



The 5th Rail Industry Symposium and Exhibition

Bringing the Thai Railway Industry into the International Mainstream

July 10-12, 2019
Grand Mercure Bangkok Fortune, THAILAND



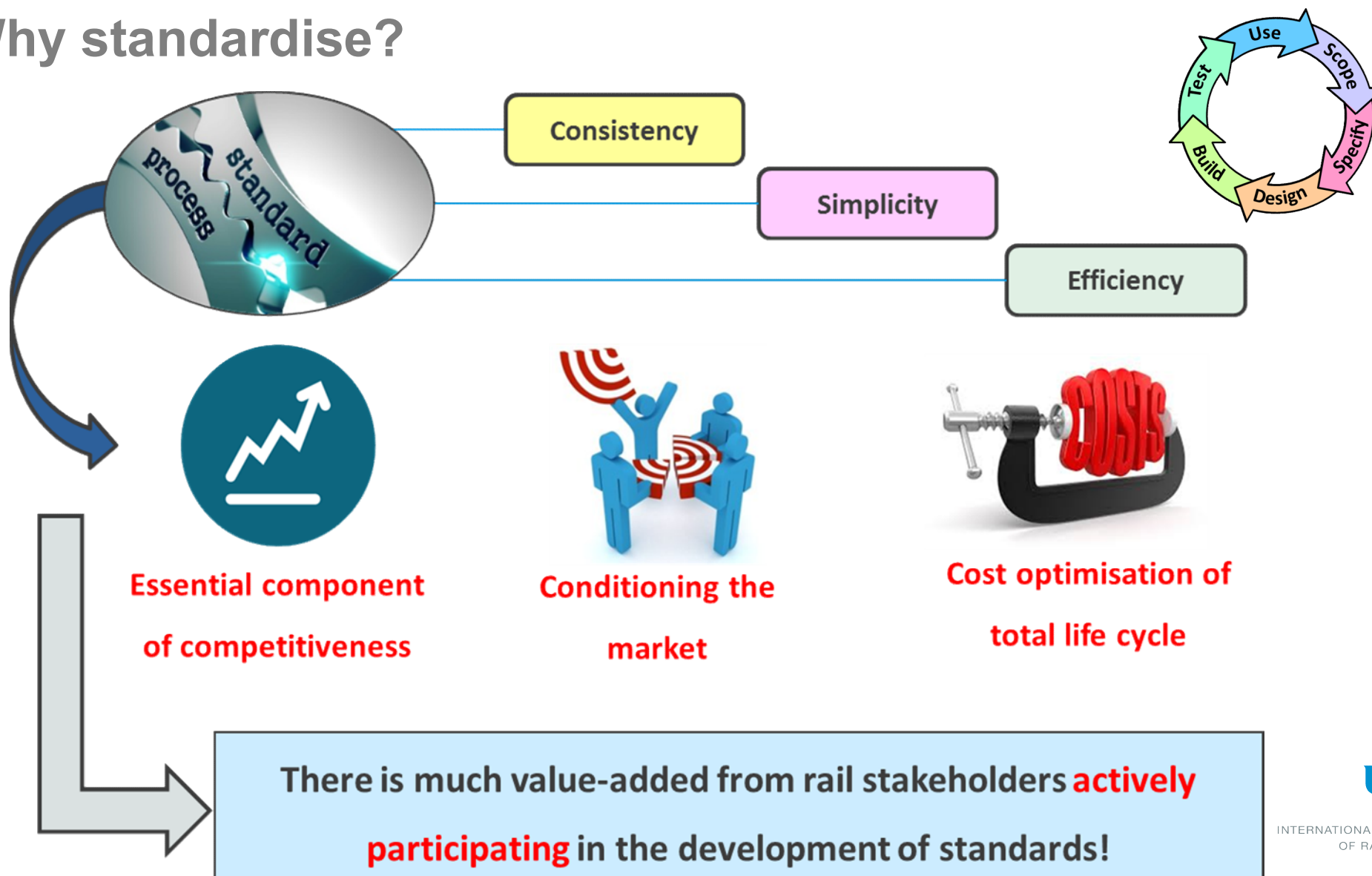
➤ SETTING THE STAGE FOR FUTURE MOBILITY ➤ STANDARDISATION – THE ROLE OF THE UIC

Milko Papazoff, UIC, ASEAN Representative
RISE 5, 2019
Bangkok, 11th July 2019



Why standardise?

2



Institutional standardisation...

In a complex ecosystem, railway standardisation is interfacing with:

European regulation



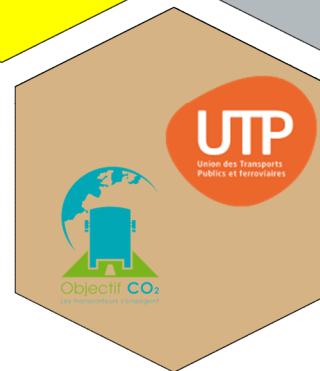
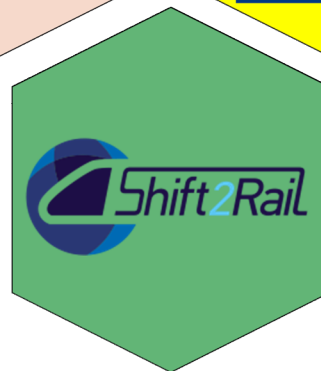
**International
treaties and
conventions**

