Identity in a Digital Age: A Glance at the Countries Leading the Revolution

A BREAKDOWN OF THE LATEST DEVELOPMENTS

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Which Countries are Investing the Most in Biometrics?

Ahead of the **Global ID Summit**, taking place September 17 – 19 in New York, NY, we took a look at the top countries investing the most into biometrics and identity management technology. According to a market report published by Credence Research Inc., the global biometrics technology market is expected to reach US$34.5 billion by 2022. The report emphasizes that the primary factor influencing the growth of biometrics systems is government adoption.

Governments across the world are adopting biometrics technologies for access authorization, identification and verification, e-passport management and national border control projects. The Asia-Pacific region is expected to see the fastest growth, with increasing adoption of biometrics technologies particularly in India and China. North America accounted for the largest revenue share followed by Europe.

Driven by factors such as the growing demand for government initiatives to innovate and enhance operations and security, **Global ID** brings together an audience comprised of 200+ Secretaries, Directors of Security Agencies, Heads of Acquisition, Biometric Program Managers, Academia and Industry Experts from the U.S. and International partners to discuss the challenges and successes shaping national and global security.

Australia

Australian Budget Invests Hundreds of Millions in Funding for Identity Programs

May, 2018

Australia's federal budget for 2018-2019 includes major funding worth hundreds of millions of dollars for government biometric and identity programs. This includes roughly **$130 million** AUD ($97 million USD) for the **Department of Home Affairs' (DHA)** to upgrade its infrastructure, enhance its analytics and threat management capabilities and establish a platform for the enterprise identity management system. **$59.1 million** AUD ($44 million USD) of the budget is set aside to create a national facial database of suspected terrorists to support their identification in public areas. This database will also reference driver's license images, following an agreement between the federal and state and territory governments. The presence of cameras will also see an increase, as **$30 million** AUD ($22 million USD) has been given to the **Safer Communities Fund** to deploy more CCTV cameras. The **GovPass** program will be receiving **$92.4 million** AUD ($69 million USD), including **$60.9 million** AUD ($45 million USD) for the **Digital Transformation Agency** (DTA) to accelerate its implementation. GovPass will ultimately be providing government services to citizens online with identity verification performed with facial recognition. The remainder of the funding is being allocated to increase the presence of police and border forces at airports and screen incoming cargo and mail.

Australia to Process 90% of Incoming Passengers Based on Biometrics by 2020

May, 2018

Australia's **Department of Immigration and Border Protection** (DIBP) has launched a request for companies to submit technology solutions in the hopes of replacing passports and immigration officers with electronic stations and automatic triage. The DIBP is looking to implement the world's first entirely **automatic and seamless processing system** for international passengers entering the country based on their biometric data, such as fingerprints, iris and facial recognition. This initiative is part of the **$93.7 million** AUD ($69.5 million USD), a five-year **Seamless Traveler program** that was launched by the government in 2015. DIBP first started collecting facial images and fingerprints from passengers in airports in November 2012. Since then, it has collected a massive amount of personal data which is required by the advanced system and will be installed over the next three years. The department aims to process **90%** of incoming passengers by **2020** based solely on their biometric data, which will be compared and matched with the massive database of existing biometric data. Peter Dutton MP, Minister for Immigration and Border Protection, previously stated the biometric project, "will reduce manual processes allowing [for] a fast, seamless self-processing experience for up to 90 percent of travelers and enable border control officers to concentrate on passengers-of-interest."

Australian Tax Office Has Collected 3.4 million Voiceprints

February, 2018

The **Australian Tax Office** (ATO) has collected voiceprints from 3.4 million Australians, which equates to one in seven citizens. The goal of collecting the voiceprints is to authenticate their identities in interactions with its call center and the ATO mobile application. The 3.4 million represents an increase of 500,000 enrollments over six months. The technology, provided by Nuance, compares 140 speech characteristics to a stored voiceprint when the caller repeats a phrase. Since the system was originally launched by the call center in 2015 and the ATO app in 2016, it has been able to verify more than 4.8 million interactions; reducing the average hold time by 48 seconds. The ATO has mentioned that the voiceprints could be shared with other government agencies with user consent and that the database "may in the future become a whole of government voiceprint database." The **Digital Transformation Agency** is currently developing the **GovPass** identity verification platform that eventually could incorporate the voice authentication system.

