

GS1 IN EUROPE REGIONAL FORUM



23 - 26 October 2023 Athens, Greece

RAIL – BALANCING BETWEEN LOCAL, REGIONAL AND GLOBAL ITINERARIES

Tue 24 Oct, 11:00 – 12:30



GS1 Competition Law Caution

- GS1 operates under the GS1 Competition Law Caution. Strict compliance with competition 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 caution is available via the link below, if you would like to read it in its entirety: <http://www.gs1.org/gs1-competition-law-caution>



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REGIONAL FORUM**

23 - 26 October 2023 Athens, Greece



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ETIQUETTES ...

IN-PERSON
USE MICROPHONE
FOR QUESTIONS

ONLINE
PLEASE STAY MUTED
RAISE HAND OR USE
CHAT FOR QUESTIONS

FOR ALL
ENJOY THE SESSION &
THE REGIONAL FORUM

THE SLIDE DECK AND THE RECORDING OF
THE SESSION WILL BE SHARED AFTERWARDS

WELCOME & INTRODUCTION

Agenda

- French POC Rail EPCIS
Philippe LUCIANI (GS1 France), François LENCI (Alstom), Claude BAUDRY (Wabtec), Uwe Rüdel (GS1 Switzerland), Falk Nieder (EECC)
- Welding in Rail - How EPCIS connects Stakeholders in Switzerland
Dominik Halbeisen (GS1 Switzerland)
- Centre of Excellence Rail – Insights into local and global activities
Thorsten Kirschner (GS1 Germany)



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Thorsten Kirschner,
Global Lead – Centre of Excellence Rail
GS1 Germany



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23 - 26 October 2023 Athens, Greece



FRENCH POC RAIL EPCIS



French POC Rail EPCIS

GS1 Regional Forum - 24 october 2023 - Athens



Philippe LUCIANI
Sector Manager Technical Industries
GS1 France



François LENCI
GS1 and Digitalization manager
ALSTOM



Claude BAUDRY
Transformation Engineering Director
WABTEC



Uwe RUDEL
Head of Industry Management for Technical Industries
GS1 Switzerland



Falk NIEDER
Head of Software and Traceability Solutions
EECC



Agenda



French context



GS1 standards, a driver for the digital transformation of the rail industry

CONTEXT



Strategic contract for the railway sector in France



Opening of the network - 4 railway packages - European regulation



Digital continuity and international competitiveness



Sustainable mobility

THE FOUNDATIONS OF GS1 STANDARDS



PERSPECTIVES



Share product data in a standardised and automated way between stakeholders and throughout the life cycle

Speed up the transition to circular economy (sustainable mobility) through the digitalisation of data sharing



"The French Railway Industries Association supports, without reserve, the action of the strategic committee of the sector, the identification and standardisation of railway parts and the choice of GS1. This identification is the essential basis for the digital transition, which is why FIF encourages the deployment of GS1 among all the stakeholders in the sector."
Louis Nègre
President



"Fer de France has been a supporter of this approach for a long time, which simplifies and promotes communication and good traceability between stakeholders. The GS1 standards are crucial for boosting the performance and sustainability of the sector."
François Meyer
Managing Director



"The RATP MRF department is adopting GS1 standards for the identification of all the repairable parts of future rolling stock. This choice illustrates the determination to be a major stakeholder in the development of the railway sector. To meet the challenges of safety, traceability and maintenance, it is essential to have reliable and robust data. The GS1 standard meets these needs."
Eric Fresquet
Technical Unit Manager Industrial Maintenance & Engineering



"The deployment of GS1 standards is strategic for SNCF Voyageurs in order to improve the identification and traceability of parts throughout their life cycle. To anticipate and support the change, it is important that each player in the sector adopts the approach as soon as possible."
Xavier DUIN
Directeur du Matériel



"The GS1 standard offer a mature solution to the question of digitalizing the marking of components in the railway sector. The unique identification, capture and sharing of information according to GS1 standards are at the heart of the challenges facing our industry in France and on international level."
Pierre Fleury
Vice-President Development Rolling Stock and Components



"The standardisation of identifiers shared by key stakeholders in the sector will enable the efficiency of many processes and open up new perspectives in terms of traceability, safety and maintenance. The TGV-M initiative, as well as the German dynamic, will make it possible to secure this approach for the digital continuity of the sector. The next step is to integrate the entire railway sector together with the infrastructure."
Frédéric Bernardin
VP French Innovative Project



"Knorr-Bremse has now integrated GS1 standards into the execution of its most emblematic projects, such as the TGV-M, and is convinced of the benefits of deploying this standard in the railway industry, for equipment manufacturers, for manufacturers and for operators."
Eric Tassilly
Chairman and Managing Director Knorr-Bremse Railway systems France



"The application of GS1 standards allows a single language to be used between the stakeholders in the value chain, from the equipment manufacturer to the end user. It also contributes to the digital transformation of the sector and the collaborative implementation of new processes."
Denis Moreaux
Directeur Transit Digitalisation

GS1 standards implementation status



Identify GIAI - SGTIN

Identification of Components and Parts in the Rail Industry - Application Standard

Rules on the use of the GS1 keys and attributes for the identification and marking of components and parts in the rail industry

Release 1.1, Ratified, Sep 2018

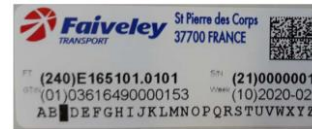
Vehicules → **GIAI (EVN included)**

MRO →

- GIAI
- SGTIN
- GTIN + complementary AI



Capture GS1 Datamatrix



Share



Share: With GS1 standards of course !!



EPCIS and CBV Implementation Guideline

Using EPCIS & CBV to increase supply chain visibility

Release 2.0., Ratified, Mar 2023



Share



This is also an important requirement, as it will enable to comply in part with European Parliament Directive (EU) 2016/797.

In particular the article 57 :

"...To ensure traceability of vehicles and their history, the references of the vehicle authorizations for placing on the market should be recorded together with other vehicle data..."

Proof Of Concept



Issues and objectives for the French Rail Community



Issues :

- Interoperability of exchanges between the different players
- Streamlining of flows
- Monitoring of maintenance operations

Objectives :

1. **Validate the feasibility** of our use cases
2. **Understand** the implementation of the **EPCIS GS1 standard**
3. **Show the added value** of data sharing for the sector
4. **Identify the orientations** for the points to be addressed subsequently (system architecture, IT infrastructures, access security, encryption, data ownership, etc.)
5. **Convince business decision-makers** to widely deploy GS1 as a business project (budget, resources, etc.)



The POC will contribute to the digitalization of the sector by improving the quality and efficiency of exchanges (product attributes, events linked to the life of the product, etc.)

Scope of the project - starting points



Goal of the project : Creation of a data exchange platform between the different actors in an interoperable EPCIS format. The exchanges will be simulated through the platform and will respect the real use cases of the different actors

Platform powered by  **and driven by** 

3 Use cases scenarios

- Component integration up to Vehicle level
- Repair flow
- Segmented Data sharing

Technical Data focus

- EVN vehicle EVN assignment
- Data processing/sharing (train configuration, part research, ...)
- Index revision change report & tracking
- Product Master Data attribute sharing & consolidation

