

BORDER MANAGEMENT TODAY

Issue 003 | October 2019

SEAMLESS TRAVEL:

IBMATA CALL TO ACTION

IBMATA publishes
proposal for future
seamless travel

**ISOB 2019
HIGHLIGHTS:**

the role of effective border management

TOWARDS DIGITAL TRAVEL:

next generation border technology

MANAGING THE BACKSTOP:

The Irish border dilemma

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Message from the Chairman

When we established IBMATA two years ago, we hoped to develop some broad discussion between border agencies around the world and the latest technology providers on Future Borders. In any such debate, it is important to bring in expert views not just from government and technology suppliers; but also from the travel and transportation industry, and academia.

Little did we know at the time that we would be thrust into the forefront of 2 major border transformation initiatives, which has stretched our members fully in identifying workable and practical proposals for what are seemingly intractable problems.

The first is the question of “seamless travel”. Despite significant effort and investment across the world in technology, queues in arrivals halls and at visa offices around the world continue to grow. Since we first raised this issue with leading Border Agency members and our partners at WTTC, we have been working tirelessly behind the scenes to develop a proposal which (we hope) has the support of leading border agencies around the world. This has been “sense tested” both at workshops and events as far afield as Delhi, Istanbul, Ottawa and Washington DC; and in numerous telephone calls and meetings with border officials around the world. In this issue, we are delighted to publish alongside BMT 3 our proposal on “Seamless and Secure Travel – The Future of International Passenger Travel and Border Control”. You can download a copy [HERE](#). I am delighted to announce that this paper has the agreement and endorsement of my good friend Judge Rob Bonner, former Commissioner of US Customs

and Border Protection. Between us, Rob and I will be encouraging Border leaders around the world – starting with the Border 5 and the EU – to collaborate to develop a set of global standards for the next generation of safe, secure and seamless travel.

The second – and closer to home for our UK based members – is the status of the Irish Border and how it might be managed after the UK leaves the EU. This has proved to be an intractable problem for British and EU politicians alike, over something called the Irish “backstop” and a potential “border in the Irish Sea”. In response to a call for expert help the chair of our Advisory Board (Lars Karlsson), one of our leading technology members (Frank Dunsmuir, Fujitsu) and I have been working on the expert panel to the Parliamentary Commission for Alternative Arrangements for the Irish Border. We are an independent think tank; but our report on potential Customs and Borders solutions to avoid both a hard border on the island of Ireland or in the Irish Sea has received widespread interest both in the UK Parliament, in Ireland and in Europe. You can find out more about the work of the Commission – including the report and draft protocols – [HERE](https://www.prosperity-uk.com/) <https://www.prosperity-uk.com/>

The issue of border control continues to dominate the news globally. We are delighted to reproduce some of the materials arising from our third International Summit on Borders in Washington DC, which continues to attract border leaders from across the globe. From the challenges of managing e commerce, to the irregular people movements at the US Southern Border and across the Mediterranean Sea, to the next generation traveller initiatives we heard from border leaders past and present

– and business leaders – on the need for dialogue and collaboration.

We also include in this issue articles from our members covering new and emerging developments in end to end border management including digital identity, e commerce and smart borders. We take a closer look at the latest developments in document security, identity management and seamless borders; and hear good news from Apple as to how the IOS system will shortly be able to accommodate applications on I phone for the highly successful EU settlement programme in the UK. We hear from one of our leading academic members on the challenges of managing compliance in the educational sector in a changing policy environment; and we take a closer look at the thorny question of Brexit, Borders and Backstops.

We also include a report on our highly successful IBMATA (Europe) Summit which was held in Istanbul in April. Due to political sensitivities, the mere mention of the word “border” can cause difficulties in some countries. After some discussions with the Indian government we have agreed to postpone our next IBMATA (Asia) Summit in New Delhi in November. We will instead be holding our next Asia Summit in Singapore on 25 – 27 February; and our next Europe Summit will be in Brussels on 12 – 14 May. We look forward to seeing you there – and in the meantime I hope you enjoy reading BMT3.

Tony Smith

Tony Smith CBE,

CHAIRPERSON *at* INTERNATIONAL BORDER
MANAGEMENT AND TECHNOLOGIES
ASSOCIATION

04 International summit on borders spotlights the challenges of trade, travel and security at third annual conference

08 Known Traveler Digital Identity - Making Seamless and Secure Cross-Border Travel a Reality

12 E-Commerce: Redefining the Customs Cross-Border Trade Paradigm

16 Smart Border Systems Delivered

18 EVENT REPORT: IBMATA Border Management & Technologies Summit Europe 2019

20 The Hidden Costs of ‘Free’ Border Software

22 ‘Drive Through Border’- Gatekeepers Value Proposition...

24 Security Concepts for Passports and Identification Documents

26 Deployment of Identity Management Technology within Border Management

28 Next-generation kiosks transform border security at Barbados’ International Airport

30 Managing borders: the land border challenge

32 The Time is Ripe, Thanks to Apple: Why Now is the Time for Digital Identity Verification

34 The role of universities in future compliance for students: an expert view

36 A Seamless and Secure Border – Fujitsu’s Vision for the Future UK Border

39 Borders, Frontiers and Backstops

International summit on borders spotlights the challenges of trade, travel and security at third annual conference

By Tom Mapes and Cynthia Holloway, Clarion Events

Washington, DC (June 18, 2019) – Returning to Washington, DC for its third annual event, the International Summit on Borders brought together some of the world's most notable security and migration management leaders during its two-day event. The annual Summit, supported by an illustrious Advisory Board and key stakeholders from industry, government and academia, drew high-level experts from across the security and migration spectrum to discuss pressing issues that included human trafficking, terrorism and threat mitigation. Other presenters also delved into customs and immigration procedures and anti-smuggling protocols, among other important topics.



Day One saw the Opening Keynote delivered by Kevin K. McAleenan, Acting Secretary, U.S. Department of Homeland Security, who addressed the mass immigration crisis at the U.S. border.



U.S. Congressman Mike Rogers provided insights from Congress on current discussions; he was followed by Plenary Keynote Gloria Guevara Manzo President & CEO, World Travel and Tourism Council, who spoke of the impact of border security and other threats on international travel.



Day two of the Summit opened with a Keynote by Rodolphe Gintz Director General, French Customs and Excise Administration. Karen Tandy, Administrator, Homeland Security Advisory Council, offered real-time perspective into the evolving situation at the U.S. Border in addition to other emerging issues of concern facing domestic and global leaders alike.



In addition to representatives from the U.S. and the UK, the Summit received attendees from 12 countries, including Belgium, Brazil, Canada, Estonia, France, Ireland, Mexico, New Zealand, Singapore and Sweden.



Ana Christina Jorge represented the European Border and Coastguard Agency (Frontex) to discuss the expanding role of Frontex in mitigating threats at the EU border.



We were also pleased to welcome back Krum Garkov, Executive Director of EU LISA, to discuss the latest developments in the EU “Smart Borders” Programme.

VACANCIES

HMRC seeks digital support for Future Borders programme

HMRC has published two contract notices seeking commercial partners to assist in work on “operational facing proto types”. You can find out more and apply for this opportunity here:

https://www.digitalmarketplace.service.gov.uk/digital-outcomes-and-specialists/opportunities/10791?utm_id=20191008&utm_source=DOS4+Suppliers+-+Digital+Outcomes&utm_campaign=3692b5898e-EMAIL_CAMPAIGN_2019_10_08_08_04&utm_medium=email&utm_term=0_4360debc5a-3692b5898e-65888741



HM Revenue & Customs



Another recurring theme was the issue of “seamless travel” and how Border Agencies can use technology and registered traveler programmes to manage ever increasing volumes of passengers.

International Summit on Borders Co-chair and former U.S. Customs and Border Patrol Commissioner, Rob Bonner, noted “This international conference truly fills a void. It is the only conference of its type that intelligently discusses and analyzes

transnational threats and their impact on border security from a multi-country perspective. It is the only conference that reaches out to bring together the world’s foremost thinkers for the sharing of best practices and policy solutions to counter those threats, including the perspectives of high-level officials from many nations who are charged with border protection.”

Tony Smith CBE, former Director General of the U.K. Border Force and

Co-Chairman of the ISOB Advisory Board, also focused on the diversity of the group “It was a pleasure to deliver a truly international border management conference of such high quality. With volume complexity and risk all rising at International Borders, this event was extremely valuable in bringing together border experts and leaders from across the globe in a spirit of mutual respect and collaboration.”

Chris Millar of Gatekeeper (one of ISOB’s several industry leading sponsors) noted the ability to meet with key players in the industry, “This is the second year we have been a platinum sponsor at the International Summit on Borders. Once again, our investment has been greatly rewarded with meetings and discussions with a number of border security experts. If we are anywhere near as successful as we were last year our involvement will be greatly rewarded.”

The 2020 International Summer on Borders is scheduled to take place June 16-17, 2020 at the Ronald Reagan Building in Washington, D.C. Registration will open in January 2020. For the latest event information, visit <https://www.internationalsummitonborders.com/>.





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**Singapore
25th-27th February 2020**

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By Daniel Bachenheimer
of Accenture

Known Traveler Digital Identity - Making Seamless and Secure Cross- Border Travel a Reality

With advances in digital technologies it is now possible for travelers to enjoy a more personalized, seamless, and secure travel experience by digitally enabling them to control what personal information they share and with whom – removing friction without negatively impacting security.

Specifically, advances in biometric technologies such as fingerprint and facial recognition are making travelling easier for passengers while providing border agencies with accurate information on travelers within an enhanced security environment. Emerging technologies such as blockchain are also gaining interest from border agencies due to the benefits they promise to both trade and travel, specifically removing the need for intermediaries or centralized authorities to verify claims.

Today, Accenture is working with the World Economic Forum (WEF), the Canadian and Dutch governments, Air Canada, KLM and Marriott International (among other partners) on the Known Traveler Digital Identity (KTDI) program — a public-private collaboration to enable seamless and secure cross-border travel, using biometrics and cryptography (including blockchain). The project is exploring the potential of the decentralized digital identity system to engender trust and cooperation between travelers and international partners.

KTDI is a digital solution that eliminates many of the administrative and security challenges resulting from centralized identity systems. Using biometrics and blockchain technology, KTDI enables the creation of unique, verifiable and secure digital wallet for travelers

that will provide them with near hassle-free travel and is the first step of an ambitious plan to transform international travel while simultaneously enhancing cross-border security. KTDI enables trusted entities such as passport issuance and border control agencies to perform in-person identity proofing. Personal information provided by the traveler via self-registration can be reviewed, attested to and then cryptographically signed by trusted entities to prove provenance. This trusted, verifiable digital identity (or verifiable credential), is then issued to a traveler which they can manage via a self-managed digital wallet.

A key benefit of KTDI is that it is a traveler-centric technology as all the components of a traveler's digital wallet reside with the traveler, who decides how and when to share their wallet's information (travel history, identity information)

The inherent architecture of blockchain — which enables multiple stakeholders to securely share access to the same information, making it consistent across stakeholders and virtually impossible to change data without detection, makes it an ideal solution to promote trust among all the parties involved, from travelers to national governments, border-control agencies, airlines and airports, hotels and others.

After the initial registration process is completed, a traveler can share specific trusted, verifiable identity attributes with trusted third-parties such as border agencies, airlines or hotel groups. For example, a traveler may select to disclose a boarding pass and photo identity attributes to their carrier for biometric boarding or may select to share an eDeclaration and passport details with a participating immigration agency. The traveler may even choose to share their photo and affinity number with the hotel

they plan to stay in during their trip. In each case, the traveler selects which information he/she wishes to disclose after reviewing a required informed disclosure statement

As travelers use their KTDI, service providers can add additional trusted, verifiable attributes to the traveler's digital identity wallets such as a boarding pass, frequent flyer program information or other trusted, verifiable claims that enhance both the personalization of the travel experience and risk assessment capabilities.

You are Your Passport

All traveler facilitation projects have a common theme – you are your passport. That is, once you have opted-in to public and/or private travel facilitation schemes that can streamline identity verification processes using biometrics, you no longer need to produce identity documents or boarding passes which are already on file.

