



The Global Language of Business

GS1 Transport & Logistics Workshop

Transport & Logistics: Key to Customer Experience

Delivery process often cause for Customer Disappointment;
Industry is learning to improve its performance

Jaco Voorspuij, Senior Manager Transport & Logistics
12th September 2019

Welcome & Agenda



- Schedule for this workshop
- Housekeeping
- Presentations and discussions
 - Setting the scene
 - T&L initiatives – heads up and updates
 - FENIX pan-European federated networks
 - SMILE project – involving the Consumer
 - Questions, Answers and discussion
- Closing
- Lunch

Jaco Voorspuij
Jaco Voorspuij
Sandra Wagner
Oliver Pütke

Anti-Trust Caution



- GS1 operates under the GS1 anti-trust caution. Strict compliance with anti-trust laws is and always has been the policy of GS1.
- The best way to avoid problems is to remember that the purpose of the group is to enhance the ability of all industry members to compete more efficiently.
- This means:
 - **There shall be no discussion of prices, allocation of customers, or products, boycotts, refusals to deal, or market share.**
 - If any participant believes the group is drifting toward impermissible discussion, the topic shall be tabled until the opinion of counsel can be obtained.
- The full anti-trust caution is available via the link below, if you would like to read it in its entirety: <http://www.gs1.org/gs1-anti-trust-caution>.

Meeting etiquette



- Meetings will begin promptly as scheduled
- Be present – avoid multi-tasking
- Avoid distracting behaviour:
 - Place mobile devices on silent mode
 - Avoid sidebar conversations
- Be considerate
 - Avoid monologues
 - Keep comments concise
- Collaborate in support of meeting objectives
 - Ask questions
 - Be open to alternatives

WiFi internet access



- Select network “**Sheraton Lisboa**” and connect
- User and Password both: **GS1events**



Setting the scene

T&L is transforming itself to better meet the needs of its Clients;
GS1 is making sure we are an integral part of the transformation

Jaco Voorspuij, Senior Manager Transport & Logistics
12th September 2019; Industry & Standards Event; Lisbon



Supporting ALL sectors



T&L is an **integral** part of every Sector's **Value Chain**.

T&L **follows the business** needs in every Value Chain.

Sector variations pose risks to efficiency, reliability and effectiveness

Changing T&L landscape



1. **Convergence of physical and digital**
2. **E-commerce and consumers**
3. **B2B commerce**
4. **Globalisation**
5. **Urbanisation**
6. **Technology and innovation**

By 2019, B2B firms will spend more on e-commerce technology than online retailers do.

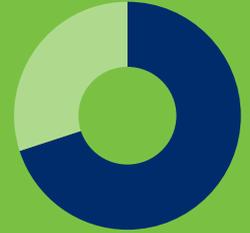
Source: [10 Ecommerce Trends for 2018](#)

E-commerce is likely to reach more than 20% of all retail sales.



Source: 2016 CGF Collaborative Logistics Report

70% of the world's population will move to an urban area by 2050.



Source: 2016 CGF Collaborative Logistics Report

Inefficient cross-border delivery is consistently one of the top-three biggest barriers for online merchants.

Top
3

Source: [Cross-border E-commerce Barometer 2016](#)

Insights from our customers



Technology is significantly impacting T&L.

"Digitisation of the maritime supply chain system will help solve the majority of the problems we have today and it will bring a lot of improvement into our day-to-day activity".

GS1 can support collaboration between the different logistics partners.

"In interconnectivity, it's important that this language is there across different parties so that the platform is more like a virtual layer that brings everyone together".

Today's operations are not sufficient to meet current trends and customer demand.

"Facilities and transport networks are not built to support the current trends of smaller packages and high volumes. They were built to support retail fulfilment, not direct-to-customer".

GS1 has an opportunity to develop standards for new technology.

"Focus on standards and expand to meet whatever new technology needs can be met".

GS1 T&L strategy milestones & timeline



Vision

End-to-end visibility

throughout the supply chain—from source to **CUSTOMER**

**3-5
years**

Real-time business processes

powered by standardised web APIs, interconnected platforms & registries

**0-2
years**

Development efforts, pilots and partnerships

for standardised web APIs, **interconnected platforms** & registries

Today

Do more with GS1 standards, services and solutions

by telling new stories to new audiences;
focus on last mile, **Maritime & Ports** , cross-border & traceability



Every second receiver is dissatisfied



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81%

of the interviewed people would like to be delivered at home in future as well.



82%

of the interviewed people would like to receive their parcel in future at home within a preferred time slot.



85%

of the interviewed people would provide all necessary information.



What are Industry Stakeholders doing?



- [Amazon has purchased its own fleet of airplanes and has obtained a license to operate as NVOCC \(Freight Forwarder\)](#) in order to take control over their critical Supply Chain elements;
- FedEx is cutting its ties with Amazon (not wanting to make a competitor stronger or being handed bad left-overs for transportation);
- UPS appears to be getting closer to Amazon;
- [Alibaba and Maersk have a strategic alliance](#) in place to carry (Ecommerce) Orders from China to European and American markets;
- Freight Marketplaces (like FreightOS) are taking significant portions of the market between Logistic Service Providers and Logistic Service Providers;
- Traditional business models for Freight Forwarders and carriers are being challenged.

What is GS1 doing?



- GS1 T&L have engaged in a number of long term initiatives with several stakeholder groups most affected by the on-going transformations;
- Following slides will go into more detail;
- GS1 is successfully positioning itself in large scale innovation projects that aim to **make Transport & Logistics fit for next level of Customer Expectation;**
- We have two presentations today on GS1 engagement in these large scale innovation projects;
- We feel that there are unique opportunities here for also the smaller MOs to participate.

GS1 is taking FRONT ROW SEAT to help drive innovation in Transport & Logistics for the benefit of ALL Value Chains

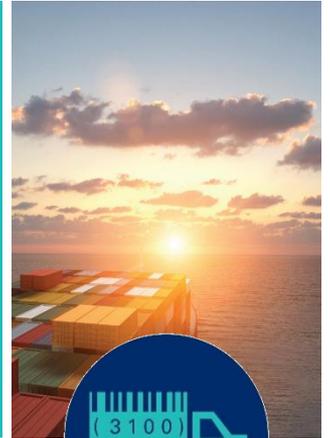




Transport & Logistics initiatives

Longer-term engagements coming to fruition;
positioning GS1 as **THE** standards for Supply Chain improvements

Jaco Voorspuij, Senior Manger Transport & Logistics, GS1 Global Office
12th September 2019; Industry & Standard Event; Lisbon



Two Foundational Standards Efforts



- **Maritime & Ports**
- **Scan4Transport**

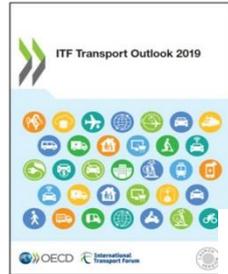
Maritime mode crucial for all sectors



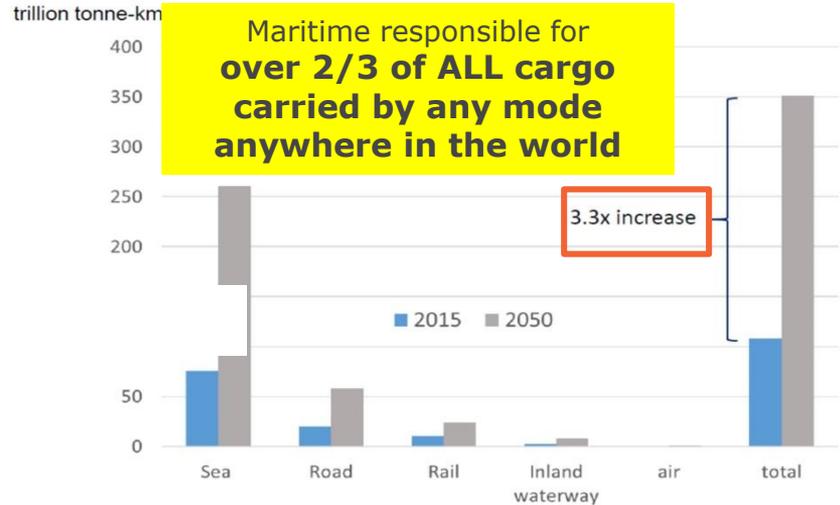
Projected growth in freight movement worldwide between 2015 and 2050



