SG 11 Regional Workshop for Africa on "Counterfeit ICT Devices, Conformance and Interoperability Testing Challenges in Africa" (Cairo, Egypt 5 April 2017)

Combat of Counterfeit and Stolen ICT Devices

João Alexandre Zanon

National Telecommunication Agency – ANATEL/Brazil

Vice Chairman of ITU-T SG11 and WP3/11 – Rapporteur of Q15/11

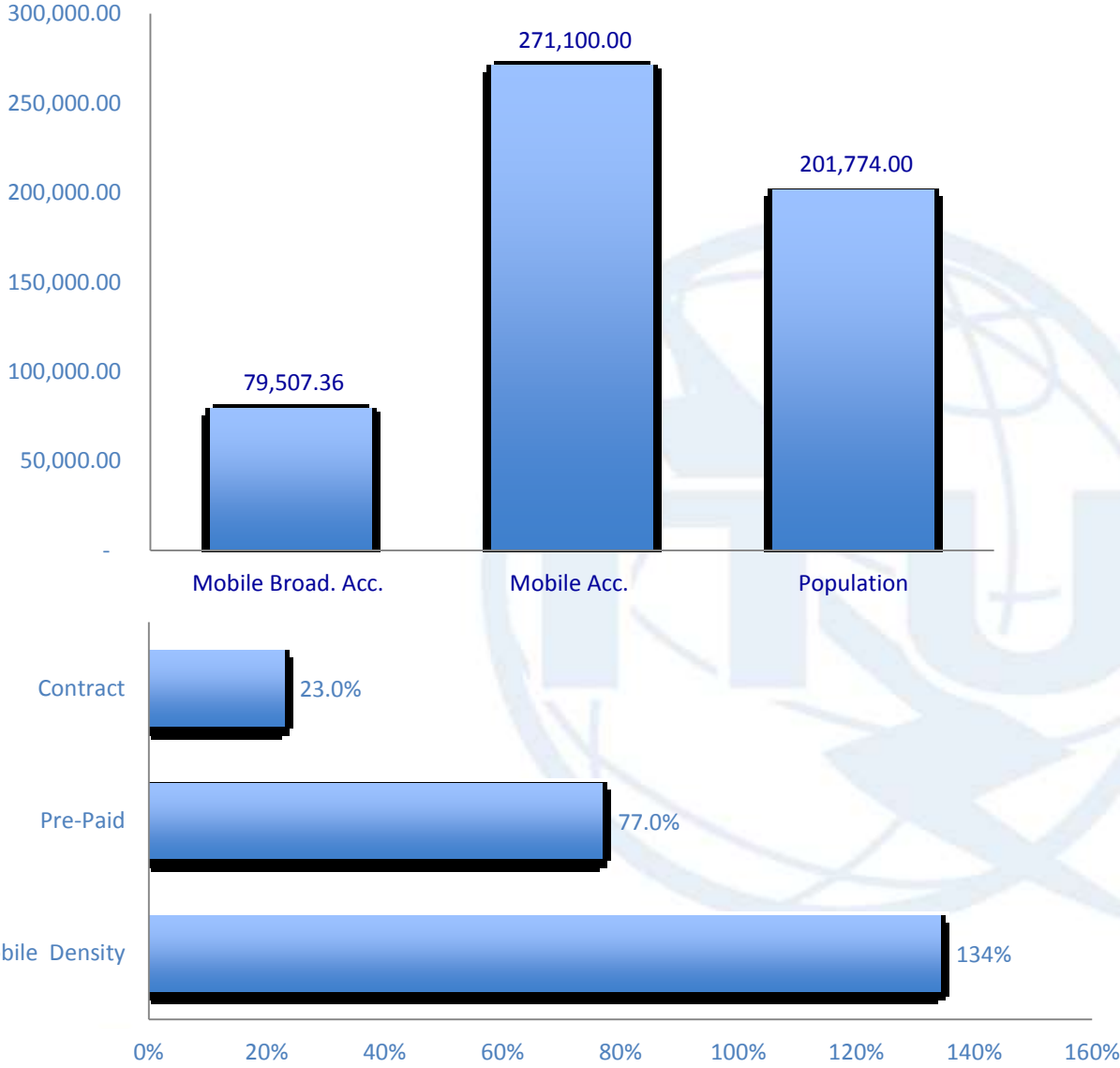*zanon@anatel.gov.br*

Outline

- **The Brazilian Scenario.**

- **Challenges when addressing the problem.**

- **The importance of Conformity Policies.**

- **Latest CITEL actives.**

- **Latest ITU actives.**
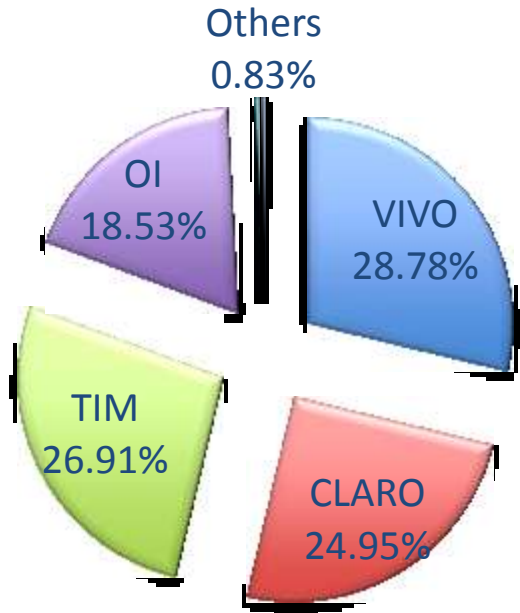
- **What we should aim for.**

The Brazilian Scenario

General Statistics

Mobile Market Share

- Others 0.83%
- VIVO 28.78%
- CLARO 24.95%
- TIM 26.91%
- OI 18.53%

Mobile Broad. Acc.: 79,507.36
Mobile Acc.: 271,100.00
Population: 201,774.00

Contract: 23.0%
Pre-Paid: 77.0%
Mobile Density: 134%

C&I Applicable Laws and Regulations

- **Law 9.472 (July 1997) – General Telecommunications Law.**
  - Establishes that **Anatel**, the Brazilian National Telecommunications Agency is responsible for issuing or recognizing the certification of telecommunication products and for issuing standards and regulations regarding their use in Brazil.

- **Resolution 242 (November 2000) – General regulations on the certification and approval of telecommunication products.**

  - Establishes that any telecommunication product, before it may be sold or used in Brazil, must have a CERTIFICATE OF CONFORMITY issued by a **Designated Certification Organization – OCD** and approved / homologated by Anatel.

  - Anatel may implement Mutual Recognition Agreements for conformity assessment of telecommunication products.

" All equipment that use radiofrequency to transmit signal must be certificate before being used on Brazil."

CA - Enforcement activities

- To Identify and combat defining preventive actions to protect the market;

- To favor fair competiton between all equipment manufactures;

- Protect the internal market and the end-user;

- **Pre-Market Surveillance (Type Approval):**

  - To grant access to market by compliance demonstration;

- **Currently are available in Brazil, for testing telecom products:**

  - **23** Third Party laboratories: **18** accredited by INMETRO and **5** by OCDs;

  - **5** First Party laboratories evaluated by OCDs.

- **Pós-market (Oversight):**

  - When demanded (complains).

  - Continuos validation the equipment follows up-to-date regulations;

