JSaRC
Joint Security and Resilience Centre

Home Office

SECURITY & POLICING
HOME OFFICE EVENT

9-11 MARCH 2021

Industry Showcase

INDUSTRY SOLUTIONS
TO SECURITY CHALLENGES

GUIDE & DIRECTORY

Welcome to the JSaRC Industry Showcase feature at Security and Policing 2021

THE SHOWCASE   INDUSTRY SOLUTIONS TO SECURITY CHALLENGES

Keeping people and infrastructure safe and secure remains a UK Government priority. Threats to National Security come in many forms, driving the need for continued collaboration and the development and deployment of innovative solutions, technology and products from the security sector.

For Security & Policing 2021, the Joint Security and Resilience Centre (JSaRC) will be presenting an Industry Showcase which will provide an integrated demonstration of a range of innovative security solutions. Driven by the impact of the COVID-19 pandemic, the narrative and themes for our showcase this year are **'Resilience, Recovery, Rebuild'.** Working closely with industry, our aim is to demonstrate security solutions and the use of innovative technology.

Our exciting digital showcase consists of three dedicated 'rooms', each one providing insight, demonstrations and information from solution providers and manufacturers to help visitors increase their understanding and awareness of how innovative technologies and operational concepts can be combined to reduce or remove threat-risk.
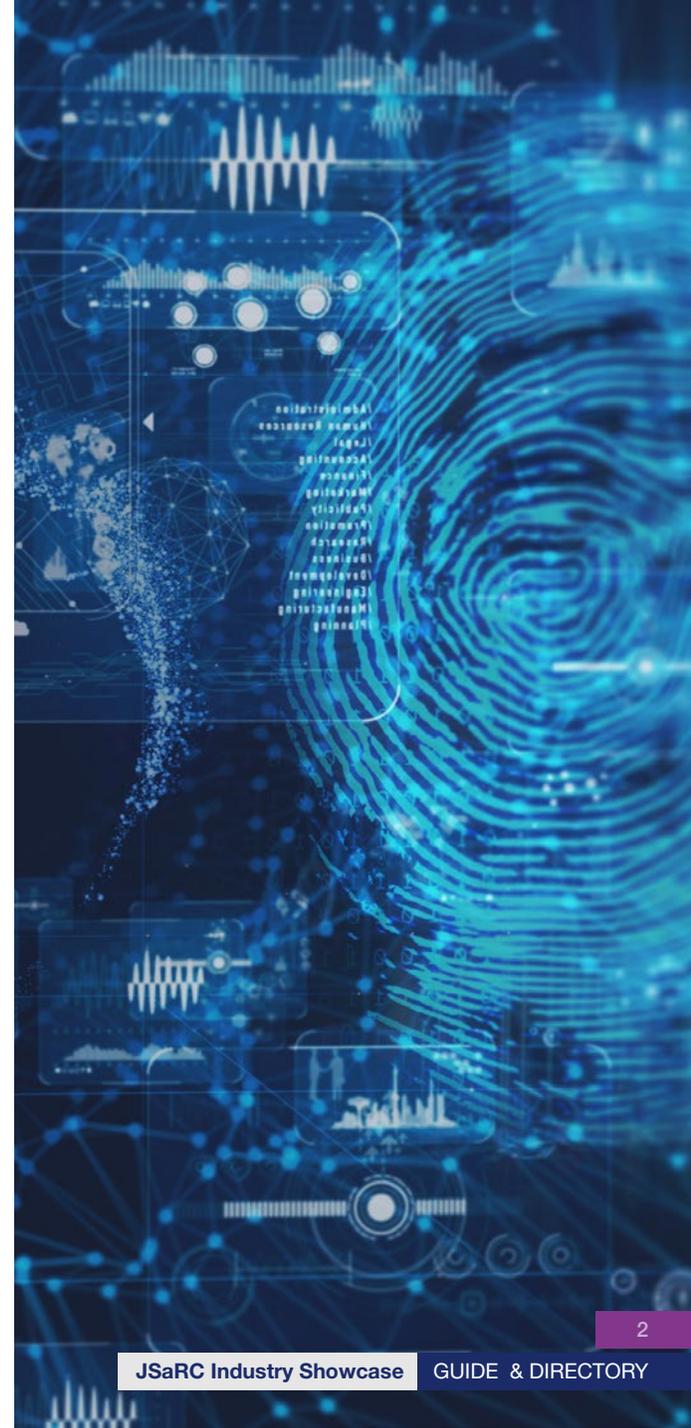
About JSaRC

Established by the Home Office, within the Office for Security and Counter-Terrorism, JSaRC works to provide security outcomes for the UK by combining Government, academic and private sector expertise.

