



Scan4Transport Enabling freight to talk



S4T
Scan4Transport

Scan for more information



Delivering digital capability in the transport process

IPIC-2023

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13-15 JUNE 2023 Athens, Greece
www.pi.events/IPIC2023

Agenda

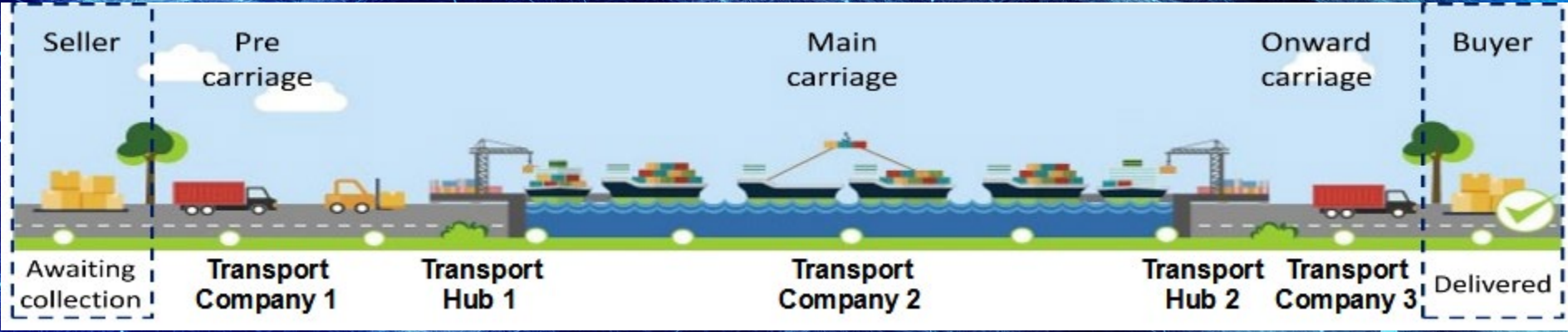


- The Challenge – What is the Problem?
- What could be the Solution?
Scan4Transport standard
- How does Scan4Transport help?