Brazilian Certification Process
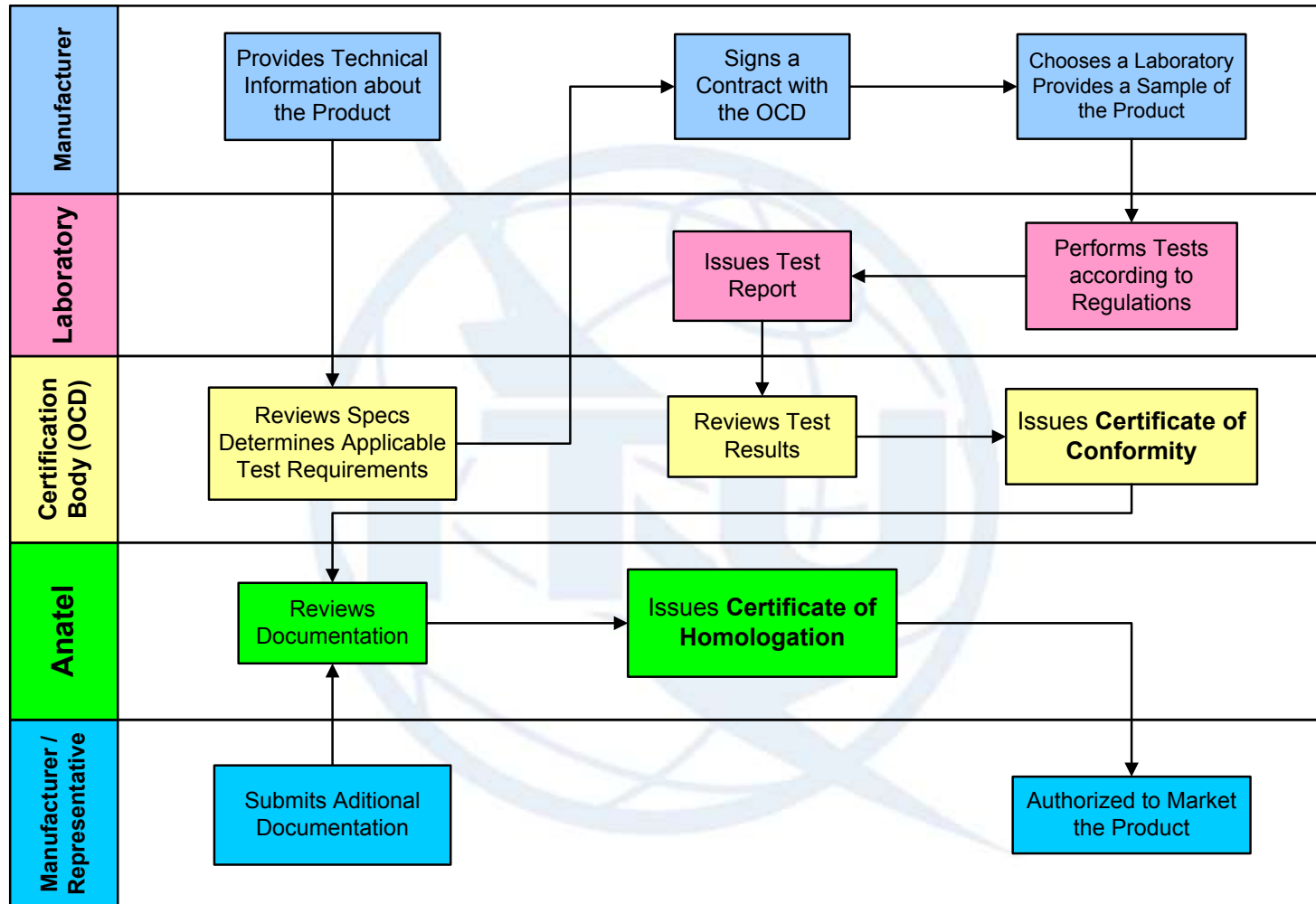
Stakeholder Roles