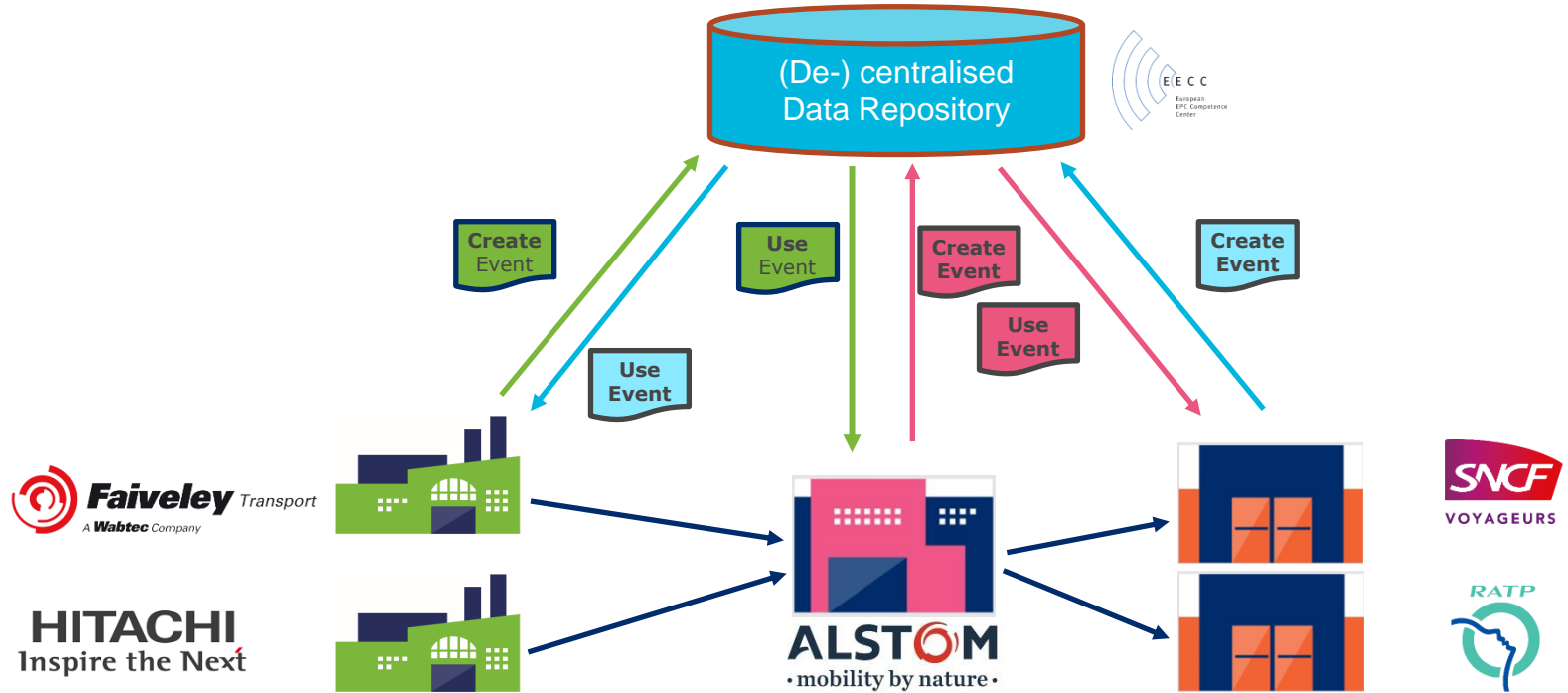
Transactional events focus

- Main Business steps monitoring (production, test, integration,...)
- Logistics events monitoring (shipment, reception,...)
- Parent-Child unpairing/pairing tracking

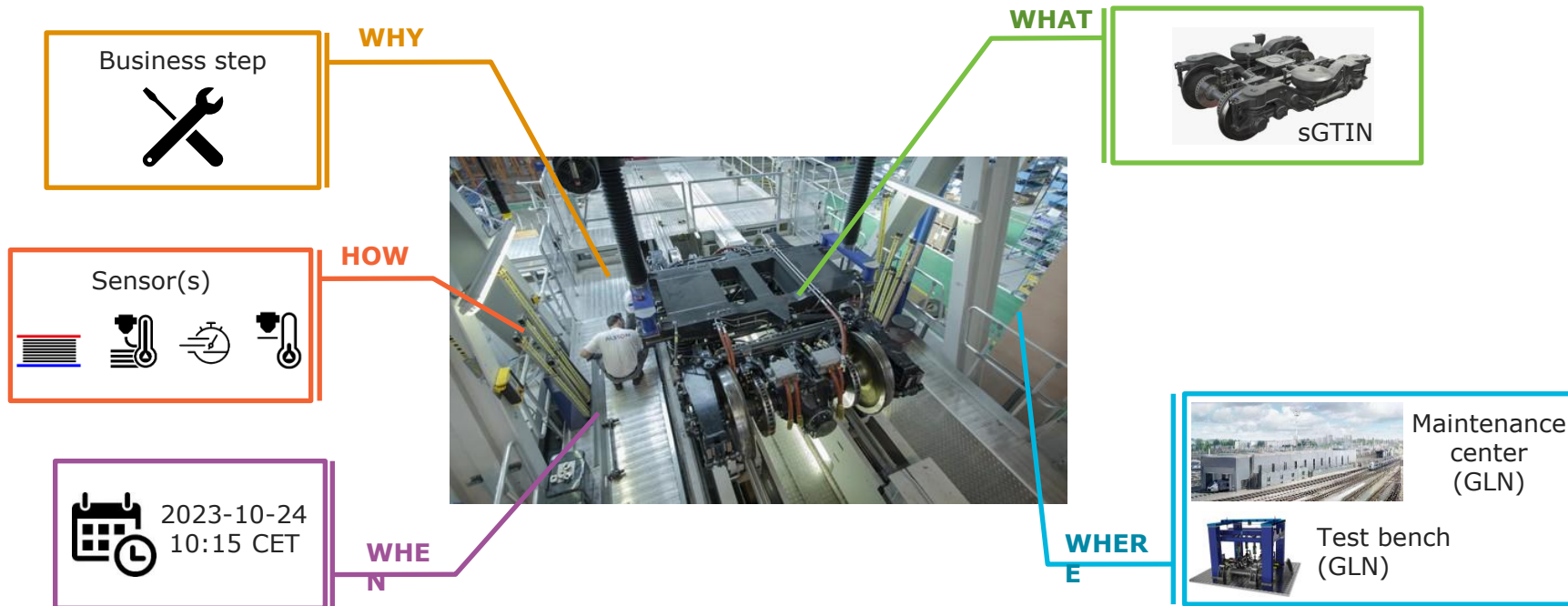
Differentiated Data processing according to the actors

- Public Data / Restricted Data
- Manufacturers can only access Data related to their scope of deliveries
- Railway Operators access to all Data

PoC architecture – How does it work ?



The EPCIS standard - A pivotal format for describing events occurring in the supply chain



Point to date (demonstration)



Rail EPCIS

ALSTOM

 Hitachi Rail STS



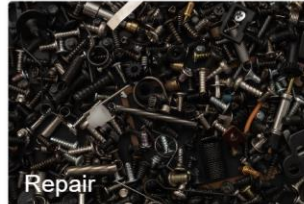
 SNCF
VOYAGEURS



Car history book

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

EXPLORE



Repair

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

EXPLORE



Discovery

Lorem Ipsum is simply dummy text of the printing and typesetting industry. Lorem Ipsum has been the industry's standard dummy text ever since the 1500s, when an unknown printer took a galley of type and scrambled it to make a type specimen book.

EXPLORE

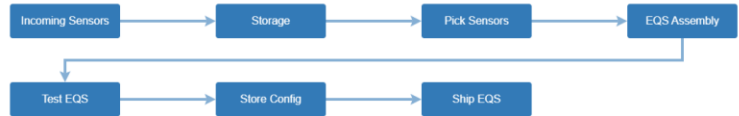
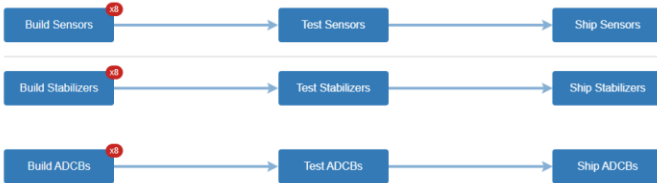


Point to date (demonstration)



Car History Book

BACK RESET ALL CAR HISTORY



Point to date (demonstration)



Car History

EXPORT XLSX

Search

GTIN
0361649000054

Serial



Doors



Stabilizers



EQS



Sensors

GTIN	Serial	Options	GTIN	Serial	Options	GTIN	Serial	Options	GTIN	Serial	Options
0361649 000005 4	1093341		0361649 000007 8	1093341		0376033857 008 4	9969501		0361649 000123 5	2560927	
0361649 000005 4	8326098		0361649 000007 8	8326098		0376033857 008 4	3635059		0361649 000123 5	312529	
									0361649 000123 5	1093341	
									0361649 000123 5	8326098	

Train: 1
Wagon: urn:epc:id:glai:361654.618718033200
EVN: 61 87 1803 320-0



Benefits



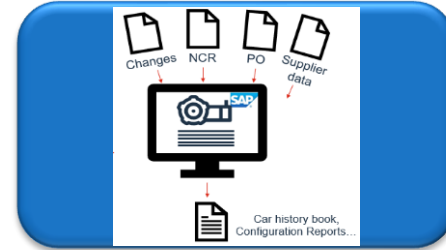
Expected Benefits



Data Processing (Reliability Growth,...)



