



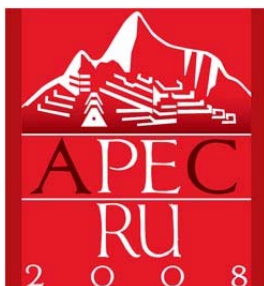
**Asia-Pacific
Economic Cooperation**

2008/SOM3/CTTF/STAR/010

Session: 10

**Costs and Benefits of Investing in Supply Chain
Security Measures: Case Studies of Successful
Experiences by Private Sector**

Submitted by: World BASC Organization



**6th Secure Trade in APEC Region Conference
Lima, Peru
20-21 August 2008**

Costs and benefits of Investing in Supply Chain Security Measures: Case Studies of Successful Experiences by Private Sector

Voluntary supply chain security programs, such as BASC and C-TPAT, have had important impacts in the global trade environment.

Several studies have been done in order to understand the different points of views and perceptions that companies have towards these programs.

In 2006, the Crossborder Research Association held a study, whose main objectives were to identify which supply chain security standards have been implemented by security leading companies in Latin America in order to establish which are the most efficient and analyze the direct and indirect costs and benefits relationship.

On the other hand, in 2007 a similar research was conducted by the Center for Survey Research (CSR) at the University of Virginia in order to have a better close up of the C-TPAT Costs of investment, benefits and the relationship between them

It is important to know the different experiences members are having, as it provides an important guideline for future development and globalization of supply chain security standards.



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Costs and benefits of Investing in Supply Chain Security Measures: Case Studies of Successful Experiences by Private Sector

**Sixth 'Trade in the APEC Region's Conference (STAR VI)
"Security and Vulnerabilities of the Global Supply Chain"
Peru, 2008**

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AGENDA

- ◆ Global Security Environment
- ◆ Voluntary Supply Chain Security Programs
Impacts: an Empirical study with BASC
members
- ◆ C-TPAT Cost / Benefit Survey
- ◆ Summary & Conclusion
- ◆ Q & A

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Case I:

VOLUNTARY SUPPLY CHAIN SECURITY PROGRAMS IMPACTS

Cross Border Research and two Swiss universities : Empirical Study With Basc Members Companies

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Study description

- The study was coordinated by Cross-border research association a research team, working in **supply chain security management** and sponsored by its member companies and two Swiss universities and
- BASC was selected as an interesting case due to its long experience in supply chain security.
- Carried out from January 05 – February 06 (Before AEO programs)
- Cost of the study assumed by Ecole Polytechnique Fédérale de Lausanne, HEC University of Lausanne and the Swiss National Science Foundation
- The study was carried out with a 20-questions survey, which reached 800 BASC member companies in 10 different countries. The survey was written in collaboration with BASC's direction and fined-tuned in a validation exercise with 5 BASC chapter directors from different countries.



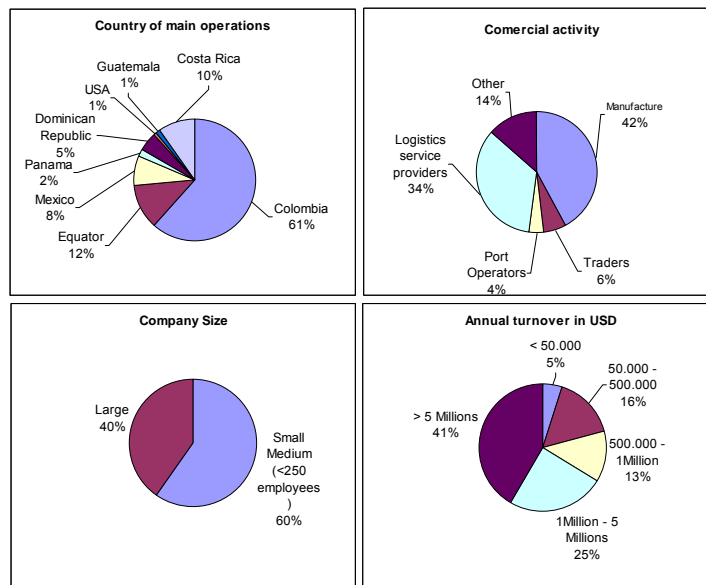


What is BASC?