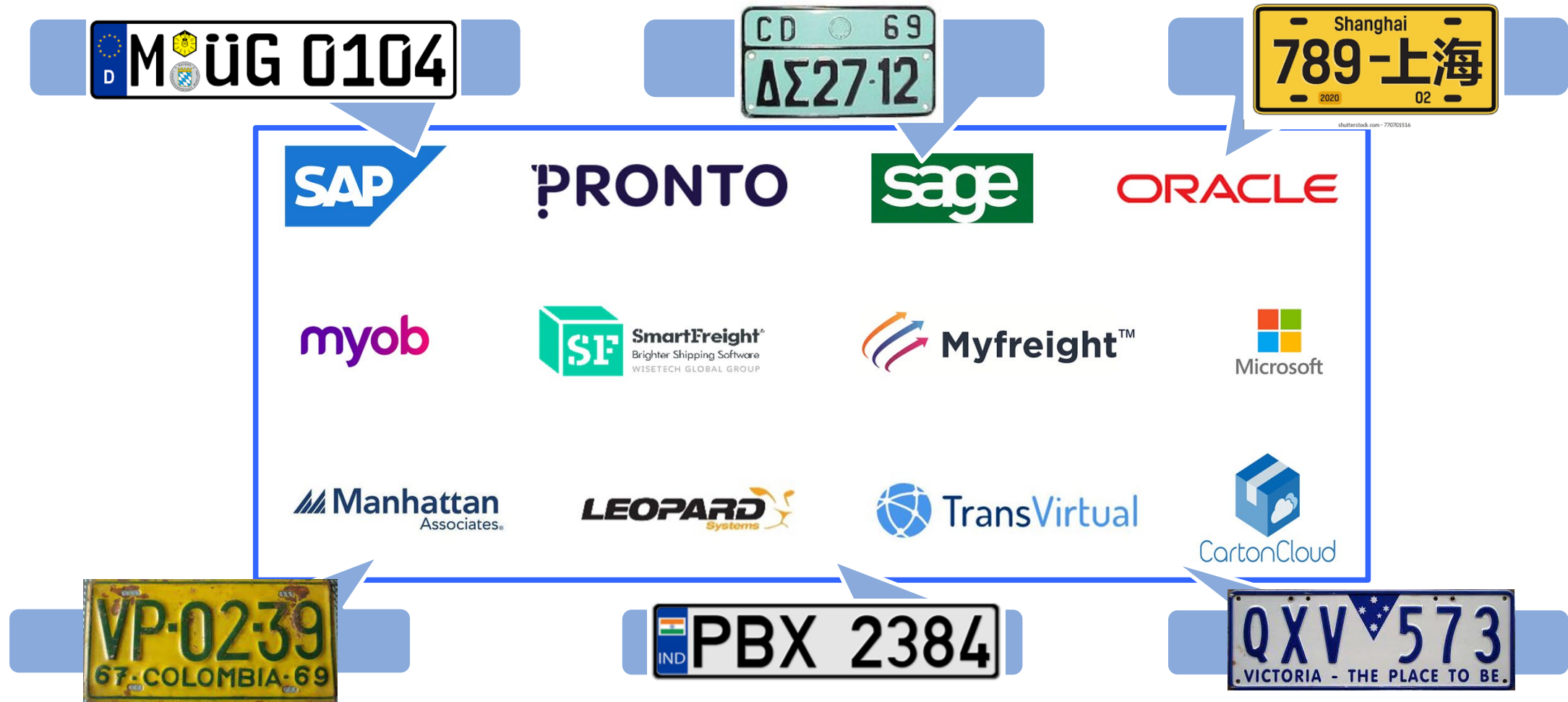
Challenge - Fragmentation



Millions of Transport Companies worldwide
Running their own Systems



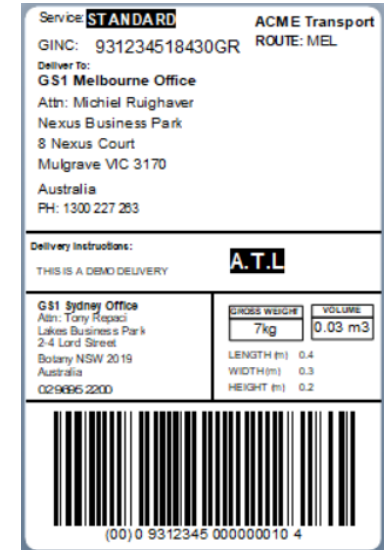
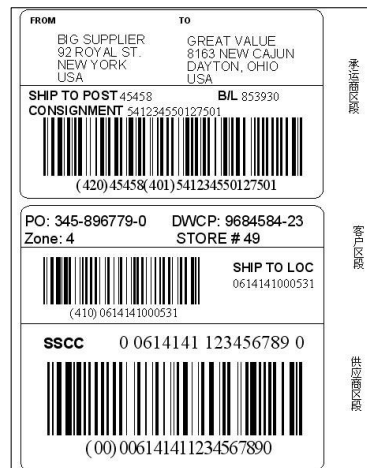
Overabundance of identifiers & no common data format



Multitude of Transport Labels

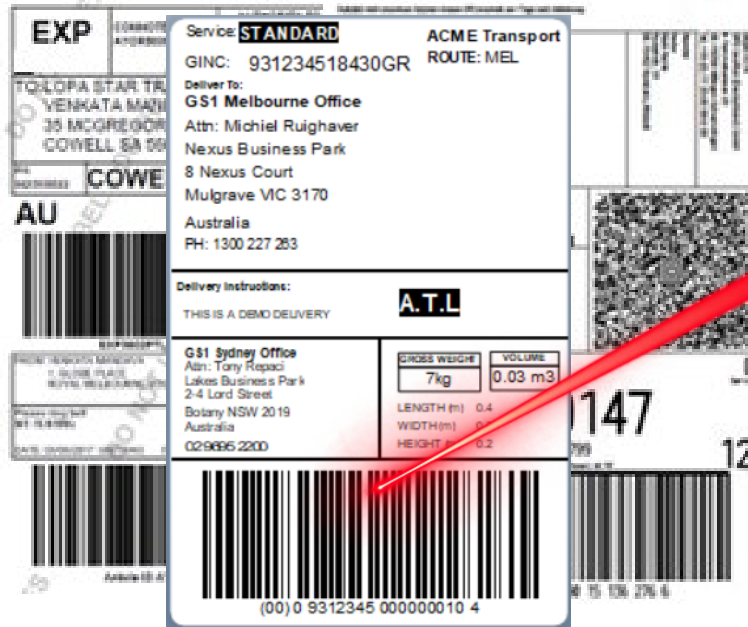


- Each Logistic Service Provider insists on its own format
 - Causing big headaches for Shippers in Despatch processes
 - Causing relabelling at each handover



Lack of required information

Many (SME) transport operators do **not** receive advance information



Requiring **manual processing** of data on the Transport Label

Why is this a Problem?

