



Brussels, 26 February 2015.

GLOBALLY NETWORKED CUSTOMS AND INFORMATION TECHNOLOGY

Discussion on the envisaged report to the Policy Commission on the Proof-of-Concept Phase (Item XI. (a) on the Agenda)

Introduction

1. The June 2012 Policy Commission had mandated the PTC to be the forum for discussion on all technical matters associated with GNC. At its November 2012 meeting, the PTC noted that decision, confirming the PTC as the forum for discussion of all technical aspects of GNC, including the development of the relevant protocols, standards and guidelines, and for the overall management of GNC.
2. In line with the “light-touch” administrative structure approved by the Policy Commission and Council, delegates would also work bilaterally, multilaterally or regionally when working on the design of new Utility Blocks (UBs) and / or Proof of Concept Projects, and update the PTC when they were ready.
3. Since that time, the PTC has heard regular updates on Utility Blocks being developed and presentations by Members sharing their respective Utility Blocks. As GNC comes towards the end of its “proof-of-concept” phase, there is a need for the PTC to once again revisit the achievements, and issues relating to the progress of Globally Networked Customs, with a mind towards updating the Policy Commission in June 2015.

Progress of GNC Utility Blocks Being Developed

4. The PTC has noted the development of the following Utility Blocks:
 - South Africa IT Connectivity Project: Exchange of information between South Africa and Swaziland;

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- INDIRA System: Exchange of information between Argentina and Ecuador and Mexico;
- MRA Mutual Recognition: Exchange of information between EU and USA;
- Mutual Recognition of Control: Exchange of information between EU and Switzerland;
- SEED: Exchange of information between Serbian and neighbouring Customs administrations in the Balkans.

5. In addition to the 5 Utility Blocks that have been developed, a Utility Block for eATA is also under development by Istanbul Convention and ATA Convention Contracting parties.

The Globally Networked Customs Concept

6. At its inception in June 2009, the ad hoc Working Group was tasked to undertake a comprehensive analysis of the potential to rationalize, harmonize and standardize the secure and efficient exchange of information between WCO Members.

7. The ad hoc Working Group explored various modalities, including the possibility of a centralized “SWIFT-for-Customs” model that would replicate the global international banking system, and which would include trade partners and other government agencies. This was eventually dropped in favour of a voluntary approach based on Protocols, Standards and Guidelines when negotiating international agreements on Customs-to-Customs (C2C) exchanges.

8. The fact that GNC was able to identify that the exchange of information between Customs was not merely a questions of IT systems, but the outcome of mutually acceptable decisions based on law, derived business rules and processes and identified data elements, was as an aspect that was ahead of its time and a testament to the forward thinking work of the ad hoc Working Group.

GNC and Interoperability

9. The issue of C2C exchange of data is ultimately premised on the level of interoperability between the exchanging parties and the subject of interoperability had also come into the spotlight in recent years, as more and more countries had embarked on regional integration projects that necessitated the exchange of customs related information.

10. Interoperability was also an issue that had been raised in the WCO Single Window Compendium, where the 4 areas of interoperability, were identified:

- **Legislative Interoperability:** Ensuring compatibility and alignment between legislations so that information exchange is legally enabled, and data protection legislation in both originating and receiving countries are respected;
- **Organizational Interoperability:** Ensuring that business processes are agreed upon and documented so that all parties are clear with their roles, and able to execute their functions accordingly;
- **Semantic Interoperability:** Ensuring that the meaning of exchanged information is consistently and precisely understood, including the data elements exchanged, and the relationships between them;

- **Technical Interoperability:** Ensuring that the technical issues of linking computer systems and services, including interface specifications, interconnection services, and data integration are properly understood and executable.

11. These same issues are also being explored as part of the UN/CEFACT's work on a new recommendation on Single Window Interoperability that is currently being developed. The GNC Utility Block is, in a sense, nothing more than a template for documenting these 4 areas of interoperability, so that the parties undertaking the exchange will have a common point of reference, and a common understanding, in order to facilitate the C2C exchange.

<u>Layer</u>	<u>Description of Layer</u>	<u>Area of Interoperability</u>
Name of the Block	The name of the Utility Block being developed	
Purpose	What the block is supposed to do.	Organizational
Legal Framework	The law, including the instrument providing the legal gateway.	Legislative
Entities	Those who can send/receive information, and the methods of identifying them.	Organizational
Business Rules	The specific rules for the UB. If not described elsewhere, includes relevant Protocols, Standards and Guidelines.	Organizational
Data Cluster	The list of data elements for the UB	Semantic
Triggers	Events that either start the data flow, or respond to data receipt	Organizational / Technical
Interface	How the parties in a GNC relationship are connected	Technical
Integration	How a GNC partner connects to its own systems	Technical
Communication	The electronic means of exchanging information	Technical
Advantages	Benefits delivered to: Customs, Business and Other Agencies	

12. The GNC concept further suggests that eventually, the Utility Blocks developed by different WCO member administrations may serve as useful references for other Members seeking to undertake similar exchanges, so that there would be no need to "reinvent the wheel" every time.