JSaRC works to support the UK's National Security objectives and to protect our people. Our aims continue to be reflected in the National Security framework, which represents the UK's interests through three objectives; to protect our people, project our global influence and promote our prosperity.

In 2021, the JSaRC role will expand by using the Security and Resilience Growth Partnership to further challenge how government tackles security issues. This crucial partnership with industry will look more strategically at how government can make improvements to develop a more collaborative and agile procurement process in the Security Sector; provision for the right environment for National Security Innovation; strategies to maximise UK security exports; as well as ways to ensure the sector has the necessary skills, both now and in the future, to meet National Security demands.

RESILIENCE

This critical theme will focus on opportunities to showcase innovative products and solutions to current and emerging UK and global threats to the safety and security of people and infrastructure. Expect to see solutions which improve screening and detection, and the enhancement of biosecurity in Publicly Accessible Locations.

Companies participating in the 'Resilience Room' include:

apsteco systems

SABRE GLOBAL UK, LTD.

KIRINTEC

FIRST RESPONDER TECHNOLOGIES

THALES

www.apstecsystems.com

Product
Human Security Radar (HSR)

About the company
Apstec's mission is to make the world a safer place by developing innovative security screening technology that contributes to the fight against terrorism. Leading organisations in both the public and private sector work with Apstec® to improve security and public safety.

After years of extensive research and development by leading experts in radiophysics, electronics, software engineering, security operations, and counter-terrorism, Apstec has developed innovative high-throughput screening technology to help secure crowded places from terrorism in a way that is practical and proportionate, allowing people to go about their daily lives without unnecessary disruption.

We work proactively with public authorities around the world to ensure our solutions are rigorously tested and meet the changing needs of the security sector. Apstec and our network of experienced distribution partners, in over 30 countries, support customers in adopting next generation people screening technology to improve security and the experience of the people being screened.

About the product
Apstec's Human Security Radar® (HSR™) provides seamless security for public spaces and has been deployed widely to improve security in publicly accessible locations such as stadia, exhibition centres, concert venues, major events, places of worship, entrances to airport terminals, transport hubs and critical national infrastructure.

On the topic of 'Resilience', in light of the current and future pandemics, HSR is perfectly designed for social distancing and low contact security screening to mitigate health risks for both the public being screened and the security staff running the operation. HSR helps satisfy the need to open venues and businesses safely. By implementing innovative approaches to security screening that feature; high throughput, have no queues, minimise contact between people, and allow for social distancing; organisations can mitigate health risks while improving the overall the security screening experience.

Using a number of complementary technologies combined with sophisticated algorithms, artificial intelligence and machine learning, HSR discriminates explosives and weapons from benign materials, with a high degree of accuracy. It detects non-metallic as well as metallic threats, enabling the detection of low metallic improvised explosive devices. The fully automatic walkthrough system enables low contact, non-invasive security screening of thousands of people an hour.

RESILIENCE

www.kirintec.com

Product
Rebus 2.1

About the company
Kirintec specialise in the design and production of innovative technology solutions, for Cyber & Electromagnetic Activities (CEMA) Counter-IED and Counter-UAS. We engineer and deliver battle proven capabilities across the world from our Head Office in Herefordshire.

Kirintec was founded in 2008 and is a SME-Prime, with a vision to create innovative products; combining first hand military operational experience with cutting-edge engineering talent to resolve operational issues.

Many of our personnel are recognised as industry experts in their fields and our products are in use daily in the defence, security and critical national infrastructure sectors. Our users include Governments, Private Security Companies and Non-Government organisations.

About the product
REBUS 2.1 is a unique system designed to provide security personnel and First Responders with the means to mitigate an Improvised Explosive Device (IED). REBUS 2.1 is designed to be quickly placed over a suspected IED to then isolate the device from any initiation signals and to provide mitigation of any blast or fragmentation effects.

Resilience in real world situations is paramount. With REBUS 2.1, First Responders can protect with confidence by simply covering a suspect package with the REBUS tent, then switching on the Radio Frequency (RF) Inhibitor box.