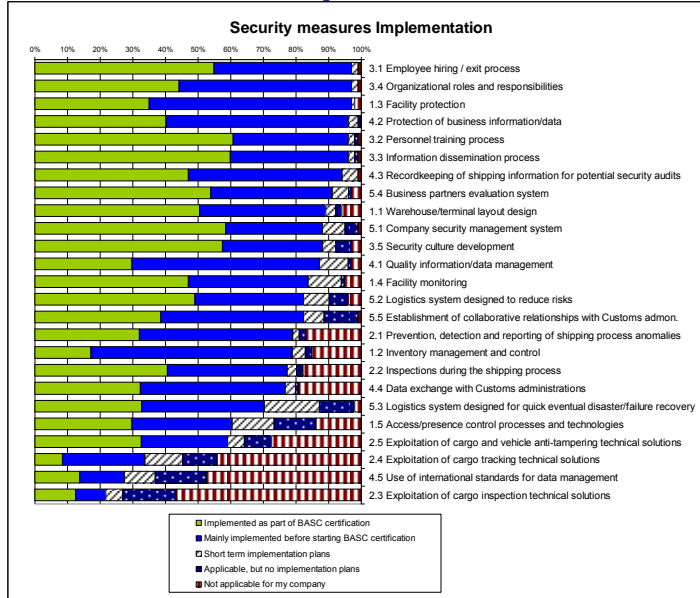
- ◆ **BASC** (Business Alliance for Secure Commerce), is a business-customs partnership created to promote a safe international trade in cooperation with governments and international organizations
- ◆ It is a non-profit organization

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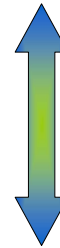
Findings – Sample characteristics



Findings – Security measures degree of implementation



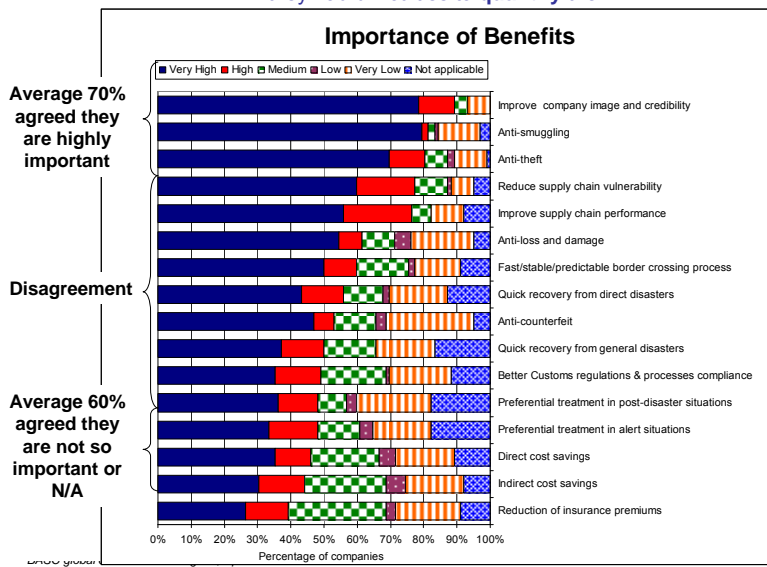
The most implemented measures



The least implemented measures

Findings – Benefits of investing in security

Companies reported the attainment of multiple benefits, although they had difficulties to quantify them

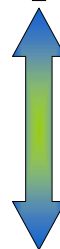


Average 70% agreed they are highly important

Disagreement

Average 60% agreed they are not so important or N/A

The most important benefits



The least important benefits

Findings –EMPIRICAL STUDY WITH BASC MEMBERS COMPANIES: Benefits of investing in security