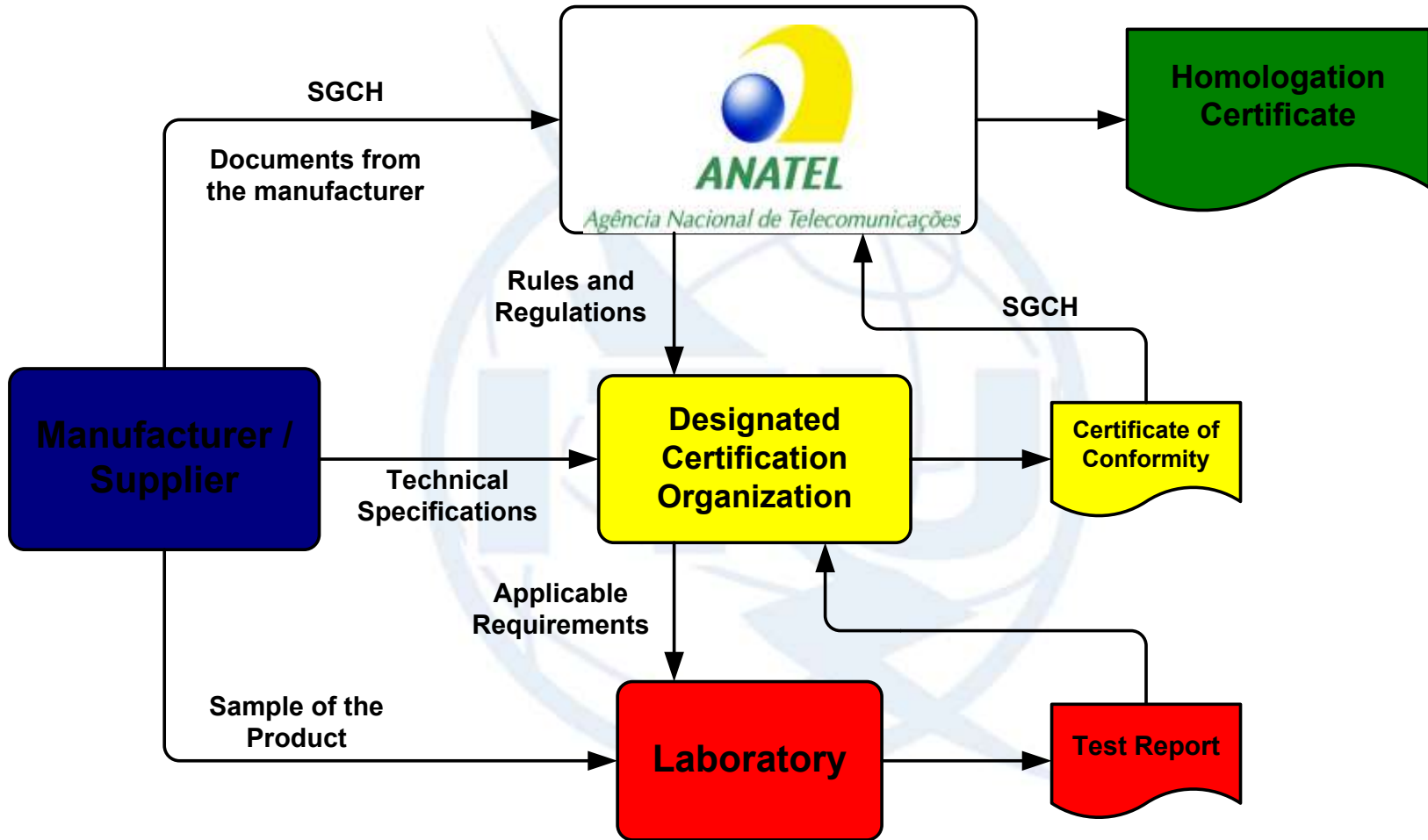
SIGA - Sistema Integrado de Gestão de Aparelhos

