



Smart Borders
Increasing security
without sacrificing mobility

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Executive Summary

In 2015, global commerce is projected to be worth over \$300 billion. The interlinked and international nature of this economy makes exponential growth quite lucrative, yet this economy also becomes increasingly susceptible to a range of risks from organized crime and terrorist groups to emerging technology. Take 3D printing—the technology has been around for decades but now that it is commercially viable and readily available, it presents a myriad of unprecedented threats. With anyone able to print any physical object for which a blueprint exists, this technology has the potential to fundamentally change the economies of scale for small, innovative enterprises and may revolutionize the entire manufacturing industry. Dynamic disruptions, such as these, will force governments and industry to re-imagine policies and business practices related to the movement of goods and people to remain competitive in this new global order. Governments, in particular, will have the opportunity to envision and realize Smart Borders—a border security and management paradigm that can create safer, more standard and cost effective demarcations.

This report describes how governments can apply the following principles to transform the way they secure and manage their borders:

- 1. Make a safer border by employing risk based decision-making**
- 2. Improve standardization by normalizing data requirements and partnering across borders**
- 3. Increase cost savings by consolidating government functions at the border**
- 4. And innovate at the border by enabling the ecosystem to bring commercial and community solutions**

Smart Borders can help government get back to basics, empowering public servants, industry and the community to work together to solve the most pressing economic and security problems—from issues affecting local communities to those that transcend national borders.

By Sean Morris, David George, Alex Haseley, Nes Parker and Becca Sherman

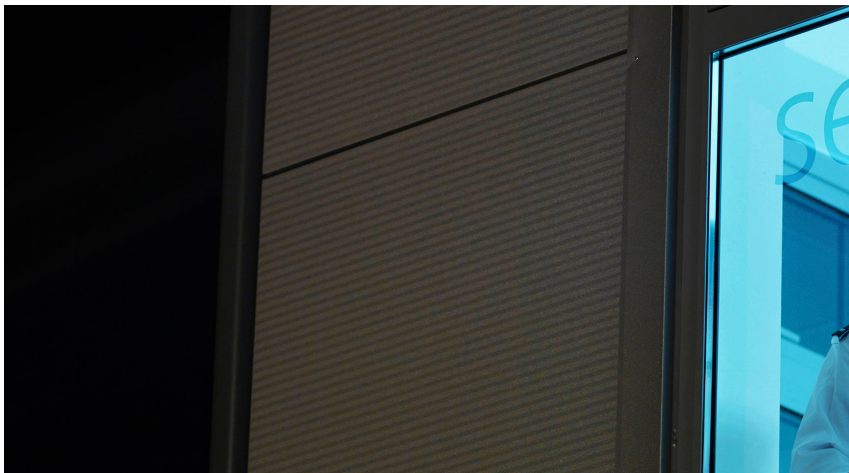
For additional information, please contact us at GlobalMBMTeam@deloitte.com

Introduction

Our borders have been transformed from a static line on a map to an ecosystem for shared decision making and real-time collaboration that empower government and industry to work together to create safer, more standard and cost effective perimeters.

Border security and management is a broad term encompassing a vast range of national security, economic, and socio-political functions. From developing economies utilizing World Customs Organization (WCO) guidance to build border security capabilities, to nations with established, integrated border security constructs, to integrated border security between nations who collectively work to increase protection beyond their own borders, migration and border management has been addressed in different ways around

the world. An increased focus on the physical security of goods and people moving across borders in response to 9/11 and an overall global emphasis on counterterrorism has caused a systemic shift in the border security landscape. Almost seventy years ago, the global order faced similar shocks. In the wake of the Second World War, the U.S. and UK, and soon after Canada, Australia and New Zealand became an alliance of intelligence operations by signing the Five Eyes agreement. This pact established an alliance of five English-speaking countries for the purpose of sharing intelligence, especially signals intelligence. This agreement is considered by some to be the most exclusive information sharing club on the planet, but at the very least serves as a powerful case study



for cohesive policymaking. These five developed economies utilizing collaborative border management thereby represent a bright spot in this global order as their agreement continues to protect national interests of all members as it relates to national and border security.

The evolving international economic and security environment signals a need for increased intelligence cooperation. Governments seeking to encourage the success of their citizens and businesses should consider new and innovative measures to mitigate the impact of two converging issues, namely heightened security and the exponential increase in the flow of populations and goods.

