AFRICAN RAILWAY
THURSDAYS

Standardisation UIC - Role and Benefits

Célia Levy , Chief Standardisation officer, UIC
1. A complex standardisation ecosystem
Overview of Railway Standardisation Organisations
Standardisation...WHO is doing what?
Institutional standardisation...
In a complex ecosystem, institutional standardisation is interfacing with:

- European regulation
- International treaties and conventions
- Sectorial standardisation
- Private industrial standards
- Collaborative research
- Charts and labels (environmental concerns, governance, ethical issues)
Cooperation between UIC and CEN/CENELEC/ISO/IEC

Organisations producing different types of deliverables must work together, in mutual respect and consistency for the benefit of the whole railway sector

Process-related standards
“Operator” responsible for the SYSTEM and the SERVICES

Product-related standards
“Manufacturer” responsible for the PRODUCTS

Cooperation Agreement
2015

Cooperation Agreement
12/2016

Cooperation Agreement (revised)
11/2018
2. Standardisation... Why?
Standardisation ...Definition

Standardization is defined as an activity of general interest, the purpose of which is to provide reference documents drawn up in a consensual manner by all interested parties, relating to rules, characteristics, recommendations, security, interoperability, requirements or examples of good practice, relating to products, services, methods, processes or organizations, aimed at encouraging economic development and innovation while taking into account the objectives of sustainable development.
Why standardise?

Rail stakeholders need to **actively participate** in the development of standards!

**Consistency**

- Essential component of competitiveness

**Simplicity**

- Conditioning the market

**Efficiency**

- Cost optimisation of total life cycle
Standardisation ...Which economic added value?

- In a world of many complexities and challenges – economic, social, safety, security… - standards are needed for consistency, simplicity and efficiency

- An essential component of the competitiveness of a sector and its stakeholders

- Influencing the standard means conditioning the markets and establishing modes of governance to overcome competition

- The manufacturers focus mainly on the optimisation of their production costs, whereas the end user’s interest is to optimise the costs over the total life cycle of the product. In particular for railway products, e. g. locomotives, with life cycles of 40 years and more, those two concepts can lead to very different results.

- Crucial for cost optimisation, warranty periods, total life cycle, Safety Management System guarantees...

Rail stakeholders need to actively participate in the development of standards

This cannot be left only to the suppliers – or there will be a risk of significantly higher life cycle costs
3. The UIC role in standardisation
Standardisation for the ROC - fundamental principles:

UIC is divided into 6 regions. These all have their own governance but undertake their business around the corporate nucleus in Paris.

The European region is the most developed in terms of experts and investment.

It must be noted that:

1. **UIC is NOT a Standardisation Body.** It is however an **SSO** that works on behalf of the ROC and develops a range of solutions for the railway system.

2. **UIC** has a Standardisation Platform which is supervising the relationship with SBs in Europe and beyond and oversees the transposition programme of the leaflets to IRSs.

3. **UIC’s main standardisation work today** is **design** (the services to the customer...), **construction** (the timetable....), **operations** (processes, cybersecurity, S&SMS...) and **maintenance** (fleet, infrastructure.....) of the components of the railway system.
➢ Ongoing task ever since the first **UIC leaflet** was published in 1928.

➢ Many railway systems around the world have been constructed and are still operated today using the standards that have been produced by the UIC

➢ Modernisation programme - Leaflets ➔ International Railway Solution (IRS)
In a complex ecosystem, railway standardisation is interfacing with:

**Institutional standardisation...**

UIC is an SSO*:

- any entity whose primary activities are developing, coordinating, promulgating, revising, amending, reissuing, interpreting, or otherwise maintaining standards that address the interests of a wide base of users outside the standards development organisation

*Standard setting organisation
The added value of

Why UIC Standards in addition to ENs, ISO,...?

"Delta" not incorporated into the general standards.

Interoperability

Oriented to ROC Business needs, daily operations and legal responsibilities

Share good practices with colleagues from all over the world

Avoid any suggestion of double-work

Optimising life cycle costs

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4. UIC ORGANISATION
NEED TO IDENTIFY WHERE TO BE ACTIVE...

• Standardisation **work programme** available

• Analyse ongoing and proposed work to **position experts**

*UIC extranet provides informations – **forums and platforms** – Working bodies and UIC project managers*

*Answer call for experts and/or collect information and assess which group is in interest*

• Identify **which expert** is ready to actively participate to the drafting of an IRS

• Contact UIC project managers and **nominate experts**

**UIC Standardisation Unit is your ONE STOP SHOP for any assistance**
Structure

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Director-General

Celia Levy
Chief Standardisation Officer

Liesbeth de Jong
Programme Coordinator (RSF + Digital)

Mouna Bennouna
Programme Coordinator (Passenger + Freight)

Pierrick GAUT
Programme Coordinator junior

Vytautas Kinderis
Programme Coordinator (OSJD)

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5. Migration from leaflet to IRS
A Leaflet should not be referenced / used anymore in any new document (commercial, regulatory, etc.) once withdrawn and the replacing IRS is published.
Systematic review

- All residual leaflets will have been either withdrawn or migrated to an IRS within the next 3 – 5 years maximum
- IRS will systematically be reviewed after maximum 5 years
- This revision can of course take place sooner should the need arise!
Identification of obsolete leaflets

All leaflets have to be reviewed and their fate decided by the relevant WG / Forum / Platform

- The leaflet is completely withdrawn and no longer accessible
- The leaflet is withdrawn and no longer in force (though still accessible as an archive)
- The leaflet is to be updated and transposed into an IRS
- The leaflet is to be merged with others into a single IRS
How is an IRS structured?