Brazil

Brazil Adopts OSTP Alliance CIPURSE to Protect Personal Data on New Drivers' License Smartcards
December, 2017

Brazil adopted CIPURSE in late 2017 to help protect citizens' personal data, which includes fingerprints and the photo on new drivers' license cards. The cards are readable by law enforcement officials through a smartphone app and the card-holders have access to financial services with fingerprint authentication. Additionally the card allows for public transportation applications. As Brazil moves away from a paper-based license system for its 66 million drivers, it is making future plans to utilizing the cards for transport services and access control purposes.

Brazil Anticipating to Collect the Biometric Data of 140 Million Citizens by 2020
August, 2017

The **Brazilian Superior Electoral Tribunal** (TSE) was granted access to data from all Brazilian drivers, as the country looks to advance its biometric data collection endeavors. TSE has been collecting biometric data since 2013 to prevent fraud from voter identification. With the new access to systems maintained by the **Brazilian National Traffic Department**, TSE has gained access to the data of about 60 million citizens. The ultimate goal of the Brazilian government is to collection the biometric information of 140 million citizens by 2020. Of which will be used to create a single citizen database and **unified ID card**. This single database would link information such as voting cards, drivers' licenses, and tax records. The President of TSE, Gilmar Mendes, has stated that the access to the new data would result in the increased efficiency of resources and strengthen overall operations.

European Union

European Commission Proposes Requiring Biometric Data on all ID Cards
April, 2018

To decrease the use of fraudulent documents by criminals and extremists, the **European Commission** has proposed that identity cards for EU citizens should be required to include biometric images. This would introduce the inclusion of two fingerprint images and a facial image on new ID cards, phasing out old ID cards over a five year period. **Commission First Vice-President Frans Timmermans** emphasized urgency in a statement, "Today, we are stepping up our actions to deprive criminals and terrorists of the tools and resources they need to perpetrate their crimes." The Commission estimates there are currently **80 million** Europeans with ID cards that cannot be read by machines and do not feature biometric images. The ID cards also vary between EU member states. Spain's new ID cards feature fingerprints, Belgium's cards include biometrics but not fingerprints, and citizens in Germany can choose whether to include fingerprints data on their ID cards.

eu-LISA Launches First Phase of the SIS II AFIS Platform
March, 2018

The **eu-LISA Internal Security Systems Sector** proclaimed the successful launch of the first phase of the SIS II AFIS platform. This platform allows for subjects to be identified from their fingerprints alone and it has the ability to locate those who have lied or changed their identity to avoid detection. The ultimate goal of this platform is to allow for all Member States to have access to a **centralized policing-oriented database** for crime prevention across Europe. Krum Garkov, Executive Director of eu-LISA shared, "With its new biometric search capabilities the system becomes an even more important platform for law-enforcement cooperation and information exchange. At the same time, this is a great achievement for the Agency as a whole, demonstrating again our agility and ability to deliver towards the needs of eu-LISA's stakeholders."

India

Paperless Boarding Coming to Domestic Flights in India with Biometrics
May, 2018

Indian passengers on domestic flights will soon be able to board without any paper travel documents. This will be made possible by using a "**DigiYatra**" (DY) based on biometrics, the format of which was finalized by a technical team made up of representatives from the Airports Authority of India (AAI) and four private regional airports. To enroll in paperless boarding, passengers will register by giving ID proof (such as Aadhaar, drivers license, etc.) and providing fingerprints and iris biometrics. After enrolling, boarding can be processed through biometric verification. It is worth mentioning the limited presence of **Aadhaar** in the DY program. This is due to the uncertainty of Aadhaar's legal status, which is currently pending a decision from **India's Supreme Court**.

Indian Tax Numbers to be Linked with Aadhaar
April, 2018

The Indian government has made the use of **Aadhaar** mandatory for filing income tax returns, as well as for obtaining new permanent account numbers (PAN). **India's Central Board of Direct Taxes** (CBDT) recently extended the deadline for residents to link their PAN's to their Aadhaar biometric IDs from March 31, 2018 to June 30, 2018. The 12-digit unique identification number is issued to every individual resident of India by the Indian government. The expansion of Aadhaar to the tax structure exhibits the government's ongoing commitment to widening the scope of the national biometric authentication system.

India's Electoral Commission Seeks Mandatory Association Between Voter ID and Aadhaar Number
March, 2018

In early March, India's **Electoral Commission** filed a request with the Supreme Court to make linking Aadhaar numbers with voter ID cards mandatory. This request is made in an effort to prevent voter fraud. The first attempt to link Aadhaar to the **Electors Photo Identity Card** (EPIC) was in February 2015, but was ceased by the preceding Chief Electoral Commissioner. India's current Chief Electoral Commissioner shared in January that the documents should be linked. While there is support for the identifications methods to be linked, the **Unique Identification Authority of India** (UIDAI) has expressed that essential services can not be legally denied for a lack of authentication. The legality of the Aadhaar program and its various stipulations is facing the ongoing Supreme Court challenge.

