De La Rue ID4Africa Newsletter



The Future of Identity

In today's world, identity is vital for both individuals and their governments, central to global socio-economic development and the delivery of the UN's Global Compact and Sustainable Development Goals.

For individuals, identity is one of the most fundamental protections in the modern world. It secures their rights and their entitlement and access to services; it enables them to prove who they are and facilitates their freedom and mobility.

Person centric Identity Management enables governments to protect their citizens, keep count of the population, understand who those citizens are and what they're entitled to. This, in turn, allows those authorities to plan and provide social benefits and services, allocate resources effectively and protect the collective national identity.

Technology Choices are Accelerating

When it comes to managing identity efficiently, the number and type of possible technologies and infrastructure systems that could be used to support this is accelerating. It is widely recognised that digitisation can help provide more effective forms of delivery as well as enable further efficiencies in existing processes. Technology can also help to break through barriers to inclusion - whether they are geographical, cultural or economic.



As a result, this has led to great excitement as funders, donors, technology companies and consultants are backing various new, seemingly revolutionary technologies in the hope to reach those without legal identities. And while the choice of technology is increasing, there are also certain trends and themes appearing – some that require more considered than others.

Welcome to De La Rue's 2018 ID4Africa Newsletter bringing you our latest collection of news and innovations

In this issue we discuss the future of identity, namely how technology choices are accelerating, the fundamentals in delivering a digital future, and how to define solution design. We introduce The De La Rue River Book that showcases world class design techniques coupled with the latest security features and innovations, and we explain more about De La Rue's ID card solutions. You will also find a page delving into De La Rue's Heritage, followed by details on how we support local communities around the world and highlight our involvement with the UN Global Compact for Migration. Finally we introduce our team attending this year's ID4Afica in Nigeria, **visit them on stand E6** where they look forward to welcoming you.



Technology Choices are Accelerating

The first consideration is how to manage identity within a critical or emergency setting – the need for continued registration and identity verification during times of civil unrest, high migration, medical epidemic or natural disaster? The solution therefore has to be flexible, robust and most importantly, on the ground and in territory with the people themselves - driving the need for mobile registration solutions.

De La Rue recently discussed the disaster recovery requirements in a workshop with Civil Registrars from the Pacific at the Pacific Civil Registrars Network meeting.

A second theme that is emerging is the call to use BlockChain to create and manage identities. Taking this concept of continuously growing chains of records, securely linked using cryptographic techniques seems a quite logical step for identity management – allowing for the recording of vital events with status changes and then grouping them together into a single chain that is securely linked to a person's identity. It is plausible this could work for subsequent identity life cycle events and / or where government systems are unavailable or unsupported (such as refugee camps or other emergency settings), there has been little discussion so far though, about how to integrate this and provide the initial trusted proof of identity that sits at the very core and foundation of an identity ecosystem – that same identity that we use to issue identity cards, passports, voter registration and residents permits.

De La Rue called for the need for a standardisation of identity management - harmonising and bridging the various types/forms of identity from self-created to legal, at the First Informal Interactive Multistakeholder Hearing for the Global Compact for safe, orderly and regular migration at the United Nations in July 2017. We discussed practical and policy requirements that could further enhance the benefits of migration, examples of best practice of cooperation to facilitate safe, orderly and regular migration and any existing platforms and mechanisms that could be strengthened or transformed to further assist. We believe Blockchain to be an example of such a technology that could deliver great results if standards are shared, integration and cooperation plans are created and executed ensure trust and legality of any created identity.

The third consideration is the need to agree industry wide best practice on how to identify the single source of truth from which a legal identity is then created. Is it a single database that all adhere to? Aadhaar in India works on this principle – a system built on one dataset. Or, is it a single source of truth achieved with multiple datasets, with agreement between ministries to facilitate communications and define one trusted source dataset and trusted, linked networks

De La Rue is able to both support governments to integrate and link numerous data-systems or work to streamline and create one single dataset with DLR Identify[™], our web based software solution for Identity Management – whichever route or option is required. The trend for a single source of truth signifies the need for one trusted identity – but in reality, the original data can stem from any system that registers, verifies and securely records an event.

