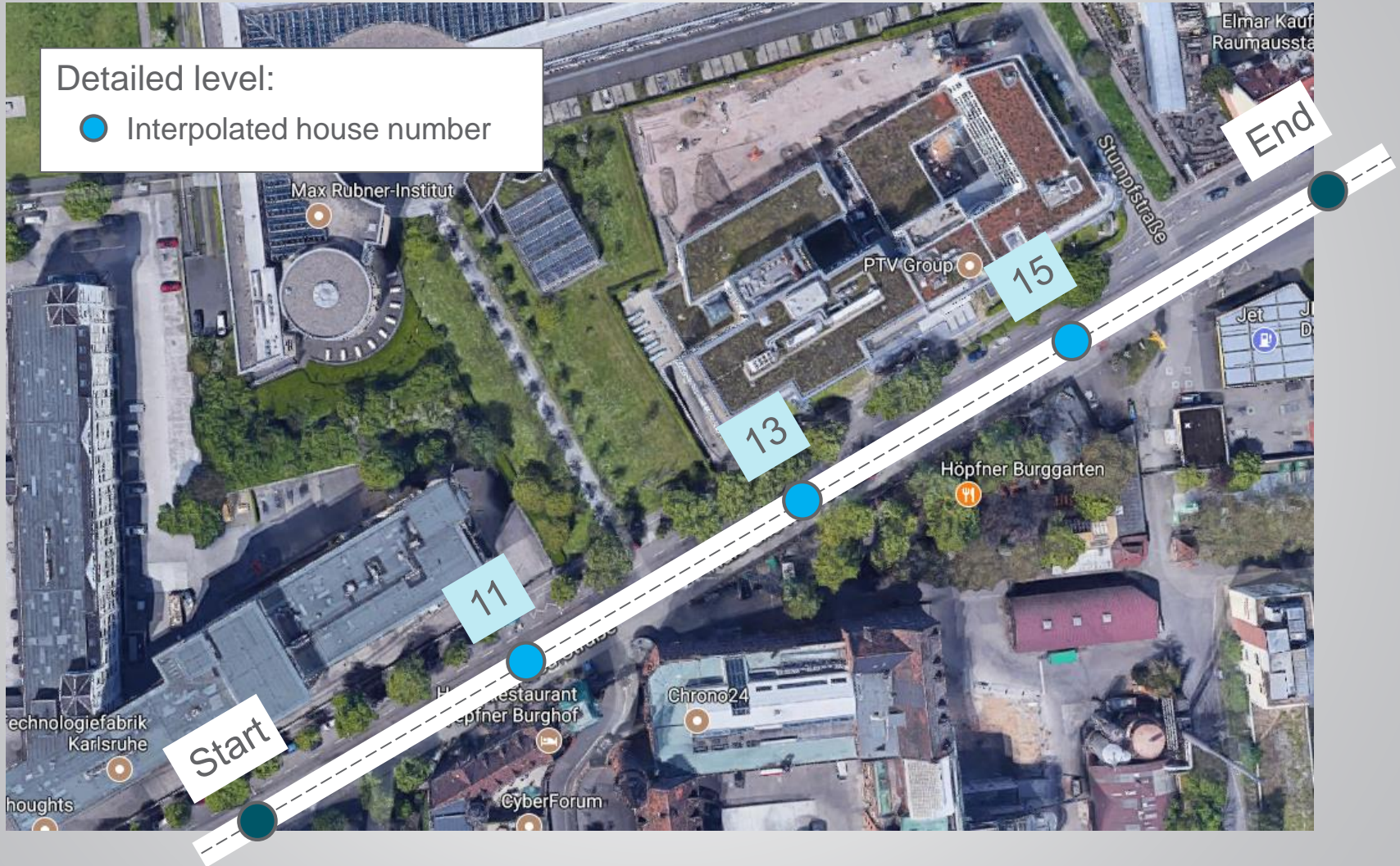
DETERMINE LEVELS OF GEOCODING



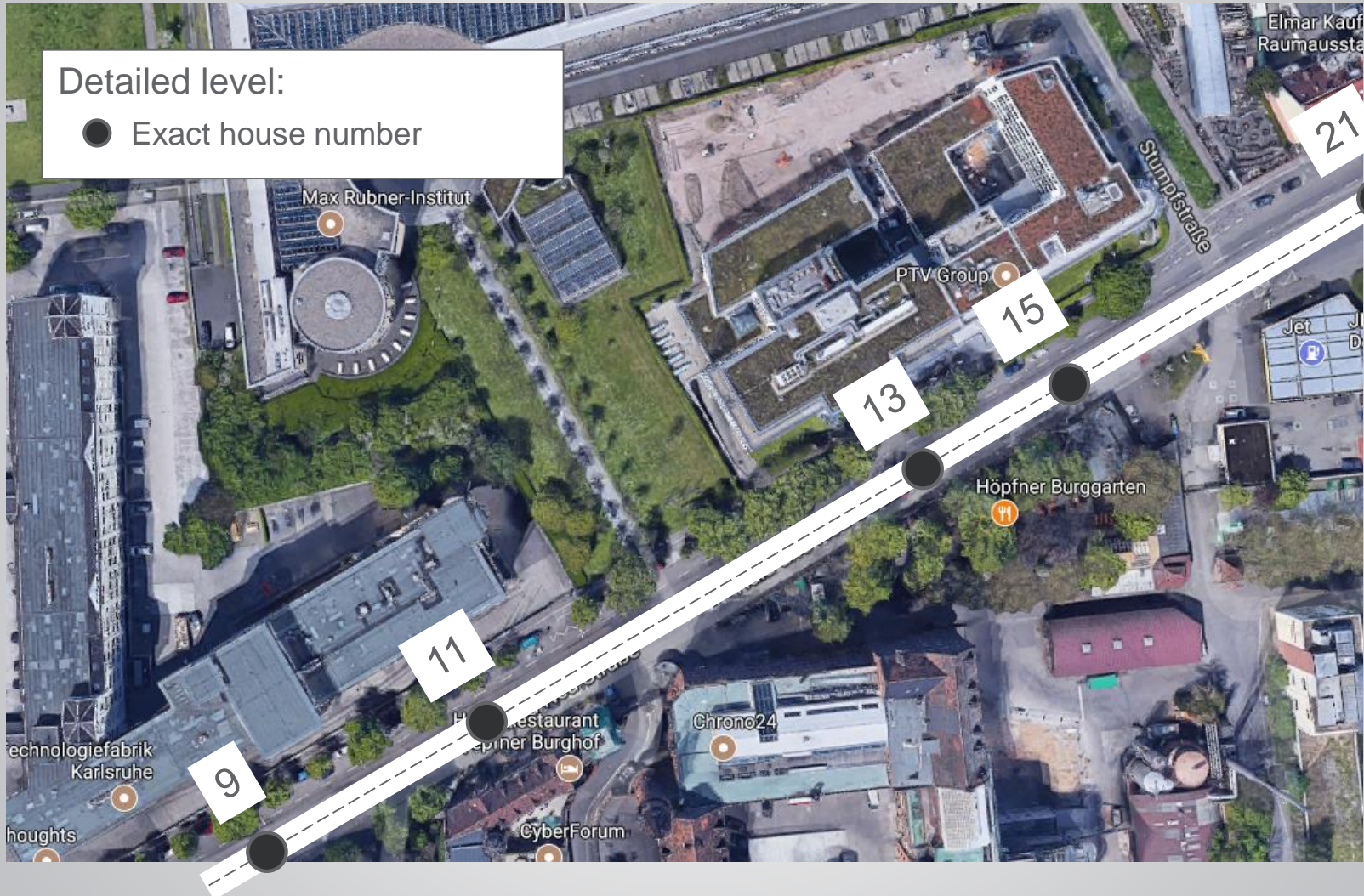
DETERMINE LEVELS OF GEOCODING



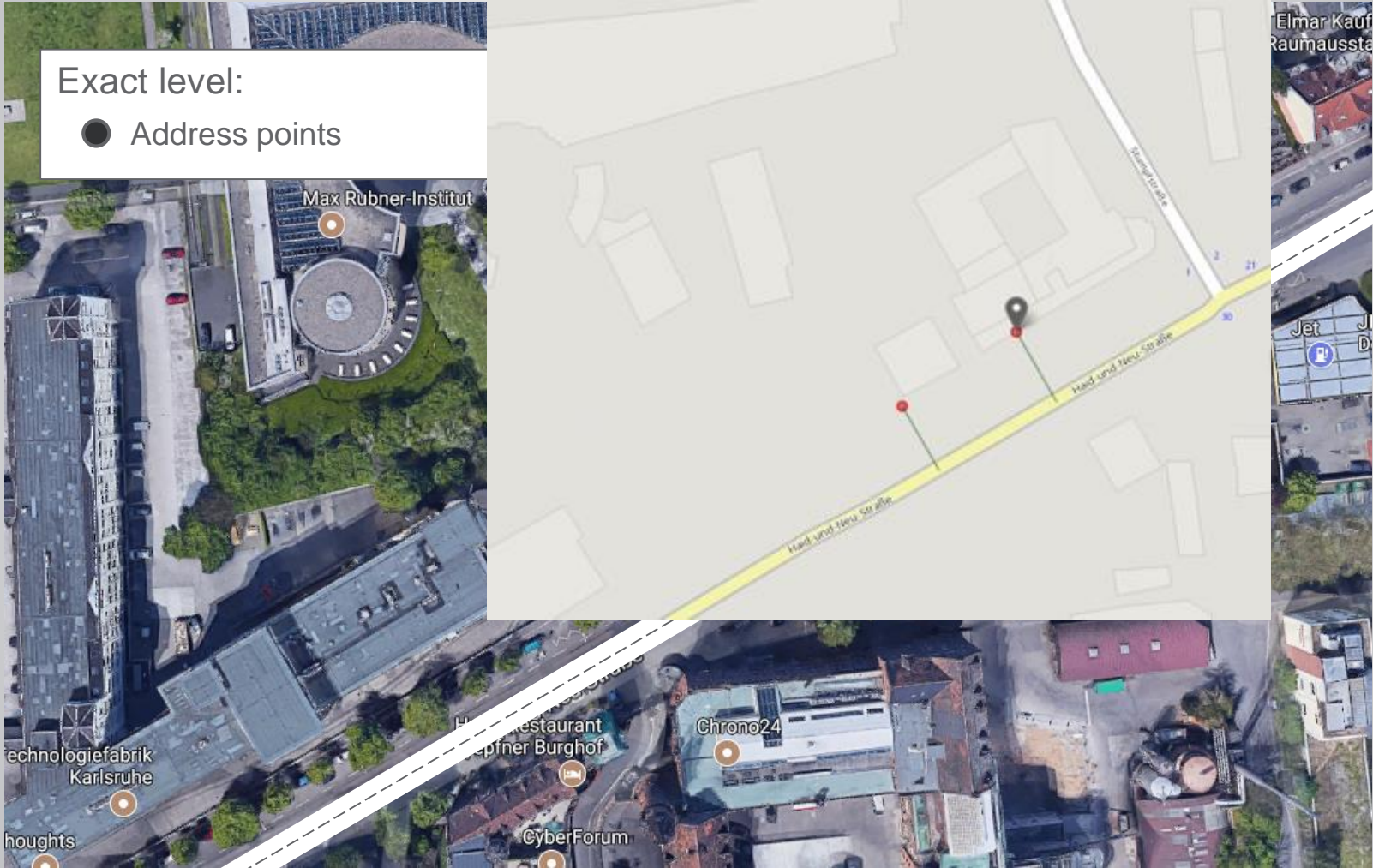