Singapore

Facial Recognition to be Used at Singapore's Changi Airport
May, 2018

Singapore's Changi airport has been testing a **facial recognition system** in the hopes of improving the efficiency for passengers to travel quicker throughout the facility. The tests are expanding from its existing used of the **smart ID system** and is looking into ways to replace passport checks. Steve Lee, Changi Airport Group's Chief Information Officer, told Reuters that the airport is working with a number of companies and plans to have facial recognition in place in a year's time. The newest terminal at Changi, **T4**, is already using facial recognition for self-service check-in options as well as bag drop, immigration and boarding. When passengers drop luggage at unstaffed booths, a photo of their face is taken and then compared with the picture in their passport. At the automated security gates in immigration, another photo is taken and is used to verify a passenger's identity at the boarding gate. The airport is additionally looking into ways to implement the same facial recognition technology throughout its three other terminals.

Singapore to Pilot Smart City Facial Recognition Project
April, 2018

The Singaporean government agency, **GovTech**, is planning on performing crowd analytics with facial analysis from a **"Lamppost-as-a-Platform"** (LaaP) pilot project. Last year, Peter Ong, the former head of Singapore's civil service, mentioned that the country wants to deploy the LaaP technology to all 110,000 lampposts in the country. As part of the trial, GovTech is testing out various kinds of sensors, including cameras that can support back-end facial recognition capabilities. Singapore's Prime Minister Lee Hsien Loong has previously stated that he did not want the project to be overbearing, intrusive, or unethical. It is also worth mentioning that a GovTech spokesperson articulated to Reuters that, "The need to protect personal data and preserve privacy are key considerations in the technical implementation of the project." Among those reported to be considering bids are a partnership including **Yitu Technology** and a partnership including Singapore-based **Xjera Labs**.

Biometric Security Trials with Singapore Government Completed Successfully
January, 2018

In early 2018, the successful completion of three safety and security test bed projects with the Singaporean government was announced. Singapore is working to enhance security for critical infrastructure, border control and city surveillance. The tests were completed under the mandate of the **Safety and Security Industry Program (SSIP) 2020**, which is led by Singapore's **Ministry of Home Affairs and Economic Development Board.**

The first trial utilized **Facial Recognition software** and a correlation of audio and video analytics by the Intelligent Complex Event Processing engine to assess the early detection of suspicious behavior and identify Persons of Interest (POI) in both outdoor and indoor environments. The second trial tested off-site security clearance for authorized personnel, while the final trial enrolled first-time visitors to Jurong Island for facial and fingerprint recognition. The systems used in all three trials transmitted monitoring data and alerts to a simulated Command Center. Ultimately, Singapore is looking to create a safer and more secure environment, with the main goal of the SSIP 2020 initiative being to test and develop the next generation of security solutions for global implementation.

South Africa

South Africa to Launch ABIS, Adding Face & Iris to National Identity System

May, 2018

South Africa announced the launch of its new **Automated Biometric Identification System** (ABIS) in May. ABIS is being launched under the **Department of Home Affairs' Modernization Program** and will eventually use facial and iris recognition. This identification system will also back the country's National Identification System, which is taking the place of the manual legacy Home Affairs National Identity System (HANIS). The Automated Fingerprint Identification system (AFIS) and HANIS will be integrated in with ABIS. The Department of Home Affairs' is currently aiming to complete the data migration from AFIS to ABIS in 2018-2019 and add iris and palm-print abilities the subsequent year.

Social Security Payments to be Delivered with Biometric Identity Verification

May, 2018

Under the **Department of Home Affairs' Modernization Program**, **Magix Africa**, **DataProof** and **Fides Cloud Technologies** were all chosen to perform biometric identity verification and data management for the **South African Post Office's** (SAPO) distribution and payment of social security grants. This program uses a multi-modal biometric matching engine to prevent fraud and confirm that benefits and cards reach the correct recipients. After a successful pilot at 12 different sites, the system went live in May. The real-time cloud service solution can be deployed anywhere in the world and is not currently used by anyone else in the market. The system currently uses fingerprints to verify the identity of recipients, but has the capability to be used with facial recognition or other biometrics.

