



DeLaRue

De La Rue Investor and Analyst Day

3 October 2017

Agenda



9:30	Opening remarks	Martin Sutherland	Chief Executive Officer
9:35	Update on strategy	Martin Sutherland	Chief Executive Officer
10:10	Driving innovation	Dr. Selva Selvaratnam	Chief Technology Officer
10:30	Part 1: Security features & holography	Ulrich Walter & Dr Brian Holmes	
11:00	Break		
11:10	Part 2: DLR Design™	Julian Payne	
11:40	Part 3: Intro to digital & DLR Analytics™	Kevin Fraser & Dr Nikki Strickland	
12:10	Q&A		
12:30	Lunch		
13:15	Product demonstrations (25 mins each)		
	DLR Analytics™	Product Management	
	DLR Identify™	Product Management	
	DLR Certify™	Product Management	
	Design & holography	Design Centre and R&D Centre	
15:15	Conclusion	Jitesh Sodha	Chief Financial Officer

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Update on strategy

Martin Sutherland
Chief Executive Officer

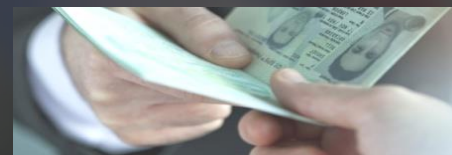
A clear plan to transform De La Rue



Better business mix



Less volatile performance



Higher quality of earnings

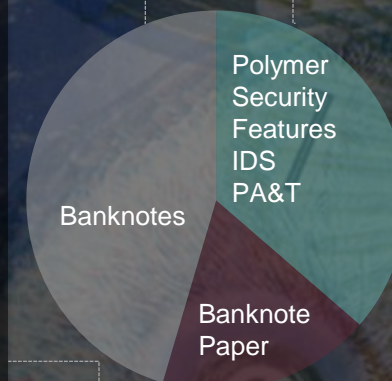


Lower customer concentration

Deliver operational excellence

Banknote Print, Banknote Paper

- Optimise capital employed
- Operational excellence
- Manage costs effectively



2016/17 revenue

Invest for growth

Polymer, Security Features, IDS, PA&T

- Augment efforts and investments in high return areas
- Increase differentiation
- Accelerate technology development and growth through partnerships and/or acquisitions

Strong financial position

Dynamic, results focused and high performing culture

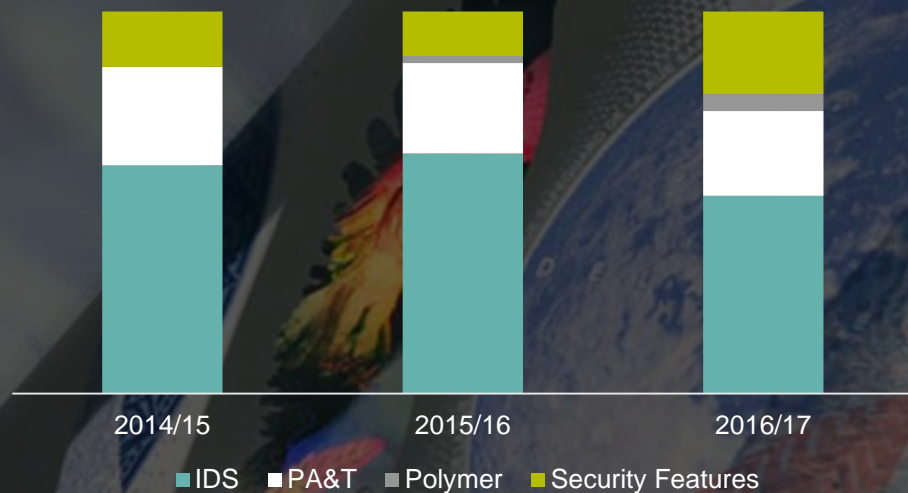
Progress since May 2015

	Strategic priorities	2020 goals	Progress
Deliver operational excellence	Address key issues	<ul style="list-style-type: none">• CPS divestment• £13m in run rate savings• ROCE enhancement	<ul style="list-style-type: none">• Completed sale of CPS in May 2016• Paper discussions ongoing• Reduced banknote print capacity to 7bn by Nov 2016• ROCE 39% in 2017 (2015: 39%)
	Drive efficiency		
Invest for growth	Diversify revenues	<ul style="list-style-type: none">• Mid-single digit revenue growth 2015 – 2020 CAGR• Double R&D investment by 2020	<ul style="list-style-type: none">• Average 5% group revenue growth between 2015 and 2017• R&D investment +54% between 2015 and 2017
	Invest in innovation		
	Strengthen financial position	<ul style="list-style-type: none">• Strengthen balance sheet	<ul style="list-style-type: none">• Net debt/EBITDA 1.27x in March 2017 (2015: 1.23x)
	Drive culture change	<ul style="list-style-type: none">• Dynamic, high performing culture	<ul style="list-style-type: none">• 12 month order book +71% between 2015 to 2017

A more diversified business

More diversified revenue streams

- Invest in R&D and product management
- Develop new channels



Revenue split by “Invest for growth” product

*Numbers exclude the large security features contract worth £30m p.a. concluded in Dec 2015 to better reflect the underlying performance

