



Computerising TIR to further secure and facilitate cross border trade

Tallinn, 7 June 2012

Philippe Grosjean
CIO



- IRU and TIR
- Change drivers and IT as enabler
- Computerization strategy & current status
- Technical highlights
- Conclusion



This is the IRU





Evolution of IRU Membership



1948 – IRU founded in **Geneva**



1973 – IRU Permanent Delegation to the European Union in **Brussels**

1998 – IRU Permanent Delegation to Eurasia in **Moscow**



2005 – IRU Permanent Delegation to the Middle East and Region in **Istanbul**

2012 – IRU Permanent Delegation for Africa in **Casablanca**



- Sustainable Development

- Innovation
- Incentives
- Infrastructure

- Facilitation

- Road Transport
- Trade
- Tourism

A diagram consisting of two blue curved arrows. One arrow starts from the 'Sustainable Development' section and points towards the 'IRU Academy' text. The other arrow starts from the 'Facilitation' section and also points towards the 'IRU Academy' text. Both arrows are positioned over a background image of a blue and white flag.

These are also
the priorities of
the **IRU**
Academy



**Securing and facilitating trade
and international road transport**

TIR

**Transports
Internationaux Routiers**

**Managed by the
IRU since 1949**

The TIR System

- The tried and tested **multilateral facilitation and security instrument** for international transport and trade
- Based on **TIR Convention** of 1975
- Provides **world-wide coverage**



TIR Geographical Scope



68

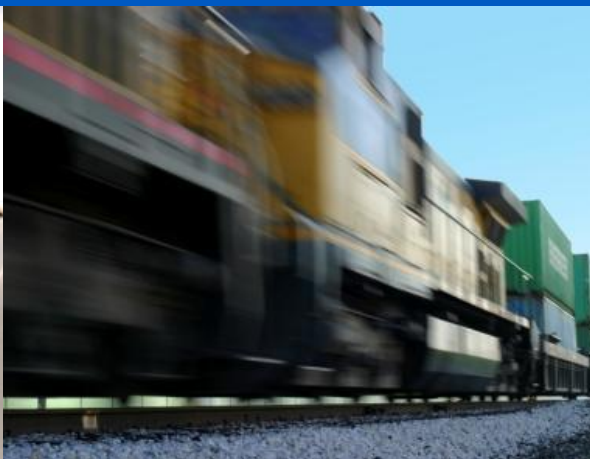
Contracting
Parties

13

In Negotiation
Process

TIR is multi-modal

TIR is multi-modal - road, rail, maritime, waterways and air transport – so long as one part of the journey is by road.



Drivers for Change

1 Make TIR even more secure

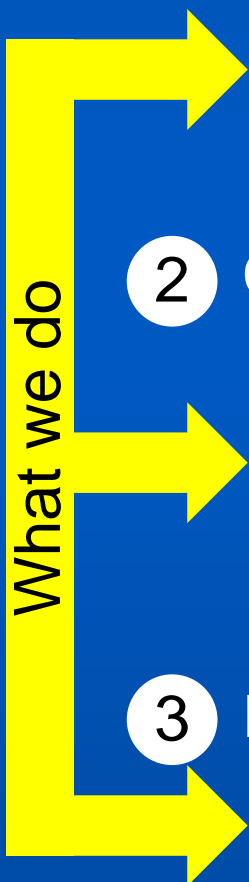
- Implement real-time B2C and C2B electronic data exchanges
- Send advance cargo information
- Enable real-time inquiry of guarantee validity

2 Cut costs and increase efficiency

- Computerise paper-based procedures
- Automate business processes
- Leverage technology (e.g. Cloud)
- Virtualise the TIR Carnet

