

smiths detection

Smiths Security Technologies

Orchestration

An intelligently integrated ecosystem of detection technologies, digital intelligence and flow function as one cohesive, high-performance operation

“Enabler for India Logistics Growth ”



About Smiths Detection



- 40 Years – Global Leader in Threat Detection and Screening Technologies
- 8 R&D Centres
- 21 Global Offices
- 5 Manufacturing Sites
- 3000 + Employees
- Worldwide Presence

smiths detection

India Footprint

SERVING THE INDIA MARKET FOR MORE THAN 25 YEARS

We have been providing security screening solutions to the Indian market for **more than 25 years** and have the largest service network across India



- Smiths Detection Head Office
- 400+ employees in India
- 50+ service sites throughout the country with spares coverage

Delhi



Bangalore

- Digital & Product Test Lab
- Assembly & Testing facility in Bangalore
- Global IT Services



India Cargo Industry Need – Speed, Accuracy, Reliability

Screening & Security Effectiveness

Accuracy of threat detection; Configurable for new threats and operational demands – flexible and quick

Strict regulations across the globe

Compliance with Global Evolving Regulatory Framework

Operational Efficiency

Reducing screening time & dwell time, increasing throughput & operator productivity, improve predictability
- Cost reduction & operational convergence

Skill Development

Upskilling of cargo screeners and operators



Emerging Technologies for Cargo Screening & Security (CT)

Typically, there are two ways for Cargo Screening:

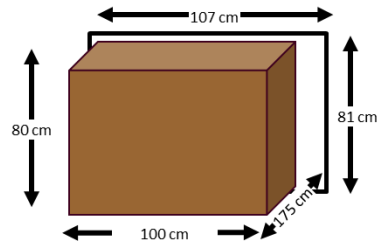
- Conventional standalone X-ray Scanners - 100% manual image analysis
- In-line automatic explosives detection (**EDS**) systems with **Computed Tomography (CT)** technology - Analysts at the recheck stage
- Operationally, **High Speed (0.5m/s)** in-line **Computed Tomography (CT)** - Best Outcome, Higher Throughput, Greater Operational Efficiency vs. standalone X-Ray systems
- Integration into the materials handling system & automated detection – Seamless flow with little or no manual intervention
- Combination of **Traditional X-ray and CT technology** - Large Tunnel Size, Meeting Latest Regulatory Framework
- **AI** enabled automatic detection – Greater Operational Efficiency

Computed Tomography (CT) EDS

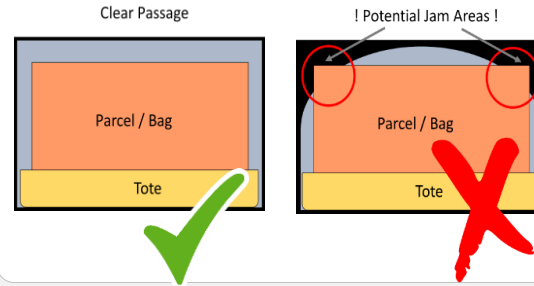


Emerging Technologies for Cargo Screening & Security (CT)

