China to EU secure and efficient trade lane research project

3rd PICARD Conference
Shanghai Customs College
May 16th, 2008

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Cross-border Research Association
Lausanne, Switzerland

Agenda

1) INTEGRITY (INTERMODAL GLOBAL DOOR-TO-DOOR CONTAINER SUPPLY CHAIN VISIBILITY) - China to EU secure and efficient trade lane - FP7 research project June 2008 – May 2011

2) Cross-border Research Association (CBRA) – Research, publication, standardization, monitoring, training and conference activities – in supply chain security, risk and compliance management; trade-government interaction, and trade facilitation; customs operations and risk management
Part 1) INTEGRITY FP7-Project

- The main challenges facing today’s international intermodal door to door container transport system are logistics efficiency and security.
  - These issues appear at first glance to be aiming at different objectives and therefore often lead to contradictory business strategies.
  - However, it is equally evident that a safe, secure and efficient intermodal transport system is a common goal of all the participants in the supply chain.
- INTEGRITY FP7-project will
  - reconcile these challenges and link all elements of the supply chain through accurate, reliable, timely, value adding tracking data, thus enhancing trade facilitation
  - achieve this through the use of high quality, technology neutral, ISO standard (where available) sophisticated equipment, including scanning equipment in ocean ports
  - develop methodologies, procedures and technologies allowing for supply chain visibility, accessibility, reliability, availability, sustainability, accountability, transparency, security, affordability and seamless solutions
  - create a Shared Inter-modal Container Information System (SICIS) as a neutral platform being economically and operationally accessible to all eligible stakeholders, large and small.

INTEGRITY – Door-to-door corridors

INTEGRITY FACTS:
- 3 year R&D project
- Starts 1.6.2008
- Within EU FP7
- 16 partners
- Budget 10 mill. euros
- 5000 containers will be shipped
INTEGRITY – Status tracking for a specific transport chain

Critical elements:
- Passing advance information, data and images
- From China to UK & the Netherlands


INTEGRITY – Shared Intermodal Container Information System (SICIS)

INTEGRITY – 16 project participants

<table>
<thead>
<tr>
<th>Beneficiary name</th>
<th>Beneficiary short name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institute of Shipping Economics and Logistics</td>
<td>ISL</td>
</tr>
<tr>
<td>RSM Erasmus University, Erasmus University Rotterdam</td>
<td>EUR</td>
</tr>
<tr>
<td>Cross-border Research Association</td>
<td>CBRA</td>
</tr>
<tr>
<td>ECT Delta Terminal B.V.</td>
<td>ECT</td>
</tr>
<tr>
<td>Port of Felixstowe</td>
<td>FDRIC</td>
</tr>
<tr>
<td>Yantian International Container Terminals</td>
<td>YICT</td>
</tr>
<tr>
<td>DeCeTe Duisburg GmbH</td>
<td>DeCeTe</td>
</tr>
<tr>
<td>Xerox Manufacturing Nederland B.V.</td>
<td>XEROX</td>
</tr>
<tr>
<td>Seacon Logistics</td>
<td>SEACON</td>
</tr>
<tr>
<td>DHL Global Forwarding N.V.</td>
<td>DHL</td>
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<tr>
<td>Unipart Expert Practices</td>
<td>UEP</td>
</tr>
<tr>
<td>A.S. Watson (Health &amp; Beauty Continental Europe)</td>
<td>ASW</td>
</tr>
<tr>
<td>HM Revenue &amp; Customs</td>
<td>HM</td>
</tr>
<tr>
<td>Dutch Tax Customs Authority</td>
<td>DTC</td>
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<tr>
<td>CHB Teledata</td>
<td>CHB</td>
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<tr>
<td>ECT Verlo B.V.</td>
<td>ECT</td>
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</tbody>
</table>

Importers / exporters; forwarders; ports; customs; technology; and academia included

