ISO/PAS 28000 applies management system approach to security of global supply chains

by **Charles Piersall** and **Nancy Williams**

With billions of dollars worth of goods moving at any given time along global supply chains, the newly published ISO/PAS 28000:2005[1)] for supply chain security management systems will help combat threats to the safe and smooth flow of international trade.

ISO/PAS 28000:2005, *Specification for security management systems for the supply chain,* gives organizations the requirements for establishing, implementing, maintaining and improving a management system for the security of the supply chain.

As security hazards can enter the supply chain at any stage, adequate control throughout is essential. Security is a joint responsibility of all the actors in the supply chain and requires their combined efforts.

ISO/PAS 28000:2005 can therefore be used by a broad range of organizations – small, medium and large – in the manufacturing, service, storage and transportation sectors. Its implementation will reassure business partners and regulators that security is taken seriously within the organizations they deal with.

The publication of ISO/PAS 28000:2005 is a major security initiative resulting from industry and governmental cooperation within the ISO framework. It is designed to enable better monitoring of freight flows, to combat smuggling and to respond to the threat of piracy and terrorist attacks by creating a safe and secure international supply chain regime.

ISO/PAS 28000 will help combat threats to the safe and smooth flow of international trade

ISO/PAS 28000:2005 integrates the process-based approach of ISO's management system standards – ISO 9001:2000 (quality) and ISO 14001:2004 (environment) – including the Plan-Do-Check-Act (PDCA) cycle and requirement for continual improvement, as well as the risk management aspects of ISO 14001:2004.

While ISO/PAS 28000 can be implemented on its own, it is

1) An ISO/PAS (Publicly Available Specification) is one of several alternatives to fully fledged International Standards offered by ISO for cases where swift development and publication takes priority. All Publicly Available Specifications are reviewed every three years to determine if the document should be reconfirmed as a PAS for another three-year period or whether it should be further developed to become an ISO International Standard

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designed to be fully compatible with ISO 9001:2000 and ISO 14001:2004 and companies already implementing these management system standards may be able to use them as a foundation for developing a security management system conforming to ISO/PAS 28000.

ISO/PAS 28000 offers **a systematic approach** to security management

To help users to do so, ISO/PAS 28000 includes a table showing the correspondence of its requirements with those of ISO 9001:2000 and ISO 14001:2004. Like these standards, conformity of a security management system to ISO/PAS 28000 may be verified and certified by an independent body. However, conformity to ISO/PAS 28000 does not in itself confer immunity from legal obligations.

ISO/PAS 28000 is one of several developments for intermodal supply chain security being undertaken by ISO technical committee ISO/TC 8, *Ships and marine technology,* comprising the following documents:

- ISO/PAS 20858:2004, *Ships and marine technology – Maritime port facility security assessments and security plan development,* which was published in June 2004, is designed to assist in the implementation of the International Maritime Organization's International Ship & Port Security (ISPS) Code.
- ISO/PAS 28001, *Best practices for custody in supply chain security,* will assist industry to implement best practices as outlined in the World Customs Organization Framework. It is expected to be published in the second quarter of 2006.
- ISO/PAS 28004, *Security management systems for the supply chain – General guidelines,* will help organizations to understand and implement ISO 28000. In this respect, it will play a complementary role similar to that of ISO 14004:2004 in relation to ISO 14001:2004. It will reference the existing ISO 19011:2002, *Guidelines for quality and/or environmental management systems auditing* and the future ISO/IEC 17021, *Conformity assessment – Requirements for bodies providing audit and certification of management systems.*

ISO Secretary General Alan Bryden has commented: "The newly published ISO/PAS 28000 is the first of a series of documents relating to security management. Two more documents are under preparation – ISO/PAS 28001 and ISO/PAS 28004 – which together will comprise a complete portfolio of ISO standards for security in the supply chain."

ISO/PAS 28000 is the output of ISO/TC 8 in collaboration with other ISO technical committees that develop standards for specific nodes of supply chains.