Maximize in-gauge screening Large rectangular tunnel



Support in-tote screening

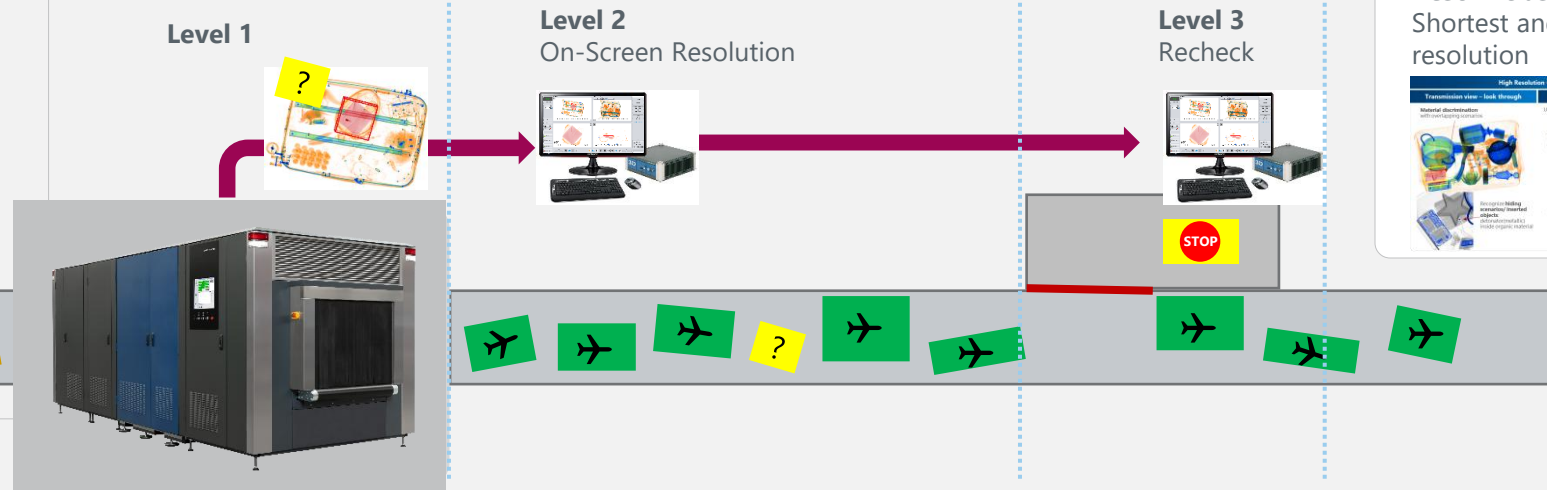
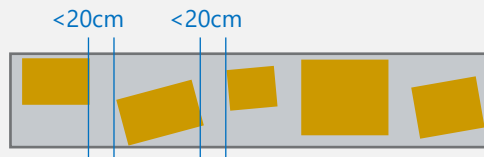


Minimize interference of curtains: Empty suitcase screening & packages <1kg



Maximize throughput

- > Uninterrupted operation (NO stop for calibration)
- > Minimized object spacing
- > Cut-less image processing



Best in class image quality Shortest and most reliable on-screen resolution



A family of automatic target recognition applications

iCMORE provides accurate detection capability to selected Smiths Detection X-ray and CT screening solutions, helping to reduce the burden on image analysts and improve screening outcomes

Available for a wide range of Smiths Detection X-rays and CT



Prohibited
Items/APIDS



Currency



Weapons



Dangerous
Goods



Lithium
Battery



Narcotics



Cigarettes



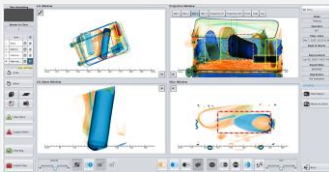
- Improves Operational Efficiency
- Less human, more AI
- Increased security & safety

Emerging Technologies for Cargo Screening & Security (iCMORE)

iCMORE - Automated Threat Detection

iCMORE Dangerous Goods (Cargo)

- Flammable liquids
- Flammable solids
- Liquefied gases
- Compressed gases
- Lithium Batteries



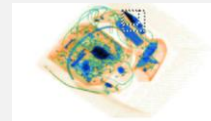
iCMORE Lithium Battery (Cargo)

- Lithium Batteries
- Examples of batteries:



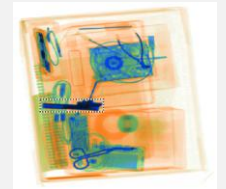
iCMORE Weapons (Cargo)

- Firearms and Guns (incl. Gun Parts)
- Knives
- Ammunition
- Grenades



iCMORE Lithium Battery + Weapons (Cargo)

- Lithium Batteries
- Firearms and Guns (incl. Gun Parts)
- Knives
- Ammunition
- Grenades

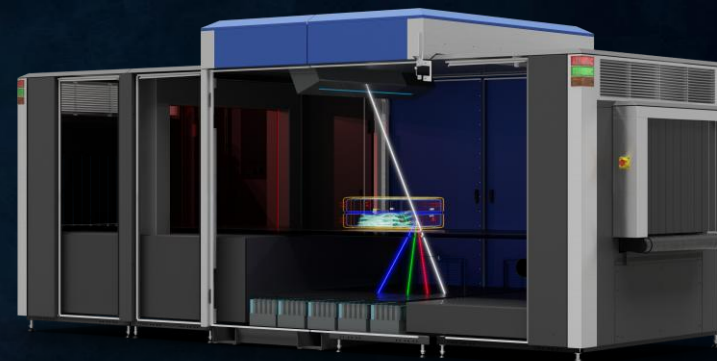




A NEW ERA IN SECURITY SCREENING

X-ray Diffraction – A major breakthrough in material discrimination

- Incremental detection accuracy
- Unmatched material specificity in continuous operations
- Future proof security effectiveness
- Operational savings through automatic resolution of EDS-Alarms