DETERMINE LEVELS OF GEOCODING



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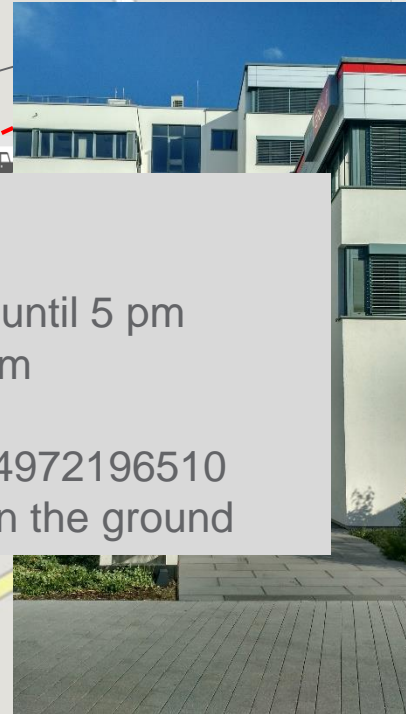
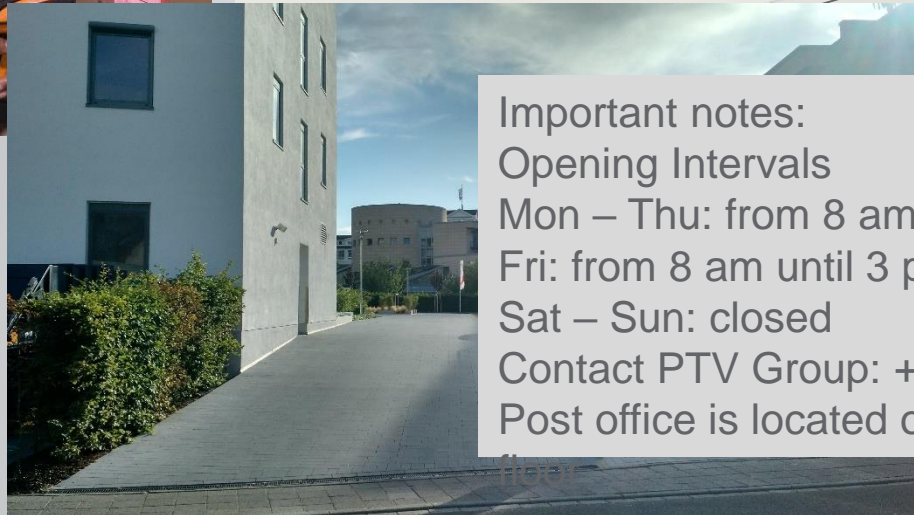


Exact level:
● Address points

DETERMINE LEVELS OF GEOCODING



