www.smithsdetection.com



Smiths Detection New York June 28, 2011



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# Introduction to Smiths Detection Philip Bowman

### **Observations on Smiths Detection**

Operates in growth markets – phasing heavily affected by external influences

Changed market & competitive landscape requiring improved responsiveness

Strong technology position – need to align investment with customer needs

Need for focus on processes, management data & personal capabilities

Strong actions required on fixed costs, operational improvements & margins

Opportunities through government relations and increased after-sales activity

### Immediate key initiatives

Reviewing organization and processes to match customer requirements

Better management information systems to support specific functions

Program to reduce fixed costs substantially

Value engineering project will reduce product costs and strengthen margins

Exciting growth opportunities with fluctuating cycles - addressing operational challenges will deliver better financial performance

### **Business profile**



The world leader in the provision of Government regulated systems to detect and identify CBRNE\* materials and other dangerous or illegal objects, for homeland security and the military

### Market leadership based on:

- 65,000 X-ray inspection systems deployed worldwide
- 186,000 chemical agent detectors delivered
- 10,000 explosives trace detectors deployed worldwide

\* CBRNE – Chemical, biological, radiological, nuclear and explosive materials



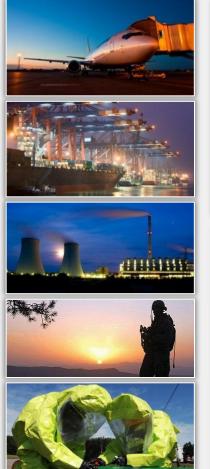




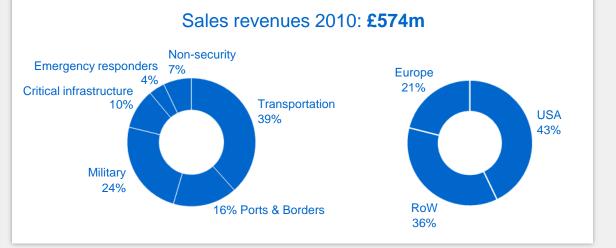




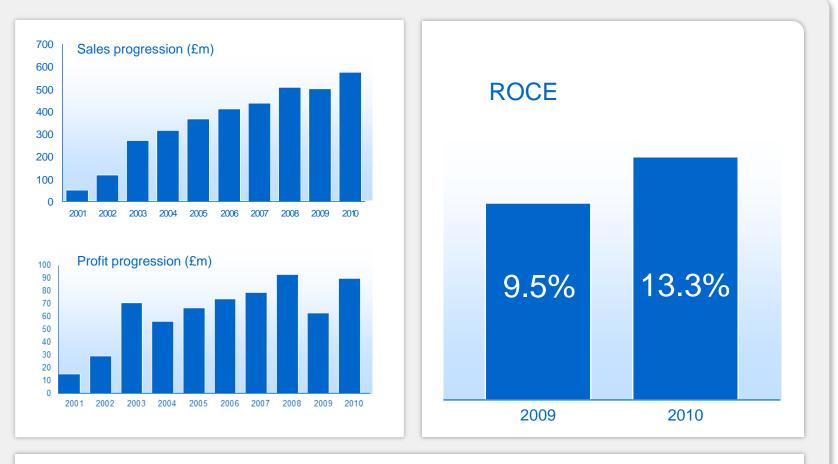
### The market



- Serving an addressable market of more than £4bn, growing at 7%
- Most markets event-driven, characterized by unpredictability
- Growth & resilience driven by changing threats, legislation and new technologies
- Purchasing decisions are made on reliability, technology, service and price
- An increasingly global market



# **Financial performance**



Annual fluctuations in an event driven business

### Our response to the challenge

Targeting growth drivers in the detection sector Maintaining R & D investment levels to compete more effectively Improving customer intimacy & managing sales complexity