The final trend we are seeing is a drive for local innovation and development to solve local problems and help deliver local solutions. To ensure strong in country relationships, regional knowledge and on the ground expertise, local partnering is an essential and critical part of long term identity management sustainability.

De La Rue has worked in partnership with local governments and local businesses to deliver our services and today works with a number of incountry partners in Africa. We know that identity management requires more than the supply of printed documents. That is why we have a team of technical and project managers who will take the time to understand your needs, find the right local partner, put together a comprehensive training package for employees and will continue to support the local partner throughout the contract. This uses the best of local talent, drives local innovation and drives investment in local employees. We know that local partnerships, local training and investments are what will add most value, drive local entrepreneurship and most likely lead to sustainable systems and processes.

Delivering a Digital Future

Whatever your views on the future of identity, there is no dispute that some form of Digital ID is inevitable. And it might even help in the quest to ensure complete social inclusion. The question of what form this will take though and more importantly, how the data is designed and safeguarded, processed, protected, authenticated and ultimately trusted, is yet to be answered, but is something a great many in the industry are currently discussing.

The priority has to be to deliver the required trust in the data that an individual's identity is based upon:

- unique to each individual
 - captured at the earliest opportunity to ensure integrity
 - able to secure both physical and digital tokens to ensure offline and online usability
 - deliver and maintain

De La Rue's Approach to Identity Data Management				
Function				
	Notify	Record	Register	Report
What	Informing authorities of the occurrence of a vital event (limited vital event and individual details information)	Provision of detailed vital event and individual information (including substantiating evidence if required)	Legal registration: issuance of a certification of registration	Vital statistics: generation of aggregate pointers on key health and development indicators
Who	Health official Certifier of cause of death Government-appointed notifier Courts Judicial institutions Informant	Informant Individual/individuals representative Government official	Government official (registrar) Accessible by other government officials	Government official (national statistics) Accessible by other government officials & external researchers
How	Mobile application SMS notification Email notification	Web-based application Mobile application SMS notification Email notification	Web-based application SMS notification Email notification	Automatic aggregation Web-based statistical report generation Email output Dashboard

Defining the Solution Design

Any new technology that is intended to support an identity management solution, therefore, must be thoroughly assessed against all these criteria and considerations. It would be short-sighted and risky to create something as important as a population's legal identity on an underdeveloped, untested technology. One that is not sustainable, which does not guarantee trust or security, long-term access to identity and which does not integrate with other established central systems to enable rights and responsibilities.

In the end, the right solution very much depends on a clear understanding of service requirements of that particular nation and their end users; on the way

their data is used to provide both the trust UNSDGs and protected human rights? factor as well as the holder's participation, enablement and facilitation in society; and future proofed? These also need to be the way in which the government counts, collates, plans, protects and resources.

There are many questions ahead. What data architecture would be best employed? Interface to legacy systems or build brand new foundations? What data currently exists and is trusted? And how is the data management, what security solution needs to be in place; what is the mobile network / internet connectivity like? Would / could the Cloud be part of the overall solution?

But it is not just the technology aspect that needs consideration. How does the solution align to the achievement of the

• is a secure, sustainable solution to both

The approach endorsed by De La Rue to help achieve this is based around four functional pillars:

Notify Record Register Report

How can we ensure it is sustainable and considered during implementation planning and prior to any new technology roll out.

At De La Rue we believe the right identity data management solution will be unique to each country; nation; government; and will be tailored specifically to their needs, requirements and existing systems. Technology will certainly be a part of this solution and help to deliver the service. but its critical it is done so with careful consideration and not for the sake of the technology itself.

Want to discuss some more? Visit us on stand E6

The De La Rue River Book represents a culmination of knowledge and expertise in identity document design, laying out innovative security features and techniques to combat the increasingly sophisticated threats we face today.



Based on a theme of rivers – a physical and metaphorical journey - the end result delivers a highly secure, technically integrated and beautifully designed book.

Design and Approach

The DLR Design[™] approach to design is structured and thorough, yet allows for creativity and inspiration throughout. They follow six steps and use these as the guiding principles for any and every piece of work.