Unlike conventional ECM jammers REBUS doesn't transmit lots of uncontained spurious RF energy, so it can be used in complex urban environments without impacting on friendly local signals such as mobile phone networks, emergency service radio systems and Wi-Fi. For this reason, it is often used in Government buildings, airports, other mass transit locations, Critical infrastructure locations, concerts and sporting events.

REBUS 2.1 is a unique technology that can 'bridge-the-gap' between discovering a suspect device and a specialist explosive ordnance team arriving. With proven effectiveness. REBUS 2.1 is life-saving equipment, allowing an Explosive Ordnance Disposal (EOD) team to arrive at the scene and then work safely and confidently.

RESILIENCE

www.sabre-global.co.uk

Product
Sentinel WiFi concealed weapons detection and Sentinel Vision

About the company
Our world is evolving. Advances in technology are generating new and more sophisticated threats faster than ever before. We understand your concerns and we make it our business to understand the ever-increasing demands and complexities of today's security challenges.

That's why at Sabre Global UK, we've developed a comprehensive and customisable portfolio of permanent and mobile security solutions to protect your people, property and assets from risk and harm. Providing you with 360 degrees of protection.

We draw from our extensive combined knowledge and diverse experience to keep you and your people safe without impacting your freedom. Eliminating threats without compromising your operations.

By fully listening to your specific needs and then thoroughly assessing the potential risks, we can recommend the right security solution with the right products and put them in the right place at the right time. We are an SME.

About the product
Revolutionary Concealed Threat Detection System. Sentinel WIFI is a uniquely WI-FI based concealed weapons detection system. Simple, smart, and swift to deploy, Sentinel is a game-changing solution for the security industry.

Sentinel WiFi instantly warns of any potential concealed weapon on a premise in the critical seconds available before an impending incident.

The first of its kind, this solution uniquely utilises Wi-Fi to detect concealed materials and indicate the existence of a threat. With AI-enabled detection, Sentinel WiFi is coded to identify the material, shape and size of the object that it has been programmed to flag.

When a risk is detected, the user interface instantly displays an alert, video feed of the suspect, location, and details of the threat. No matter where your security personnel are located, they receive immediate updates on the situation direct to their mobile device via a cloud-based system.

Designed for use in:
Stand-alone security in publicly accessible locations such as sports venues, entertainment complexes, and places of worship.

Integrated, layered security for fully equipped institutions such as airports, government buildings, and corporate settings.

Threat and risk assessment; determining any need for additional security measures such as progressive surveillance or searches.

RESILIENCE

THALES

www.thalesgroup.com

Product
Thales Mobile Biometric Enrolment App and Facial Recognition Face Pod

About the company
Headquartered in Reading, UK, Thales UK is the UK subsidiary of Thales Group. The Group operates as master system integrator and solution provider in the areas of Defence & Security, Cybersecurity, Digital Identity & Security, Cybersecurity, Aerospace, Space and Ground Transportation. In the UK our solutions range from the provision of Air Traffic Control, to the manufacture of the new UK Passport and to the national system for rail signalling.

Thales UK employs over 6500 employees across nine sites and invests approximately £130m per annum in research and development.

Specifically related to Security and Policing markets Government agencies across the world entrust Thales expertise in civil identity, biometrics and law enforcement. We are part of more than 200 ID programs, supplying secure identity documents, identification and verification solutions as well as digital government services. We also address border management, road safety, public security and law enforcement challenges.

A market leader in cyber security and data protection, Thales addresses the entire information security lifecycle, the cornerstone of digital trust. Thales helps secure the digital transformation of the most demanding government bodies, private firms and critical infrastructure providers.

About the products
Facial recognition technology can be used for more secure and efficient access control to large venues, reducing the need for non-socially distanced queues.

Thales' Mobile biometric enrolment platform and Face Pod demonstrate how we can use people's faces as their event ticket.

When customers buy their event ticket from a personal device, they can opt to enrol their facial biometrics.

This process requires the user to use their mobile device to upload their passport details and then take a selfie. The passport capture and selfie are matched against each other for security then saved to the organiser's database.

On the day of the event, the database is replicated to the access control Face Pods.

After passing through security, the customer is able to go directly to the Fast Track ticket area where the Face Pod will verify if the customer is a real person with a liveness detection.

The customer's face is then matched against their selfie. The result is immediately communicated to the access control system, and either grants entry, or raises an alert if the individual is not authorised.

This solution allows ticket holders to access the venue with reduced contact for both customers and venue staff.