**Sales** Cherif Rizkalla Driving efficiencies to reduce operating costs



**Operations** John Burton



**Strategy** Duncan Emery

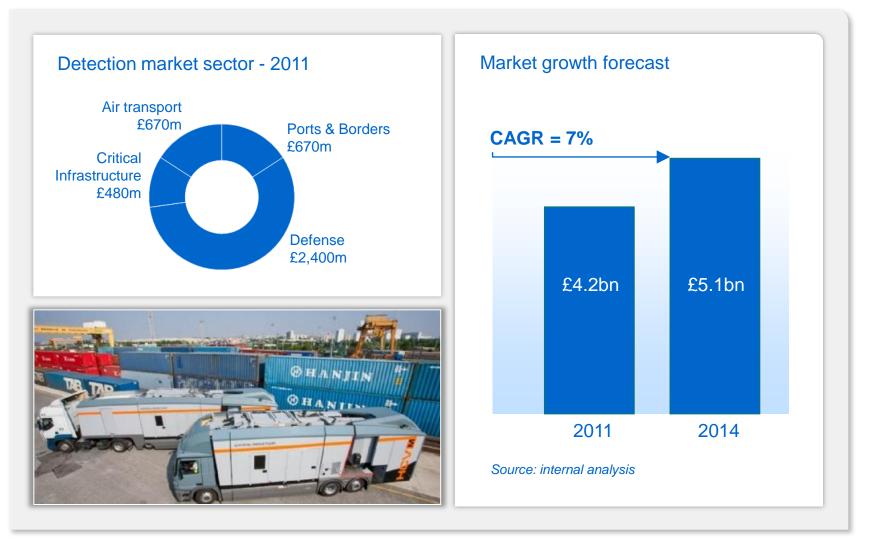


Business Management Group Mal Maginnis

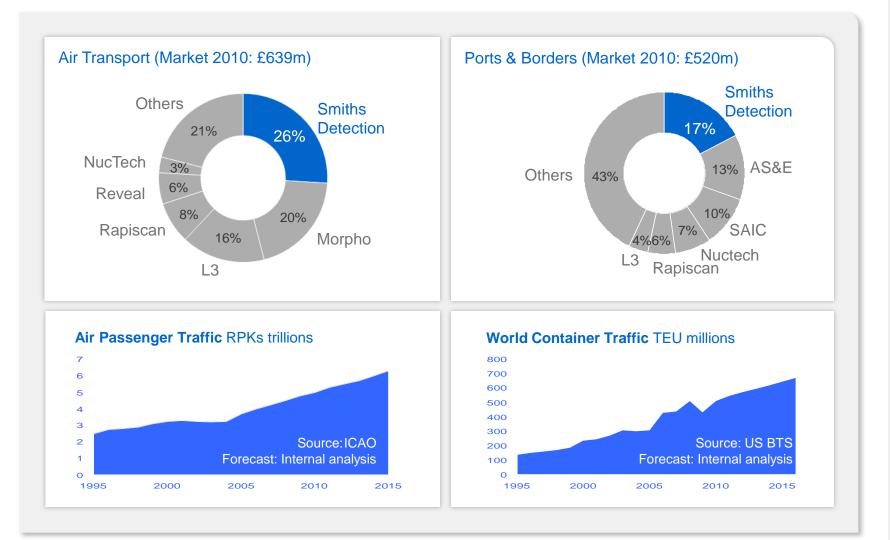
# The market and growth drivers Duncan Emery



### Market development



## Strong positions in key markets



# Market dynamics – the growth drivers

Geo-political unrest
Enhanced detection requirements
High levels of incumbency
Increased automation & networking
Replacement cycle opportunities

# Market dynamics – Replacement cycle opportunities

### U.S. Aviation:

- Advanced Technology program upgrades checkpoint X-ray systems, 450 airports
- Checked baggage, ~1,200 post 9/11 lobby systems, replacement by inline CT
- Trace detectors life-cycle replacement. Potential 3,000+ units
- Body scanners, AIT systems replacing 2,200 walk through metal detectors