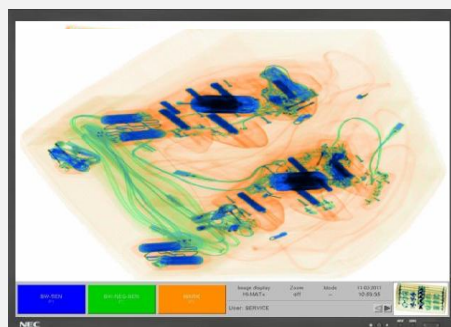
SDX 10060 XDi

The SDX10060XDi uses X-ray Diffraction to analyse materials at a molecular level, identifying each substance by its unique “diffraction fingerprint.” This allows operators to differentiate between items that appear identical under CT, for instance distinguishing plastic explosives from food or powders.

When used alongside CT systems, Diffraction becomes a powerful alarm-resolution tool, automatically confirming benign items and minimising manual rechecks. It is particularly suited for high-risk baggage and air-cargo applications, where accuracy and efficiency are equally vital.

Emerging Technologies for Cargo Screening & Security (Diffraction)

Conventional X-ray Systems (CXS)



- 2D image
- Image analysis, AI



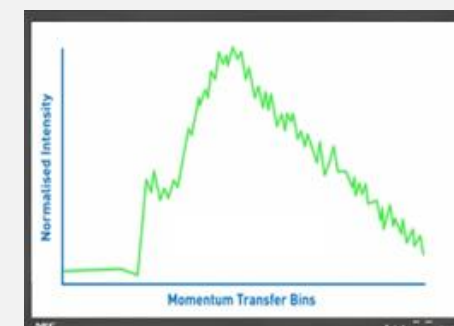
Explosive Detection systems (EDS)



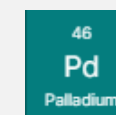
- Computer Tomograph (CT)
- Automated Detection (Density, Atomic weight)

Sc	Ti	V	Cr	Mn	Fe	Co
Ni	Cu	Zn	Ga	Ge	As	Se
Br	Kr	Rb	Sr	Y	Zr	Nb
Mo	Tc	Ru	Rh	Pd	Ag	Cd
In	Sn	Pb	Bi	Po	At	
Fr	Ra	Ac	Th	Pa	U	Np
Pu	Am	Cm	Bk	Cf	Es	Fm
Md	No	Lr				

X-ray Diffraction (XRD)



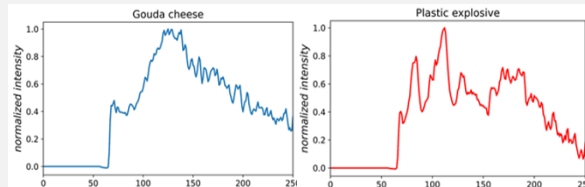
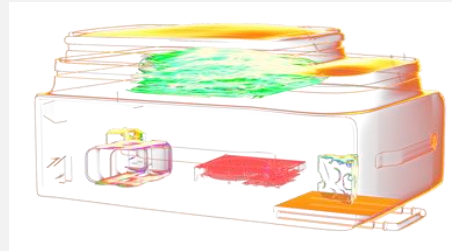
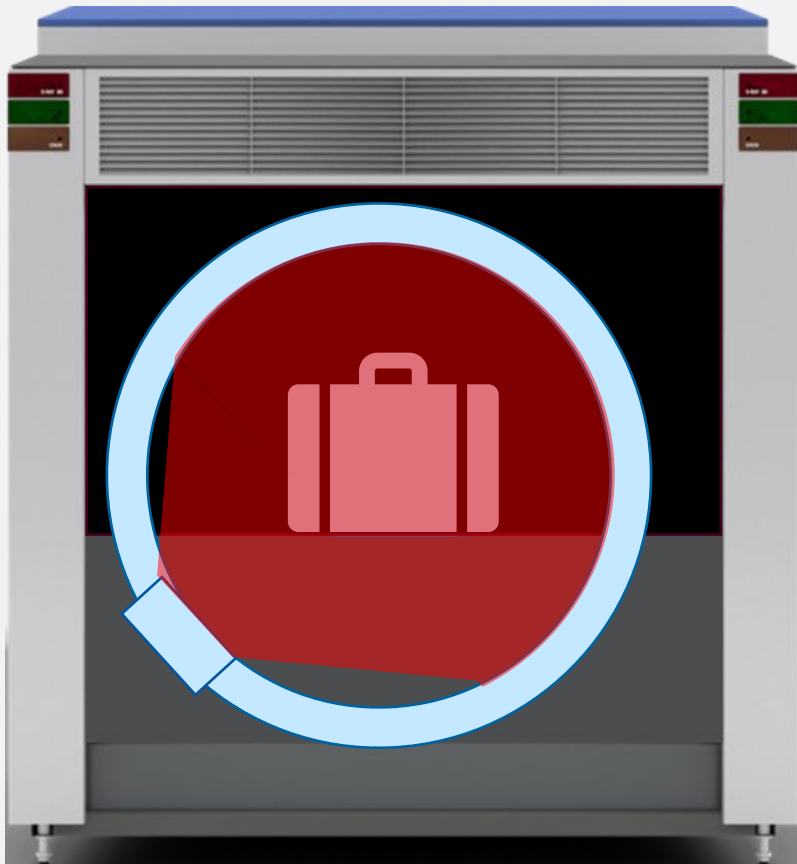
- Spectrum analysis
- Automated Detection (Molecular structure)