 Agriculture	 Apparel and footwear	 Automotive
 Fish and seafood	 Fruit and vegetables	 Machinery
 Chemicals	 Dangerous cargo	 Electronics
 Oversized cargo	 Protein	 Pharmaceuticals



May 2019
<https://bit.ly/2xhndFa>



Maritime & Ports Achievements & Opportunities

- **“Port Information Manual”** final edition ready in December 2019; published together with
 - **“Mariners’ Handbook”** of UKHO and
 - **“Just-In-Time Arrival Guide”** of [IMO GIA](#).
- M&P community is driving awareness and adoption of these publications very hard
- “Port Information Manual” is on the agenda of many seminars and congresses in the coming months.
 - GO will share list when available, so we may plan to attend / co-present (if feasible).
 - GO will also post this document shortly.



PORT INFORMATION MANUAL

Version 1.4.4



Some interesting quotes



- **For supply chain standards GS1 is the authority to advise on these existing standards.**
- Because ports act as a node in the supply chain, and their customers need more and more end to end visibility, connectivity to supply chain standards is important.
Therefore GS1 has been adopted in this publication as the most global and robust standardization body spanning the broader supply chain.
- For indirect references of port areas and lines, waypoints and sections the **Global Location Number (GLN)** is an existing ISO standard (ISO/IEC 6523). **It is the only guaranteed globally secure, unique number** and can be used in combination with local identification numbers.

NOTE: M&P Community is planning Information Exchange tests using GLN among a dozen or so ports worldwide with GS1 GO support.

Some interesting quotes



- EPCIS is encapsulated in an existing ISO standard (ISO/IEC 1987:2017) and is a global GS1 standard, which has been used for over a decade in global supply chains for representation of events.
Events may be recorded for any location and any object or entity.
EPCIS uses non-significant ID keys where available insulating against future changes to attributes.
- Ports may use any EPCIS element as needed, with no obligation to use irrelevant elements.
- **EPCIS has a rich pre-existing vocabulary with extensions possible for mode, sector or trade specifics.**

IMO Vessel Number

Closing the gap in Global Traceability



- ✓ Goods are loaded into Container by Shipper.
Link GTIN to Container ID (BIC); link Container ID to GSIN in EPCIS events
- ✓ Container transported to origin port terminal and offloaded there
Container BIC and port terminal GLN used in EPCIS event
- ✗ Terminal **loads Container onto vessel**; Need to link Container ID (BIC) to **IMO vessel number** in EPCIS event/s - Currently not feasible in EPCIS
- ✗ Vessel transports container/s to destination port; Currently not feasible to send EPCIS **events for vessel** leaving origin port, in transit and arrival at destination port
- ✗ Containers offloaded at destination port terminal
Currently not feasible to create EPCIS events for **offloading from vessel**
- ✓ Container temporarily stored at port terminal
Linking container ID to GLN for port terminal
- ✓ Container transported to Receiver
- ✓ Receiver confirms delivery of the Container

So what is the IMO Vessel number?



- **The IMO Vessel Number (IMOVN) is a unique LIFETIME identification for a vessel.**
- The name may change many times; the IMOVN cannot change.
- IMOVN is **mandated** by Maritime Regulation **for all vessels** under the SOLAS convention.
- IMOVN are recorded in a global registry along with essential master data for the vessel
- **Many maritime applications and solutions rely on the IMOVN including global vessel tracking applications.**



IMO Vessel Number

Closing the gap in Global Traceability



- ✓ Goods are loaded into Container by Shipper.
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IMO Vessel Number

Closing the gap in Global Traceability



- ✓ Goods are loaded into Container by Shipper.
Link GTIN to Container ID (BIC); link Container ID to GS1
- ✓ Container transported to origin port terminal and
Container BIC and port terminal GLN used in
- ✓ Terminal loads Container onto vessel
number in EPCIS event/s - Current **NO vessel**
- ✓ Vessel transports container
events for vessel - Not feasible to send EPCIS
- ✓ Containers
Current **arrival at destination port**
- ✓ **events for offloading from vessel**
- ✓ **terminal**
- ✓ **port terminal**
- ✓ **to Receiver**
- ✓ **this delivery of the Container**

We are now ready to support Global Traceability

ALSO NOTE:



- The current applications and solutions based on IMO Vessel Number can now connect to EPCIS infrastructures to easily exchange vessel tracking information with any and all stakeholders requiring or desiring that information.
- Synchronisation of operations across modes (through the ports) becomes much easier to achieve via such an infrastructure
As also highlighted in the Port Information Manual.

"Because ports act as a node in the supply chain, and their customers need more and more end to end visibility, connectivity to supply chain standards is important."



The Global Language of Business

Scan4Transport

2D barcode content standard for Transport Information

Enabling effective and efficient delivery even when connectivity is not available

The GS1 Vision for Transport Harmonised label Used by ALL end-to-end



Created and attached by SHIPPER at origin



Information on the Transport	
000000 000000 (000000 00 000000)	
FROM	Name Address City State
TO	Name Address City State
	+33 222648768
	



Label design
according CEN/TS 17073

Assumptions / Pre-requisites



- Information exchanged among stakeholders before parcel hand-over to next stakeholder handling the parcel.
- Use of common ID Key (SSCC) end-to-end to link to all data relevant to correctly handle the parcel.

Unfortunately these **pre-requisites are NOT met in very large areas of Transport & Logistics** environments for two main reasons:

- Reliable cost-effective Network Connectivity is NOT a given in large portions of the worlds landmass.
In Australia coverage is less than 30%; globally coverage likely less than 50%
- Between 5 and 15 million MSME LSP cannot establish economically viable EDI connections with their LSC (for lack of sufficient transaction volume).

How to ensure effective Customer Delivery?



- Customer Delivery is Key to Customer Experience.
- It's imperative GS1
- **Enable these Transport & Logistics environments to do their jobs well,**
- **Ensure all the data necessary for effective delivery is easily accessible on the parcel itself.**
- Scan4Transport (S4T) will deliver the Application Standard to help achieve exactly that.
- It will **leverage the GS1 Digital Link standard** to describe exactly what the 2D barcode content may be.
- Once the 2D barcode is created compliant with S4T all stakeholders can process the barcode easily in whatever devices they carry when handling the parcels.

Where are we now?



- We have a **large Mission Specific Work Group** with representation from all kinds of stakeholders (Postal, Courier/Express/Parcel, Solution Providers, shippers)
- We have a draft Application Standard
Still a Work in Progress.
- We are **leveraging existing global standards** (e.g. Universal Postal Union standards and knowledge regarding addresses all over the world).
- Things are **progressing well**
- We would still appreciate participants joining the on-going effort.
 - Ensuring the Scan4Transport is as good as it can be when published (before end of this year)
 - Ensure implementation of the Application Standard when ready.