KTDI is complimentary to passports in that it allows the traveler to share specific trusted, verifiable identity attributes through selective disclosure prior to travel without the need to re-scan travel documents. Where some traveler facilitation schemes (including eGates) require capturing ePassport information the KTDI traveler can share trusted, verifiable identity attributes (e.g., live-captured, in-person photo), contained within their digital identity wallet, tailored to the needs of each service provider, before they travel. Additionally, the core identity information (i.e., the information on the data page of ePassports) is captured once – not each time the individual prepares to travel. While KTDI offers unprecedented ease of travel benefits, it is not intended to be a new passport standard and passports will remain a country sovereign document.

Stakeholder Benefits

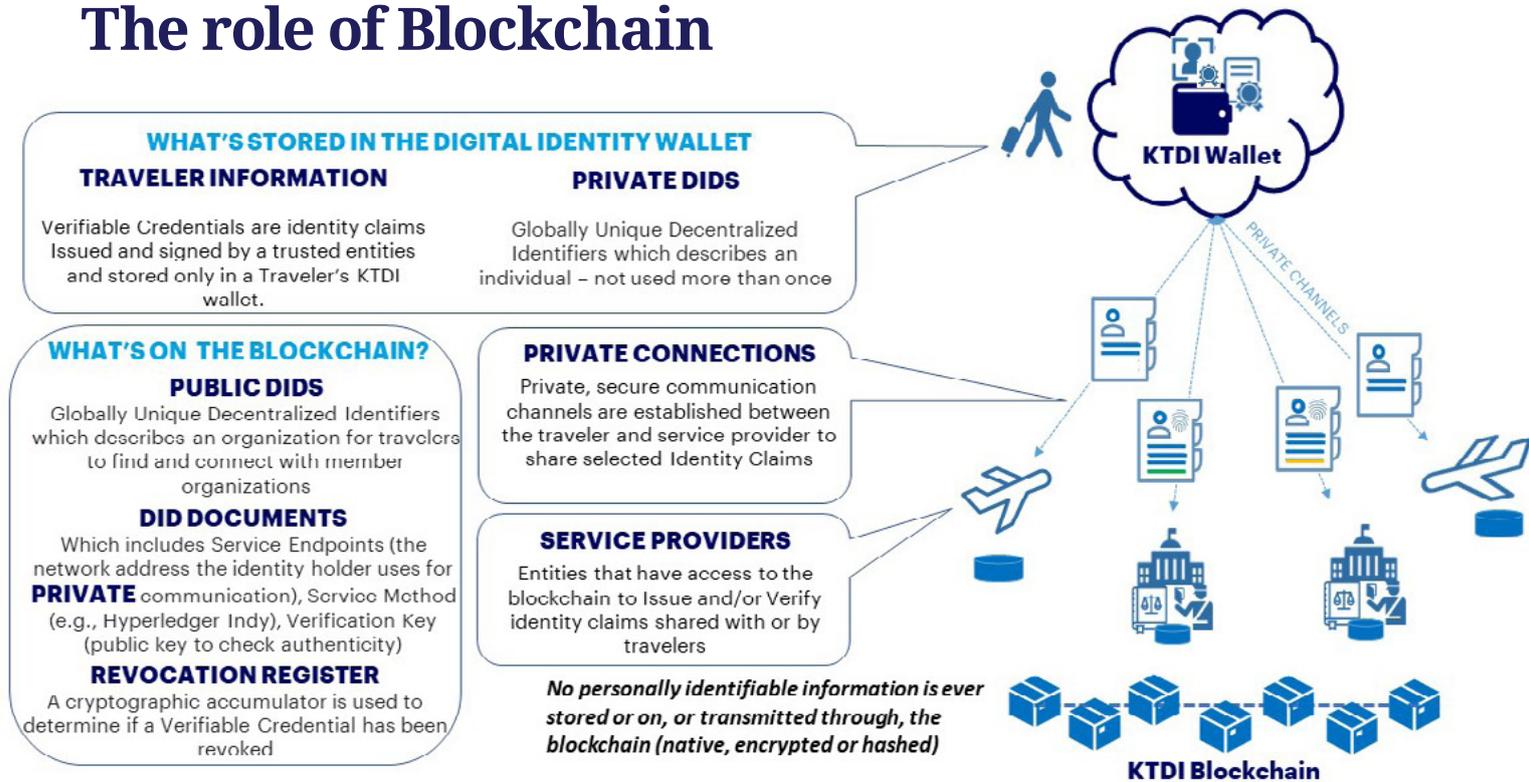
Traveler Benefits – the travel experience can be tailored to their specific preferences without the need to produce their passport or boarding pass at each point of interaction in the travel continuum. The traveler shares only the identity attributes required for the service requested with informed consent.

Border Authority Benefits – with trusted, verifiable identity attributes provided prior to travel, sufficient resources can be allocated and positioned based on risk, volume, and class of admission. Immigration lanes can be opened or closed, electronic messaging and wayfinding tailored, and officers deployed based on trusted, cryptographically verified information (including biometrics) which is not available through existing API or PNR feeds.

Airline Benefits – with trusted, verifiable identity attributes provided prior to arrivals or departures, more accurate manifests can be produced (reducing fines), biometric boarding, bag drop, lounge access, etc. can be offered, and enough resources can be allocated and positioned based volume, service class, etc. making the experience faster, more relaxed, and personalized.

Airport Benefits – with travelers spending less time in queues they can spend more time availing themselves of the more pleasant aspects of travel: shopping, dining, and other entertainment. Other benefits include the reduction in infrastructure footprint in the airport when compared with existing schemes where document scanners (boarding pass and/or travel document) are required.

The role of Blockchain



Blockchain plays a small but important role in this decentralized identity approach providing a means to securely validate the authenticity of a traveler's credentials without the need of an intermediary or other centralized authority. Furthermore, issuers may revoke an individual's credentials at any time, via the

blockchain, should a traveler's wallet be lost, stolen or should security fears arise.

An important aspect of the blockchain-based KTDI solution is that personally identifiable information is never stored on the blockchain. Rather, it is exchanged between the Traveler

and Service provider through encrypted communication channels. These channels use decentralized Identifiers (DIDs), defined by the World Wide Web Consortium (W3C) a global standards organization, which are stored in the traveler's digital identity wallet and are specific to each traveler.

What's Next

The recent launch of the KTDI prototype is the first step along a roadmap which aims to transform the travel experience for travelers from curb to gate and beyond. The KTDI pilot underway is seeing the technology being integrated with the systems of consortium partners and could by late 2020 see up to 10,000 end-to-end passenger trips facilitated by KTDI. The pilot partner airlines, Air Canada and KLM, are today using KTDI on flights to and from Toronto, Montreal and Amsterdam airports (Pearson, Montréal-Trudeau International, Schiphol).

With the technological aspect of the KTDI solution now developed, the next challenge is that of gaining critical mass — i.e., mobilizing consortium members and establishing the policies and standards around KTDI. Key to KTDI success will be in securing user and stakeholder

trust and to ensure public and private partner cooperation.

Solving these challenges won't be easy, as KTDI requires collaboration between many and various types of organizations, but for the solution to work, governments will need to learn to trust each other — to ensure the authentication of a traveler's digital ID is at least as solid as that undertaken today for physical passports.

For more information on KTDI contact Daniel Bachenheimer or Christine Leong of Accenture
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Who can join?

Supplier and Transportation Companies

- Transportation companies (including airlines, shipping companies, rail operators, freight forwarders) with a legitimate interest in supporting our aim;
- Port, airport, and other management entities with a legitimate interest in supporting our aim; and
- Those technology suppliers, business integrators and other private sector entities who, in the opinion of the Board, support the safe and secure movement of people and goods across international borders whilst facilitating flow, in accordance with the aims of the organisation.

Public Sector Organisations and Academics

- All Government Departments and Agencies charged with the responsibility of managing the international movement of people, goods and materials across national borders; including pre-entry, on-entry and after entry applications;
- Intergovernmental organisations with a vested interest in the management of people and goods across international borders;
- Non-governmental organisations with a vested interest in the management of people and goods across international borders and legitimate academic organisations and research facilities.

www.ibmata.org/how-to-join



By Douglas M Browning

E-Commerce: Redefining the Customs Cross-Border Trade Paradigm

The growth of e-commerce has been accompanied by an increasingly robust dialog among traders, Governments, international organizations, customs and border control authorities, and other stakeholders on how to manage the “new trade paradigm” e-commerce has created. These entities face a host of issues as they navigate managing and benefitting from the cross-border e-commerce environment.

E-commerce has been high on the agenda for policy makers since the mid-1990s, and a host of international organizations have called for policies to stimulate and help reduce impediments to e-commerce within and across borders for the benefit of consumers and business. Nonetheless, the e-commerce environment is still very “fluid”.

There is recognition within the international community and Governments of the value and impact of e-commerce, and the need to focus on the implications of this new global trade driver. And while the majority of e-commerce continues to take place domestically, cross-border e-commerce is expanding rapidly as Internet access increases and barriers to the use of online tools fade.

Traditional cross-border trade involves a complex network of activities, relationships and parties. Facilitating the movement of legitimate trade through the

network of regulatory, compliance, security and data requirements imposed by Governments is an equally complex endeavor. As e-commerce expands into the cross-border trade environment it will add an exponentially higher level of complexity and challenges for customs and border control authorities.

Large firms and multinational companies are not the only beneficiaries of e-commerce. The regulatory reforms and technology innovations expanding access to the Internet have also provided SME with a cost effective springboard into the complex network of global commercial opportunities. In many respects the effective use of cross-border e-commerce platforms will allow SME to “punch above their weight” in the global trade environment. As more companies establish or expand their e-commerce operations, the potential benefits to these commercial entities, and the growth and prosperity to their

national economies and consumers will be significant. Multinational companies and SME eager to increase their ability to move merchandise across international borders in an efficient, seamless, and compliant manner, as well as governments, customs and border control authorities have a vested interest in creating effective customs and trade-related operating systems and infrastructure to advance cross-border e-commerce.

While success in managing cross-border e-commerce will challenge customs and border control authorities on numerous levels, three areas will be particularly challenging: (1) understanding the e-commerce trade environment; (2) adapting traditional cross-border controls; and (3) ensuring regulatory uniformity and predictability. However, within these challenges are opportunities to redefine and implement new e-Customs approaches to managing cross-border trade.



The collection and analysis of data to segment the emerging e-commerce cross-border market is lacking. Developing mechanisms and approaches to accurately measure the scope and volume of cross-border e-commerce is a critical data point for developing regulatory compliance and enforcement regimes, determining the data requirements to support these transactions, applying risk management protocols, and allocating human and fiscal border control resources to address this growing area of global trade.

E-commerce has and will continue to challenge the traditional modes of operation of customs, trade and border control authorities. On an individual government level, existing practices in the areas of inspection, clearance and entry will need to be significantly modified. Additionally, the exponential increases in the numbers of e-commerce transactions that will need to be managed by customs and border control authorities will increase the number of compliance and regulatory risks to be addressed.

Customs, border control and other law enforcement authorities have been called upon to tackle these challenges with respect to traditional cross-border trade operations. Paperless electronic trade data processing

through a single-window is becoming increasingly common among Customs Administrations. These advanced information technology systems allow Governments and Customs authorities to: receive and process entry data; collect duties and taxes; improve internal resource management; communicate electronically with other government agencies and the trade community; and improve overall transaction processing reliability and transparency.

Customs authorities should anticipate these challenges will be even greater within the e-commerce environment. Therefore, the opportunity for Customs Administrations is to take the lessons learned and proven operational compliance and enforcement practices they have developed in managing traditional cross-border trade and adapt it to e-commerce. Information exchange, advance trade data, the application of risk management principles, partnerships with stakeholders, and coordination among customs, trade, tax and law enforcement authorities will be key to ensuring effective controls and the seamless movement of cross-border e-commerce.

Uniformity and predictability are among the most important concerns

expressed by international traders as they engage customs and border control authorities managing their cross-border transactions. Any e-Customs solution must provide sufficient space to allow for the development of new models of effective cooperation and sharing of information between Governments, border authorities, traders and service providers. One of the critical challenges to uniformity and predictability for traders involved in e-commerce is the realization that there is no single uniform approach to managing cross-border e-commerce. Domestic differences in the handling and conflicts of law related to e-commerce are another major challenge to providing the uniformity and predictability traders need.