**Sectoral
standardisation**



**Private industrial
standards**

**Collaborative
research**

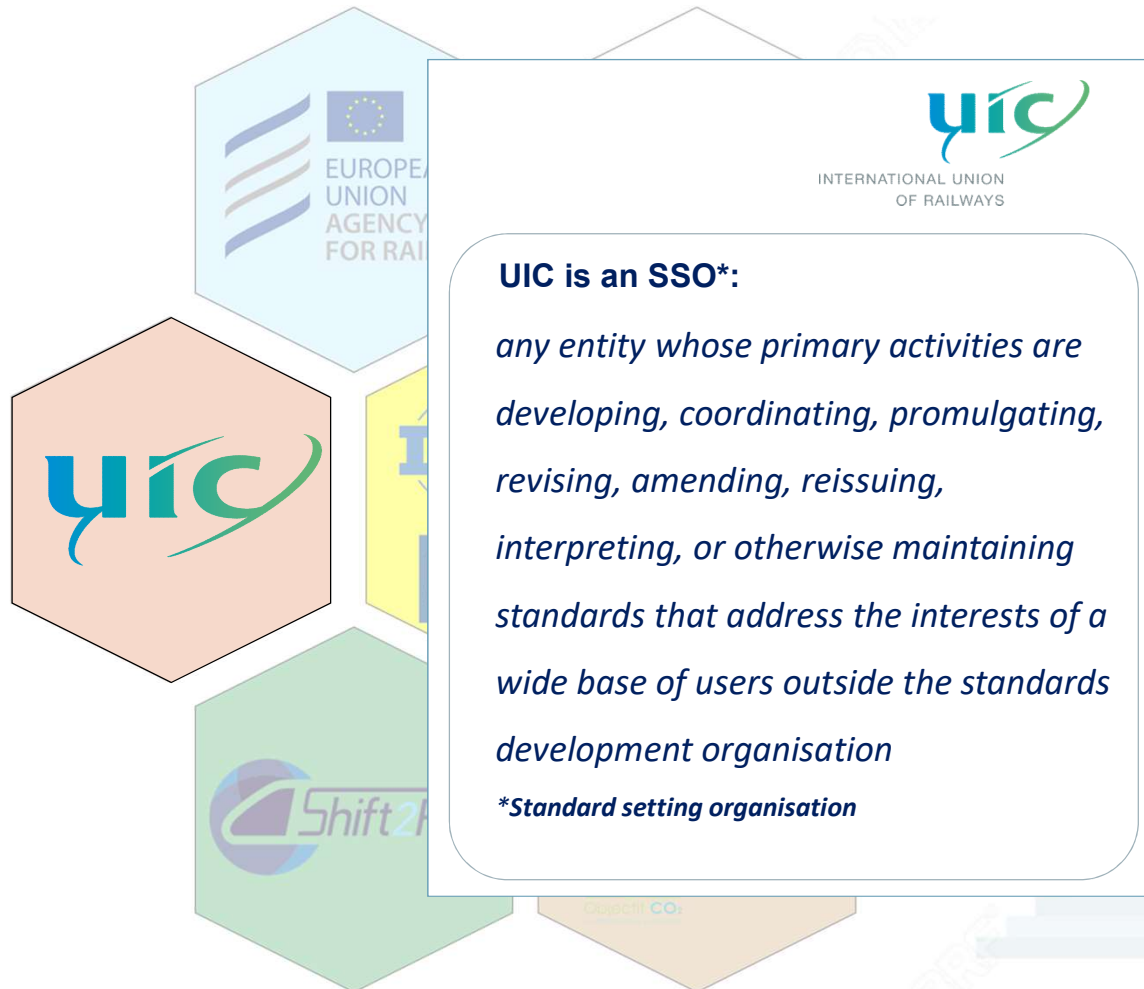


**Charts and labels
(environmental concerns,
governance, ethical
issues)**

Institutional standardisation...

In a complex ecosystem, railway standardisation is interfacing with:

**Sectoral
standardisation**



Institutional standardisation...



As an SSO, UIC plays an important role in the standardisation of the **design, construction, operation and maintenance** of the services that the railways provide

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



5

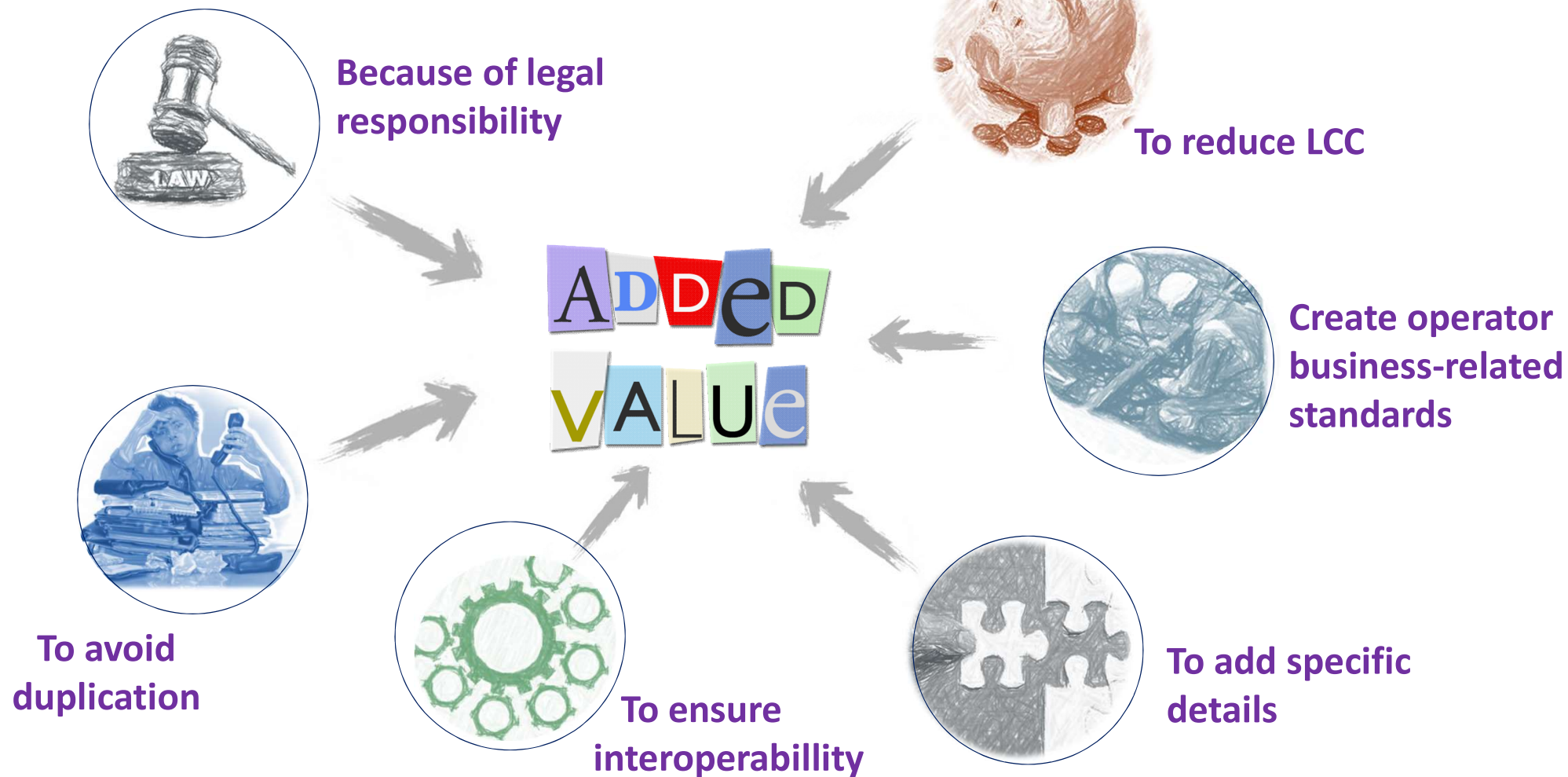
Modernisation
programme - Leaflets to



International Railway Solutions
(IRS)©: a **structured framework** of
standardised documents blending
together voluntary solutions,
prepared and published by the UIC,
for use within the railway sector.

