

# ANNEXES

## ANNEX 1: RISK MANAGEMENT TECHNIQUES AND TOOLS

There are many different tools and techniques to assist the various steps of the risk assessment process. More detailed information on these tools can be found in ISO Standard 31010:2009 “Risk management – Risk assessment techniques”.

### Risk identification

#### Techniques

The above-mentioned ISO Standard 31010:2009 lists the following techniques that can be used in the identification of risks<sup>17</sup>:

- Brainstorming;
- The Delphi technique;
- Structured or semi-structured interviews;
- Use of check-lists;
- Primary hazard analysis;
- Hazard and Operability Studies (HAZOP);
- Hazard Analysis and Critical Control (HACCP);
- Environmental risk assessment;
- Scenario analysis;

- Structure “What if?” (SWIFT);
- Failure mode effect analysis;
- Cause-and-effect analysis;
- Human reliability analysis;
- Reliability centred maintenance;
- Consequence/probability matrix; and
- Fault tree analysis.

Instead of using only one technique, a combination of different tools should be used where appropriate. It is also important to combine aspects of qualitative and quantitative analysis in order to reach the best outcomes.

#### Tools

As previously shown, a risk register is an essential documentation tool for risk management. The risk register is like an “index” of an administration’s risks, from which each functional area can develop its respective risk plans. The register should be tailored to meet the requirements of the organization and may be set out in many different ways. Three examples of risk registers appear below.

### Example #1 of 3 RISK MANAGEMENT REGISTER: ORGANIZATIONAL ELEMENTS

The Risk		Likelihood Rating	Consequence Rating	Tolerance	Risk Priority	Risk Treatment
1	Strategic Management					
2	Resources					
3	Legal Framework					
4	Customs Systems and Procedures					
5	Information Technology and Communication					
6	External Cooperation, Communication and Partnership					
7	Good Governance					

17. ISO Standard 31010:2009 “Risk management – Risk assessment techniques” includes additional details on the above-mentioned techniques.

## Example #2 of 3 RISK MANAGEMENT REGISTER: ORGANIZATIONAL PRIORITY

The Risk		Likelihood Rating	Consequence Rating	Tolerance	Risk Priority	Risk Treatment
1	Revenue Collection					
1.1	e.g. Duty					
1.2	e.g. Excise					
2	National Security					
3	Community Protection					
3.1	e.g. Narcotics					
3.2	e.g. IPR					
4	Trade Facilitation					
5	Collecting Trade Data					

## Example #3 of 3 -RISK MANAGEMENT REGISTER: ORGANIZATIONAL STRUCTURE

The Risk		Likelihood Rating	Consequence Rating	Tolerance	Risk Priority	Risk Treatment
1	Head Office / Corporate					
	e.g. Personnel					
	e.g. Legislation					
	e.g. Finance					
2	Maritime					
	e.g. Wharf / Port offices					
	e.g. Sea Cargo					
	e.g. Sea Passengers / Crew					
	e.g. Vessels					
3	Aviation					
	e.g. Airports					
	e.g. Air Cargo					
	e.g. Air Passengers / Crew					
	e.g. Aircraft					
4	Land					
	e.g. Border control points					
	e.g. Conveyances					

## Risk analysis

### Techniques

Various techniques and tools for the risk analysis process are recognized by ISO Standard 31010:2009 "Risk management – Risk assessment

techniques". These tools can be categorized with reference to their usability for analyzing consequences, likelihood or the level of risk.





**Box 2: Risk analysis techniques**

Technique	Consequence	Likelihood	Level of risk
Bayesian statistics and Bayes nets	✓		
Bow tie analysis		✓	✓
Cause-and-consequence analysis	✓	✓	
Cause-and-effect analysis	✓		
Consequence/probability matrix	✓	✓	✓
Cost/benefit analysis	✓		
Decision tree	✓	✓	
Environmental risk assessment	✓	✓	✓
Event tree analysis	✓		
Failure mode effect analysis	✓	✓	✓
Fault tree analysis		✓	
FN curves	✓	✓	
Hazard Analysis and Critical Control (HACCP)	✓		
Hazard and Operability Studies (HAZOP)	✓		
Human reliability analysis	✓	✓	✓
Layer protection analysis	✓		
Markov analysis	✓		
Multi-criteria decision analysis	✓		✓
Reliability centered maintenance		✓	✓
Risk Indices	✓	✓	
Root cause analysis		✓	✓
Scenario analysis	✓		
Structure "What if?" (SWIFT)	✓	✓	✓

## Tools

The previous chapter presented some simple 3x3 examples of consequence and likelihood matrices.

The following tables provide additional examples of 5x5 scales and their attributes.

### EXAMPLE OF A 5x5 LIKELIHOOD SCALE

	Example of Qualitative Measure		Examples of Quantitative Measures			Other Measures
Almost Certain	The event is expected to occur in most circumstances	Once per week or more frequently	10 chances a year	> 1 in 10	9 to 10 times out of 10 occurrences	
Likely	The event will probably occur in most circumstances	On average once per month	Once a year or more	1 in 10-100	7 to 8 times out of 10 occurrences	
Possible	The event might occur at some time	On average once per year	Once in ten chances a year	1 in 100 – 1,000	4 to 6 times out of 10 occurrences	
Unlikely	The event is not expected to occur in most circumstances	Typically once every ten years	One in 100 chances a year	1 in 1,000 – 10,000	2 to 3 times out of 10 occurrences	
Rare	The event may occur only in exceptional circumstances	Typically once every hundred years	One in 1,000 chances a year	1 in 10,000 – 100,000	0 to 1 times out of 10 occurrences	If these scales do not match your circumstance, then you should develop your own scale