This report explores what those measures could look like through an examination of the efforts of the Five Eyes, namely: Australia, Canada, New Zealand, United Kingdom, and the United States. These nations belong to a strong alliance, but are also testing methods of meeting both national security needs and free trade. Through this examination, a balanced and efficient approach, a vision for Smart Borders emerges—that vision includes safer, more standardized, and cost-effective borders.



The following developments set the stage for emerging solutions with border security efforts in the Australia, Canada, New Zealand, United Kingdom, and the United States:

Australia has taken a recent conceptual leap – double-hatting the National Director of Intelligence in the Australian Customs & Border Protection Service as the agency’s Chief Information Officer to drive an intelligence-led approach to border information management and analytics.^{vi}

New Zealand’s Ministry of Business, Innovation and Employment is looking to enhance existing immigration services with a more customer-centric design and strong emphasis on online interactions. It’s also aiming to establish trusted partnerships through for example universities.^{vii}

The United States and Canada recently launched the Beyond the Border Economics Action Plan to make trade and travel easier. This agreement highlights a shared approach to addressing both internal and external threats.^{viii}

The United Kingdom recently created three distinct but connected borders and immigration organizations within the Home Office to help improve clarity of accountability in delivering the department’s objectives. The three functions have clear roles and priorities around the visa system, border security and immigration enforcement, with the rest of the department being re-configured to support them in delivering their mission.^{viii}

Trends from Across the Globe

Consider the current state of the flow of goods and people in some of the largest economies in the developed world:

- Australia processed more than 31 million international air and sea passengers between 2011 and 2012; that number is expected to reach 50 million by 2020.
- In New Zealand, the total value of overseas merchandise imported as a percentage of GDP was nearly 25 percent in 2008.
- More than 86 percent of all U.S. merchandise trade by value with Canada and Mexico entered or exited the country through surface mode of transportation in 2012. The value of U.S.-NAFTA goods transported by truck alone was US \$665 billion dollars.
- More than 210 million passengers passed through UK airports in 2010, with 2 million air transport movements.



As these nations' economies grow and recover from recent downturns, global trade will only increase. Although the trade outlook is sluggish, the World Trade Organization does forecast an uptick of 5 percent in 2014. Unfortunately, even this slow rate of movement between nations is being met with a global trend toward congestion at the border. Industry and individuals consistently suffer through long lines and delays at high-volume, overburdened, and sometimes redundant checkpoints.

The key issue plaguing immigration and customs agencies is the resources needed to undertake the critical security screenings required of both people and goods as they traverse the border. As the volume and speed of trade transactions increase, inadequate infrastructure and manpower are not easily scalable to meet the growing needs, including increased trade, more complex supply chains and the increasingly sophisticated criminal activity. For example, the U.S. Government Accounting Office has stated that levels of staffing for Customs and Border Patrol officers are lacking. The National Travel and Tourism Strategy Task Force on Travel and Competitiveness recommends investing infrastructure in the United States—for both the Canadian and Mexican border crossings—to ameliorate long wait times. And the Beyond the Border Action

Plan—proposed by U.S. President Obama and Canadian Prime Minister Stephen Harper—calls for increased flow of trade and travel between Canada and the US via increased investments (including cyber) in infrastructure and technology at 120 points of entry along the border.

While a long wait time may seem like a small inconvenience in light of the very real threats of the post-9/11 world, there is no question they have a very tangible effect on trade. As of 2005, delays in getting trucks carrying freight across the U.S.-Mexico border were estimated to cost the two economies \$6 billion and more than 51,000 jobs. An increase of just 15 minutes was expected to cost an additional \$1 billion in productivity and 134,000 jobs in the border region. It is now estimated that the cost of congestion to the regional economy at the U.S.-Mexico border in 2012 was \$12 billion—with a wait time of 99 minutes.

Emerging Solutions for Smart Borders

How can a government provide enhanced security while at the same time facilitating the rapid and efficient movement of goods and people? Australia, Canada, New Zealand, United Kingdom, and the United States have all instituted stricter security measures in the past decade and, as a result, now contend with this issue and are rethinking their border flow strategies. Each have worked to implement a variety of organizational restructuring, technological investments, and bilateral cooperative agreements in an attempt to bolster security without compromising economic progress. These approaches have produced varying results and a wealth of lessons learned.