### **European aviation:**

- Checked baggage EDS replacement to meet new EU standards ~140 airports
- Checkpoint systems 7-10 year replacement cycle, mostly next generation equipment

### Asia Pacific aviation:

- Airports follow EU or TSA guidelines, esp. for flights to those regions
- Replacement of more than 200 checked baggage systems anticipated

### Key additional customers (US):

CBP: Cargo inspection - 5 year phasing out of 74 truck-mounted gamma systems
 Marshals (USMS) 5 year renewal policy – approx \$3m annual replacement
 Federal Protective Service: 5 year renewal policy – In 3rd of 5 year contract (\$22m to date)
 Postal Inspection: Upgrading chemical identifiers to new standard. \$4m

# Market dynamics- regulatory drivers

	USA	EU
Air cargo screening	100% screening - cargo planes from August 2010. (Certified Cargo Screening Program)	Policy introduction planned summer 2011
	- Cargo on passenger flights by 31 December 2011	
Passenger screening (body scanners)	1250 AIT systems by end 2012. TSA driving for automated threat recognition	Definition of legislation for Oct/Nov 2011 policy
Liquids detection	TSA technology roadmap	Removal of restriction on liquids in hand baggage planned April 2013
Other initiatives	Maritime - screening for rad/nuc/explosives,	Security industry strategy under development
	2012 deadline deferred	Cargo screening (cross border) under review

Strong government relations activity to influence policy decisions

# **Investing in new products** Mal Maginnis



# Leveraging scale across a broad range of technologies

GBRNE	Chemical		Biological	Rad/Nuc	Explosives	
Markets						
Transportation						
Ports & Borders						
Critical Infra.						
Military						
Emergency Response						

- \* Technology regulation by governments
- \* Continuous R&D investment required, delivering high level IP

#### \* Certification/QA - long process

\* High service levels

### Investing for the future to enhance capability

### Company-funded R&D investment 2010 - £36m

- Company funded investment is 6.2% of sales
- Customer funding of £8m makes total expenditure £44m (7.6% of sales)
- Continued investment in performance
  improvement and product cost reduction
- Programs mostly address specific issues, often government initiated







# Technology to Products – our core competency







- Continuous development of core technologies
- Working with customers, technology companies, national laboratories, university research groups
- Our product engineering strengths:
  - Ruggedization & reliability
  - Lowering false alarm rates
  - Simplification of operation in sophisticated instruments
  - Maximizing sensitivity
  - Lifecycle cost-effectiveness

Working with partners:

- Analogic CT technology for checked baggage screening
- Symetrica Radiological technology for RadSeeker
- Varian X-ray accelerators

### smiths detection

#### Smiths Detection Investor Day, New York – June 2011 | 19

# Bringing new products to market – X-ray screening systems

**aTiX** – first system for automatic explosives detection in hand baggage

- US deployment under TSA 'Advanced Technology' program
- Approved to EU Standard 2 Type C (liquids detection)
- Multi-view scanning for increased accuracy
- Platform based solution with software upgrades cost effective for customers

### CT Technology for checked baggage

- Current development project for next generation highspeed explosives detection system
- Partnering with Analogic since December 2009
- To meet US certification requirement
- Combines multi-energy X-ray technology with 3D computed tomography
- Excellent program progress achieving all milestones





## Bringing new products to market - RadSeeker

#### R&D investment leading to a major opportunity

- Highly sensitive. Handheld Radiation Detector
- · Increases accuracy in finding and identifying rad-nuc threats
- Development: 2006-2011 DNDO awarded Smiths Detection \$13.7m funding for nextgeneration radiation detection and identification systems
- Only product of its type currently approved by DNDO
- Partnered with Symetrica (UK) for advanced spectrum processing and identification.
- Markets: Customs inspection, border protection, emergency response, and radiological facilities/ personnel monitoring.
- Market size est. up to £700m in 2012 across our core markets