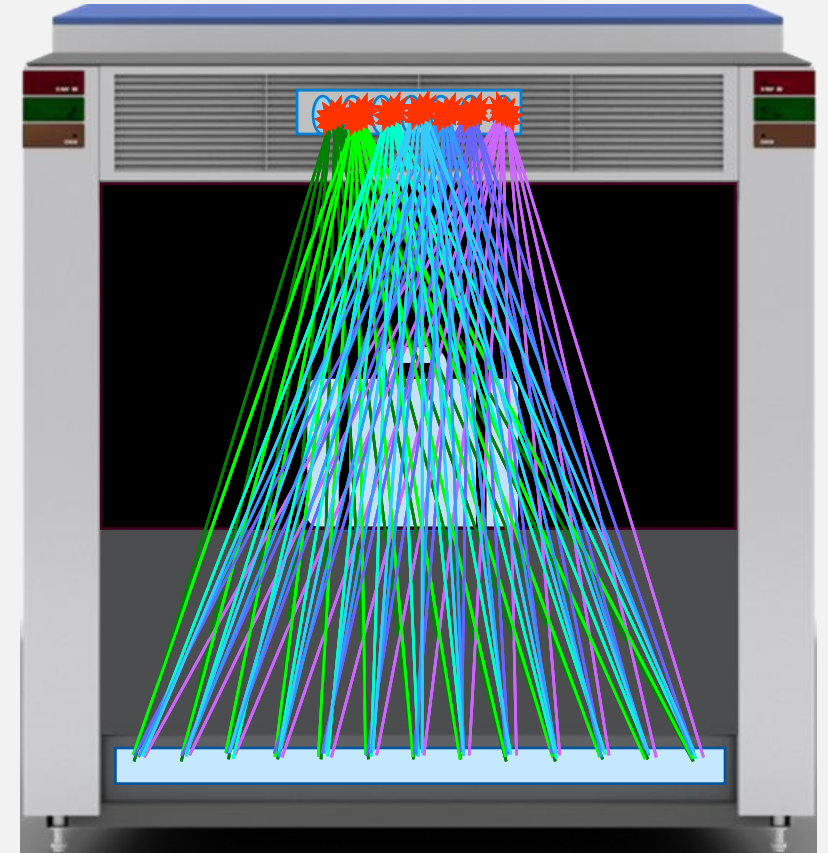
Emerging Technologies for Cargo Screening & Security (Diffraction)

EDS by Computer Tomography (CT) and Diffraction (XDi)