Upon examination of these efforts, four solution areas have emerged that deserve special consideration when constructing a long-term vision for border security and management:

- 1. Make a safer border by employing risk based decision-making**
- 2. Improve standardization by normalizing data requirements and partnering across borders**
- 3. Increase cost savings by consolidating government functions at the border**
- 4. And innovate at the border by enabling the ecosystem to bring commercial and community solutions**

By leveraging these countries' past experiences and successes in these areas, governments will be better equipped to build an effective border security solution.

1. Make a safer border by employing risk based decision-making

As a first step, establishing common assessment criteria and mutual guidelines for identifying, segmenting, and addressing risk is necessary in order for agencies to reach agreement on high priority risk areas and drive risk-based resource allocation. In this setting, integrated risk assessments prioritize emerging vulnerabilities and enhance individual and shared border security efforts. This approach requires government organizations to be adaptable, using resources where they are needed, when they are needed, regardless of the country – both at the physical border and at other critical transit nodes and checkpoints.

Early success stories have come out of co-habitation of intelligence/fusion centers. Many of these centers use automated technology platforms and solutions to support information sharing, and have helped address threats early by bringing leads to an appropriate law enforcement resolution.

Shifting to a risk-based approach that deploys the most effective inspection and scanning technologies to detect and prevent the entry of hazardous materials, goods, and terrorist weapons is another important component. Policy changes can include advanced

screening programs which determine that containers that pose a potential risk for terrorism are identified and inspected at foreign ports before they are placed on vessels destined for their designated country. The US Customs and Border Patrol's Container Security Initiative is a real-life example. And the technologies that enable this type of screening include mobile Non-Intrusive Inspection (NII) which detect and interdict weapons, narcotics, currency, and other contraband hidden in commercial shipments; large-scale x-ray and gamma-ray imaging systems, radiation detection technology; portable and handheld devices. Five eye countries have also deployed "Green Lanes" which accelerate the flow of legitimate goods for low risk cargo at ports of entry and trusted traveler programs which work similarly but for individuals.

Yet, these risk assessments can only be effective if they are supported by ample information sharing between agencies and governments, particularly as it relates to travelers' biographic information, good content information and risk profiles.

What can governments do today to start employing Smart Borders?

Establish an integrated and dynamic, intelligence-driven, risk model that is shared across governments. Such a model can provide enhanced targeting capabilities and create a more agile approach to border management and enhancement.

Australia is currently ahead of the curve in terms of a national risk-based approach to border intelligence. According to the CEO of the Australian Customs and Border Protection Service in 2001, Australia employs an intelligence-led risk based approach for border security, understanding that the majority of travelers and goods do not present a high risk. The process allows for a pre-arrival risk assessment to facilitate processing for travelers who pose low risk, with a second layer of intervention at the physical border, often through biometric technologies. In 2010, the Australian government invested \$69 million to introduce a biometric-based visa system for only certain non-citizens.

2. Improve standardization by normalizing data requirements and partnering across borders

The standardization of data requirements significantly increases the efficiency and effectiveness of information sharing within and between governments and industry alike. In order to standardize data effectively, governments should first begin to utilize a shared risk model across its security agencies, to promote information sharing within its own borders. A clear, common risk model can improve communication between law enforcement arms, improving performance and coordination across multiple areas of border security. However, in order to implement collaborative border management, partner governments must also standardize the types of information collected, and the processes for doing so. Efforts to unify data requirements are most effective when governments are capturing and using the same type of information to drive decision-making at the border. This element is especially impactful for those in the law enforcement community. By sharing information collected about passengers and cargo, participating governments and industry stakeholders can streamline individual data-collection efforts and

strengthen overall security and efficiency through the use of consistent and accessible data.

In 2008, the U.S. government launched the Air Cargo Security Program. It was created to meet a congressional requirement for 100 percent screening of air cargo carried in passenger aircraft. While it is also intended to bolster counterterrorism efforts, the program has direct impact on trade facilitation, namely it also aims to promote specific data requirements for the processing and shipping of all air cargo. In 2012, the U.S. Transportation Security Administration (TSA) and the European Union announced an air cargo security partnership to pave the way for improved information sharing, security measures, and efficient transportation of cargo across the Atlantic. Over twenty percent of all EU outbound air cargo went to the US in 2010, and that traffic alone totaled over 1 million tons. TSA also uses a unified system of cargo screening methods and technologies.