Transport impacts key business initiatives







Non value add activities waste time, resources, money and more

Lack of resources is a primary obstacle to many of logistics' most pressing problems

We need ways to reduce the waste

Industry Survey Confirms

 <p>81% Improve interoperability</p>	<p>Lack of interoperability – Many parties in the supply chain have different systems with their own proprietary format (“language”) for encoding transport data into barcodes on the Transport Label and sharing information (e.g. transport instructions and status notifications).</p>
 <p>86% Improve efficiency</p>	<p>Inefficiency – Each party in the supply chain needs to develop and maintain the different barcode formats found across the supply chain within their systems. Relabelling and manual processes resulting from the different formats are other consequences impacting the efficiency of these businesses.</p>
 <p>81% Improve resilience</p>	<p>Poor resilience – When electronic transport instructions have not been exchanged prior to the freight being handled, the movement of freight is often impacted until the instructions have been sourced or manually processed.</p>
 <p>76% Improve freight visibility</p>	<p>Freight visibility challenges – There are often visibility gaps or delays when Supply Chains rely on information being passed in a daisy-chain style from party to party along the supply chain or not all systems in the supply chain are connected.</p>

- More than 4 out of 5 respondents indicate major improvements are needed in transport of packaged items related to
 - Interoperability
 - Efficiency
 - Resilience
- 3 out of 4 respondents feel that visibility about the progress of transport execution must be improved

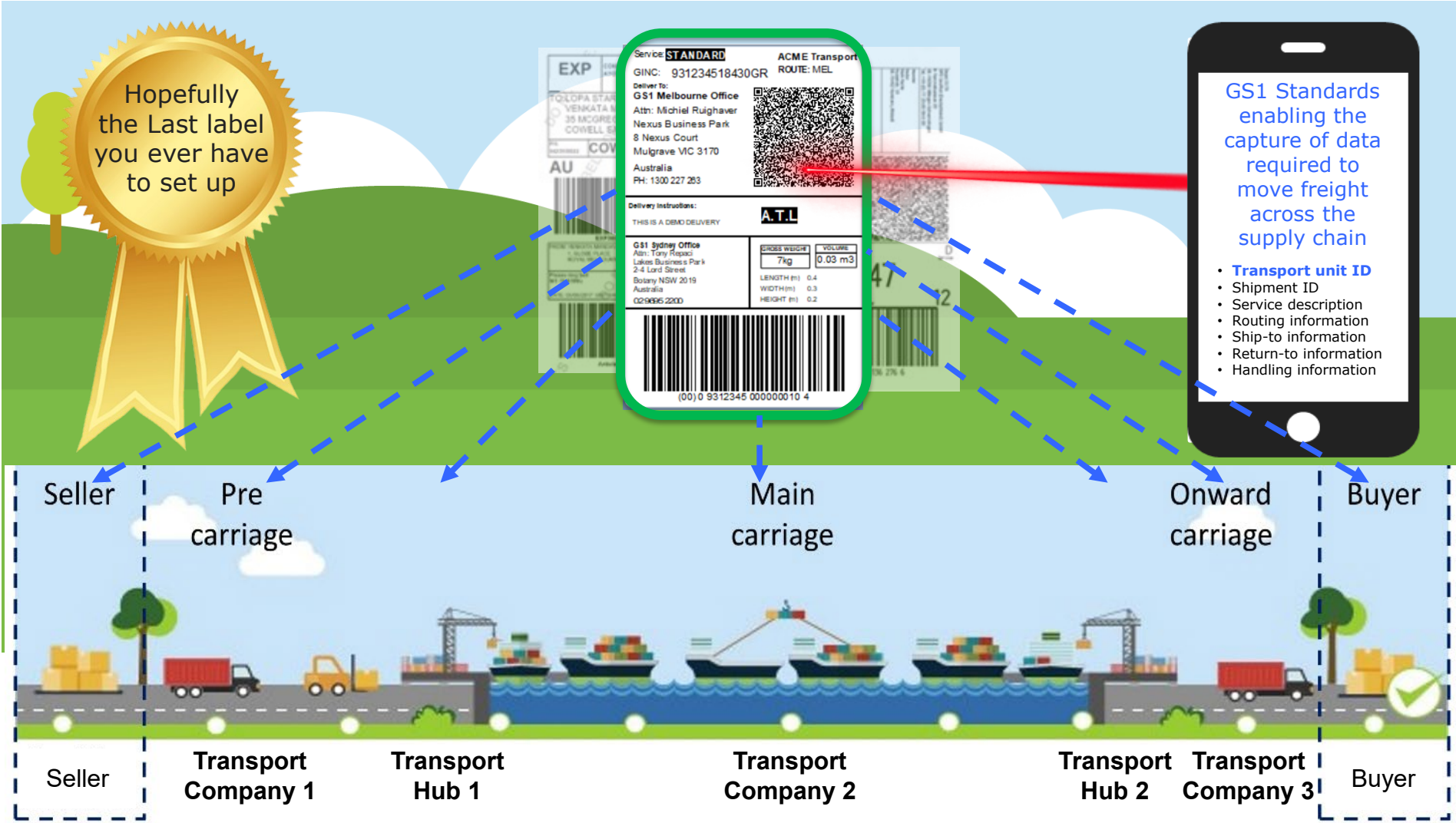
How may we solve the Problem?