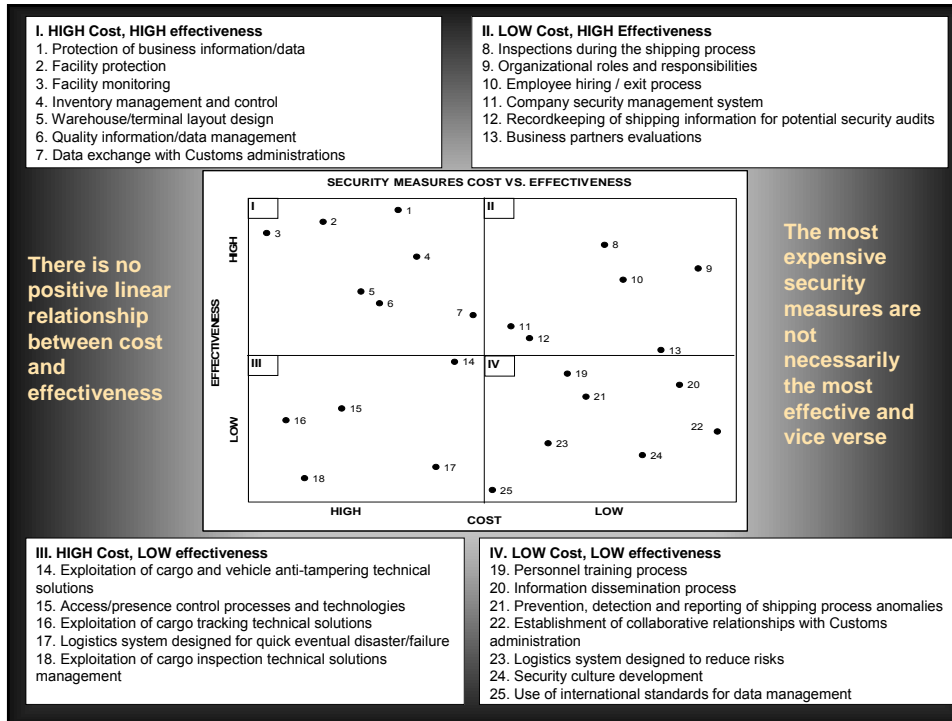
Avoid smuggling	90%
Improve company Image	82%
Reduce theft	81%
Reduce supply chain vulnerability	78%
Improve supply chain performance	77%
Reduce loss & damage	61%
Fast border crossing	60%
Reduce counterfeit	56%
Quick recovery from direct disasters	52%
Quick recovery from general disasters	50%
Preferential treatment in post-disaster situation	49%
Better customs compliance	48%
Direct operations cost savings	48%
Preferential treatment in alert situations	47%
Indirect operations cost savings	44%
Insurance cost reduction	39%



Certification and maintenance average cost for different turnovers

Annual turnover	Number of companies	Average value in USD			
		Implementation Cost	Annual Maintenance cost	Maintenance / certification cost	Certification cost / Turnover
< 50.000	4	28'625	2'888	10%	≥ 57%
50.000 -500.000	13	17'176	8'539	50%	3% -34%
500.000 -1Million	13	13'585	6'698	49%	1% -3%
1Million -5 Million	25	61'820	15'826	26%	1% -6%
> 5 Million	35	52'742	28'484	54%	≤1%
Total	90	34'790	12'487	38%	





Results of the research

- ◆ BASC study presented for the first time empirical data about the cost, efforts required and effectiveness of supply chain security programs.
- ◆ Qualitative benefits were proven to exist, but respondents were hardly able to establish the quantifiable gains of these achievements.
- ◆ Results show that they not only improve their image but they also got various security direct benefits and some contributions to supply chain efficiency.

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Results of the research

- ♦ The current biggest concern for BASC companies was the compatibility or mutual recognition of BASC with the new supply chain security programs; especially with those promoted by their main exports' destination countries (US and Europe)
- ♦ BASC has a strong established organization. The companies and the organization are possessors of valuable experience that needs to be exploited in the current supply chain security environment.
- ♦ BASC companies, although based in risky countries have shown that it is possible to enhance security even with difficult conditions. Their experience, provides important guidelines for the future development and globalization of supply chain security standards.

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Case II:

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US Customs and Border Protection

Customs-Trade Partnership Against Terrorism Cost/Benefit Survey 2007

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What is CTPAT?

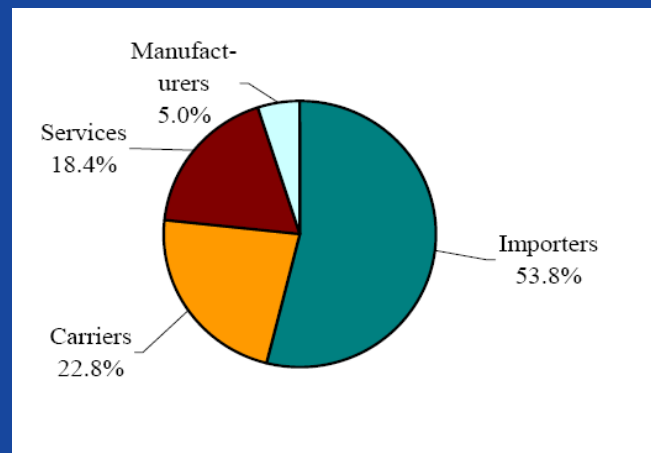
U.S. Customs Response to 9/11:

- ◆ Voluntary
- ◆ Establishes Security Standards
- ◆ Requires ISO Seals
- ◆ Key Feature: Business Partners
- ◆ Benefits
- ◆ Participants: Carriers, Brokers, Freight Forwarders & NAFTA Companies