In the cross-border e-commerce environment ensuring the required uniformity and predictability desired by traders will further challenge customs, trade and border control authorities to align their operations and practices. Providing the necessary regulatory clarity and compliance guidance traders, customs and border control authorities need to effectively manage e-commerce transactions will be an ongoing effort. Hearing from stakeholders about

the problems, concerns, issues and successes they have identified will enhance the process of developing and implementing e-Customs solutions. The WCO has done yeomen's work in developing and issuing the Cross-Border E-Commerce Framework of Standards (the Framework), which has initiated the dialog on practices and policies amongst its Member Administrations.

So what are the elements that need to be addressed in any e-Customs solution? To meet government and commercial requirements, any Government e-Customs operational solution must incorporate a number of functional elements. The solution must be flexible to accommodate the fact that there will likely not be a single, uniform solution or methodology due to the unique information requirements and formats within governments and commerce. The solution must accommodate all

universal Custom-related processes and specifications. It should promote standardization, in the core import/export data requirements and global trade processes used by governments, international organizations, and industry associations. Ideally the solution will be able to collect and assemble requisite data from multiple supply chain entities and ensure that the authorized data filer ultimately approves the final transmission to government.

The solution must incorporate risk management and targeting approaches that will assist authorities to identify potentially high-risk shipments. The solution must enable governments adopting or moving toward account-based management of importers to create and maintain account information that shows a composite picture of the trader, its business, transactions and compliance record. The solution must be able to provide

authorities' feedback to traders in a manner that is consistent, predictable, and auditable. The solution must be open to the use of new and innovative technologies that may change the dynamics of the process or enhance risk assessment practices. The solution must provide a level-playing field for all operators and modes of transport.

E-Commerce is a major development in the organization of the world economy. It immensely expands opportunities for producers, traders and consumers worldwide. It also implies drastic changes in existing practices of customs, border control and other authorities designed to stop illicit movements of goods, ensure regulatory compliance, facilitate legitimate trade, secure transactions and protect means of transport. Addressing these opportunities and challenges effectively and efficiently requires coherent international action.





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Barrington Hilsley,
Founder, Physical 2 Digital
www.P2DL.com

Smart Border Systems Delivered



Cross Border

Amidst the breakdown in US-China trade relations and the ongoing trade war, the rest of the world is scrambling to make trade moves that will insulate them against the uncertainty. The United Kingdom is racing to strike deals with the US, China, and other Asian countries, and EU nations to shelter their economy during the impending Brexit, whose deadline has been pushed to late 2019. This trade volatility and disruption affects every company and every industry – and often not for the better. It is critical to be tuned in to the geopolitical changes that are impacting the direction of global trade and the implementation of punitive and retaliatory tariffs. Companies should consider how to react to these developments and brace for more changes that might come down the road. To stay ahead, you need up-to-date trade knowledge to pinpoint the new changes coupled with a digital supply chain execution platform to ensure goods cross borders efficiently. The benefits of improved global trade facilitation far exceed those available from further tariff reduction.

Estimates suggest that an ambitious (but still incomplete) improvement in two key components of supply chain barriers, border administration and transport and communications infrastructure, with all countries raising their performance halfway to global best practice, would lead to an increase of approximately US\$ 2.6 trillion (4.7%) in global GDP and US\$ 1.6 trillion (14.5%) in global

exports.*World Economic Forum (WEF). This report also went on to say that if emerging countries concentrated more on reduction of friction at the border vs reducing tariffs the country could see a significant increase in GDP. Countries are wanting to move to a single window platform for trade which requires more visibility on movement and true provenance and trust at borders but to enable this with agility in the deployment and execution of implementation whilst still ensuring security is almost impossible. P2D has been working with government departments running trials in part of developing its flexible trusted trader solution.

The challenge was to enable a border force to have true trust within a shipment from beginning to end. When looking at the process we needed to secure single truth data that would enable us to lift the haystack off the needle. So, we focused on three areas, the load point, inbound and in country.

1. LOAD POINT

As we know AEOS (Authorised Economic Operator) is designed so that you could benefit from faster application process for customs simplifications and authorisations as well as have reduction/waivers of comprehensive guarantees. Below is a list of requirements, but what if we could find a way to cover the majority of these items in a quick and agile way that not only gave visibility to the exporter but also gave a risk score for advanced targeting. In addition, the

score is reviewed live 24/7/365! In the AEO certification list below we focused on the area's underlined.

- have a safety and security risk assessment in place
- have secured external boundaries with documented procedures to control access to your premises
- have measures in place to protect your cargo units and to prevent unauthorised access to shipping areas, loading docks and cargo areas
- use procedures to secure the safety of your goods during storage, manufacture and transport agree appropriate safety and security measures with your suppliers
- carry out security screening and procedures for prospective employees and contracted parties
- train your staff in the security and safety requirements
- have contracts for temporary personnel
- have details of owners of cargo units
- have all outsourcing contracts (including cleaning, security, maintenance and any others)

By deploying our software on-site we can monitor live the onsite personnel's day to day duties, the patrols, door checks, fence checks, even scanning the seal on the way out.

This allows the P2D system to create a risk score live of the exporting site at all times. This is far more accurate and relevant to the exact export at that moment in time of load.

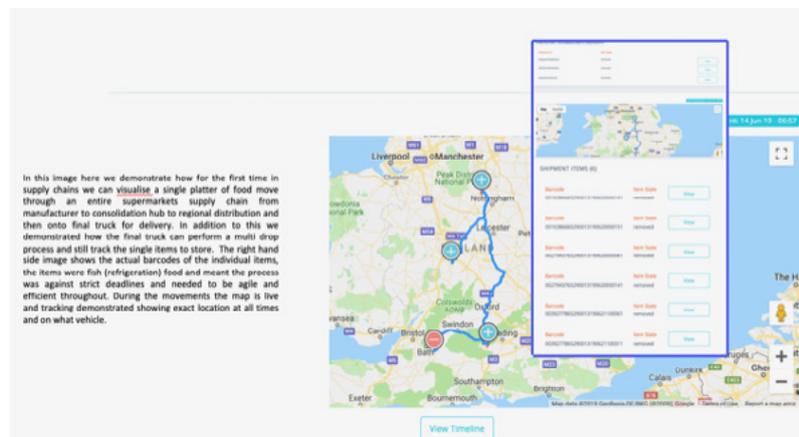
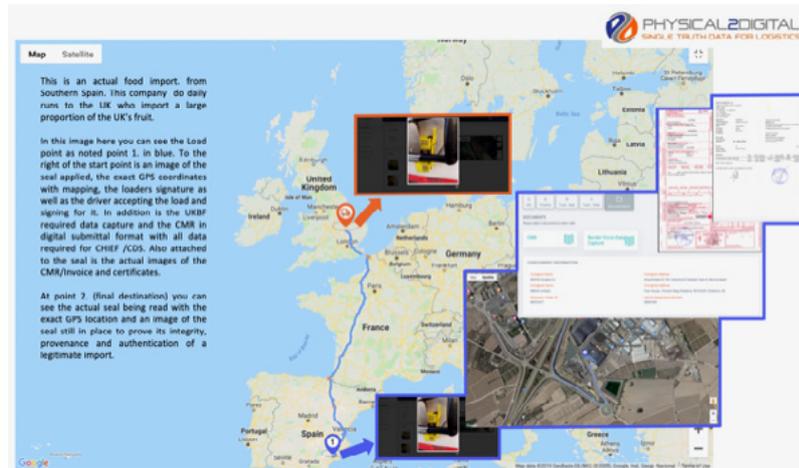
2. INBOUND

TRUST! Trust is what we focused on, how can we enhance the trust in the data that is currently supplied, how can we prove that the contents declared are in the truck or container and that it has been sealed with assurance. P2D developed a middleware platform that integrates to the exporter's ERP (Enterprise Resource Planning), as the employee on dock scans the load P2D captures all this data. The loader then uses one of P2D's patented process seals to secure the load. The patented seal technology allows the system to recognise the seal and attach it to the load and contents. The seals come in many formats even in label form and it can be there are a few hundred seals on separate shipments within the container all attached to the same process. The P2D platform gives visibility to all content even down to a single item and attaches everything to the process. It is at this point when the process is finished that the customs declaration, waypoint 1/2 house data is live online for targeting and declarations submitted automatically to multiple recipients assuring 100% accuracy within P2D.

By allowing visibility from load point to border forces we have enabled the movement of borders to all over the world. No longer will a border team be faced with short notice of minutes or hours but they will have the data from load and through our technology see the shipment travelling towards them on our mapping system live whether it be by truck, plane or ship. The system also allows for the notification of stops and rests and can even request the driver to rescan and inspect especially for curtain side with photographic evidence all placed online for the border to review. At entry should the ground force need to do a check which is now unnecessary they can simply scan the seal and obtain all data required on the mobile device for a full intrusion free inspection of load and seal check.

3. IN COUNTRY

Often countries never get to know



if the declared product ever got to its destination or not which is so often the most valuable data a force can use to help build a trusted profile of exporter/importer. P2D's platform allows the agency to watch the final miles in country of the journey and see if the seal is removed at declared destination. The patented process allows for full visibility of the removal process and with its unique process obtain 100% proof that the removed P2D seal was the seal that was put on at origin. This can also apply where vehicles need to travel through one country and out of another in regards to a land bridge process. By the unique way P2D enables importer and

exporters to physically attach physical product to its Blockchain, ensures single truth data for assurance and integrity end to end on any freight journey.

As P2D progresses with its markets, the system is enabling companies around the world to put agility into their supply chains through immediate visualisation. P2D products are being implemented for visibility and assurance as much as proof of sustainability and Fairtrade in areas of the world that are hard to imagine.

Thank you reading this article, for more information please visit: www.P2DL.com



IBMATA Border Management & Technologies Summit Europe 2019

In April 2019 IBMATA hosted our 2nd annual Border Management and Technologies Summit (Europe) conference and exhibition in Istanbul, Turkey. The event brought together senior government officials from across Europe to discuss the latest migration challenges in the region, cross-border crimes, intelligence and targeting, smart border technology and the future of air-travel.

The event was opened by the Regional Head of the International Organisation for Migration (IOM) who provided an in-depth presentation discussing the current work the IOM have been doing in Turkey to assist with the high volumes of migrants crossing Turkey to reach mainland Europe.

During the first day of the conference there was a greater focus on the management of land borders and technology used to assist border agencies in the region. The OSCE Mission in Kosovo representative discussed the work they are doing in the region in preventing violent extremism and radicalization that lead to terrorism that crosses borders within the Balkans region. This was followed by the National Police Force in Istanbul who provided our audience a detailed review of the organised crimes and operations that are happening in Istanbul to assist migrants and refugees to cross the Turkish border into mainland Europe.



With a focus on land borders it was important to hear perspectives from security vendors who provided presentations discussing the use of mobile forensics and digital border solutions to help border police identify civilians crossing land borders in the region. Frontex also discussed the technology used to track document fraud across the European Union and the efforts in developing technologies at borders to assist governments.

Day one was concluded by the UK Border Force who provided our audience an insight into their Project Hunter programme they are rolling out to border agencies that would like to learn intelligence and targeting best practice and techniques used to identify threats.

The following day kicked off with an insightful and eye-opening presentation by Mr. Abdullah Ayaz the Director General of the Directorate for Migration Management (DGMM) of Turkey who provided statistics of the number of Syrian refugees that have travelled through Turkey and also the numbers that have settled in Turkey and how the government has

accommodated them by giving them ID cards and enrolling Syrian children into schools.

This was followed by Mr. Krum Garkov the Director of EU-LISA who gave our audience an update on Smart Borders across the European Union. This covered Entry/Exit systems at EU borders, biometrics for third country travellers and the introduction of European Travel Information and Authorisation System (ETIAS).

With digital technology being a key focus of the event, we were pleased to introduce a UKVI session from the UK Home Office to discuss the UK government plan to become “Digital by Default”; and how the visa application process will be changing in future.

This was followed by the Kosovo Border Management Agency who gave an in-depth presentation discussing the current state of the Kosovo border and where they would like to be in the future.

The final day of the conference discussed the future of air travel with a case study presentation by Vancouver Airport Authority showing

how effective their seamless traveller solutions have been. This was followed by SITA and the World Travel and Tourism Council (WTTTC) who discussed the progress of frictionless, secure and high capacity biometric borders and the current state of the seamless traveller journey.