Scan4Transport

- Making structured data available on the box



Scan4Transport – Developed by Industry for Industry



All Required Information is on the box



The 2D barcode contains the structured data for transport execution

- The globally unique identifier for the transport unit
This is a mandatory data-element. Without it the S4T standard cannot deliver its full potential
- Basic data about the transport unit
Weight, dimensions, volume, returnable asset identifier (e.g., for roll-cage, pallet or container)
- Trade and Transport Reference identifiers
Identifiers for the Trade Transaction (shipment) and Transport Contract (consignment)
- Ship-to / Return-to information
Address data, geo/GPS-coordinates, identifier for the ship-to location, contact details
- Handling instructions
Dangerous Goods flag, delivery window, Signature-required, Authority-to-Leave
- A Digital Link (URL / URI)
This enables the operator to access remote information in case Internet connectivity is available

[https://visibility.Seller.com/00/195212342345678909?3301=000045&3312=000030&3322=000040&3332=000050&4300=GS1+New+Zealand+\(Auckland+Office\)&4302=Level+5%2C+25+College+Hill&4304=Freemans+Bay&4305=Auckland&4307=NZ&420=1011&4308=%2B64098209088&4309=05315182031747494660&4323=1&4324=2306300900&402=95212340000000012&410=9429300016329&s4t](https://visibility.Seller.com/00/195212342345678909?3301=000045&3312=000030&3322=000040&3332=000050&4300=GS1+New+Zealand+(Auckland+Office)&4302=Level+5%2C+25+College+Hill&4304=Freemans+Bay&4305=Auckland&4307=NZ&420=1011&4308=%2B64098209088&4309=05315182031747494660&4323=1&4324=2306300900&402=95212340000000012&410=9429300016329&s4t)



Scan4Transport

“enables freight to talk”



Improved Interoperability

Consistent Label Data Standards No Need to Relabel

Consistent Transport Unit Identifier Across Journey



Figure 3.3.1-1. Format of the element string

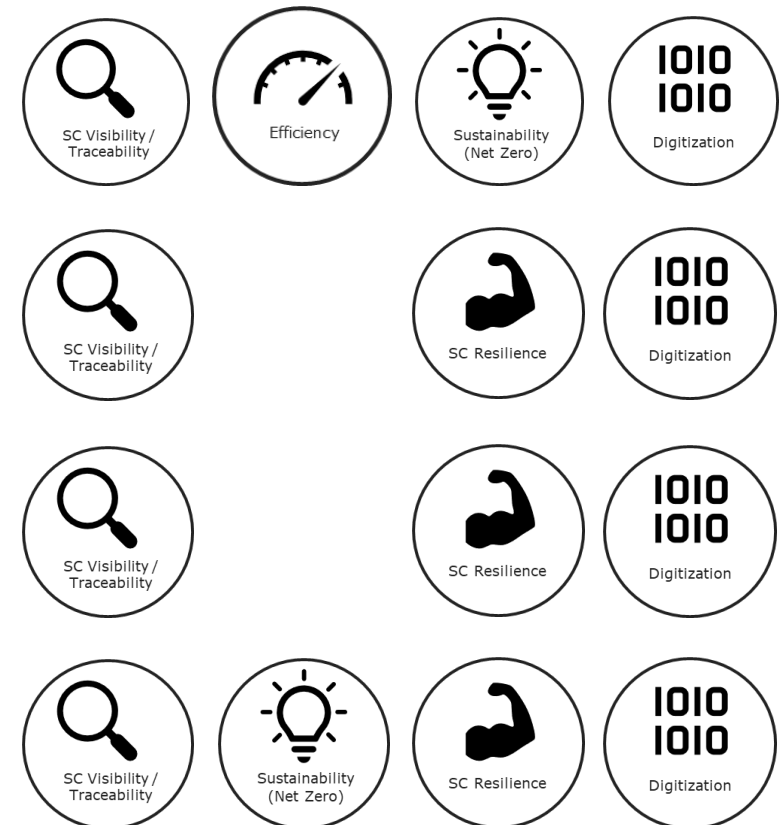
GS1 Application Identifier	SSCC (Serial Shipping Container Code)																	
	Extension digit	GS1 Company Prefix															Serial reference	Check digit
0 0	N ₁	N ₂	N ₃	N ₄	N ₅	N ₆	N ₇	N ₈	N ₉	N ₁₀	N ₁₁	N ₁₂	N ₁₃	N ₁₄	N ₁₅	N ₁₆	N ₁₇	N ₁₈