- O "Sistema Integrado de Gestão de Aparelhos – SIGA" aims to **control counterfeit, tampered and unauthorized** mobile devices.

- The project is based on Anatel Regulatory framework that dictates that **operators can only allow on the network authorized devices**.

- The Project is lead by Anatel with the participation of all relevant actors (**Anatel, Operators, ABR-Telecom, Manufactures, GSMA, among others**).

- The system is operated by ABR-Telecom and is **active since march 2014** collecting the relevant information from all mobile networks on Brazil.

- **Centralized solution:** built jointly and integrated to all Brazilian mobile operators;

- **Automated solution**: allowing the input of information with low human intervention;

- **Scalable, Dynamic and Flexible:** expandable system, rules adjusted over time;

- **Multiple sources of info:** CDRs, operators systems, international databases;

- **Reliable and secure:** Minimize impacts on regular end users;

SIGA status and next steps

- On november 2016 Abinee (manufactures association) promoted an awareness campaign "Celular pirata não"
  - Major campaign involving, TV, Newspaper, internet and other street media.
  - https://www.youtube.com/channel/UCdAapZdKU0BMJR8De8phg1Q

- On February 2017 Anatel as launched the website of the project SIGA called "Celularlegal".
  - The website aims to help end-users to purchase only regular devices.
  - www.anatel.gov.br/celularlegal

- Anatel is preparing to start an awareness campaign focused on new irregular devices identified o the network.
  - Initial communication by SMS to all new irregular devices identified on the network.
  - Preparation of the Call-Center of Anatel, Operators and manufactures to assist users.
  - Aligned communication language with all the participants based on Anatel's website of the project.

Anatel will provide a tool to enduser check if the device he would like to buy is regular (including checks regarding Stolen devices blacklisting).

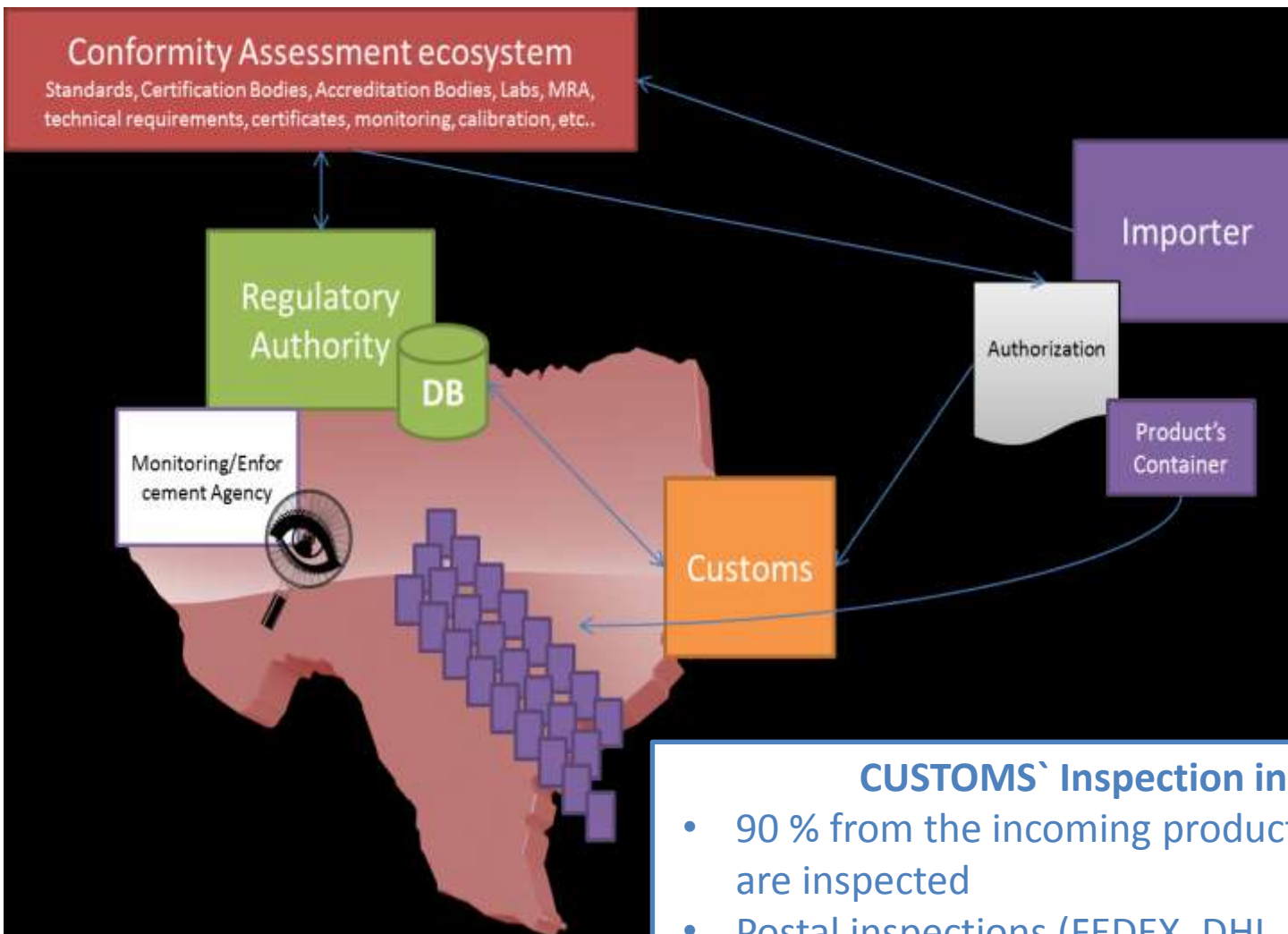# Challenges when addressing the problem.