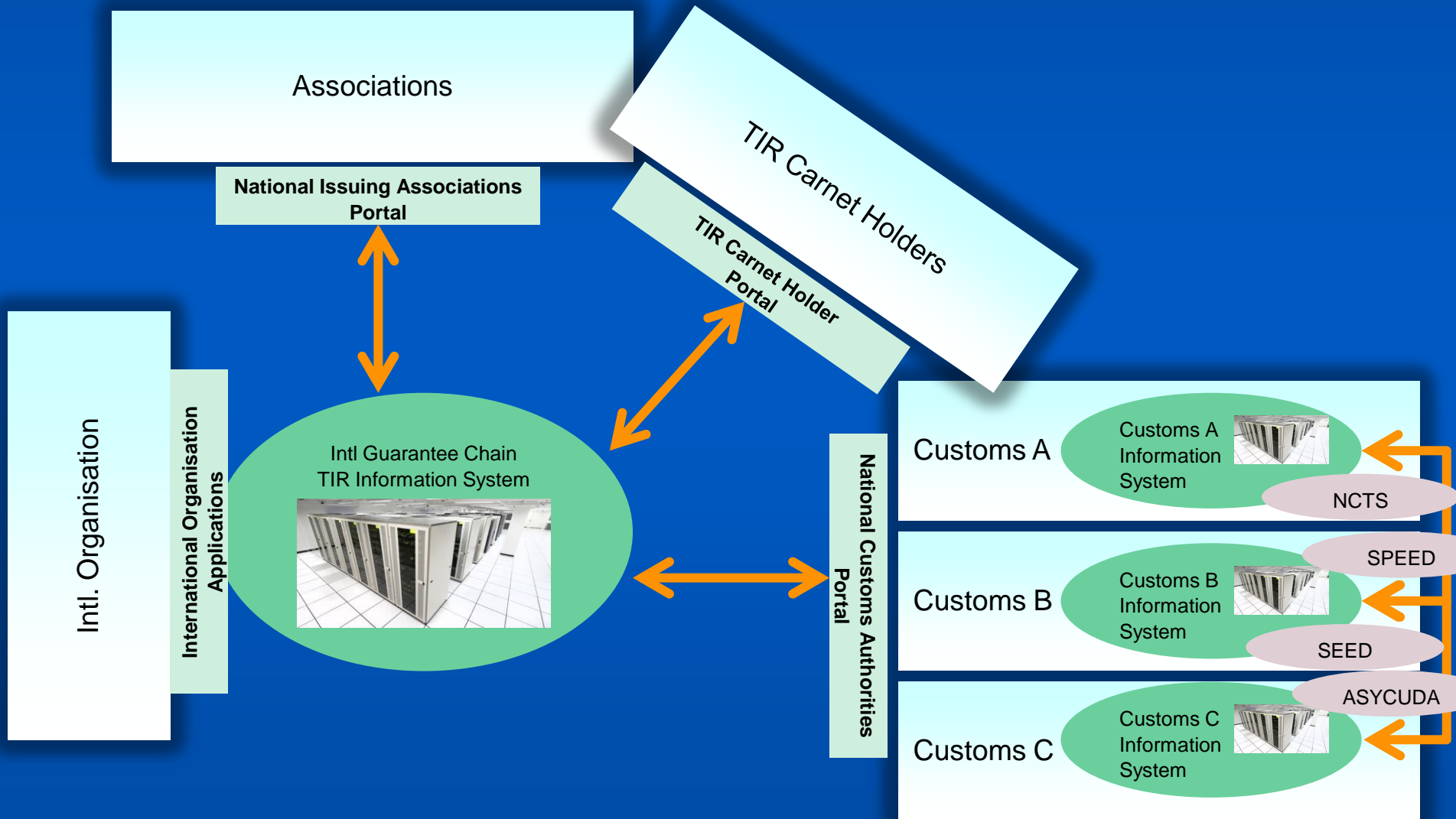
3 Facilitate legitimate trade further

- Promote & leverage TIR
- Improve cross-border processes through green lanes



IT
as
Enabler

Computerisation of TIR Overall Strategy





TIR Carnet Holder Portal TIR-EPD



TIR Electronic Pre- Declaration

1100110100110101	11011	11001101001101	1100110100110101	11001101001101	1100110100110
1011011001010101	01011	101101100101010	1011011001010101	101101100101010	101101100101010
11010	11011	11010	11010	11010	11010
10101	10101	10100	11010	10100	11010
11011	11001	110100100111010	1101111001010101	110100100111010	11010
00101	00101	00100010111010	0010111001010101	00100010111010	00100
11011	11001	11010	11101	11010	11010
11101	11101	11100	10101	11100	11100
11010	11010	11011	00111	11011	101101100101010
11010	11010	11011	11010	11012	1100110100110



Connecting Business and Customs
for facilitating and securing international trade