Configuration Management



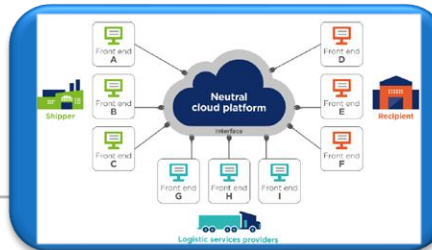
Digital Product Passport



Réglementation ESPR :
European Sustainable Product Regulation



Logistic Management



The Global Language of Business

IP Protection



Next steps

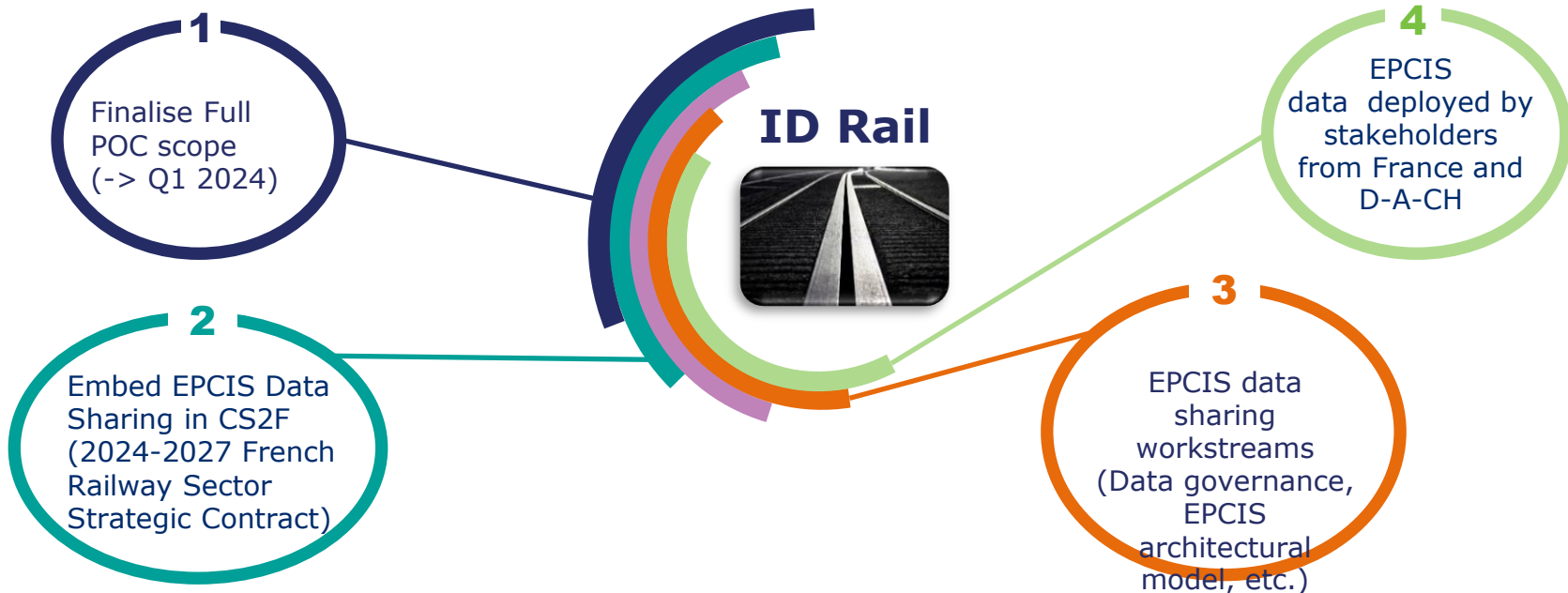


Next steps of POC between Rail stakeholders



**Short
Term**

Mid/Long Term



Questions - Answers





It's in everyone's interest to speak the **same language**

GS1 France
21 Boulevard Haussmann
75009 Paris
www.gs1.fr

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WELDING IN RAIL
HOW EPCIS CONNECTS STAKEHOLDERS IN SWITZERLAND



The Challenge: Data on Rail Weldings

Rail weldings connect two pieces of rail.



The Challenge: Data on Rail Weldings

- Weldings are highly safety relevant (failure is not a option)...
- ...and a lot of data needs to be captured
- ...in the past on paper

The image shows eight handwritten forms, numbered 1 through 8, arranged in a 4x2 grid. Each form is a railway welding inspection form. The forms contain the following fields and data:

- Form 1:** GIAI Code: 23330, Chargen Nr.: 0020066, 0420. Fields include checkboxes for REE-088 I, REE-088 IV, REE-088 V, and REE-088 VI. Technical specifications include VC-800, VC-1100, VC-1200, and PO-1200. A 'Zeit A-E' field is filled with '30' min and '30' s. A 'Garantie' field is filled with '1' and '2'. A 'Schweisser' field is filled with '1', '2', '3', and '4'. A 'Bemerkung' field is empty.
- Form 2:** GIAI Code: 23303, Chargen Nr.: 0020066, 0432. Similar structure to Form 1, with 'Zeit A-E' filled with '30' min and '30' s.
- Form 3:** GIAI Code: 23342, Chargen Nr.: 0020066, 0431. Similar structure to Form 1, with 'Zeit A-E' filled with '30' min and '30' s.
- Form 4:** GIAI Code: 23364, Chargen Nr.: 0020066, 0433. Similar structure to Form 1, with 'Zeit A-E' filled with '30' min and '30' s.
- Form 5:** GIAI Code: 23290, Chargen Nr.: 0020066, 0424. Similar structure to Form 1, with 'Zeit A-E' filled with '2' min and '2' s.
- Form 6:** Empty form.
- Form 7:** Empty form.
- Form 8:** Empty form.

The Challenge: Data on Rail Weldings

- Weldings are highly safety relevant (failure is not a option)...
- ...and a lot of data needs to be captured
- ...in the past on paper
- ...in all weather conditions



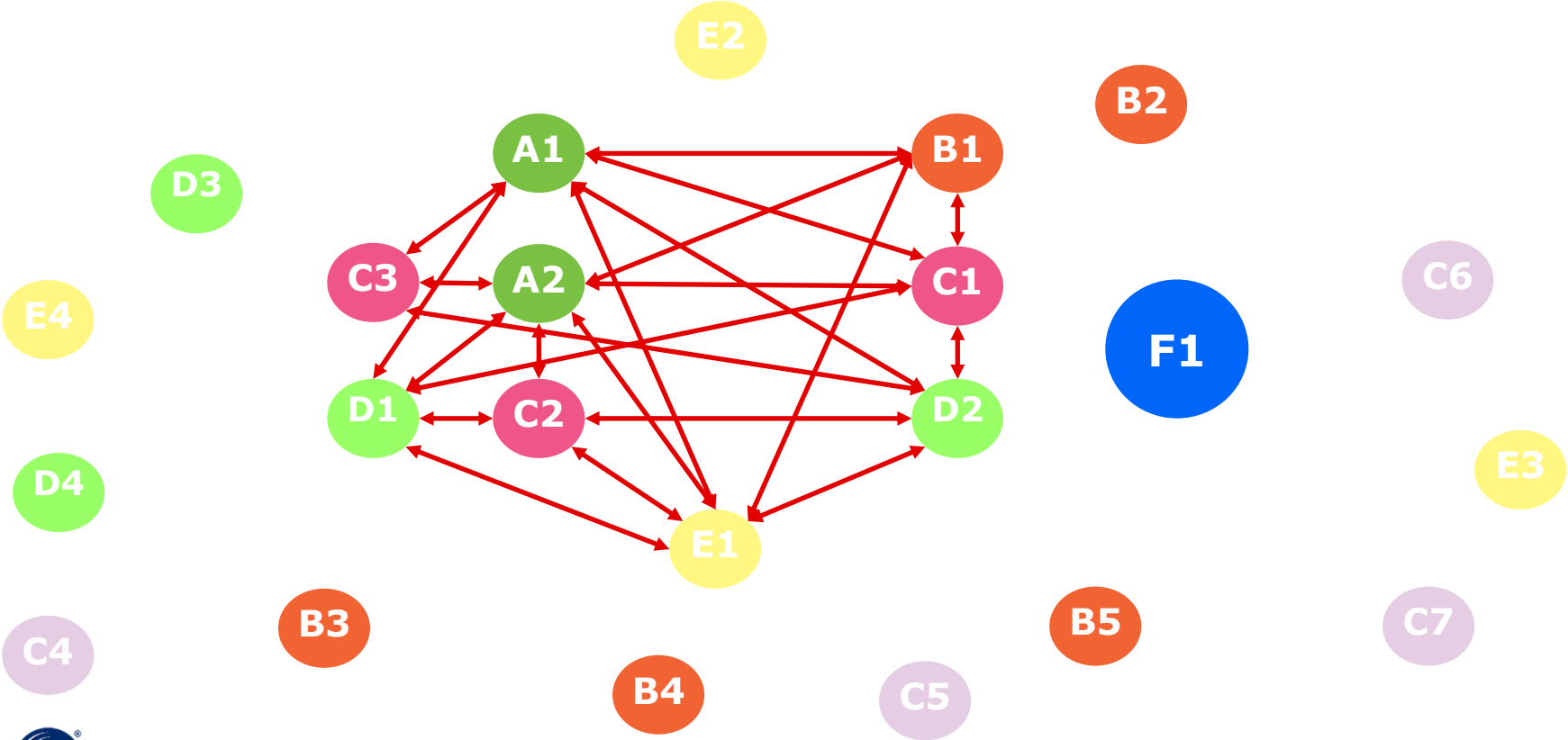
The Challenge: How Can this Be Digitized?