Similarly, the Beyond the Border Agreement was signed in 2011 by the Canadian and United States

governments. Based on the fundamental notion that the border security of both Canada and the United States would be strengthened by integrating processes and sharing information related to trade, cyber security, counterterrorism, and law enforcement, the agreement demonstrates a commitment to security, mobility, and privacy through the adoption of several critical trusted traveler initiatives.

Another potent example of neighboring countries partnering to increase the mobility of their citizens is in the Schengen area. The Schengen states are a group of 26 European countries that have abolished passport and immigration controls at their common, internal borders, while simultaneously tightening common external border to ensure the security of those living or traveling in the Schengen area. Central to this cooperation are the “Schengen rules” that establish the legal framework for collaboration that are best embodied in two information sharing systems. The Visa Information System (VIS) allows the Schengen States to exchange visa data, while the Schengen Information System

(SIS) allows for exchanges of data on risk groups and goods, including suspected criminals, people who may not have the right to enter or stay in the EU, missing persons and stolen, misappropriated or lost property.

Continuous improvements to the existing information sharing systems as well as the legal framework have been imperative for the Schengen States. Most recently, in February 2013, the European Commission proposed two new important instruments as part of its “smart border package”. This proposal has the dual objective of facilitating the entry of frequent travelers to the EU by means of a “Registered Traveller Programme” (RTP) and improving the monitoring and information sharing relating to overstayers through an “Entry/Exit System” (EES). The RTP would allow certain groups of frequent travelers from third countries to enter the EU using simplified border checks. The EES would serve to record the time and place of entry and exit of third country nationals travelling to the EU and to alert Schengen countries of overstays.

What can governments do today to start employing Smart Borders?

Standardize data collected across customs organizations. By adopting a global standard, nations will create uniformity and consistency in data requirements and information, which will create a ripple effect across the entire supply chain. Allowing countries to share and report export data regarding the flow of goods in and out of countries will result in a thinner border through the reduction of repetitive checkpoints. If Canada collects information regarding exported goods that cross to the United States and shares that information with U.S. Customs, the system has facilitated trade between countries and prevented duplicative security efforts by both the Canadian and U.S. governments. From an intelligence perspective as well, coordination and collective action for information-sharing can result in benefits for all parties involved. Additionally, there are opportunities to create open sharing agreements around biometrics data as many nations individually collect this information.

An example of a global standard is the World Customs Organization (WCO) Data Model. To expedite universal data standardization, the model aims to simplify and standardize data requirements of cross-border regulatory agencies, including customs. The harmonized data requirements are derived from cross-border regulation and are updated on a regular basis to meet the procedural and legal needs of cross-border regulatory agencies. The effort is part of the WCO's core mission to advance the notion of "collaborative border management" and the development of a cross-border, "single window" concept and, ultimately, the "single submission" of data.

The standardization of data and data requirements—especially biometrics—faces impediments restrictions, however. For example, shippers and industry stakeholders are subjected to internal regulatory and compliance requirements in each country. Depending on the specific item, comprehensive data standardization may not be feasible. However, even the minimum amount of standardization can have an impact. According to the International Air Transport Association (IATA)—a private trade organization of nearly 250 airlines—the cost of non-standard passenger data programs, in terms of IT development, data extraction, and transmission has risen to unacceptable levels in recent years. An airline spends on average \$382,000 a year just to update and maintain the system to transfer passenger data to governments—and it is all non-standard. Right now 39 countries require an airline to send advance passenger information (API) data before the flight's arrival and 32 more plan to introduce similar requirements in the near future. IATA is working to harmonize their requirements for API-type data, which is too often inconsistent and non-standard across countries, with global standards and guidelines.

3. Increase cost savings by consolidating government functions at the border

Many countries have moved beyond existing concepts of collaborative border management to actually consolidating around functions. By streamlining and fortifying border security operations, multiple countries have consolidated governmental agencies and related border functions to allow agencies that were once separate to pursue the security of the border in tandem with trade and immigration. In this paradigm, border security becomes an integrated way of addressing national security, community protection, biosecurity, trade and immigration issues concurrently. Not only can this improve the oversight of security issues related to the flow of goods and people, but it also enables a critical holistic view of operations and opportunities to streamline inefficient trade and travel security procedures.

