

COSTA RICA



UN-ECLAC

OVERVIEW OF THE PILOT PROJECT

October 2014 to June 2016

Alberto Chehebar, consultant

CONTENTS

- * **1) BACKGROUND**

- * 2) GAP ANALYSIS (2014)

- * 3) TRAINING WORKSHOP CENTRAL AMERICA (June 2015)

- * 4) TECHNICAL ASISTANCE ON BUSINESS INTELLIGENCE
AND ELECTRONIC INVOICE (2015/16)

- * 5) PILOT IMPLEMENTATION (2016)

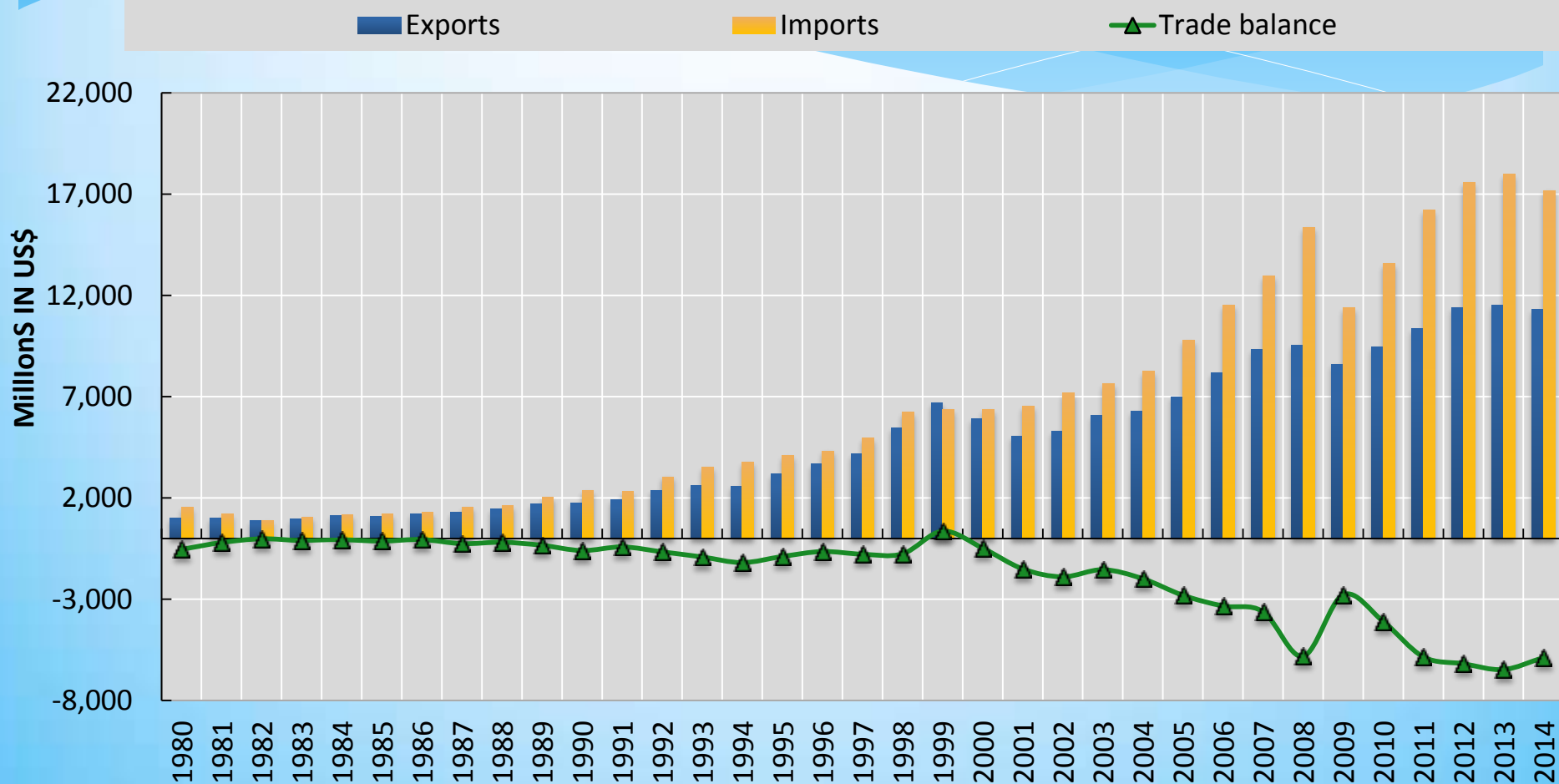


BACKGROUND

- * **Official name: Republic of Costa Rica**
- * **Area: 51.100 Km²**
- * **Population: 4,800,000**
- * **GDP (PPP) per capita: \$15,482 USD (IMF, 2015).**
- * **Frontiers: 516 Km**
- * **Coastline: 1412 Km**
- * **Official language: Spanish**
- * **No army**

COSTA RICA'S TRADE HAS GROWN QUICKLY

Costa Rica: Trade flows 1980 - 2014



Fuente: COMEX, con base en cifras de PROCOMER y BCCR. Datos preliminares sujetos a revisión para 2014.