Fourteen countries participated in its development, together with several international organizations and regional bodies. These included the International Maritime Organization, the International Association of Ports and Harbours, the International Chamber of Shipping, the World Customs Organization, the Baltic and International Maritime Council (BIMCO), the International Association of Classification Societies, the International Innovative Trade Network, the

Captain Piersall (right) *and ISO/TC 8 Secretary,* ***Mr. I. Ogo*** (left)*, receive on behalf of the committee the Lawrence D. Eicher Leadership Award from ISO President,* ***Professor Masami Tanaka,*** *at the 28th ISO General Assembly in September 2005 in Singapore. ISO/TC 8, of which the secretariat is held by the Japanese Industrial Standards Committee (JISC), was honoured for its creativity and innovation in the development of standards.*

World Shipping Council, the Strategic Council on Security Technology, which has a Memorandum of Understanding with ISO/TC 8, and the US-Israel Science and Technology Foundation.

ISO/PAS 28000 was completed in only 10 months, a truly remarkable achievement which demonstrates the deep spirit of cooperation and energies of all the stakeholders who participated. It was an extraordinary effort and proves that standards can and will be completed to meet market needs "on time".

ISO/PAS 28000:2005 costs 81 Swiss francs and is available from ISO national member institutes (listed with full contact details on the ISO Web site: **www.iso.org)** and from ISO Central Secretariat (**sales@iso.org**).

Supply chains

"Supply chain" designates an overall process that results in goods being transported from the point of origin to final destination and includes the movement of the goods, the shipping data and the associated processes, including the dynamic links between the different participants.

These include many entities, such as producers of the goods, logistics management firms, consolidators, truckers, railroads, air carriers, marine terminal operators, ocean carriers, cargo/mode/customs agents, financial and information services, and buyers of the goods being shipped.

Figure 1: *This model depicts the principal inter-related requirements (with clause numbers) of ISO/PAS 28000:2005.*

For example, a company may employ more than one logistics firm, trucking companies may subcontract to operators or other companies, and vessel operating companies may divert the cargo to other carriers for various reasons.

Since supply chains are dynamic in nature, some organizations managing multiple supply chains may look to their service providers to meet related governmental or ISO supply chain security standards as a condition of being included in that supply chain in order to simplify security management. **Figure 1** reflects the inter-related nature of supply chain security requirements.

Threats

The international supply chain is vulnerable. The war on drugs, that rose to prominence in the 1960's and 70's and continues today, illustrates how smuggling techniques have kept pace with changes in transportation technology and processes.

Many of these vulnerabilities remain today and can be exploited by organizations with far more sinister motives. Terrorists have also taken advantage of criminal smuggling networks to circumvent border security measures.

Cargo theft remains a significant issue in many parts of the world. Falsification of shipping documents allows for goods to enter into the "informal economy" (gray/black market), or facilitates their theft and is rampant in certain regions. In some developing countries, "informal economies" account for 41 % of actual GDP. Generally, this percentage decreases to about 18 % for nations with more controlled economies.

Lesser known or understood are the efforts that industry and government has been making in addressing the issue of international trade security. A major outcome of these efforts is ISO/PAS 28000, which specifies the requirements for a security management system, including those aspects critical to security assurance of the supply chain.

These aspects include, but are not limited to, financing, manufacturing, information management and the facilities for packing, storing and transferring goods between modes of transport and locations. Security management is linked to many other aspects of business management. These other aspects should be considered where and when they have an impact on security.

ISO/PAS 28000 promises to facilitate global trade for the benefit of all

ISO/PAS 28000:2005 is a high level management systems standard. It requires the organization to assess the security environment in which it operates, to determine if adequate security measures are in place, and to identify and comply with relevant regulatory requirements. If security needs are identified by this process, the organization should implement mechanisms and processes to meet these needs.

ISO/PAS 28000 requires the user organization to establish, document, implement, maintain and continually improve an effective security management system for identifying security risks and controlling and mitigating their consequences.

The organization shall define the scope of its security management system. Where an organization chooses to outsource any process that affects conformity with these requirements, the organization shall ensure that such processes are controlled. The necessary controls and responsibilities of such outsourced processes shall be identified within the security management system.

International consensus

International supply chain security can be thought of as consisting of broad groups of stakeholders: government, owners of the goods, and service providers. Each of these groups, as well as the individual organizations of which they are composed, may have its own specific needs and objectives and, at times, they may conflict with those of other entities in the supply chain.

For the individual organizations in the supply chain that implement it, ISO/PAS 28000 offers a systematic approach to security management that can both improve their operational capabilities and increase confidence in them on the part of customers and regulators.

In addition, because the approach is the result of international consensus, ISO/PAS 28000 promises to avoid the complication and cost of different and possibly conflicting national requirements and therefore to facilitate global trade for the benefit of all. •