How can this data be available to all parties concerned?

- Between many welding contractors and many rail infrastructure operators?
- Thereby connecting stakeholders from construction and technical industries?
- Without paper?
- With traceability down to each welding?
- The same way for everybody?
- Without using a common software?



Challenge: Data Sharing Looks Easy at First



The Solution: GS1 ID-Keys and EPCIS



The Global Language of Business

Identification of Components and Parts in the Rail Industry - Application Standard

Rules on the use of the GS1 keys and attributes for the identification and marking of components and parts in the rail industry

Release 1.1, Ratified, Sep 2018

GIAI



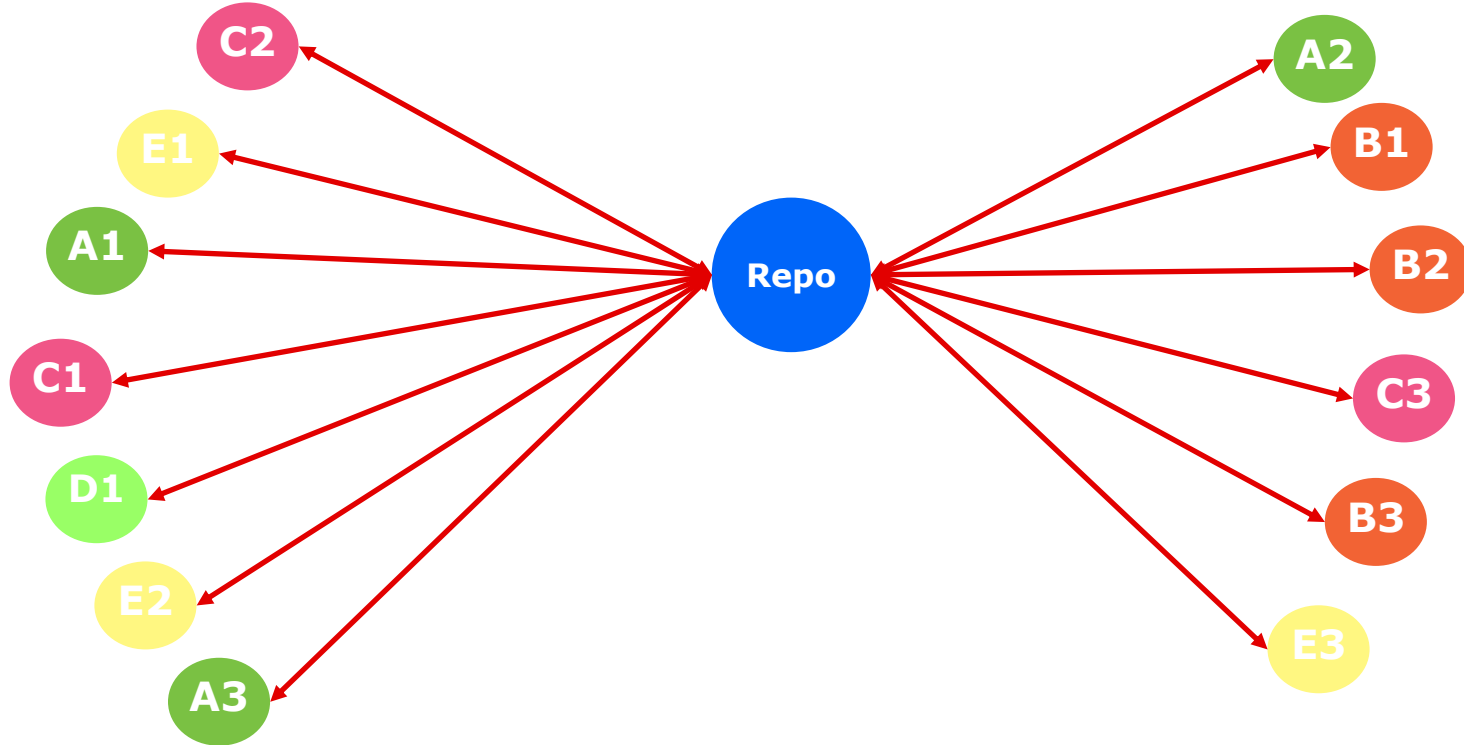
Exchange of component/part lifecycle data in the rail industry Application Standard

Exchange of visibility event data for lifecycle tracking of crucial and safety relevant MRO-objects across manufacturing, maintenance, repair and overhaul processes.

Release 1.0.1, Ratified, Feb 2018

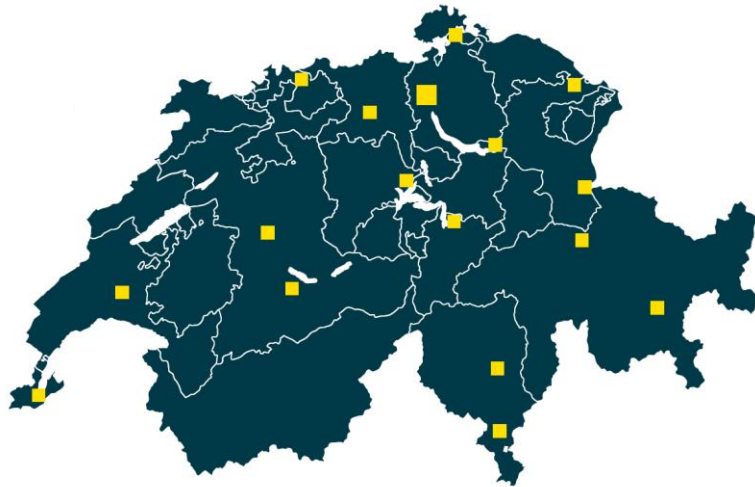
EPCIS

The Solution: Data Sharing with EPCIS

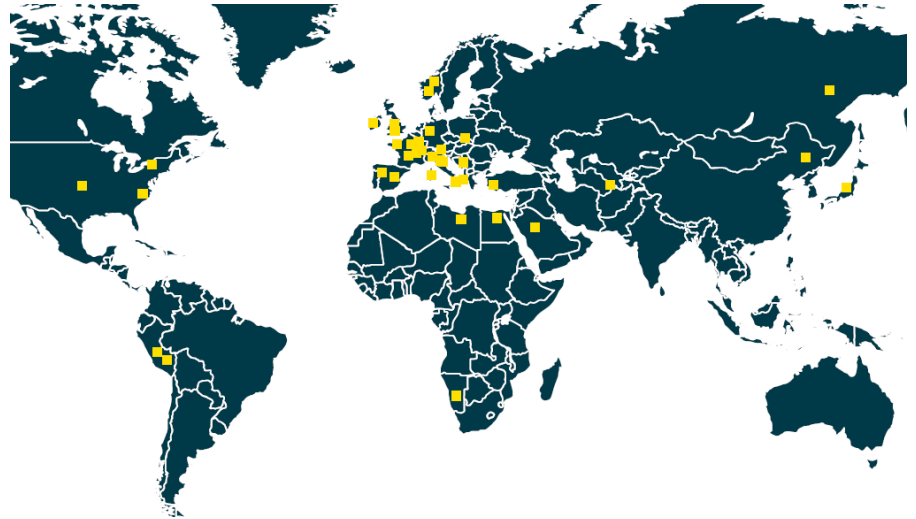


WALO: Connecting Construction and Technical Industries

- WALO – A Swiss construction company...