Enhance Process

All required info is on the box

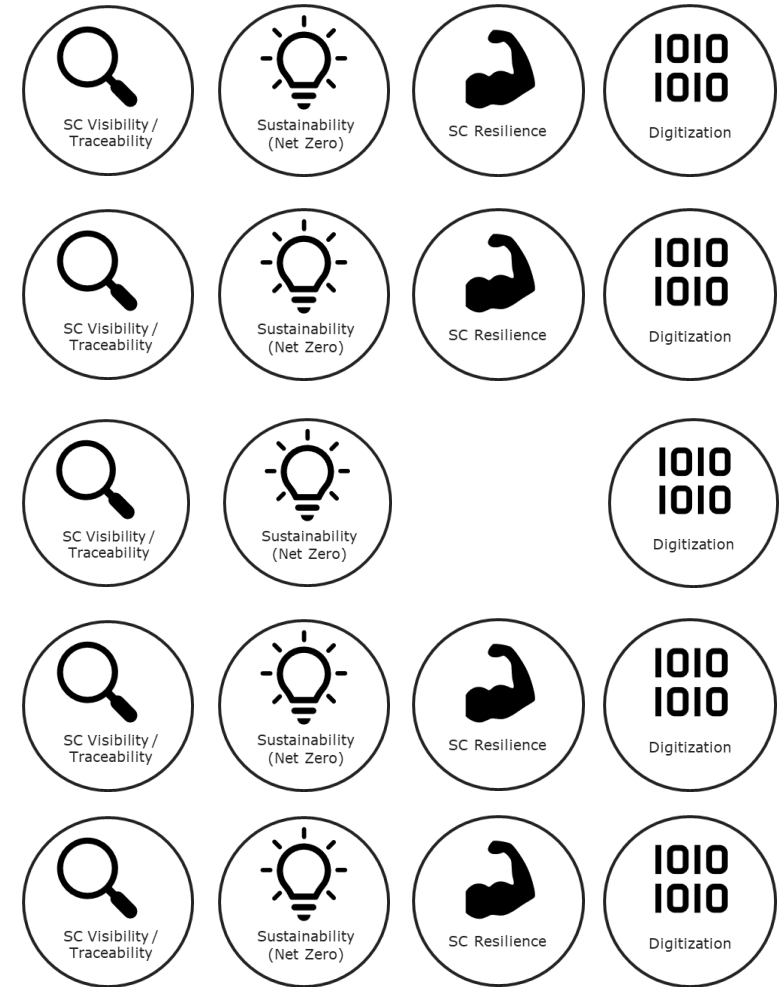
- Weights and dimensions for
 - better planning
 - prevention of injuries
- Prevent (un)loading errors using consignment information
- Improved safety and compliance e.g., hazardous materials
- Geo/GPS-coordinates enabling accurate delivery everywhere



Increase Customer Satisfaction

All required info is on the box

- Shipment information to keep transport units together for final delivery
- Understand service requirements
 - Speed of delivery (e.g., express)
 - Delivery Window
- Keep recipient informed contact details
- Reduce failed deliveries
Signature-needed vs Authority-to-Leave
- Simplify Reverse Logistics
Return address



How may we solve the Problem?

Scan4Transport

- Enabling dynamic interaction with stakeholder systems



What systems may be accessed?



- Any system that is connected to the Internet e.g.,
 - Seller's Delivery Visibility platform
 - Logistic Service Provider (LSP) own system/s
 - Any third-party systems, which includes
 - Other LSP system/s
 - Registry Platforms for Locations or Organisations

Accessing the Seller's Visibility Platform



Why should you do it?

- **Delivery location may have changed**
 - Geo/GPS-coordinates may have been added
 - Address details may have been corrected
- **Delivery date and/or time may have changed**
- **Delivery Instructions may have changed**
 - Signature-Required vs Authority-to-Leave
- Information e.g., related to the **Sales Order/Shipment** may not be on the box
- **Confirm Delivery to the Seller**



[https://visibility.Seller.com/00/195212342345678909?3301=000045&3312=000030&3322=000040&3332=000050&4300=GS1+New+Zealand+\(Auckland+Office\)&4302=Level+5%2C+25+College+Hill&4304=Freemans+Bay&4305=Auckland&4307=NZ&420=1011&4308=%2B64098209088&4309=05315182031747494660&4323=1&4324=2306300900&402=95212340000000012&410=9429300016329&s4t](https://visibility.Seller.com/00/195212342345678909?3301=000045&3312=000030&3322=000040&3332=000050&4300=GS1+New+Zealand+(Auckland+Office)&4302=Level+5%2C+25+College+Hill&4304=Freemans+Bay&4305=Auckland&4307=NZ&420=1011&4308=%2B64098209088&4309=05315182031747494660&4323=1&4324=2306300900&402=95212340000000012&410=9429300016329&s4t)

Accessing a Third-Party Registry



Why should you do it?

