smiths detection

INTEGRATED CHECKPOINT SOLUTIONS

FLEXIBLE, FUTURE-PROOF CHECKPOINTS FOR SMART, DIGITALLY ENABLED AIRPORTS

Using integrated checkpoint security solutions, we can create or modify checkpoint processes and customer experiences to meet (and exceed) evolving security, business and market requirements. New and emerging technologies, hardware and digital developments deliver the highest security standards combined with exceptional performance – driving productivity up and costs down.

ONE SOURCE – ONE SOLUTION

Smiths Detection provides the complete package of equipment, technologies, software and support. From planning and design to commissioning and the integration and service of products throughout their lifespan. Our solutions are flexible, future-proof and ready to embrace the diverse, connected technology infrastructure enabled by Open Architecture (OA).

EVERY CHECKPOINT IS UNIQUE

Our strategy for development and design focuses on the checkpoint as a whole and how it affects the broader operation. To manage the flow and screening of passengers properly, we consider not only how the system can function smoothly and efficiently, but also how it merges into the full kerb to gate experience.

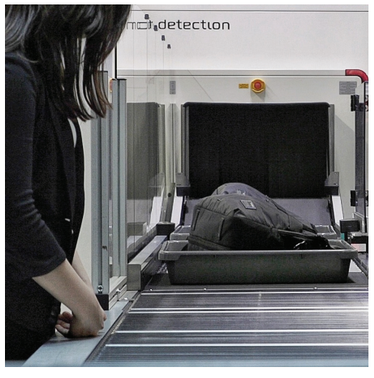
Because every checkpoint is unique, we use modelling and simulation to customise each configuration; and base it on open technical standards to allow incorporation of the best available technologies. The result is a solution designed to meet individual business and regulatory requirements, delivering a cost-effective process, increased passenger satisfaction and sustainable commercial growth.

COMMITTED TO ADVANCING OA

Actively engaged in several industry OA working groups, Smiths Detection is also pursuing its own associated innovations and Proof of Concept projects. Through our Ada Initiative, we are working with both start-up and established third parties to ensure technology seamlessly, bidirectionally and safely integrates with our own software and equipment. This underlines our firm commitment to advancing OA in a responsible manner.

OA offers choice by allowing hardware, software and algorithms from different suppliers to be plugged together to create a more relevant, precise data ecosystem. The diverse technology can be managed centrally, generating both operational efficiencies and higher levels of safety.

We do, of course, already integrate with third party Automatic Tray Return Systems (ATRS) and body scanner equipment; as well as offering a universal interface.



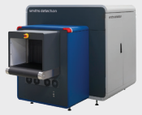
All our checkpoint solutions are upgradeable to accommodate evolving threats and operational requirements. Through sustained investment in research and development, we continually innovate to introduce new technology and further improve performance.

INTEGRATED CHECKPOINT SOLUTIONS

Smiths Detection offers everything from standard, off-the-shelf products to complete, individually-tailored solutions. We have the proven expertise, experience and backup you need – all from one source. Put your trust in us for high quality equipment, reliability and a global service footprint.

ADVANCED X-RAY SCREENING

> MORE ON PAGE 6



HI-SCAN 6040 CTiX

Next-generation Computed Tomography (CT) checkpoint scanner.

HI-SCAN 7555aTiX

Advanced multi-view X-ray system for oversized cabin baggage.

HI-SCAN 6040aTiX

Advanced multi-view X-ray system for cabin baggage.

HI-SCAN 7555 DV

Advanced dual-view X-ray inspection for oversized cabin baggage.

HI-SCAN 6040 DV

Advanced dual-view X-ray inspection for cabin baggage.

ADVANCED DETECTION

> MORE ON PAGE 8

iCMORE APIDS

Automatic detection of prohibited items at airport security checkpoints.

iCMORE

CONNECTIVITY & INTEGRATION

> MORE ON PAGE 8

Creates an intelligent, integrated network connecting various components and aggregating data from across the entire screening area, allowing for remote screening, analysis and reporting.