Challenges when addressing Counterfeit/Substandard/unauthorized

- **Construct a reliable reference database.**
  - Need of reliable Unique identifiers (as indicated on Res. 188).
  - Preferable use of international reference databases + national bases.

- **Identification and definition** of actions for for each scenario.
  - Attack every device of focus first on voice terminals?
  - How to address the cloned problem?

- **Reduce end-user impact.**
  - Define Legacy Terminal actions (regulatory wave?)
  - Strong Educative campaign to pass information to the user.

- **Actions effective only on terminal already on the network.**
  - How to control the entrance of new Counterfeit and other irregular devices?
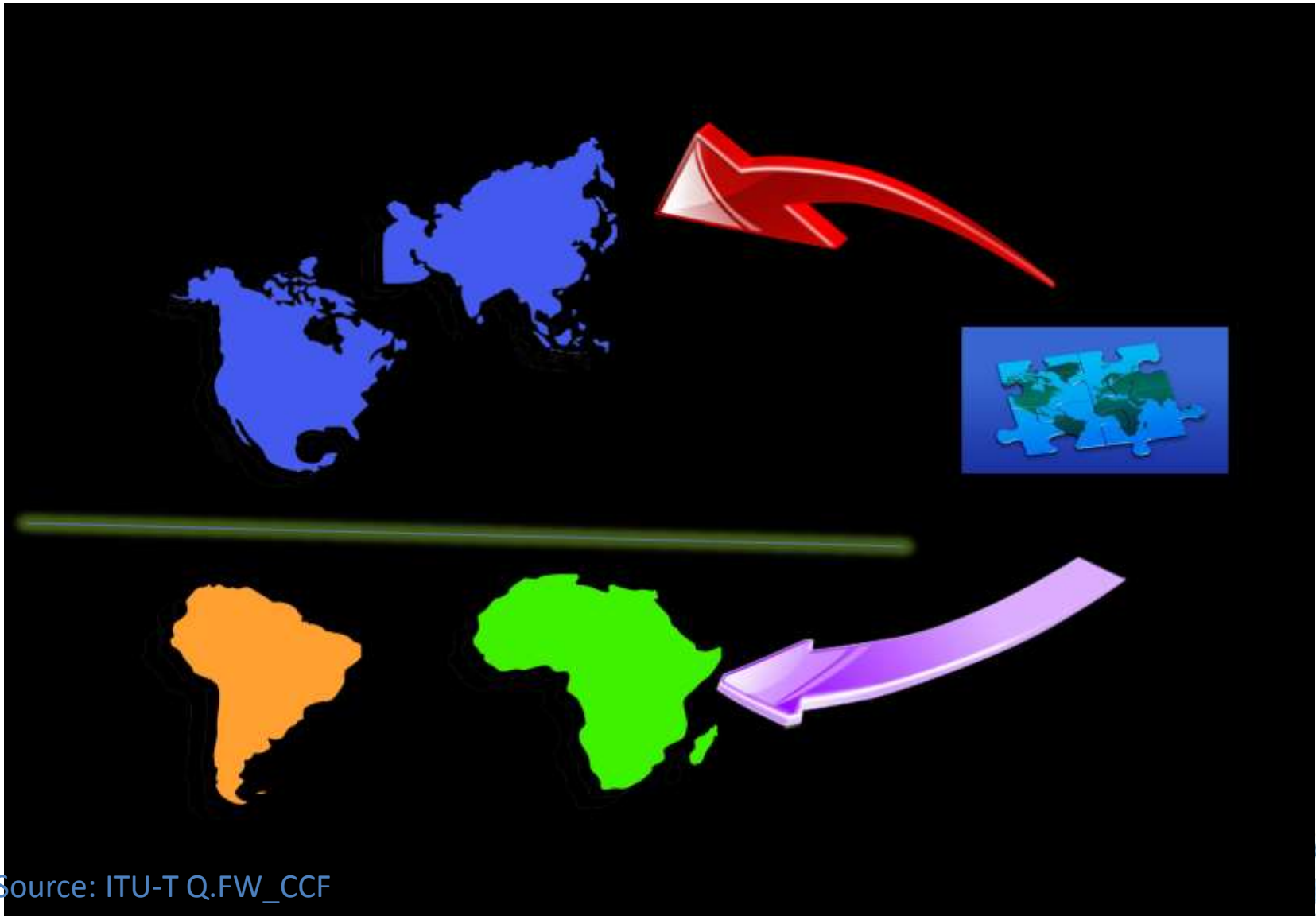
Blocking the entrance of these new Devices