Example:

International Railway Solution

Respecting all contexts of applicability...
6 - UIC Tools
IRS Database & Rolling 3 Year Work Programme

- The IRS Work Programme is an extract of the IRS database

Dynamic, evolving document
Comprehensive, formal and operative view of any IRS/leaflets status
Official periodic report to the General Assembly and the Standardisation PT
Enable the concerned Forums and Platforms to be appraised of progress not only within their area of responsibility but also across the entire range of UIC business areas
IRS database

- First step for a shared workspace development
- Data accessible: Transparency
- IRS database now opened to UIC active members (and possible others member’s category on a case by case basis)
- Members were invited to list experts for this access. They’ve received a link by mail to create their identification & password
- IRS database will be included into the future shared workspace which will offer additional functionalities
The Concept of the IRS database

- Detail of all leaflets being migrated, the IRS number and the number of the corresponding former leaflet,
- IRS title, UIC department responsible, the name of the UIC technical manager responsible,
- The working group in charge, the current stage of the migration process,
- The estimated date of publication,
- Countries using the relevant leaflets as a reference for their national law (if information and source known),
- TSI(s) or other regulations using the leaflet as a reference (if information and source known),
- Including synchronisation with external partners (OTIF, OSJD...).
- Creation of a new collaborative shared workspace (SU administrator)

- For 500 Users:
  ✓ Senior Advisor UIC
  ✓ UIC Members
  ✓ external partners (Restricted Access)

- Cross-functional standardisation Programme in accordance with the UIC Code: SU database enriched with new functionalities.

- This tool will be:
  ✓ more efficient and reliable because the leading SPOCS / project managers / WGs will be able to directly enter their data and download useful documents
  ✓ More flexible and modern, thanks to general digitisation (online consultation, downloadable documents, shared work online, digitisation of all data, advanced search, personal calendar, etc.)

The platform will be:

Active ➔ Dynamic ➔ Transparent ➔ Collaborative
# Leaflet/IRS Numbering correlation table

Available on UIC web site “UIC.org”

<table>
<thead>
<tr>
<th>LEAFLET REFERENCE NUMBER</th>
<th>IRS REFERENCE NUMBER</th>
<th>TITLE</th>
<th>DATE OF PUBLICATION</th>
<th>EDITION NUMBER</th>
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<td>RailTopoModel - Railway Infrastructure topological model</td>
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<td>50405</td>
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<td>Standard wagons - Wagons for combined transport - Characteristics</td>
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<td>Wagons for combined transport - Low-loader wagons for the conveyance of road vehicles</td>
<td>2019-04</td>
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</table>
The UIC Code

- The catalogue of all our standardisation products
- Reviewing and adding categories Digital, Telecoms, Automation …
- Focus on the new generation IRSs
Standardisation Guidelines

Structure

✓ simplified flowcharts
✓ process description
✓ issuing / updating / approving / withdrawal of the leaflets and IRSs and the related activities
✓ who does what, when

A GUIDE TO STANDARDISATION

How IRS are developed and where they fit in the world of standardisation

ONGOING REVISION

Quality in Focus
The **standard for writing a UIC standard** (i.e. the template for former leaflets, now IRS) has been thoroughly revised

English, German and French version available

IRS templates at your disposal into 3 languages
UIC’s Online term bank

1957: *The General Dictionary of Railway Terms*
2020: 23 languages online

= language tool for engineers & translators

-> harmonise terms and definitions

-> facilitate international cooperation

=> standardise working language
4- Next Standardisation Events
• The 3rd International Railway Standardisation Conference will be developed around the theme......

“How can standardisation help to evolve a sustainable railway”

https://uic.org/events/3rd-international-railway-standardisation-conference
UIC EXCELLENCE IN STANDARDISATION AWARDS 2021

- Will be held during the International Standardisation conference on 16 March 2021 Webinar
- Through these awards, it is the UIC’s objective to support and promote excellence in user-friendly, business-sensitive documents that support the efficiency of railway operations including new IRS and/or the migration from Leaflets to IRSs

**AWARD CATEGORY**
- Business Oriented
- Innovative with value added
- Standardisation Interfaces
- Proficiently developed

**Targets**
- Forums and Platforms and their Working groups
- Working with external partners
- Excellence in the evolution of the railway system.

For more information: https://uic.org/events/uic-excellence-in-standardisation-awards
Stay in touch with UIC!

www.uic.org

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