...with an international footprint.



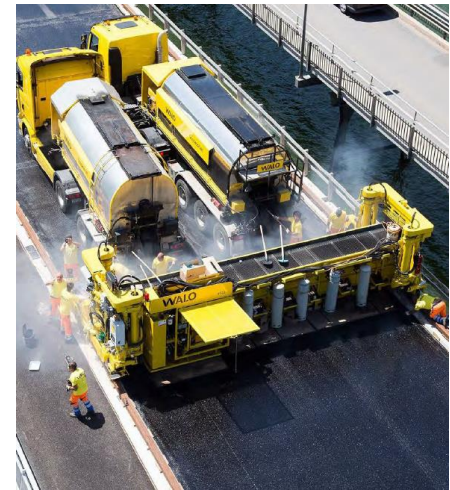
WALO: Connecting Construction and Technical Industries

WALO – with a focus on

- Rail
- Light Rail
- Road
- Bridges
- Infrastructure



Iowa, USA
Floyd River Bridge
UHPC Overlay, 2018

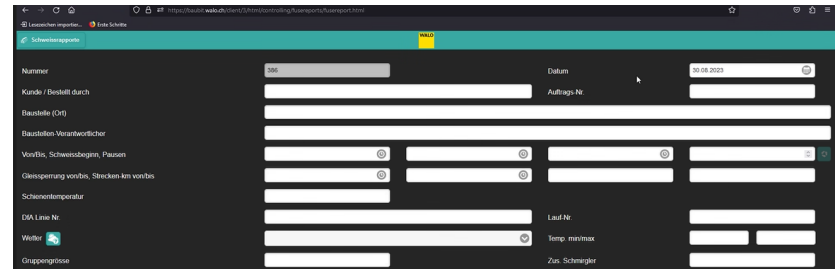
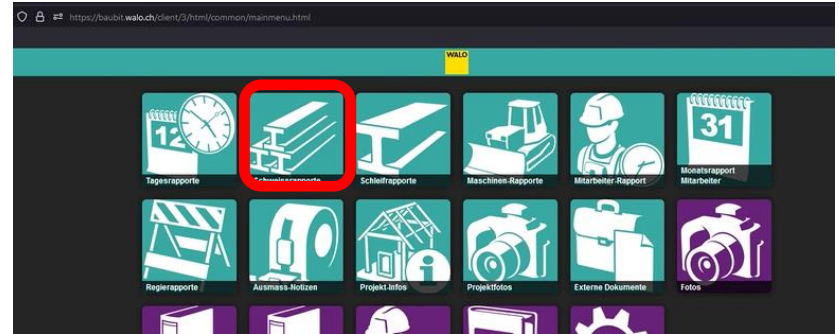


WALO: Connecting Construction and Technical Industries



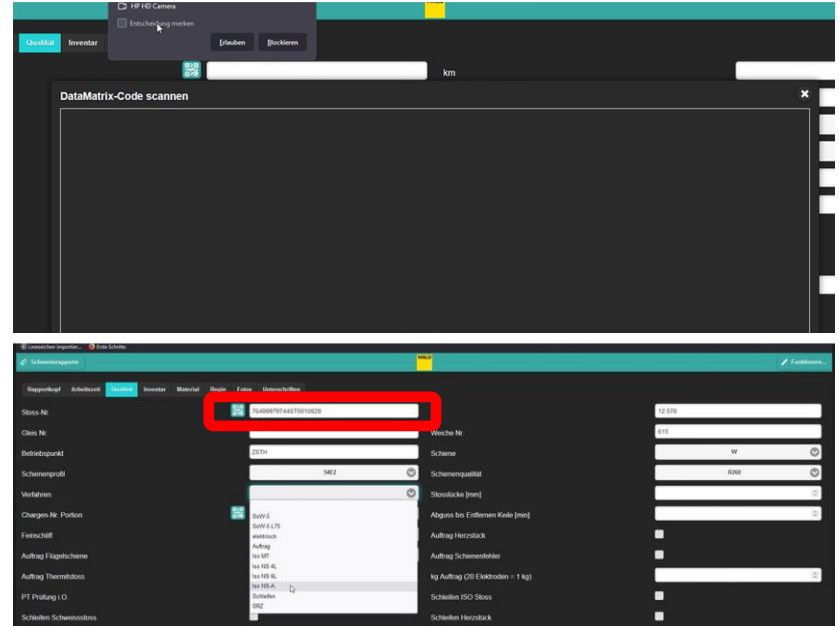
WALO: Let us Follow the Production Process

- Receives PO from an Operator
- Starts welding project in their work order suite
- Fills in project master data



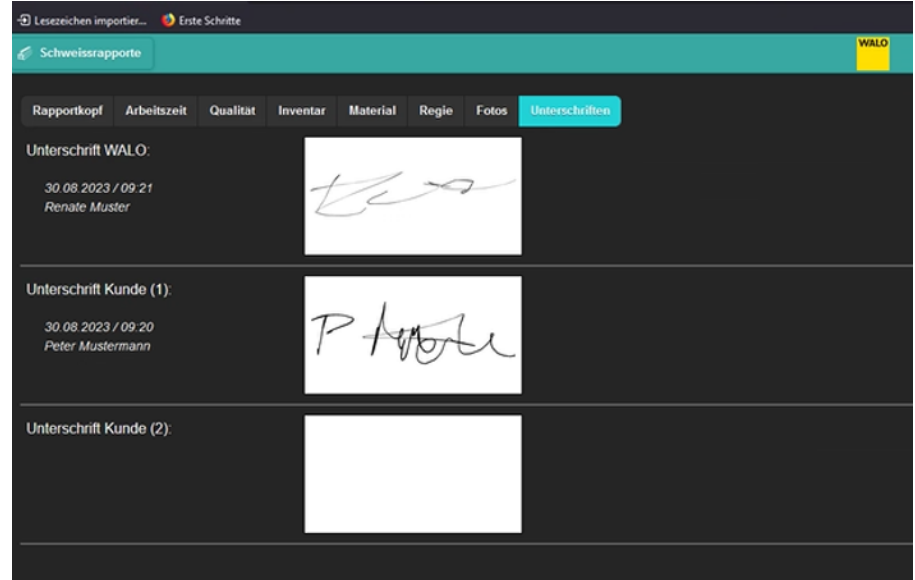
WALO: Let us Follow the Production Process

- On the work site: Execute welding
- Hammer GIAI-Tag in place next to the welding
- Open project on any mobile device
- Scan it. GIAI is now the ID-key of the report
- Populate all dynamic data for this welding



WALO: Let us Follow the Production Process

- Scan batch number of used welding portion
- Insert weather data manually or automatically via GPS-based webservice
- Both parties sign off job handover on mobile device:
 - Welding contractor
 - Infrastructure operator



WALO: Let us Follow the Production Process

- The job coordinator in the office sees job status live
- Once job completed the data is checked one last time
- If ok, data is published to PDF and to an EPCIS repository

The screenshot shows a software interface with a 'Web-Dienst' window. The window has a toolbar at the top with a red box around the 'Exportieren (F2)' button. Below the toolbar are several form fields and checkboxes for printing and email options. At the bottom of the window is a table with the following columns: Nummer, Datum, Verantwortlich, Unterschrift, Export, Exp.-Datum, and Laufnummer. A red box highlights the 'Export' column in the table.