On the final day of the event in Istanbul our IBMATA Chairman Mr. Tony Smith ran a workshop/exercise discussing the seamless traveller vision which involved many vendors who all provided inputs and scenarios that led to great discussions on where seamless traveller programs are heading and what is needed. This workshop helped to define the IBMATA Point of View on the Future of Seamless Travel, which was subsequently discussed at a follow up workshop in Ottawa, Canada in May and at the International Summit on Borders in Washington DC in June.

We would like to thank all the speakers, sponsors, exhibitors and attendees who all participated in Istanbul and provided great discussions over the three-day event.



By Jorge L. Ramirez,
Border Management Strategy,
SITA

The Hidden Costs of ‘Free’ Border Software

THERE ARE NOW OPTIONS FOR “FREE” SOFTWARE AVAILABLE TO COUNTRIES WISHING TO ENHANCE THE SECURITY OF THEIR BORDERS. WHAT DOES FREE ACTUALLY MEAN? JORGE RAMIREZ SHARES HIS THOUGHTS ON INNOVATION, WORKING WITH GOVERNMENTS AND THE POTENTIAL HIDDEN COSTS OF ‘FREE SOFTWARE’ FOR BORDER SECURITY SYSTEMS. BORDER FORCE TO HAVE TRUE TRUST WITHIN A SHIPMENT FROM BEGINNING TO END. WHEN LOOKING AT THE PROCESS WE NEEDED TO SECURE SINGLE TRUTH DATA THAT WOULD ENABLE US TO LIFT THE HAYSTACK OFF THE NEEDLE. SO, WE FOCUSED ON THREE AREAS, THE LOAD POINT, INBOUND AND IN COUNTRY.

WHAT BORDER SYSTEMS DOES A GOVERNMENT NEED TO PAY FOR IF SOFTWARE IS MADE AVAILABLE FOR FREE?

Over the past twenty or so years, we have been supporting governments to develop capabilities to secure their borders. More recently, we have helped governments evaluate the value of ‘free software’ solutions. Of course, at a time when public budgets are under pressure, there is good reason to look at software that’s freely available and see how it might be used to build capability and improve security. But it turns out it’s not as simple as one might think; and there are often significant hidden costs.

Many of our government customers were initially quite excited about several free offerings, but their excitement was short-lived when the evaluation highlighted the limited value and hidden costs associated with their implementation. On the positive side, some governments were able to benefit from free software by creating capabilities they didn’t have before; and this created a new baseline to enable them to identify gaps in requirements and functionalities. But the reality is, free software rarely, if ever, addresses the government’s full set of needs to secure the border across all modes of

transport.

It’s true there are some aspects of border security capabilities that are becoming something of a ‘commodity’.

In the early days of building border management systems, SITA’s ability to acquire traveler data, such as Passenger Name Records (PNR) and Advance Passenger Information (API) was a unique differentiator. Today, the process of acquiring traveler data and transmitting it to a government has lost its central role in the minds of customers, perhaps undeservedly. But governments will need to clarify just how much (or how little) data can be acquired via free software as many current offerings are unlikely to support the full range of airlines operating in their country, particularly charter and general aviation carriers, and many still rely on acquiring data via existing industry service providers which represents an additional cost.

WHY GIVE SOMETHING AWAY FOR FREE?

Giving software away for free is, in itself, nothing new. Just think about some of the apps on your mobile phone or the browser you use to search the Internet. The reasons for doing so vary. Like most commercial companies, a

software provider will be keen to raise their profile and have the opportunity to showcase their products and services. Making some of them available for free allows them to do just that. Other providers will benefit from acquiring a reference site and being able to learn more about their customer’s context and needs. And others may only offer free software as a means of opening up commercial discussions about other solutions – ones that come with a price tag.

Additionally, we are aware of free software solutions being made available by governments and international organizations. These need to be evaluated, not just in terms of their functional requirements, but also from a perspective of national security. In some instances, in return for free software, the recipient government is required to provide the donor government with copies of its traveler data which raises questions about sovereignty, data privacy and national security.

WHAT’S YOUR APPROACH TO WORKING WITH GOVERNMENTS?

Firstly, you need to have a strong trust-based relationship with your government customer. The work we

do is extremely sensitive and requires a deep understanding of the customer's issues and challenges at the border.

We know the importance of working with local partners and incumbent suppliers. So, it's important to remain objective and impartial – including highlighting any limitations in our systems. We routinely conduct insight workshops with our customers. In these, we share 'the good, the bad and the ugly' of our border security experience and help our customers conduct rigorous analyses of products, services and capabilities – and the companies who provide them. Our role is to remain objective, provide evidence and build a set of recommendations to help the customer acquire the capabilities they need most with the least amount of risk.

HOW DO YOU KNOW WHAT TO DEVELOP AT SITA?

Innovation at SITA is fueled by market intelligence and a passion to help our customers leverage technology to deliver better services and create better outcomes. In border security, it's vital to understand – really understand – what the customer is trying to achieve, what their needs are, and how other governments have approached solving similar problems.

The insight workshops bring a lot of learning for us, too. Each government is unique and while their border security challenges may be similar, the national security context will be different every single time. We also need to stay on top of the latest technology trends. We have to be specific and precise; and potentially prove exactly how a specific technology can deliver a specific outcome. It is important not to get caught up in the latest technology hype and be vigilant about companies, new to the border security arena, making bold claims or who may be perceived as having successfully brought a solution to market quicker than their competitors.

WHAT OTHER WAYS DO YOU HELP GOVERNMENTS INNOVATE IN BORDER SECURITY

Ultimately, as an industry-owned company, our aim is to help governments secure their borders in a way that delivers better traveler experiences and involves transport and port operators in the process. At the outset, we help them capture airline traveler data, then we repeat the process for other transport modes at land and maritime border crossings. This helps accelerate immigration arrivals and departure processes. Once the data is acquired, we can then move towards deploying machine-learning techniques to create tailored "predictive analytics" capabilities. This enables governments to build systems that learn and significantly improve targeting accuracy, remembering that no two governments' data or concerns look the same.

In a world where human trafficking and drug smuggling, for example, continue to impact societies, the methods and concealment techniques employed by organized crime continually adapt. It's our job to create capabilities that also continually adapt, keeping governments ahead of the curve when modus operandi change.

HOW DO YOU ADVISE GOVERNMENTS ON POTENTIAL HIDDEN COSTS?

Having designed and supported border security systems for more than twenty years, we have deep knowledge of the sector and the key players who operate within it. We always recommend our government customers proceed with caution with free software providers and ensure they're able to provide solid evidence and a robust cost analysis to support their claims; and compare these with other products and services available in the marketplace.

Governments need to realize it is vital to factor in the 'time' required to operationalize a free software solution.

The implementation lifecycle could be significantly longer than alternative solutions in the marketplace, and the time required to develop, integrate, test and deploy the solution may also vary by a significant factor. Other questions to consider are: Do we have enough of the right skills and resources in our organization and can they be made available to support this project full time? Who will own the process of engaging all of the carriers and ports operating in my country to ensure they deliver the right data in the right way at the right time? How much budget should be available for upgrades to infrastructure, integration and testing? How will you manage the ongoing operations and maintenance, including carrier data monitoring and issue resolution?

WHAT WOULD YOU SAY YOUR FUTURE GOVERNMENT CUSTOMERS ENTERPRISE NEEDS ARE AND WHERE DOES THE SCOPE OF THIS FREE SOFTWARE FIT WITHIN THOSE BROAD NEEDS?

Technology is constantly changing. And this demands a robust evaluation of the advantages and disadvantages of each solution and business case to identify any functionality gaps, hidden charges and/or unexpected costs in their deployment. We take immense pride in our work developing border security capabilities and are routinely called upon to either advise governments on their ideas or help bring them to life. Wherever possible, we will identify the least expensive routes to achieve their objectives but it rarely, if ever, involves integrating free software that could potentially cost our government customers significant amounts of money to deploy and maintain.

Jorge Ramirez is SITA's Advisor on Business Development & Market Analysis for Border Management and can be contacted via e-mail on: jorge.ramirez@sita.aero or by phone at +1 202 320 0481.



By Dave Harmon
Director, Business Development
UK and Europe

‘Drive Through Border’- Gatekeepers Value Proposition...

Gatekeeper has been at the forefront of automated border systems for many years and is already installed on large border systems to provide ‘**instant actionable intelligence**’.

The problem the Gatekeeper solution (as part of a total solution) addresses:

A) Automatic Instant Identification of:

- Vehicle
- License Plate
- Make/Model
- Colour
- Driver
- Occupants
- Container Numbers/Reference Details
- Trains, Carriages, Cargo Rolling Stock

B) Automatic Instant Virtual 3D Scanning of the Vehicles undercarriage

for Contraband, Foreign Objects or Changes made to the undercarriage.

C) Instant Alerting to any discrepancies or anomalies on any of the above multi-factor identifiers

D) Integration with Manifests, Customs Documents, Intelligent Cargo Seals and Border/Immigration Databases (as required)

E) Faster processing of Coach Passengers via the Gatekeepers Pedestrian Identification Clearance System (PICS)

HOW DOES IT WORK?

The Gatekeeper solutions are based upon award winning, independently verified and certified optical solutions.

Designated cameras and scanners operate in real time, allowing the flow of traffic to continue without stopping (unless slowing/stopping traffic is a preferred requirement).

Commercial (and private) traffic can be pre-registered for travel (on existing and new third-party databases and registration systems) and the information on vehicles, drivers, passengers, commercial loads/containers and expected time window of arrival at the crossing/control point. This information can be automatically provided to the Gatekeeper system.

As the vehicle approaches the crossing/control point the Gatekeeper Camera and Sensors automatically detect and recognise the vehicle by its make, model, colour and its license plate number.

In addition, the Gatekeeper Intelligent Occupant Detection Cameras can detect and recognise the faces of drivers and passengers through the windscreen glass (regardless of day, night and weather conditions).

Simultaneously, the system also has the ability to scan the underside of the vehicle and compare it to an exact image of this vehicle (should it have seen this

exact vehicle before) or from a similar make model and type of vehicle (if this exact individual vehicle hasn't been scanned before).

The complete scan takes less than 3 seconds to be completed, compared and analysed with any changes, foreign objects or anomalies detected being instantly alerted to the relevant operator or agency (with a accompanying images of both the anomaly, and the clean image of what was expected).

This allows the agency/operator to make an instant decision to flag the vehicle for further checks (this might be instantly or at a time and location of the agency's choice).

For coaches, the Gatekeeper PICS solution allows the passengers to simply disembark and walk past a PICS Camera Terminal. There is no need to stop individual pedestrians (the system can handle multiple faces simultaneously) and the system will automatically will alert the relevant operator or agency to any anomalies in the faces that are expected to those being viewed by the PICS camera terminal.

The complete scanning and identification system is managed by Gatekeepers Enterprise Management System (GEMS) which is specifically designed to securely operate on government and private networks and integrate seamlessly to pass and

receive relevant information with other connected control databases and platforms.

The system can be utilised to read the QR codes on intelligent cargo seals that can automatically and instantly link to manifest documentation and provide real time intelligence (and recall) on a cargo load passing a crossing point and confirming the vehicle carrying it is correct and the driver/passengers are as expected.

BENEFITS OF THE SYSTEM:

The Gatekeeper Solution has already been in use with border projects for many years and **offers an increase in throughput whilst also increasing security levels and providing real-time actionable intelligence.**

The ability to increase throughput and keep vehicle flows moving increases the flow of trade offering optimised returns in terms of taxes/duties and charges.