### New Zealand Customs Service Example of A 5x5 LIKELIHOOD scale

Rating	How likely	Description / Example *
5	Almost Certain	<ul style="list-style-type: none"> <li>• <b>Definite probability, or</b></li> <li>• <b>No Controls, or</b></li> <li>• <b>Has happened</b> in the past and <b>no compensating controls</b> have been <b>implemented</b>, or Without additional controls the event is <b>expected to occur in most circumstances, or</b></li> <li>• Has happened <b>within the last 3 months</b></li> </ul>
4	Likely	<ul style="list-style-type: none"> <li>• The event will <b>probably occur</b> in <b>most circumstances</b>, or</li> <li>• <b>Weak Controls</b> e.g. Limited QAPs, no internal audits performed, or</li> <li>• <b>With existing controls</b> in place this event will probably <b>still occur with some certainty, or</b></li> <li>• Has <b>happened in the last 6 months</b></li> </ul>
3	Possible	<ul style="list-style-type: none"> <li>• The event <b>should occur in some circumstances</b>, or</li> <li>• <b>Minimal controls</b>, e.g. Some QAPs, some internal audits performed, or</li> <li>• The event <b>has occurred in other customs agencies</b> with similar levels of controls in place, i.e. substandard control assurance, or</li> <li>• Has <b>happened in the last 12 months</b></li> </ul>
2	Unlikely	<ul style="list-style-type: none"> <li>• The event <b>could occur</b> in some circumstances, however more <b>likely through human error</b> for not following the control environment, or</li> <li>• <b>Effective Controls</b> in place, e.g. Timely QAPs, internal &amp; external audits, or</li> <li>• The event <b>hasn't occurred in Customs</b> recently but it could occur in some circumstances, or</li> <li>• Has <b>happened in the last 2 years</b></li> </ul>
1	Rare	<ul style="list-style-type: none"> <li>• The event <b>may occur in some exceptional circumstances</b>, i.e. deliberate fraud / attack outside of existing deterrents, or from activity beyond the control of Customs actions, or</li> <li>• <b>Strong Controls</b>. Despite effective controls an external event or <b>uncontrollable event</b> could occur, or</li> <li>• <b>Improbable</b>: A very small chance of an event occurring that would be caused by stressed economic, market and operating conditions or events <b>not previously seen in similar agencies</b>, or</li> <li>• Has <b>not happened in the last 3 years</b></li> </ul>



## EXAMPLE OF A 5x5 CONSEQUENCE SCALE

Risk*	SEVERITY OF RISK				
	Insignificant	Minor	Moderate	Major	Severe
Cargo/ Passengers	Rare for passenger clearance targets not to be met. Few clients are affected by delays. Air and sea cargo delays are causing insignificant financial and community impact.	Passenger clearance targets sometimes not met. Air and sea cargo delays are causing minor financial and community impact.	Passenger clearance delays are occurring, causing moderate disruption to the client. Air and sea cargo delays are causing moderate financial and community impact.	Passenger clearance delays are occurring, causing major disruption to the client. Air and sea cargo delays are causing major financial and community impact.	Passenger clearance delays are occurring, causing severe disruption to the client. Air and sea cargo delays are causing severe financial and community impact.
Border Enforcement	Rare for non-compliers to avoid detection and action. This applies particularly for serious offences under Customs Act and other agency's legislation enforced by Customs.	Unlikely that non-compliers will avoid detection and action. This applies particularly for serious offences under Customs Act and other agency's legislation enforced by Customs.	Possible that non-compliers will avoid detection and action. This applies particularly for serious offences under Customs Act and other agency's legislation enforced by Customs.	Highly likely that non-compliers will avoid detection and action. This applies particularly for serious offences under Customs Act and other agency's legislation enforced by Customs.	Almost certain that non-compliers will avoid detection and action. This applies particularly for serious offences under Customs Act and other agency's legislation enforced by Customs.
Revenue collection	Collections against revenue forecast are under target and it could be justified by statistical error.	Collections against revenue forecast are under target but only by a small amount.	Collections against revenue forecast are under target, and the shortfall is not linked to general economic conditions.	Collections against revenue forecast are unexpectedly and/or significantly under target. The shortfall cannot be linked to general economic conditions. An explanation may be required for Parliament and Government.	Collections against revenue forecast are unexpectedly and/or significantly under target. The shortfall cannot be linked to general economic conditions. It is possible that Parliament and/or Government will initiate an enquiry into the shortfall.

## Risk evaluation and prioritization

### Techniques

There are a number of risk analysis models in business literature for use when evaluating and prioritizing tolerance for risk. These include:

- Threat analysis;
- SWOT analysis (Strengths, Weaknesses, Opportunities, Threats);
- Fault tree analysis;
- FMEA (Failure Mode & Effect Analysis);
- BPEST (Business, Political, Economic, Social, Technological) analysis;

- PESTLE (Political Economic Social Technical Legal Environmental);
- Dependency modeling and Real Option Modeling; and
- Statistical Modelling.

### Tools

Risk criteria are terms of reference against which the significance of a risk is evaluated. They are defined when establishing the context for the risk management process, and before risk identification takes place. Risk criteria often take the form of a risk significance or tolerance matrix. It is important to note here that risk criteria



must be based on organizational objectives, and the external and internal context. They can be derived from standards, laws, policies and other

requirements. The following diagram presents a potential example of a 5x5 risk tolerance/significance matrix.

### EXAMPLES OF A 5x5 RISK TOLERANCE MATRIX

	Minimal 1	Minor 2	Moderate 3	Major 4	Severe 5
Almost Certain 5	5	10	15	20	25
Likely 4	4	8	12	16	20
Possible 3	3	6	9	12	15
Unlikely 2	2	4	6	8	10
Rare 1	1	2	3	4	5

	Minimal	Minor	Moderate	Major	Severe
Almost Certain	MEDIUM	HIGH	HIGH	EXTREME	EXTREME
Likely	LOW	MEDIUM	HIGH	EXTREME	EXTREME
Possible	LOW	MEDIUM	MEDIUM	HIGH	HIGH
Unlikely	LOW	LOW	MEDIUM	MEDIUM	HIGH
Rare	LOW	LOW	LOW	LOW	MEDIUM



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## ANNEX 2: COMPLIANCE MEASUREMENT

### Overview

For any risk management process to be successful and effective, it will have to be constantly monitored and evaluated. One method for this is the use of compliance measurement. "Compliance measurement" is a phrase used when statistically valid random sampling techniques are employed to determine the degree to which traders, carriers, imported goods, etc. conform to Customs rules and procedures. When designed in a systematic and appropriate manner, compliance measurement methodologies provide objective and statistically valid results. Compliance measurement can be used as a diagnostic tool to identify areas of non-compliance.

Compliance measurement as a diagnostic tool for Customs administrations should be used in conjunction with risk assessment, profiling and other targeting procedures. Used strategically, compliance measurement and targeting can provide the necessary balance to help focus resources effectively in areas of concern to Customs. In addition, the results of initial compliance measurements can provide important information to enhance risk assessment methodologies.