DATA & ANALYTICS

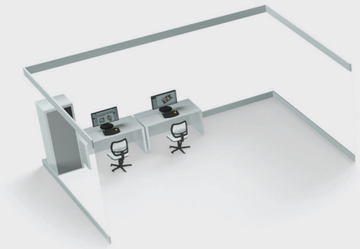
> MORE ON PAGE 8

Dashboard supervision for sharing information and remotely monitoring the aggregated operational data from components across the entire screening area.

OPERATIONAL MANAGEMENT

> MORE ON PAGE 8

Dashboard supervision for sharing information and remotely monitoring the asset health for a more complete view of the equipment's health.



EXPLOSIVE TRACE DETECTION (ETD)

IONSCAN 600

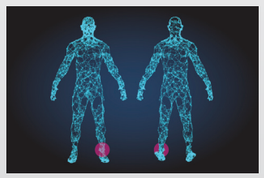
Portable explosives and narcotics trace detector.

> MORE ON PAGE 13

PEOPLE SCREENING

Non-invasive people screening with automatic multi-material detection of concealed objects.

> MORE ON PAGE 12

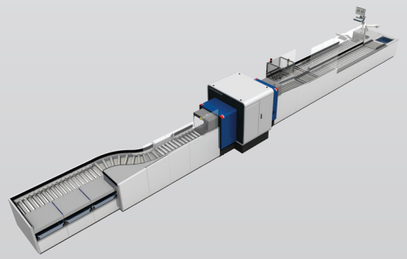


LANE DESIGN

iLane A20

Next generation fully Automated Tray Return System.

> MORE ON PAGE 14



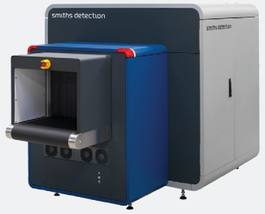
X-RAY SCREENING

Scanners are at the heart of every checkpoint solution and choosing the most appropriate equipment is crucial. For a clear evaluation of the benefits offered by equipment operating at the various certification levels, it is important to consider a range of different factors such as: how each airport can comply with regulations; current and predicted passenger traffic; operational efficiency; and passenger experience.

Smiths Detection has an extensive portfolio of checkpoint screening systems designed to meet the requirements of everything from small airports to international, multi-airport groups. Offering a choice of ECAC EDS CB C1, C2 or C3 and TSA approved equipment, it includes single, dual and multi-view X-ray systems and the latest CT technology.

With 70+ years' experience and over 75,000 X-ray systems deployed in around 180 countries, we are well placed to help you identify the best possible option/s for your operation.

HI-SCAN 6040 CTiX



NEXT-GENERATION CHECKPOINT SCANNER FEATURING COMPUTED TOMOGRAPHY (CT)

- ECAC EDS CB C2/C3 & TSA APSS 6.2 Level 1 Certified
- Screen liquids and large electronics in bags
- Computed Tomography
- 620 x 420 mm
- 0.2 m/s

HI-SCAN 7555aTiX

MULTI-VIEW X-RAY SYSTEM FOR OVERSIZED CABIN BAGGAGE

- ECAC EDS CB C1/C2 & qualified for TSA-AT2
- Screen large electronics in bags
- Multi-View
- 755 x 555 mm
- 0.2 m/s

HI-SCAN 6040aTiX

ADVANCED MULTI-VIEW X-RAY SYSTEM FOR CABIN BAGGAGE

- ECAC EDS CB C1/C2 & qualified for TSA AT-2
- Screen large electronics in bags
- Multi-View
- 620 x 418 mm
- 0.2 m/s

HI-SCAN 7555 DV

DUAL-VIEW X-RAY INSPECTION FOR CABIN BAGGAGE

- ECAC EDS CB C1
- No random checks - remove liquids and electronics
- Dual-View
- 755 x 555 mm
- 0.2 m/s