CT → 3D X-ray image

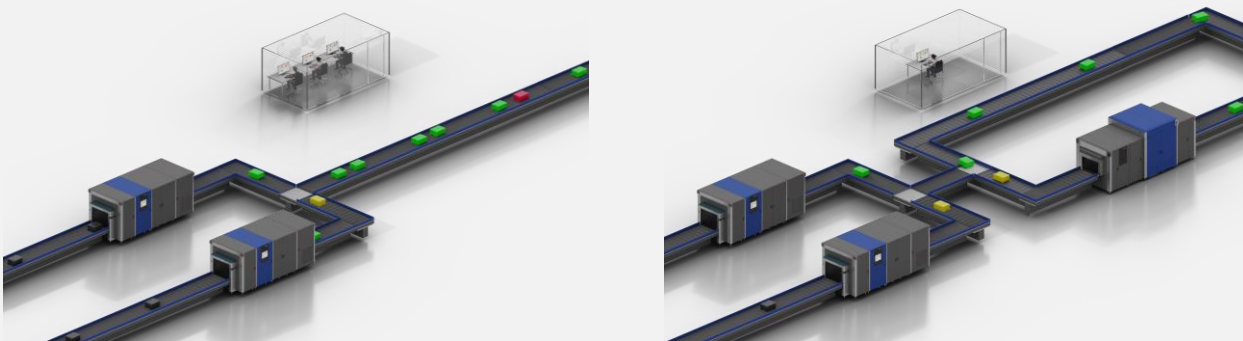


XDi → Molecular analysis



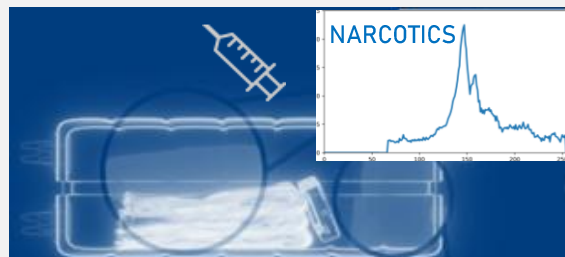
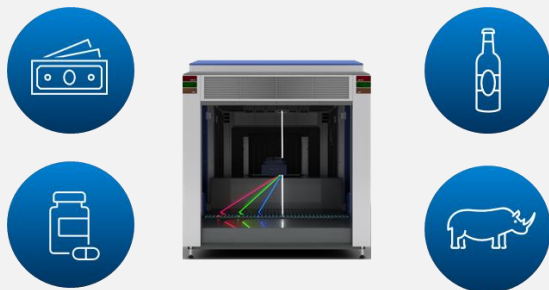
Emerging Technologies for Cargo Screening & Security (Diffraction)

Alarm resolution



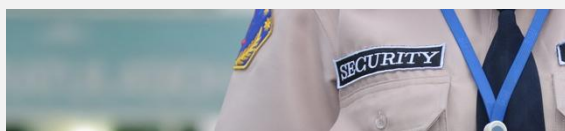
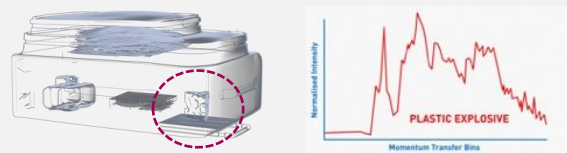
- Applicable for multilevel installations in hold-baggage and air cargo screening

Contraband Detection



- Trafficking of drugs and contrabands has a significant impact on the society, also economically.
- SDX 10060 XDi provides non-intrusive, efficient and specific contraband detection