FENIX - A European FEderated Network of Information eXchange in Logistics".

Building an interconnected IT ecosystems for Logistics

Sandra Wagner, FENIX Project Lead , GS1 Germany
12th September 2019; Industry & Standard Event; Lisbon



Overview EU Project FENIX



- Consortium leader: ERTICO – public-private Partnership of 120 companies and organizations
- Main topic: IoT in European logistics networks
- Project partners: approx. 40 Partners (next Slide)
- FENIX project value: approx. 60,000,000 €
- Funding amount for FENIX: approx. 30,000,000 €
- Funding volume of GS1 Germany: 1.053.750€
- Start of project: April 2019
- Project duration: 36 months

FENIX Test sites -> GS1 User engagement



B1: AirCargo pilot site(Be)-
implement/pre-deploy/deploy
specific use cases for the
air cargo community linked to
the other transport modes
across TEN corridors



**B2: Multimodal inland Hub-
Procter & Gamble-
Mechelen-Willebroek** pilot site
across TEN-T corridors



H: Smart door-to-door
multimodal T&L services
across TEN-T



A: Customs corridor services for
T&L:- Fürnitz Pilot Site (South
Austria) on the Baltic-Adriatic
corridor



SL: Mondelez T&L multimodal
services across TEN-T
corridors



**F: Multi Modal Transport
T&L services
interoperability** on the
Mediterranean and the
North Sea – Mediterranean
TEN-T corridors



G: Multiple test sites
across on Rhine-Alpine in
Holland, Germany,
Switzerland, Italy



**E: Data visibility T&L
services** across the Spanish-
Atlantic corridor between the
main nodes and actors



**I1: Mediterranean and Baltic-
Adriatic and the Motorway of the
Sea of South-east corridors**

**I2: The Italian Rhine Alpine pilot
site – Dynamic Synchro-modal
for sustainable multimodal
logistic planning and
operations**



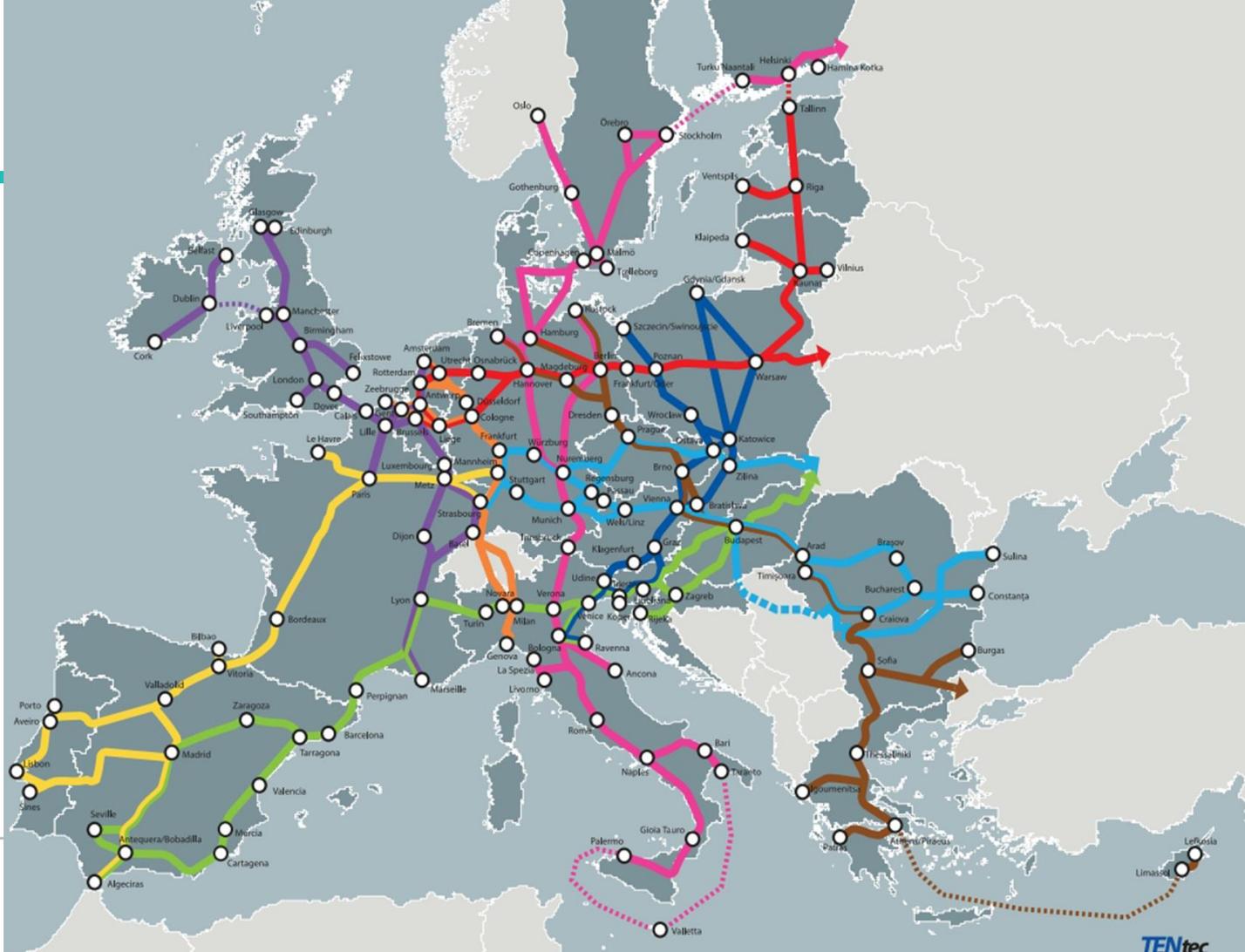
**GR: Greece Balkan-TEN-T
network, Adriatic-Ionian
Corridor-Cyprus multimodal
T&L services**