RECOVERY

The current pandemic is impacting our citizens, our infrastructure and our economy. It is vitally important to have a strategy for recovery. In this area of the showcase, organisations will demonstrate, discuss, and identify a range of technologies, that will provide practical solutions to aid recovery, promote growth and stimulate innovation. Included are solutions around the control and reporting of crowd flows as well as the use of biometrics to support future frictionless borders.

Organisations participating in the 'Recovery Room' include:

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

SITA

Cranfield University

sopra steria

RECOVERY

www.ait.ac.at

Product
Biometric Contactless Fingerprint Technologies

About the company
The AIT Austrian Institute of Technology is Austria's largest research and technology organisation and a specialist in the key infrastructure issues of the future. As an Ingenious Partner to industry and public institutions, AIT is already researching and developing the technologies, methods and tools of tomorrow.

AIT is part owned by both the Federation of Austrian Industries (49.54%) and the Republic of Austria's Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology (50.46%).

At the AIT Center for Digital Safety & Security over 240 experts are developing state-of-the-art information and communication technologies to ensure that our systems are highly secure and reliable in the context of comprehensive digitisation and global networking. Among many others, the center focuses on key technology areas such as the latest sensor technologies and biometric systems for the protection of critical infrastructures and digital identities.

Further information here

About the product
Fast and secure access controls, seamless border crossings, queue-less passenger checks at airports, and the rapid identification of individuals are key to better security and convenience. With our internationally recognised experience in the field of smart border control, and as the coordinator of key EU-funded projects in this field (e.g. FastPass, MobilePass), we develop novel solutions for identifying individuals on the move.

By using machine-learning methods and exceptionally fast software algorithms, we are developing biometric high-tech sensor systems for identity checks, and fast, secure and hygienic access control solutions, ranging from low to high security applications and requirements. We offer high-level research and development services designed to raise the technology readiness level of identification systems. Working closely with our customers, we prepare models that are tailored to their specific needs.

As part of the Industry Showcase, we are pleased to present modern contactless biometric solutions, implemented in a sample e-Gate device to ease the work of law enforcement agencies (LEAs) and other security services. The new approach of contactless fingerprint capture enhances security, speeds up the border control process, and makes biometric verification less cumbersome and far more hygienic for both individuals and officials.

Further information here

and more details here

RECOVERY

Cranfield University

www.cranfield.ac.uk

Product

Passenger experience and airport management academic expertise

About the organisation

Cranfield is a specialist postgraduate university that is a global leader for education and transformational research in technology and management.

We are focused on the specialist themes of aerospace, defence and security, energy and power, environment and agrifood, manufacturing, transport systems, and water. Cranfield School of Management is a world leader in management education and research.

Cranfield is a six-time winner of the prestigious Queen's Anniversary Prize, the only national honour given to educational institutions for work carried out in the public interest.

We are home to many world-class, large-scale facilities which enhance our teaching and research. We are one of the few universities in the world to have its own airport – our global research airport offers a unique environment for transformational research. Our living laboratory is a testbed for transformative technologies and new approaches to deliver enhanced social, economic and environmental outcomes in urban, transport and infrastructure systems.

About their expertise

Dr Thomas Budd is a Lecturer in Airport Planning and Management in the Centre for Air Transport Management at Cranfield University, UK, and Course Director for the Airport Planning and Management MSc programme. His main areas of expertise include environmental planning and policy, climate change adaptation and resilience, and how disruptive technologies can be leveraged to facilitate safe, seamless and sustainable journeys.

Thomas is also the Academic Lead for the Passenger Experience Laboratory in Cranfield University's new Digital Aviation Research and Technology Centre (DARTeC) which will spearhead the UK's research into digital aviation technology.

Thomas shares his thoughts on how technology can play it's part in removing physical touch points to help change people's behaviours and restore passenger confidence in everyday travel to help reduce queuing and cross-contamination during their journey.

RECOVERY

SITA

www.sita.aero

Products
1. SITA Automated Border Control (ABC) and Enrolment Kiosk
2. SITA ABC Gate

About the company
SITA is an aviation industry born and focused company. This is what drives us to lead industry-wide collaboration and co-innovation across airlines, airports and governments globally.

We apply our 70+ years of experience to develop technology solutions to drive our industry's success, tailored to our customers exact business needs.

Borders must be seamless yet secure. We ensure that governments can strike the balance between critical security measures, while promoting and facilitating safer and easier travel, across their borders.

Building on our deep aviation knowledge and border security expertise. We're leading the way with intelligence-led, risk-based and data-driven approaches to border security.