For these reasons, in 2003, the United States stood up the Customs and Border Protection Agency (CBP) as the centralized agency within the Department of Homeland Security charged with managing border security as well as facilitating immigration and trade. CBP consolidated border security agencies as well as their mission: immigration, customs, and agriculture protection. This policy change became a force multiplier.

But consolidation also has its challenges. Once agencies and departments are combined, the overall mission can become very large and unwieldy. The UK's recent creation of three distinct but closely connected functions out of what was the UK Border Agency (UKBA) illustrates the need to balance the benefits of integration with the retention of a clear focus and mission.

As the scope of border security continues to evolve to include a focus on immigration, commerce, and consumer protection, consolidation will play an even greater role, especially as governments seek to incorporate leading practices related to technology use and cross-border agreements.

What can governments do today to start employing Smart Borders?

Consolidate functions at the border by fusing intelligence driven, risk-based analytics. For example, Australia has moved to combine the roles of the Chief Information Officer and the professional head of Intelligence. This will generate tight linkages between intelligence needs and enterprise-level information management strategies, create opportunities for intelligence to pose questions of “big data” to uncover previously unforeseen risks, and will empower information flows that enable a greater level of shared situational awareness around the border.

Intelligence has always played key roles in identifying threats and vulnerabilities, but in many organisations there is increasing focus on building the evidence base that enables informed decision-making and resource allocation. Equally, intelligence insights will frame the way in which risk tiering can be applied as a component of predictive analytics across real-time border transactional data, to segment transactions and support both facilitation and targeted intervention.

This ultimate vision for an expanded border would see a reduction in criminal or security risks through the hardening of shared supply chains, logistics and commercial arrangements. And the capacity to build, maintain and communicate a rich “live” intelligence picture to decision-makers across a government will generate a higher level of situational awareness – a geospatially and temporally-coded common frame of reference in which to balance priorities and pursue outcomes.

4. And innovate at the border by enabling the ecosystem to bring commercial and community solutions

A critical step to improving the flow of trade and travelers is simple cooperation and leveraging the capabilities of non-government players for innovative ways to shore up key infrastructure. To that end, there is a critical need for strong public-private partnerships (PPP) in order to help secure the border—and there are a handful of extremely successful examples.

The Customs-Trade Partnership Against Terrorism (C-TPAT) is a voluntary government-business initiative led by the U.S. Customs and Border Protection that builds cooperative relationships aimed at strengthening and improving international supply-chain and border security. The program encourages businesses to comply with specific requirements to ensure the integrity of their security practices and to verify the legitimacy of business partners throughout the supply chain. By entering into the program, industry stakeholders are able to significantly minimize the negative impacts of a congested border. Participants experience reduced inspections—C-TPAT shipments are 4 to 6 times less likely to undergo an examination—and those from the United States, Canada, or Mexico can use designated “fast” lanes. Packages that do need to be examined

have front-of-the-line privileges at customs checkpoints. More than 10,000 companies are now participating in C-TPAT. It is a win-win situation, with both industries and governments benefitting equally from the expedited identification and verification of trusted shippers.

Similarly, IATA sets standards for airport checkpoints and is currently working to streamline security measures for both passengers and cargo. IATA efforts to improve security screening of cargo include Consignment Security Declarations, which provide a standardized audit trail for cargo along the entire supply chain; Advance Electronic Information, which facilitates the risk assessment process by customs authorities; and Secure Freight, an air cargo security project that aims to ensure freight is protected from unlawful interference. IATA has also created programs to standardize key passenger information that is shared with governments and works to promote use of those standards internationally. Its “checkpoint of the future” working group seeks to address overall passenger flow and security, acknowledging that today’s processes are unsustainable in light of anticipated growth in air travel.

What can governments do today to start employing Smart Borders?

Promote global participation in multi-lateral trusted traveler programs, container security initiatives as well as by tapping into the larger community through digital strategies. By capitalizing on the success and momentum created through existing bi-lateral agreements, participating countries are closer to engaging international institutions and implementing a broader global protocol for information sharing. The primary goal of an international agreement would be to scale the benefits of existing trusted traveler programs to multiple countries and industries to reduce the number of screenings and checkpoints required for the international traveler. Both Australia and the United States have identified the fostering of intergovernmental, multilateral agreements as key strategic priorities in the effort to protect the integrity of their borders. The United States, as noted above, has already developed security partnerships with both Canada and the EU.