TEN-T

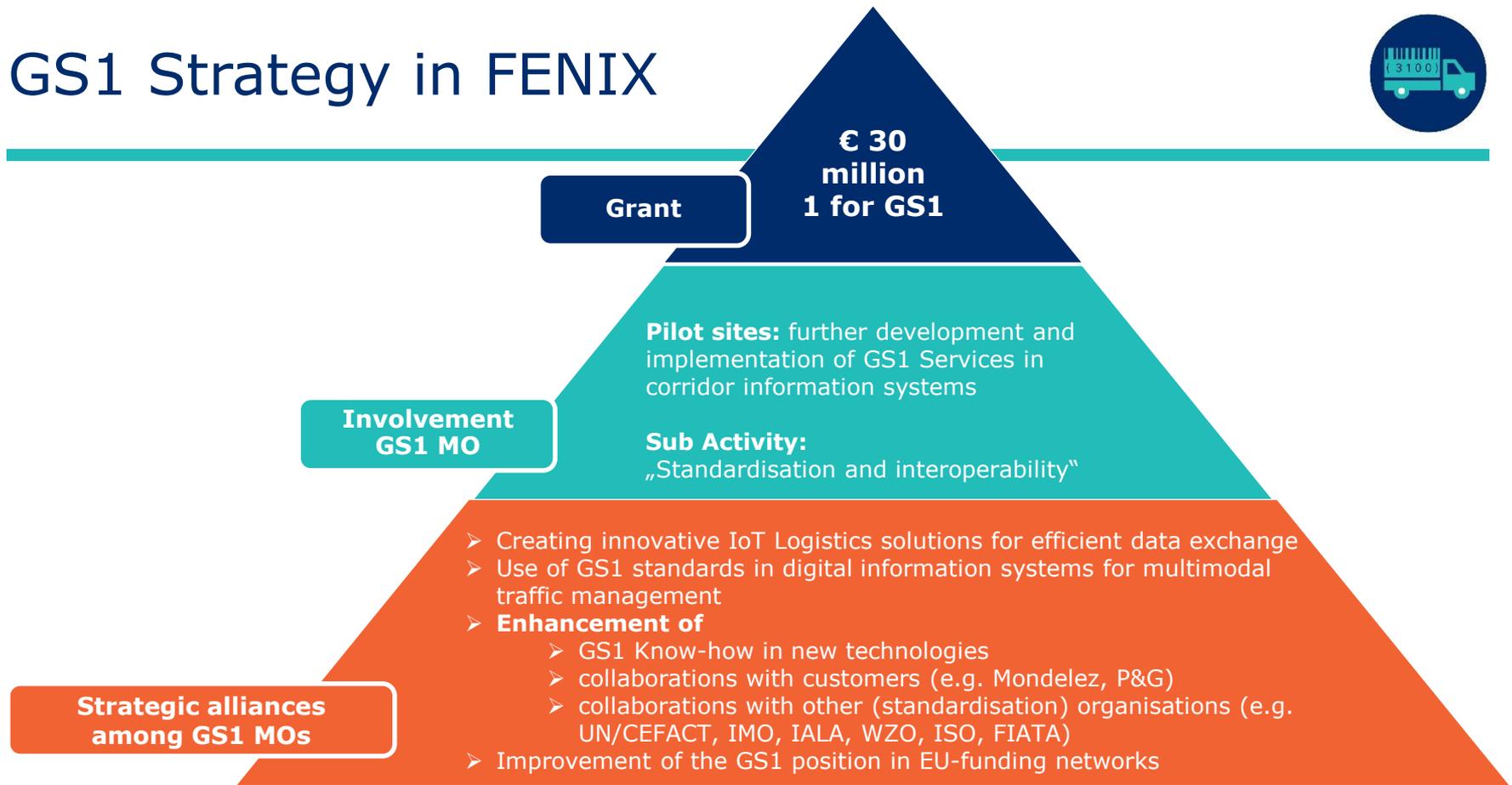
EU funding programmes and initiatives make available financial support to projects implementing the

Trans-European Networks -Transport

<https://ec.europa.eu/transport/infrastructure/tentec/portal/map/maps.html>



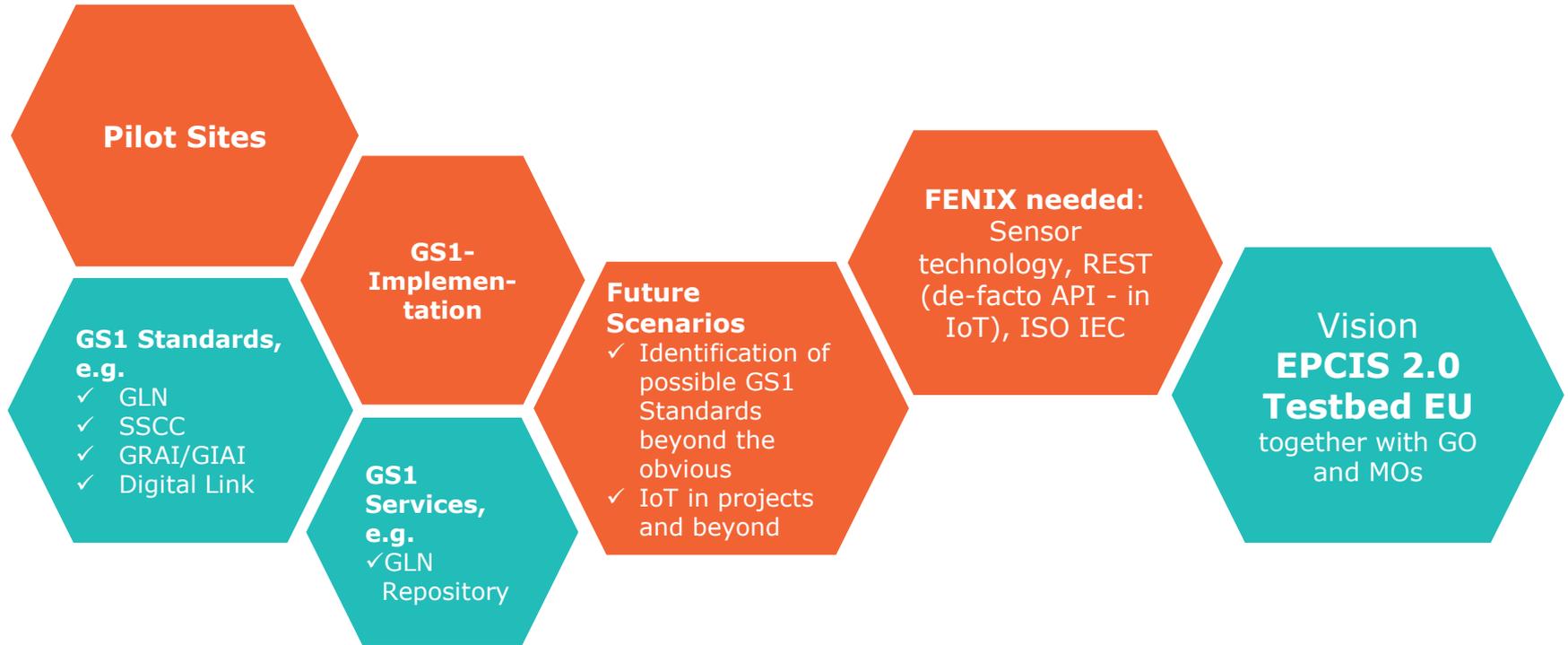
GS1 Strategy in FENIX





„Who does not know where he wants to go should not be surprised if he arrives somewhere else.“ Mark Twain

Where do we want to go? Let's create



Role of GS1 MOs within FENIX



01

Working with
pilot sites on
local basis

02

Creating value
with country-
specific
experience for
the use of
standards

03

Support for the
implementation
of standards in
corridors

04

Being part of
Sub-activity
"Standardisation
and
Interoperability"

Representing GS1 in the regional market



Role of GS1 MO



- When an MO does work for FENIX, that work may be partly paid for by the EC.
- The MO would act as subcontractor for GS1 Germany who are the official consortium member representing GS1.
- Any MO as well as GO would work on the FENIX project under the same Terms & Conditions as GS1 works under according to the Grant Agreement with the EC.