GNC and the WCO Data Model

13. Since Release 3.3, the WCO Data Model had introduced the concept of "Information Packages", where electronic message templates (i.e. EDIFACT and XML) were provided to allow users to develop standardized messages for cross border regulatory purposes. To date, 4 Base Information Packages had been developed:

- (i) Declaration – for B2G messages;
- (ii) Response – for G2B messages;

- (iii) Intergov – for G2G messages, and;
 - (iv) LPCO – for messages relating to other cross border regulatory agencies aside from Customs.
- 14. Each Base Information Package, which represents a sub-set of the WCO Data Model, and the maximum data-set that is commonly used in each process, can be further “derived” into specific use-cases based on other international standards and conventions (e.g. IMO FAL forms, UPU CUSITM postal declaration, Phyto-sanitary certificates), as well as national or regional applications (i.e. My Information Packages).
- 15. The content of the Information Packages are focused on enhancing semantic interoperability through the mapping of data elements. Recent discussions in the DMPT had also raised the possibility that Information Packages should contain more descriptive information on how to use them, so as to appeal to a broader audience and make the Information Packages more user-friendly.
- 16. There are also ongoing efforts where GNC Utility Blocks that had been developed were also developed as Derived Information Packages in the WCO Data Model. In such a situation, the Utility Block, and the Information Package will become a very good reference that can support implementation by other countries. The Utility Block provides the documentation that describes the C2C data exchange approach, while the Derived Information Package or My Information Package provides the data-mapping to the WCO Data Model, and the standardized electronic message that is used in the exchange. In this way, information on organizational, legal, semantic and technological interoperability comes together.

Need for Diversity

- 17. In order for GNC to become the useful reference that was originally envisaged by the ad hoc Working Group, where Utility Blocks developed could become the basis of a standardized approach for implementing C2C exchange of information, the Secretariat feels that 3 key criteria would have to be fulfilled:
 - (i) The availability of a critical mass of Utility Blocks covering the entire spectrum of Customs processes;
 - (ii) Confidence among users that the Utility Blocks contained sufficient diversity to accommodate diverse conditions, but yet, still point to a somewhat standardized approach;
 - (iii) Openness in the process so that more members will come forward and document their approach as a Utility Block;
- 18. It is unknown if the current 5 Utility Blocks that had been developed provide sufficient diversity and comprehensiveness to guide WCO Member Administrations in their efforts to enhance and advance C2C exchanges of information. In this respect, it would be desirable to have more Utility Blocks documented so that Members would have more choices to determine which model works best for them.

Governance & Documentation

19. The 203rd – 204th PTC had discussed the issues relating to GNC Governance and noted that the original process envisaged by the ad-hoc working group on GNC was onerous and could deviate from the “light-touch” administrative structure approved by the Policy Commission. In this connection, it is foreseen that the management of GNC will remain “light-touch”, and Members’-driven.
20. The Secretariat considered that GNC will ultimately have to be managed in line with the “light-touch” administrative structure approved by PTC but in order to support members in their future C2C exchanges, it will be necessary to develop a GNC Handbook, providing more guidance on the 4 areas of interoperability, and how to populate each layer within the Utility Block, either as preparation for a C2C exchange project, or to document an exchange after it had been implemented, so that it can serve as a useful guide for other Members.
21. GNC, from the beginning, was always seen as a voluntary model. Hence, its future would continue to be dependent on the voluntary support of Member administrations to develop Utility Blocks, in line with documentation developed by the Secretariat. At its most basic level, a Utility Block will document how a C2C exchange was undertaken between 2 or more voluntary parties. The Utility Block can be elaborated through alignment to the WCO Data Model, so that Derived Information Packages or My Information Packages can be developed and published as constituent parts of the WCO Data Model. Usage of these Information Packages by Members, as always, remains optional.

Conclusion

22. Given the complexity of the subject matter, 2 years is a very short time to establish “proof-of-concept”. Nevertheless, through the support of Member administrations, it had been demonstrated that the GNC concept was workable and worthy of further nurturing.
23. Considering the current development trajectory and the issues raised by the PTC since GNC emerged as an agenda item in 2012, the Secretariat proposes that:
- (i) Efforts by member administrations to develop GNC Utility Blocks should continue and the PTC shall continue to be the forum for discussing GNC related topics;
 - (ii) Secretariat should undertake efforts to develop more detailed documentation to support members in developing GNC Utility Blocks;
 - (iii) The relationships between GNC and the WCO Data Model should be clarified, as mentioned under paragraph 21.
24. In this connection, the PTC is invited to provide comments and guidance on the way forward for GNC, particularly with a mind towards informing the Policy Commission in June 2015.
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