SITA's ready to use solutions enable governments to extend their borders, to point of departure, to undertake risk-based pre-travel authorization.

We're working with governments and industry stakeholders around the globe to make borders securer, smarter, seamless and more connected, travellers and citizens safer.

About the products
We are showcasing SITA Automated Border Control (ABC) and Enrolment Kiosks and SITA ABC Gate which is part of our SITA Border Control product.

SITA Border Control provides your air, sea and land borders with elite-level security capability. These ABC gates, kiosks and mobile devices integrate effortlessly with Entry Exit databases to guarantee fast and accurate identification of travellers. This gives no/low-risk travellers a seamless experience when arriving to or departing from your country while preventing persons of interest from entering.

As a core part of a SITA border management ecosystem, SITA Border Control also facilitates advanced risk assessment and creates a rich set of traveller data for record-keeping and subsequent analysis. Furthermore,

Border Control's mobile solutions offer you the flexibility to constantly adapt to changing border control requirements.

Risk assessments can be enriched with data captured by governments on hotel bookings, car hire, and purchase of SIM cards – providing a fuller picture of a traveler's activity in-country and a more thorough means of pursuing intelligence-led risk analysis.

The self-service and low touch nature of these kiosks and gates support contactless and low-touch travel -important to safely resume flights and get our industry moving again following COVID-19.

sopra steria

www.soprasteria.com

Product
UK eTraveller

About the company
Innovation is nothing without impact. A great idea isn't an answer in itself. You need to deliver on that vision and turn it into a value-added reality for your business. For that, you need a consulting and IT services partner that has the passion, insight and pace to continually take you from ideation to impact. Ongoing innovation is only the beginning of what we can achieve together.

Sopra Steria does more to help you adapt in a changing world. We design, develop and deliver technology solutions that achieve your strategic outcomes and meet your specific business challenges. By combining consulting-led strategic expertise with sector specialisms, digital best practice and accelerated delivery, we make a real difference to every client's business.

About the product
Supporting large volumes of passengers in a Covid-secure way whilst maintaining high levels of security should focus on 'pushing back the border'. Leveraging prior information on passengers' intention to travel and secure identity makes for smooth, contact free travel across the border.

Leveraging our visa service experience, Sopra Steria have developed the UK eTraveller prototype app showcasing the future of applying for an Electronic Travel Authorisation (ETA). The way in which passengers enrol will mean they can pass secure borders without intervention, facilitating an improved customer experience with confidence before they embark on their journey and when they reach their destination.

The remote identity enrolment and on-boarding through Sopra Steria's UK eTraveller app addresses the challenge for identifying passengers' in a frictionless contact freeway. From the comfort of their own home, passengers complete a three-step identity capture process:

1. Scanning the passenger's passport.
2. Facial liveness check – to verify the passenger exists in person and is who they say they are on the passport.
3. Fingerprint enrolment – passenger's ten digits are captured by the app to provide a unique digital record.

This enables binding of identity to an approved ETA allowing for seamless and contact-free passage across the border.

Access Interactive prototype app: UK eTraveller

View the UK eTraveller App User Guide here

REBUILD

The security sector is an important part of the UK's future growth, by supporting businesses to rebuild and scale their infrastructure and working practices, quickly, securely and economically. This area of the showcase will focus on technical security solutions to support organisations to transition to and improve their solutions for remote working and beyond.

Companies participating in the 'Reuild Room' include:

Armour Comms

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www.armourcomms.com

Products
1. Armour Mobile
2. SigNet by Armour

About the company
Armour Communications Limited is a UK based organisation that provides government-grade encryption for secure communications (voice, messaging, video and data) on everyday devices across all popular platforms.

Supplying cost-effective, easy to use technology combined with advanced security techniques to deliver cloud-based and on-premises solutions for Governments, Finance and Enterprise markets.

About the products
Armour Mobile and SigNet by Armour safeguard the content of communications using National Cyber Security Centre-approved encryption also protecting the associated meta-data which is particularly important for security and special operations.

Armour technology prevents mobile communications whether voice, text, video or conference from being decrypted even if intercepted over-the-air, and protects the Armour data stored on the device against loss by theft. It enables secure collaboration on anonymous everyday COTS devices between trusted colleagues, and is equally valuable for conveying sensitive commercial, tactical or personal data and for covert or special operations, confidential informants, etc. up to SECRET when used in collaboration with our partners' technologies.