- You may use the **Ship-to Location ID** to access a reliable source (e.g., industry or governmental).
 - **Find out more about the Delivery Address**
 - Address details may be checked
 - Geo/GPS-coordinates may be found
 - Opening hours
 - Access restrictions
 - Related Organisation information
 - And much more
- As subcontracting LSP, access the outsourcing LSPs system using the **Transport Unit ID** as the primary key. The LSP system may offer similar functionality as the Seller's system on previous slide. including Confirmation of Delivery

[https://Registry.ThirdParty.org/00/195212342345678909?3301=000045&3312=000030&3322=000040&3332=000050&4300=GS1+New+Zealand+\(Auckland+Office\)&4302=Level+5%2C+25+College+Hill&4304=Freemans+Bay&4305=Auckland&4307=NZ&420=1011&4308=%2B64098209088&4309=05315182031747494660&4323=1&4324=2306300900&402=95212340000000012&410=9429300016329&s4t](https://Registry.ThirdParty.org/00/195212342345678909?3301=000045&3312=000030&3322=000040&3332=000050&4300=GS1+New+Zealand+(Auckland+Office)&4302=Level+5%2C+25+College+Hill&4304=Freemans+Bay&4305=Auckland&4307=NZ&420=1011&4308=%2B64098209088&4309=05315182031747494660&4323=1&4324=2306300900&402=95212340000000012&410=9429300016329&s4t)

Accessing a Third-Party Registry



How do you do it?

- Directly (knowing the platform address)
 - <https://www.nzbn.govt.nz/mynzbn/opndetails/9429000000000/9429300016329/>
In this case the NZ Government Platform for Business Numbers & Organisation Parts
 - <https://www.portmasterdata.com/id/9429300016329>
In this case the Global Location Data Platform demo application
- Indirectly e.g., via GS1 Resolver
<https://id.gs1.org/414/9429300016329>
In this case there is a default target associated with the GLN



Demo GS1 NZ Auckland - NZBN



< BACK TO GS1 NEW ZEALAND INCORPORATED (NZBN 9429000000000) < BACK TO GS1 NEW ZEALAND INCORPORATED (NZBN 9429000000000)

+ VIEW 4 ORGANISATION PARTS: — VIEW 4 ORGANISATION PARTS:

ORGANISATION PART (3 OF 4) << PREVIOUS NEXT >>

GS1 New Zealand (Auckland Office)

Organisation Part Number 9429300016329
Purpose MOH Covid Poster Location
Phone Number 64 09 8209088 (Other)

Email Address support@gs1nz.org (Contact Detail)

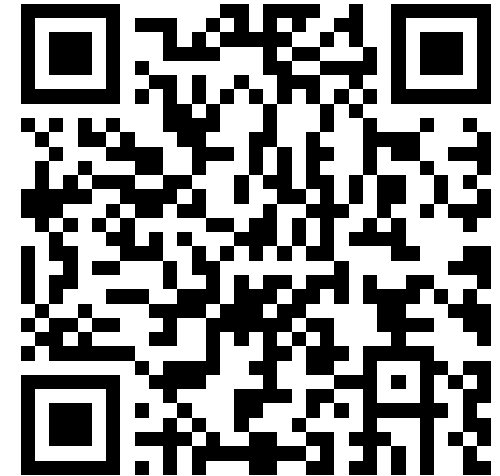
Physical Address Level 3, 25College Hill
 Freemans Bay
 Auckland
 New Zealand
 1011