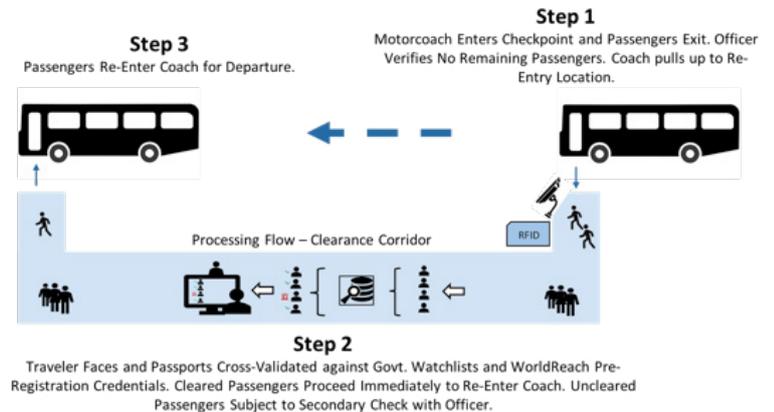
The automated operation of the system means that the higher costing and overstretched human input can be best resourced and focused. This focus can be on the anomalies and

Pre-Registered Info:

Document ID: XYZ123 ✓

Time Window Valid: 27 Sept 2019 ✓

Facial Matching: ✓

alerts generated by the system, whilst the conforming traffic and commercial loads can continue unstopped and faster, moving more securely and making the process a much better experience for both private and commercial traffic.

The system operates fully automatically and instantly, with images either being deleted as soon as they are sent as part of real time data packages to relevant third-party systems or kept as required by the agencies.

The system, if required can operate without displaying any face images to meet GDPR requirements if this is necessary or preferred.

The system in operation has already proved itself invaluable generating automated reports for multiple agencies.

EXAMPLES INCLUDE:

- A report showing one individual driver driving multiple cars and vans with multiple times over several days.
- A vehicle being recognised by its undercarriage scan, but showing that its license plates have been changed
- A vehicle being flagged as its colour or make had changed compared to its last passing the crossing.





Covestro – Henry Leung,
Global Segment Manager,
Identification, Specialty Films

Security Concepts for Passports and Identification Documents

INDUSTRY MARKET TRENDS

Globally, there is a continued trend towards the convergence of physical and digital identity to create secure identification documents which have multiple use cases on top of the main form of identification. Today, nearly 70 countries are participants of the ICAO Public Key Directory (PKD) program with the aim to facilitate interoperability of electronic passports across international borders. Core government identification documents such as passports and national ID cards typically have a validity period of minimum 10 years and hence need robust substrate materials to protect the document's physical data as with the contents embedded into the electronic chip.

WHY POLYCARBONATE SUBSTRATE FOR SECURE IDENTIFICATION DOCUMENTS?

More and more passport programs are incorporating electronic chip within the passport booklet polycarbonate data page. This is to safeguard the travelers' digital credentials including biometrics



data to interface with government systems for identity verification and adjudication via both manned and automated systems (border control e-gates, airport self-service kiosks and more). As such, a strong substrate material is required to protect the physical personalized elements on the passport data page as with the incorporated chip together with the digital contents. Covestro Makrofol® ID and Platilon® ID specialty films are

used in synergy to construct robust passport data page and passport booklet hinge to withstand the rigors of the citizen's international travels.

COVESTRO MAKROFOL® ID

Passport data pages and identification cards created using Covestro Makrofol® ID superlaser films can be laser-engraved with the holder's data and photo in higher contrast resolution than what is



for passport applications and identification documents considering multiple security needs beyond the next decade. With decades of expertise and curiosity for innovative material solutions, we offer our customers to always be one step ahead of the counterfeiters. Covestro specialty films are used in identification programs in over 30 countries. For more information, please visit our website at www.covestro.com and contact us at films@covestro.com

ABOUT COVESTRO

With 2018 sales of EUR 14.6 billion, Covestro is among the world's largest polymer companies. Business activities are focused on the manufacture of high-tech polymer materials and the development of innovative solutions for products used in many areas of daily life. Covestro has 30 production sites worldwide employs approximately 16,800 people (calculated as full-time equivalents) at the end of 2018. With its Makrofol® ID and Platilon® ID product lines, Covestro is the leading global supplier of polycarbonate (PC) and thermoplastic polyurethane (TPU) based specialty films which are used for manufacturing highly tamper-proof ID documents, such as identity cards, passports, driver licenses and border crossing cards. Covestro continues to develop new innovative material solutions to provide tomorrow's security needs already today.

possible in standard industry laser-reactive overlay films. The superlaser 3 layer film structure offered as a single layer enables better protection against forgery and counterfeiting since the laser personalization penetrates all 3 layers to create a forensic (level 3) data set. Furthermore, the personalization process is faster and less costly compared to conventional production methods.

LATEST CLEAR WINDOW CONCEPT FOR SECURE IDENTIFICATION DOCUMENTS

Covestro takes the clear window concept to a whole different level which will optimize the secure identification document construction process. At the same time, it makes things difficult for the bad guys to duplicate and counterfeit. This new concept in clear window technology is enabled using high opaque thin white polycarbonate film during the document construction process whereas the clear overlays can naturally fill the punched window space in the thin opaque white film.

This can also help create sophisticated window designs which are easy to verify while difficult to duplicate.

INNOVATIVE PASSPORT BOOKLET HINGE

In the passport arena, Covestro also offers a differentiated passport hinge solution via its Platilon® ID thermoplastic polyurethane (TPU) film with enhanced mechanical strength and longevity for opening and closing of passports with polycarbonate data page. This is critical for the durability and security of the passports.

Covestro Platilon® ID hinge solution exhibits very good bonding strength and flexibility with the passport polycarbonate data page. Passport booklets made from this material can be opened and closed an infinite number of times without affecting the flexibility or tearing at the hinge. The TPU film can also be stitched into a passport and offer enhance tear propagation resistance.

Driven by the desire to make the world a brighter and more secure place, Covestro invented solutions





Gav Watts, Commercial Director, Transport and Government

Deployment of Identity Management Technology within Border Management

INTRODUCTION

The IBMATA problem statement – *“The sheer volume and complexity of passenger movements across international borders demands a new approach to border control making best use of technology to facilitate growth without compromising security”*.

Breaking that down, the following are some elements relating to identity management that need to be achieved:

- Robust identification of people as early as possible in a process
- Provision of a frictionless experience for the many
- Maintenance of today’s security standards as a minimum

The challenges faced by authorities in delivering a safe and compliant border have many commonalities with businesses in other sectors. Parallels can be drawn to the financial services and high-volume sectors such as retail. Whilst the risk profile differs, the potential of a terrorist crossing a border versus financial crime or unlawful sale of age restricted goods, the same technological innovations in identity apply.

The use of a digital identity across the travel ecosystem and the delivery of a ‘seamless journey’ has long been talked about. Often the perceived barrier is a lack of maturity of the

technology to support such aims. We believe the opposite is in fact true.

Citizens can today create a reusable digital identity that combines their biometric with their government issued document. Through smartphone applications, of which Yoti is one, NFC technology can be used to read ICAO 9303 standard documents (and others using OCR technology), check the embedded security features and extract the data from the relevant data groups. Facial recognition technology then compares the extracted image of an individual to that captured through a liveness test, ensuring the same real person is carrying out the action. Where e-documents are not available it is possible to check against source issuers for document authenticity, thereby maintaining necessary security levels. An individual then has a digital identity that can be reused time and again.

APPLICATIONS

Within the travel space, an individual can use their digital identity to provide an airline, cruise ship or train company with the necessary information during booking or check-in. As the identity information has been extracted from a verified document the receiving company can be confident of its accuracy.

Cyber security is also improved as the identity can be used as a log-in authentication method, removing the need for weak username and password systems.

Further to this, the digital identity facilitates the creation of a ‘travel token’ remotely, prior to the point of travel, removing the need for onboarding kiosks (for those that wish to use a digital identity) within port departure estates – Increasing the value to all stakeholders and enabling passengers to use their face as their passport at key checkpoints and access areas.

The real benefit however, to individuals, businesses and Governments, comes from the network effect that digital identities create. An individual will use the same digital identity that they used to provide check-in details to an airline to also access Government services, make purchases on line and to carry out financial transactions. Businesses & Governments benefit from the volume of customers, who in essence, are pre-verified and do not require further KYC checks and individuals have friction free experiences with these businesses.

Looking at financial services - transactions are not limited by geographic borders and the increasing volume of on-line transactions and criminal activity require even more

robust identification means. The advent of open banking adds to this complexity. Financial institutions must therefore adapt processes and embrace technology to increase the speed and ease for the many whilst ensuring fraud and money laundering events are minimised. They must adopt a multi-layered approach to 'know your customer checks' and establishing a true identity is a fundamental step in this process. Digital Identities are starting to be adopted by challenger and traditional institutions for the provision of verified information, such as full name, DOB and Address, verified against government issued documents and third-party datasets (a traditional 2 plus 2). This dataset can then be supplemented with additional sources, such as mobile telephone data (Sim Swap, call divert etc) and other such sources to build a picture of an individual depending on the risk level of a transaction.

Governments, such as Jersey, Scotland, Estonia and other European countries and now recognising the benefits a reusable digital identity delivers. A one-time verification of a citizen can provide a single sign on solution to access all services an individual needs. The level of information required to be shared can differ depending on the reason for access. Thus, a tailored system is introduced that abides by the main pillars of the newly introduced GDPR. Government and local authority systems are streamlined, reducing OpEX and citizens experience a

frictionless on-line journey.

Let us now consider this network effect across the travel sector. An individual can readily share verified ID attributes to apply for their travel Visa or ETA, through a revised FES process. When the Visa or ETA is granted, it is pushed, as a third-party attribute, to their Digital ID wallet, allowing them to prove the right to travel if challenged. Checking in for a flight and creating a 'token' is seamless and you have the option to use your face at bag drop, security and the boarding gate. Further, as your frequent flyer details are in your wallet, a simple show of your face grants you access to the airline lounge. You can even use your digital ID to prove your age in the terminal where needed. On arrival at your destination your car hire collection is completed by verifying yourself with your digital ID, as you used it during booking – no paperwork and long queues. On arrival at the hotel your experience is transformed. Forms are not required, neither is the need to hand over your travel document, since you supplied it using your digital ID, which now also contains your room key for access.

SUMMARY

The elements relating to identity management identified were:

- Robust identification of people as early as possible in a process
- Provision of a frictionless experience for the many
- Maintenance of today's security standards as a minimum

Digital Identity technology exists today to deliver the above and we have described how other sectors have adopted these technologies to address similar challenges; those being, increased speed of throughput, enhanced customer experience and maintenance of security standards.

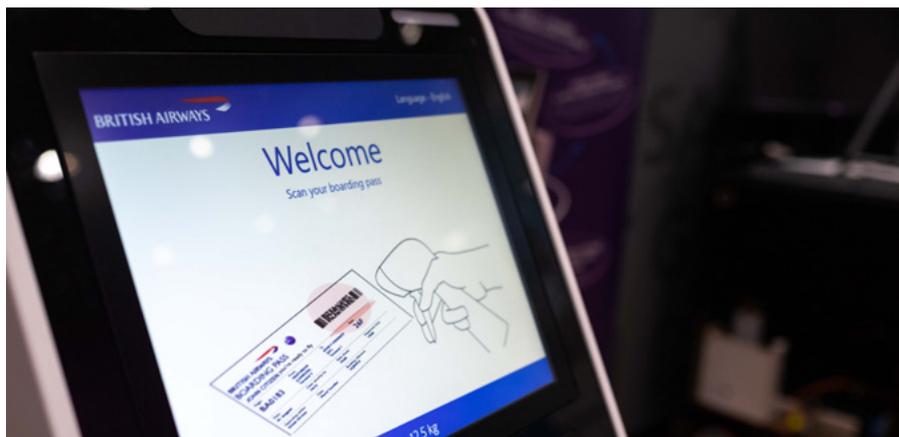
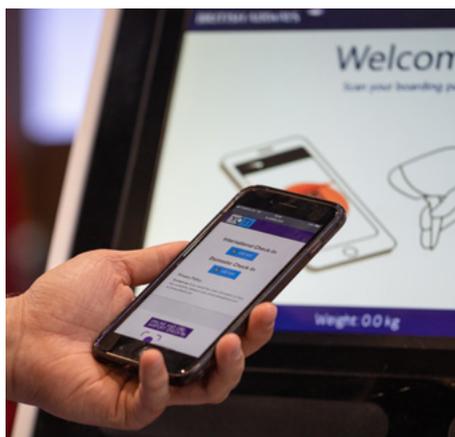
The difference across sectors boils down to 2 key points:

1. The level of information that is requested from the individuals
2. The risk level associated with the transaction

To point 1, the source of the information does not change. Individual identity information is harvested from a government / country issued identity document that has been authenticated and matched to an individual's biometric.