More diversified customer base

- Increase number of key accounts
- Grow revenue per account

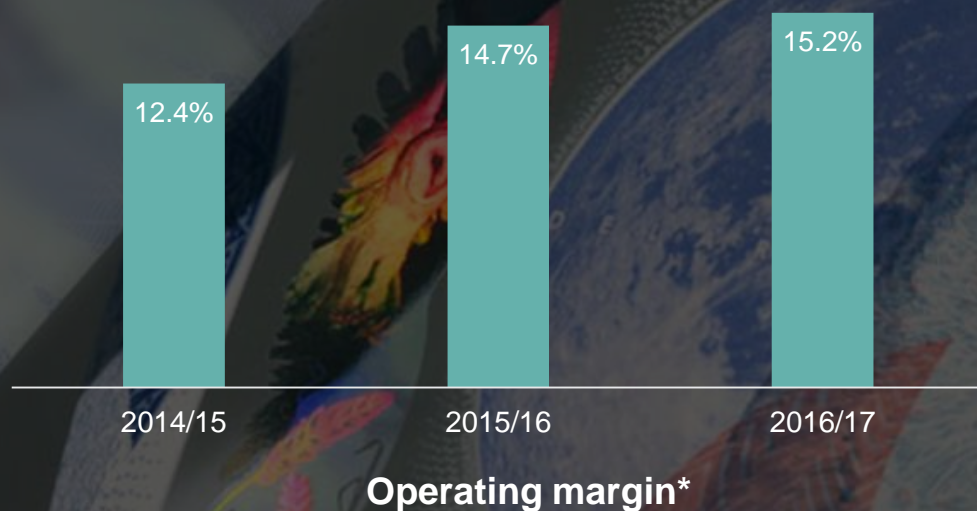


Revenue split by customer

More focus, better returns

Improved margin

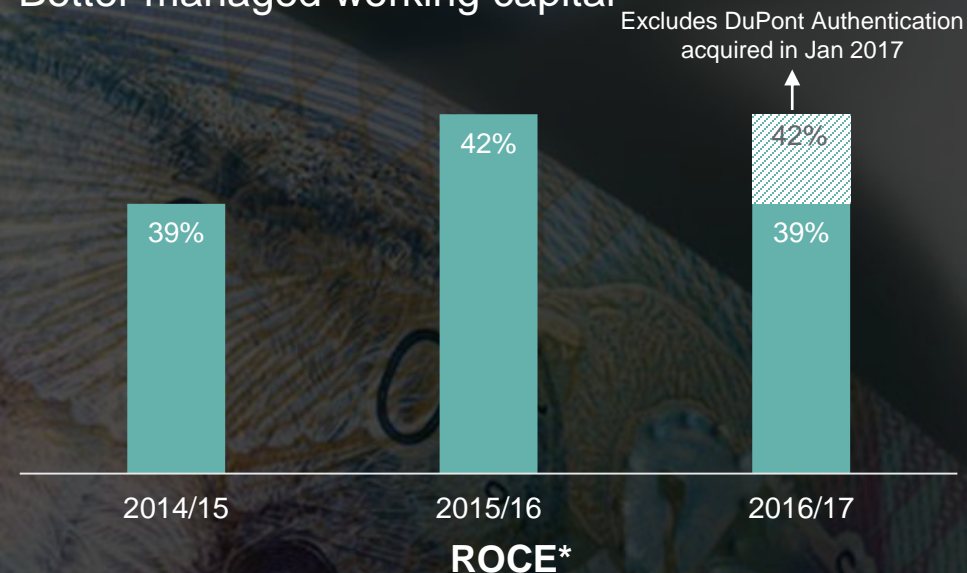
- Pricing strategy
- Efficiency and cost saving programme
- Better managed operational charges



*Operating margin is operating profit after exceptional items and acquired intangibles over revenue

Improved return on capital employed

- Minimise capital in low return areas
- Invest in high return areas
- Maximise asset utilisation
- Better managed working capital



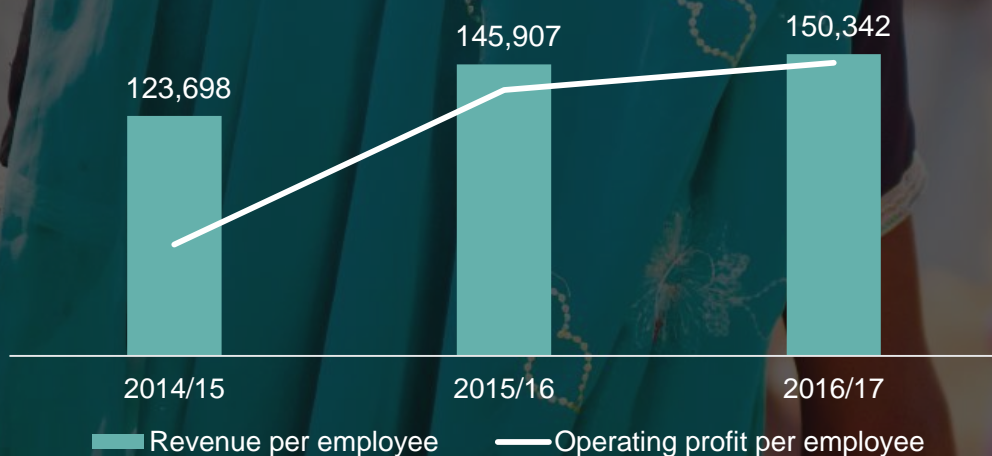
*ROCE is the ratio of operating profit before exceptional and adjusted items over capital employed, where capital employed equals net assets, excluding pensions, tax, interest and long term liabilities.