### Serving the defense market

- Intensive R & D projects leading to major program wins
- LCD successfully developed and selected by several armed forces, including DoD
- Selected for JCAD program, the US Army's standard chemical agent detector
- Orders to date \$350 million
- Major program CBPS (Chemical Biological Protective Shelter) for DoD
- Highly mobile, self contained collective protection system as working area for medical, combat services
- Integrated systems a core growth area
- Program management activity developed to match customers' changing needs





# Managing profitable sales Cherif Rizkalla



### Global sales presence

- Largest market USA, primarily direct to Government sales
- Direct sales in 48 countries; sales reps/agents in 167 countries

#### **Future expansion:**

- Emerging markets taking control of agents as businesses achieves significant scale. Allows us to anticipate and influence large opportunities
- FY 2011 Assumed ownership of Indian and Brazilian distributors

#### India

- Significant opportunities long-term.
- Recent major contracts: Delhi Airport, Commonwealth Games

#### **Brazil**

- Building on strong installed base 1300 systems
- Future opportunities eg: FIFA World Cup 2014; Olympics 2016.



### **Customer intimacy**

- Considerable focus on working with the customer, fully understanding the requirement to propose the most effective solution
- Need to show we offer full value where price is not the determining factor our technical superiority becomes the primary selection criterion.

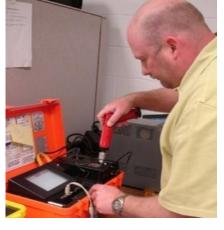
- In Ports & Borders, early influencing of the technical specification and customer buyin to our value proposition have an impact.
- Military market selling process combines with government relations influencing to demonstrate technology advantages and secure funding

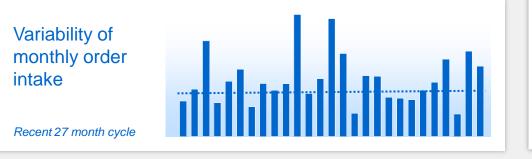


# Managing the order book

- 60% of revenue is derived from large contracts with long timescales, subject to contractual variables
- Mitigation through:
- Product launches to core markets
- Emphasis on smaller customer contracts, especially in Critical Infrastructure market
- Expansion into emerging markets
- Increasing Service activity already 17% of sales revenue steady revenue generation and more predictable