- Creative collaboration
- Layered security
- Designed for use
- Insight and evidence
- Reducing the risk

Inspirational iconic design

- Our design solutions always commence with a thorough analysis and understanding of the potential threats:
- Threat of counterfeit pages
- Threat of data alteration
- Threat of dismantle and reassembly
- Threat of access to the chip
- Threat of use of blank stolen passport

Next, we examine all options and requirements and design rule relating to:

- Substrate security
- Security print
- Construction
- Personalisation
- Tamper evidence
- Lifetime durability

De La Rue then layers and integrates a complex and sophisticated solution of security features, technical specifications, design themes and aesthetics. Detailed illustrations and original artworks are created and the most effective quality, proofing and manufacturing techniques applied.

Each of our security designs use a number of layered, sophisticated and complex security features to ensure maximum protection and integrity of the document. Feature types come in one of three classifications, and will be layered and integrated to combat specifically identified threats and customer requirements.

\bigcirc viewing device.

Q

and laboratory equipment





Microtext

Printed text, too small to be recognised by the naked eye, which appears as a background tint. When viewed through a magnifying glass, the message becomes readable. Easily overlooked by counterfeiters, this feature provides protection against scanners and colour copiers which will only reproduce blocks as opposed to the minute lettering.

Skylight[™]

A specialist, unique and complex watermarking feature developed in house by De La Rue. Small areas that appear lighter and thinner than the background are positioned to register across the printed sheet. Ideal for an end papers and / or bio-data page, SkyLight[™] provides tamper evidence of attempted splitting and lifting of paper and subsequent reassembly with fraudulent data.



serial number using a specific algorithm

and is added as a final character to the

when used in combination with the laser

perforations, represents a significant

increase in passport security.

laser perforated book number. This feature,

Check Digit



Polycarbonate bio-data page De La Rue's unique check digit symbol feature is generated from the document

The De La Rue polycarbonate bio-data page solution consists of a number of individual layers fused together under immense pressure and heat to create a secure structure that cannot be delaminated. These layers can incorporate protective and tactile properties, holder personalisation, lithography, OVIs and DOVIDs, multiple security features, flexible hinge and an embedded RFID chip.



Level 1: Overt or 'public recognition' features

Detectable by an untrained individual without the aid of any specialist equipment or

Level 2: Covert or 'official assist' features

Detectable by a trained individual with the correct viewing device such as a magnifying glass or UV lamp.

Level 3: Features require forensic authentication, using specialist verification

De La Rue can offer a range of highly secure bespoke Level 3 features.





Gemini



Gemini[™] is a specialist lithographic printed security feature, created using two separate ultra-violet (UV) fluorescent inks, carefully colour matched to appear as a single colour under normal lighting conditions, but transforms into two different fluorescent colours under UV illumination.







Polymer

Polymer is a synthetic substrate made by applying layers of opaque gravure print, front and back, to a clear base sheet. These lavers are subsequently printed and allow design enhancement through the use of clear window areas.

ID Card Solutions

Domestic and national identity needs - solutions that include National Identity Cards, Driving Licenses, Residents Permits, Voter Registration, Health and Education Cards - are critical for the functioning of society.

Getting this important aspect of identity management right enables governments to protect their citizens, keep count of the population, understand who those citizens are and what they're entitled to. This, in turn, allows those authorities to plan and provide social benefits and services, allocate resources effectively and protect the collective national identity.

The first function of any identity card is to identify the holder. It provides simple face to face confirmation of the holder and key biographic data such as name, status, date of birth and any specific rights, permits and entitlements. The addition of a bar code, QR code or chip enhances the card's ability to offer and access more services upheld via electronic identification, online authentication and / or the use of digital signatures. There is also potential for post issuance functionality and third party

services such as eWallet, travel apps, loyalty cards, health records, education and employment data.

At De La Rue, we provide the design, production and supply of physical tokens and cards that support national identity programmes through to fully managed and integrated platform solutions. We can also help you transition from physical to digital as part of your eGovernment transition plan.



De La Rue's 100% **Polycarbonate ID Card**

Durable and attack resistant 100% polycarbonate, long-life card, encompassing a multi-layer structure protecting against the threat of counterfeit of the card and fraud to the holder's identity.

Classification

Secure ID1 card

Security benefits and threats countered

Easy to verify protective solution with a mono-block structure, embedded security features (physical and electronic) and tamper evidence built-in. The ID Card contains characteristics that combine to safeguard the holder's personal details and make it virtually impossible to counterfeit without obvious signs of attack.