Status ACTIVE

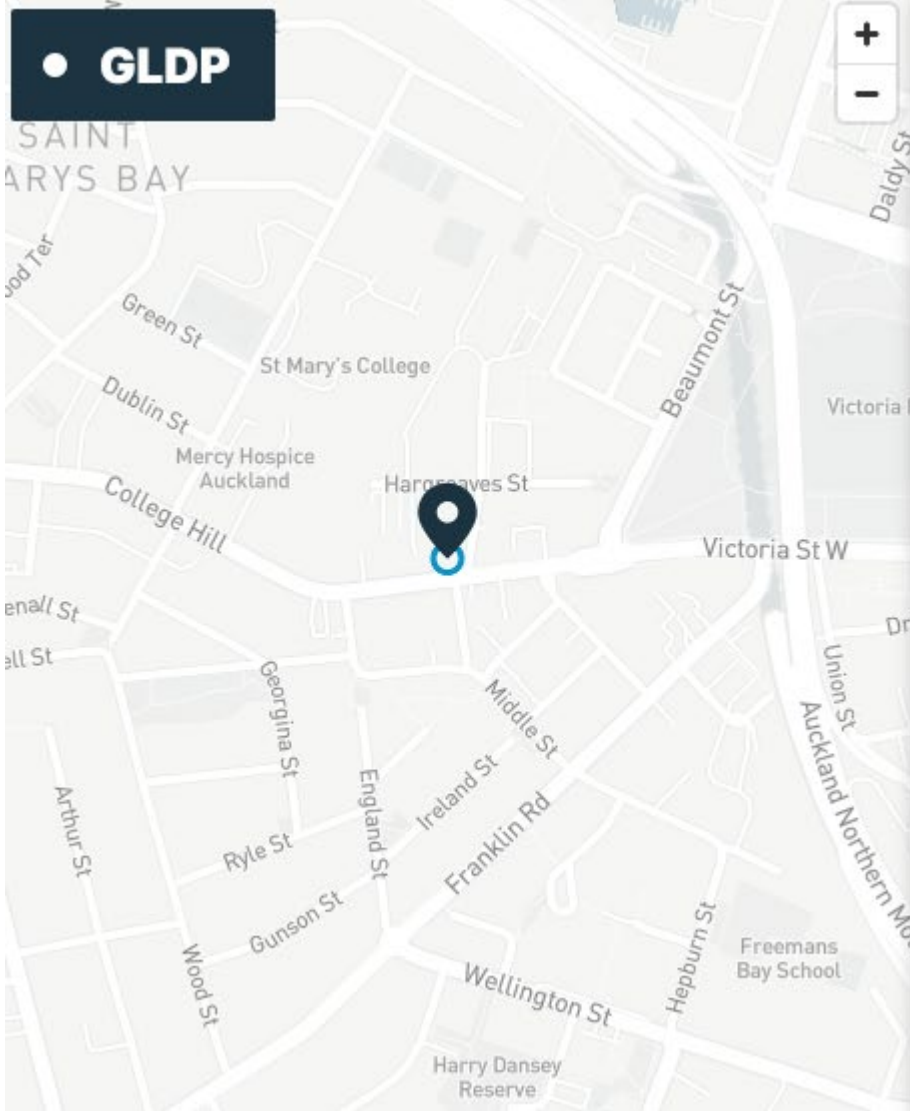
NAME	OPN	PURPOSE
GS1 New Zealand Wellington (Head Office, Ground Floor)	9429302695232	MOH Covid Poster Location, Courier Drop Off
GS1 New Zealand (Christchurch Office)	9429300016626	MOH Covid Poster Location
GS1 New Zealand (Auckland Office)	9429300016329	MOH Covid Poster Location
GS1 New Zealand Wellington (Head Office, 2nd Floor)	9429300016183	MOH Covid Poster Location



Search the NZBN Register



Demo GS1 NZ Auckland - GLDP



x

GS1 New Zealand (Auckland Office)

Verified & Audited

Global reference

Assigned id: 9429300016329

GCP: 942930

Position

Latitude: -36.8481797

Longitude: 174.749466

Attributes

Name: GS1 New Zealand (Auckland Office)

GS1 linked data

Title	Link relationship type	Media type	Language
NZ Location Registry	https://gs1.org/voc/masterData	text/html	

Demo GS1 NZ Auckland – Seller Site



Delivery to:

GS1 New Zealand (Auckland Office)
attn. Michiel Ruighaver
Level 3, 25 College Hill
Freemans Bay
Auckland
New Zealand (NZ)
1011

Delivery Instructions:

Do not deliver before 30 June 2023, 09:00 local time.
Obtain signature from recipient.

Tracking ID for your package:

195212342345678909

Package details

Weight: 4.5 KGM (Kilogramme)
Length: 0.30 MTR (30 centimetres)
Width: 0.40 MTR (40 centimetres)
Depth: 0.50 MTR (50 centimetres)

Your order:
95212340000000012

Additional information Deliver to
GLN: 9429300016329
[New Zealand Business Number Registry](#)

[Global Location Data Platform \(GLDP\)](#)



<https://fixlog.consulting/195212342345678909>

Products included in your package

Product Code	Description	Quantity
95261000003455	Tablet Computer	1
95264000006785	Tablet Computer cover "Don't touch me"	1

Tracking details for your Package/Item

Event	Where	When
Item in hands of first carrier	Seller's Warehouse Melbourne Australia; GLN: 9526678000124	25 June 2023, 15:45 (local time)
Item	Melbourne International airport, Australia; GLN: 9527080003451	25 June 2023, 22:50 (local time)
Item arrived in destination country	Auckland International airport, New Zealand; GLN: 9528108000896	26 June 2023, 4:05 (local time)

ACTIONS

Confirm Delivery

Confirm Collection

In Conclusion



- With Scan4Transport the **minimum required information is on the box**
- Scan4Transport facilitates the **seamless collaboration of ALL stakeholders** involved in transporting Goods from Seller to Buyer, be they large or SME operators
- Scan4Transport **helps eliminate waste** from current transport and logistics processes
- Scan4Transport dynamic access to various sources of information **enables new ways of working in transport and logistics**