A compliance management programme also provides a basis for Customs to assess its own performance in revenue protection and enforcement of laws, improve its efficiency and effectiveness, and develop strategies to improve compliance.

### *Compliance Measurement Areas*

One approach to compliance measurement is to consider that in some countries or economic unions, as few as 10% of traders account for over 80% of imports and exports. By focusing on the top 5-10% of these highest volume manufacturers, importers, exporters and commodities, Customs can ensure that those which have the most significant impact on the national economy are being reviewed more effectively.

Compliance measurement areas may include:

#### Documentary issues:

- proper tariff classification by traders;
- proper valuation by traders; and
- country of origin.

#### Procedural issues:

- importation and exportation (from the goods declaration through revenue collection);
- transit operations; and
- warehousing, free trade zones, processing.

#### Revenue issues:

- timely and accurate revenue payments; and
- proper posting of securities.

#### Transport issues:

- accurate reporting of the quantity of goods;
- accurate description of goods on the manifest and/or transport document;
- accuracy of container quantities and identification numbers; and
- transporter compliance.

#### Specific concerns:

- compliance by tariff number or range of tariff numbers;
- public health and safety issues;
- intellectual property rights and copyright issues;
- compliance with trade agreements;
- proper country of origin marking on goods;
- high revenue commodities; and
- selected traders.

### *Measurement Process*

Customs gathers data from a variety of sources, both internal and external, and by both manual and automated means. With the data (import and export records), the tools (statistical analysis) and the methodology (systematic analysis



of large traders or commodities), Customs can arrive at reasonable, informed conclusions about the compliance rates of many entities. These rates can be determined for each step of a transaction process, e.g. for imports, from the manifest to the goods declaration to the collection of duty and taxes. The automated systems that Customs uses to evaluate high-risk shipments can support the compliance review requirements for a scientific approach to accurate data collection and analysis and projections, although compliance rates can also be measured effectively without automation.

Customs should determine a designated universe of transactions and, using a statistically valid sampling methodology, select specific transactions or entities from this universe for review or verification. Depending upon the results, the universe may be modified in many ways.

Customs must also determine what level of compliance is acceptable. For example, a compliance rate of 95% of the transactions or entities reviewed in a given area may be the acceptable level for an administration. This may also be called the level of tolerance.

Some of the transaction processes for compliance verifications would be :

- goods declaration compliance;
- trader compliance;
- transit compliance;
- free trade zone or warehouse compliance;
- manifest and transport document compliance ; and
- transporter compliance.

Below are a few factors that should be considered during a verification review for a selected example of these processes.

#### Goods Declaration Compliance

- a) Is there evidence of documentation to support an accurate goods declaration?
- b) Do the quantities declared match what is contained in the consignment?
- c) Does the declared country of origin match the country of origin marking on the goods?

- d) Does the declared description of the goods match the actual goods?

Thus, a typical compliance measurement review relating to intellectual property rights for a selected commodity, at a tolerance level of 95%, might progress as follows :

- a) Conduct a statistically valid random sampling of goods declarations for the selected HS number.
- b) If the resulting compliance rate is less than 95%, conduct another measurement of the same HS number, but stratified by selected countries of origin.
- c) For countries of origin found to have a compliance rate of less than 95%, conduct a measurement for each of the major importers.
- d) For importers found to have a compliance rate of less than 95%, Customs should seek to:
  - inform the importer ("informed compliance");
  - establish profiles/targets for the identified areas of non-compliance;
  - conduct subsequent measurements to ensure that the importer has corrected the problem;
  - conduct more reviews and/or examinations; and
  - issue fines or penalties, if appropriate, in cases of continued non-compliance.

#### ***Use of Compliance Measurement Results within the Control Programme***

Statistically valid compliance measurement procedures can be used in various ways, e.g. to:

- define any revenue gap;
- prevent widespread commercial fraud;
- assess performance by major key industries;
- assess performance by major importers and exporters;
- increase commercial compliance; and
- accurately measure international trade.

The results of these measurements can help direct resources effectively. In determining

compliance rates for individual importers, those found to have high compliance rates may have their goods examined less frequently, while those having low compliance rates may have their goods examined more frequently.

The findings of compliance reviews for commodities, traders and industries provide information for updating existing selectivity criteria used

to target high-risk transactions, as well as for the overall effectiveness of an administration's risk management programme. In addition, they contribute significantly towards determining trends and issues relating to specific industry sectors and should result in focused, up-to-the-minute analytical information being available to assist Customs officers in their daily activities.



## ANNEX 3: APEC RISK MANAGEMENT PROCESS SELF-ASSESSMENT

Box 3 outlines and explains the APEC Risk Management Process Self-Assessment model.

### Box 3: APEC Risk Management Process Self-Assessment

Purpose/ Context/Scope	Risk Management Concept	Data	Analysis	Employee Investment
INTEGRATION	Our stakeholders are advocates of our service	Risk management effectively contributes to organisational outcomes	High quality data is available for decision making	Decisions are based on comprehensive understanding of the risk
	Continuous communication with stakeholders is maintained and the organisation expresses a willingness to consider change	Results are measured and reviewed to promote continuous improvement and informed decision making	Best practices are shared and incorporated	Best practices of analysis are shared and incorporated
				Review and update role and competencies of employees against work Identify gaps in skill sets and address
ADAPTATION	We constantly review changes to our context and adapt our processes to our stakeholders requirements where appropriate	Risk management is a theme in other management activities and processes	Data reflects changing requirements	Analysis methods adapt to meet changing requirements
	Communication with stakeholders Monitor context Continuously review current processes	Review other management activities and processes to ensure risk management is integrated i.e., project management strategic and corporate planning, resource allocation	Review data requirements in response to changes in context	Review analytical effectiveness and make adjustments as appropriate
				Monitor context Continuously review processes Consider process revisions Train employees as appropriate