The polycarbonate substrate solution also ensures a strong performance in terms of card longevity and durability.

Demonstrated by

A sophisticated range of security features are incorporated within the polycarbonate substrate to protect the holder's identity. Any attempts to access the inner layers and alter data will immediately damage these highly detailed features, making an attack obvious.

Security Level Levels 1, 2 and 3 O S depending on selected features

Integrated security

Security design created by De La Rue's award winning designers. The ID card solution incorporates state-of-the art security printing features such as Lithography, multi-colour Ultra Violet (UV) and Infra-Red (IR) workings, Rainbow effect, Fine line drawings and Guilloche patterns. These base workings can be combined with optically variable inks (OVI), embedded holograms and tactile features, such as, CLI/MLI lens, embossing, further enhancing security and protection.

Chip technology options are available with a wide range of applets (ICAO, eID, Digital signing, Voting & more).

Usage

Suitable for all ID1 card applications (National ID, eID, Driving Licence, Voters, Health. Student ID etc)





Our Heritage

De La Rue has a long, distinguished and fascinating history stretching back nearly 200 years.

From humble origins as printer and stationer, De La Rue has expanded into the world's largest commercial banknote printer with a global presence and customers who include governments, central banks and leading brands.





1831

Thomas de la Rue's first commercial The modern playing card was evolved venture was in 1813, when the first with the invention of a new process edition of Le Miroir was published in the typographical method. Thomas de la Rue was awarded a Roval Letters Patent from King William IV for the manufacture of playing cards.



Guernsev

1881



1967

De La Rue developed the first practical fountain pens in 1881, which were later to nbe developed into the famous Onton pen.

De La Rue jointly developed and instaled the world's first ATM at Barclays Bank in Enfield, UK. Photo used with kind permission of Barclays Bank PLC.





2015

De La Rue launches DLR Identify[™] a new citizen-centric web-based software solution for the secure management, personalisation and storage of citizen identity data.

De La Rue launched DLR Analytics a software solution for central beanks, to give data-led insight of their cash cvcle

2017

Find out more about our incredible story by looking at some key dates in our history - from playing card production to the world's first ATMs. Visit www.delarue.com/about-us/our-heritage



1855

In 1855 Thomas de la Rue began printing postage stamps - the Fourpenny Carmine – and obtained the contract for all Indian postal requirements



1860 De La Rue printed its first paper money - the Mauritius £5, £1 and 10 Shilling notes.



1993

During 1993 De La Rue joined a consortium called Camelot Group plc which, in 1994, was awarded the licence to operate the UK national lotterv



2017

De La Rue announced it has signed up to the United Nations Global Compact sustainability programme.



2003

In 2003 De La Rue signed a seven year contract to print and supply sterling for the Bank of England, taking over the bank's manufacturing operation

Visit **Our Heritage** page on our website to view our full timeline and Archivist's blogs: www.delarue.com/about-us/ our-heritage

UN Global Compact for Migration **Global Compact** FOR Migration

UN Global Compact for Migration: A specially accredited organisation

De La Rue is proud to be a Specially Accredited Organisation and have been approved to attend and participate in the preparatory process of the global compact for safe, orderly and regular migration by the President's Office of the General Assembly at the UN.

In accordance with United Nations General Assembly resolution 71/1, the 'New York Declaration for Refugees and Migrants', a preparatory process is underway for the intergovernmental negotiations of a global compact for safe, orderly and regular



migration, to be adopted at an intergovernmental conference on international migration in 2018. As part of this preparatory process, the President of the General Assembly organised a series of informal thematic sessions between April 2017 and November 2017, as well as four days of informal interactive multi-stakeholder hearings between April 2017 and June 2018, in accordance with the organisational arrangements adopted by the UN General Assembly.

In July 2017, Sophie Ogilvy, Senior Government Relations Advisor for Sustainable Development, was a panellist at both the thematic sessions and informal interactive multi-stakeholder hearings of the preparatory process to discuss international cooperation and governance of migration.

We discussed practical and policy requirements that could further enhance the benefits of migration, examples of best practice of cooperation to facilitate safe, orderly and regular migration and any existing platforms and mechanisms that could be strengthened or transformed to further assist.