# **Driving efficiencies and improving returns** John Burton

### Initiatives to enhance margins and working capital

Manufacturing & Supply Chain Rationalization

Lean Enterprise

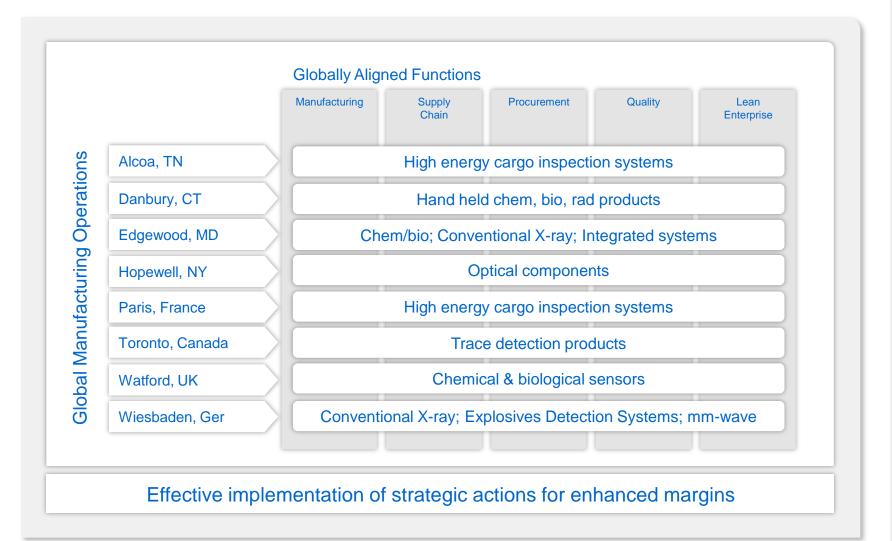
**Global inventory** 

Global ERP system: Data driven performance improvement

Formalized continuous improvement framework



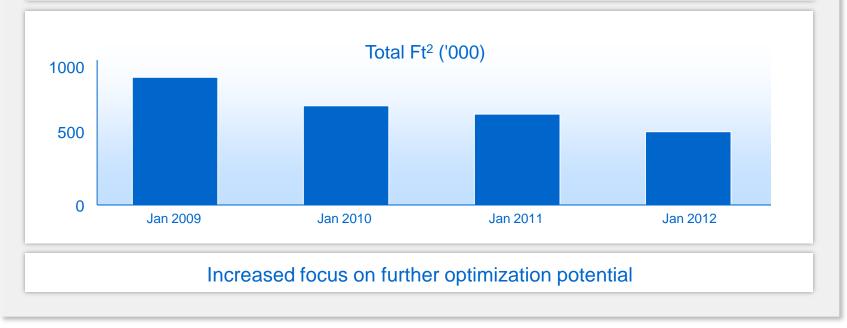
# **Global Approach to Operations**



## **Operations - Initiatives to enhance margins**

#### Manufacturing & Supply Chain Rationalization Strategy

- · Fewer facilities more world class facilities
- Projected 40% reduction in manufacturing operations footprint
- Five year plan from 2012 to achieve structural cost savings
- Leverage world class supply chain capabilities

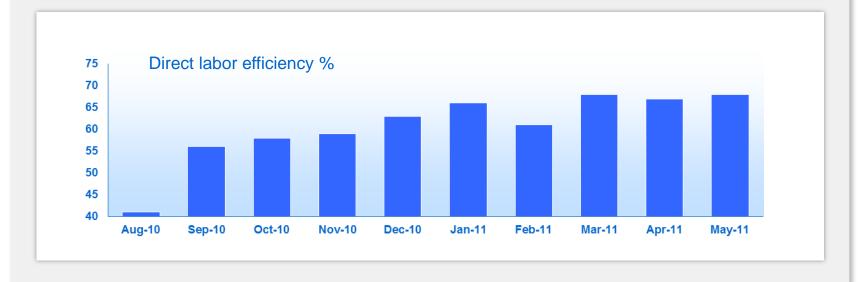


## **Operations - Initiatives to enhance margins**

#### Lean Enterprise through:

- Positive effect of globalization
- Continuous Improvement from lean thinking
- Elimination of waste
- Standardization
- Bringing products to market faster

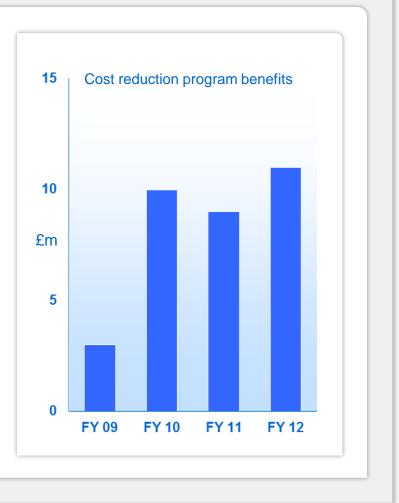
- People Involvement
- More team work
- Training, development & communications
- Quality
- Raising first-time acceptance rates



## Sustainable Structural Improvement

#### **Key Focus Areas**

- Procurement
- Group Leveraging
- Low Cost Country Sourcing
- Commodity management
- Raw Materials
- Shorter lead times for deliveries
- Kanban
- Value Engineering
- Reviewing processes
- Challenging established practices
- Service Inventory
- Network optimization
- · Logistics outsourced to world-class vendor
- Supply Chain
- Sales & Operations Planning