Conformity Assessment ecosystem
Standards, Certification Bodies, Accreditation Bodies, Labs, MRA, technical requirements, certificates, monitoring, calibration, etc..

Importer

Regulatory Authority

DB

Authorization

Product's Container

Monitoring/Enfor cement Agency

Customs

CUSTOMS` Inspection in Brazil:
- 90 % from the incoming products to Brazil are inspected
- Postal inspections (FEDEX, DHL, UPS, TNT, etc).
- Shipping inspections – when demand.

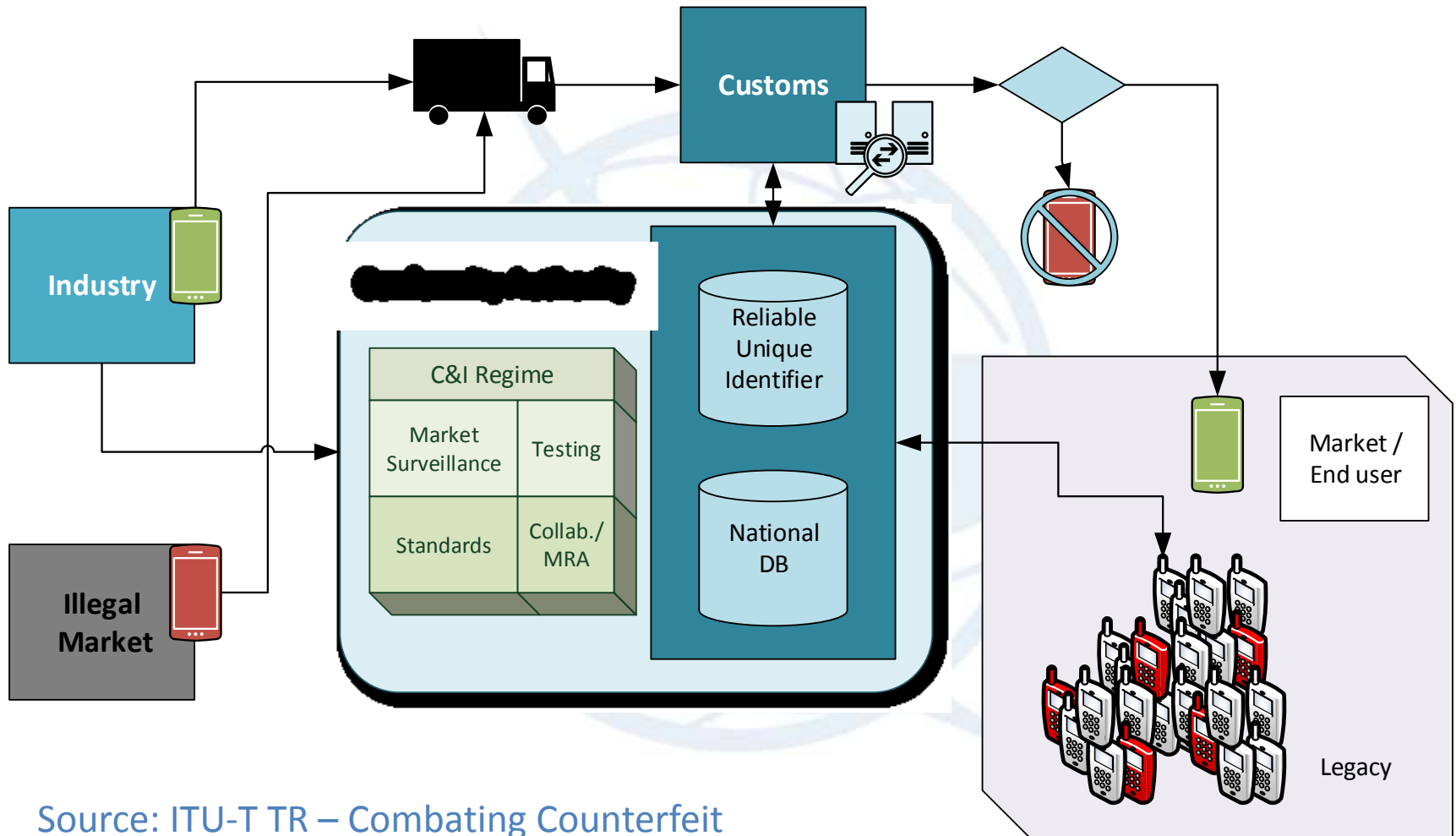Source: ITU-T TR – Combating Counterfeit

Conformity Assessment Importance

Proposed ICT Equipment Control Workflow

Industry

Illegal Market

Customs

C&I Regime

Market Surveillance	Testing
Standards	Collab./MRA

Reliable Unique Identifier

National DB

Market / End user

Legacy

Source: ITU-T TR – Combating Counterfeit

Multi Layer Initiatives

Multi Layer Initiatives Regarding Counterfeit

- **National:** Example - Brazil's SIGA and Custom Integration.

- **Regional:**

  - **CITEL CCPI:**

    - **GTPR Correspondence Group** on the Combat of Counterfeit, substandard and unauthorized mobile terminals.

    - **GTPR Rapporteurship** on Fraud Control, Regulatory Non-compliance Practices in Telecommunications and Regional Measures against the Theft of Mobile Terminal Devices.

    - **Creation of a Technical Notebook on Counterfeit and discussion of Q.FW_CCF**

    - **IAP with a proposal of new WTSA-16 Resolution on the combat of Counterfeit**

- **Global Wide Actions**:

  - **PP14 Resolution 188 on Counterfeit.**

  - **ITU-T SG11 (Q8/11) Technical Report.**

  - **ITU Event on the combat of Counterfeit.**

  - **Q.FW_CCF "Framework for solution to combat counterfeit ICT Devices".**

  - **WTSA-16 – Res. 96 Combating counterfeit ICT devices**

  - SG 11 Regional Workshop for Africa on Counterfeit ICT Devices.

Most Relevant CITEL PCCI Activities

- **XXIV Meeting of PCC.I (Lima, May 2014):**
  - **Resolution 222 (XXIV-14)** - established the "Correspondence Group to Discuss Regional Measures to Combat the Spread of Counterfeit, Substandard and Unapproved Mobile Devices"
    - **Mandate: develop definitions ,evaluate the scope; share information, experiences and best practices among Member States and associate members of CITEL, developing recommendations and guidelines**