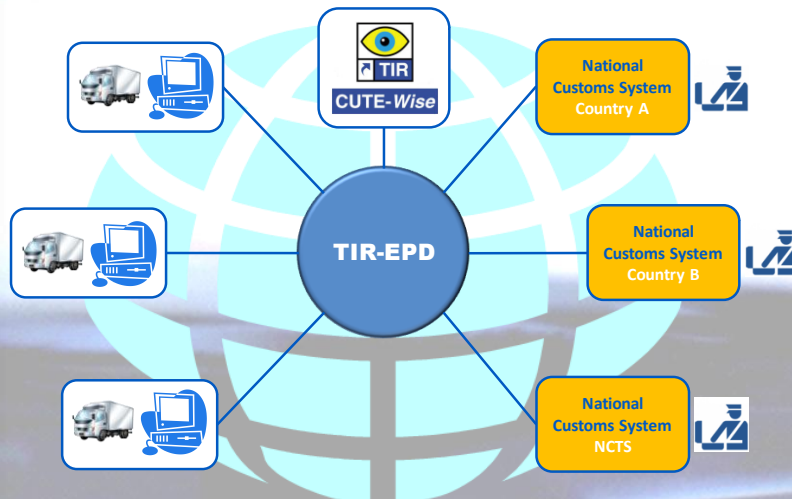
1

**Traders & Carriers submit
free-of-charge electronic
pre-declarations to Customs
authorities in different
countries**



2

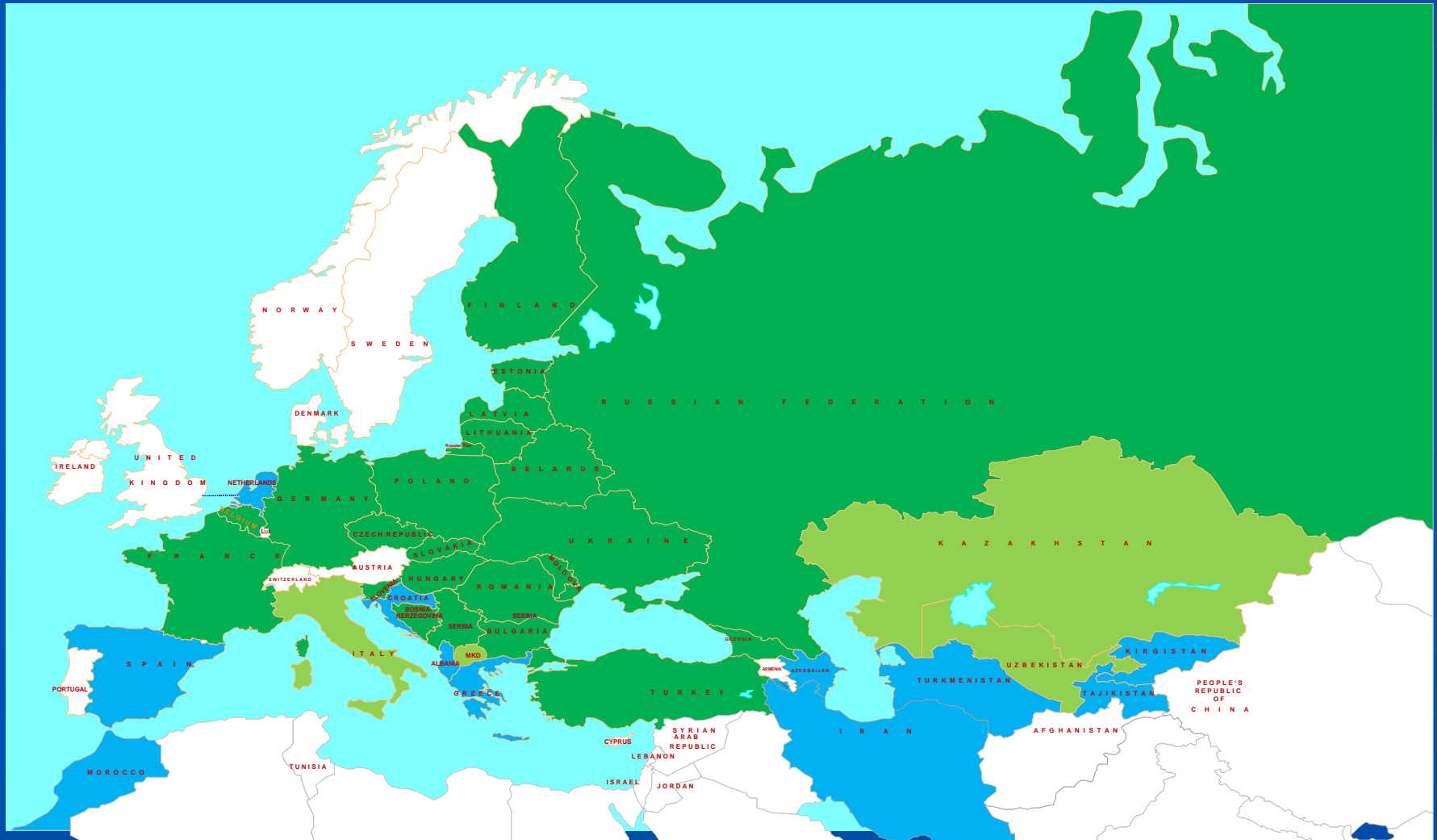
**Customs authorities confirm
reception of the message,
validate the guarantee and
release the cargo for transit**



**Benefits: this exchange of advance
information facilitates pre-arrival
risk analysis and makes border
crossings simpler, more secure and
faster**

TIR Carnet Holder Portal

TIR-EPD Geographical Coverage





TIR Carnet Holder Portal

TIR-EPD: Simple, useful, effective and free of charge service for Holders

1. Login



2. Fill-in

Country where TIR-EPD needs to be sent	Customs office of departure/destination	Country of destination/exit	Customs office of destination/exit	VPN Number	EU Security Elements
PL	PL352020-ANDRYCHÓW / ANDRYCHÓW OC	DE	DE007054-Aachen / Zollamt Aachen Charlottenburger Allee	3	YES

3. Submit

Current Logged In User: iretest_17(en)
Logged In At: 11:46
Date: 09/12/2019

4. Obtain movement reference Nr, present it to Customs!



TIR Carnet Holder Portal

TIR-EPD Data Elements

IRU Union Internationale des Transports Routiers

CARNET TIR*

14 volets I.R.U. X825000000

1. Valable pour toutes les marchandises qui sont transportées par camion, par train ou par bateau, à l'exception des marchandises dangereuses, sous le régime de transit international.

2. Délivré par l'administration douanière du pays d'origine.

3. Délivré par l'administration douanière du pays d'origine.

4. Signature du titulaire du carnet (ou de son représentant légal) et de l'administration douanière du pays d'origine.

5. Signature de l'administration douanière du pays de destination.

6. Signature de l'administration douanière du pays de transit.

7. Signature de l'administration douanière du pays de destination.

8. Signature de l'administration douanière du pays de transit.

9. Signature de l'administration douanière du pays de destination.

10. Signature de l'administration douanière du pays de transit.

11. Signature de l'administration douanière du pays de destination.

12. Signature de l'administration douanière du pays de transit.

13. Signature de l'administration douanière du pays de destination.

14. Signature de l'administration douanière du pays de transit.

FEUILLET NON DOUANIER
NOT FOR CUSTOMS USE

Form not to be taken under Customs control by the Customs authorities

1. Valable pour toutes les marchandises qui sont transportées par camion, par train ou par bateau, à l'exception des marchandises dangereuses, sous le régime de transit international.

2. Délivré par l'administration douanière du pays d'origine.

3. Délivré par l'administration douanière du pays d'origine.

4. Signature du titulaire du carnet (ou de son représentant légal) et de l'administration douanière du pays d'origine.

5. Signature de l'administration douanière du pays de destination.

6. Signature de l'administration douanière du pays de transit.

7. Signature de l'administration douanière du pays de destination.

8. Signature de l'administration douanière du pays de transit.

9. Signature de l'administration douanière du pays de destination.

10. Signature de l'administration douanière du pays de transit.

11. Signature de l'administration douanière du pays de destination.

12. Signature de l'administration douanière du pays de transit.

13. Signature de l'administration douanière du pays de destination.

14. Signature de l'administration douanière du pays de transit.

TIR-EPD = TIR Carnet + additional information (safety and security, etc)

Initially based on NCTS format, e.g. IE15 message (comprising notably all movement, trader (principal, career, consignor, consignee), customs, guarantee, goods items, itinerary and security information