INTEGRITY – links to other initiatives

- INTEGRITY is embedded into international strategies and initiatives e.g. concepts of the SAFE Framework of Standards of the World Customs Organization (WCO) to push cargo control to the exporting country and the principles of Mutual Recognition;
- To the EU/China Customs (SSTL) project supported by DG TAXUD, the e-Customs project, the Freight Logistics Action Plan of DG TREN as well as to intermodal initiatives like EIRAC;
- It will also be combined with the AEO concept and scanning/monitoring technology and will support the “trust but verify” approach.
- INTEGRITY will raise the standard for door-to-door container chains by providing high quality and integrity information.
- Its validation and demonstration will verify the benefits for all current and future, big or small players.
INTEGRITY - Mapping the chain of custody over the end-to-end supply chain

Chain-of-custody layers

<table>
<thead>
<tr>
<th>Goods ownership</th>
<th>1) Port</th>
<th>2) Factory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cargo operator</td>
<td>Trading unit of the brand</td>
<td>Factory / Country BU</td>
</tr>
<tr>
<td>Operating responsibility</td>
<td>Terminal operator</td>
<td>Factory</td>
</tr>
<tr>
<td>Infrastructure owner</td>
<td>Forwarding agent</td>
<td>Factory</td>
</tr>
<tr>
<td></td>
<td>State or city</td>
<td>Leasing company</td>
</tr>
</tbody>
</table>

SOURCE: CBRA @ SCSM2008 Conference, January 2008

INTEGRITY - Mapping the security measures over the end-to-end supply chain

Security measure goal

<table>
<thead>
<tr>
<th>Prevent a crime</th>
<th>1) Port</th>
<th>2) Factory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detect a crime</td>
<td>Higher fences</td>
<td>Access control</td>
</tr>
<tr>
<td></td>
<td>Security guards</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seals, notifications</td>
<td>Alarm systems</td>
</tr>
<tr>
<td>Recover from a crime</td>
<td>Notification process</td>
<td>Firing policy in case of theft</td>
</tr>
</tbody>
</table>

SOURCE: CBRA @ SCSM2008 Conference, January 2008
INTEGRITY – using conceptual model for cross-border supply chain controls?

- EU policies touching cross-border supply chain controls (CBSC-controls)
- “Actual EU concerns” – who and what we have to protect
- “Sensitive commodities” – a snapshot on products which can require high cross-border attention
- “Bad intentions behind” – what is the motivation of people behind the incidents?
- “Primary control triggers” – what are the potential main drivers for cross-border supply chain controls
- “Cross-border control actors” – from 1 to 4 actors can contribute
- “Cross-border control agencies” – which agencies can play a role
- “Cross-border control timing” – when the control is done
- “Cross-border control type and degree” – how the control is done
- “Cross-border control implications” – what is the cost of optimum/over/under

INTEGRITY – helping to fight various types of supply chain crime?

- Theft (single pieces)
- Theft (full shipments / units)
- Smuggling (for duty fraud)
- Smuggling (for illegal goods)
- Other illicit trade
- Intellectual property violations
- Other industrial espionage
- Sabotage (planned)
- Causing ad-hoc damage (irrational)
- Civil unrest (looting etc.)
- Illegal sales (selling to minors, selling without recipes etc.)
- Data system crime
- Blackmailing
- Violence (illegal threat, act of violence)
- Money laundry
- Terrorism (destruction on supply chain)
- Terrorism (destruction on destination)
- Corruption (note: depends on definition and legislation)

Note: most supply chain crime both business and government concern; but different weights per crime type.

INTEGRITY - Increasing integration between the three logistics layers

Governments are entering international supply chains in a new manner!
Part 2) Cross-border Research Association, CBRA

- CBRA was formally established with HEC University of Lausanne and EPFL in 2005 and our team has been working in the field of Supply chain security management (SCSM) research since the year 2002.
- CBRA acts as an independent, objective research partner, to create better understanding of SCSM standard and regulation implications for international supply chains.
- CBRA works both with companies (trade and logistics) and government agencies (customs, transportation, police), understanding the objectives and constraints of both sides of the table, without promoting one over the other.
- Our team has following nationalities (in alphabetical order) since past few years: Bangladesh, Brazil, China, Colombia, Finland, Germany, India, Italy, Jordan, Netherlands, Senegal, Switzerland, Romania, UK.
  - We look always for new, highly motivated collaborators.
  - We also have one PhD-student position open in Lausanne (60% funding scheme).