Subcontracting agreement must be made, Amendment of GA necessary –
by End of 2019



The Global Language of Business

In case you would like to know more

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SMILE – Project GS1 Germany

Involving the Consumer in the Delivery Process

Oliver Püthe, NNNN , GS1 Germany

12th September 2019; Industry & Standards Event; Lisbon





SMile - Smart Last-Mile in urban and rural areas

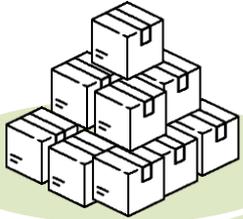
12.09.2019

Oliver Pütke & Sarah Leick, GS1 Germany

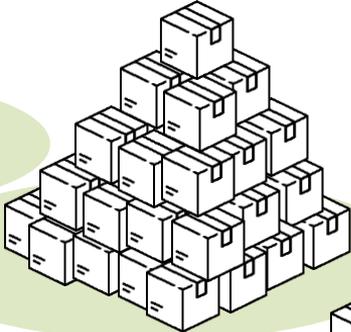
Last Mile Challenge in Germany



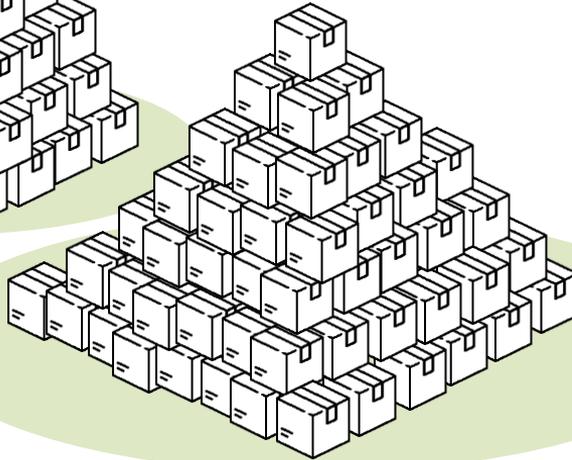
2012
2.5 billion



2017
3.5 billion



2022
4.3 billion



Complex customer needs



Overloaded infrastructure



Precarious employment conditions



Increasing costs



High traffic load

Every second receiver is not satisfied



81%

of the interviewed people would like to be delivered at home in the future as well.



82%

of the interviewed people would like to receive their parcel in the future at home within a preferred time slot.



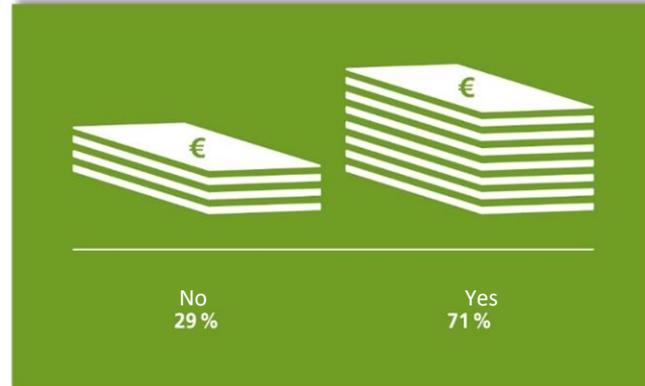
85%

of the interviewed people would provide all necessary information.

More service - higher willingness to pay



Willingness to pay for a higher service level



40 %

of the interviewed people who would pay a mark-up would pay at least one euro.



95 %

of the respondents who would not accept a mark-up are satisfied.



58%

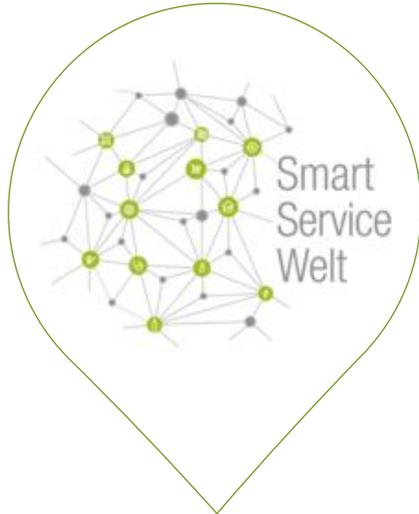
would pay 1.99 euros for an important delivery in a preferred two-hour time slot.



You can find the study results here!



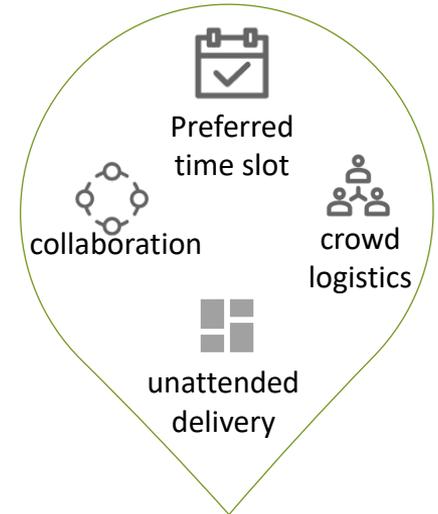
The Smile Consortium



3 years



5 partner



1 platform



It's a Match!

You guys liked each other.



Sarah, E-Commerce Retailer

- happy customers
- customised service
- 5-star rating,
- unique selling point...



Jens, Bicycle Courier

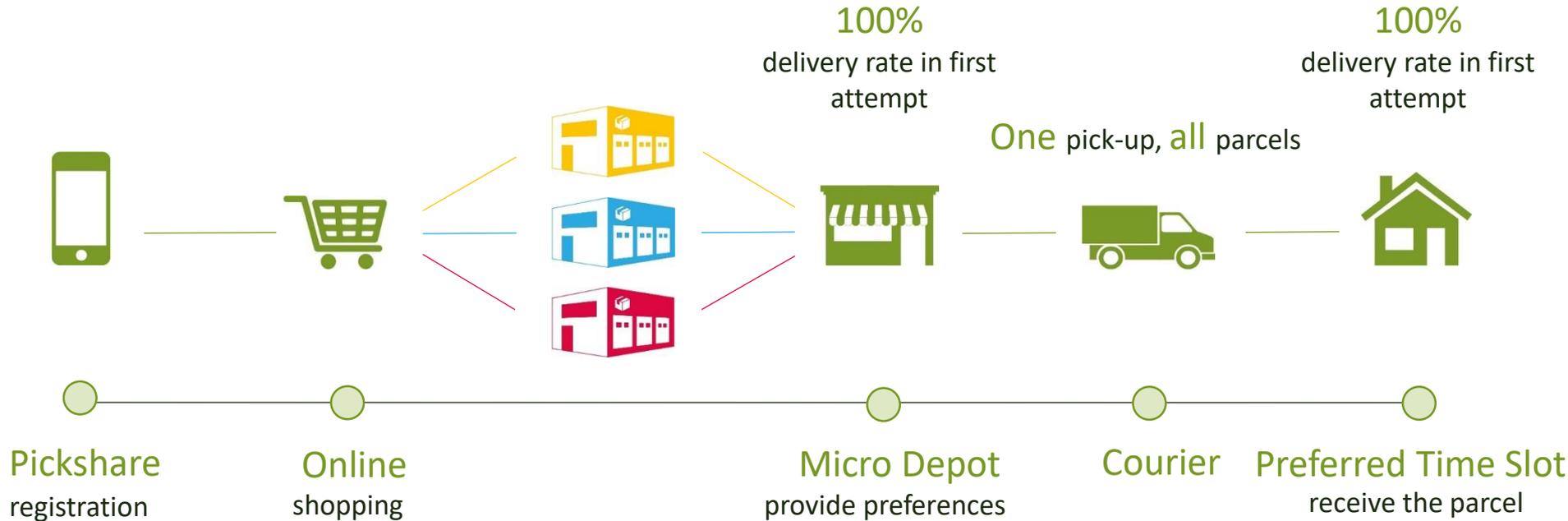
- additional volume,
- on my terms,
- flexibly managed,
- without IT investment ...



Paula, Online Shopper

- all my parcels,
- at my home,
- on my preferred time slot
- independent of the logistics service provider...