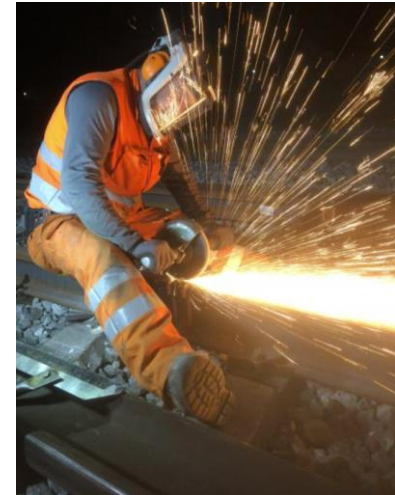
Nummer	Datum	Verantwortlich	Unterschrift	Export	Exp.-Datum	Laufnummer
T						
370	16.08.2023		2/3	<input checked="" type="checkbox"/>	22.08.2023 15:27:55	42720
371	17.08.2023		2/3	<input checked="" type="checkbox"/>	22.08.2023 15:27:55	42720
372	17.08.2023		2/3	<input checked="" type="checkbox"/>	22.08.2023 15:27:55	Intervention
373	19.08.2023		2/3	<input checked="" type="checkbox"/>	22.08.2023 15:32:23	FbE
375	19.08.2023		2/3	<input checked="" type="checkbox"/>	22.08.2023 15:27:55	FbE
376	19.08.2023		2/3	<input checked="" type="checkbox"/>	22.08.2023 15:27:55	FbE
374	20.08.2023		2/3	<input checked="" type="checkbox"/>	22.08.2023 15:27:55	FbE
377	20.08.2023		2/3	<input checked="" type="checkbox"/>	22.08.2023 15:32:23	Intervention
378	20.08.2023		2/3	<input checked="" type="checkbox"/>	22.08.2023 15:27:55	41733
379	22.08.2023		2/3	<input type="checkbox"/>		41724
380	23.08.2023		2/3	<input type="checkbox"/>		41410
381	24.08.2023		2/3	<input type="checkbox"/>		41410
382	24.08.2023		2/3	<input type="checkbox"/>		41507
383	24.08.2023		2/3	<input type="checkbox"/>		

WALO: Let us Follow the Production Process

- In what way does the information arrive in the repository?
- Let us look **LIVE** into the repository, which has been for more than two years now.
- <https://tracelabs.io/nos/xml2xls/30>
- It connects **ALL welding contractors in** Switzerland with **ALL major rail infrastructure operators**
- The access rights to this private repository are managed by the operators

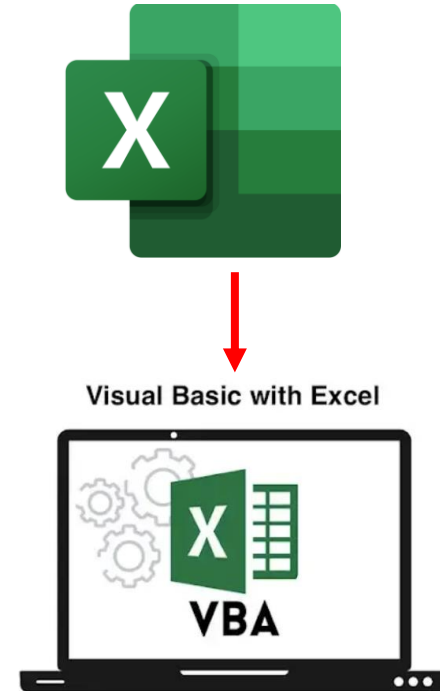
EFSA: EPCIS Allows to Connect Different UIs

- What does the just shown screen flow look like with another welding contractor?
- Let us have a short look at EFSA, a Swiss company with 117 employees (SME).



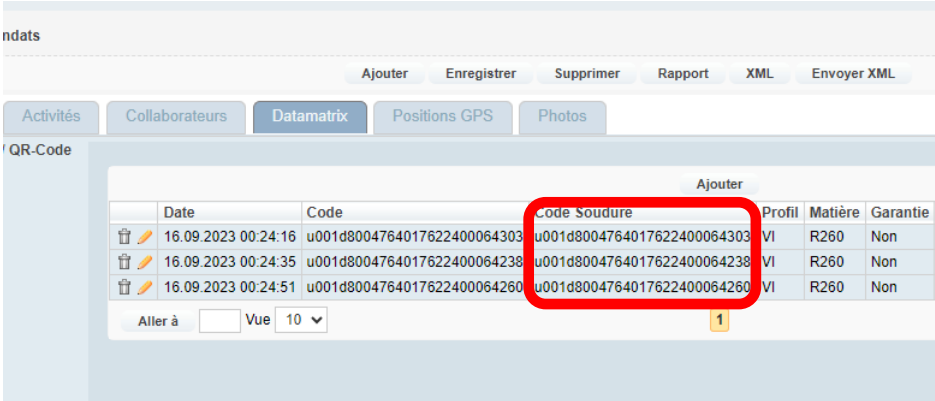
EFSA: Let us Follow the Production Process

- Receives detailed PO from an Operator
- Inputs the PO data via an Excel macro to their order management system



EFSA: Let us Follow the Production Process

- On the work site: Execute welding
- Hammer GIAI-Tag in place next to the welding
- Open project on any mobile device
- Scan it. GIAI is now one the ID-keys linked to a welding report
- Populate all dynamic data for this welding (like weather)



The screenshot shows a software interface with a table of welding data. The table has columns for Date, Code, Code Soudure, Profil, Matière, and Garantie. The 'Code Soudure' column is highlighted with a red box. The table contains three rows of data, each with a trash icon and a pencil icon in the first column. Below the table, there is a search bar with 'Aller à' and a dropdown menu for 'Vue' set to '10'.

	Date	Code	Code Soudure	Profil	Matière	Garantie
🗑️ ✎	16.09.2023 00:24:16	u001d8004764017622400064303	u001d8004764017622400064303	VI	R260	Non
🗑️ ✎	16.09.2023 00:24:35	u001d8004764017622400064238	u001d8004764017622400064238	VI	R260	Non
🗑️ ✎	16.09.2023 00:24:51	u001d8004764017622400064260	u001d8004764017622400064260	VI	R260	Non

EFSA: Let us Follow the Production Process

- Scan batch number of used welding portion
- Both parties sign off job handover on mobile device:
 - Welding contractor
 - Infrastructure operator
- Once both signatures are filled, a report .pdf as well as an EPCIS .xml file are automatically generated and sent




Ajouter Enregistrer Supprimer Rapport XML Envoyer XML

Activités Collaborateurs Datamatrix Positions GPS Photos

Date Non-conformités Photo * Remarques Client

Aucun enregistrement

* Champs obligatoires

Date	Photo *
15.09.2023 23:39:12	 9bdeac8282df12ec W02000000000-18a9ac89a90-
16.09.2023 02:35:11	 1f3ff86affce672 W02000000000-18a9b69b7da-
16.09.2023 02:35:41	 a485738ff00603e9 W02000000000-18a9b6a2d03-

* Champs obligatoires

EFSA: Let us Follow the Production Process

- By the way: The batch number of the welding portion is also encoded by the supplier in a GS1 DataMatrix



GS1 Standards Leverage Individual Environments

- **Data is immediately accessible** by all parties involved
- **Data is found**, not searched (all Swiss rail welding data in one place!)
- **Data is in the same format** for all parties involved
- **Attribute mapping is stable** for all parties involved
- **Easily scalable and big data ready**
- **It is sector neutral** (links construction to technical industries)
- And last but not least: **Paper is eliminated** 😊

WALO



10001760997974421000657

OK

Thank You Very Much for Your Attention!



Ihr Kontakt

Dominik Halbeisen

Solutions Expert Technical
Industries

GS1 Switzerland



[+41 58 800 72 38](tel:+41588007238)



doh@gs1.ch



www.gs1.ch

GS1 IN EUROPE REGIONAL FORUM



23 - 26 October 2023 Athens, Greece



CENTRE OF EXCELLENCE RAIL INSIGHTS INTO LOCAL AND GLOBAL ACTIVITIES

The Global Language of Business

Members of CoE Rail in detail



Australia, Maria Palazzolo has held the role of CEO of GS1 Australia for the past 19 years and has been with GS1 for more than 30 years. During this time, she has overseen the implementation of GS1 standards across multiple sectors supported by committed and passionate GS1 colleagues.

Australia, Tony Repaci has been working at GS1 Australia for 14 months and brings to his new role over 25 years experience in diverse supply chain, automation and asset management solutions with a focus on helping company's with the adoption of GS1 standards to streamline operations and enable industry wide efficiencies.

France, Philippe LUCIANI, is Sector Manager Technical Industries with which GS1 France collaborate on the deployment GS1 standards. Her main role is to support French stakeholders on the improvement of their industrial performance and their digital transformation thanks to GS1 standards. Philippe joined GS1 France since 3 months.

Switzerland, Uwe Ruedel is Manager Industry Engagement for Technical Industries at GS1 Switzerland. From the Nottingham Trent University, he was awarded a PhD degree for a combined experimental and numerical investigation on heat transfer and fluid dynamics. For 18 years he worked within the field of lifetime management and technology development of complex energy systems. During this time, he gained a lot of experience with 3D design and knowledge management tools. Since 2019, he accompanies member companies of GS1 during the process of digital transformation and digitalization.