CUSTOMS IT SYSTEM (TICA)

- * **Standardized Electronic Customs Declaration Form (“Declaración única aduanera - DUA).**
- * **Automated customs processes.**
- * **Declaration decided by the user.**
- * **Electronic payments.**
- * **Centralized database with registered operations.**
- * **Integrated risk analysis module.**
- * **Electronic connectivity with public and private institutions.**
- * **Paperless custom.**

TIM Procedure - Traceability



Departure
Custom



Destination custom

INTERNATIONAL TRANSIT OF MERCHANDISE (TIM)

Common IT system of all
Central American countries to
monitor international road
transits

CONTENTS

- * 1) BACKGROUND
- * **2) GAP ANALYSIS (2014)**
- * 3) TRAINING WORKSHOP CENTRAL AMERICA (June 2015)
- * 4) TECHNICAL ASISTANCE ON BUSINESS INTELLIGENCE AND ELECTRONIC INVOICE (2015/16)
- * 5) PILOT IMPLEMENTATION (2016)

IT SHORTCOMINGS

- * The Central American International Transit of Merchandise System (TIM), where each country registers land transits, is not supported on a 24x7 basis in the case of technical difficulties.
- * Central American countries have not yet agreed on the improvements to be made to TIM.
- * Data bases of Costa Rica Customs (TICA) have not been benchmarked against the WCO data model.
- * **Currently TICA does not accept electronic invoices, although it plans to do so in the future.**

IT SHORTCOMINGS (cont.)

- * Infrastructure and operations risks have been identified. The IT area plans to mitigate these but requires support from authorities.
- * The data center was being migrated from unsafe to a tier 3 data center.
- * Costa Rica's Customs System (TICA) complies with 80% of requirements included in laws and regulations. IT is developing new functions to close the gap. TICA needs to be upgraded to a web enabled platform.
- * The receipt of scanned images of import and export invoices does not prevent possible fraudulent alteration of original invoice values.
- * **Personnel in charge of risk analysis and audit has not been trained in applying techniques to analyze big amounts of data (data marts, data mining, business intelligence).**

GAP ANALYSIS (2014): CONCLUSIONS

- * There are strong trade ties between countries in Central America.
- * The current IT customs platform (TIM) of all Central American countries provides a sound base to increase information exchanges.
- * Customs officials and operators have been using a centralized database accessed on line from all stations and offices for the last several years.
- * Customs needs to improve its IT infrastructure to provide a service compatible with demands from increasing trade with acceptable risk levels.
- * Observed legal gaps are not too difficult to solve. There is room to increase electronic data exchange between customs.
- * The experienced small team of specialists on Customs Information systems needs to be expanded and trained in best practices of processes and technology to increase information exchange between customs.
- * Coordinate actions with other agencies to avoid duplicating efforts.

CONTENTS

- * 1) BACKGROUND
- * 2) GAP ANALYSIS (2014)
- * **3) TRAINING WORKSHOP IN CENTRAL AMERICA (June 2015)**
- * 4) TECHNICAL ASISTANCE ON BUSINESS INTELLIGENCE AND ELECTRONIC INVOICE (2015/16)
- * 5) PILOT IMPLEMENTATION (2016)

TRAINING WORKSHOP

- * On June 16th and 17th 2015 a 'Regional workshop on Business Intelligence applied to risk analysis and custom valuation and introduction to WCO data Model' was held in San Jose, Costa Rica.
- * 30 representatives from all customs in Central America participated in the training sessions.
- * Trainers from ECLAC, Inter-American Development Bank, International Road Transport Union and Peru Customs

TRAINING WORKSHOP

- * **SESSION I: Business Intelligence and Data Mining**
 - * **Basic concepts of Business Intelligence.**
 - * **Introduction to Control Charts and Indicators**
 - * **Data Mining Tools**
 - * **Application of Data Mining Tools (examples from Peru).**
 - * **Trade facilitation: modernization of border stations in Central America**