South Africa to Introduce Electronic Visas

March, 2018

South Africa's **Department of Home Affairs** (DHA) has confirmed that the first phase of the electronic visa system will be piloted by the end of March in **2019**. The electronic visas will make it easier for tourists to enter the country, due to the online visa and permit application process that will capture applicants' biometrics both locally and abroad. James Vos, Member of Parliament for the Democratic Alliance and Shadow Minister of Tourism has shared, "The rollout program will be gradual starting with Phase 1, which entails applications for temporary residence visas, adjudication of temporary residence visas, applications for waivers, notifications to the applicant via email and biometrics captured at the Mission." Vos additionally indicated the electronic visas will boost South Africa's tourism industry by cutting the turnaround time for issuing travel documentation while ensuring that applicants' information is secure.

United Arab Emirates

Dubai International Airport Introduces a Multimodal Biometric Passenger Flow Solution
February, 2018

Dubai International Airport has deployed the latest generation of automated border control **SmartGates** across all terminals. The **General Directorate of Residency and Foreigners Affairs** (GDRFA) awarded the project to **Emaratech** and **Vision-Box**. The project included the development, delivery and maintenance of **122** SmartGates. The multimodal biometric passenger flow solution reflects Dubai's top priority: maintaining a high level of security through passport control. The new system helps officials to create a balance between achieving their overall objectives and guaranteeing an enhanced experience for passengers through speed and efficiency. SmartGates are also scheduled to make an introduction in the near future at the Dubai World Central- Al Maktoum International Airport.

Dubai International Airport Installs Virtual Aquarium Tunnel with Facial Recognition Capabilities
October, 2017

Dubai International Airport (DIA) is working to replace its facial recognition security booths with a virtual aquarium tunnel that will scan the faces and irises of passengers, using up to 80 hidden cameras. To be scanned by the cameras, passengers will only need to walk through the tunnel. After passengers exit the tunnel, a green or red light will display. A red light signals officials to intervene and conduct a more comprehensive search. The **Deputy Director General of Dubai Residency and Foreign Affairs**, **Major Gen Obaid Al Hameeri**, shared, "This will also benefit stakeholders; now the traveler can spend more time shopping at duty-free, or avoid missing their flight due to long queues." The aquarium tunnel showcases the virtual fish swimming in multiple directions to encourage passengers to glance in all directions, thus creating the ability to obtain the different perspectives of an individuals' face needed to make an accurate match. The Dubai International Airport will have these "**virtual borders**" at Terminal 3 by the end of **August 2018** and be fully implemented by **2020**. This new program looks to reduce the amount of time that millions of passengers spend in airport security, with DIA forecasting to serve 120 million passengers by 2020.

Law Enforcement Implement AI and Biometrics for Crime Prevention
February, 2017

Law enforcement in Dubai has deployed artificial intelligence and facial recognition software in the hopes to predict and prevent crimes. The Director of the Dubai Police Operations Department, Brigadier Kamil Butti Al Suwaidi, clarified that the police command room uses a smart security system, which utilizes the biometric software to compare images from CCTV cameras installed in public places to a database of face photos of known criminals. When the face of a criminal is detected, it automatically triggers alerts to law enforcement. Resulting in increased response times and a higher percentage of prevented crimes. Al Suwaidi also emphasized, "The system will provide data and information about the areas expecting crimes to happen . . . The system stores the data about the crimes and in which areas and based on the data, [and] will analyze it and provide the police information about the location of the future crime."

United Kingdom

UK Prisons Applying Biometrics to Increase Safety
May, 2018

UK prisons are starting to implement biometrics in the hopes of creating a safer environment with greater access to services. **Unilink** is tasked with the implementation of the self-service biometric application for the prisoners. The self-service application will allow prisoners to order meals ahead of time with biometric verification, which will prevent other prisoners from taking others meals. Other applications will include the ability for prisoners to order small items from prison shops and manage personal account information. The **Director of Business Change at HM Prison and Probation Service** (HMPPS), Gary Monaghan, spoke about the gradual implementation of Digital Prisons recently and stated, "As our service was going through a challenging time in terms of operational stability it was imperative that Digital Prisons was really focused on safety in prisons." HMPPS is also looking to integrate the Unilink system with the police biometric system.