Germany, Thorsten Kirschner has been working at GS1 Germany for over 20 years and has an in-depth understanding of how GS1 standards can be applied in a wide range of environments. Since 2014, he has been co-responsible for the Technical Industries (incl. Rail) in Germany.

Germany, Sandra Hohenecker has more than 20 years of experience in implementation of GS1 Standards in industry. As Senior Manager Identification + Data Carriers she has been involved in the rail sector activities within GS1 from the very beginning and supports Industry Engagement in Technical Industries since 2011. As an expert in GS1 AIDC standards she is committed to global working groups developing GS1 standards. With focus on technical industries she supports the implementation of GS1 standards in German companies from the sectors railway, construction and plant engineering and construction.

Austria, Gerald Gruber is a project manager for GS1 standards at GS1 Austria. He has been working at GS1 Austria for over 15 years. He is an expert on AIDC, barcode verification and logistics. Since 2016 he is using his experience in the rail sector to help members to optimize their use of GS1 standards.

Slovenia, Branko Šafarič, senior IT consultant at GS1 Slovenia. Engineering degree from University of Mechanics, but soon changed his career intentions, studied computer sciences and worked at various IT companies until almost 20 years ago, when he ended at GS1 Slovenija. Worked on almost all major projects from inhouse IT development, to identification, logistics and most of all on EDI. Some successful projects are in energy sector (electricity and gas), banking sector (CashEDI), XML messages development and so on.



ALSTOM: GS1 SUPPLIER PARTS MARKING SPECIFICATION



ALSTOM	Instruction GS1 SUPPLIER PARTS MARKING SPECIFICATION	Document Reference: CFG-R5-WMS-004 Version A	Application date : September 2023
Written by :	François LENCI / Digitalization Manager		
Verified by :	Maria DE PRADO / Process Development Lead	Ensures that the technical/process accuracy has been checked.	
Approved by :	Matthias JORNS / RSC Configuration Management Director	Orders, by his/her signature, the implementation of the document.	

U: To be used as is

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2.1 ALPHANUMERICAL INFORMATION USING GS1 STANDARD

Information has to be generated and formatted in conformity with GS1 applicable standards. The marking shall be composed of the following information:

- Supplier identification (initials, logo,...)
- Part description
- Supplier number GTIN (01)
- Supplier serial number (mandatory for TI at least) (21)

The unicity of the part shall be guaranteed by the SGTIN ((01)+(21)).

The FEDeRATED Living Labs (Sweden)



LL #5 RFID in Rail

1 FEBRUARY 2023

A. GENERAL (Business case)

1. Objectives

- Rail transport tracking by RFID
- Asset and Infrastructure monitoring - operational data can be provided making it possible to optimize wagon fleet and other resources
- Shorten lead times in arriving terminals due to earlier and correct information
- Platform interoperability
- Supply chain visibility
- Data sharing in a FEDeRATED way

Timing

LL#5	2021				2022				2023				2024			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Preparations	█	█	█	█												
Planning and scoping	█	█	█	█												
Stakeholder engagement					█	█	█	█								
LL infrastructure development					█	█	█	█								
Testing and piloting									█	█	█	█				
Iteration and process analys									█	█	█	█				
Operational trials									█	█	█	█				
Feedback & Scaling									█	█	█	█				

<https://www.federatedplatforms.eu/>

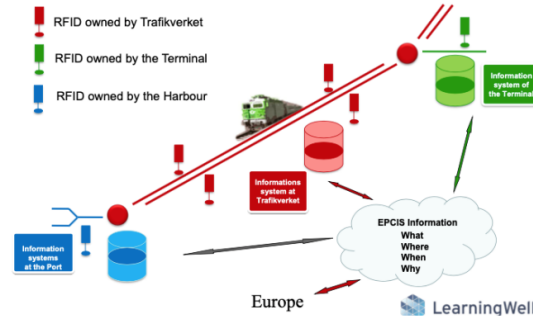


RFID tags will be mounted on railway vehicles, one on each side of the vehicle. Structure of the content in the RFID tag will be based on GS1 standard, concept GIAI. The RFID tag will contain a company prefix of vehicle owner/operator as well as the 12-digit EVN number for vehicle identification.

To exchange RFID information amongst stakeholders the GS1 concept EPCIS will be used. Information to be shared are:

- WHAT, vehicle identification
- WHERE, location of reading point (RFID reader installation)
- WHEN, exact time stamp in milli seconds
- WHY, activity as departure, passing etc.

EPCIS – for information exchange



Subgroup DACH – Parts relevant for serialization/labelling – rolling stock components (extract)



Parts relevant for serialization/labelling - rolling stock components, V1.0			sGTIN, (01) + (21) obligation (m) mandatory, (r) recommended	GTIN + Lot, (01) + (10) obligation (m) mandatory, (r) recommended	only GTIN, (01) obligation (m) mandatory, (r) recommended
List structure	Position- number (DB list- structure)	part name			
Rail vehicle parts					
Vehicle body	1	BA Vehicle body			
Vehicle body shell/body shell	1.1	BA Vehicle body shell/body shell/vehicle body/structure			
External design	1.2	CF External design			
	1.2.4	CF Front flap system		r	m
Entry/loading facilities	1.3	NA Entry/loading facilities			
	1.3.1	NB exterior doors			m
		NB Locking unit for exterior doors/entry doors	r	m	
	1.3.3	NB Platform elevator			m
	1.3.4	ND Steps			m
	1.3.8	NB Drives	r		m
	1.3.9	NB Control components for operation of the entry/loading facilities	m		
Buffing and draw gear, coupler	1.4	SA Buffing and draw gear, coupler			
	1.4.1	SA Mechanical coupler/central buffer coupler (automatic coupler, switching coupler, close and	m		
	1.4.6	SD Buffing gear	r	m	
	1.4.7	SD Draw gear	r	m	
Transition	1.5	SF Transition			
	1.5.8	SF Transition door			m
Window system	1.6	CB Window system			
	1.6.3	CB End wall window, windscreen (inc. heating system)		r	m
	1.6.6	JG Window pane heating system			m
	1.6.7	JG Windscreen wipers and washer			m
External lighting and indicators	1.7	KB External lighting and indicators			m
Chassis/running gear/truck (complete)	2	EA Chassis/running gear/truck (complete)			



Queensland Rail Supply Standards



[View Guideline](#)

Welcome

Queensland Rail has a proud history of connecting Queensland communities and supporting local jobs, industries and economies. We are committed to providing a customer-focused, safe, modern and world-class rail service for Queenslanders.

Collectively with you, our supply partners, we are undertaking our implementation of Project i-TRACE, an industry wide rail supply chain initiative. Recent local and international events have shown us that connected supply chains are critical, and I would like to take the opportunity to thank you for your support and collaboration as we worked together through some of the most challenge times Australian Rail Supply Chain has experienced.

Queensland is experiencing significant investment in new and future rail infrastructure and Queensland Rail will be supporting these investments and requires better traceability, more digital data and streamlined supply chains. As a result, we have developed great skills in solving for complexity.

In the last few years, we've invested heavily in shaping our supply chain, and many of our supply chain partners have supported us with a renewed focus and compliance and capability.

As we have in the past, we will continue to evolve our Supply Chain fit for the future. We will continuously adapt to support even greater adoption of supply chain standards to better manage components and inventory, along with providing more efficient and effective lifecycle management of our assets. You'll soon see many of these enhancements reflected through the network, as new capability is delivered, and as new technologies provide better supply chain visibility, accuracy and control.



We know that these initiatives will only succeed with consistent, collaboration with our partners supported by clear and easy-to-follow standards to help guide a smooth process. In this document, we share our Queensland Rail Supply Standards. This guide reflects our ongoing commitment to providing better communication with our partners.

Within the following pages, you'll find information that is vital to ensure a safe, responsive, and digital focused supply chain. The guide covers a broad range of topic areas from master data standards, barcoding, part and component identification requirements, all under the umbrella of Project i-TRACE.

I ask and encourage you to circulate this document among your immediate teams and any upstream suppliers and other parties involved in your extended supply chain. Please reach out to our Inventory Centre of Excellence and Supply Chain / Inventory teams who are available to assist you with any questions to support and improve the quality and efficient supply through our network.