To point 2, to balance the risk across the travel / border sector it could be decreed that only chip read, or source data checks will be accepted for a digital identity. Banks manage this risk by carrying out additional checks depending on the nature of the transaction, based on the verified identity it receives in the first instance.

ICAO are seeking to define a set of standards that will govern the use of a digital identity. We would argue that these already exist, are used across other sectors today and what is needed is a risk framework against which to apply it.



Next-generation kiosks transform border security at Barbados' International Airport

Innovative technology expedites clearance process and improves passenger experience

Innovative Travel Solutions by Vancouver International Airport (YVR) announced the expansion of the border control program at Grantley Adams International Airport (GAIA) in Barbados with a total of 48 biometric-enabled kiosks now in use. This partnership utilizes ITS' industry-leading self-service global border control solution, BorderXpress, to enhance security, speed of service and improve the overall passenger experience.

“As air travel continues to experience remarkable growth, we understand the need for greater innovation to solve passenger processing challenges. As an airport operator ourselves, we prioritize researching and designing technology to improve the overall travellers' experience, not only at our own airport, but across

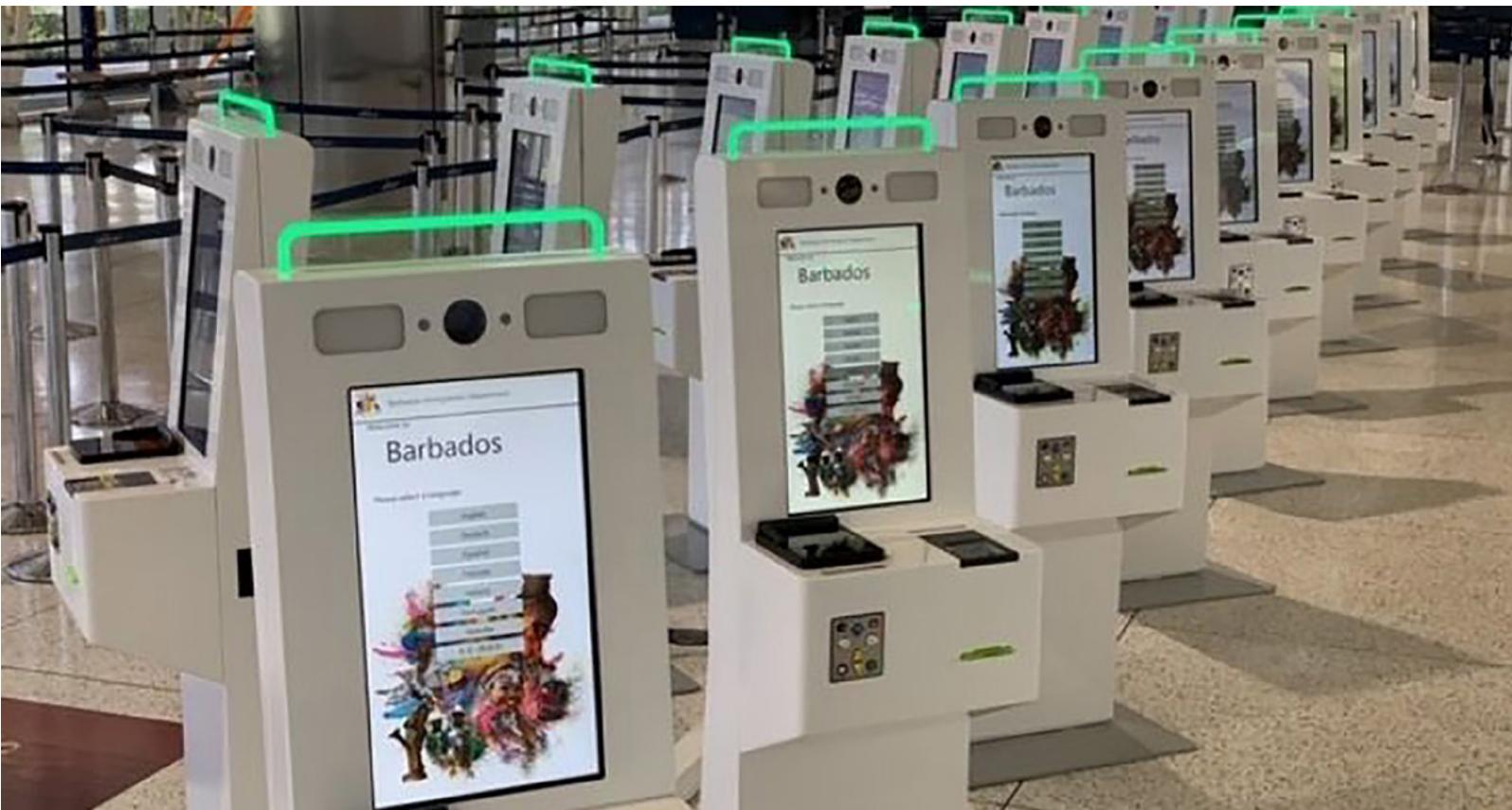
the travel industry,” says Chris Gilliland, Director of Innovative Travel Solutions, Vancouver Airport Authority. “We are proud to expand our global border control solution in Barbados. This is an exciting milestone for our team as we continue to work with airports and governments around the world to meet their critical passenger processing needs.”

BorderXpress was first implemented at GAIA as a pilot program with 16 kiosks in August 2018. The technology has simplified the border clearance process, significantly reducing wait times for passengers at GAIA. The program has now been expanded to include a total of 48 kiosks, available for use by all arriving passengers, expanding from the original use being limited to residents from

Barbados, the Caribbean Community (CARICOM) region and those who hold permanent or indefinite status in Barbados.

Using the kiosks, passengers scan their travel documents, complete their declaration and eligible travellers will verify their identity and admissibility using facial recognition technology before proceeding to a border services officer for final inspection. This process ultimately reduces time spent with the border services officers and decreases overall processing times for arriving passengers.

“The implementation of an additional 32 BorderXpress kiosks at Grantley Adams International Airport will ultimately simplify the border clearance process for all arriving passengers and reduce wait times significantly,” adds Gilliland.



“BorderXpress continues to prove its effectiveness globally and we are excited to explore new opportunities to optimize the border clearance process for passengers, airports and governments.”

BorderXpress kiosks are proven to reduce passenger wait times by more than 60 per cent. In a recently published White Paper by InterVISTAS, the study concluded that the use of kiosks for border control significantly outperforms competing technologies, such as eGates, providing a much higher throughput of passengers. This results in cost and space savings and supports border authorities, allowing their officers to focus on maintaining the safety of the border, rather than administrative duties. BorderXpress provides better exception handling, is fully accessible to persons with

disabilities, and can be configured with any desired languages. It can process any passenger, including families travelling as a group.

BorderXpress technology was developed by Innovative Travel Solutions, an independent business unit within Vancouver International Airport (YVR), named Best Airport in North America for 10 consecutive years. ITS specializes in delivering industry-leading travel technology to transform the traveller’s experience. Since 2009, ITS has sold over 1,600 kiosks at 43 airport and seaport locations around the world, helping more than 250 million passengers clear the border safely and securely.

ABOUT VANCOUVER AIRPORT AUTHORITY

Vancouver Airport Authority is a community-based, not-for-

profit organization that manages Vancouver International Airport (YVR). Canada’s second busiest airport, YVR served 25.9 million passengers in 2018. Fifty-six airlines serve YVR, connecting people and businesses to more than 125 non-stop destinations worldwide. In 2019, YVR was voted Best Airport in North America for the tenth consecutive year in the Skytrax World Airport Awards. Vancouver Airport Authority is a dedicated community partner and in 2018 donated more than \$1,000,000 to local organizations. We are committed to creating an airport that British Columbia can be proud of: a premier global gateway, local economic generator and community contributor.

By Jan Tomczyk, Currently Team Leader for the Asian Development Bank Mongolia Regional Improvement of Border Services Project. He recently helped carrying out the Feasibility Study for the Afghanistan National Single Window. He has worked for the EU, JICA, GIZ, USAID and for The World Bank.



Managing borders: the land border challenge

ROAD BORDER CROSSINGS

Road border crossings using international good practices have efficient border management, modern infrastructure and equipment, fast export, import and import cargo procedures, and contribute to alleviating poverty and economic development. Modern crossings using international good practices are needed to facilitate global value chains (GVC) and help attract foreign direct investment (FDI). Good border management at crossings balance the need for trade facilitation and security. In comparison crossings which are not “fit-for-purpose” because of the lack of modern infrastructure and management procedures which do not facilitate trade create time delays, long vehicle queues for export, import and transit cargo and congestion for car and bus passengers. There are now several projects funded by Governments and international donor agencies to rebuild border crossing points (BCP) to get more efficient and modern BCPs. For example, The World Bank and the European Union (EU) will change six BCPs in the Western Balkans and The Asian Development Bank (ADB) will rebuild three in Pakistan. Mongolia wants to modernize four roads and rail crossings and the Republic of Kazakhstan (RoK) is renovating some crossings. Turkey rebuilt several road crossings using their public-private partnership (PPP) model. Azerbaijan plans to rebuild the Red Bridge crossing and Moldova has a project to rebuild the Palanca

road crossing. However, there are a number of problems getting road border crossing building programs started and completed.

THE PROBLEMS

Modernizing a border crossing should get carried out using an integrated method in which the infrastructure, equipment and the import, export, and transit procedures all get changed as part of the same project. The integrated method has the objective of getting exports to markets faster. Unfortunately, this approach is not always the case because some border agency officials believe installing modern detection equipment such as an expensive vehicle tunnel X-Ray scanner is enough to solve border crossing capacity and security problems and leave out changing border management. This incremental approach to investment leaves the border with time-consuming procedures, repetitive paper document checks, and long traffic queues. This sub-optimum way might be a result of a “control” approach to border issues because they have not yet caught up with the integrating and “authenticating” method.

A recent study¹ describes the reasons for the time consuming and repetitive procedures at some border crossings “Uncoordinated and repetitive interventions of numerous inspection and border crossing administrations working in isolation on the same cargo were recorded at many border

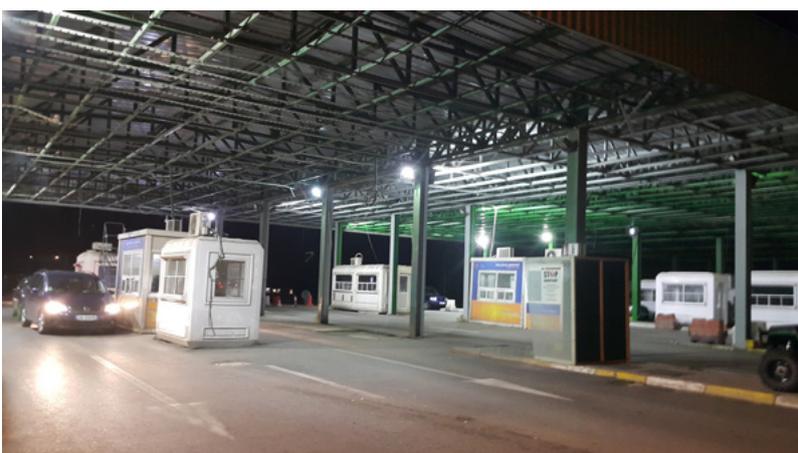
crossing points on the Euro Asian Transport Links (EATL) inland routes. Each administration would require its own set of documents to be cleared separately from others, which was considered as duplication. The problem often remained with the organization of customs procedures with each clearance procedure established separately by a responsible administration in isolation from others. Any optimization of those procedures from the perspective of a faster border crossing clearance, in particular through joint interventions and sharing of data and information remained to be undertaken. The procedures were thus quite unfriendly from the perspective of transport operators. The physical inspection was also done as customs authorities would often not trust documents cleared by customs authorities of a neighbouring country and would therefore physically inspect cargo to match the document information with the actual cargo count”.

Another study found “overwhelming evidence that shows improvements in border administration has the greatest impact on exports of corridor countries. Although physical infrastructure is important for trade, the Chinese government should place equal attention to improvements in trade facilitation to ensure trade routes operate seamlessly across the various corridors.”²

However, there are additional challenges (not to mention the

¹ Euro-Asian Transport Linkages (EATL), Operationalization of Inland Transport Between Europe and Asia, UNECE, Report No.3, 2019, p.160 https://www.unece.org/fileadmin/DAM/trans/doc/2019/wp5eatl/EATL_phase3.pdf

² China's One Belt One Road Initiative: The impact of Trade Facilitation versus Physical Infrastructure on Exports, Bala Ramasamy, Matthew Young, 03 May 2019 <https://doi.org/10.1111/twec.12808>



delays getting truck driver visas and corruption along transport corridors) facing Government officials, border agency staffs, international donors and consultants in reducing time delays and eliminating repetitive procedures and achieving seamless corridors.