TrustStamp™

www.truststamp.ai

Product
Trusted Mail

About the company
Trust Stamp leverages biometrics and artificial intelligence to create biometric technology at the intersection of access, security and privacy. Our technology converts biometric templates into an irreversible hash to allow for identity verification or authentication without the risk of breach of sensitive biometric data. Trusted Mail utilizes biometric capture to create encryption keys for secure email. Trust Stamp is dually headquartered in Atlanta, Georgia and Cheltenham, UK.

About the product
Email phishing, specifically business email compromise (BEC) scams, result in losses of over $1.78 billion annually, more than half of all cybercrime losses logged by the FBI in 2019. These scams have increased 37% since 2018 and have targeted over 30,700 organizations in the first quarter of 2020 alone. BEC is a scam where fraudsters impersonate a known source and make a request appear legitimate.

Trusted Mail defeats email phishing and takes a zero-trust approach to email security where a sender must authenticate their identity using facial biometrics in order to send an email. After authentication, emails are encrypted when sent and can only decrypted with the recipient's facial biometric. With Trusted Mail, this means that even if an attacker gains access to your mailbox, they cannot impersonate you.

www.surevine.com

Products
1. Jodami
2. Threatvine

About the company
Surevine builds secure, scalable collaboration solutions for the most security conscious organisations globally; joining people up and enabling collaboration.

Our systems are accredited to handle the most sensitive information, whilst still delivering an intuitive and engaging user experience which actively promotes participation; building smart, secure networks of connected people.

Our own smart research and development and customer sponsored R&D into collaboration technology delivers constant innovation, creating products born out of genuine user needs. The company was founded by Stuart Murdoch and John Atherton, both of whom have an established track record of delivering landmark secure systems, including systems for UK Central Government. Surevine's secure collaboration technology is relied on by thousands of people around the world to securely share and collaborate on sensitive information.

To date, the company has implemented hundreds of collaboration projects for government and other organisations, supporting tens of thousands of live users.

About the products
Jodami is an award-winning video conferencing, voice and instant messaging solution designed for secure communication. It provides a cohesive user experience to allow participants to securely hold voice and video calls and send private and group chat messages. Host it on your own private cloud or public cloud infrastructure, in a location of your choice and take back control of your organisation's communication. Jodami delivers the same modern user experience as Slack or Zoom but does so in a way which can be trusted to keep your secrets, secret.

Jodami is accredited for use at scale for SECRET communications across the UK. It has been used by UK Government, police and military.

Threatvine is a cyber security information-sharing platform, designed for cross-organisational sharing powering National cyber strategies worldwide. Threatvine unites critical national infrastructure, law enforcement and academia, moving beyond information sharing to collaborative intelligence analysis; keeping you one step ahead of the cyber threat.

Threatvine is used by the UK to power CiSP, the UK's national platform for cyber security information sharing. CiSP is home to thousands of network defenders - sharing and collaborating on behalf of their employers, which comprise of CNI including financial services, energy, utilities and telecommunications.

www.verifiablecredentials.info

Product
Identiproof

About the company
We are a new spin-out SME from the University of Kent, based in Canterbury, UK. We bring over 20 years of professorial and PhD-based R&D experience in Identity and Access Management (IAM) to the commercial market. We are experts in internet security, identification, authentication, authorisation and federated identity management.

We have developed the Identiproof software suite to bring you the next generation of zero trust-based access controls using the latest standardised cryptographic mechanisms, eliminating the need for usernames and passwords. Our policy based Identiproof software is the most secure, lightweight, low maintenance and flexible identification and access control system on the market.

About the product
Identifying someone face to face with a high level of confidence is extremely difficult. Paper documents can easily be forged, copied or stolen. Identifying someone via the internet is even more difficult. But we have a solution, and it is based on the latest World Wide Web standards for authentication, identification and authorisation. People can now hold digitally signed verifiable credentials on their smart phones, or via a protected QR code on their ID cards. Verifiable credentials are unforgeable, theft-proof and instantly verifiable.

Our policy-based verifiable credential middleware allows you to set the policies for access to your resources, whether they are physical or virtual. In order to gain access, people must present the required credentials. Smartphone owners gain access to their credentials via their biometrics (fingerprints), thereby removing any need for usernames and passwords.

Using policies to control access to your resources means that you can have different policies for different groups of people. For example, to gain access to your building the person must either be an employee or a visitor with a valid passport and a digitally signed invitation, and both must provide a COVID-19 vaccination certificate.

Where technology and innovation meet