HI-SCAN 6040 DV

DUAL-VIEW X-RAY INSPECTION FOR CABIN BAGGAGE

- ECAC EDS CB C1
- No random checks - remove liquids and electronics
- Dual-View
- 620 x 420 mm
- 0.2 m/s

Icon Key

- COMPLIANCE
- CONOPs (concept of operation)
- X-RAY TECHNOLOGY
- MAX TUNNEL SIZE
- BELT SPEED

DIGITALLY ENABLED CHECKPOINTS

By leveraging data, artificial intelligence, biometrics, automation and connectivity, digital technologies are set to take checkpoint efficiency, passenger experience and security to completely new levels. Developed with decades of experience and the needs of customers in mind, our digital technologies deliver enhanced capability and intelligence to your security operations, helping to improve safety outcomes, operational efficiency, and asset performance, while reducing OPEX and the overall cost of ownership.

TAILORED SOLUTIONS

Work with us to design your ideal digital checkpoint, by bundling together applications to meet your needs with ELECTORA, our digital security management platform. It integrates multi-vendor devices, datasets and applications on one, scalable and cybersecure platform.

DATA & ANALYTICS

Gain a full range of invaluable operational insights by collecting and analysing data from across your checkpoint. Our data insight applications support faster, more informed decisions on performance, resource optimisation and general administration.

CONNECTIVITY & INTEGRATION

Improve operator productivity and increase throughput with connectivity and integration applications such as centralised image evaluation - which facilitates more effective use of resources and reduces costs. With this process, images are collected from all security lanes and delivered to analysts in a central location away from the checkpoint. Suspicious areas are marked and classified on the images, creating a focus for secondary inspections. Additionally, multiplexing of screening images improves operational efficiency through operator load balancing.

ADVANCED DETECTION

Enhance your X-ray equipment with our advanced detection algorithms and AI applications – including automatic threat recognition – which enable faster and more accurate decision-making and reduce operational overheads.

OPERATIONAL MANAGEMENT

Achieve an extensive view of system health to help increase uptime, reduce unplanned interruptions, and reach optimum performance. Our operational management applications also feature vital system management functions to support IT security, privacy, and other regulatory compliances.

BIOMETRIC TRANSFORMATION

Matching passenger images and travel information to their trays is a key enabler for risk-based screening. This data can transform the checkpoint process by allowing different levels of security and processing to be applied to individual passengers and their belongings based on criteria such as flights and destinations. Screening results can be shared between departure and transit or arrival airports.

> Our solutions are constantly evolving to keep pace with demands today and into the future. We are dedicated to delivering the very latest and best in security screening innovations.

ADVANCED DETECTION

iCMORE is a collection of smart and adaptable algorithms for the automatic detection of dangerous, prohibited and contraband goods and substances. iCMORE delivers accurate, reliable and powerful detection to our X-ray and CT screening solutions, helping to reduce the burden on image analysts and improve screening outcomes.

ICMORE FEATURE HIGHLIGHTS

- Accurate and reliable real-time detection
- Requires minimum training
- Increases operational efficiency and security
- Invaluable support for security operators
- Reduces and improves resource OPEX planning
- Future proofs screening systems
- Allows airports to move towards alarm-only viewing

iCMORE APIDS automatically detects objects on the aviation list of banned items including: firearms, sharps (knives & scissors), axes, grenades, blasting caps, ammunition and blunt objects. These algorithms will play an important role in enabling alarm-only viewing at the checkpoint.

ALARM-ONLY VIEWING AT THE CHECKPOINT

Intelligent object recognition algorithms can support a more automated screening process. When combined with automatic explosives detection, they will be key to the development of alarm-only viewing of X-ray images, a concept which has already been well proven in hold baggage screening.