Effective cost management and efficiency programme

A leaner and high performing business

- Streamlined management team
- New incentive scheme
- Training and development

Reduce headcount by 10%

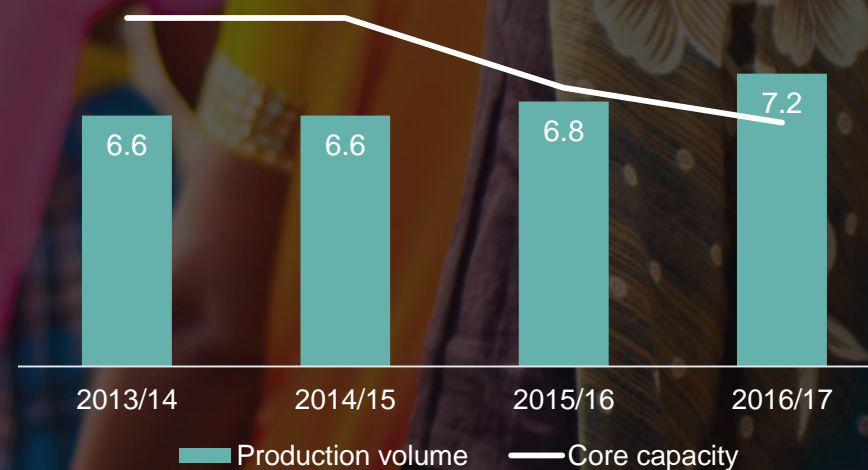


*All figures exclude CPS which was sold in May 2016.

Greater efficiency

- Operational Excellence programme – Level 3 implementation
- Higher throughput, lower spoiled rate
- Strategic sourcing – better procurement

Reduce number of print line by 25%



Manufacturing footprint programme

2015	In future
4 banknote manufacturing sites Different machine capability	Common footprint with standardised capability
8bn core capacity, less flexibility, no outsourcing	6bn core capacity, can flex up to 7bn. Outsourcing partners for surge demand
	c£13m run rate savings from FY18/19

Gateshead, UK

2015	To date
2 x Banknote print lines 1 x Security print line	2 x Enhanced banknote print lines 1 x Security print line

Debden, UK – Banknote printing managed service*

Westhoughton, UK – Security features and polymer substrate

Nairobi, Kenya

2015	To date
1 x Banknote print line	1 x Banknote print line – in progress of upgrading

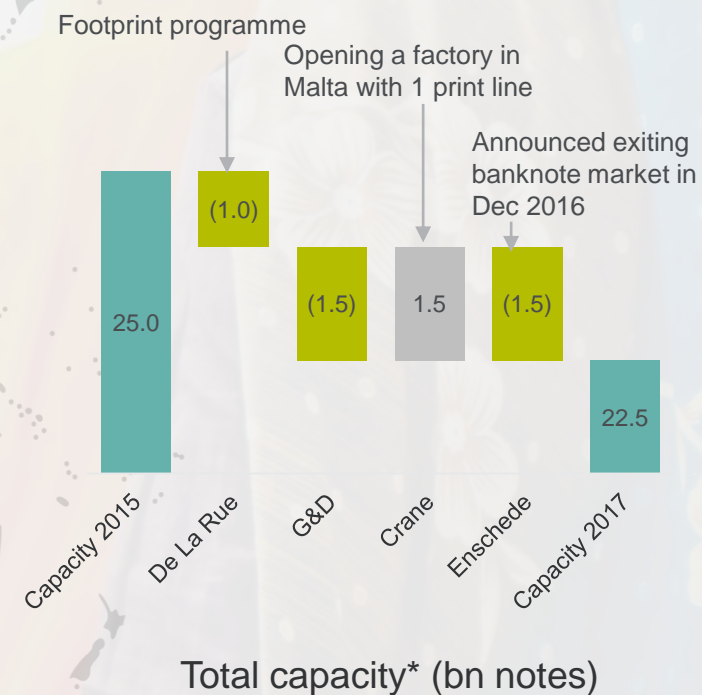
Malta

2015	To date
3 x Banknote print lines	1 x Banknote print line 1 x Polycarbonate line 1 x Security print line

Malwana, Sri Lanka

2015	To date
1 x Banknote print line	1 x Enhanced banknote print line

Commercial banknote printers have been optimising. Total capacity to date is estimated to be c23bn vs commercially available market of 20-25bn notes a year