The added value of UIC Standards

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

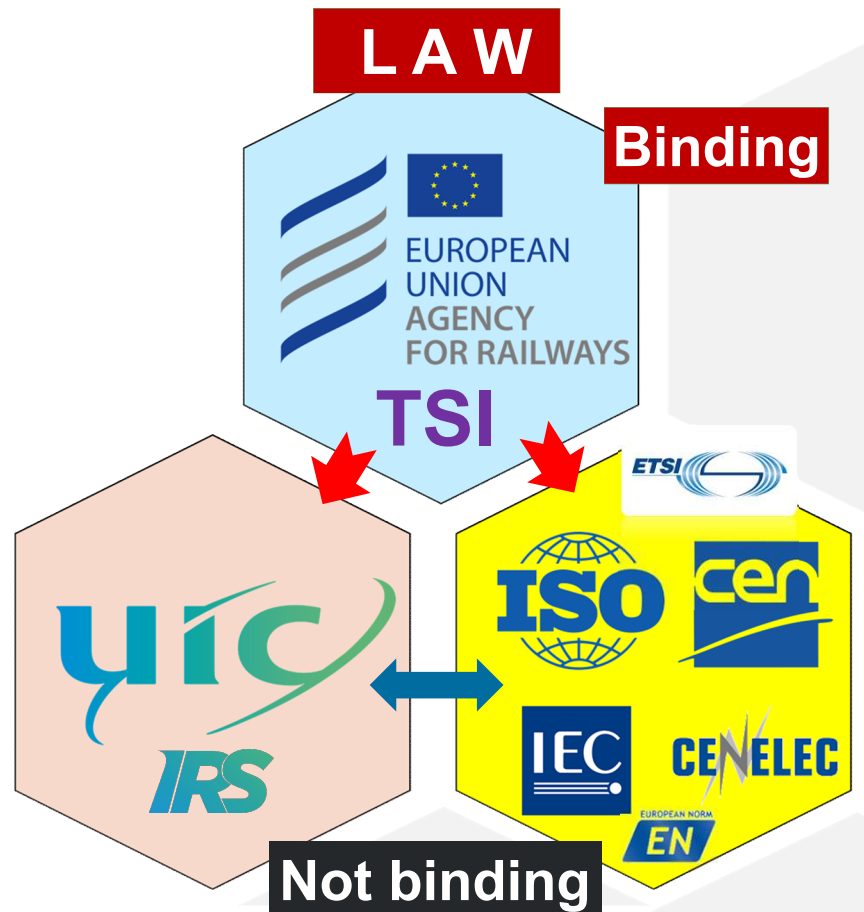


The European dimension

Process-related standards

“Operator” responsible for the SYSTEM and the SERVICES

- Operation
- Maintenance
- Integration
- High speed
- Freight
- Asset Management
- Safety/Security
- Organisation



Product-related standards

“Manufacturer” responsible for the PRODUCTS

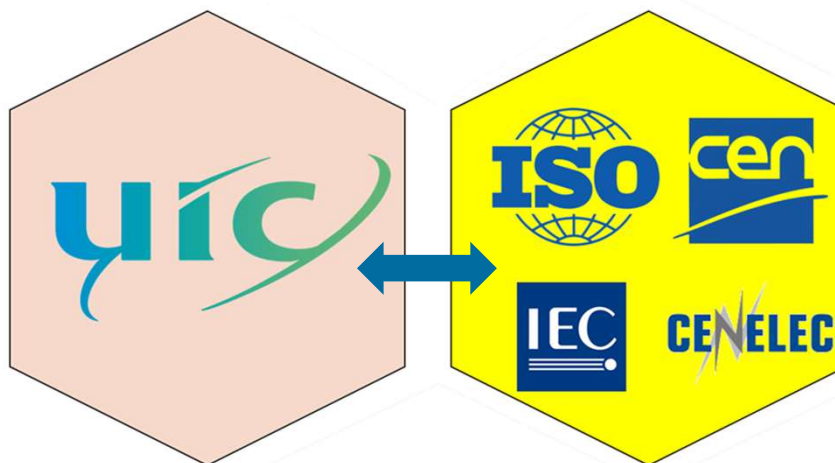
- Products
- Sub-System
- Industrialisation