Use Case – Preferred Time Slot



Gefördert durch:



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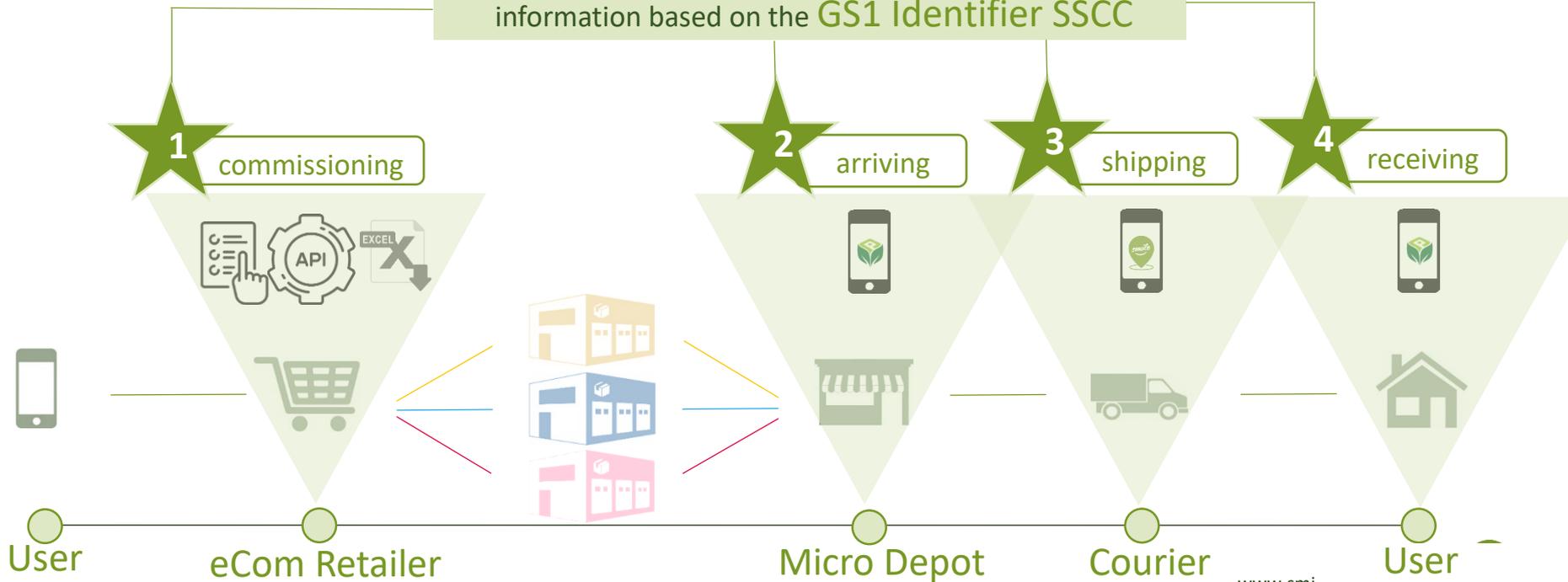


Use Case – Preferred Time Slot



EPCIS

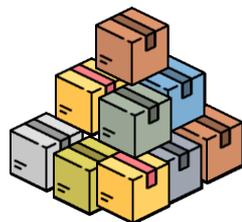
open and independent platform ensuring event based end2end visibility for the exchange of parcel information based on the GS1 Identifier SSCC







Receive your
Parcel





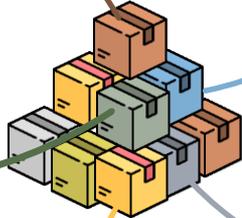
13:00 –
15:00



14:00 –
16:00



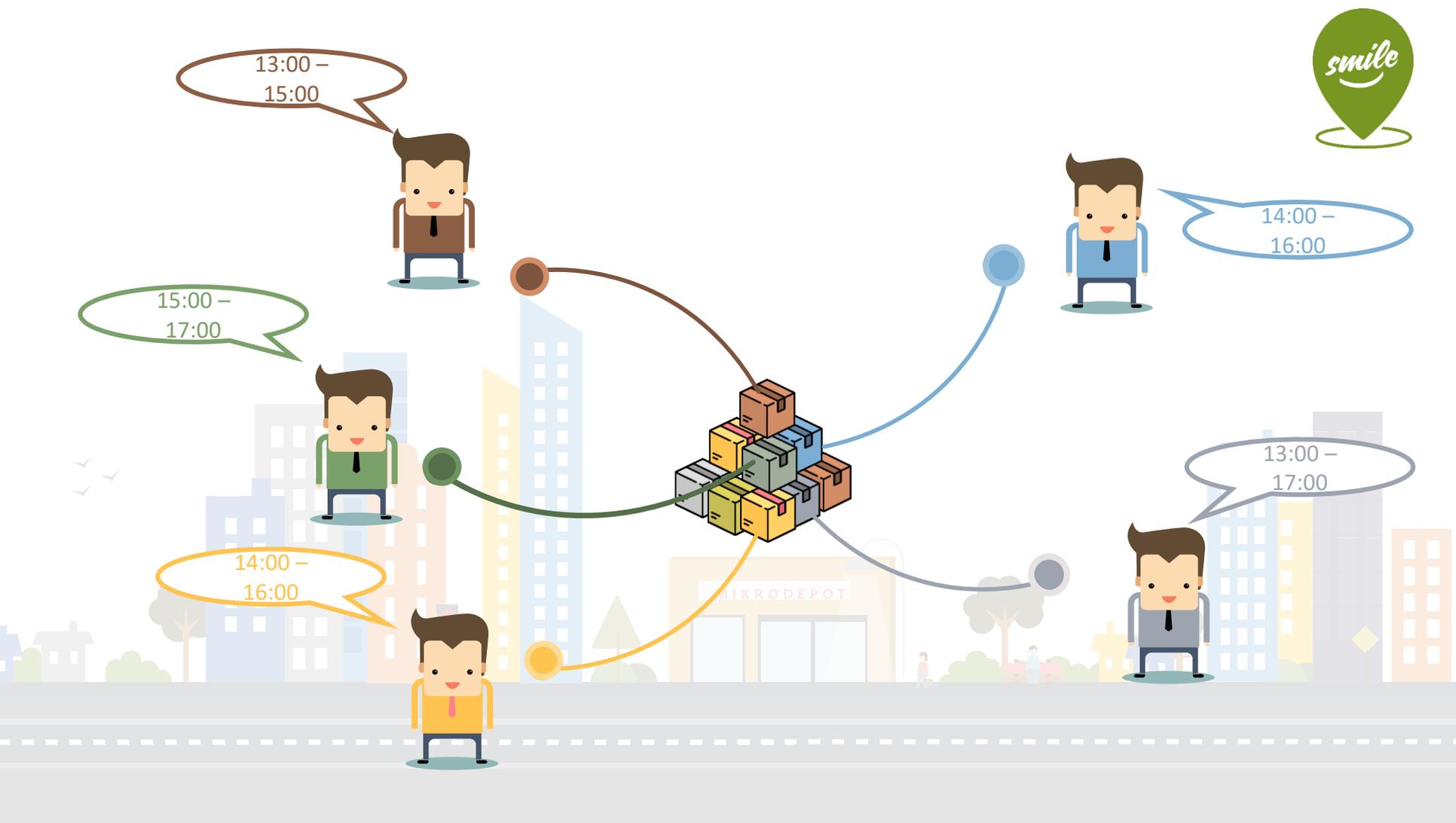
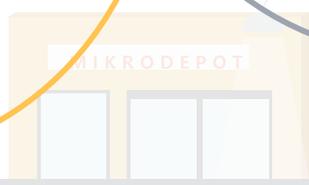
15:00 –
17:00