The introduction of the new ECAC certification of APIDS (Automated Prohibited Items Detection Systems) algorithms will soon bring alarm-only viewing to the checkpoint. The main benefit is a significant reduction in the number of images manually inspected so, when combined with automated lanes and centralised screening, this will greatly improve resource utilisation.

SETTING THE STANDARDS

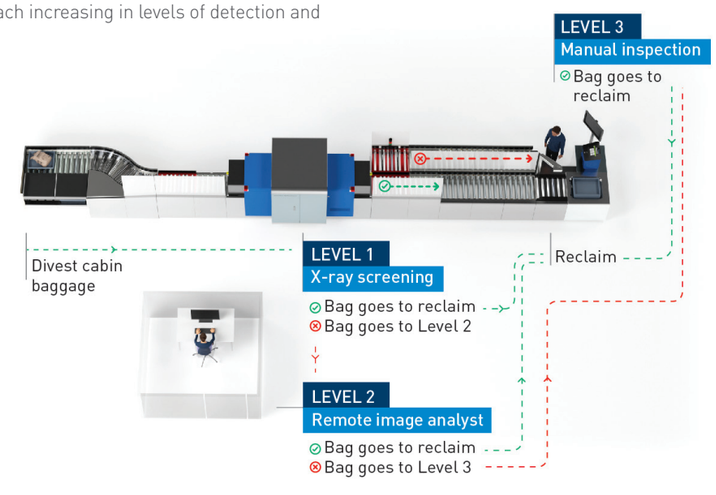
The regulatory framework for alarm-only viewing will include a combination of APIDS and EDS CB standards to allow for different degrees of automation.

There will be three APIDS standards, each increasing in levels of detection and decreasing in percentage of mandatory random alarms from APIDS Standard 1 to APIDS Standard 3.

DRIVING DEVELOPMENTS

Smiths Detection has extensive experience in developing automatic threat detection technology, based on AI and non-AI algorithms. Deep learning is fundamental to AI and Smiths Detection took this approach in developing iCMORE APIDS - collaborating with customers and security authorities to build a huge library of images from which the algorithms could 'learn'.

iCMORE APIDS will be at the forefront of these advances, helping to increase operational efficiency and throughput whilst also reducing OPEX and facilitating resource planning.



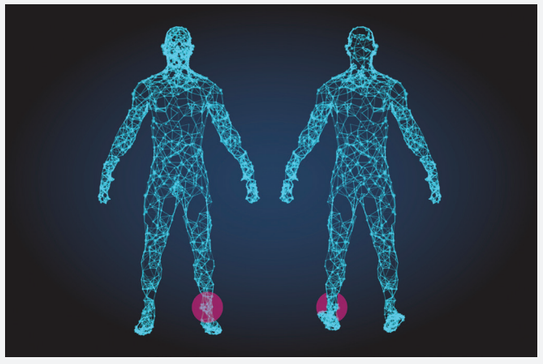
People Screening

State of the art people screening systems offer non-invasive, automatic detection of many different substances. Fast, targeted inspection delivers increased security and throughput - and a better experience for both passengers and operators.

We have extensive experience in deploying technologies which include partner systems and enable customers to achieve layered security and operational efficiencies. Our Open Architecture approach supports easy integration of third-party devices into any current checkpoint configuration as well as into our central screening & management solutions.

PEOPLE SCREENING SYSTEMS

NON-INVASIVE, AUTOMATIC MULTI-MATERIAL DETECTION OF CONCEALED OBJECTS



FEATURE HIGHLIGHTS

- Ensures a less intrusive screening process by reducing the need for manual searches
- Uses a generic mannequin representation of the person for full privacy
- Multi-material detection – including metals, ceramics, plastics, liquids etc.
- Minimal footprint - allows for easy checkpoint integration

Explosive Trace Detection

The constant evolution of threats from explosives requires new and advanced trace detectors for secondary screening at passenger checkpoints. The IONSCAN 600 trace detector is highly sensitive yet lightweight and portable for desktop configuration. It is extremely efficient – in under eight seconds it accurately detects and identifies a wide range of military, commercial and homemade explosives and common illegal/controlled narcotics.