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

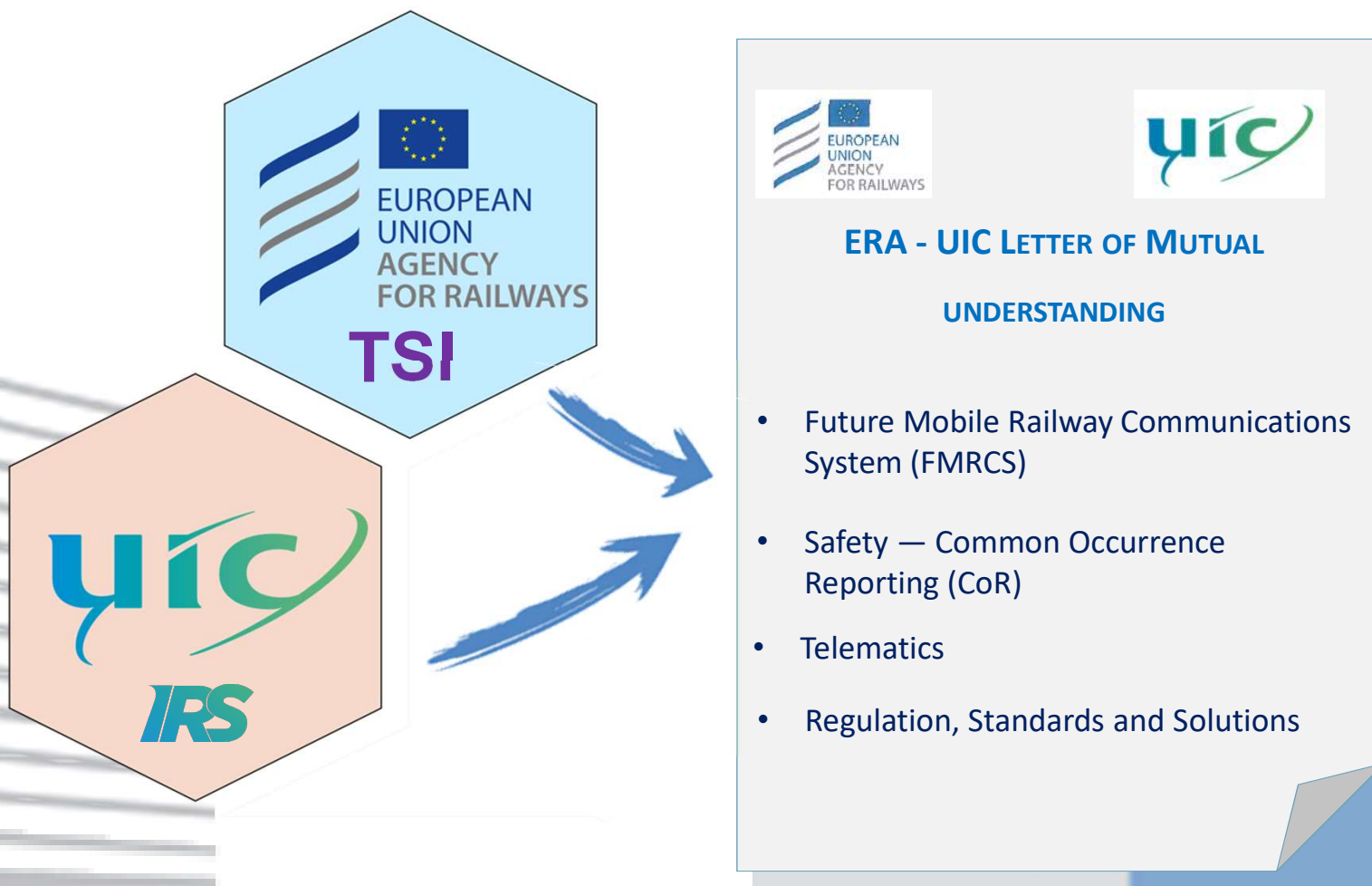


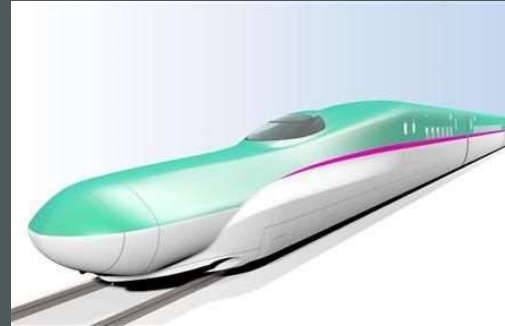
Product-related standards

"Manufacturer" responsible
for the **PRODUCTS**



Cooperation between UIC and ERA





INTERNATIONAL UNION
OF RAILWAYS

➤ STANDARDISATION AT UIC – WHO, WHAT, WHY



UIC Standardisation Unit



UIC GA December 2017

endorsed



Standardisation
Unit



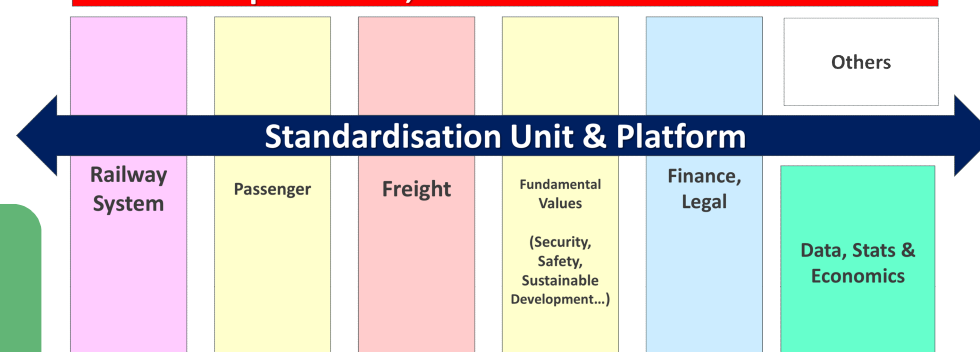
**One
Stop-
Shop**

- Guarantee of processes and quality
- Transposition of the residual leaflets into IRS
- Support the development, publication and maintenance of new and existing IRS
- Strategic relationship with the standardisation bodies in close collaboration with UIC technical specialists

Does not write the actual standards!

Transverse approach

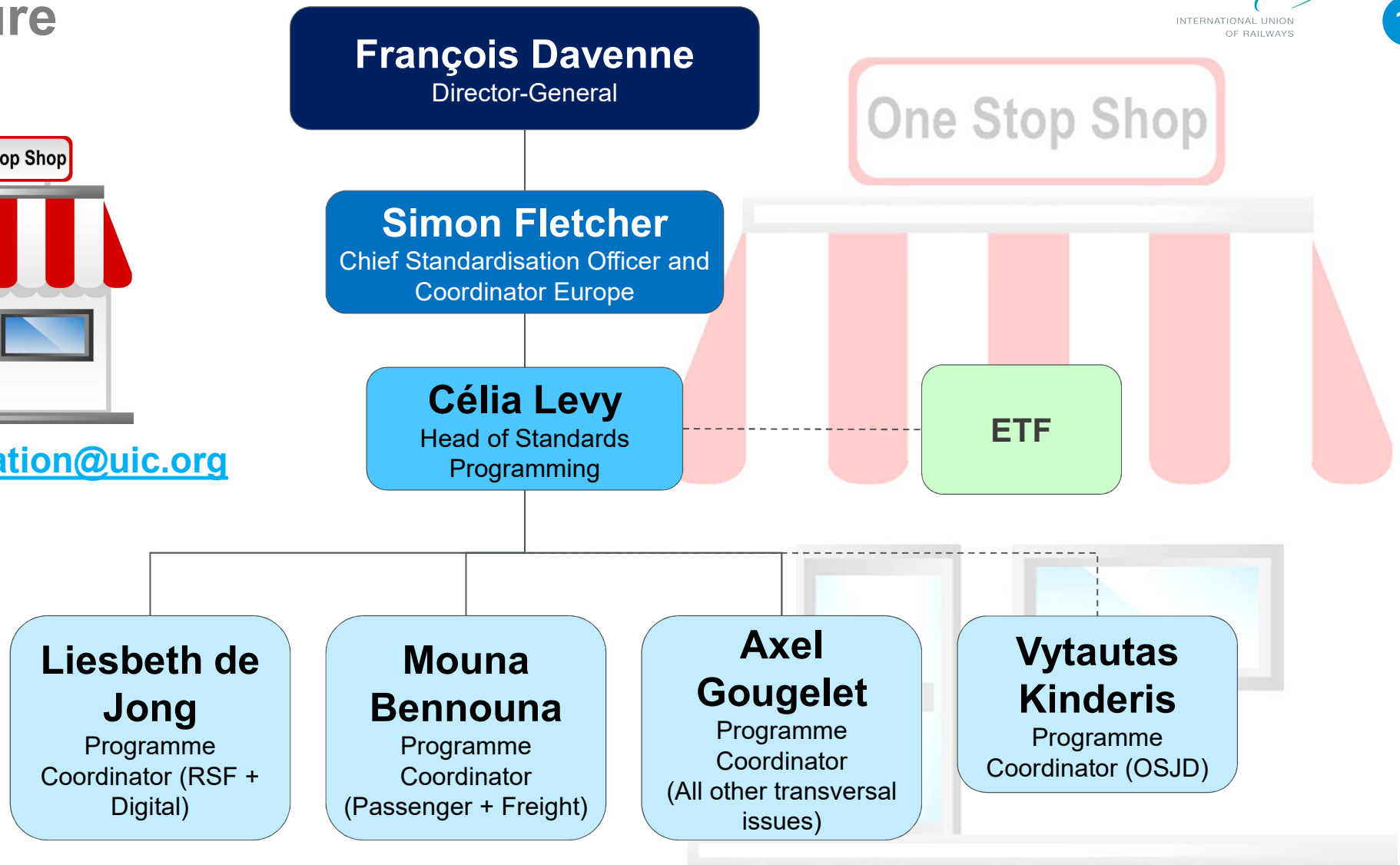
UIC Departments, units and member-led bodies