*Debden print lines belong to the Bank of England

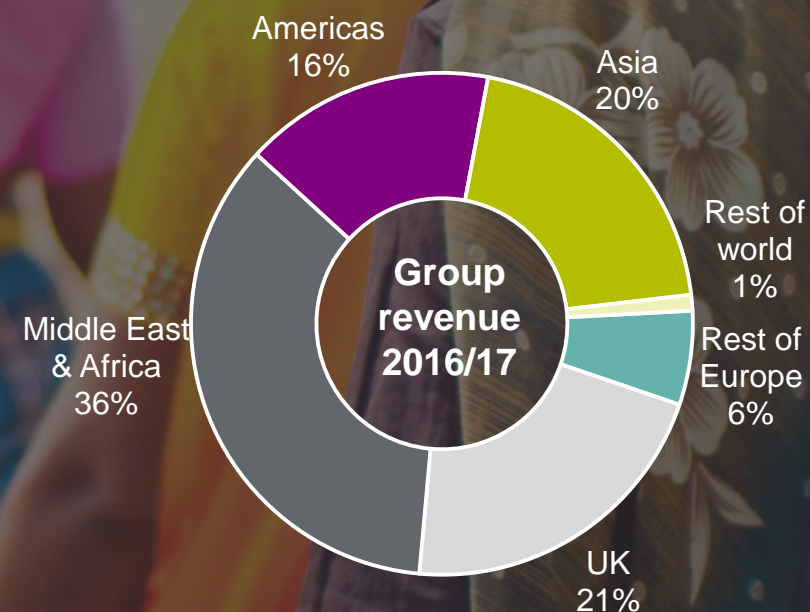
*De La Rue estimates

Growing markets, growing opportunities

In our main markets, cash in circulation growth rates are above GDP growth

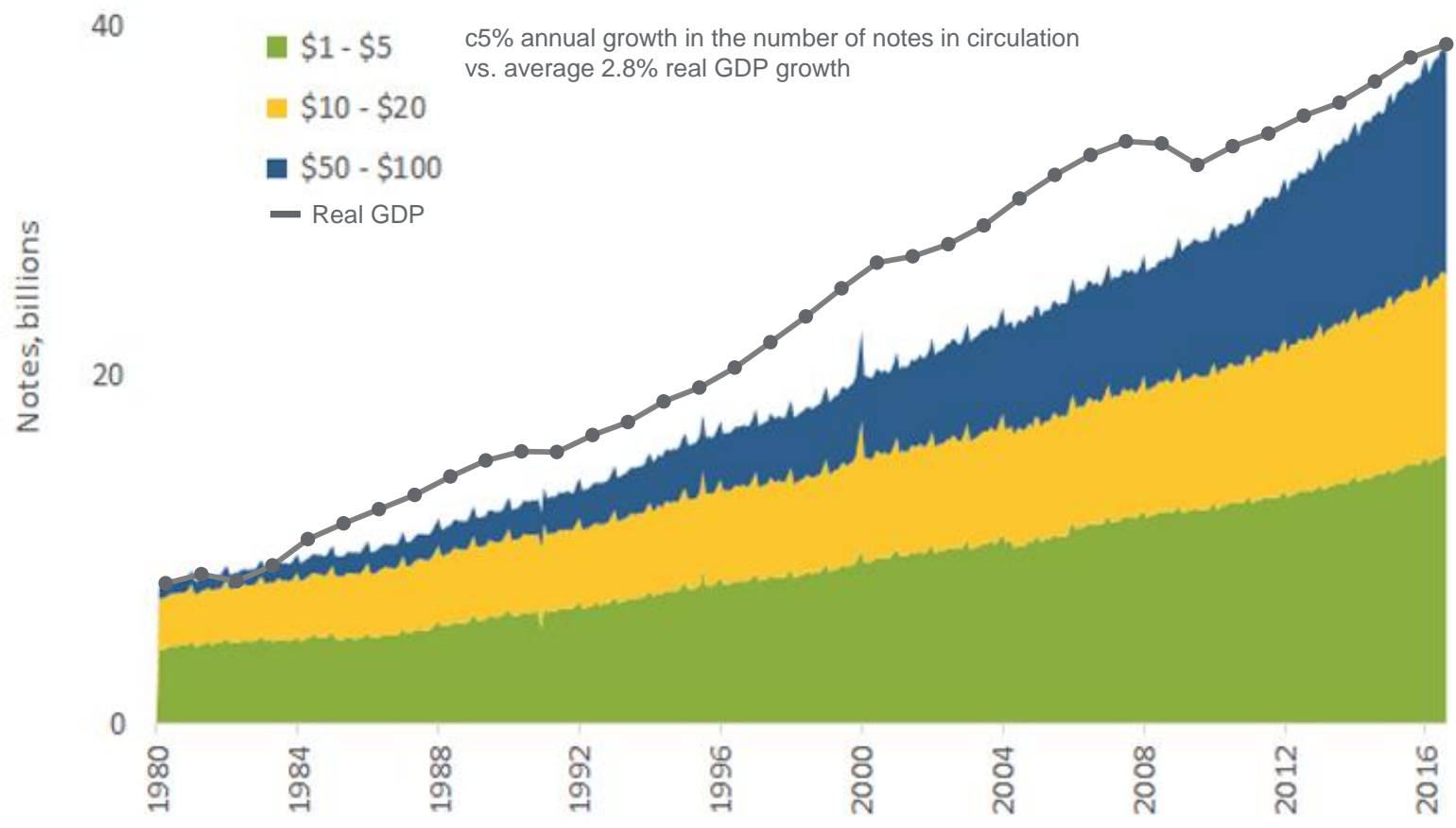


- GDP and population growth are good indicators of demand for our products
- Demand in our home market – the UK is stable
- Growing opportunities in our core markets – Africa, Middle East, Asia



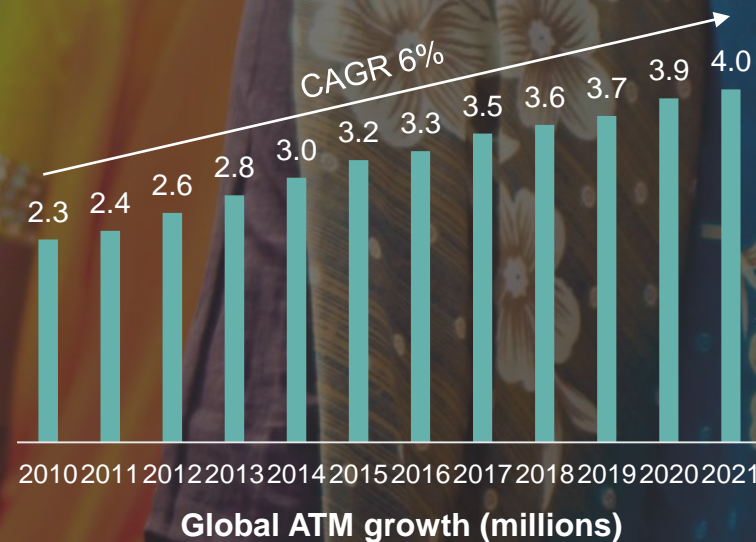
Demand for cash is strong

Demand for cash is strong, even in developed markets such as the US



Source: US Federal Reserve

- Cash in circulation volumes continue to grow at 3-4% p.a. globally
- Growth drivers:
 - Population growth
 - Economy growth
 - Political and financial uncertainty
 - Clean note policy



Source: Global ATM Market and Forecasts to 2021 (RBR)