	Purpose/ Context/Scope	Risk Management Concept	Data	Analysis	Employee Investment
FOCUS	We determine the processes that could be changed and the consequential risk to the mission and goals of Customs	Specific elements of the risk management infrastructure are refocused	Data is aligned with specific needs	Mechanisms to determine likelihood, severity and consequences of risk are in place	Operational activities are supported by employees with appropriate skill sets
	Set service delivery standards and publicise Gap analysis of stakeholders needs and Customs internal processes Performance perception analysed and documented	Evaluate and improve the effectiveness of policies, procedures and training Risk management is a theme in operational planning	Identify gaps and additional data required Modify data requirements	Procure training and tools Consider what support requirements are needed i.e., reporting, dissemination, lines of communication, etc. Place staff as appropriate	Build employee skills as appropriate i.e., training Assign employees to suitable works
REALISATION	Stakeholder perception expectations of our performance is evaluated against Customs current missions and goals	The risk management infrastructure is established i.e., policy procedures and training	The worth of the data in terms of relevance timeliness and integrity is known	Tools and skills required for analysis are identified	Employee skill levels against competencies and gaps are known
	Stakeholders are surveyed Focus groups are formed Feedback consultations are sought	Policy and procedures are developed and disseminated Training and promotional strategies are developed Operational plans that should incorporate risk management are identified	Collect analyse and evaluate data	Assessment of current internal tools skills, elements and abilities is conducted Identify competencies for analysts Undertake gap analysis	Develop competencies Conduct employee skills audit Identify gaps and create solutions to address



	<b>Purpose/ Context/Scope</b>	<b>Risk Management Concept</b>	<b>Data</b>	<b>Analysis</b>	<b>Employee Investment</b>
AWARENESS	<p>Stakeholders are known and their needs are explored</p> <p>We understand Customs current missions and goals</p>	Risk management process is understood	Data needs and sources are known	An analytical process is understood	<p>Employees are aware of the concepts, methodology, principles and benefits of the risk management</p> <p>Employees are aware that change will occur, is necessary and the extent of that change</p>
	<p>Brainstorming of group of managers to identify stakeholders</p> <p>Identify what their might be Customs missions and goals identified and stated</p>	<p>Research and adopt risk management methodology</p> <p>Risk management process is promoted</p>	<p>Brain storming to identify data needs and sources within the context, goals objectives and measures</p>	<p>Research and adopt an analytical process</p>	<p>Awareness training and communication strategy is developed and delivered</p> <p>High level commitment is demonstrated</p>
Starting Point	We recognize we have an internal and external stakeholders and have an assumption of their needs	The need for risk management concept is recognized	Need for information is recognised	The need to assess or evaluate data/information and the benefits are recognized	The need to raise employee awareness is recognised

## Instructions for Use

The purpose of this matrix is to assist an economy to determine through self-assessment, the current status of their organization in terms of risk management. By charting the current position of your economy, the matrix will assist in helping to identify the next steps to refining or building your risk management process. The subject areas of Purpose/Context/Scope, Risk Management Concept, Data, Analysis, and Employee Investment are individually assessed based on the following stages: Starting Point, Awareness, Realization, Focus, Adaptation and Integration. Your economy will investigate the subject areas and after gathering data, will determine at what stage in that subject area you are. While dependent on each other in practice, the subject areas should be assessed independently and not against each other. It is therefore realistic to be in a Focus stage in reference to your Data subject area, and be at the Starting Point in your Employee Investment subject area. There is no right or wrong answer to this assessment. The purpose is to help your economy see where it currently is, and assist you in advancing your current position.

To properly use this tool, look at the definition in the Starting Point stage for the first subject area Purpose/Context/Scope, and assess whether you have reached this point based on the definition. If you have, then review the definition in the Awareness Stage. If you have reached this stage, look at the definition in the Realization

stage and assess your organization. If you have reached this stage, then review the definition against your current position in the Focus stage. Continue reviewing the definitions in relation to the current status of your organization until you reach the Integration stage. If at any point before reaching the Integration stage, you find the definition that best describes your organization, you have determined your current position. Make a notation indicating the stage where your organization fits. It is highly unlikely (although possible) that organizations may be at the Integration stage when first conducting this exercise. Once you have determined and recorded where your organization is relative to all subject areas, you are ready to determine and review what it will take to get to the next level, and the feasibility of that venture.

The grey shaded areas may provide your economy with examples of the actions or activities and tools that may assist in progressing through the matrix. This is not to say that other actions, activities or tools specific to your economy cannot be used or developed, as it is only intended to provide some useful options that you can consider. The actions and activities that are identified as appropriate to help the organization to move to the next level in the matrix will form the basis of your risk management implementation plan.

It would be helpful to review this matrix and conduct this same assessment at various intervals of time to reassess progress, refocus goals, and improve your Risk Management Process.





## ANNEX 4: RISK ASSESSMENT/TARGETING CENTRES

There is an increasing trend towards the establishment of specific risk management functions that focus on building a closer interface between the traditional roles of intelligence and front-line operations. In some countries, this function has taken the form of a national risk assessment/targeting centre.

There are different organizational models for operating a risk assessment/targeting centre. Models depend on organizational roles, structures, activities and functions. They may be centralized, decentralized or a mixture of the two. Often this is also influenced by the ICT capabilities of the organization. There is no “one size fits all” organizational model for establishing such a centre. The following activities seem to be typical of the centres currently in existence:

- manage selectivity and targeting criteria;
- manage risk analysis related IT systems and assist with their development;
- provide 24/7/365 tactical analysis and coordination capacity to front-line operations;
- assist with planning & resource deployment;
- act as a hub for risk related information exchange; and
- provide a platform for stakeholder and Coordinated Border Management (CBM) cooperation.

### Selectivity and targeting

Risk assessment and targeting centres carry out analytical functions and develop selectivity and targeting criteria relating to activities such as vetting commercial transactions, revenue assurance, fraud and other illegal activities, profiling of travellers, enforcing prohibitions and restrictions, and cultural heritage protection. In some cases these centres serve as a nexus for gathering information from a wide variety of sources (public domain and law enforcement), both internal and external to Customs. Most often they use automated analysis and trade-based research tools (importation trends, common traits, profiles, past violations, passenger data, etc.) to conduct these activities in conjunction with existing Intelligence

products. The outcome of the analysis leads to the development of risk profiles and examination criteria, enabling Customs to identify those transactions most likely to be non-compliant in a dynamic manner, thus enabling more effective resource planning and deployment responses to situations presenting the highest risks.

The centres contribute to the management of the selectivity system and can enter criteria into electronic and/or manual systems. While most often managed centrally, this function will generally include selectivity and targeting criteria derived from national systems and regional or local experience. This ensures that national risk management goals and objectives are met and that local knowledge and experience enrich the process. The centres analyze the resultant “hits”, collect, and store information from front-line interventions, which in turn enables the continuous refinement and development of the selection and targeting criteria in conjunction with intelligence units.