- **XXVII Meeting of PCC.I (Washington, September 2015):**
  - Proposal of the base text for the Technical Report on Counterfeit, Substandard and Unauthorized based on ITU-T TR Counterfeit and responses to the questionnaire.
  - Discussion on how CITEL can coordinate its works with ITU-T Q8/11 work items.
  - Discussion of IAP/Multi-country contribution to Draft Recommendation **ITU-T Q.FW_CC.**

- **XXIX Meeting of PCC.I (Lima, September 2016):**
  - Approval of a Inter-America Proposal (IAP) to create a new WTSA Resolution on the combat of Counterfeit ICT.

Recent ITU Initiatives

On going work from the past Study-Period Q8/11:

Based on **PP-14 Resolution 188** - Combating counterfeit telecommunication/information and communication technology devices

- **Q.FW_CCF:** Framework for solution to combat counterfeit ICT Devices

- **TR-CF_BP:** Technical Report - Guidelines on Best Practice and Solutions for Combating Counterfeit ICT Devices

- **TR-Uni_Id:** Technical Report on use of anti-counterfeiting technical solutions relying on unique and persistent mobile device identifiers

Resolution 2 of WTSA-16 – SGs responsibility and mandates

ITU-T SG11 Lead study group on combating counterfeiting and the use of stolen ICT devices

AREAS OF STUDY OF ITU-T SG11: studies to **combat counterfeiting products** including telecommunication/ICT and **mobile device theft**

Q15/11 Questions:

- What technical reports are needed to raise awareness of the problem of counterfeiting of ICT equipment and the dangers they pose?

- Can Conformity and interoperability testing and assessment schemes be used to combat counterfeit ICT equipment?

- What technologies may be used as a tool for combating counterfeit, tampered and stolen ICT equipment?

- What identity management frameworks are appropriate to combat counterfeit and stolen ICT equipment with their identity modified?

- What kind of Recommendations, technical reports and guidelines should be developed to combat ICT counterfeiting, tampering, modification and/or duplication of unique device identifiers?

- What kind of Recommendations, frameworks, technical reports and guidelines should be developed to assist ITU Members, in cooperation with ITU-D Sector, on combating counterfeit and mitigate the use of stolen ICT equipment?