# **Summary** Philip Bowman

### Increasing our market share - actions

Disciplined market approach; increased government relations activity

New product pipeline; speed and flexibility in product development

Better understanding customer requirements & goals

Improving operational effectiveness to deliver enhanced margins

### Summary – An attractive investment case

Market leader in a growth sector with high barriers to entry

Business underpinned by leading edge technology

Positive outlook, driven by events, changing risks and new technologies

Resilience through diversity of markets, customers and global spread

Strong focus on cost reductions and margin improvement

Smiths Detection growth range.\* Sales: 10-12%\*\* Margins: 17-20%

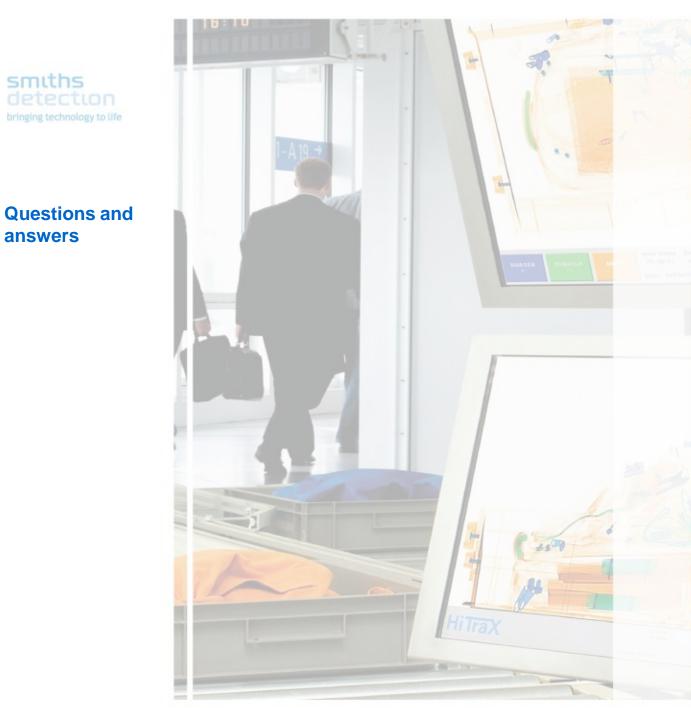
\*Range of underlying growth over 3 year period

\*\*Organic growth at constant currency

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answers



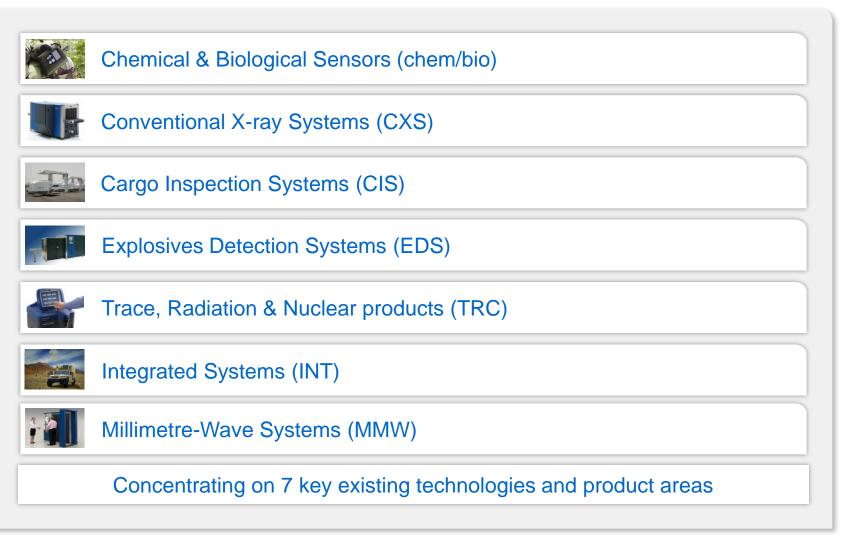
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# Appendices