### *Information systems and their development*

As mentioned above, risk assessment and targeting centres often have a role in managing electronic risk analysis systems and inserting the risk rules, profiles and statistically valid random selection criteria. Their tasks can also include keeping the system and its content relevant.

### *Operational support*

Centres tend to operate on a 24/7/365 basis and support front-line operational activity by providing additional tactical analysis capacity. They bring added value to the front line by providing analysis capacity to operational inquiries originating in realtime from business operations such as goods inspection, passenger inspection, transport and vessel search and investigations activities. The centres can also provide support to resource planning and deployment, particularly in dynamic situations where mobile units may be dispatched to address risks or to bolster static resources where they are deemed insufficient to deal with a high-risk situation.



## *Information coordination and exchange hubs*

Risk assessment and targeting centres often facilitate information exchange on risk related issues, both nationally and internationally. Operating as a central hub they can be used to coordinate information exchange on risk related issues between Customs and other governmental agencies, between Customs and the private sector, and between Customs administrations internationally where the legal authority exists for this.

## *Stakeholder cooperation and a vehicle for better coordinated border management*

These centres cooperate closely with both internal and external stakeholders. They have also provided Customs administrations with an

excellent vehicle for strengthening inter-agency cooperation on managing cross-border risks. In many cases Customs have invited other border agencies (national and/or international) to join in, and work in the centres. This has enabled better planning, coordination and response actions, contributing towards more efficient and cost-effective delivery of whole-of-government border management goals. A major feature of such an approach is the fact that even though Customs administrations physically host these centres, each participating organization retains its agency-specific mission, role and identity. This encourages wider buy-in to the concept and enables governments to achieve a “many parts, one view” approach without destabilization of wider institutional and agency arrangements.



## ANNEX 5: CASE STUDIES BY MEMBERS

### Argentina

*"Risk management in the Argentina Customs"*

#### Background

In order to control the foreign trade transactions, the National Executive Power, through Decree No. 898/2005, decided to create the General Sub-Directorate of Customs Control, inside the CUSTOMS GENERAL DIRECTORATE.

The Argentina Customs, through Regulation AFIP No. 36/06, dated on January 18, 2006, included on its organizational structure the Risk Management Directorate, which depends on the General Sub-Directorate of Customs Control.

To comply with the tasks assigned to the Customs General Directorate and to control the international movement of goods, the powers of the different areas were adapted, thus favoring the centralization of the strategic information and the decentralization of the strategic control operation.

According to the new methods of international trade and to the national security risks that suppose the smuggling, the trade mark fraud, the international terrorism and the drug trafficking, the Customs control outline was redesigned, thus centralizing the strategic definitions and the intelligence applicable to said control through the creation of risk profiles for the different foreign trade operators.

#### Aspects of the Risk Management in the Argentina Customs

The techniques used for the risk management are useful for the fight against the counterfeiting and to secure and facilitate the exchanges of information and good practices.

The risk analysis processes, the use of computerized procedures that permit the analysis of a large amount of information and the use of harmonized criteria to control the goods and the economic operators, are the basis of an effective control that does not affect the legitimate international trade and that minimizes the risks for the citizens.

The main responsibility of the Risk Management Directorate is to create strategic politics for the Customs control, to collect and analyze the information to define the risk profiles and to coordinate the activities in which the Customs General Directorate has to act with other organizations.

The Directorate is formed by two Departments: Selectivity and Strategic Management of Valuation. Their tasks area the following:

- to plan and propose criteria to define the risk profiles of the operations, destinations, operators and foreign trade auxiliaries and to evaluate the results; and
- to create control and analysis criteria for the valuation of the goods. Said criteria will be used on the selectivity procedure.

These actions are conducted within the framework of the World Customs Organization, which establishes the rules for the system for risk analysis: "The Customs Administrations must apply a computerized system to analyze the risks and to identify the goods that can be of high risk".

Even though the adoption of the Revised Kyoto Convention is still pending at the Parliament, the Customs perform the tasks according to the Guidelines on Customs Control, as set forth in the General Annex of Chapter VI of the RKC.

Finally, the agency also takes into account what is set forth in the ISO Standard 31000:2009 for the successful risk management. The Standard is a practical document that is intended to help the public and private organizations, advising them to develop, apply and improve a risk management framework as a fundamental part of their management system.

#### Tasks

This system includes a mechanism to validate the risk analysis, to adopt strategic decisions and to identify "good practices" to produce a change in the way in which the selectivity is managed.



This change is based on the following pillars:

- definition of the general and uniform criteria;
- measurement of the results;
- increase of the risk perception; and
- joint work of the operational areas and other control agencies.

### **Advantages**

- to guarantee a better use of resources;
- to increase incomes;
- to improve compliance;
- to increase the risk perception in relation to operations and operators;
- to reduce clearance times;
- to decrease logistics costs; and
- to enhance cooperation among operators, control agencies and Customs.

### **Jamaica**

*“From traditional to risk-based control approach”*

The Jamaica Customs Department is implementing proactive risk management. The table below compares the Department's previous Customs controls with its current approach and includes some lessons learned.

<b>Previous approach</b>	<b>Risk-based approach</b>
100% examinations conducted	Focus on high-risk areas, with minimal intervention in low-risk areas Increased focus on post-transaction compliance assessment Balance between regulatory control and trade facilitation
Lack of coordination and structure within operating environment – “fragmented”	Strategic and holistic approach Centralised risk management coordination
Focus on identifying non-compliance	Focus on identifying both compliance and non-compliance Focus on assessing the integrity of trader systems and procedures

<b>Previous approach</b>	<b>Risk-based approach</b>
Lack of formal feedback mechanism, limited incentives for compliance	Consultative, cooperative approach Rewards for recognized compliant traders Dual enforcement/client service focus
Unilateral approach & inflexible procedures	Simplification of procedures with appeal mechanisms
Limited automation & IT integration	Information management focus Pre-arrival import clearance Greater integration of systems Intelligence driven

Lessons learned throughout the implementation experience were:

- risk management requires a structured communication network for the exchange of information both within Jamaica Customs Department and with stakeholders and clients;
- staff awareness about risk management and change in organizational culture is vital;
- a formal process for evaluating and monitoring risk management solutions is paramount; and
- there are direct and indirect impacts on trade, such as reduced processing times and lower transaction costs.