CBRA is bringing the operations management approach to cross-border, security and customs business!
- Business process (re)design
- Technology management
- Performance measurement
- Cost management

CBRA early days – 2001-2002

- Working with a global express carrier on end-to-end customs clearance automation and landed cost calculation tool
  - Pilots in Ireland, Brazil and Malaysia
  - Very tough project…
- Literature search didn’t bring much, few exceptions:

Major gap in academic research and publications!!
Reinforcement on Supply chain security management (SCSM) research needs –
1st PICARD, 2006

This study finds answers to following questions:
What has been published so far at various forums?
What are the research interests of various actors?
Where are the gaps between publications and interests?

Trends and recommendations for future research focus, themes and activities in supply chain, border and port security management

Proposed research topics for SCSM (1st PICARD, 2006)

1. Analysing cost of security
2. Identifying efficient security measures and standards
3. Finding the right balance between security and facilitation
4. Identifying benefits of security measures and standards
5. Defining common security standards
6. Developing and testing new security technologies
7. Developing business – customs relationships
8. Risk reduction / prevention
9. Trade policies
10. Security legal systems

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CBRA Research – New 2-year study on Customs risk management

Study partners & funding:
- WCO (BE)
- Swiss Science Foundation, SNF (CH)
- GreenLine Systems (USA)
New 2-year study on Customs risk management – Planned deliverables

- Operational process maps for customs risk management (CRM), explaining which are the risk management related business processes and how they are managed in customs administrations
- Communication and interaction charts for CRM, indicating the risk management communication patterns both inside the customs administrations and between customs and the stakeholder communities.
- CRM maturity model, positioning each customs administration at a certain development stage regarding their CRM functionality
- Key performance indicators (KPIs) for CRM, showing how the efficiency and success in CRM function can be measured

Study on Customs risk management – Sample maturity model from literature

NOTE: This is just a pre-study sample model; NOT an outcome of this study
New CBRA study: Preferred benefits model for EU AEO

- Study goal: to explore and rank the preferred strategic and operational benefits European companies are expecting/appreciating while planning their possible participation in the EU AEO program
- Method: we use a stated preference analysis (Conjoint) as the main scientific approach in this study
- Invited participants: all manufacturing, trading and logistics companies who have legal entities in the EU, and who participate in international supply chains (i.e. are EU AEO eligible)
- Study partners: the study is prepared by CBRA and ASIS International; other trade and logistics organizations may join later in the study, tbd.
- Schedule: the trial version of the study will be launched with a small group of companies by the end of May 2008 and with the full target audience during June 2008. The study will close in September 2008.

New CBRA study: Preferred benefits model for EU AEO

- Reduce customs and other import controls
- Reduce customs and other export controls
- Create proactively better corporate reputation and image
- Protect corporate image and brand reputation
- Gain new customers
- Prevent loosing customers
- Introduce a comprehensive supply chain security management (SCSM) system in the company
- Complement your existing SCSM system
- Reduce insurance premiums
- Reduce theft rates
- Prepare for centralized clearance in the EU
- Improve overall relations with customs authorities in the EU
- Ensure smooth flow of exports to the US
- Ensure smooth flow of exports to other regions of the world
- Get priority in high alert and/or post-incident situations
- Improve supply chain visibility and efficiency
CBRA standardization work – goals for European Norms Committee (CEN) project 2008-2010

- To enhance security in the supply chain, i.e. secure interconnectivity between the various transport modes, operators and public authorities
- To define the most effective and cost-effective measures in relation to the three levels of risks (normal, heightened, exceptional)
- To develop a method for supply chain vulnerability assessment by operators in the supply chain
- To allow business the opportunity to develop tailor-made and cost beneficial security measures
- To streamline different terminologies on supply chain security statuses

CBRA Publications

CBRA wishes to have fruitful collaboration with PICARD 2008 participants in the future!

- In all areas of activities, as presented; new ideas also welcome
- Both short and long term collaboration schemes
- With customs administrations and academia worldwide
- We also examine the possibility to hold PICARD 2009 (or 2010) Conference in Switzerland
  - Analyzing locations and costs in: Lausanne, Crans-Montana, Zurich and Davos
Next PICARD? Of course, Brussels could be nice…

PICARD 2009 (or 2010) – or maybe in Switzerland…!!!