TRAINING WORKSHOP

- * **SESSION II: World Custom Organization Data Model**
 - * **Introduction to WCO Data Model**
 - * **Implementation concepts of the WCO Data Model**
 - * **Electronic Invoices**
 - * **Best practices on Information exchange (TIR)**
 - * **SIECA support to trade facilitation and its relationship with WCO Data model**
 - * **Regional project to promote economic integration in Central-America and implementation of the Association Agreement with the EU (PRAIAA)**

TRAINING WORKSHOP

- * **Good feedback from participants. Request to continue this initiative to treat in more depth in these subjects.**
- * **From May 2016 onwards, a joint effort between ECLAC, WCO and PRAIAA was started with 8 one week training sessions including all countries in Central America.**

CONTENTS

- * 1) BACKGROUND
- * 2) GAP ANALYSIS (2014)
- * 3) TRAINING WORKSHOP CENTRAL AMERICA (June 2015)
- * **4) TECHNICAL ASISTANCE ON BUSINESS INTELLIGENCE AND ELECTRONIC INVOICE (2015/16)**
- * 5) PILOT IMPLEMENTATION (2016)

BUSINESS INTELLIGENCE AND ELECTRONIC IMPORT INVOICE (2015/16)

*** Based on the 2014 Gap Analysis, Costa Rica Customs asked for support to mitigate two detected gaps:**

- (1) Electronic Import Invoices**
- (2) Application of Business intelligence to risk and valuation to reduce under invoicing**

(1) Electronic Import Invoices

USE OF ELECTRONIC IMPORT INVOICE: ACTIVITIES

- * Analysis of existing process to enter Import Invoices to IT System (TICA).
- * Interviews with professionals in different areas to identify priorities.
- * Interviews with representatives to develop an Electronic Invoice that can be used in the domestic market.
- * Meetings with vendors interested in using electronic import invoicing mechanism.
- * Review of best practices around the world.