TIR Carnet Holder Portal

TIR-EPD additional Country Data (e.g. Belarus)

IRU International Road Transport Union

lucastransport
TIR-EPD Driver Information

Edit Driver Information

Last Name: Registration country:

First Name: Middle Name:

Position:

Document ID Type:

Document Series:

Document Number:

Date of Issue:

Issuing Organization:

Drivers:

Last Name	First Name	Document ID Type
cacho	castana	Other documents issued by Interior Ministry

Current Logged In User: lucas(en)

Logged In At: 10:21

IRU International Road Transport Union

lucastransport
TIR-EPD Vehicle Information

Vehicle Reg Numbers:

Truck :

Reg. Num. of Truck: Nationality Truck/Trailer:

Select VIN/Chassis of Truck:

VIN/Chassis of Truck:

Mark of Truck:

Type of Truck:

Trailer :

Reg. Num. of Trailer: Nationality Trailer:

Select VIN/Chassis of Trailer:

VIN/Chassis of Trailer:

Mark of Trailer:

Type of Trailer:

2nd Trailer :

Reg. Num. of 2nd Trailer: Nationality 2nd Trailer:

Select VIN/Chassis 2nd of Trailer:

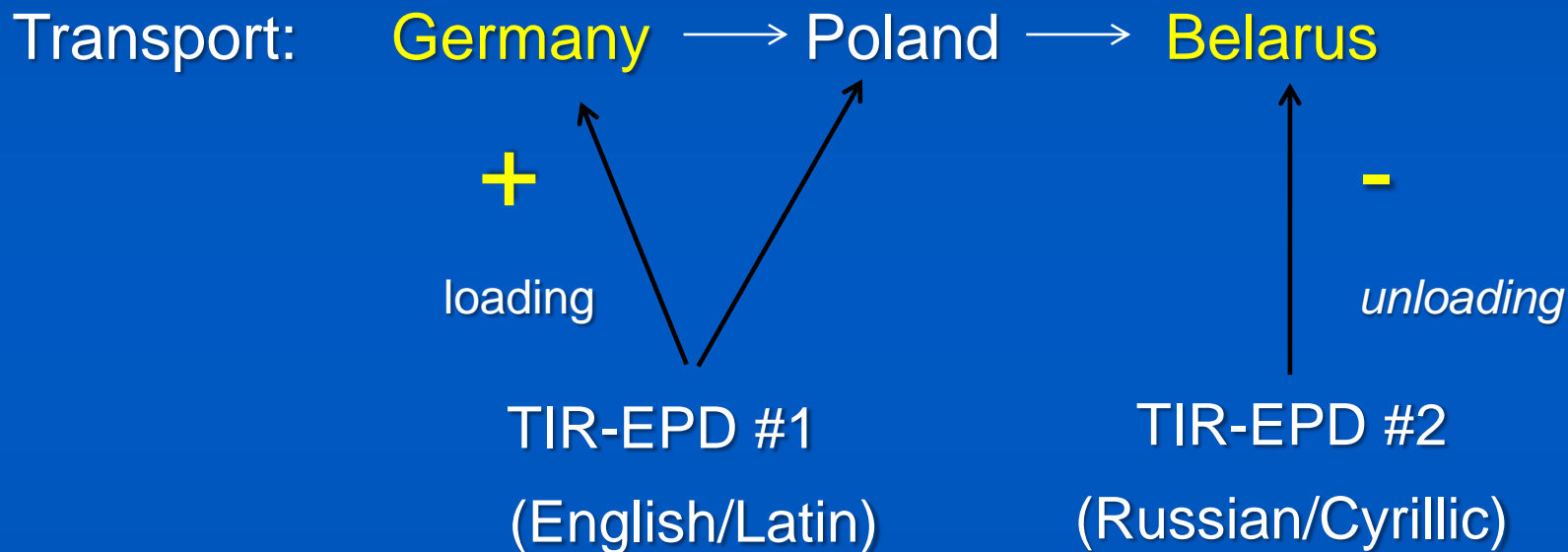
VIN/Chassis of 2nd Trailer:

Mark of 2nd Trailer:

Type of 2nd Trailer:

Registration Language:

☒ Container



Possibility to submit goods descriptions in Cyrillic!

Solution in preparation to have only one submission necessary



TIR Carnet Holder Portal

TIR-EPD Constant Improvements

TIR Holder Portal **T&T Express**

Help | Contact us | 4 new messages ▼ | Kahil Gibran ▼ | English ▼ | X

Carnets EPDs Messages Company Info Admin

[Search EPD]

Welcome to the IRU Holder Portal

The Holder Portal allows you to view the status of your TIR Carnets and send pre-declarations to Customs.

Issue notes Return notes

Issue note	# Carnets	Date ▼
16-ZUR-2012-ISS-14	20	22-Mar-2012
16-ZUR-2012-ISS-14	15	15-Feb-2012
16-ZUR-2012-ISS-14	10	30-Jan-2012
16-ZUR-2012-ISS-14	20	03-Jan-2012
16-ZUR-2012-ISS-14	20	15-Dec-2011
16-ZUR-2012-ISS-14	10	30-Nov-2011

[View all](#)

Carnets overdue (5) In circulation (22)

Carnets	Overdue ▲
UX 30 120 209	10 days
GZ 30 120 210	10 days
AX 30 120 211	10 days
PW 30 120 212	10 days
DT 30 098 950	5 days

TIR EPD Alerts & Messages

Carnet #	From	Message
AX52369812	BY - 15304-Aleksandrovka / Aleksandrovka	Ref. No. : CH316357000000011S00004
JX66905879	PL - Balice / Krakow-Balice OC Port Lotniczy (PL351030)	Please wait for reply from customs
PX52369812	FR - Abbeville / Abbeville Ant (FR000010)	Released for transit

[Create new](#) [View all](#)

TIR News

12/11/2011	Lorem ipsum dolor sit amet, consectetur adipisicing elit
10/11/2011	Lorem ipsum dolor sit amet, consectetur adipisicing
09/10/2011	Lorem ipsum dolor sit amet, adipisicing elit

New messages from Association

2 overdue Carnet(s)
We hereby notify you that you have 2 overdue carnets by 5 days. Please return them immediately or declare them as lost or stolen.