Scan4Transport links the Physical Internet with the Digital Internet

Discussion

Questions and Answers

IPIC 2023

9th International
Physical Internet Conference

June 13-15, 2023
Athens, Greece

13-15 JUNE 2023 Athens, Greece
www.pi.events/IPIC2023

alice! Alliance for
Logistics Innovation
through Collaboration
in Europe



Expanding the logistics Scope

Contact Jaco



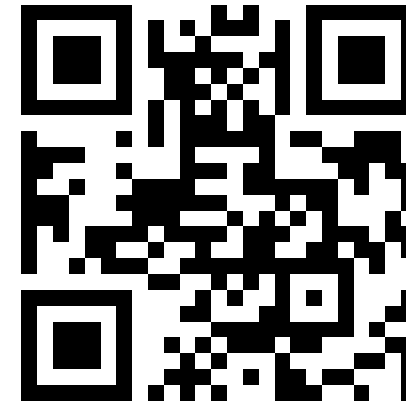
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Contact Michiel



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E: michiel.ruighaver@gs1au.org

Back-Up Slides

- Where to find more information



Leverage the Scan4Transport Website



Home > Industries > T&L > Scan4Transport



[S4T Website](#)

Scan4Transport is a global standard for encoding transport data on a Logistics Label. The standard supports companies across the transport process including first mile, sortation and last mile activities and enables them to keep pace with the

www.gs1.org/industries/transport-and-logistics/scan4transport

- Informative docs/videos
- Scan4Transport Guideline
- Pilot report/video
- Demo/implementation tools
- GS1 DigitalLink video



Scan4Transport – A Tale of Two Labels



<p>Typical transport label</p>	<p>Standardised 2D barcode</p>	<p>The new smart Scan4Transport label</p>
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<https://www.youtube.com/watch?v=xz1kSiJoK-4>



Scan4Transport - Full Support from Global Label Creation Solution Provider



GS1 | **S4T**
Scan4Transport
Delivering digital capability in the transport process

GS1 Transport Standards
Certified labelling software

Scan4Transport

Download the BarTender® Scan4Transport label templates for simplified compliance.

Scan4Transport

Data Matrix
 QR Code

URI Stem:

Transport Company:
Service Code Description:
SSCC: SSCC in full SSCC in parts
SSCC:
Company Prefix:
Serial Reference:
Ext. Digit:

Ship to:
Company:
Contact:
Tel:
Address Line 1:
Address Line 2:
Suburb:
Locality:
Region:
Postal Code:
Country:

Return to:
Company:
Contact:
Tel:
Address Line 1:
Address Line 2:
Suburb:
Locality:
Region:
Postal Code:
Country:

Routing Code:
Ship to GLN:
Ship for GLN:
 Dangerous goods
 Authority to leave
 Signature required
Release Date:
Delivery not before: Date:
Enter Time:
Delivery not after: Date:
Enter Time:
Delivery instructions:
Dimensions: Width: Length: Height: Volume:

Scan4Transport

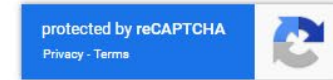
SERVICE	STANDARD
GS1C	9312345C001
GSIN	93123450000099992
SHIP TO GLOBAL LOCATION NUMBER	9312345000012
SHIP FORWARD GLOBAL LOCATION NUMBER	9312345000029
TRANSPORT COMPANY	GS1 Transport
ROUTE	MEL
DELIVERY TO	GS1 Melbourne Office Attn: Michiel Ruijghaver Nexus Business Park 8 Nexus Court MULGRAVE Melbourne VIC 3170 AU Australia PH (041) 2 830 09 5
DELIVERY INSTRUCTIONS	Release Date: 22-Jul-2022 Not delivery before: 25-Jul-2022 09:00 Not delivery after: 29-Jul-2022 17:00 This is a Certification Test
DELIVERY FROM	GS1 Sydney Office Attn: Tony Repaci Lakes Business Park 2-4 Lord St Botany Sydney NSW 2019 AU Australia PH (029) 6 952 20 0
A.T.L	
SIG REQUIRED	
WIDTH	0.20m
LENGTH	0.10m
HEIGHT	0.30m
WEIGHT	7.000kg
ITEM	1 of 1
VOLUME	0.60m ³

SSCC:

Phone number

Yes, I want to receive email updates about BarTender products, services and events from time to time. I understand I can unsubscribe at any time.

I agree to allow Seagull Scientific to store and process my personal data in compliance with their [Privacy Policy](#).*



GET THE TEMPLATE



<https://info.seagullscientific.com/scan4transport>