High Security

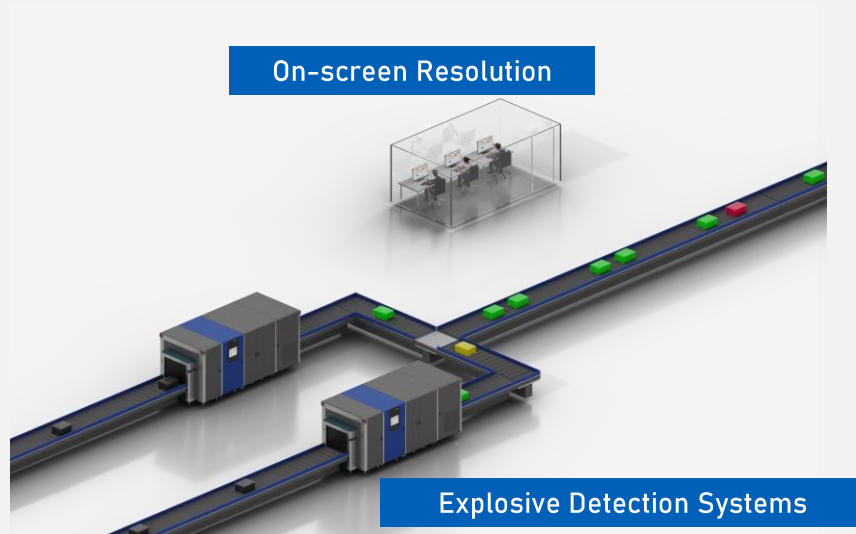


- Inherent benefit → additional layer of security
- Reducing the human factor

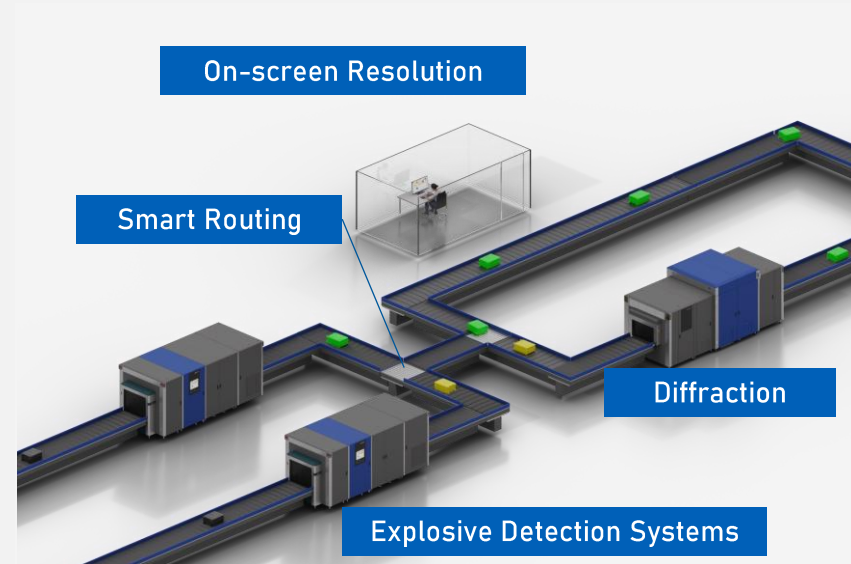
Emerging Technologies for Cargo Screening & Security (Diffraction Use Cases)

AUTOMATIC ALARM RESOLUTION TO BOOST EFFICIENCY

CONVENTIONAL EDS SET-UP



AUTOMATED ALARM RESOLUTION



- Increase efficiency through automation
- Save operating costs
- Optimise staff resources
- Mitigate staff shortages



Cargo / Vehicle Screening Systems



smiths detection

Emerging Technologies for Cargo Screening & Security (Cargo Inspection)



HCVTM HCV
Mobile X series
Truck and Trailer



HCVTM
HCV Train



HCVTM
HCV Portal

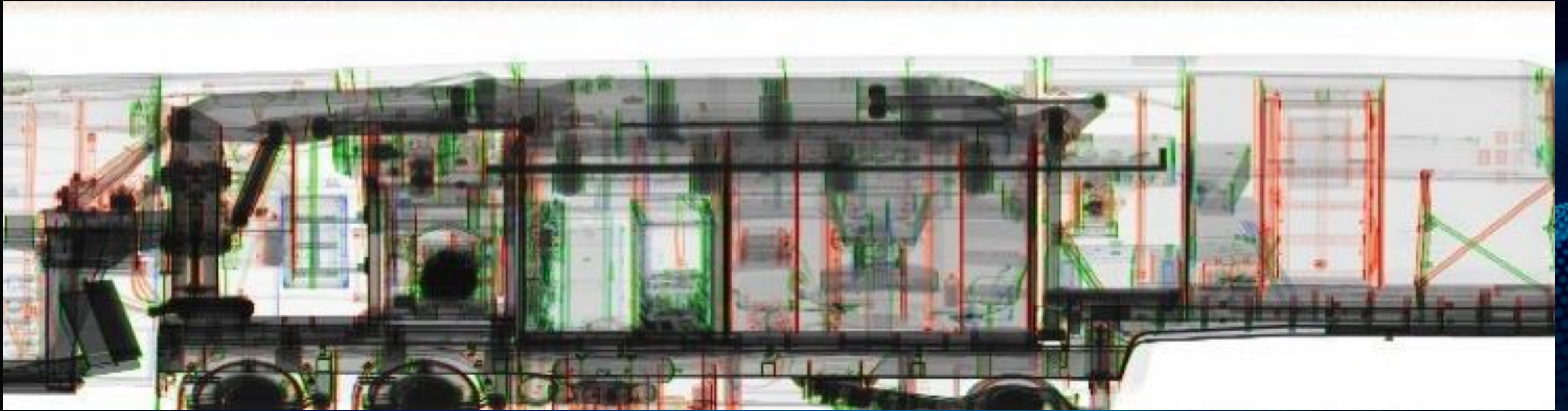
HCVTM
HCV Stationary



Train Scanner and Stationary systems are Bespoke Designs

Augmented X-Ray (AXR)