ELECTRONIC IMPORT INVOICE: CURRENT PROCESS

Present process

Esquema Actual



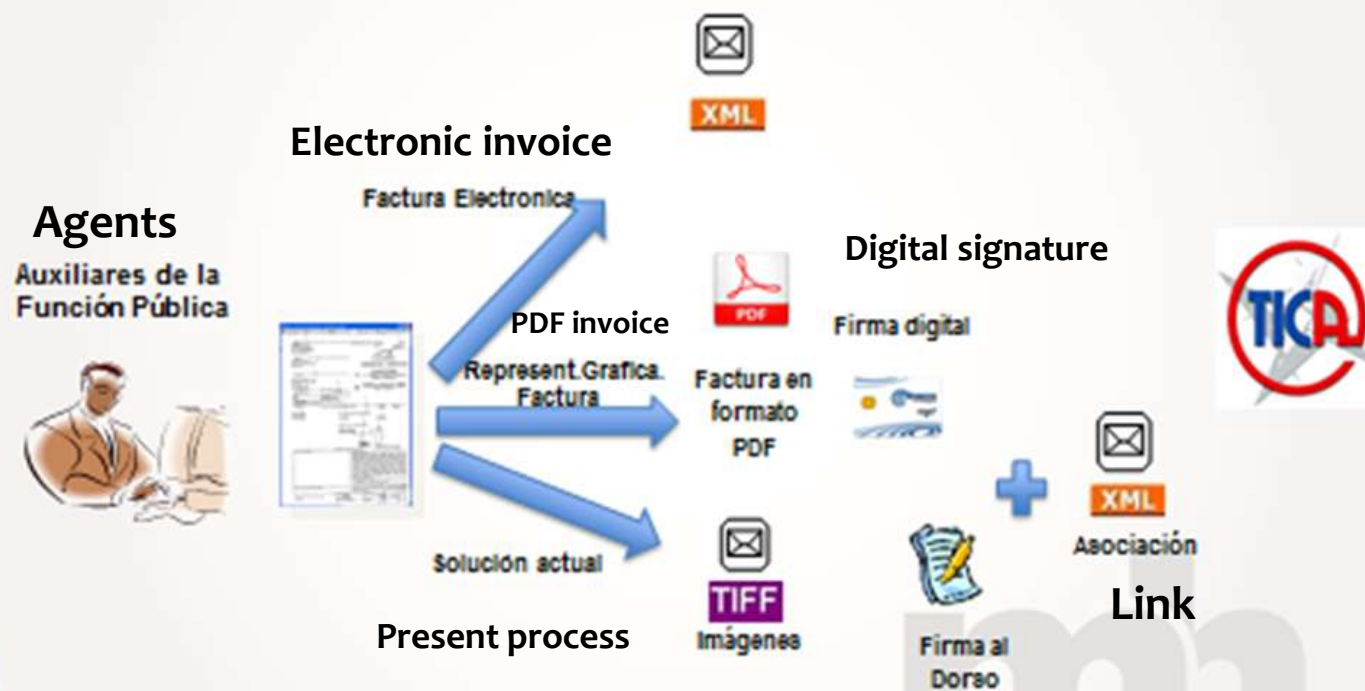
Source: TICA Presentation. C.R. Custom

USE OF ELECTRONIC INVOICES: RECOMMENDATIONS

- * **Define a standard for Import Invoices that can be implemented gradually**
- * **Adopt standards defined by the «United Nations Centre for Trade Facilitation and Electronic Business» (UN/CEFACT)**

ELECTRONIC IMPORT INVOICE: PROPOSED IMPLEMENTATION

New Process



PRODUCTS PROVIDED

- * Detailed import invoice messages to be read with XML-Reader software.
- * Cross reference table containing each message field and the corresponding TICA data when applicable
- * Global design of new process

(2) Business Intelligence Risk Analysis

BUSINESS INTELLIGENCE FOR RISK ANALYSIS: RECOMMENDATIONS

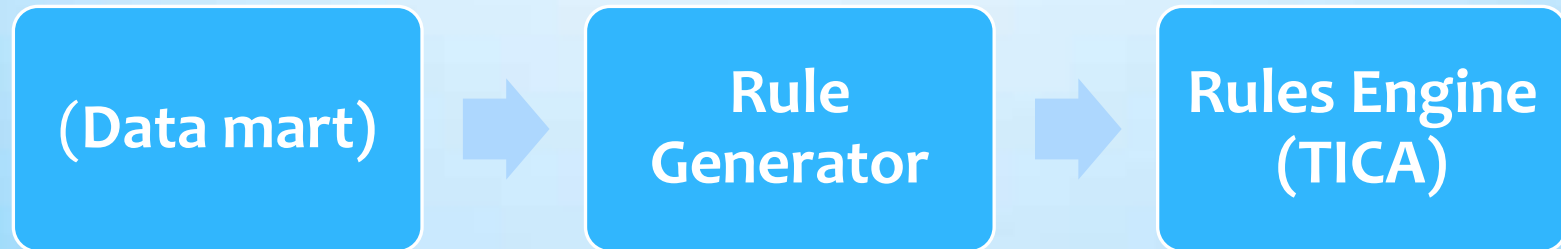
- * On Data Marts**
- * On indicators and Control Charts regarding the indicators generating process automation and use of IT tools for Control Charts production.**
- * Recommendations on automated generation of risk rules based on statistical analysis of data**

BUSINESS INTELLIGENCE FOR RISK ANALYSIS: GENERATING RULES

- * **Three types of rules**
 - * a) Rules to detect risk of value anomalies based on calculation of Statistical Mean over Data Mart
 - * b) Rules to detect outliers
 - * c) Other rules based in data obtained directly from the operational system.

BUSINESS INTELLIGENCE FOR RISK ANALYSIS

GENERATING RULES USING A STATISTICAL MEAN



EXAMPLE

- * **OBJECTIVE:** Generate rules to detect imports of a product (at the 10 digit level) from a country and unit which differ substantially from the mean value.
- * **PROCEDURE:** For each product, rules are generated on the basis of frequently calculated means with statistics from Data Marts
- * Rules are generated for those tariff positions when one country of origin and unit have sufficient declarations and when tax income is relatively high

CONTENTS

- * 1) BACKGROUND
- * 2) GAP ANALYSIS (2014)
- * 3) TRAINING WORKSHOP CENTRAL AMERICA (June 2015)
- * 4) TECHNICAL ASISTANCE ON BUSINESS INTELLIGENCE AND ELECTRONIC INVOICE (2015/16)
- * **5) PILOT IMPLEMENTATION (2016)**

PILOT IMPLEMENTATION

- * Assistance to the Divisions in charge of Risk and Value Assessment in the implementation of these techniques.
- * Building a plan to implement statistical analysis and generation of Risk Rules based on average values.
- * Procedures and documentation generation for the methodology usage in Costa Rica customs.
- * A one week work session was held between June 4-10.
- * A detailed implementation plan to be formulated before the end of June.

A photograph of a tropical street scene. In the foreground, there are houses with red-tiled roofs and palm trees. A street with a few cars leads into the distance. In the background, there are large, green mountains under a clear blue sky with some power lines visible.

THANK YOU

alberto.chehebar@gmail.com