Future work will include:

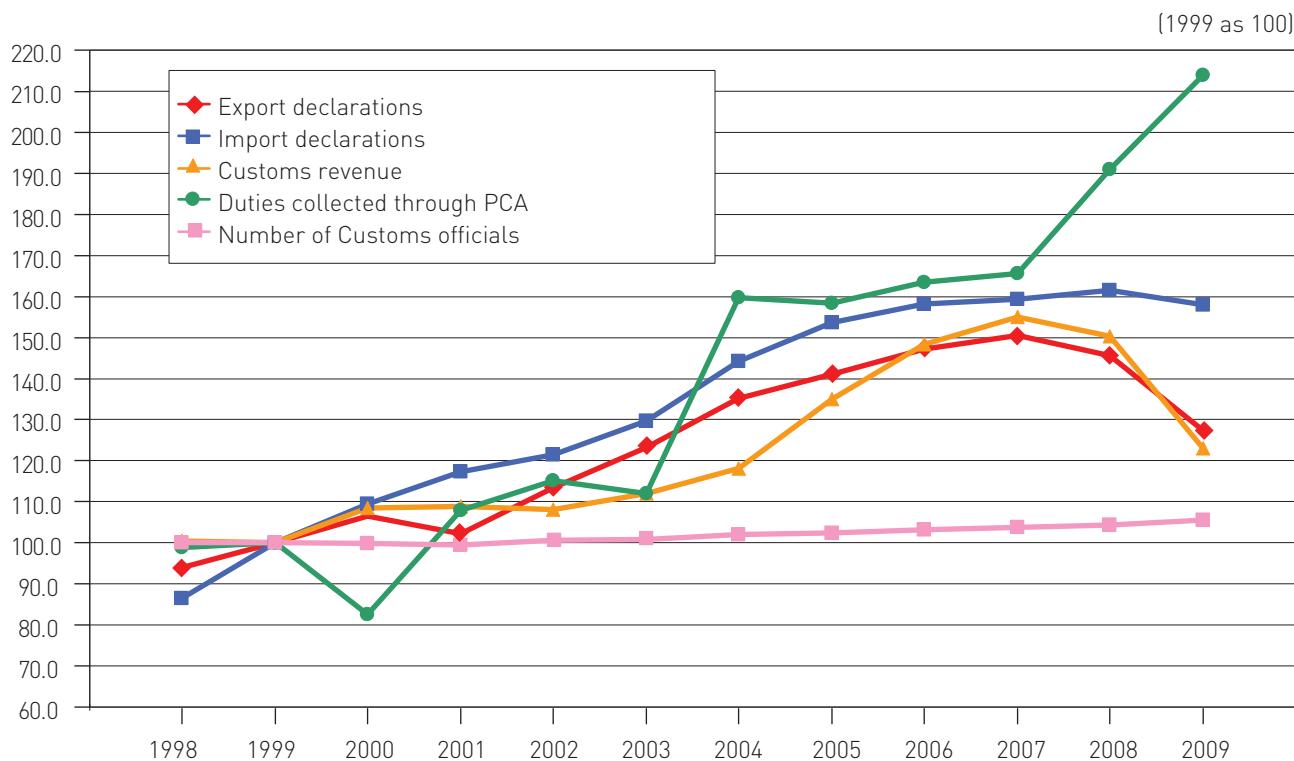
- client education;
- legislative amendments;
- operational changes;
- resource re-allocation; and
- technology and technical support.

### **Japan**

*“Example of benefits of risk management”*

The following graph shows the transition in the volume of main services and the number of officials in Japan Customs. While the workload has been increasing, the number of officials has remained at the same level, which shows that operational efficiency has been improved. Better resource allocation through the enhancement of the risk management approach greatly contributes to this achievement.