Structure



standardisation@uic.org



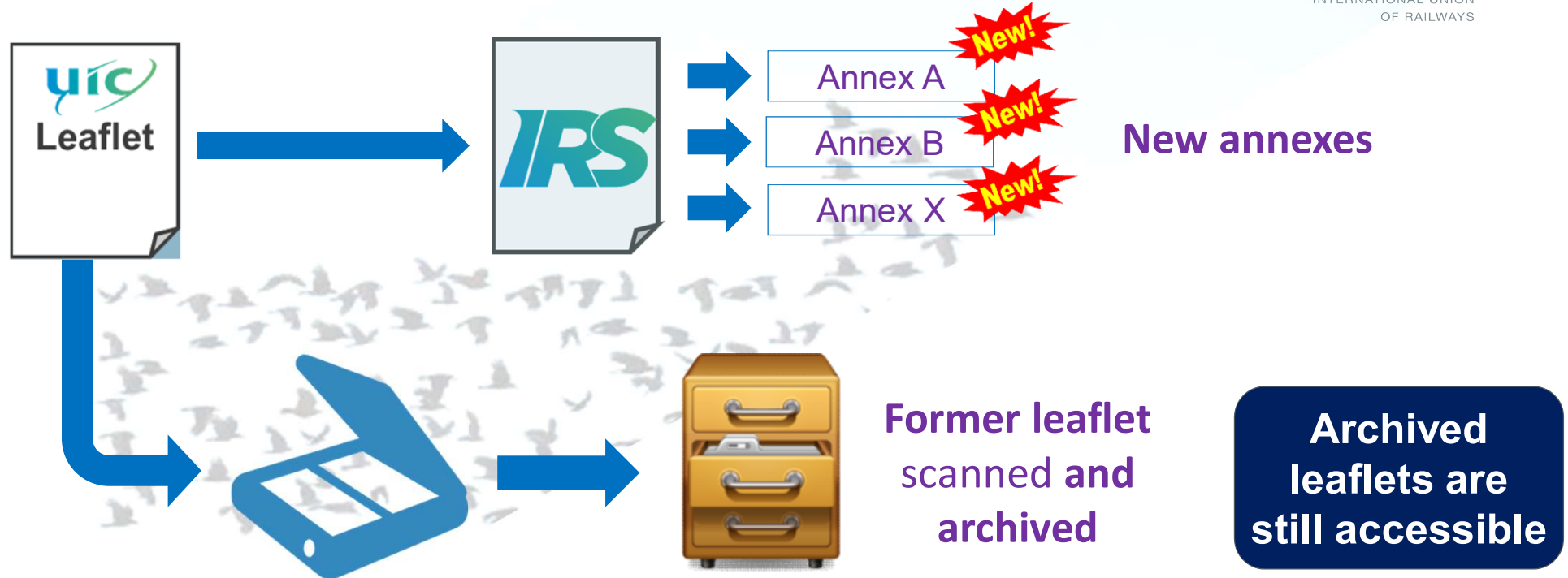


INTERNATIONAL UNION
OF RAILWAYS

➤ MIGRATION OF UIC LEAFLETS TO



Migration principles



A Leaflet must no longer be referenced / used anymore in any new document (commercial, regulatory, etc.) once withdrawn and the replacement IRS is published

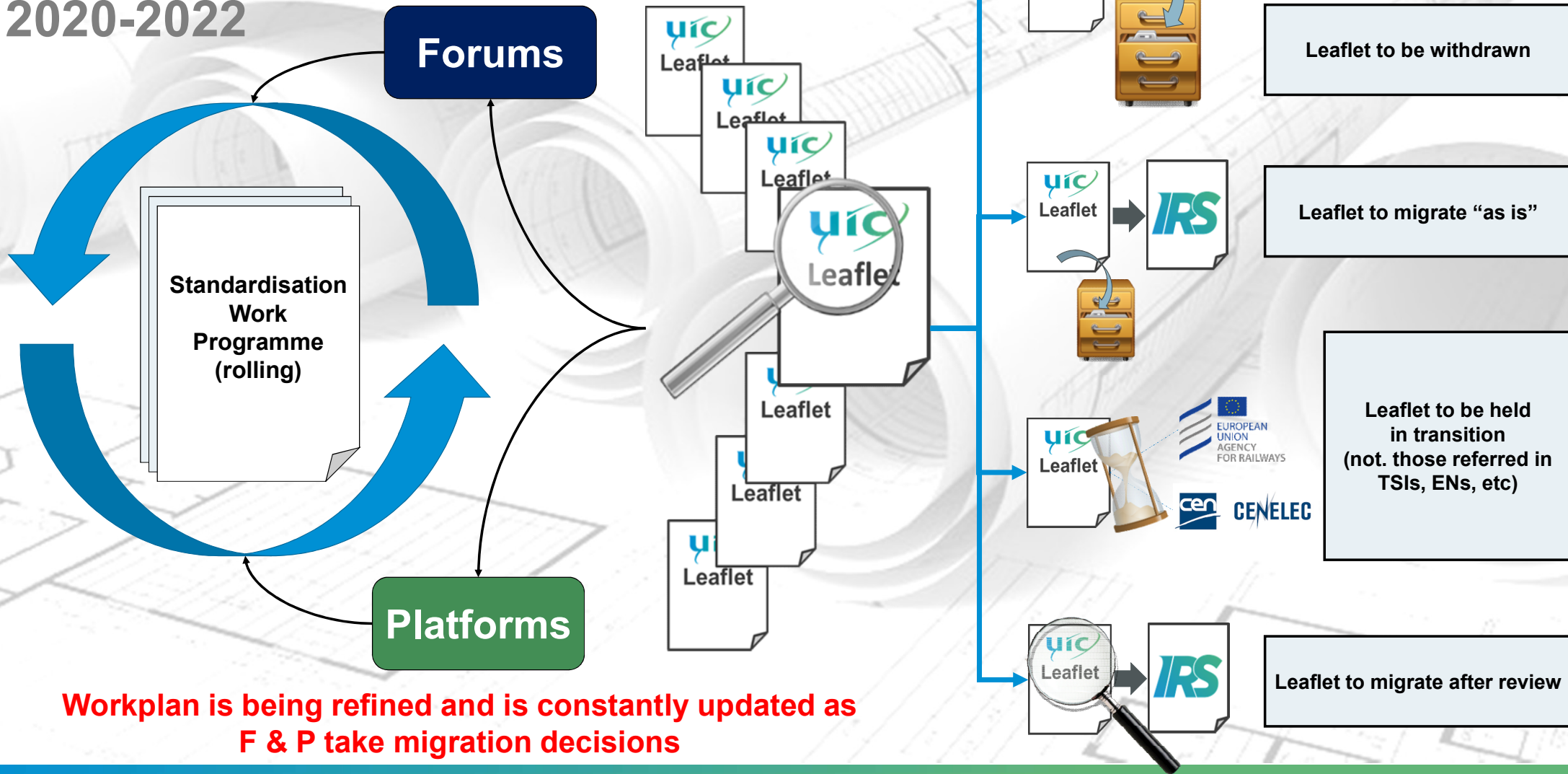
Systematic review

- All residual leaflets will have been either withdrawn or migrated to an IRS by 2022
- IRS will systematically be reviewed on a 5 year cycle
- This revision can of course take place sooner, should the need arise!



Standardisation Rolling work plan

2020-2022

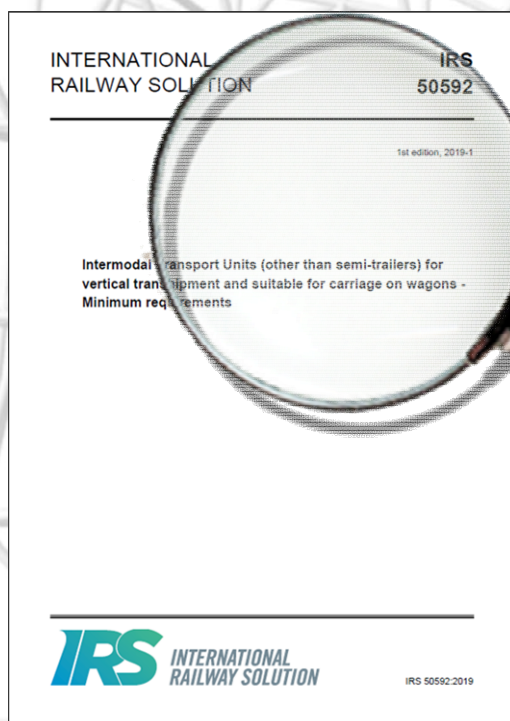


How is an IRS structured?

