



Asia Pacific Model E-Port Network (APMEN)

亞太示範電子口岸網絡

APMEN Visualisation of Sea Freight Logistics 亞太示範電子口岸網絡的海運物流可視化計劃

“ It is suggested that the next step is to promote the model within APMEN members to improve the efficiency of data connectivity between other member ports in the future. ”

Wayne Q. Y. Gu, International Cooperation Manager, E&P International, Shanghai ePorts-Easipass

Background

Ports play an important role in the supply chain acting in the first place as a transportation hub, as well as an information hub. Shippers and logistics operators need to be able to share information documents with operators and administrators of other ports to achieve “end-to-end” visibility.

The APMEN Visualisation of Sea Freight Logistics Phase I project was commissioned, to improve the visibility, integrity and transparency of cross-border trade in the Asia-Pacific by automating the exchange of sea freight data between APMEN members and using GS1 Global Data Standards.

Project Overview & Approach

The project was undertaken by APMEN and its members (NSW Ports, Xiamen E-port and Shanghai E-port), DP World (Australian port operator), GS1 Australia, GS1 China, GS1 Hong Kong, and GS1 Global Office.

The initial step was to map and review the end-to-end processes for both imports and exports between participating ports. The mapping exercise identified critical, common processes called “events” which would trigger the exchange of sea freight data between participants for improved visibility.

For each critical event, data standards were developed to capture information about these events as the basis for the data exchange. Data attributes such as Container ID, Vessel ID, etc. were agreed and aligned to the GS1 EPCIS Standards.

GS1 EPCIS is a global data standard that enables physical supply chain and critical tracking events (e.g. a container being loaded on a vessel) to be defined, and for event data (e.g. what, where, when, why) to be captured and shared across enterprises.

It is necessary to achieve inter-port information connectivity to realise the ‘global e-port community vision’.

A single technical platform (ezTRACK™ - an EPCIS-Compliant cloud-based traceability solution) developed by GS1 Hong Kong was used. The platform was configured specifically to meet the process and data requirements, so that participants could record actual event data for each critical event onto ezTRACK™ which enabled data exchange and reporting.

Benefits

The exchange of critical sea freight data between ports can deliver benefits to participants, including

- 1 • Greater transparency in container movements
- 2 • Improved planning of port operations through increased visibility
- 3 • More efficient track and trace operations
- 4 • Better access to data for port management systems
- 5 • Better customer service support to port community stakeholders

The majority of participants provided insights into potential benefits, and particularly that the sharing of data and events would deliver:

- 1 • Implementation of early warning systems
- 2 • Visibility of vessel location and status
- 3 • Improved track-and-trace
- 4 • Strengthening regulatory and operational effectiveness

GS1 Standards used

- Global Location Number (GLN)
- Global Trade Item Number (GTIN)
- Serial Shipping Container Code (SSCC)
- Global Individual Asset Identifier (GIAI)
- Electronic Product Code Information Services (EPCIS)
- Global Shipment Identification Number (GSIN)

Solution(s)/Service(s) applied

- ezTRACK™

About APMEN

Asia-Pacific Model E-Port Network (APMEN) was launched at the 22nd APEC Economic Leaders Meeting (AELM) in November 2014, as a regional cooperation initiative to promote trade facilitation and supply chain connectivity. In August 2015, APMEN Operational Center (AOC) was set up in Shanghai. So far, APMEN has 19 members from 11 APEC economies.

Key ports events for sharing 關鍵口岸事件分享



The project implemented a basic process flow that enabled participants to capture four export and four import events and record these in the GS1 EPCIS Sandpit (ezTRACK™).

項目展示了基本的過程，讓參與者能在建基於GS1 EPCIS標準的縱橫網™內，記錄出口及入口各四項「事件」數據。

計劃背景

港口往往是運輸樞紐的第一站，亦是承載資訊的關鍵環節，在供應鏈上擔當著重要角色。航運及物流營運者需要與其他港口的業界同儕及監管機構分享資訊文件，方能達致端到端的透明度。

亞太示範電子口岸網絡（APMEN）的海運物流可視化首階段計劃於是展開，運用GS1全球數據標準將APMEN會員間的航運數據溝通自動化，目標是改善亞太地區跨境貿易的可見度、完整一致性及透明度。

項目概覽及推行方法

APMEN與其成員新南威爾斯口岸（NSW Ports）、廈門電子口岸及上海電子口岸，聯同DP World（澳洲港口營運商）、GS1澳洲、中國物品編碼中心、香港貨品編碼協會（GS1 HK）及GS1總部一同推行該項目。

項目初階段在於對接和審視參與口岸之間的出入口貨品、整個端到端的過程。在對接過程中，團隊確立了多項關鍵的恒常流程、統稱「事件」，該些「事件」會引發參與者交流航運數據，是提升可見度的關鍵。

團隊會就每一項重要「事件」發展出一套數據標準，方便擷取這些資料以作交流。團隊會運用GS1 EPCIS標準，協調不同數據如貨櫃號碼、船號碼等的屬性。

GS1 EPCIS是全球數據標準，能夠確立實際在供應鏈上發生的重要追蹤「事件」（如貨櫃運送上船）變成數據，讓該些數據（什麼物件、在什麼地方、什麼時候、為何）被收集及分享至不同企業。將口岸之間的資訊連結起來，是達致「全球電子口岸社群」願景的基礎。

“建議下一步在APMEN成員間推廣項目，期望未來可改善成員口岸之間的數據聯通效率。”

上海電子口岸億通國際合作經理顧勤毅



亞太示範電子口岸網絡簡介

2014年11月，亞太經合組織第22屆經濟領袖會議（AELM）成立亞太示範電子口岸網絡（APMEN），旨在促進貿易便利化和供應鏈聯通性的區域合作計劃。2015年8月，APMEN運營中心（AOC）在上海成立。至今APMEN有來自11個APEC經濟體的19個成員。

項目運用了GS1 HK開發的縱橫網™（ezTRACK™）技術平台（縱橫網™是符合EPCIS標準的追蹤追溯雲端解決方案）。平台根據項目的流程及數據要求而作出了調整，讓參與者能在縱橫網™中記錄真實的關鍵「事件」數據，方便數據互換及匯報。

GS1 HK參與擬定全面的全球數據標準工作，以支援各口岸及主要持份者的航運關鍵數據交換，當中涉及貨運代理人、貨主、運輸及物流服務供應商和政府部門等。GS1 HK團隊亦對縱橫網™作出了調整，以提供額外的物流查詢、顯示、匯報、集成功能及其他技術支援。

效益

口岸之間互換關鍵航運數據能為各參與者帶來效益，當中包括：

1. 提升貨櫃運輸過程的透明度
2. 透過提升可見度，改善口岸運作計劃
3. 更有效率地在營運中實踐追蹤追溯
4. 更易掌握口岸管理系統的數據
5. 為口岸社群的持份者提供更佳的顧客服務支援

大部份參與者都對項目的潛在效益提出見解，特別指出數據和事件的互換可有助：

1. 實踐預警系統
2. 船隻位置及狀態的可見度
3. 改善追蹤追溯
4. 強化規管及營運效率

應用的GS1標準

- 全球位置編碼（GLN）
- 全球貿易貨品編碼（GTIN）
- 貨運容器序號（SSCC）
- 產品電子代碼訊息服務（EPCIS）
- 全球個體資產識別碼（GIAI）
- 全球貨運識別碼（GSIN）

應用的解決方案/服務

- 縱橫網™