In depth information display



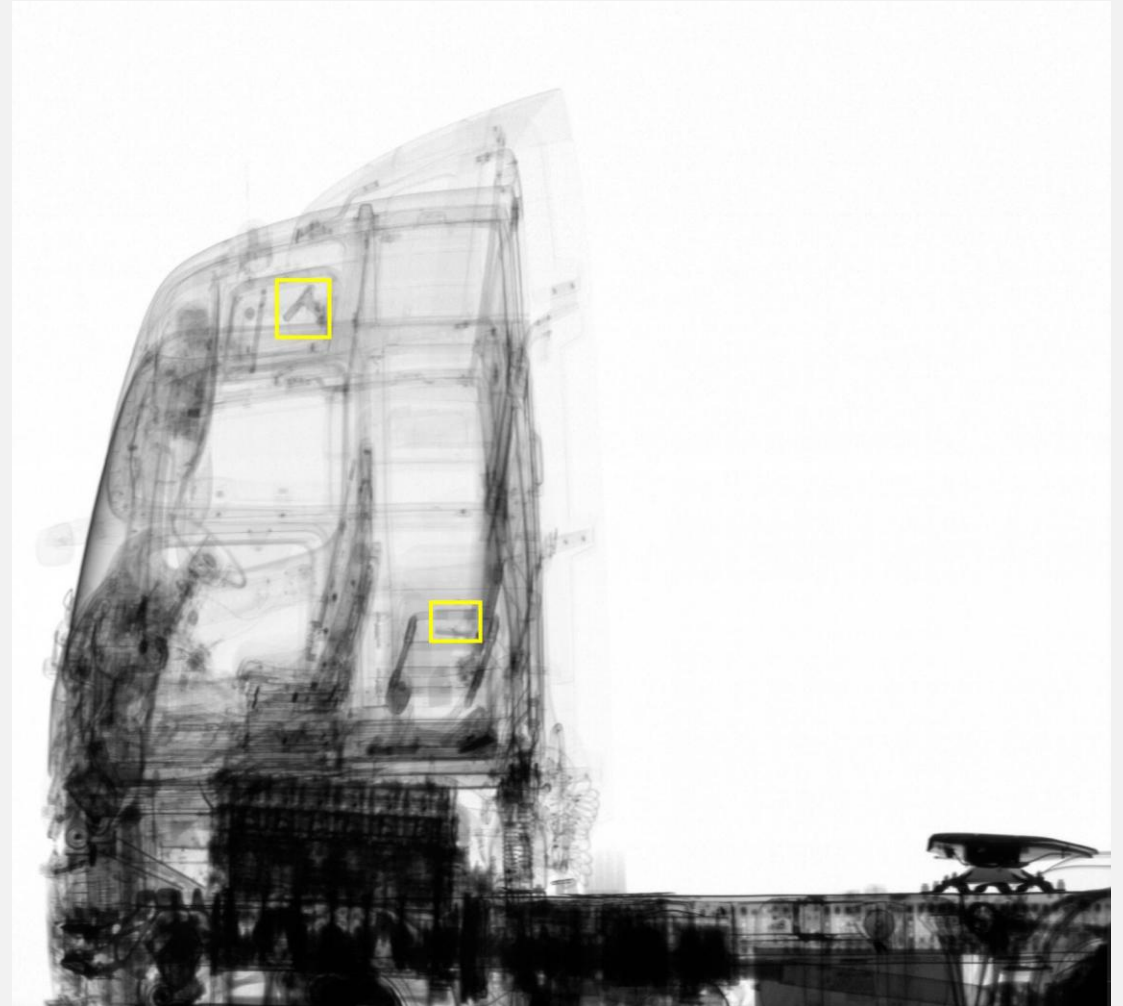
Sample Image of Depth information

Emerging Technologies for Cargo Screening & Security (Cargo Inspection)

Auto-Detection

iCMORE - Weapons

- Automatic Detection of Weapons of
- different types
- 2 guns detected automatically
 - Inside the upper glove box
 - Under the lower bunk mattress





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Thank You

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