To find out more, come and meet Sophie on our stand E6.



De La Rue Supporting Local Communities

De La Rue Kenya Invests Ksh30m in People

De La Rue has invested Ksh30 million in a three-vear programme aimed at boosting the management and Health and Safety skills of its staff at its Kenvan site.

Eight of its 300 staff at the site recently passed the National Examination Board in Occupational Safety and Health (NEBOSH) exams due to funding from the programme, with three achieving Distinctions. NEBOSH is offered by a UK-based examination board, but vocational gualifications in health and safety practice and management are recognised world-wide, including in Kenya.

The eight staff who got three distinctions and five passes brings the total number of NEBOSH qualified people at the site to 11. With this achievement, Kenya becomes only the second manufacturing site across De La Rue's global footprint to fulfil the requirement on the number of people that must be NEBOSH qualified. It also underpins De La Rue Kenya's commitment to Health and Safety at the site, which has a proud record of almost four years without a reportable accident.

The benefits of the skills of the Kenyan staff have also been recognised across De La Rue's global footprint, with key members of staff travelling to other sites across the world to support their delivery challenges and share their expertise. This includes a team of print specialists spending three weeks in Malta, supporting the operation and sharing best practice within its Operational Excellence framework. Most recently, a key member of the Kenyan management team has been seconded to manage De La Rue's plant in Sri Lanka, an opportunity to share skills and experience learnt in Kenya.

Robin Mackenzie, De La Rue's Marketing Director commented: "This long term investment in skills has helped create an outstanding operation in Kenya, delivering to the highest global standards. After 25 years in operation, the site is set for a strong future."

As a centre of excellence, the Kenyan site employs 300 local Kenyan staff and contributes Ksh1.25bn to the local economy every year. It has produced Currency, Identity Management and Product Authentication Solutions for Kenya for the last 25 years. The current infrastructure investment of KShs286 million is part of a long term investment of Ksh1.4bn to upgrade the site to become a regional hub for East Africa and the wider continent and a Global Centre of Excellence for De La Rue.

For more information about De La Rue Kenya, visit www.delarue.com/kenya



Rwanda Aid Local Community & Enterprise program

One of the main aims of Rwanda Aid, a small UK based charity supported by De La Rue, has always been to create a more inclusive and sustainable community for some of the more the disadvantaged in rural remote parts of Rwanda.

Over the years, the charity have invested in education and training; building class rooms, providing books and materials, teacher mentoring (an innovative approach that has now been adopted by the government as a nation scheme!) and also vocational training.

While having a tremendous impact on the local community, it was not enough - when the student's education was completed, there were no jobs to go into.

One of Rwanda Aid's most recent projects therefore has been to invest in local enterprise and helping to upskill and support smal start-up businesses, provide best practice guidance, encourage

entrepreneurship and effective business planning - they have even implemented the De La Rue Award for Enterprise where an investment fund helps small local businesses progress to the next level of sustainability and continued growth of local enterprise.

For more information, please visit www.rwanda-aid.org



A unique partnership with Disney and the GREAT Britain campaign – raising £186,754 for Together for Short Lives



The release of Star Wars: The Last Jedi caused great public interest during 2017. To celebrate this event while showcasing the best of British innovation and raising funds for a worthwhile cause, we teamed up with the UK Government's GREAT campaign and the Walt Disney Company.

We produced 1,000 limited edition and 50 premium Star Wars™ commemorative bank notes, which were sold and auctioned on eBay for £186,000. All proceeds were donated to Together for Short Lives, a UKbased charity which supports children's hospices and the 49,000 children with life-threatening and life-limiting conditions in the UK, and their families.

Design Excellence for the Future

The design of a new passport or security document is so much more than the physical object itself. It is significant and symbolic, evocative and iconic - a cultural statement that respects a proud heritage while looking to the future. It is identity, integrity, a promise.

Introducing, DLR Design[™]

At De La Rue, our integrated approach, unrivalled technical know-how and supreme attention to detail makes us an ideal partner, guiding and collaborating with you every step of the way. Delivering on varied and complex briefs, we continually produce the award-winning designs that have established us as leaders in the field.





DLR Design™ in numbers

50

22

28

150 +

14

1/3

3x

15m+

200



Layered Security

The integration of security features is critical to the integrity of a passport or other identity document's design.