CHALLENGES TO ACHIEVING INTERNATIONAL GOOD PRACTICE BORDER CROSSINGS

When planning BCP design and layout it is not enough for the planners, architects, and engineers to show where the process will take place because it is more important to describe how the process gets carried out i.e., the AS-IS. After analysing the AS-IS situation the renovated crossing needs the spaces (land and floor space) allocated for the new TO-BE procedures. Getting an improved TO-BE scenario involves solving a number of challenges.

In some instances, there is a lack of data to help plan border crossing modernization. Using past traffic statistics is important but other data is needed such as consistent key performance indicators (KPI) or

benchmarks. For example, the KPI should include the number of import and export declarations and how many where in error and why? In addition, how many trucks, cars, and buses were sent through the x-ray scanner as a percentage of total vehicle throughputs? How many trucks were targeted using risk management prior to their arrival at the border crossing? (This helps with staff allocation). How many seizures were made as a result of targeted risk management? How many prosecutions were carried out? How many persons were detected to have a virus as a result of a temperature scanner? How many import bans were made as a result of Phytosanitary and Quarantine laboratory testing? How many traders comply with the trade laws and how many have not?

Each border agency has a mandate but complex border management is not as efficient as it could be while each agency works in isolation; “silo management”. There is no border agency coordination forum or coalition for border crossing planning and operations. The solution is to foster

integrated border management (IBM) and prepare Memorandums of Understanding (MoU) to facilitate the exchange of information between border agencies and sharing data in real-time. Until there is a single forum which treats border crossings as a “system” initiatives and investment will remain piecemeal. The forum must include the KPIs, infrastructure, equipment, and design to get the operational objectives at all border crossings fulfilled and not just those of individual agencies;

Many border crossings get renovated and expanded without a border agency vision statement which describes the justification and objectives;

In the past, many border crossings were not built as solutions to global value chains (GVC) or trade facilitation. Instead, their traditional one lane in and one lane out resulted in creating congestion at the entries and exits and serve as barriers to trade adding cost and time. At one BCP the border guards make all vehicles wait outside the border between one and two hours before allowing them entry.



Jon Payne
Director, UK
WorldReach Software Corporation

The Time is Ripe, Thanks to Apple: Why Now is the Time for Digital Identity Verification



In May 2019, Goode Intelligence published an excellent report entitled Digital Identity & Document Verification. The report defines “eIDV” (electronic identity and document verification) as a digital means to establish that a person is who they claim to be. This includes onboarding into a system (for banking purposes, for example), or making an application to a government agency for a benefit of some kind. The report provides a comprehensive review of the use of eIDV systems around the world across a range of industries, including financial services, telecommunications and retail. It concludes that the use of such technology will grow rapidly in the next few years, but is constrained by a number of barriers, one of which was the inability of iPhone users to access the NFC (near-field communication) capabilities of their device outside the Apple ecosystem. But things are changing.

Before we get on to Apple, let’s take a step back. Why should those of us working in the immigration and borders world care about all this?

Because recent developments in technology are changing the way we think about solving operational problems. In particular, the old trade-off between security and facilitation is becoming obsolete.

Here’s an example. In the early 2000s, the US began to collect biometric data from overseas visa applicants (in the form of fingerprints) and the UK followed suit a few years later. Today, it’s commonplace for governments to expect visa applicants to provide a fingerprint biometric as part of the visa application process. But, in making visa processes more secure, we have – as a matter of policy – chosen to make them more cumbersome and less convenient for applicants. Despite the rapid growth of the visa outsourcing industry – providing commercial visa application centres (VACs) all over the world – the core problem remains: in order to apply for a visa, most applicants must travel to a consulate or a VAC for a biometric appointment and must surrender their passport and other personal documents for an unknown period. In some cases, applicants are

required to make a second visit later in the process. And all of this happens before the applicant is allowed to do what they want to do: travel to the receiving country to work or study or spend their money as a visitor. What if there were a way to get secure access to both the biometric and biographic information about an applicant without having to see them in person?

At WorldReach, we have been working on unlocking the power of the chip embedded in the e-passports that are now issued by the majority of governments. Given all the efforts made by passport agencies to embed a small computer full of rich data into the passport, shouldn’t we in the borders world make better use of it? This question has taken us into two innovative projects, in Canada and the UK. For the last couple of years, the two Canadian government agencies with lead borders responsibilities, IRCC (Immigration, Refugees and Citizenship Canada) and CBSA (Canada Border Services Agency), have been working on a prototype called the Chain of Trust. The ultimate aim of the project is

IDENTITY AND DOCUMENT VERIFICATION



to achieve zero wait time at the future border for admissible passengers, by making the enforcement and compliance processes more dynamic and responsive. As the industry leader on the project, WorldReach is pleased to be working with partners towards this aim. For example, using our eIDV service, low-risk travellers will be able to register using only a smart phone, remotely, from wherever they are. Our app allows applicants to register and authenticate their passport information – using their smartphone to read the chip – and uses the latest facial recognition technology to check that the applicant is in fact the owner of the document. Plus, there's an additional layer of security in the form of liveness – otherwise known as genuine presence – to confirm that a real, live person is making the application.

In the prototype, the above information is used by CBSA to assess the level of immigration risk associated with the application, and to determine how the applicant will be processed at the border. In some cases, this will involve in-person checks with an officer, but in many cases an applicant deemed to be low-risk will be directed to a walk-through biometric corridor, without stopping at a gate.

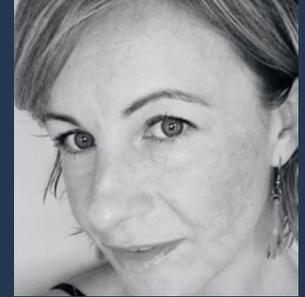
In the UK, the EU Settlement Scheme run by the Home Office is using the eIDV concept in an immigration context in perhaps its single largest live deployment. Because of Brexit, the freedom of movement previously enjoyed by other EU nationals living in the UK will soon come to an end. The UK government estimates that there are between 3 and 4 million people in this category, who are required to apply for a new “settled status” before December 2020, in order to continue living and working in the UK.

The above policy presented the Home Office with a new operational challenge, since applying for settlement in the UK usually involves filling out a lengthy form and sending personal documents – including passports – to the department in the mail. Some applicants are also required to attend a Home Office facility for an in-person interview. Given its awareness of emerging eIDV technologies, the Home Office chose to offer an entirely digital application process, and we at WorldReach are pleased to be a significant part of the solution. Although the EU Settlement Scheme began in public beta only in January of this year, followed by full release in March, the Home Office recently

announced that more than 1.5 million applicants had already applied for settled status. However, because of the lack of access to NFC on Apple devices, all those choosing the eIDV route had to apply on an Android device.

But now that restriction is about to change. Writing in *The Guardian* on 6 September, the Home Office minister, Brandon Lewis, said of the eIDV service: “More than three-quarters of applicants are choosing to use a specially created app to prove their identity. It’s available on Android and we will roll out an Apple version in October once the technology is available”. Access to the NFC capability of iPhones was provided to app developers in iOS 13.1, which was released in late September. So, one of the key barriers to the deployment of eIDV systems, as identified by Goode Intelligence, is in the process of being removed. Which means that convenient, secure identity verification services, using the latest in facial recognition and liveness technologies, will soon be accessible by the large majority of applicants with access to a smartphone.

In other words, thanks in part to Apple, the eIDV approach to managing identity is ripening. Perhaps it’s time for border agencies to take a bite.



By Alex Lock and Dawn Taylor,
Anglia Ruskin University

The role of universities in future compliance for students: an expert view

Anglia Ruskin University (ARU) is proud to be pioneering the use of new technology to confirm the immigration status and funding eligibility of students – from the UK as well as from abroad – while at the same time maintaining a friendly and welcoming experience for all our new students.

ARU is a Tier 4 educational sponsor with a strong track record of compliance. We have approximately 1500 non-EEA students studying with us from more than 40 different countries and a total student population of nearly ten times that number. Tier 4 sponsors have responsibility to act in accordance with the Immigration Rules and all parts of the Tier 4 Sponsor Guidance; this is demonstrated to the UKVI during institutional audits.

Since 2014 UKVI have included wording in the Tier 4 Sponsor Guidance requiring sponsors to take reasonable steps to ensure that every student has permission to be in the UK. This wording has evolved since then and now states that sponsors must: 'comply with all aspects of the Immigration Rules and sponsor guidance, and support immigration control, including by taking steps to ensure that every student at their institution has permission to study in the UK throughout the whole period of their study'. This is reinforced by the explanation that a serious breach of sponsorship duty is constituted by 'Operating in a manner that poses a risk to immigration control, such as failing to take steps to ensure non-EEA students have leave to remain in the UK'.

It is clear from the guidance that evidence of identity or immigration permission cannot be presumed by an individual's eligibility for student loans or via third party or documents received via email. Manual identity verification is slow; prone to human error and has inherent storage and retrieval issues so we determined at an early stage that a digital solution should be employed.

We secured buy-in from our senior management team to pilot a 'Right to Study' (RTS) initiative and engaged the services of 'Validate ID' in 2014. Validate is an identity authentication system that captures, verifies, extracts and stores key information from identity documents

Universities now operate in a global and predominantly digital market and it is increasingly rare that they will see their student applicants face-to-face at the admissions stage. To accommodate this the RTS checks were mapped to activities that occur at enrolment when our students collect their ID cards in person and the Validate scanners are used to quickly and simply authenticate their identity documents. The scanners allow us to retain all key information required by UKVI in relation to passports and visas; such as nationality, issue/expiry dates, type of visa etc. as well as an image of the document. We also accepted EU ID cards and driving licenses.

Using driving licenses proved pivotal for us in achieving an effective and positive student experience. A high proportion of our student population simply do not have passports when they start university. This is a clear distinction between RTS and right to work; whereas Right to Work has a fully defined acceptable document list there is no formal definition of RTS. Using Validate, we were able to extract the Country of Birth from driving licenses to identify those students who were born in a non-EEA country and request additional evidence of their residency.

A significant technical project has

seen the integration of data from the validate database into our own student record system. This is a further efficiency and ensures data integrity with a single primary evidence source necessary for regulatory compliance.

Following each enrolment period the Compliance Team then compile lists of students who do not provide their RTS documents and those where their documentation does not confer RTS. We then contact these individuals and follow an escalation process up to and including suspension of studies. The process has been successful within the University and has been running since September 2016.

RTS has brought the University closer to decisions taken by Home Office officials, multiple types of visas from different time periods and the inconsistencies across these. In one example a student was granted Indefinite Leave to Enter by UKVI; and when entering the United Kingdom was granted Leave to Remain in error. This was highlighted by our RTS checks and the University was able to support the student in having their immigration status corrected, avoiding significant future implications. We also have multiple cases of students where their Indefinite Leave to Remain has not been transferred from an older passport and we have been able to advise students what this means for them.

It would be remiss not to mention Brexit when looking at the future of RTS. All too often applicants' misunderstanding of nationality and domicile result in errors coming from self-declared data received via UCAS or our online application forms. RTS enables us to cross-check that the information presented at admission stage is accurate and importantly allows us to accurately monitor the recruitment of EU students and model the impact of Brexit on the University.

The decision to fully implement RTS in 2016 ahead of many in the sector has paid dividends as

the regulatory landscape continues to evolve. The Student Loan Company are explicit that Universities must see their students in person before confirming their attendance, which releases their loan payments, and the Office for Students expect that primary identity data is retained for all students studying at an institution. We have seen an increase in identity verification software solutions being used by the University sector to meet these requirements and we recognise that there is a need for greater collaboration between sponsors (employer and educational) and the Home Office. If we have learnt anything from Windrush, it is that individuals without traditional approved documentation must still be given the opportunity, and full support, to help them evidence their identity.