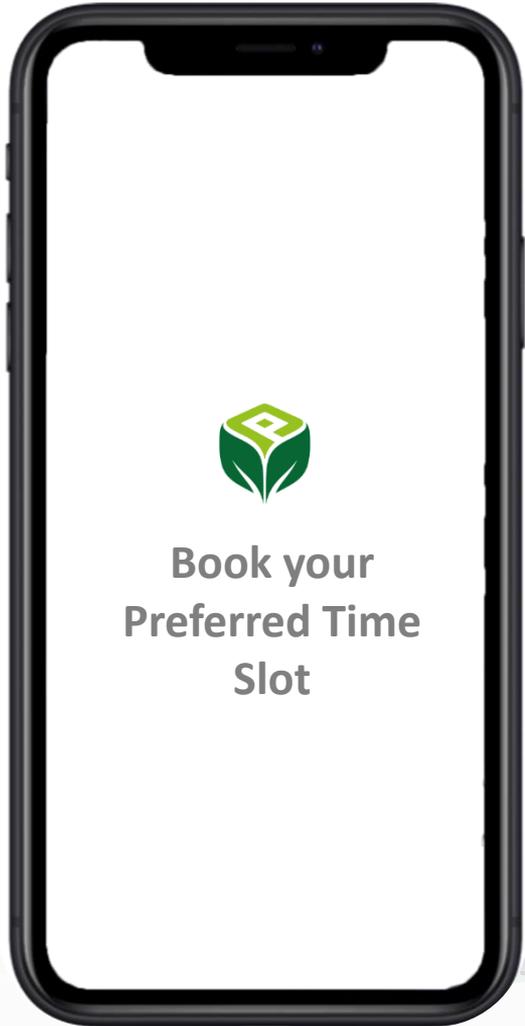


13:00 –
17:00



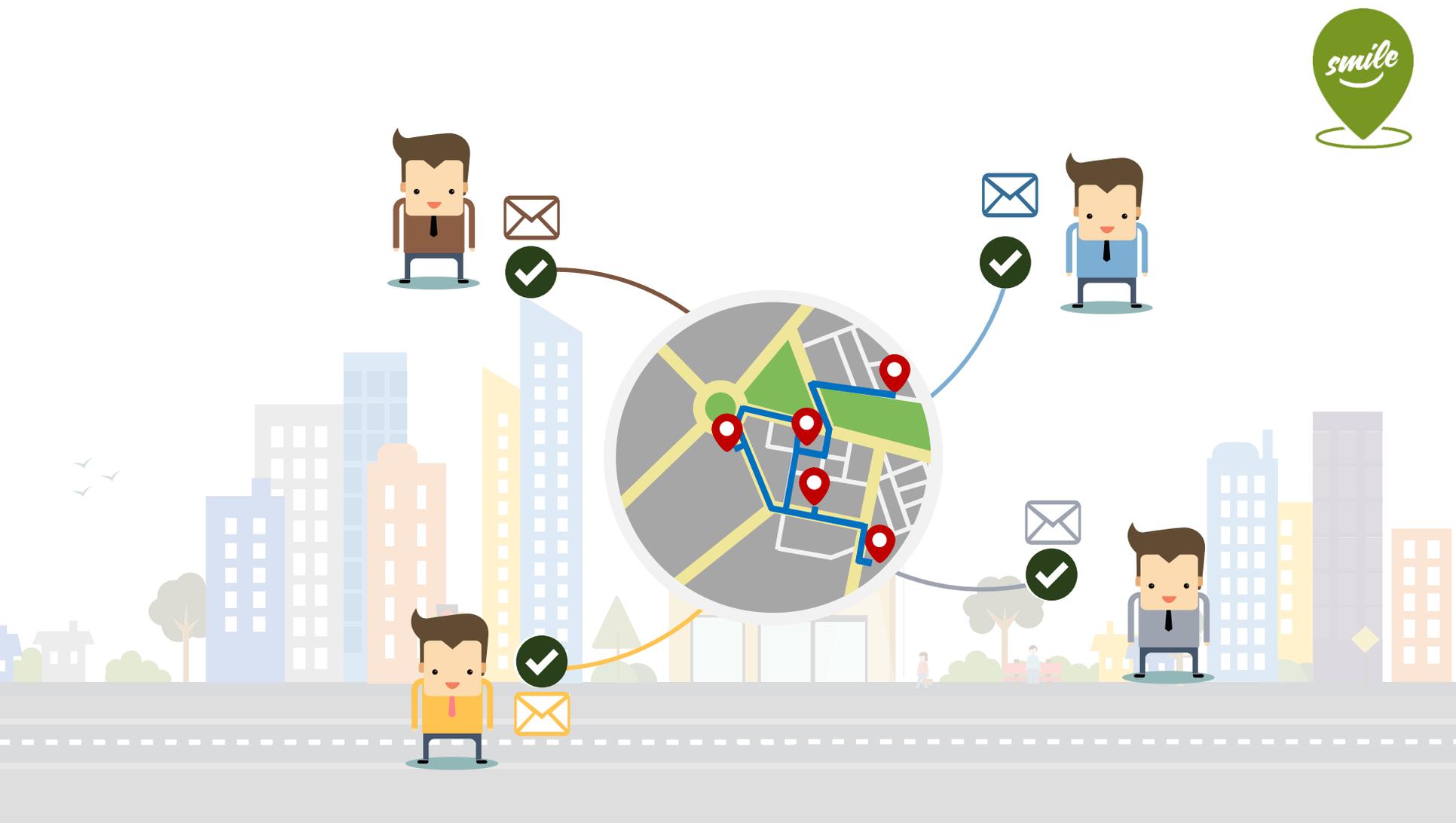
14:00 –
16:00

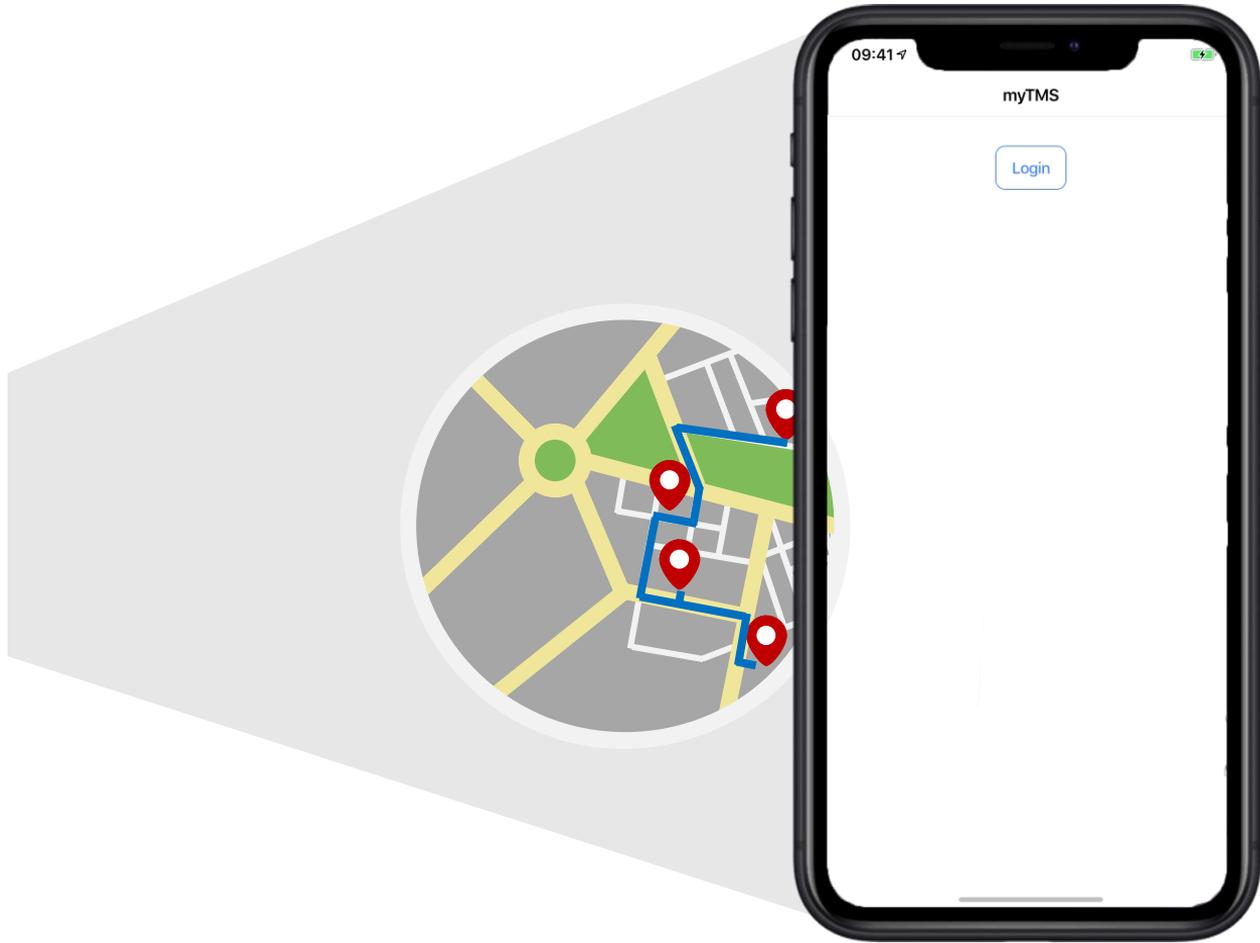





Book your
Preferred Time
Slot



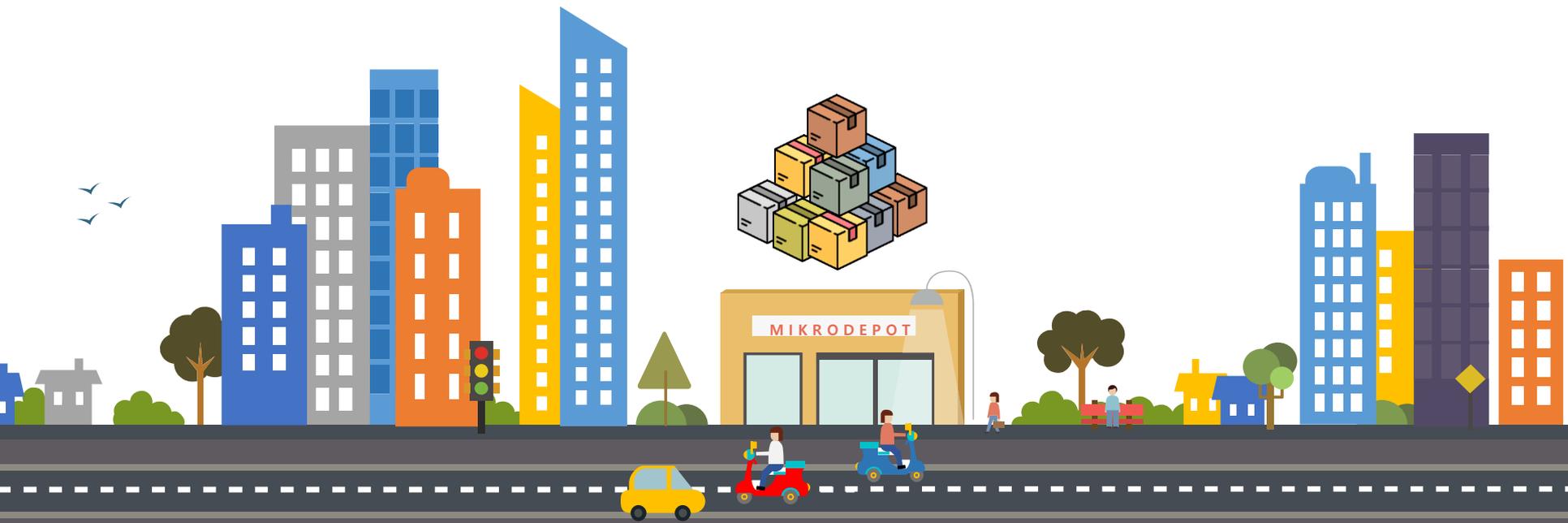






Tobias







Roadmap



Gefördert durch:

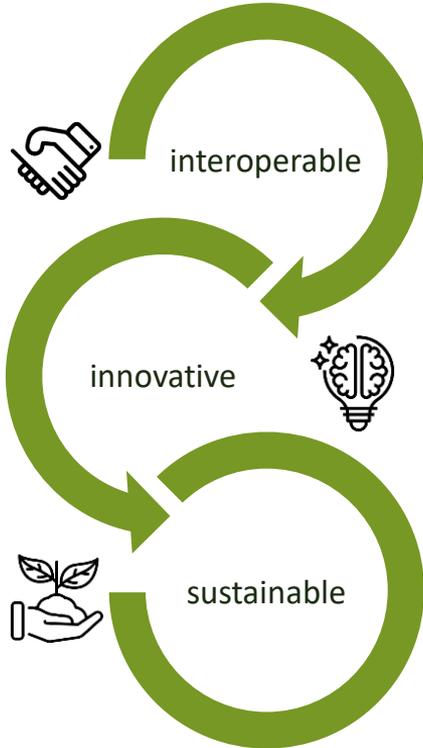


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Wrap-up



- cooperative white label platform based on GS1 Standards
- open, interoperable shipment information system
- access to the parcel market for companies of all sizes

- more customer orientation through innovative, service provider-independent delivery concepts
- multiplication of micro-depot options