IONSCAN 600

PORTABLE EXPLOSIVES AND NARCOTICS TRACE DETECTOR

FEATURE HIGHLIGHTS

- Detection and identification in less than 8 seconds
- Simultaneously detects and identifies explosives and narcotics
- Non-radioactive IMS source
- Small, lightweight and portable
- Optional integrated printer
- Single use, disposable sampling swabs
- Approved/certified by ECAC and CAAC

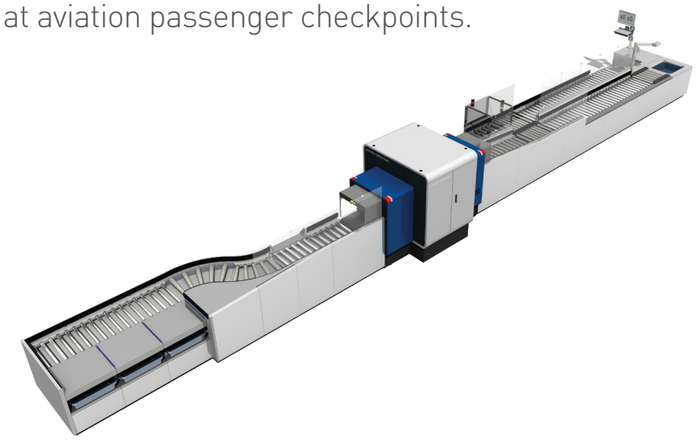
LANE DESIGN

Fully automated tray return systems play a pivotal role at the checkpoint. Delivering a steady flow of trays streamlines the screening process, resulting in faster throughput, lower operational costs and increased operator productivity.

Innovations in lane design and function can help take the overall checkpoint solution to new levels by removing bottlenecks and simply keeping things moving. Featuring the latest developments, the iLane from Smiths Detection ensures effective throughput and supports seamless, passenger friendly screening.

iLane A20

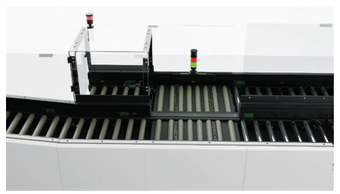
The fully Automated Tray Return System iLane A20 was designed to increase throughput, reduce queues and improve operational efficiency at aviation passenger checkpoints.



FEATURE HIGHLIGHTS

- Modular, flexible and customisable design
- Increased throughput & operational efficiency
- Plug & Play installation
- Integration with Checkpoint Management System
- Advanced system performance and health monitoring
- Various divest modules
- Automatic recirculation of empty trays
- Optional German Design Award-winning Marcus Pedersen design cladding
- Optional UVC kits for automatic tray disinfection

Last Minute Insertion



Diverter and High Threat Module

Empty Tray Verification and Reclaim Unit

Operator Tray Infeed

TRAINING, SERVICE & CYBERSECURITY

Solutions can only perform at their best when operated by a well-trained team and regularly serviced. Smiths Detection offers a comprehensive range of standard and bespoke training courses and service programmes designed in collaboration with customers to ensure a perfect fit. Our services also include delivering and maintaining maximum levels of cybersecurity, to ensure the availability and confidentiality of data and information generated by our equipment.

PROACTIVE, RESPONSIVE TRUSTED SERVICE AND SUPPORT

Across the globe, Smiths Detection's local teams of on the ground technicians and engineers provide proactive and responsive equipment maintenance to ensure our customers' detection solutions operate in peak condition throughout the lifecycle of their investment with minimum downtime.

We're trusted by customers across to maintain equipment health and have invested in the development of a global, highly proactive service network, which includes 24/7 call centres; predictive software analytics; midlife and cybersecurity upgrades programs delivering the most reliable service programme anywhere in the world to maximise up-time, and help extend the life of your equipment.