GUIDE ME TO PTV'S POST OFFICE



Important notes:
Opening Intervals
Mon – Thu: from 8 am until 5 pm
Fri: from 8 am until 3 pm
Sat – Sun: closed
Contact PTV Group: +4972196510
Post office is located on the ground

Delivery:
PTV Group
Stumpfstraße 1
76131
Karlsruhe
Germany

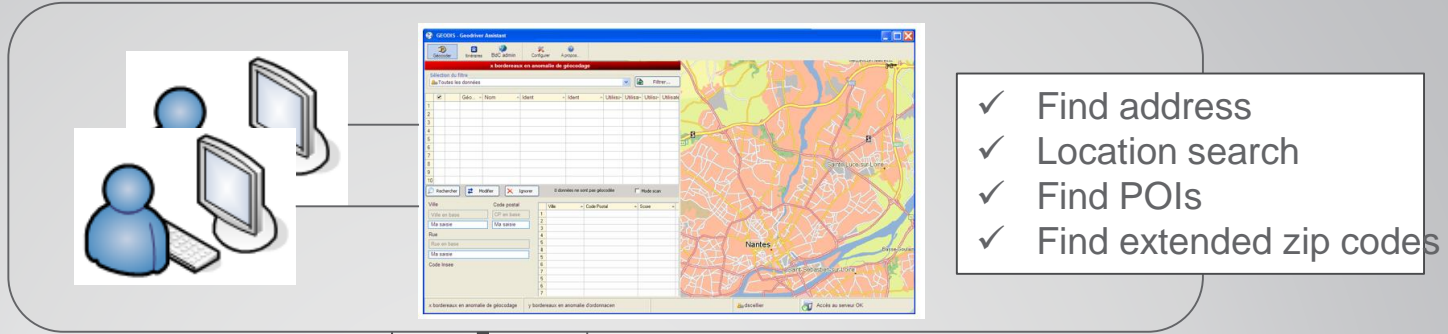
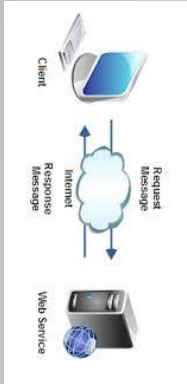
FROM OUTDOOR TO INDOOR NAVIGATION