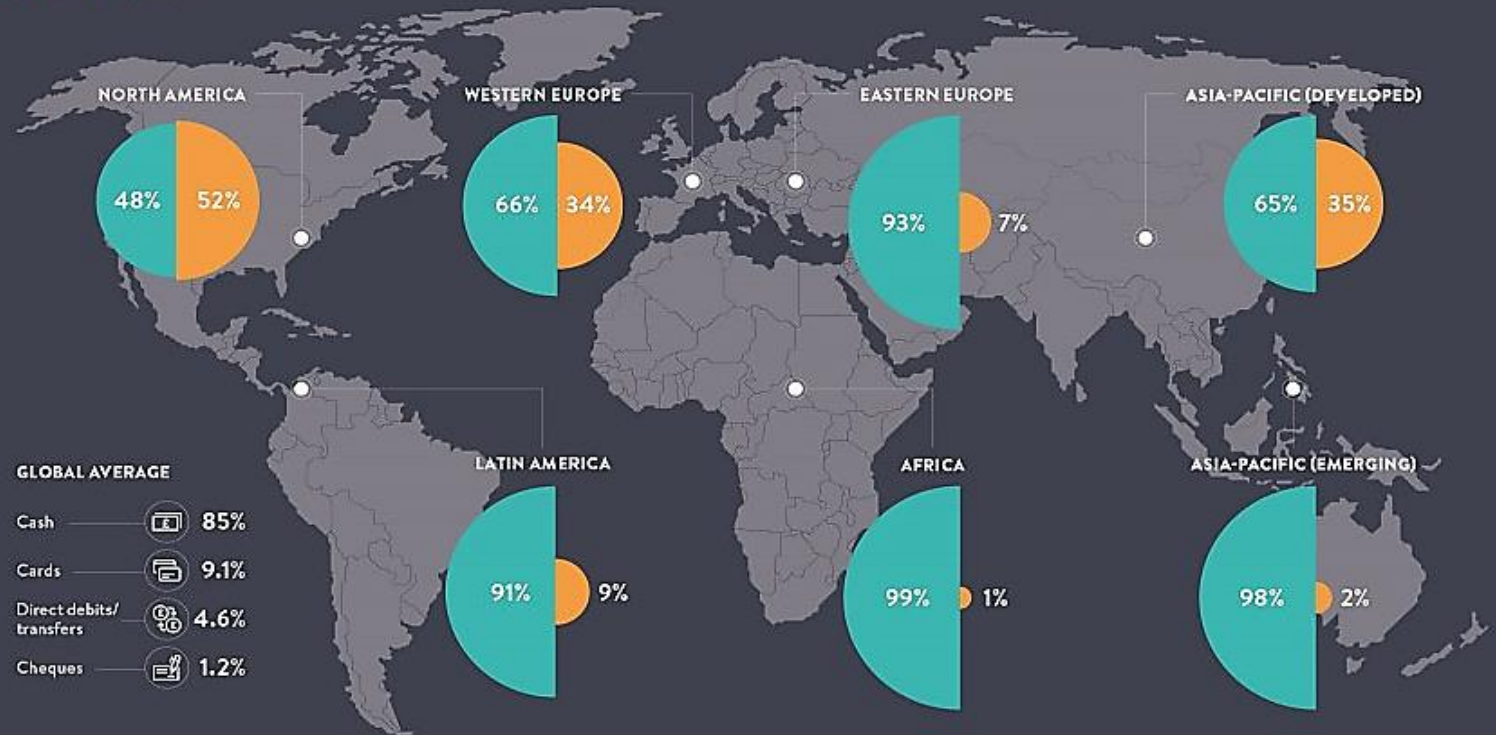
Cash as part of payment ecosystem

Although electronic payment is growing as proportion of the payment ecosystem, cash still remains the most commonly used payment method

GLOBAL PAYMENTS

PROPORTION OF CASH AND NON-CASH PAYMENTS

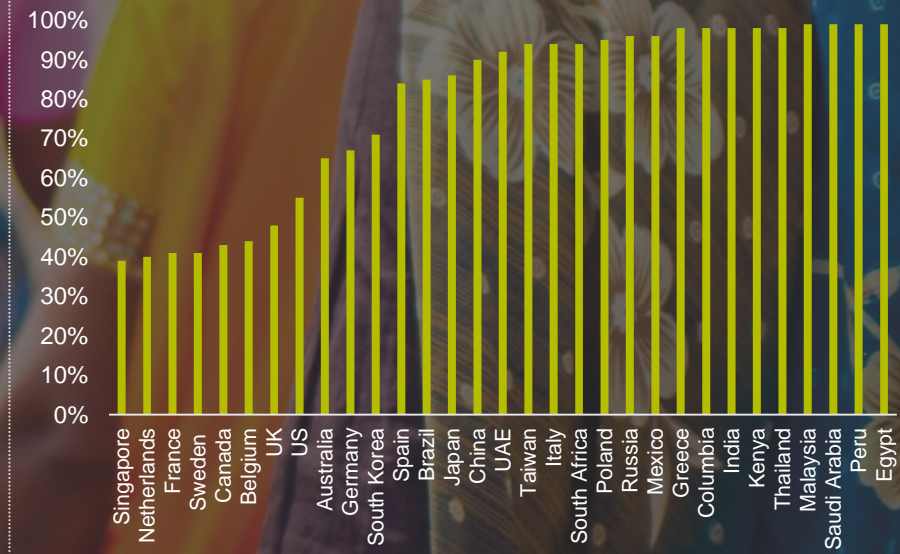
● Cash ● Non-cash



Source: McKinsey/Capgemini

Why people use cash?