Our multi-layered approach to defence protects against counterfeit or fraud, with specific security features chosen to counter specific threats. The selection and layering of features also supports public education, recognition and enforcement.

De La Rue is unusual in that, unlike many providers, it operates a design house that includes security design experts, material scientists and specialists in print, pattern, thread, substrate, holographics, engraving and proofing. This means that you have full access to an expert team, constantly pushing the limits of the aesthetic and technical design possibilities and ensuring the effective integration of features throughout.



Feature Focus: Shaped Antenna

Additional embedded design feature delivering enhanced ePassport polycarbonate bio-data page security and protection. Visit stand E6 to pick up the full technical feature guide



Case Study: Kenya Passport

In designing Kenya's first ever polycarbonate bio-data page for a new EAC-compliant ePassport, we exploited the substrate to its maximum design capability.

Echoing and translating the core print design themes to the laser-engraving plates for the polycarbonate, the 'Big 5 Wildlife of East Africa' are replicated in an alternate matt finish and outline treatment, and sit alongside microtext, embossings and complicated holographic techniques.citizen, security, control and facilitation for the government.



One of the most important attributes of an ePassport is the secure integration of its chip and antenna. De La Rue's Shaped Antenna adds an extra layer of security for polycarbonate bio-data page documents thanks to the unique ability of being able to design and apply the antenna and chip into different layouts within the page itself.

The inlay structure for the Shaped Antenna is incredibly thin - between 200-250µm. This allows full flexibility and for thinner designs of the polycarbonate bio-data page where required.

De La Rue's Shaped Antenna has been developed as a fully comprehensive technical solution:

- Complies with ICAO 9303 and ISO 14443 standards
- Compatible with industry standard chip readers and encoders
- Compatible with industry eGate solutions
- Inlay structure is 100% polycarbonate
- Chip connectivity uses inductive coupling method
- Supports both NXP and Infineon security chips

Meet the Team

Come and say hello to us during the event, we are on stand E6.



Sophie Ogilvy

Senior Government Relations Advisor Areas of Interest

Sustainable approaches to implementing and running a CRVS and ID service

Random Fact

Went to the school that JK Rowling used as inspiration for Hogwarts in the Harry Potter books





Jim Runcie

Areas of Interest

Random Fact

Head of Product Marketing, Identity

Securing identities so as to allow us to live in

I was a waterpolo player at one time in my life





Nicholas Marhic

Areas of Interest ID innovation

Random Fact

safety

Julian Payne

Creative Director Areas of Interest

Secure product design Random Fact I make comics









Ken Chan Product Line Manager Areas of Interest Creation of secure identity

Bandom Fact I helped launch the first Android PC in the world



Key Accounts Director, Solutions

Areas of Interest Passport and iD systems, especially in Africa

Random Fact I only manage to finish the cryptic crossword when on a plane

to discuss and debate some of the current issues facing

the industry. We also hope it has helped you gain a good

understanding of how and where De La Rue, our solutions

Ola Olajide

Regional Sales Manager (Francophone Africa)

I often get mistaken for the French Prime Minister

I am passing my purple belt in kickboxing this year

Business Development Manager Areas of Interest

Working with organisations to make Nigeria more secure interested in new growth market

Random Fact I have 36 uncles and aunties!

We hope you have found this newsletter both interesting and insightful, and have had the chance to visit us on stand

If you have any questions, would like further information or indeed for one of our experts to contact you directly, please do not hesitate to ask.

Simply email us at identity@uk.delarue.com

And if you have any feedback, please be sure to let us know!

April 2018

Scott Atkins Business Development Manager Areas of Interest The challenge of Identity Management within the African Environment

Random Fact Africa has been my home since 2010, it still amazes me every day

Richard Gutsell

Identity & Digital Inclusion

Richard is a veteran of Oxford University

Regional Director

Areas of Interest

Random Fact

Boxing Club.

Regional Director, ID solutions - MENEA

Digital transformation of the Identity world

Ian Murfin

Technical Pre-Sales

Finding the best technological

I recently cycled 600km across

the Italian mountains in multi

Areas of Interest

solutions available

Bandom Fact

day / night race

Hisham Al Surakhi

Areas of Interest









and our people can help.