- securing the delivery success

- consolidate deliveries and plan routes efficiently
- optimize distribution structures with dynamic depots

Gefördert durch:

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about us and SMile



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Thank you!



Questions?

Questions & Discussions



Close

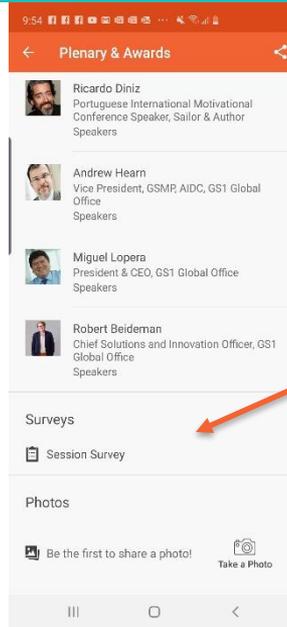
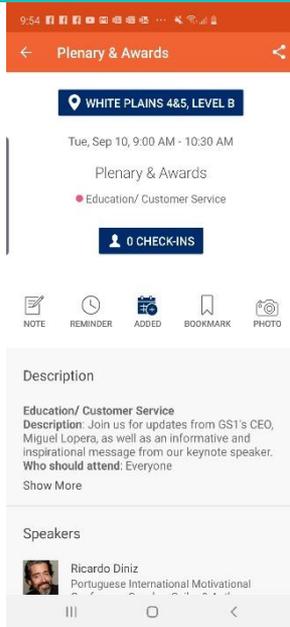




-
- Thank you all for being here
 - But for now enjoy the remainder of your Event
 - Please rate the session



Event App – How to rate sessions



1 Open session that you want to survey

2 Scroll to the bottom for **Session Survey**

3 Begin the survey