*State-of-the-art and
common requirements*

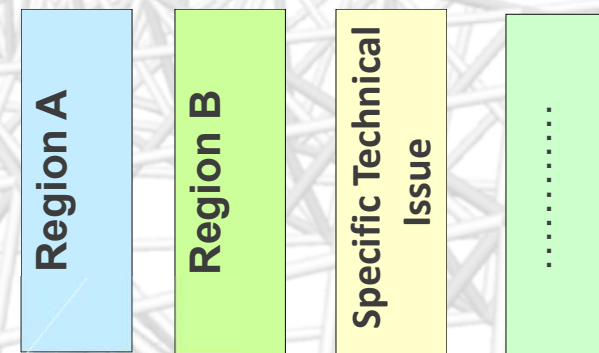
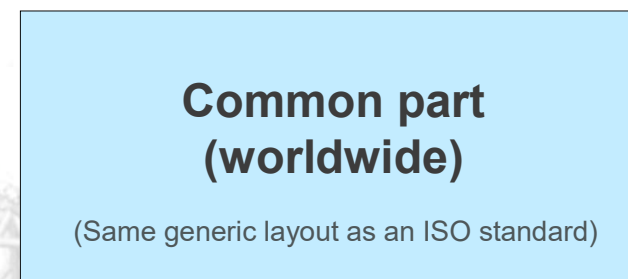
**... respecting all
contexts of applicability**

Example:



**An International
Railway Solution...**

*Specific **regional or national**
technical requirements can
be specified within annexes*



The Standardisation Platform



Standardisation Platform

*Chair: L. Schmitt
(SNCF)*

Validates all tasks pertaining to the development of new and updated IRSs, the migration strategy of residual leaflets to IRSs

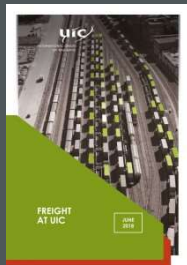
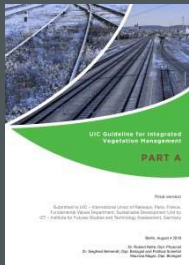
Stimulates the development of new IRS by members

Collects, bundles and informs stakeholder companies of developments in the standardisation and regulation landscape

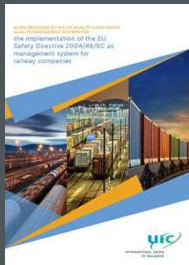
Proposes and coordinates a technical, business-focused standardisation activities programme to be developed by the various Forums and Platforms.

Defines detailed railway standardisation strategies that implement the guidelines set by the General Assembly

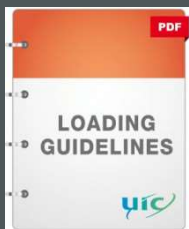
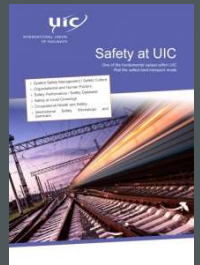
Creates and Approves the standardisation tools (Standardisation Guidelines, M1 Standard, UIC Code, etc)



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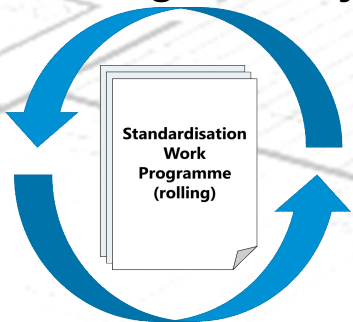
➤ UIC STANDARDISATION TOOLS



Rolling Standardisation Work Programme

- The **IRS Work Programme** has been established in order to **manage the development of the IRS**
- It is in line with the **standardisation guidance and processes** that are part of the **UIC Quality Management System**

| | N° IRS/ Leaflet | Area | Body | Title | Status | Estimated date of publication | Overall process | Comments |
|----|-------------------|-------------------|--------------|---|----------------|-------------------------------|-----------------|---|
| | 2019 | | | | | | | |
| 19 | 60675 | HIGH SPEED | ICHSC | Railway Application - High Speed - Implementation of a High Speed Line. Operation phase | Under approval | Jun 2019 | | |
| 20 | 60611 (611) | ROLLING STOCK | SET 11 | Regulations governing acceptance of electric locomotives, power cars and multiple-unit sets for running on international services | Under approval | Aug 2019 | | "Draft launched in September. There are a lot of comments from European experts. IRS mostly written by Cars A part of 611 is in TSI but not the electrical part which is in this draft." 03/2019 Under approval by RST steering committee |
| 21 | 70782 | ENERGY MANAGEMENT | E&ET | Digital Control Substation. User interface | Under approval | Oct 2019 | | IEC cooperation |
| 22 | 80870 (870) | ENERGY MANAGEMENT | E&ET | Technical specification for grooved contact wires | Under approval | Nov 2019 | | |
| 23 | 60684 (10001) | HIGH SPEED | ICHSC | High Speed System Breakdown Structure | Being drafted | Feb 2019 | | |
| 24 | 30301 (301) | FINANCE | C3 | Accountancy regulations for international "Passenger" traffic | Being drafted | Feb 2019 | | |
| 25 | 30304 (304) | FINANCE | C3 | Accountancy and allocation regulations between carriers applicable to international freight | Being drafted | Feb 2019 | | Waiting for the final quality approval "passed for press" |
| 26 | XX | FREIGHT | | Exchange protocole for intelligent wagons | Being drafted | May 2019 | | |
| 27 | 50111 | ROLLING STOCK | SET 8 | Railway Application - Rolling Stock - Passenger doors functionalities, communication interface and application profiles | Being drafted | Aug 2019 | | This IRS should be done following the work with joint document with IEC - this IRS is linked to 50105 |
| 28 | 50500 | ROLLING STOCK | SET 8 | Railway Application - Rolling Stock - Train Control and Monitoring System (TCMS) Function Interface | Being drafted | Aug 2019 | | Last RSF Enquiry August 2016 2 comments : DB / SNCF |
| 29 | 50555 (555) | ROLLING STOCK | SET 8 | Electric lighting in passenger rolling stock | Being drafted | Aug 2019 | | draft made by SET 08. Few experts in SET 08, priority is 50111 and 50500" |
| 30 | 60612 (612 + 651) | ROLLING STOCK | Ad-Hoc Group | Driver cab DMI | Being drafted | Aug 2019 | | |
| 31 | 10140 (140) | PASSENGERS | SMGG | Accessibility to stations in Europe | Being drafted | Aug 2019 | | |