It's an exciting time at Queensland Rail, one in which the delivery of a safe, efficient and modern rail network has never been more central, and we're proud and grateful to have you partnering with us on this journey.

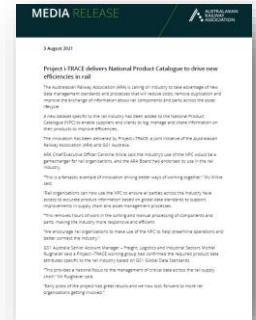
Sarah Dixon
Executive General Manager SEQ Assets
Queensland Rail

National Product Catalogue

The National Product Catalogue is a centralized platform that allows businesses to create, manage, and share standardized product information with their trading partners. GS1 Australia is a not-for-profit organization that facilitates the adoption and implementation of GS1 standards, which are widely used in various industries to improve supply chain efficiency and accuracy.

The National Product Catalogue enables businesses to store essential information about their products including product descriptions, dimensions, weights, images, and other relevant details. By using GS1 standards, companies can ensure that their product data is consistent, accurate, and easily understood by trading partners across rail and other industries.

The benefits of using the GS1 Australia National Product Catalogue include streamlined data exchange and reduced errors in product information. This enables improved inventory and asset management, enhanced supply chain visibility and helps businesses operate more efficiently.



[View Media Release](#)



21 Mandatory Data Attributes

For example: GTIN, Description, minimum order quantity, start availability date, vendor item number, is it a dangerous good, UN Dangerous Goods Number

52 Optional attributes


For example: End availability date, supersedes item, product lifespan, ordering lead time

[More Info](#)

Technical Specification for Track Inspection & Monitoring System (India)



Ref: OO-D-7.1-1 Page 1 of 32 Date Issued: 11.07.2023 TM/IM/419 (Revision-1, 2023)



GOVERNMENT OF INDIA
MINISTRY OF RAILWAY

Technical Specification for
Track Inspection & Monitoring System

SPECIFICATION NO. TM/IM/419 (Revision-1, 2023)

Approved by Railway Board vide letter No. 2023/Track-III/TK/5
dated 11.07.2023

Issued By

TRACK MACHINE & MONITORING DIRECTORATE
RESEARCH DESIGNS AND STANDARDS ORGANISATION
MANAK NAGAR, LUCKNOW-226011

- RFID based Automatic Location Detector (ALD) comprises of two parts, one passive ground transponder installed in track and one active unit installed in TIMS to detect the ground transponder. The active unit (Reader) of ALD sensors shall be suitable to be fitted underneath the coach body & shall be rugged enough to withstand field conditions. Reader is to be supplied by the supplier. The passive unit (Tags) of ALD shall be installed on track by IR. The supplier will install the RFID reader compatible with RFID tag of open protocol as per specification details given below
- The ground/track installed tags are used with all types of Sleepers of the Indian Railways. These are typically placed in the center (± 300 mm) of the sleeper in-between the two rails.
 - The tags on sleepers are mounted at sleeper top level. The base metal is steel, stainless steel or aluminum as per relevant Indian Railways standards.
 - The tag specifications are, in general, as per GS1 standards and broadly aligned with the 'European Guideline for the Identification of Railway Assets using GS1 Standards'. The basic encoding standard applicable is SGLN195 of GS1.
 - For understanding the data formats for use on the tags please read the associated document 'Guidelines for Data onboard RFID Tags of the Indian Railways Track' attached as Annexure -V.
 - The tag reader should work in conditions of EMI/ RFI as 25kV AC or 2x25 kV AC is used in overhead lines on tracks.
 - Base standard of Tag being used will be: EPC Gen2 V1.2 or higher.
 - Generic information on Tag:
 - Concrete / metal mount type of tags.
 - All standards as applicable for use of UHF RFID tags in India are applicable.

Work Requests in Rail



GS1 & Rail

Questions and answers

The FAQs are designed to help the rail community find answers to typical questions in an efficient way.

[FAQs for Rail](#)

Tools

Three decision support tools available to help companies implement the standard:

[Direct Marking Wizard](#)

[Object Identification Wizard](#)

[GTIN Management Wizard](#)

Brochure: GS1 Standards in the Rail industry

Global identification, labelling and data exchange for parts, components and assets

Application Standard: Identification of Components and Parts in the Rail industry

Rules on the use of the GS1 Keys and Attributes

Implementation Guide: AutoID in Rail

Identification of rolling stock, components and spare parts in the rail sector

Application Standard: Exchange of Component/Part Lifecycle Data in the Rail Industry

Exchange of visibility event data for lifecycle tracking

Application Standard: GS1 EPCIS for Rail Vehicle Visibility

GS1 transport & logistics standard that explains how to implement EPCIS rail vehicle visibility

<https://www.gs1.org/industries/technical-industries/rail>

MGA Mobility – Mobility goes Additive



network

mobility

medical

membership

news

events

weboostam



MGA Mobility | MGA Medical – Mobility goes Additive e.V.

No question – 3D printing is currently on everyone’s lips and it is considered to be one of the key technologies of Industry 4.0. But the strategy “let’s buy a printer and start producing” usually proves not to be the best.

The advantages of 3D printing against conventional manufacturing are obvious: the technology enables the production of highly customized parts from batch size 1 with very complex geometries – even new functions can be integrated. Moreover, obsolescence issues can often be solved. A shorter time-to-market, lower material usage and resource consumption as well as a high-fit to customer requirements are further key arguments for the use of this fantastic technology.

<https://mga-net.com/the-network/>



MGA Mobility – Mobility goes Additive



MGA members

1000 Berlin	ZMP Logo Group	3D Systems	3YOURMIND	Additive Marking	DMRC	Durham University	DTE Maxxion	Ensinger	EOS	Pharma Center	KU LEUVEN	LFT	LEHOSS	Laserline Legal	SKZ	SLM	SWCF	Sodalis	SDFE-D	
Addup	ALSTOM	AM Entrepreneur	AM POWERS	AM Solutions	ESSENTIUM	ExOne	EXPERTANTS	Fabreeco	Fehrmann Aldre	JerVerse	MANN+HUMMEL	Materialise	Materion	MUS	srh	Synera	Takeda	Technische Universität Darmstadt	TUM	
AMEXCI	Angel Train	ANISOPRINT	ARBURG	ARNOLD	Fero Tec	finnester	FIT	formlabs	Frankfurt School	MIDWEST CHEMICAL	N	Novel Materials	Novel	Novel Materials Germany	OBB	OBB	OBB	OBB	OBB	OBB
atum 3D	AUTODESK	Exito	BAM	BASF	Fraunhofer IPT	Fraunhofer ET	Fraunhofer	GEREFECT	GSI	GSI Germany	ORION	OST	ottobock	P&S	Photon AG	trinkle	TRUMPF	TU	TU	TU
be on quality	Berger 3D	bigrep	BioMed Center	Blue Production	Guaranteed	Heraeus	Heraeus AMLOY	Heraeus	HOFMANN	HOFMANN	IBEL	ponticon	POSTPROCESS	pro beam	PROTIO	SINUS	ca	DRIEBERG	VALCUN	VELO
CFK	Chromatic	cirp	Constellium	Core Technologies	ILAS	IMAD	INM	inspire	Institut für Produktionstechnik	IPIB	QANTOS	Quantica	r3volution	R3VOLUTION	R3VOLUTION	R3VOLUTION	R3VOLUTION	R3VOLUTION	R3VOLUTION	R3VOLUTION
Coverso	CTC	DB	DB SCHENKER	DIMAEX	IPC	AMPT	KIMVA	KNORR-BREMSE	KNORR-BREMSE	NIA	replique	SBS OFF FFS	SIEMENS	simufact	ZEISS	ZEISS	ZEISS	ZEISS	ZEISS	ZEISS



Side effect



GS1 Germany welcomes
members of 45th ATWG meeting

27.09.2023



Side effect



Headquarters Supreme Allied
Commander Transformation
7857 Blandy Road, Suite 100
Norfolk, VA 23551-2490 / USA



Headquarters
Rue de la Gare 11
L-8325 Capellen
G.-D. Luxembourg



Call: Additive Manufacturing with GS1, October 31st



GS1 IN EUROPE REGIONAL FORUM



23 - 26 October 2023 Athens, Greece



THANK YOU !!!

THE SLIDE DECK AND THE RECORDING OF
THE SESSION WILL BE SHARED AFTERWARDS