CONNECT INDUSTRIAL AREAS TO THE STREET NETWORK



SMART GEOCODING



- ✓ Find address
- ✓ Location search
- ✓ Find POIs
- ✓ Find extended zip codes

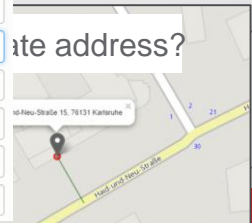
<http://<URLName>.cloud.ptvgroup.com>

Middleware: Database Management System ▪ Order Management System

Additional Information?

Country	Germany
State	Baden-Württemberg
Postal code	76131
City	Karlsruhe
Street	haid-und-neu-str
House number	15

Not found



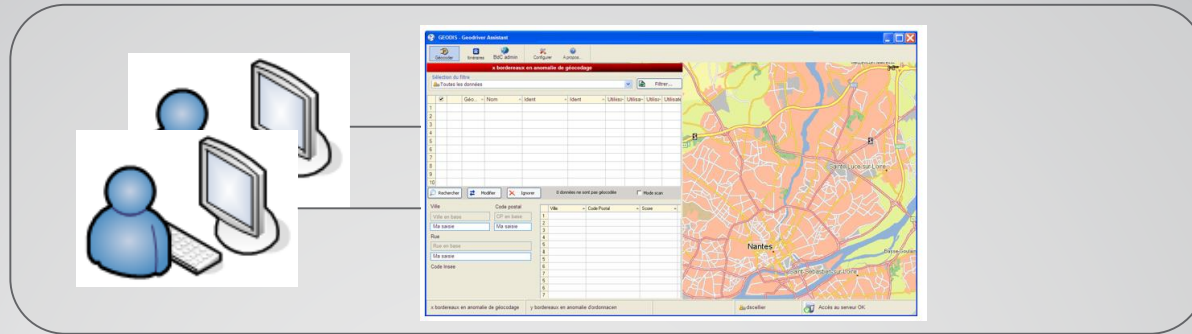
Customized Services

Knowledge-based database

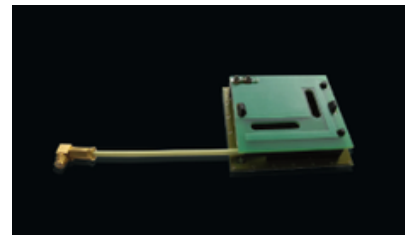
PTV Web Services

Geocoding Mapping Routing Optimization

GET SMART



Machine2machine communication



PUT IN A NUTSHELL

- ▶ Exact address and geolocation information are the mandatory basis for logistics processes
- ▶ The majority of population doesn't have a valid address → new approaches are obligatory
- ▶ Everything is connected → seamless shipment tracking is required
- ▶ Learning systems help to establish an efficient logistics system environment



PTV GROUP

the mind of movement



The Global Language of Business

Harmonised Parcel Label and Identification Breaking down barriers in Ecommerce

Enabling exciting new delivery models
involving many interconnected parties.

Jaco Voorspuij, Sr. Manager Transport and Logistics, GS1
4th July 2017, International Physical Internet Conference, Graz

“Old” barriers among players hampering new Value Chains



Working with Last Mile carriers is extremely challenging

- *Thousands of carriers* worldwide
 - All use *proprietary* systems / identifications / labels / interfaces
- *Lead time issues*
- *High cost per unit* delivered
- *Inflexibility* in *optimising* end-to-end Delivery *network*
- Inflexibility in returns process for customers and shippers

Severe problem in domestic; even more so in international trade

- EC-priority:
Digital Single Market –
“*Bringing down barriers* to unlock online opportunities”
- Mandated CEN to develop standard parcel label.