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

Standardisation Guidelines

**Available
RIGHT NOW!**

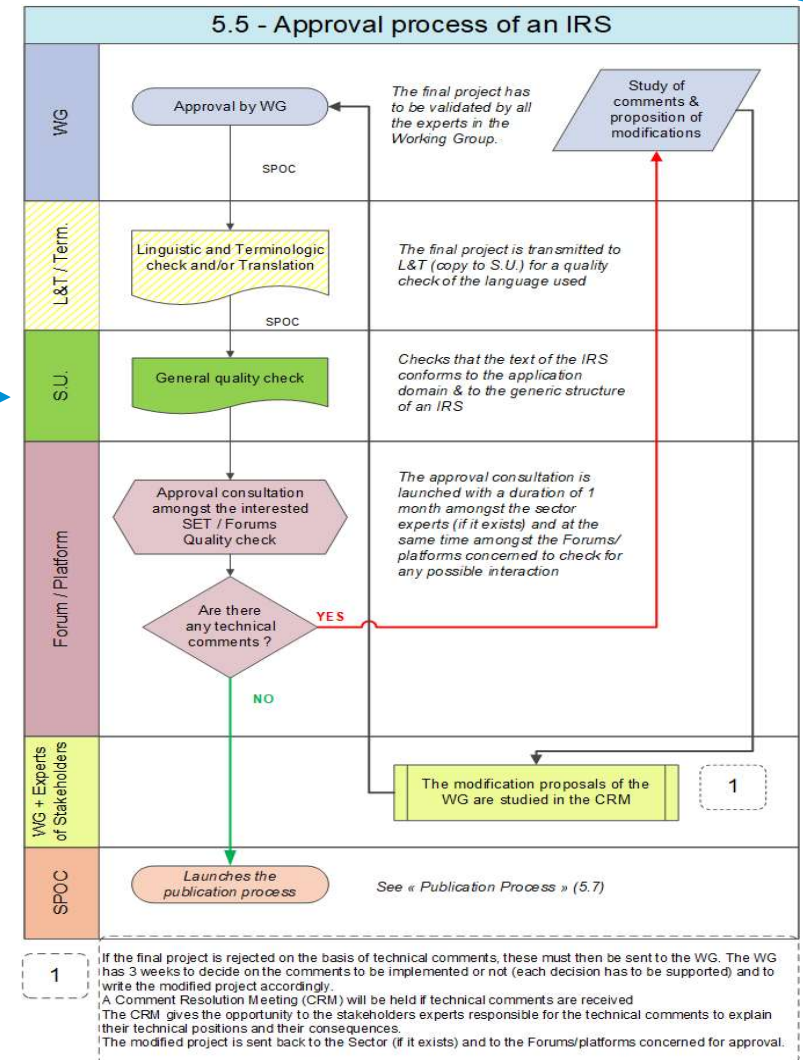
A GUIDE TO STANDARDISATION

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



Structure

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



The M1 Standard

- The **standard for writing a UIC standard** (*i.e. the template for former leaflets, now IRS*) has been thoroughly revised by the SU, the SPOC Group and ETF, a final version exists in French
- Translation in English and German is ongoing
- **Standardisation Platform members** will endorse it by consultation
- The M1 will be **available end of Summer 2019**

Available this
Summer!



**KEEP
CALM
AND
WRITE**

IRS INTERNATIONAL
RAILWAY SOLUTION

Leaflet / IRS Numbering correlation table

Available on UIC web site “www.uic.org”

The screenshot shows the UIC website's 'PRODUCTS & SERVICES' section. The left sidebar contains a list of links, including 'Leaflets / IRS - Numbering Correlation Table'. The main content area displays various UIC services and publications. A red circle with the number '1' is placed over the 'PRODUCTS & SERVICES' tab, and a red circle with the number '2' is placed over the 'Leaflets / IRS - Numbering Correlation Table' link in the sidebar.

This is especially useful
for managing references
in contracts, third party
documents, partner
organisations...

LEAFLETS / IRS - NUMBERING CORRELATION TABLE

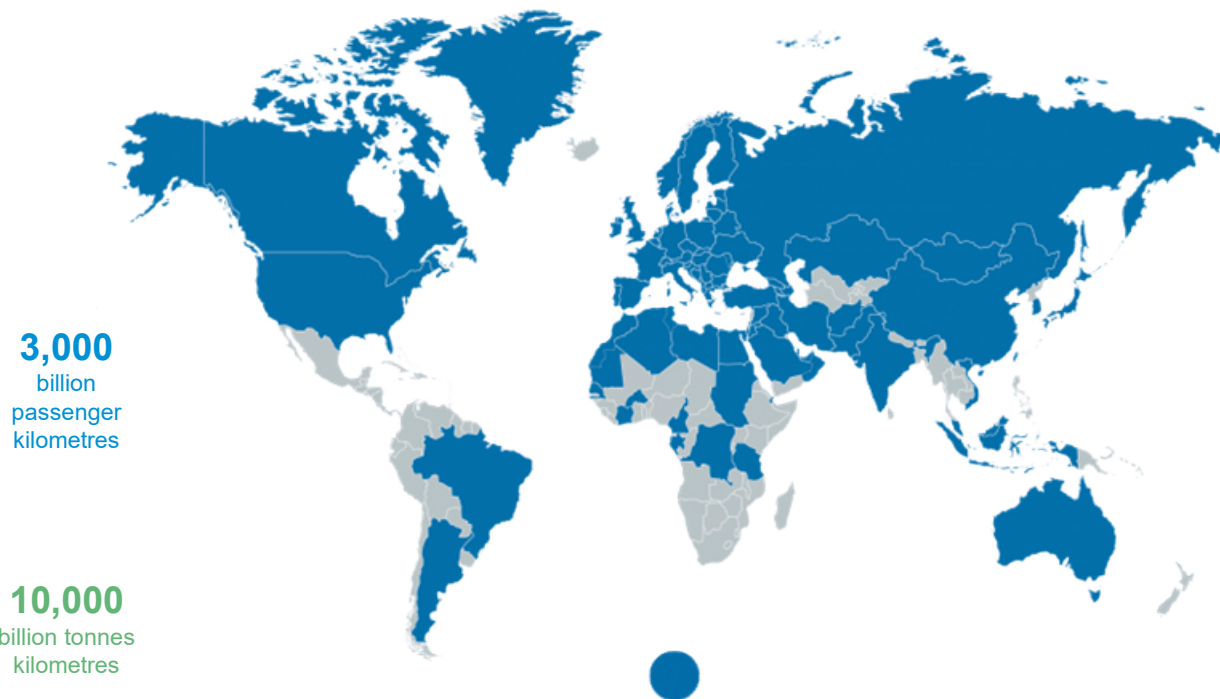
| LEAFLET REFERENCE NUMBER | IRS REFERENCE NUMBER | TITLE | DATE OF PUBLICATION | EDITION NUMBER |
|--------------------------------|----------------------------|---|------------------------|-------------------|
| new | 30100 | RailTopoModel - Railway infrastructure topological model | 2016-09 | 1 |
| 559 | 50405 | Railway application - Rolling Stock - Specification "#Diagnostic Data Transmission#" from Railway vehicles | 2016-09 | 1 |
| | 50507 | Railway Application - Rolling Stock - Wagons - Conditions governing wagons conveyed on ferries | 2016-11 | 1 |
| | 50530 | Railway Application - Rolling Stock - Rolling Stock Maintenance | 2017-07 | 1 |
| | 50536 | Railway application - Rolling stock - Towing hooks for wagons - Standardisation | 2016-11 | 1 |
| | 50537 | Railway Application - Rolling Stock - Pipe connections for wagons equipped for pneumatic discharge | 2016-11 | 1 |
| | 50558 | Railway Application - Rolling Stock - Remote control and data cables interfaces - Standard technical features | 2017-07 | 1 |
| | 50561 | Railway Application - Rolling Stock, Interconnecting gangway systems between vehicles | 2016-05 | 1 |
| | 50569 | Railway Application - Rolling Stock - Regulations to be observed in the construction of coaches and vans suitable for conveyance by train ferry | 2016-11 | 1 |
| 571-4 | 50571-4 | Standard wagons - Wagons for combined transport - Characteristics | 2018-04 | 1 |
| 571-5 | 50571-5 | Wagons for combined transport - Roller units for horizontal transshipment - Characteristics | 2018-02 | 1 |
| 571-6 | 50571-6 | Wagons for combined transport - Low-loader wagons for the conveyance of road vehicles | 2018-04 | 1 |