Bank guarantee expires in 1 week
Your bank guarantee expires in 1 week. Please send an updated guarantee via certified mail.

Your quota has been reduced to 30 carnets
Due to repeated loss of carnets, we are temporarily reducing your quota to 30 carnets.

[Create new](#) [View all](#)

AskTIR access

Haulier status Pending suspension

Quota 30

Carnet types Ordinary, Pilot

Expiry alert 19-Apr-2012 Bank guarantee
20-Apr-2012 Admission guarantee

[View more](#)

Company profile

Name T&T Express

Unique ID CHE/100/29382

International licence # 203 2093 02 9

Address 22 Main Street
4th floor
20290 Sample City

Email Contact@transport.int

[View more](#)



TIR Carnet Holder Portal

TIR and TIR-EPD green lanes



1100110100110101	11011	11001101001101	1100110100110101	11001101001101	1100110100110101
1011011001010101	01011	101101100101010	1011011001010101	101101100101010	101101100101010
11010	11011	11010	11010	11010	11010
10101	10101	10100	11010	10100	11010
11011	11001	110100100111010	1101111001010101	110100100111010	11010
00101	00101	00100010111010	0010111001010101	00100010111010	00100
11011	11001	11010	11011	11010	00101
11101	11101	11100	10101	11100	11100
11010	11010	11011	00111	11011	101101100101010
11010	11010	11011	11010	11010	110011010011010





Customs Authorities Portal CUTE-Wise <http://www.cutewise.org/>

- A central & worldwide database allowing Customs to control TIR guarantees
- A portal reserved for National Customs Authorities and issuing Associations
- Up-to-date information on TIR Carnets:
 - In circulation
 - Terminated (with info provided by the customs office of destination)
 - Returned to the IRU
 - Recorded as invalid by the IRU (used/unused)

Consultation Of TIR Carnet Data | **Download Lists Of Invalid TIR Carnets** | **CUTE - Wise User Guide** | **IRU**

TIR Carnet Number: SX68587711 | **NEW SEARCH**

Issuing Country ISO Alpha 3: LTU | **Name**: LITHUANIA

Issuing Association: LTLINAVA | **Language Used On Yellow Manifest**: LITUANIE

Number Of Pages: 14

Date Of Issuance Of The TIR Carnet To The Issuing Association: 06.06.11

Date Of Issuance Of The TIR Carnet To The Holder: 21.06.11

Holder ID Number: LTU/032/0558 | **Expiry Date**: 19.08.11

Status Of The TIR Carnet: THE TIR CARNET WAS RETURNED TO THE IRU

Number Of Customs Records: 1

RECORDS RECEIVED FROM THE CUSTOMS OFFICES OF DESTINATION

Country	Name Or Number Of Customs Office	Date In The Customs Ledger	Record Number In The Customs Ledger	Reference Number As Per The Certificate Of Termination	Date As Per The Certificate Of Termination	Partial (P) Or Final (F) Termination	Page Number	Termination Certified With (R) Or Without (OK) Reservation	Number Of Packages	Customs Comments	Record Available At IRU On
RUS	10113083	11.07.11	009376	009376	11.07.11	F	4	OK	15	???	11.07.11

Real Time SafeTIR



System to system connection

For full automation of the SafeTIR related procedures:

TIR Carnet status control

Automatic SafeTIR data transmission

Electronic SafeTIR reconciliation

**Connecting Business and Customs
to facilitate and secure international trade**

Customs Authorities Portal

Increased Security thanks to IRU RTS

The status of the TIR Carnet is :

- Valid (with following details:
Holder ID, validity date, Issuing Association name)
- Invalid
- Not issued/False/other situations

IRU
Geneva

What is the status of the TIR Carnet ?