While pursuing international standards, governments can also look to scale existing public private partnership models. By engaging industry, governments can demonstrate a commitment to economic growth while leveraging enabling technology and commercial leading practices.

Outside of government to government interactions, public sector organizations will need to target approaches to engage industry and the community. The continuing advancement of digital and mobile capabilities will enable governments to better educate and connect travelers and industry with border security authorities. By employing mobile technologies, inspection agencies and officers can obtain a degree of agility that helps expedite the transfer of crucial security and customs information throughout the supply chain. A mobile device that can log and share the results of vessel inspections at a seaport eliminates the need to manually file paperwork at the office. Information on the whereabouts of high-risk passengers can be transported instantly with the click of a button, allowing border security officers to work in real-time.

Five eye countries are already beginning to deploy these strategies and technologies. For example, Australia and New Zealand are starting to design digital strategy to better engage international custom and border protection partners and the public communities that they interact with every day. Currently, mobile applications are available to governmental and maritime stakeholders and enable real-time reporting of suspicious behavior to customs and other enforcement agencies. To that end, a U.S. software developer has also unveiled an app that would allow border patrol agents to “track persons of interest, document suspicious cargo, conduct vehicle inspections, and perform a variety of other security-related tasks.” By increasing situational awareness, border control agents will receive real-time updates and data requests where and when they need it to better protect the community.

By truly engaging the ecosystem, governments can get closer to some of its customers, namely the traveler and immigrant community. Through mobile and digital strategies, governments can focus the energy of these populations and empower its agencies and residents to work together to respond quickly to challenges. Government can then pursue new models for delivering public services, better understand the challenges of diverse communities, and design more effective solutions.

Conclusion: A Global Vision for Smart Borders

Despite unique challenges and varying approaches, border security specialists from Australia, Canada, New Zealand, United Kingdom, and the United States share a vision for Smart Borders. With a goal of facilitating the movement of goods and people across borders, the ideal global solution will strive to be safe, standardized, and cost effective. And for each of these components there are two primary stakeholder groups that should be addressed: industry and government.

Both private and public sector stakeholders could benefit from a future state that enhances the day-to-day operations of the global citizen including suppliers, small businesses, and travelers that need to ship cargo as well as pass through checkpoints regularly. The ultimate goal is to enable nations to set up a consistent and uniform approach to border security. That capability will not only ease border flow but also, it will actually extend their borders and offer even greater security.

The vision of a seamless border is also designed to create a business model for the processing of people and goods that is agile enough to accommodate

projected large increases in volume. The concept should deliver an experience characterized by the smooth movement of legitimate cargo, travelers, and industry stakeholders while enabling targeted interventions against illicit and threatening activity.

Leveraging leading practices is a key feature in developing a vision for smarter borders. The countries referenced in this report have pursued a variety of policies in their efforts to alleviate border congestion while at the same time staying ever-vigilant on national security. Each has a unique perspective and can point to successes via programs that incorporate new technologies and innovative thinking.

It is important to remember that no one country can truly act alone and achieve the most effective border security. Yes, bi-lateral agreements are critical and promote a more seamless flow of goods and people across borders. But this issue affects more than those countries that sit physically next to each other on a map. The overarching need for a global border management solution is one shared by all countries.

Acknowledgements

We are grateful to the many individuals who shared their time and experience throughout the writing of this report.

Several Deloitte colleagues collaborated across borders and served as tireless champions and sources of inspiration, including **Sal Sidoti**, Director for Deloitte Risk Services Australia, **Dan Newman** Partner for Deloitte Consulting Australia, **Richard Doherty**, Partner for Deloitte Consulting Belgium, **Charles Perron**, Partner for Deloitte Consulting Canada, **James Taylor**, Partner for Deloitte Consulting UK, **Jenny Boon**, Partner for Deloitte Consulting UK, **Heather Reilly**, Principal for Deloitte Consulting US, **Bob Jacksta**, Specialist Leader for Deloitte Financial Advisory Services US, **Tiff Wan**, Senior Consultant for Deloitte Consulting US, and **Emily Roesing**, former Consultant for Deloitte Consulting US and current MBA candidate at UC Berkeley.