- Universal
- Secure
- Easy to use
- Budgetary control
- Privacy and anonymity



Cash to total payment transactions (%)

Source: McKinsey/Mastercard Advisers

Investing in new capabilities



Centre of excellence for security print

Malta

Polycarbonate line for ID
Security print lines for PAT

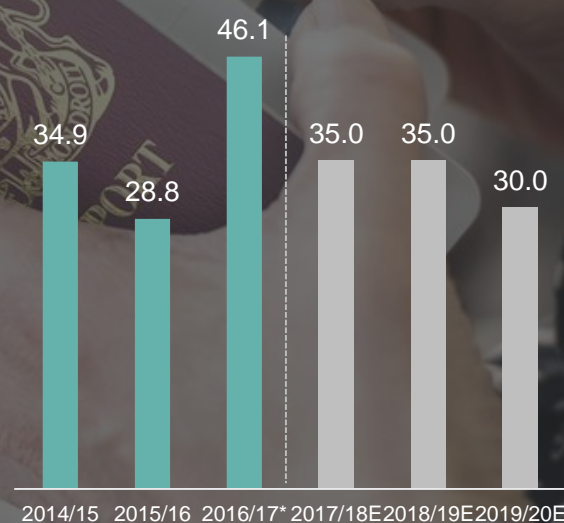


Security features and print

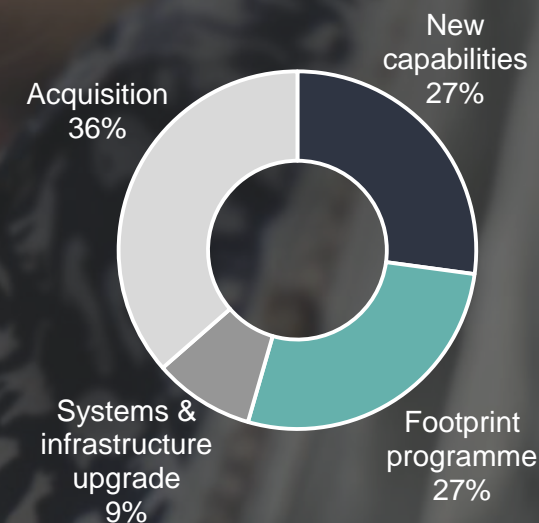
Logan, Utah, USA

Lippmann hologram and identity applications

- Capex investments committed to new capabilities and efficiency improvement
- New centre of excellence for security print in Malta for ID and PAT
- New technology – DuPont Authentication acquisition
- Systems and infrastructure upgrade

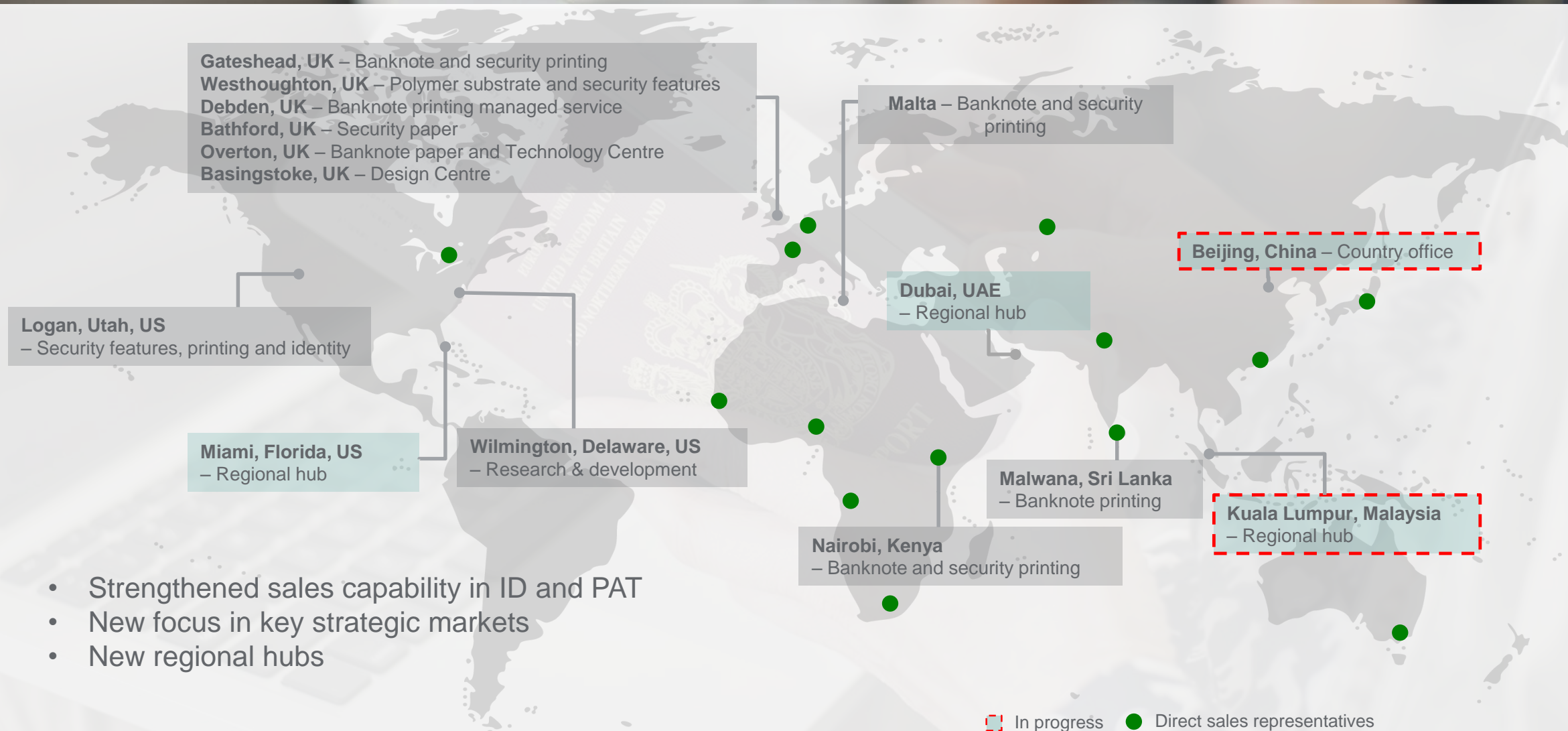


*Including £20m for acquisition of DuPont Authentication



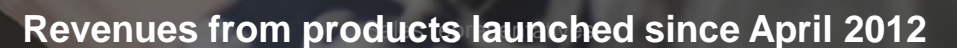
Capital investments (2015-2018)