Customs
Moscow

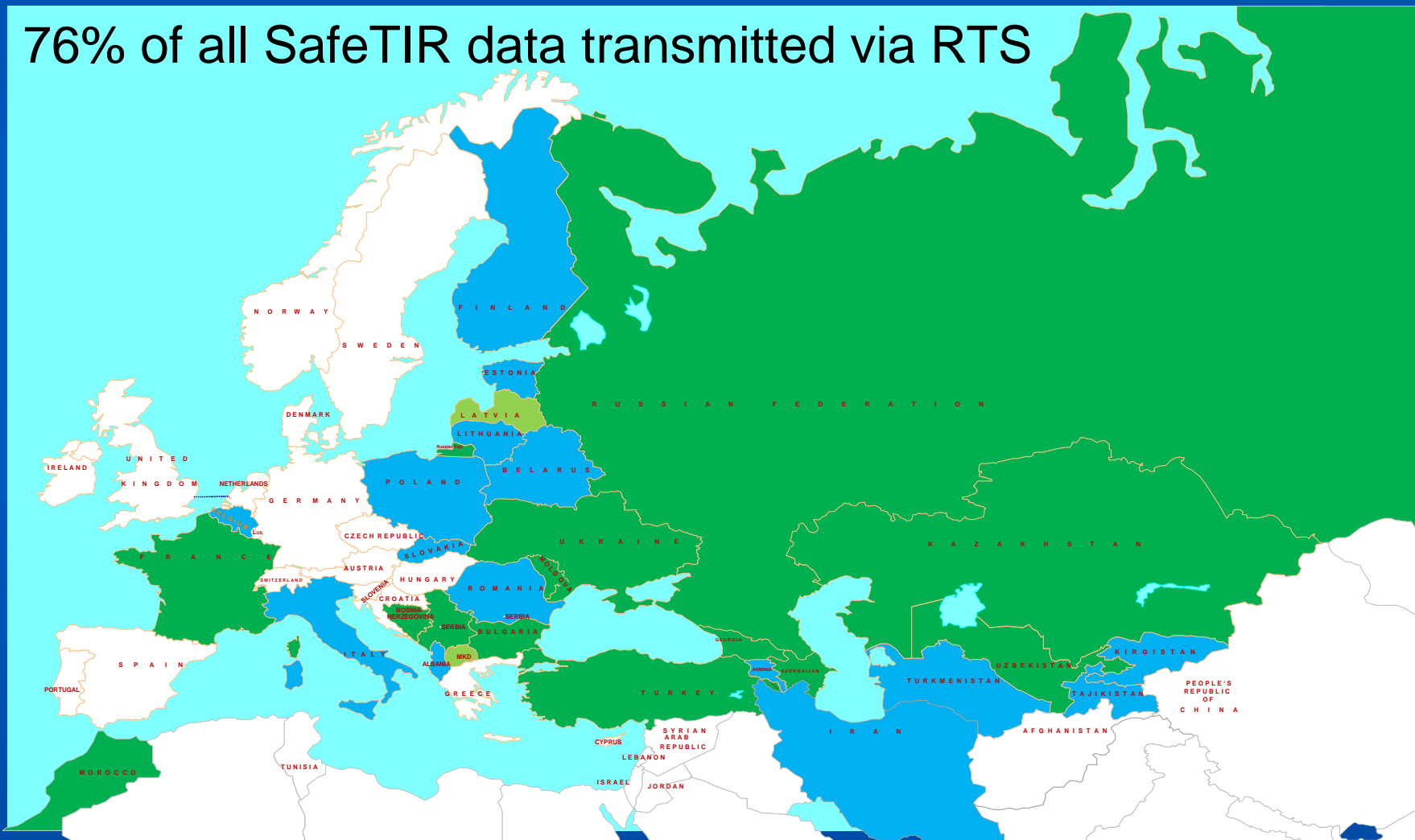
SafeTIR
data

Real Time SafeTIR and
TIR-EPD provide security to
allow the issuance of
\$1billion/day in guarantees

Real Time SafeTIR:

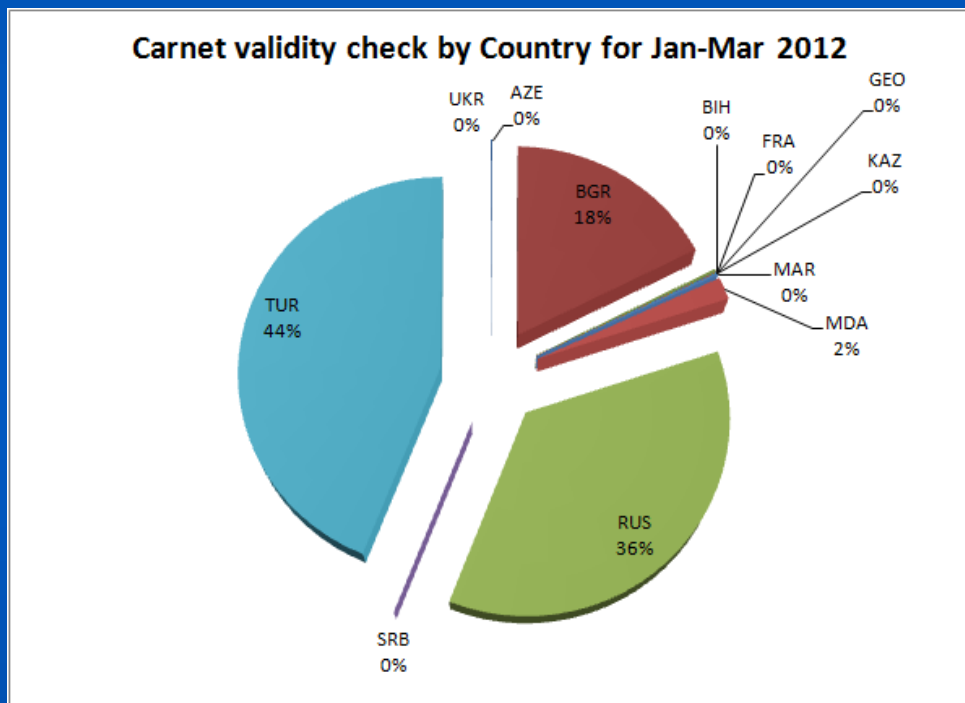
- SafeTIR Customs data is sent by Customs in real time as soon as the TIR transport is terminated
- Information is made available to all relevant actors

76% of all SafeTIR data transmitted via RTS



Customs Authorities Portal

RTS Carnet validity check statistics (TCHQ)