## Transition in main Customs services and the number of Customs personnel

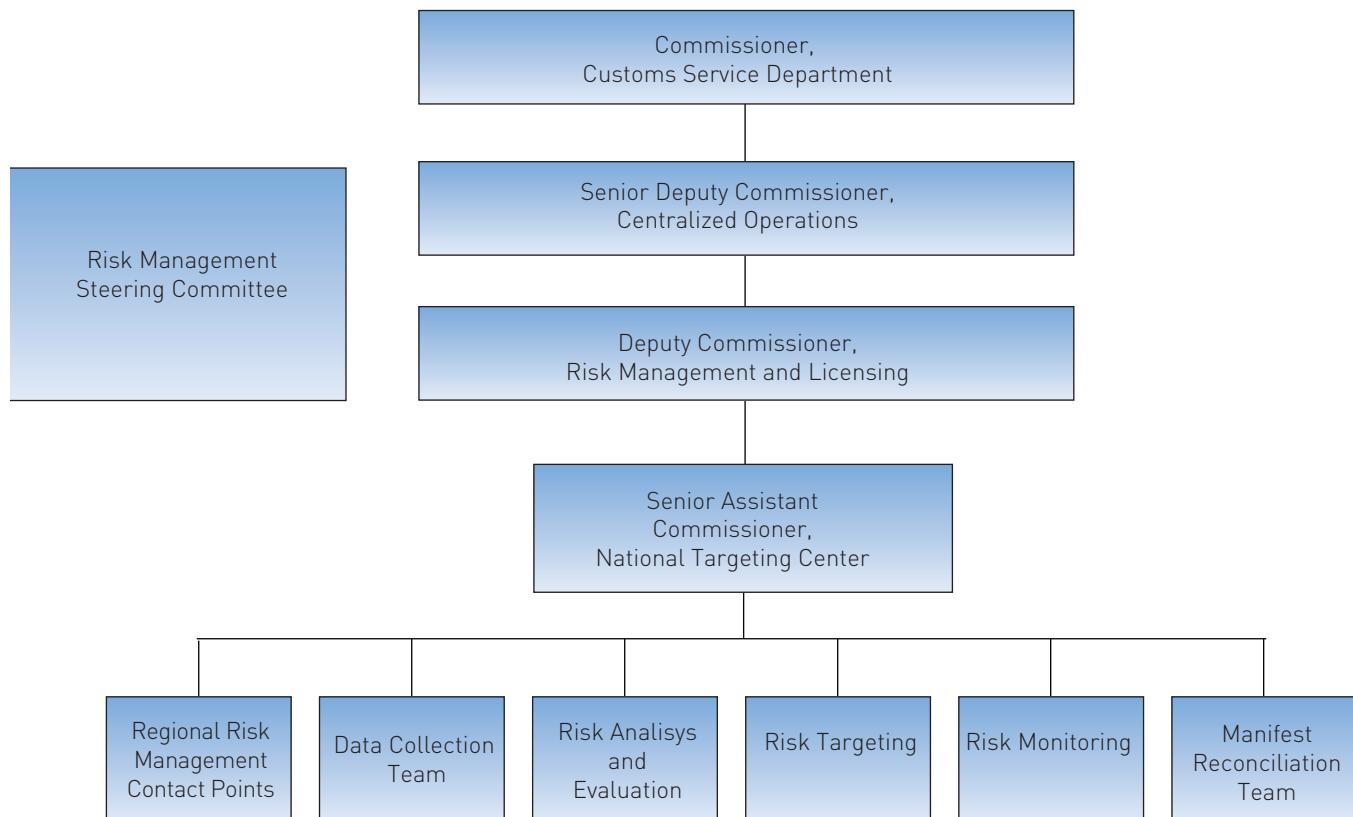


## Kenya

*"Organization of the risk management function"*

The following diagram shows the organization of risk management functions in the Kenya Customs

Department. A Risk Management Steering Committee deals with organizational risks and priorities, whereas a National Targeting Centre has been established to support operational risk assessment, profiling and targeting practices.



## Korea

*"Integrated Risk Management System"*

### Overview

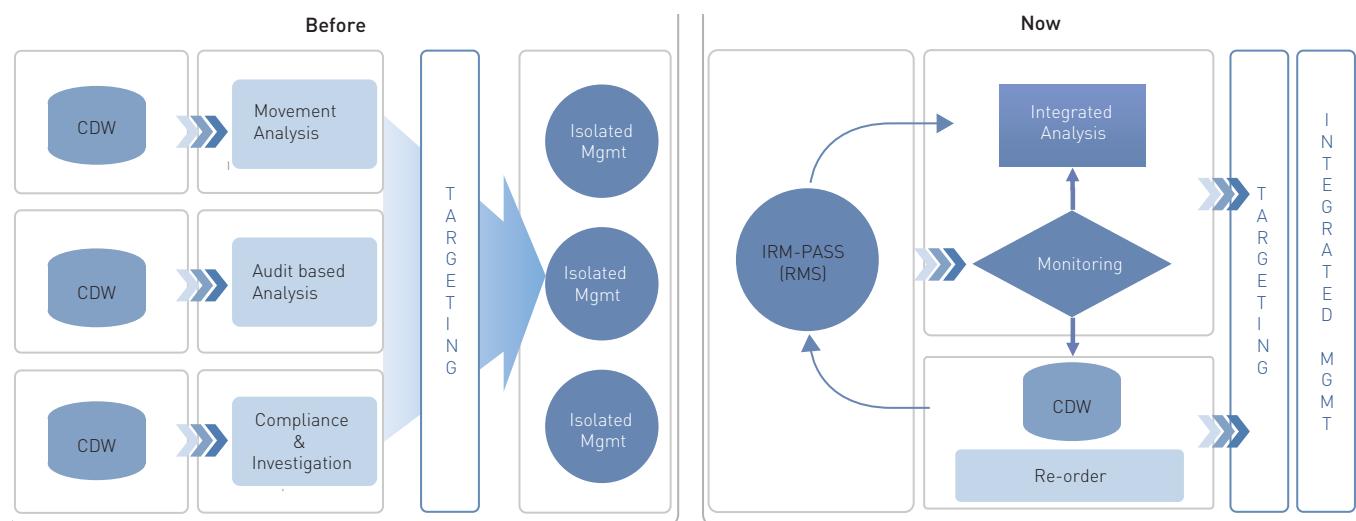
Risk management based on information and communication technology is essential for coping with challenges from cross-border transactions. The Korea Customs Service (KCS) selects and inspects high-risk passengers, goods and transportation based on the results of risk analysis. The KCS has traditionally conducted risk analysis for post- audit on illegal transactions and tax evasion cases, and also established a Customs Data Warehouse (CDW) in 2002.

The CDW collected data not just from Customs divisions but from other government agencies such as the Ministry of Justice, National Tax Service, Ministry of Foreign Affairs & Trade, and Ministry of Land, Transport and Maritime Affairs.

From 2008 the KCS started to establish an Integrated Risk Management System (IRM) with a range of functions:

- automatic integration and segmentation of data;
- providing customized information (e.g. high, mid and field level);
- circulating information and screening criteria; and
- articulating risk factors using complex target selection indicators.