Investing in sales



- Strengthened sales capability in ID and PAT
- New focus in key strategic markets
- New regional hubs

- ## R&D investment*



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Driving innovation

Dr Selva Selvaratnam
Chief Technology Officer

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Driving Innovation



The themes for today

Overview of products and markets

Leveraging common platforms

Increasing velocity of product development and launch

Our key markets in summary

	Currency	Identity	Product Authentication
Market Size	172bn Issued banknotes in 2017†	£3.9 - 4.5bn Over next 5 years	£2.5 - 3bn Over next 3 years
Growth rate	3-5% Over next 4 years	8% Passport 5% National ID	16% Over next 3 years
De La Rue position	27% Commercial print market* (vol)	32% Commercial passport market (vol)	Fragmented market, multiple product offerings
Trends	Print on polymer DLR analytics™ Embedded features	Flexible financing BOT International funding	Track & trace capability Digital & physical solutions

†11% of which is available commercially
*excluding overspill

Common platform innovation in three areas

Value drivers
&
differentiators

**Security
features**

**Software
innovation**

**Design
services**

Common
platforms

Multiple
markets



Product launches



6 new product and service launches in 2017

vs. historic average of 1-2

32 patents filed last year

Vs. 10 in 2012/13

Leveraging cross platform IP creates longer term value & higher security products

Proven technology combinations an increasing area of focus
Kinetic Starchrome Portrait™, Enhanced Gemini™, Tru-Image™

Differentiated service offerings that build customer partnerships

DLR Analytics
DLR Design services

Differentiation by design



An end to end,
multi-skilled design
team is competitive
advantage

Design engagement builds stronger, longer
relationships with customers

Design platform enables seamless feature integration
within customer products

Transfer domain knowledge to address new markets

Design enables efficient manufacture

Partnerships



3 new partnerships
in the last 12
months

Accelerate time to launch

R&D resources deployed on core De La Rue domains

Develop new channels to market



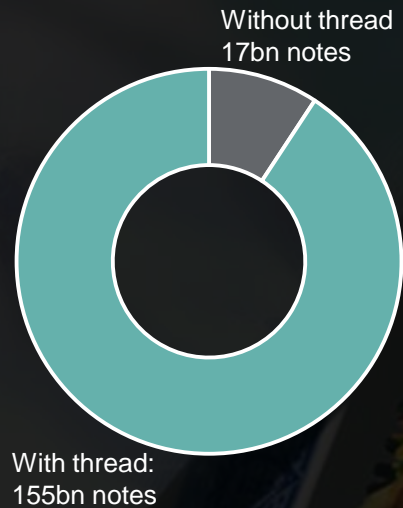
DeLaRue

Security Features

Ulrich Walter
Product Director

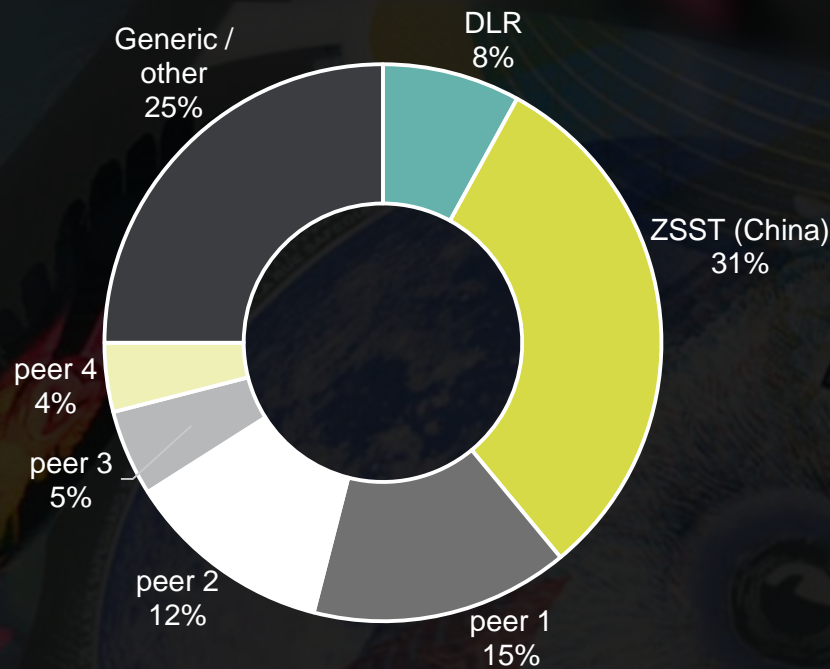
Security Features offers an attractive, commercially available market

Global banknote market*
(c172bn notes)