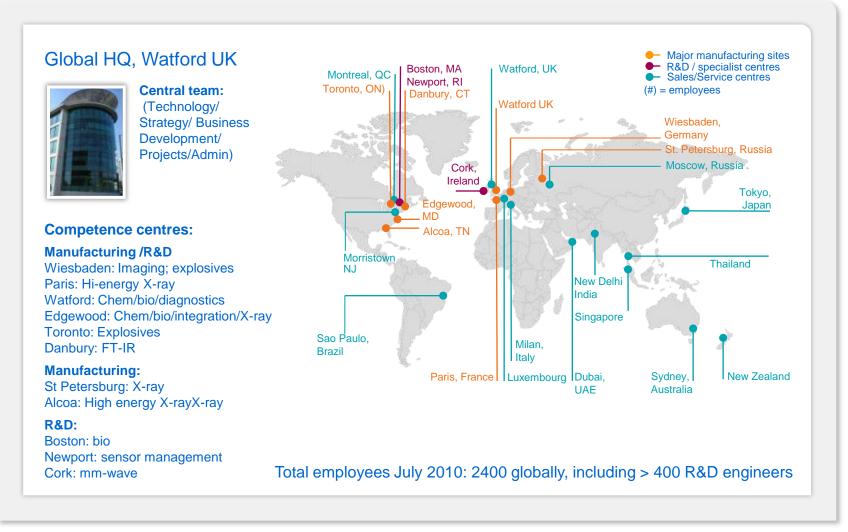
## Core technology streams







# Smiths Detection has true global presence



### Glossary

APAC – Asia Pacific region

AIT – Advanced imaging technologies

ATR – Automated threat recognition

**AT** – Advanced Technology, the TSA's program for advanced X-ray technologies for improved detection of potential threat items.

**BAA** – Formerly British Airports Authority

**BMG** – Business Management Group. Smiths Detection's team responsible for Technology, Products & Programs.

**aTiX** - Advanced Threat Identification X-ray. Automatic explosives detection system for security checkpoints.

**CBRNE:** Chemical, biological, radiological, nuclear, explosives

**CT** - Computed Tomography. Digital processing to generate a 3D image from a series of two-dimensional X-ray images

**CBP** - Customs & Border Protection (US)

**CBPS** – Chemical Biological Protective Shelter (US)

**DHS** – Department for Homeland Security (US)

**DNDO** - Domestic Nuclear Detection Office (US)

**DoD** – Department of Defence (US)

**EDS** - Explosives Detection Systems

**EMEA** - Europe, Middle East, Africa

**ER** – Emergency Responders

**ERP** - Enterprise resource planning (company information systems)

EU – European Union (comprising 27 member states)

**FT-IR** - Fourier-Transform Infrared spectroscopy. Analytical technique to identify unknown chemicals.

**IED** – Improvised Explosives Device

**IMS** - Ion Mobility Spectrometry. instrumental analytical method based on ionization to analyse chemical particles and vapours.

IP – Intellectual Property also Internet Protocol

**HCV** - Heimann Cargo Vision, brand name for high energy x-ray screening systems

**JCAD** - Joint Chemical Agent Detector program (US)

**JPEO** – Joint Program Executive Office for Chemical Biological Defense. Part of the US DoD.

**Kanban** - a scheduling system that tells you what to produce, when to produce it, and how much to produce

**mm-wave** – Millimetre-wave a spectral signal that passes transparently through lightweight materials

MoD – Ministry of Defence (UK)

P & B - Ports & Borders market sector

**QA** – Quality assurance

**RPKs** – Revenue passenger kilometres

RoW - Rest of World

**TEU** – "Twenty-foot equivalent unit." One TEU represents the cargo capacity of a standard container 20' long, = 12 tons

**TSA** - Transport Security Administration (US)

**USDA** – United States Department of Agriculture