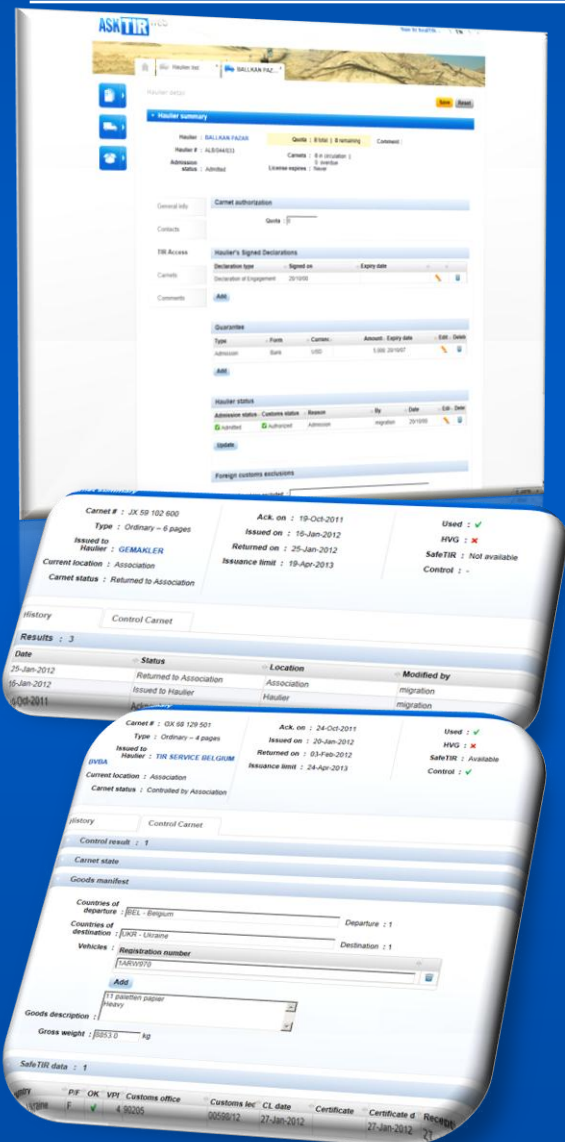
- Over the first 3 months of the year 2012, almost 50% of all TIR Carnets in circulation were checked at least once by one Customs Authority

Objective is to provide Associations with a high performing and secure **SaaS-based TIR Carnet management application**

It allows to reduce costs, to increase the integration and exchange of information and to enforce rules

It comprises functionality to manage hauliers, to issue carnets, to return and to control carnets, to handle claims, etc

It will enable (through integration with the TIR Carnet Holder Portal) the dematerialization of the TIR Carnet and the **full computerization of the TIR Carnets lifecycle**



- Best of breed component & technologies
 - Open source or proprietary (if better)
 - Freedom of choice: no vendor lock-in overall
 - Interoperability & open standards are a must
- Web-based wherever possible
- Cloud-based (IaaS, PaaS, SaaS) if suitable
- Service Oriented Architecture
 - Allows to integrate new applications with existing ones without major rewrite

- High-Availability & Reliability

- Increasing requirements / target: 99.9%, 24/7, 4h RTO, 0h RPO

=> Robust and redundant infrastructure

=> Heterogeneous clustering techniques in every application tier

- Scalability

- 30-50 million messages exchanged yearly with Customs and Associations
- Increasing demand and complexity with new services & SaaS offerings

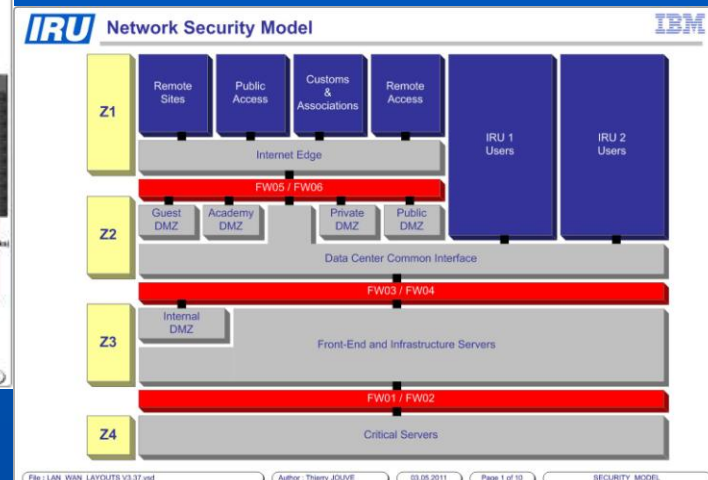
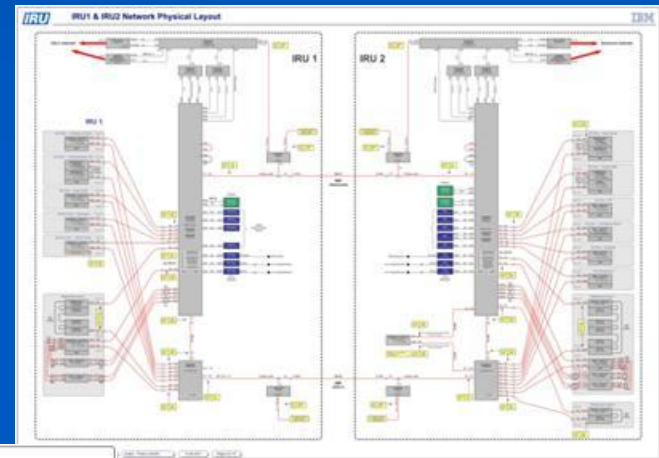
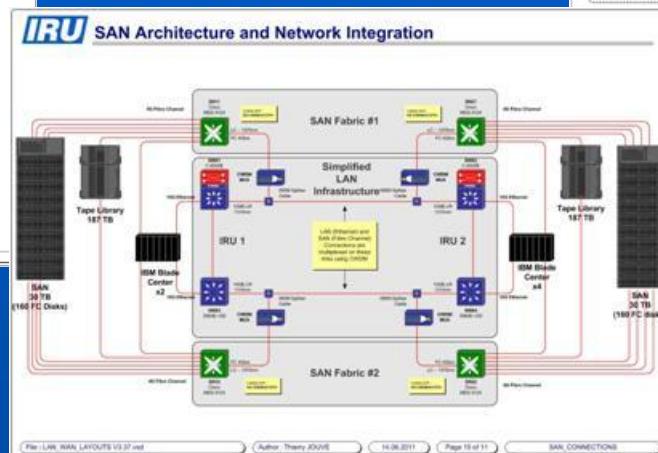
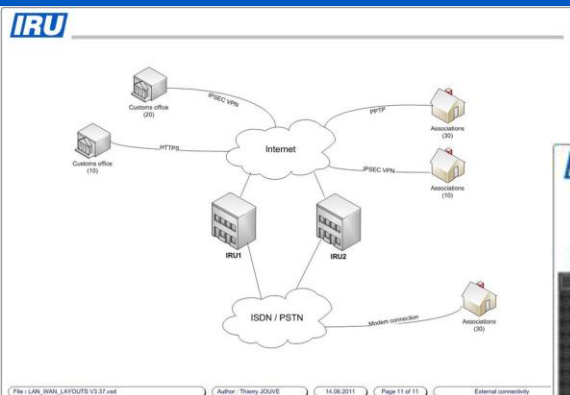
=> Load balancing & horizontal scalability application architectures