CEN Parcel Label - Objective



One label for the entire delivery network

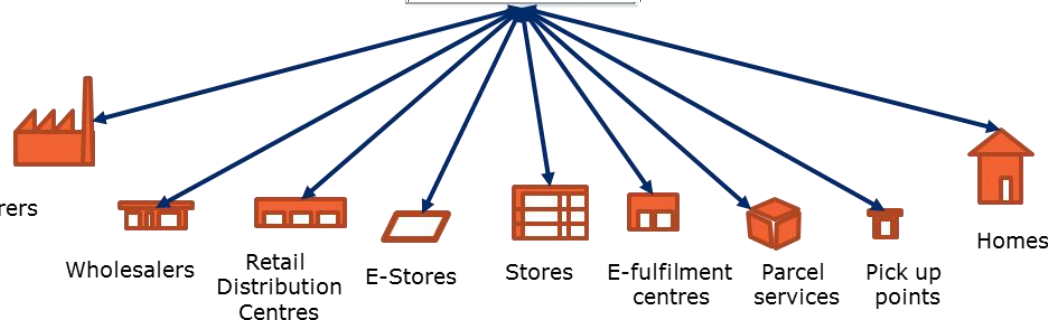
Worldwide unique
parcel identifier
GS1 SSCC

Assigned
by the
SHIPPER

Information on the origin post (name or logo)		Product identifier, service level, postal network used to process the item	
FROM	Name Address City Nation	☎ +12 345 678 901	
To	Name Address City Nation	☎ +98 765 432 109	
[Barcode]			
HA 976 774 739 AU			
[Barcode]			
(00)340123451234567895			



FJP CARRIERS		
FROM	GS1 Parham Linnik 208 1070 GA BRUSSELLES BE - 4000P GLN: 950110100012 9	☎ +32 123456789
TO	Hr. J. Voorspuil Groen van Prinstererstraat 13 1021 JK Kampen NL - Nederland	
SSCC		
[Barcode]		
(00) 3 9501101 001300012 9		