Currently identity verification checks for UK nationals can be more challenging than for their international counterparts; we are able to contact the Home Office to verify the immigration status of non-EEA nationals or students who have a passport. Students who only have a driving license or indeed no identity documents, as some students only have a birth certificate, cannot have their identity authenticated in this way. For us this is a key area that will need to be addressed and we are watching how the government intends to develop the use of digital identities with interest. The call for evidence has been answered and we welcome the opportunity to share our experiences to support a solution that is fit for the future.

Anglia Ruskin University will continue to undertake RTS checks for all our students and from September the scans themselves will trigger electronic notification to the Student Loan Company to confirm loan eligibility. We believe this is a first for the sector, with ARU continuing to pioneer compliance in response to an evolving regulatory landscape. Post-Brexit this will continue to shift and change, but we are ready!



By Shenali Jashani
Business Consultant,
Consulting and
Professional Services

A Seamless and Secure Border— Fujitsu's Vision for the Future UK Border

SUCCESSFUL BORDER MANAGEMENT MAINTAINS NATIONAL SECURITY WHILST ENHANCING THE FLOW OF TOURISM, IMMIGRATION AND INTERNATIONAL TRADE, DRIVING GDP GROWTH TOGETHER WITH BOOSTING THE ECONOMIC COMPETITIVENESS OF THE COUNTRY. AS THE WORLD BECOMES MORE INTEGRATED WITH TECHNOLOGY, GOVERNMENTS ARE TAKING STEPS TO INNOVATE, AUTOMATE AND DIGITISE THEIR BORDER OPERATIONS. THEY ARE OPTIMISING THE FLOW OF PASSENGERS THROUGH PORTS OF ENTRY AND STRENGTHENING SECURITY. TECHNOLOGY HAS CREATED A PARADIGM SHIFT IN THE MANAGEMENT OF BORDERS GLOBALLY BOTH BY ENABLING NEW CAPABILITIES AND GENERATING NEW THREATS.

From the universal propagation of smartphones and fibre-optic internet networks through to self-learning AI algorithms and driverless vehicles, globally we are at a point of exponential change and growth. Technological advancements have changed our everyday lives in ways that were inconceivable less than a century ago. We rely on our ability to access our phones, computers and laptops to interact with the world around us. Paper documents and face-to-face appointments are quickly becoming extinct and instead replaced with completely digitised processes.

This is true for the world of borders and border management also. Borders today are no longer simply the physical frontier. They are a series of transactions and processes beginning from the moment a journey is booked through to a passenger arriving at their final destination. In this way, border agencies must consider the 'end-to-end' journey of a traveller as opposed to only the border crossing points. This means

documents and databases filled with carrier and traveller information need to be accessed quicker and more remotely than can be achieved with paper documents or legacy systems. New advancements in technology offer limitless capabilities for border agencies to collaborate to manage the flow of the ever increasing number of travellers whilst maintaining high levels of security. For at its core, the purpose of the UK border is to facilitate the genuine movement of the majority of people whilst protecting the UK from the minority that is harmful or non-compliant and who seek to undermine its security and integrity. This purpose is fulfilled in a number of ways by several government departments, most specifically the Border Force, who are responsible for frontline border control operations, performing immigration and customs' controls at 138 air, sea and rail ports across the UK¹.

There are a number of key challenges facing border agencies both in the UK and around the world.

The number of people travelling is increasing every year, predicted to be 1.8bn by 2030², and so the significance of the travel and tourism sector to the UK economy grows. As technology becomes more sophisticated, so does the criminal activity that harnesses it. Border agencies are expected to handle and prevent security risks across the entirety of the UK border whilst also not negatively impacting the travel and tourism industry. This is a delicate balance; one that is further exacerbated by the UK's imminent exit from the EU currently expected to occur on 31st October this year.

The EU exit also carries a number of its own challenges, as the UK will end the free movement of people meaning EU citizens will be unable to travel, work and reside in the UK without a visa and vice versa for UK citizens currently living, working and studying abroad in EU member states. EU citizens will also no longer be able to use the eGates at UK airports and finally we may lose access to EU security systems such as SIS II.

These new issues, alongside the

¹ <https://www.nao.org.uk/wp-content/uploads/2013/09/The-Border-force-securing-the-border.pdf>

² <https://databank.worldbank.org/data/download/GDP.pdf>



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existing challenges faced by UK border agencies, have undeniably caused concern for both government and industry. However, these do not need to be viewed only as a negative. With the EU Exit demanding change, the UK government now has the ability to transform and enhance border operations to place the UK as a leader in the global rankings for GDP. To highlight, the global travel and tourism industry is predicted to be worth £257bn by 2025, and will account for almost 10% of the UK's GDP³.

Around the world, new approaches to managing the border have

been introduced, which enable tighter security and smoother flow through the border. The most successful approaches encourage pre-notification, increased data sharing and analysis and more secure verification of identity. Facilitating a seamless journey using technology, which can digitise and automate processes, will continue to attract visitors to the UK and enrich the UK economy. This applies not just for short-term travel but also with regards to administering long-term entry to the UK.

Globally there has been a shift to create a seamless and secure end-to-

end journey for passengers; this is being endorsed by the travel industry and is now being incorporated into aspects of border management. The secure verification of identity forms a significant part of border management and needs to be performed at multiple points throughout a journey, including for both short and long-term stays. Technologies which enable this principle include the extensive use of biometric data for ID verification throughout the journey and the move to a full digital identity.

If border agencies are granted access to passenger details well in advance of arrival then they

³ <https://www.visitbritain.org/visitor-economy-facts>

⁴ <https://www.basistech.com/news/congratulations-and-thank-you-to-benson-margulies/>



have more time to process checks and provide clearance of entry for low risk travellers. This allows for both more thorough checking and better allocating of resources to high-risk travellers at the physical border. Technologies which enable this principle include granting Electronic Travel Authorization (ETA), Advanced Passenger Information (API), Passenger Name Record (PNR), Trusted Traveller Schemes, eVisas, eGates and surveillance technology such as satellites and drones at the physical border.

Management of the border is a complex task involving a number of government departments and agencies. As the world becomes more integrated, the number of parties involved at the border also grows. High levels of coordination and the sharing of data between both domestic and international border agencies is thus vital in forming an integrated view of the border. Technologies which enable this principle include increased data sharing and collaboration and AI led analytics e.g. BasisTech's Natural Language Processing (NLP) AI uncovered the 2006 liquid bomb plot⁴.

Fujitsu's vision for the future of the UK border is to harness new technologies to facilitate seamless and secure travel for all. We recommend employment of biometrics for identity verification, extensive data sharing and collaboration, advanced AI-led risk assessment and physical monitoring technologies such as

drones to improve security, and procedures and technologies that increase processing speed at the border such as eGates and biometric tunnels.

The full vision encompasses key technology components including a Digital List of Travellers, Efficient Inter-Departmental Data Sharing, Advanced Risk Assessment, Operations Centre & Monitoring and Process Optimisation & Digitally Enabled Workforce. These components seek to revitalise, optimise and fully enhance UK border operations across all land, sea and air ports.

It should be noted that we recognise these to be long-term objectives. To become fully effective each component would need to be designed, implemented and integrated in line with government policy and viewed as part of a larger future border strategy.

In order to achieve this full vision, Fujitsu recommends beginning by testing initiatives by running a number of Proof of Concepts (PoCs) to test new technologies and the benefits they promise. Start small, deliver early successes and build towards the longer term vision.

The initial POCs we recommend include:

1. Trialling Digital Identity solutions which underpin a range of strategic capabilities such as; VISA and residency self-service applications, and enhanced Trusted Traveller services.
2. Testing Biometric technologies to

strengthen identity management, and support seamless 'flow' through ports of entry for visitors.

3. Exploring smart monitoring technologies for Unmanned Coastal Ports and channel crossings.

For over 40 years, Fujitsu has been a trusted provider to the public sector through the delivery of nationally critical services. This expertise encompasses those specialist fields primarily affected by EU Exit, including the movement of people and goods, security of the borders, the collection of duties, revenues and payment of benefits.

Our services touch 99% of the UK population each day and this expertise provides a deep insight into the options available to both address the challenges and maximise the opportunities of EU Exit, whether through the application of today's technology or the exploitation of emerging technology which can transform UK border performance.

Committed to driving sustainable economic growth, Fujitsu has brought together over 50 years of experience of working with government and border departments into a working group of subject matter experts, business consultants, architects and engineers. Led by Frank Dunsmuir, the group's goal has been to explore, evaluate and document how current and emerging technologies can drive UK GDP growth through transformation of UK border performance.

By **TONY SMITH CBE**
Chairman, International Border
and Technologies Association.



Borders, Frontiers and Backstops



IN THE EU, THERE IS MUCH TALK ABOUT THE 'INTERNAL FRONTIER' AND THE 'EXTERNAL FRONTIER'. THIS PRESUPPOSES THAT THERE IS SOME KIND OF 'OUTER CIRCLE' THAT DEFINES THE EDGE OF THE ZONE CONTAINING THE EU 28 COUNTRIES; WITH INTERNAL BOUNDARIES DEFINING THE BORDERS OF EACH SOVEREIGN STATE WITHIN IT. WITH FULL BORDER CHECKS AT THE EXTERNAL FRONTIER AND NO BORDER CHECKS AT THE INTERNAL FRONTIER. RIGHT? OR WRONG?

Despite the best efforts of the EU institutions, six Member States remain outside the 'borderless' EU Schengen Area – Ireland, the UK, Romania, Bulgaria, Croatia and Cyprus. Of these, the latter four are committed to joining; but the UK and Ireland are not. Although the Customs Union permits the free movement of goods within it there is a myriad of regulations about what documentation needs to be submitted to Customs Agencies along the way. There is no EU wide customs agency – each Member State has their own customs department, and internal checks on goods moving within the EU still exist in many ways.

The EU withdrawal agreement has faltered three times in the UK parliament, which has ultimately led to the downfall of the former UK Prime Minister, Theresa May. Members cannot agree a deal about how to control goods moving across the land border between Ireland and Northern Ireland. The only solution so far has been to introduce a "backstop" border in the Irish sea, thus enabling a separate regulatory arrangement on the island of Ireland to the island of Great Britain. This would eliminate the need for a border control between Northern Ireland and Ireland. However, the backstop puts a 'border' between Northern Ireland and the rest of the UK; something that offends the Union of Great Britain and Northern Ireland, which May said "no British Prime Minister could ever agree".

Many commentators argue that it would be impossible to introduce any form of border control which eliminates a physical check, inspection point or border infrastructure at the land border between Ireland and Northern Ireland. Either the UK stays in the EU Customs Union; or we have a "backstop" in the Irish sea which distinguishes Northern Ireland from Great Britain. Any potential technical solution for an "invisible border" on the island of Ireland has been belittled by opponents as a "unicorn".

This ignores some fundamental points. First is a long standing and hard-won bilateral agreement between Ireland and the UK to preserve peace on the island – the Belfast (Good Friday) Agreement. This demands North, South and East, West collaboration between the two countries – most significantly dismantling any form of government control (or even the perception of such a control) that might threaten the peace and stability of the communities who live there.

Second is a "Common Travel Area" that was agreed between the UK and Irish governments upon the creation of the Irish Free State in 1923, which allows for the free movement of people between the two countries without any form of passport control.

Third, there are already checks taking place on people and goods moving by air and sea between the island of Ireland and the island of Great Britain for veterinary and security purposes,

which do not threaten the sovereignty of the United Kingdom of Great Britain and Northern Ireland.

Placing additional checks in the ports and harbours of the islands of Ireland and Great Britain - and agreeing some other forms of regulatory compliance between Ireland and the UK without impeding the decision of the UK to leave the EU - should be achievable without offending the sovereignty of the UK, the principles of the 'EU external border', or the arrangement that already exists for 'free movement' between Ireland and the rest of the EU.

By adding a technology overlay for non-intrusive checking and tracking goods across borders - something already in widespread use across the EU Customs Union anyway – we might be able to come up with an alternative arrangement to the Irish backstop which would appease parliamentarians on all sides of the argument. We could then stop arguing about myths, legends and unicorns; and move on to the more important issues about how to build a peaceful and prosperous future relationship between the UK and the EU – and especially for the people of Ireland and Northern Ireland themselves.

You can find out more about the work of the Alternative Arrangements Commission here <https://www.prosperity-uk.com/>



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