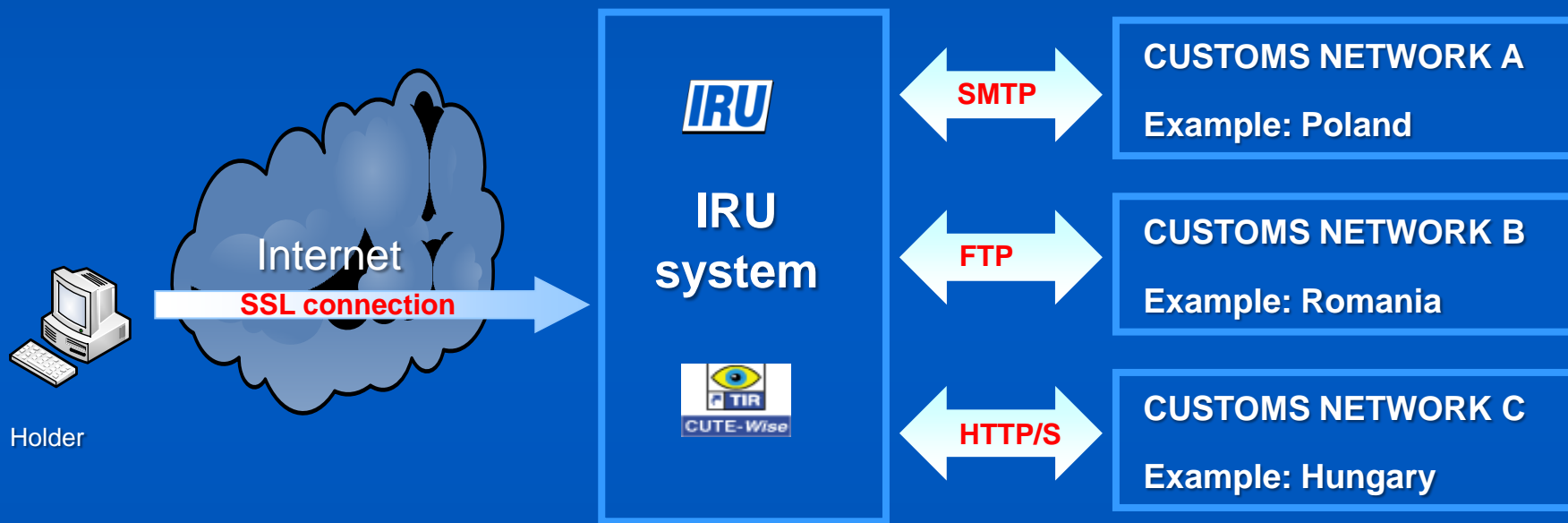
- Maintainability

- Constantly evolving applications to master complexity and changes

=> Agile methods and code quality management

- Own data center (2 distinct sites, redundant dark fibres interconnection)
- Redundant internet connection
- SAN & NAS storage
- Fully redundant backups
- State of the art security architecture

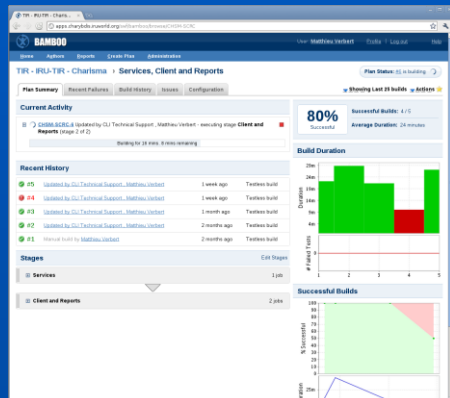




Security elements:

- Secure & Encrypted VPN
- Electronic Signatures
- RSA-1024 encryption
- X509 certificate
- SHA1 Hash function

- **Scrum** (agile software development) and **eXtreme Programming** for projects
- **Product Management** approach on business side
- **Kanban** (billboard / just in time methodology) where we have a mix between project and support
- **User eXperience** driven approach applied to UI design
- **ITIL** “light” approach for overall IT processes (e.g. Incident mgmt)
- **Software factory tools:**



- The IRU has been investing heavily in computerizing the TIR system in close partnership with Customs Authorities and National Associations
- TIR is fully computerized
 - By end 2012, all important TIR countries have TIR-EPD & Real-Time SafeTIR in operation
 - A central TIR information system is available with portal access for Customs, Associations and Holders
- We are ready to have discussions on fully computerised pilot TIR corridors including green lanes further securing and facilitating legitimate trade



www.iru.org

*Working together
for a better future*



s i n c e 1 9 4 8