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C-TPAT business participants

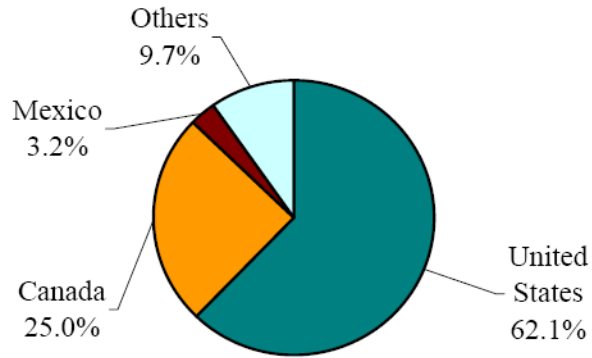


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Location of company's headquarters

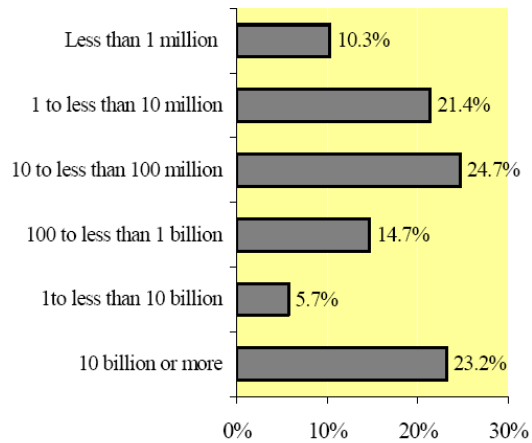


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Company's annual revenue

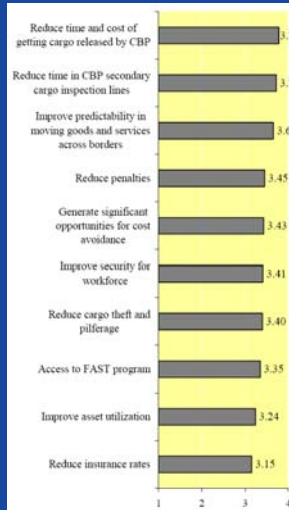


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Potential benefits for all businesses



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Implementation costs by business size

Potential Implementation costs	Less than \$10 million	\$10 million to Less \$100 million	\$100 million to less than \$10 billion	\$10 billion or more
Improving physical security	\$16,739 (192)	\$23,160 (168)	\$43,718 (103)	\$98,673 (105)
Improving in-house awareness	\$2,628 (108)	\$4,200 (96)	\$12,778 (81)	\$20,588 (75)
Salaries and expenses of personnel	\$9,808 (130)	\$24,220 (119)	\$39,523 (99)	\$67,317 (104)
Improving cargo security	\$6,488 (130)	\$14,090 (104)	\$18,577 (62)	\$45,619 (77)
Improving personnel security procedures	\$2,928 (107)	\$10,670 (82)	\$13,728 (53)	\$30,743 (48)
Improving identification system	\$2,871 (116)	\$4,971 (97)	\$9,574 (61)	\$33,349 (52)
Improving personnel screening procedures	\$2,093 (94)	\$6,842 (69)	\$13,117 (40)	\$13,671 (41)
Improving IT systems and databases	\$6,570 (111)	\$27,160 (70)	\$53,979 (31)	\$44,862 (39)
Improving use of security for personnel	\$7,093 (39)	\$36,992 (41)	\$39,419 (33)	\$73,202 (29)

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Benefits & Results

- ◆ C-TPAT benefits outweighed the costs.
- ◆ • major impacts :workforce security, time to release cargo by CBP, time in CBP inspection lines, and predictability in moving goods.
- ◆ decreased number of inspections.
- ◆ increased their supply chain visibility
- ◆ 68.7% of non-Importers: number of customers has stayed the same, 17.0% has increased number of customers.
- ◆ non-Importers (17.4%) has increased their sales revenues.
- ◆ Overall, since becoming C-TPAT certified, non-Importers who reported an increase in customers have gained 35.2% new customers.

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Summary

- ◆ BASC and CTPAT members' experience provides important guidelines for the future development and globalization of supply chain security standards.
- ◆ Security Investment= Competitiveness
- ◆ Relationship between cost-benefit
- ◆ Security Investments Produce Tangible Benefits
- ◆ Long Term Direction: WCO/AEO Program

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Thank you

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