### Integrated Risk Management System



#### IRM cycle

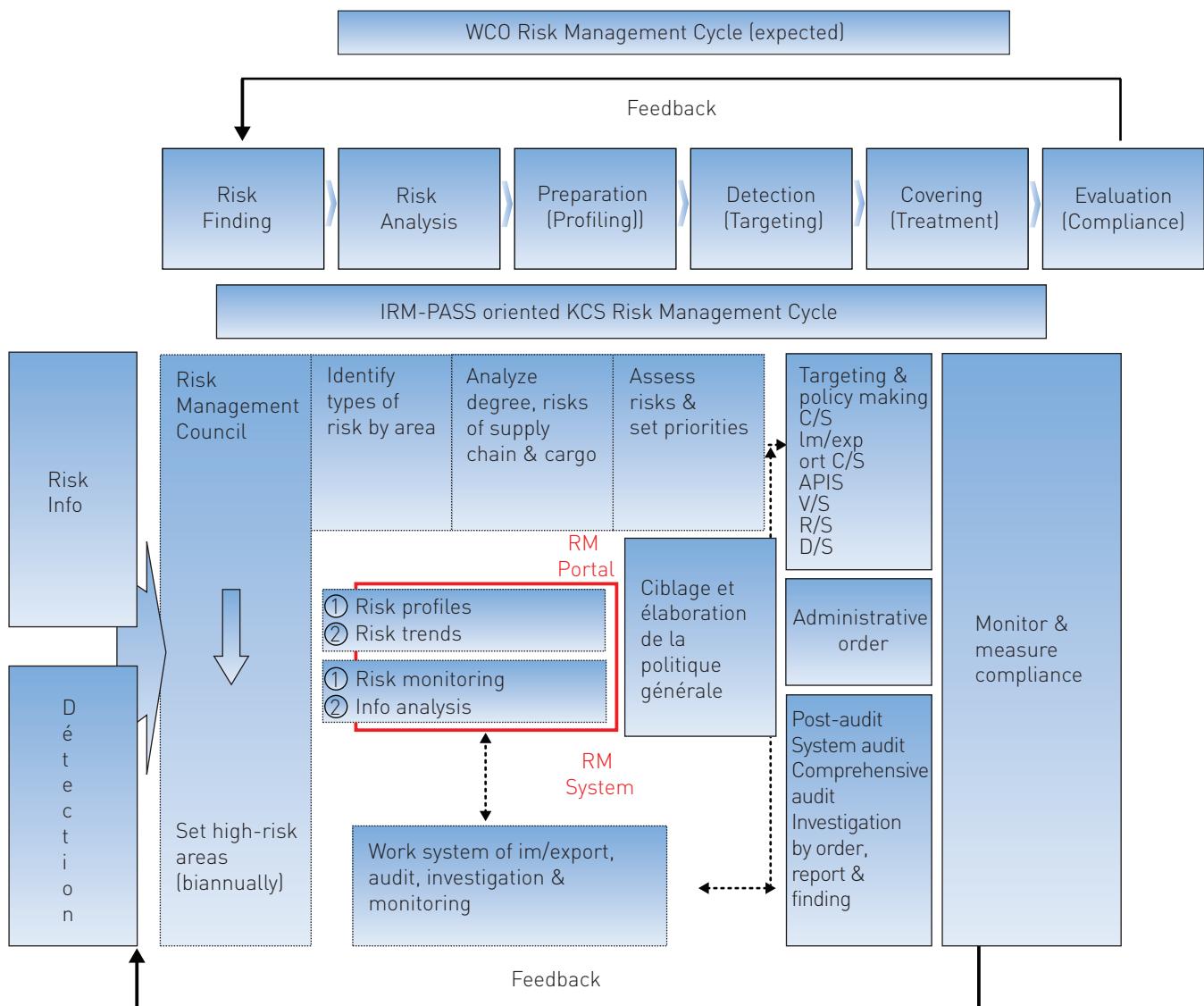
- step 1: initial screening on prior data & post records;
- step 2: analysis using auto filtering, monitoring;
- step 3: selectivity using simulation and multi-layered factors; and
- step 4: re-evaluate results of risk treatment.

Expected benefits from the IRM system:

- producing comprehensive information with an enhanced reconciliation function;
- real-time data management and reducing time lag;

- focus shifted from correction of mistakes to prevention;
- assisting divisions with their decision making; and
- possible efficiencies in organizational integration.

## Risk Management Cycle



### A way forward

Developing IRM is a continuing process with a focus on intelligence integration. Building on the successful IRM system, the KCS plans to establish a “National Targeting Council (NTC, tentative name)” for more effective and efficient risk management. Effective risk management requires close cooperation among related entities, including border agencies and other countries. The combination of NTC and technology-intensive information management will improve targeting capability, leading to an increase in revenue collection.

### Mauritius

“Using Risk Assessment and profiling to select for examination of textile fabrics having undergone

some working such as hemming or formation of necklines.”

A consignment declared as fabrics was selected for physical examination. It was observed that this consignment consisted of curtain fabrics with scalloping edges. The fabrics were declared as textile piece goods under HS code 5515.1900.

Fabrics having undergone some workings such as hemming or formation of necklines are classifiable under HS code 6307.9090 according to note 7 to Section X1 of the Harmonized Commodity Coding and Description System.

Fabrics attract 0% duty and 0% VAT at importation under Chapters 50 to 56 but fabrics having undergone some workings such as hemming or formation of necklines are classifiable under HS code



6307.9090 for which there is no duty but attract VAT at 15% at importation.

An offence report was filed for wrong classification of fabrics with scalloping edges. Feedback was received from the seizing office at Risk Management Section and used as intelligence for targeting.

Data was retrieved from the Customs import database on importers of fabrics. A list of importers of fabrics was compiled and analyzed and it was observed that all consignments were declared as fabrics. The declaration was quite misleading to the extent that the description was not complete to enable the proper classification. A survey was carried out by officers of Risk Management Section to identify/gather information on importers/retailers of curtain fabrics with scalloping edges.

A list of retailers by trading name and selling curtain fabrics was identified and matched against the list of importers registered at Customs. The importers who matched the above list were targeted for physical examination through selectivity. The assistance of the Income Tax and VAT Departments was also sought to identify other importers of curtain fabrics by their trade names and matched against their registration numbers at Customs. An additional list of importers of curtain fabrics was thus obtained and the consignments of these importers were targeted for physical examination through selectivity.

3 cases of wrong classification were observed and Offence Reports filed accordingly. Other importers of these types of fabrics are now being targeted taking into consideration the seasonability of the import of such products.

## United States

*"Risk-based, layered approach to supply chain security"*

The United States Customs and Border Protection (CBP) has adopted a risk-based layered approach to supply chain security. The methodology has

evolved over several years into a comprehensive strategy that enhances security across all potential transit vectors that is more efficient and cost effective than alternative approaches that focus exclusively on a single layer of defense. CBP is working to detect, prevent or deter attacks against, or the exploitation of, the supply chain by utilizing technologies where appropriate, but is also relying on layers of non sensor based programmes across air, land and maritime pathways. Some of these additional layers include:

- advanced electronic information under the 24-hour rule – enhanced by the 10+2 importer security filing requirements;
- screening all shipment information by interfacing with import and enforcement systems using the automated targeting system (ATS) and national targeting center;
- authorized economic operator partnerships with industry and the private sector, such as C-TPAT;
- partnerships with foreign governments such as the container security initiative and secure freight initiative;
- partnerships with other U.S. government agencies such as the Transportation Security Administration on air cargo security; and
- use of non-intrusive inspection technology and mandatory exams for all high-risk shipments.

The objective of this layered approach is to integrate these measures into intersecting processes, thereby allowing CBP to receive, process and act upon commercial and security information in a timely manner. This disciplined and highly systemized approach enables the accurate targeting of suspect shipments without hindering the movement of commerce upon arrival in US ports. The discrete layers provide defense in depth for the various segments of the supply chain, ensuring that cargo and associated information is regularly assessed and that security does not rely on any single point that could be compromised.