With a full range of customer service programs to offer, Smiths Detection can help design customised service package to suit your needs.

SUPERIOR TRAINING

We are trusted the world over to deliver training for various roles and levels of experience, including operational, technical, engineering and security courses. Led by certified in-house trainers, our courses prepare people to anticipate and meet the daily challenges of complex, evolving threats, new technologies and changing operational demands.

Arming staff with additional skills and knowledge of equipment operation, preventative maintenance and minor repairs, can optimise up-time; improve operational efficiency and security; and result in a more seamless checkpoint screening experience.

Our Learning Management System offers over 300 flexible options with easy to manage registration, documentation, certification and recertification processes. Courses are available either online or at one of our 13 training centres around the world.

With increasingly integrated and connected screening systems, it is becoming ever more important to understand the way operators interact with the equipment. At Smiths Detection, we are focused on developing training solutions that meet the specific needs of our customers and understand that when it comes to training one size does not fit all.

MAKING THE CYBER WORLD A SAFER PLACE

The growth in data-driven, networked security screening demands increasingly robust cybersecurity. At Smiths Detection, cybersecurity is embedded in our culture, policies and processes and integral to our product design principles.

Early on in our conversations with customers we seek to understand your operational risks and compliance requirements. We help with the evaluation of potential solutions versus risk and cost and the creation of a secure operating environment.

Our approach adheres to current best practices as laid down by the key cybersecurity legal and regulatory bodies and enables Smiths Detection to help you in finding the appropriate cybersecurity solution for your business.

But cybersecurity is not a one-off consideration, it's an on-going process and we are dedicated to ensuring protection evolves to maintain optimal security during the lifetime of your Smiths Detection equipment.

> You too can benefit from our commitment to customer focus, long-term co-operation and cybersecurity.

PROCESS, PEOPLE & TOOLS

Creating the optimum passenger checkpoint requires specialist input and guidance throughout the complex process of consultation, planning, design and implementation. The Smiths Detection Checkpoint Solutions Team has the experience, knowledge and tools to create and deploy the best solutions to meet your specific operational, business and regulatory demands.

Extensive research into space and location within the airport; passenger culture and behavioural patterns; and your various business objectives provide the information we need to create the right checkpoint.

With 50 years of experience in developing security equipment for airports, we understand the challenges and requirements of the checkpoint and will work with you every step of the way to meet – and exceed – your expectations.

CHECKPOINT SOLUTIONS TEAM

ACCOUNT MANAGER

Your central point of contact at Smiths Detection. There to support you throughout the process and beyond.

PROGRAMS MANAGER

Keeps the project moving to ensure everything stays on schedule. Ensures each stage is executed correctly and at the right time. Co-ordinates between you, Smiths Detection and any third parties.

SOLUTION ARCHITECT

Plays a key role at the planning stage. Consults with you to understand and analyse your requirements and then develops and validates a design using modelling and simulation tools.

FIELD SERVICE ENGINEER

Experienced technicians to install and commission your checkpoint and ensure your solution operates in peak condition throughout the lifecycle of your investment. Smiths Detection engineers have an established track record of excellent service and customer satisfaction.