UIC Worldwide

October 1922
Constitutive Assembly of
UIC (Paris): UIC Statutes
adopted by 51 Railway
administrations from 29
countries (Europe, Asia)



24



3,000
billion
passenger
kilometres

10,000
billion tonnes
kilometres

1
million
kilometres of
lines

7
million rail
personnel

UIC MEMBERS

240 in 2019

Cooperation
with over
100
institutions

85
congresses,
conferences,
workshops

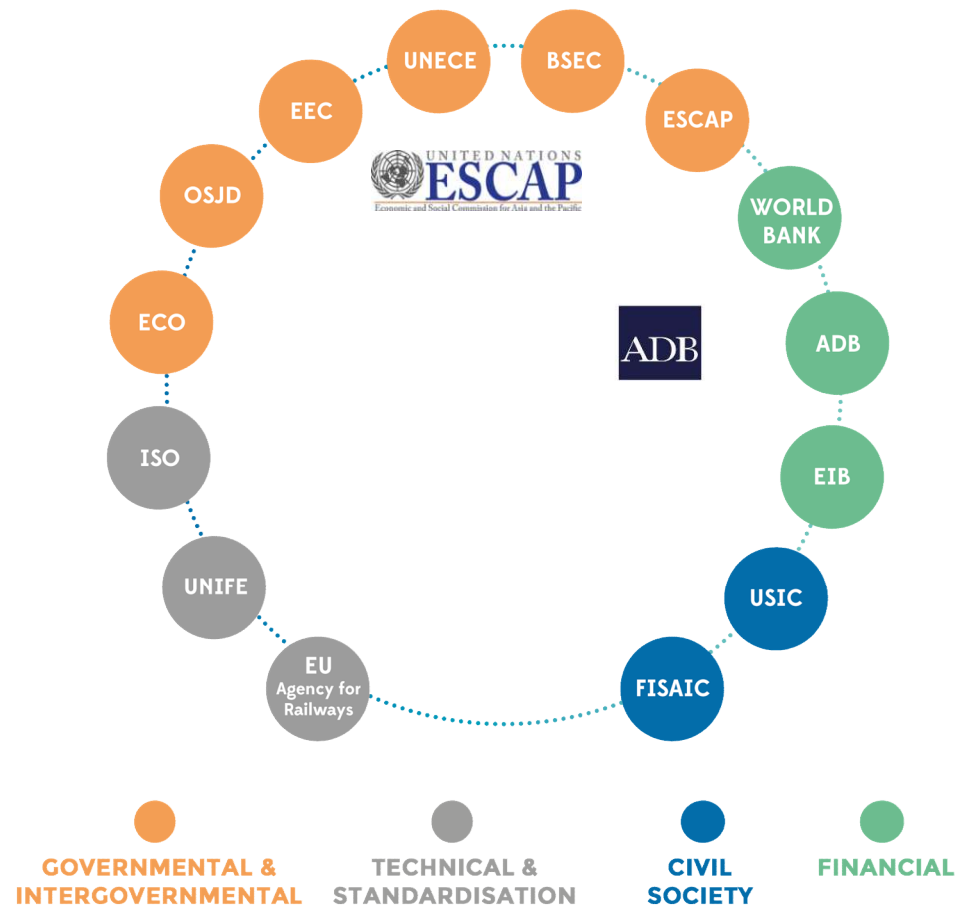
700
UIC Leaflets –
New International
Railway Solutions
(IRS)



43 in ASIA PACIFIC
Including 9 in ASEAN



SYNERGIES DEVELOPED BY UIC WITH LEADING INSTITUTIONS



ADB: Asian Development Bank

BSEC: Black Sea Economic Cooperation

EEC: Eurasian Economic Commission

ECO: Economic Cooperation Organisation

EIB: European Investment Bank

ESCAP: The Economic and Social Commission for Asia and the Pacific

FISAIC: Fédération Internationale des Sociétés Artistiques et Intellectuelles de Cheminots

ISO: International Organization for Standardization

OSJD: Organisation for Cooperation between railways

UNECE: Economic Commission for Europe

UNIFE: Union des Industries Ferroviaires Européennes

USIC: International Railway Sports Association

ASIA-PACIFIC REGIONAL ASSEMBLY (APRA)

Chairman (2019-2020)

LU Dongfu, CR (China)

Vice-Chairman

MYNBAYEV Sauat, KTZ (Kazakhstan)

ASIA-PACIFIC MANAGEMENT COMMITTEE (APMC)

Chairman: CR (China) - **Vice-Chairman:** KTZ (Kazakhstan)

Executive Board members: CR (China), JR East (Japan), KORAIL (South Korea), KTZ (Kazakhstan), PTV (Australia), RZD (Russia), UBTZ (Mongolia).

François DAVENNE

UIC Director General (Paris)

Vincent VU, UIC Director of Institutional Relations (Paris) and Regional Coordinator

Béatrice SEGERAL, UIC Senior advisor (Paris)

Irina PETRUNINA

UIC CIS and OSJD (Moscow)

Milko PAPAHOFF

UIC ASEAN (Kuala Lumpur)

Tom SARGANT

UIC Pacific (Melbourne)





UIC Members :

UIC MEMBERS SITUATION in ASEAN (July 2019)

27



INDONESIA



MALAYSIA



VIETNAM



PHILIPPINES



THAILAND

Next UIC Members :



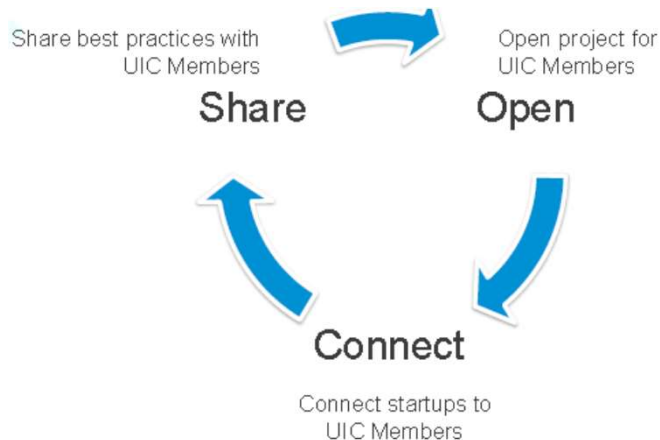
SINGAPORE



KURAIL

MYANMAR, THAILAND

Etc.



Stay in touch with UIC!

www.uic.org



#UICrail

Simon FLETCHER (MIRO)

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standardisation@uic.org

ขอบคุณ



UIC Asia-Pacific REGIONAL ASSEMBLY

Auditorium C
23 May 2019 | 2:00 - 5:00 pm



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fapmilko@gmail.com

Thank you for your kind attention

www.uic.org