- What ITU Recommendations are required to secure the supply chain management (from manufacturing, importation, distribution and marketing) to ensure traceability, security, privacy and trust of people, products and networks?

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AREAS OF STUDY OF ITU-T SG11: studies to **combat counterfeiting products** including telecommunication/ICT and **mobile device theft**

Q15/11 Task:

- Develop Recommendations, technical reports and guidelines to assist ITU Members, in cooperation with ITU-D Sector, on combating counterfeit ICT equipment

- Develop Recommendations, technical reports and guidelines to address the problem of stolen ICT equipment and to assist the Member States, in cooperation with ITU-D Sector, in deploying solutions to and mitigate the use of stolen equipment

- Study any possible solutions, including identity management frameworks, to combat counterfeit and stolen ICT equipment with their identities modified

- Study any technologies that can be used as a tool for combating counterfeit and tampered ICT equipment

- Organize workshops and events across ITU regions in cooperation with the ITU-D Sector to promote the work of ITU-T in this field and involve stakeholders

- Study possible conformity and interoperability testing (C&I) solutions to combat counterfeiting of ICT equipment, taking into account the activities of the ITU-T CASC

- Study results achieved by various international standardization bodies and develop technical specifications to feed the standardization work of the Question

Resolution 96 of WTSA-16 - Combating counterfeit ICT devices

Instructs ITU-T Study Groups 11, within their mandate:

- Developing Recommendations, technical reports and guidelines to address the problem of counterfeit and tampered ICT equipment
- Collect, analyze and exchange information about counterfeiting and tampering practices
- Study existing as well as new reliable, unique, persistent and secure identifiers that have the potential to be used in combating counterfeit and tampered products, including the context of their possible duplication/cloning
- Develop methods of assessing and verifying identifiers used for purposes of combating counterfeit production
- Develop mechanisms as appropriate for identifying products, unique identifiers that are resistant to duplication and respond to confidentiality/security requirements
- Study possible solutions, including frameworks to discover identity management information, that could support combating of counterfeit and tampered ICT devices
- Identify a list of technologies/products, used for testing conformance with ITU-T Recommendations, in order to help in efforts to combat counterfeit ICT production

Resolution 97 of WTSA-16 - Combat mobile device theft

Instructs ITU-T Study Groups 11, within their mandate:

- Develop Recommendations, technical reports and guidelines to address the problem of mobile telecommunication device theft and its negative effects

- Study any possible solutions to combat the use of stolen mobile telecommunication devices with tampered (changed without authorization) identities and to prevent them from accessing the mobile network

- Study any technologies that can be used as a tool for combating mobile telecommunication device theft

- Draw up a list of identifiers used in mobile telecommunication/ICT device

Key topics to be addressed

KEY CHALLENGES BASED ON RES. 2, 96, 97.

- Developing Recommendations, technical reports and guidelines on combating the use for Counterfeit and Stolen Devices.

- Study existing as well as new reliable, unique, persistent and secure identifiers to assist on the combat of counterfeit and stolen.

- Methods of assessing and verifying identifiers used for purposes of combating counterfeit production.

- List of technologies/products, used for testing conformance with ITU-T Recommendations, in order to help in efforts to combat counterfeit ICT production

- Solutions to address the problem of tampering and duplication of unique identifiers.

Strategic plan for Study Period (2017-2020)

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Proposed Strategic plan for addressing the Challenges:

- **Division of the work in four major blocks, based on the Res. 2, Res. 96 and Res. 97:**

  1. Raise the awareness and promote the discussion;

  2. Coordinate the actions and collect information, within and outside ITU;

  3. Produce deliverable, such as Technical Reports and Recommendation;

  4. Assist ITU members implement the deliverables and combat the use of counterfeit and stolen devices;

- **Continuation and improve of the actions regarding the combat of Counterfeit.**

- **New immediate actions on the combat of Stolen Mobile Devices:**

  - Proposal of new Recommendation: Framework for Combating the use of Stolen Mobile Devices.

  - Proposal of a Workshop to raise information an awareness.

What we should aim for

What we should aim for

- **Multi Level Actions and Cooperation.**
  - Bilateral and Regional cooperation.
  - International best-practices and recommendations.

- **Reduce End-user impact (Good Faith user)**
  - Good user communication is crucial.
  - Weave for legacy terminal (turnover).

- **National multiple actions to combat Counterfeit and Tampered**
  - Structured C&I Policy and Custom Integration.
  - Solutions to Remove Counterfeit from the market.

- **Reliable reference databases and Unique Identifiers to our solutions**
  - Secure unique identifier - PP14 Res. 188 Counterfeit
  - WTSA Resolution 96 and 97.
  - Global references databases + Country Specific databases.

Thank You!
Any Questions?

João Alexandre Zanon
zanon@anatel.gov.br