Lastly, we would like to thank our Global Migration and Border Management colleagues for their passion and dedication.

How Deloitte can help governments realize Smart Borders

Deloitte's Smart Border Analytics Tool helps government and industry better understand complicated questions about migration of people and movement of goods across the border

Governments have an opportunity to address critical border security and immigration by using a geospatial-enabled border analytics tool

1 Deloitte has many capabilities relevant to the border and the immigration landscape that can be leveraged to enhance security

Deloitte is experienced in bringing together organizations across sectors to help navigate the border and immigration landscape while maintaining high levels of service.

A Risk Analytics	Use predictive and descriptive modeling, data mining, simulation, and other analytic techniques to identify, mitigate, and manage strategic and operational risk.
B Geospatial Analytics	Use maps, graphs, statistics, and cartograms to visualize data from public and proprietary sources to identify complex relationships and enable a comprehensive understanding of an environment.
C Strategy Development & Implementation	Develop strategy to address program and policy changes, assist with implementation, and develop the required tools and metrics to measure success.
D Data Integration & IT Operations Management	Design, improve, and maintain an integrated data architecture that leverages "big data" and is enabled through various devices including mobile technology.
E Enterprise Performance Management	Provide decision-makers with key information in a timely, accurate, readily accessible, and relevant manner to support operational needs.
F Regulatory Planning & Implementation	Analyze policy and regulatory changes for operational impact across enterprises. Use scenario planning to mitigate risks and facilitate policy development and implementation.

2 Deloitte's Smart Border Analytics Tool leverages "big data" and geospatial capabilities to analyze the migration of people and movement of goods across the border

Deloitte's Smart Border Analytics Tool provides enhanced information on the migratory patterns of individuals entering and exiting the EU and tracking the movement of goods across the border through the use of "big data" and geospatial capabilities.

Migration of People

- What are the common visa types that are typically used to legally cross the border?
- What are the primary countries of origin for illegal migrants?
- Where are illegal migrants travelling within the country and can clusters be identified within certain regions?

Movement of Goods

- Where are illicit goods being intercepted?
- What are the key attributes of the individuals who transport illicit goods?
- How are current border enforcement resources matching to hot-spot areas of unlawful activities?

Deloitte.

3 The Smart Border Analytics Tool can be a central component of implementing the next generation of smart border security in the EU

The Smart Border Analytics tool can help governments visualize the flow of people and goods across their borders, inform operational decisions, and leverage big data and analytic tools to identify risk profiles and achieve a smart border security environment.



- Identify geographic clusters of legal migrant populations
- Understand economic and social drivers and impact of migration patterns
- Recognize trafficking patterns of illicit goods
- Understand implications of current resource levels at entry points



- Assess multiple data sources to identify and act on areas of potential risks such as:
 - Illegal immigration
 - Illicit activities
 - Impacts to social services
 - EU migration patterns



- Strengthen the information used during the visa application process
- Inform border front-line officers of common tactics used by individuals who transport illicit goods
- Identify high-risk entry points and deploy resources appropriately

4 Many government entities throughout the border and immigration landscape could benefit from the Smart Border Analytics Tool

The Smart Border Analytics Tool can be used by various government officials, including policy makers, visa adjudicators, and border enforcement officials to enhance visibility and inform operational decision-making with regard to border security and immigration policy.



- Policy Makers will benefit from having greater transparency into their respective immigration populations thus enabling improved assessments of the local economic and social services impact from the illegal migrant populations
- The European policy makers can develop policies that limit number of visas for a particular country based on the data that indicates an increased security threat to the country or a greater risk of overstaying



- By understanding the profile of individuals that overstay their visas in a particular country, visa regulators can make better informed decisions about granting future visas to applicants with high-risk characteristics
- European visa regulators could better assess allocation of resources to high-volume countries to proactively mitigate issues with improper issuance of visas



- Border enforcement agents can make better informed decisions during the immigration clearance process at points of entry by leveraging the risk profiles of visa overstayer populations
- By determining which point of entries present the greatest opportunity for illicit goods to enter and exit the country, border enforcement officials can responsibly allocate resources to the high-risk areas
- European border enforcement officials could use the Smart Border Analytics Tool to predict where the influx of migrants that pose a security threat to the country

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