UK Home Office Implements a Biometric Matcher Services Platform (BMPS)
March, 2018

The **UK Home Office**, responsible for immigration, security and law and order, has signed a **£28 million** ($38.7 million USD) contract to provide a **Biometric Matcher Services Platform (BMPS)**. The technology services platform ensures immigration and law enforcement will continue to have access to biometric data, as their current systems are covered by a contract to expire in **2019**. A Home Office spokesperson said, "The Home Office Biometrics program seeks to improve the technology used by immigration and law enforcement agencies to check fingerprints and biometric information . . . The new platform will not give agencies access to any new data – but make comparing existing information faster and more accurate, while reducing costs."

UK Police Trialing Mobile Fingerprint Devices
February, 2018

The **UK Home Office** and the **West Yorkshire Police** are working together to trial **250** mobile fingerprint scanners, in the hopes of creating the ability for police to identify suspects in the field in less than a minute. The device connects to the smartphones that are currently used by officers and uses an app to submit the collected fingerprints to the **IDENT1** and **IABS** databases. The Home Office anticipates to deliver the devices to 20 police forces before the end of 2018. The **West Yorkshire Police Chief Inspector**, **Ian Williams**, told the Independent, "We can get photographs back of the individual, we can get a full PNC (Police National Computer) record of the individual as well which gives us a really thorough identification." The mobile fingerprint scanners are being provided through a partnership between Motorola Solutions subsidiary Airwave Solutions and Integrated Biometrics. The scanners cost less than **£300**, which is a 90% reduction from the cost of current mobile fingerprint systems. The **Minister for Policing and the Fire Service**, **Nick Hurd**, has suggested that the efficiency improvements from the new devices will allow for officers to spend an extra hour each day in the field.

United States

Customs and Border Protection to Expand Biometric Entry/Exit Program to Include Vehicles
June, 2018

The **Department of Homeland Security** (DHS) announced the **Customs and Border Protection** (CBP) has officially proposed to revise its congressionally delegated biometric-based entry and exit system to include the collection of biometrics from vehicles at land Ports of Entry (PoE). The new inclusion of vehicle biometrics is projected to possibly decrease wait times at the ports of entry and exit. The CBP's biometric based entry and exit system is designed to improve the information of resources available to the immigration and border management decision-makers. CBP has shared, "These biometrics may include: Digital fingerprint scans, facial images, iris images or other biometrics. Biometrics may be collected from travelers entering or exiting the United States. CBP will store and use biometric data from those aliens specified in 8 CFR 215.8 and 8 CFR 235.1 in order to verify identity, determine admissibility of those seeking entry into the United States, confirm exit from the United States for the purpose of tracking aliens who have overstayed their visa or are otherwise illegally present in the United States, prevent visa fraud, and identify known or suspected criminals or terrorists." CBP is still currently testing and evaluation several "different technological and operational changes to improve the accuracy and speed of biometric collection."

Homeland Security Collecting Migrant Biometrics in Mexico
April, 2018

The **Department of Homeland Security** (DHS) has installed "scores" of screening terminals in detention centers to collect the biometric data of tens of thousands of immigrants, mostly Central Americans, arrested in Mexico. DHS officials are collecting fingerprints, iris scans, and data on identifying features such as tattoos and scars from subjects arrested in Southern Mexico. DHS plans to expand the program in Mexico within the next few months and is currently negotiating with other countries in Central America to expand futher. The biometric information can identify convicted criminals and "Special Interest Aliens" after being run through the DHS database, as well as additional databases operated by U.S. law enforcement and intelligence. In the last year, biometric data has been collected from over 30,000 immigrants.

U.S. Army Develops Method for Matching Infrared Facial Images to Existing Databases
April, 2018

Researchers for the **U.S. Army** have developed a system for transfiguring a thermal image of a person's face to a visual one that can be paralleled with an existing image by a human or automated system. This system utilizes artificial intelligence and machine learning to enable facial recognition in covert low-light or nighttime conditions. **Dr. Benjamin S. Riggan**, a **U.S. Army Research Laboratory** scientist who worked on the project shared, "This technology enables matching between thermal face images and existing biometric face databases/watch lists that only contain visible face imagery . . . The technology provides a way for humans to visually compare visible and thermal facial imagery through thermal-to-visible face synthesis." The U.S. Army's Research supported by the **Defense Forensics and Biometrics Agency**.

Interested in Learning More About the Global ID Summit?

KEY THEMES RUNNING THROUGHOUT THE SUMMIT WILL BE:

Establishing global standards and requirements for integrating identity systems.

Securing borders with mobile biometrics automation.

Leveraging iris, fingerprint, facial, voice, rapid DNA and identification tools and applications to enhance law enforcement operations.

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