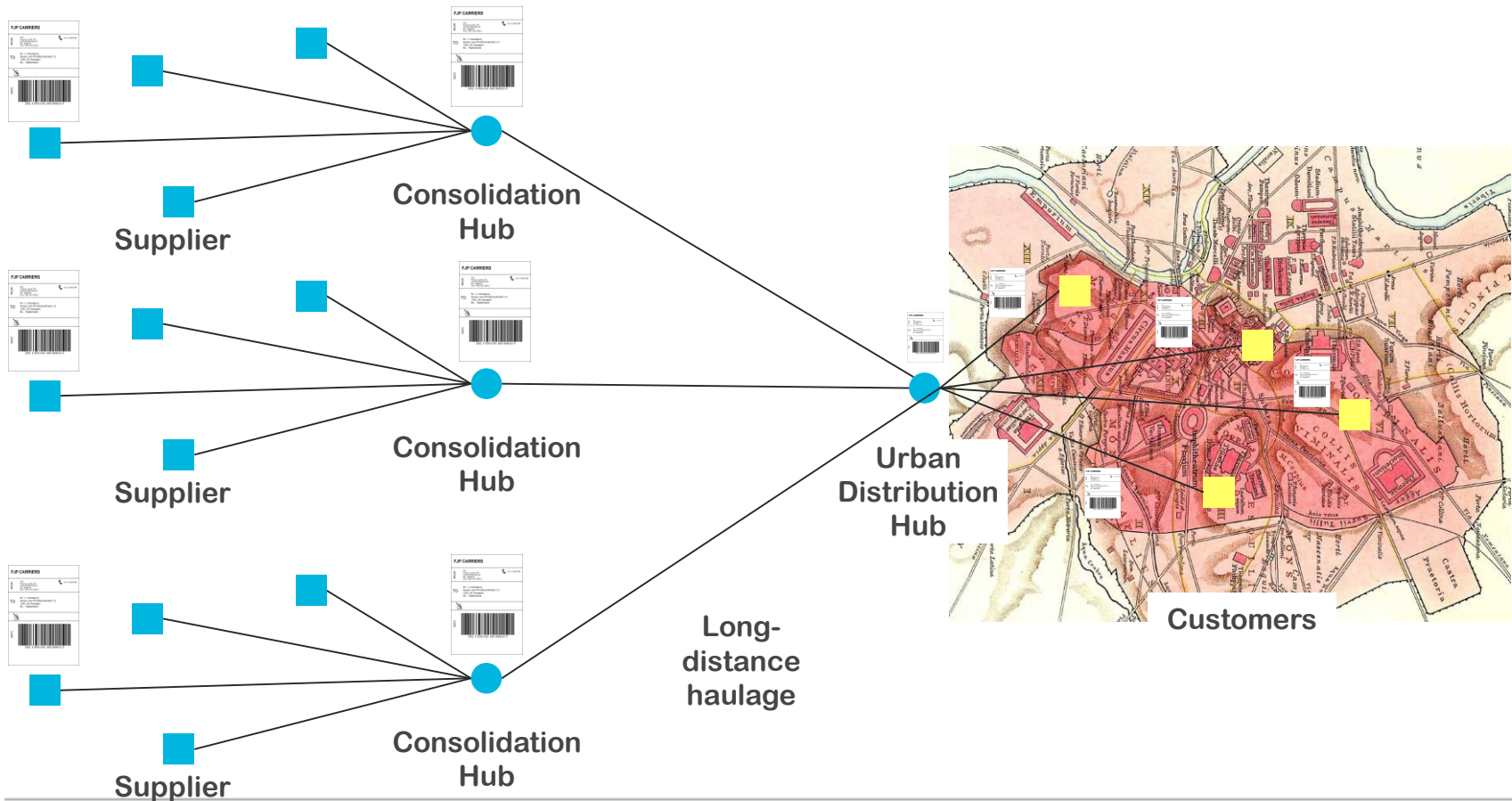
reserved zone
"GS1 item identifier"



Applied to Urban Deliveries



Cargo from different shippers consolidated in urban distribution hub

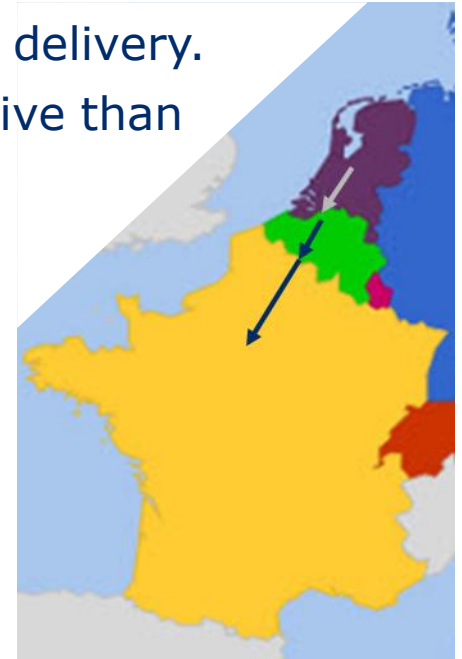


New Value Chain opportunities



- Link parcel contents to SSCC parcel ID enabling *expedited Cross Border Processes* delivering:
 - Reduction end-to-end lead time
 - Fewer delays due to inspection holds
 - Fewer unexpected tariff charges (better product data available)
- *Separate the international long-haul from domestic* delivery.
 - International Parcel 2.5 – 5 times more expensive than Domestic for same geographical distance.
 - Dutch study found:
Domestic 1;
International 4
vs line-haul plus domestic parcel 1.7

Shippers can reduce International Cost by +50%
- Opportunities apply worldwide (using Parcel ID and Label)



Creating worldwide interoperability



Contact Information



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Thank You for your attention

Questions