OUR PROCESS - THE 5 STEPS TO SUCCESS

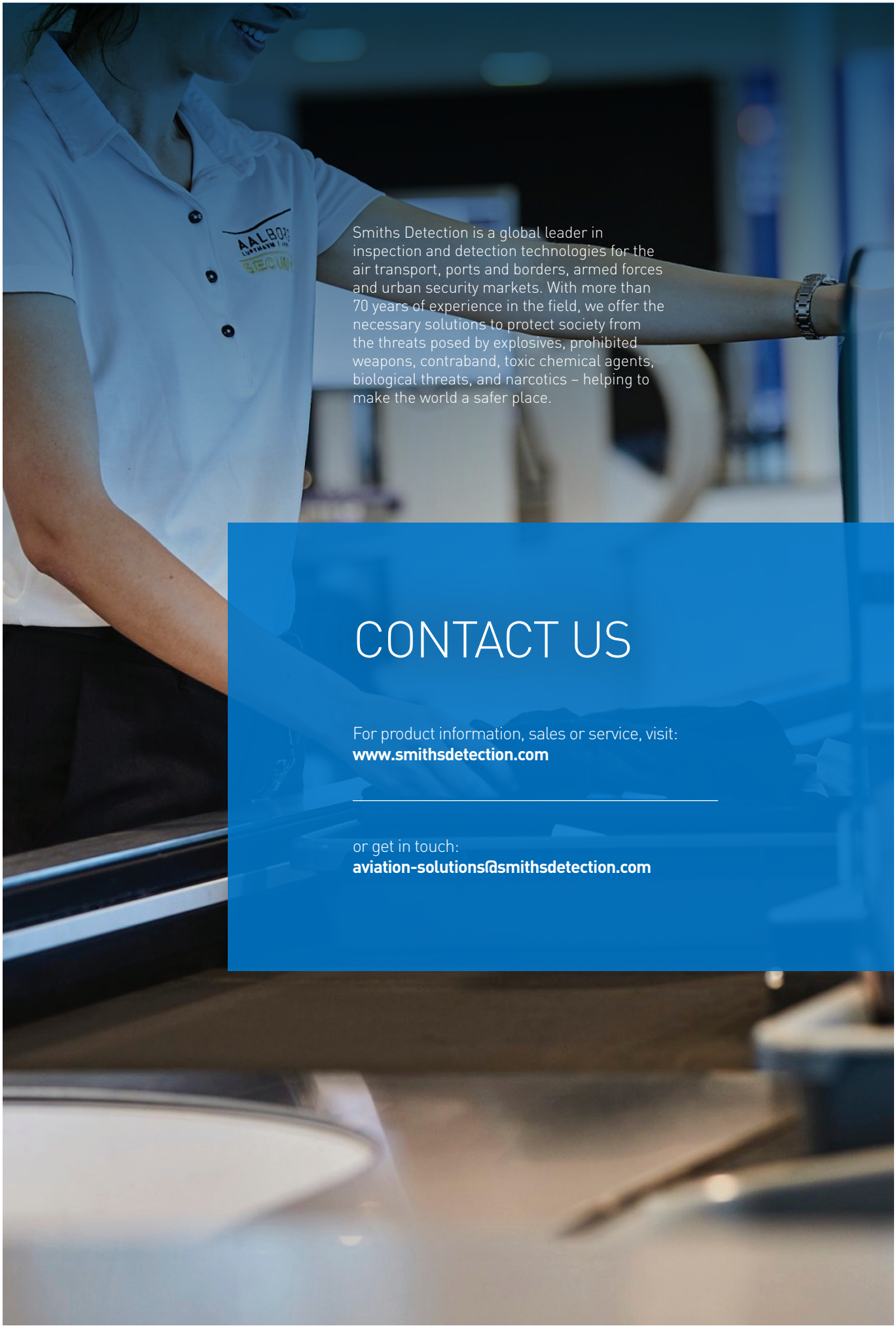
01 UNDERSTANDING YOUR REQUIREMENTS

02 ONSITE DATA COLLECTION, PASSENGER SURVEYS

03 PERFORMANCE SIMULATION & SOLUTION MODELLING

04 IMPLEMENTATION

05 ONGOING SUPPORT



Smiths Detection is a global leader in inspection and detection technologies for the air transport, ports and borders, armed forces and urban security markets. With more than 70 years of experience in the field, we offer the necessary solutions to protect society from the threats posed by explosives, prohibited weapons, contraband, toxic chemical agents, biological threats, and narcotics – helping to make the world a safer place.

CONTACT US

For product information, sales or service, visit:
www.smithsdetection.com

or get in touch:
aviation-solutions@smithsdetection.com