

2015

# ***Introduction to Global Explosives Trace Detection (ETD) Market***



*Homeland Security Research Corp.*

# ***Introduction to Global Explosives Trace Detection (ETD) Market - 2015***

***August 2015***

**Homeland Security Research Corp. (HSRC)** is an international market and technology research firm specializing in the Homeland Security (HLS) & Public Safety (PS) Industry. HSRC provides premium market reports on present and emerging technologies and industry expertise, enabling global clients to gain time-critical insight into business opportunities. HSRC's clients include U.S. Congress, DHS, U.S. Army, U.S. Navy, NATO, DOD, DOT, GAO, and EU, among others; as well as HLS & PS government agencies in Japan, Korea, Taiwan, Israel, Canada, UK, Germany, Australia, Sweden, Finland, Singapore. With over 750 private sector clients (72% repeat customers), including major defense and security contractors, and Fortune 500 companies. HSRC earned the reputation as the industry's Gold Standard for HLS & PS market reports.

Washington D.C. 20004, 601 Pennsylvania Ave., NW Suite 900,  
Tel: 202-455-0966, [info@hsrc.biz](mailto:info@hsrc.biz), [www.homelandsecurityresearch.com](http://www.homelandsecurityresearch.com)

## Table of Contents

1	Key Facts.....	4
2	Conclusions.....	7

## List of Figures

Figure 1-	A Multi-lane People Screening Site .....	5
-----------	--	---

## 1 Key Facts

- ❑ Explosives and Narcotics Trace Detection (ETD) is a key modality within homeland security, public safety communities and defense counter-IED combatants.
- ❑ As of January 2013, there are more than 25,000 ETD devices in use worldwide.
- ❑ Uses of ETD include air-sea-land transportation security, force protection, law enforcement, critical infrastructure protection and public safety.
- ❑ To date, a large assortment of thousands of tabletop, portable, hand-held, and other ETD systems form the backbone of explosive-detection and identification capabilities at airports and other highly sensitive sites around the world.
- ❑ The threats and fears posed by explosives and narcotics and IEDs are real, persistent and likely to continue.
- ❑ On average, the ETD search processing time is 2.5 minutes per checked item per operator. Cabin baggage processing time per item is on average 6 minutes.
- ❑ The aviation industry recovery and the related aviation security market growth presents ETD vendors with growth opportunities stemming from China new airports installations and upgrades (2 out of every 3 new airports projects in the world are in mainland China), and the European Union mandated enhanced detection standards which began in 2012.
- ❑ Most ETDs are used at airports, secured facilities and buildings, public gathering sites, first responders, and land-sea transportation checkpoints.
- ❑ Following years of failed air-cargo screening infrastructure, there is an enhanced pressure by policy makers to deploy an effective Air-Cargo screening means based on ETD and/or X-Ray modalities.
- ❑ Post warranty service, upgrade and consumables business constitute more than 50% of the ETD industry revenues, and 60-90% of the ETD industry profits.
- ❑ For 12 years since the terrorist attacks of 9/11, approximately 7 billion enplanements (i.e., instances of passengers boarding a plane) have occurred in the United States, and about additional 16 billion have occurred worldwide.
- ❑ Globally, there are over 16,000 transportation-related (e.g., airports, seaports and land-border checkpoints) people screening lanes (2,245 of which are in US airports).

- ❑ On average, each airline passenger carries 0.8 to 1.5 cabin bags depending on the type of passenger (domestic, international, business or leisure).
- ❑ Globally, there are over 400,000 people screening lanes. This figure includes those stationed in secured facilities, transportation checkpoints, prisons, courthouses, secured perimeters, military checkpoints, schools, embassies and private sector facilities.

**Figure 1- A Multi-lane People Screening Site**



- ❑ There are 1640 cargo and scheduled passenger flight airports in 175 countries worldwide – ranging from large, international hubs to the small, rural airports. The aviation industry forecasts (e.g., Boeing) that by 2025, the number of passengers will triple to more than 9 billion per annum worldwide.
- ❑ There are over 6,500 scheduled airline passengers screening lanes worldwide. The lion's share of these lanes includes cabin baggage ETD screening systems.
- ❑ On average, each airline passenger carries 0.8 to 1.2 cabin bags and 1-2 checked luggage items depending on type of flight (domestic, international, business or leisure).

- ❑ On a global level, there are more than 16,000 freight forwarders who place unscreened packages on scheduled passenger flights heading to the United States and other major market destinations.
- ❑ In the U.S. alone, there are over 4,000 freight companies. FedEx and UPS alone ship a combined 40,000,000 items per day and 9 million of those packages are shipped on scheduled passenger flights. Only 540,000 are screened.
- ❑ Sealing the explosives and narcotics (e.g., plastic seal, thin metal seal) to prevent explosives and narcotics traces will always remain the Achilles heel of ETD performance. Most ETD users argue that “not every terrorist is a ten-foot-tall terrorist” as a rationale to use ETD technology.
- ❑ The illegal narcotics trade is a global black market dedicated to the cultivation, manufacture, distribution and sale of narcotics that are subject to prohibition laws. Most jurisdictions prohibit trade, except under license, of many types of narcotics by narcotics prohibition laws.
- ❑ The global narcotics trade generated an estimated \$400-450 billion in 2014 the illegal narcotics trade may be estimated as nearly 1% of total global trade. Consumption of illegal narcotics is widespread globally.

## 2 Conclusions

- ❑ The ETD market and technology will evolve to include a plurality of advanced performance, hand-held devices and an additional line of portable systems.
- ❑ There is no competitive modality (e.g., X-ray, EDS) on the horizon that can compete with ETD's detection and identification of explosives and narcotics detection performance and cost performance.
- ❑ Labor costs will remain (for the forecast period) the Achilles heel of ETD. Elimination of labor intensive ETD is a major challenge for the industry.
- ❑ The need to equip many first responder teams with portable explosive detectors for the identification of exploded IED's and the detection of secondary explosive devices will remain a market driver.
- ❑ Demand will increase for the use of ETD systems at public venues such as public gathering locations, amusement parks, sports arenas, and possibly shopping malls.
- ❑ The need for better ETD performance is likely to drive current prices to a higher level.
- ❑ A new "economy" price tier will emerge for the private sector and first responder markets.
- ❑ Embedded software will be developed to simplify the operator interface, reduce training time and costs, and minimize the "human" factor in assessing the presence of explosives and/or Narcotics.
- ❑ ETD is a need-based market where both the technology and the economics (e.g., cost of personnel) create an urgent need for replacements.
- ❑ The leading technologies will be those that can provide the following:
  - Detection of all or many types of explosives
  - Rapid warm-up, acquisition and analysis times (speed of analysis will be important but not crucial for low traffic situations and 1st responders)

**More information can be found at:**

**[Explosives & Narcotics Trace Detection \(ETD\): Technologies & Global Market - 2015-2020](#)**