*De La Rue estimates

Commercial security thread suppliers*



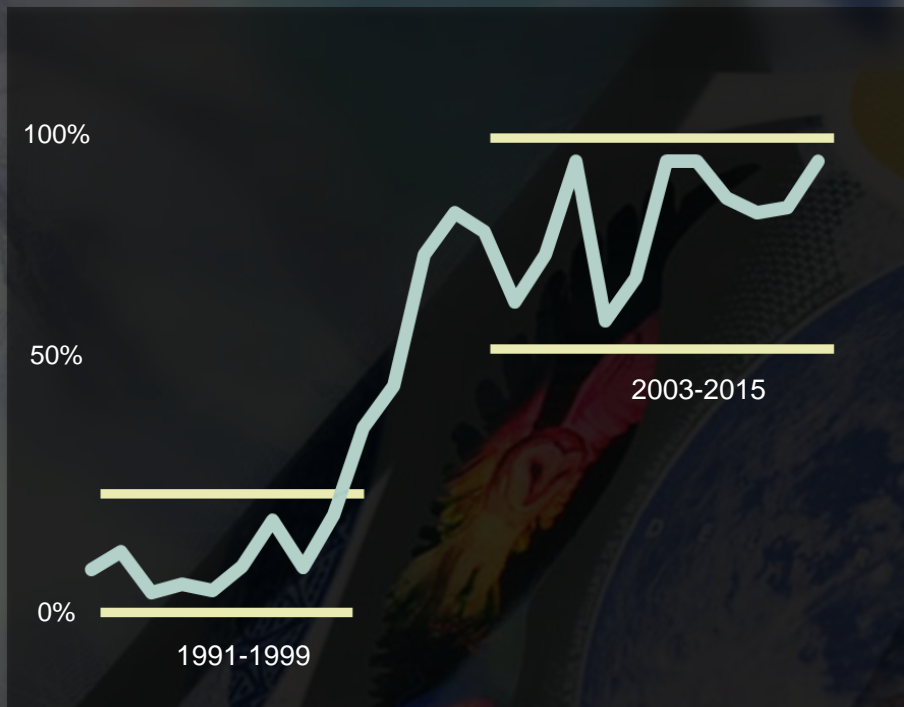
Commercially attractive market

Long term contracts

IP creates high barriers to entry

Design team provides platform to fully integrate features

Security features development is critical to remaining ahead of the counterfeiters



Counterfeiters continue to work across borders and with an increasing range of technology

Feature development demands combinations of integrated, multiple materials and IP

Not just a banknote and passport issue - brands increasing in importance & value

Virtually all counterfeits now seen include **additional processes** or **materials**

Continued investment in innovative features



Kinetic StarChrome
Portrait™



Tru-Image™

Two new security features launched in 2017

Tru-Image™

3D “stereogram” holography

Kinetic StarChrome Portrait™

Combined IP, highly secure, flexible design platform

Initially banknotes with applicability across
portfolio in mid-term

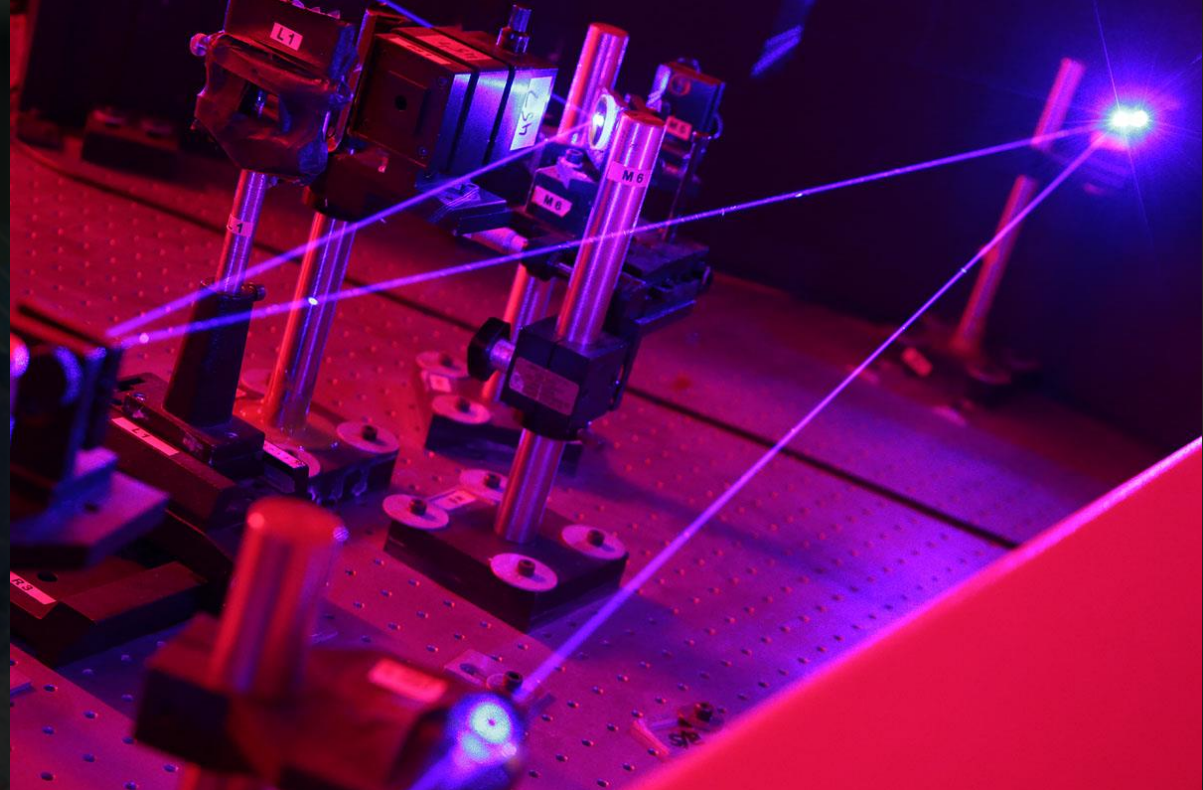


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A closer look Holography

Dr Brian Holmes
Chief Scientist

Holography in De La Rue

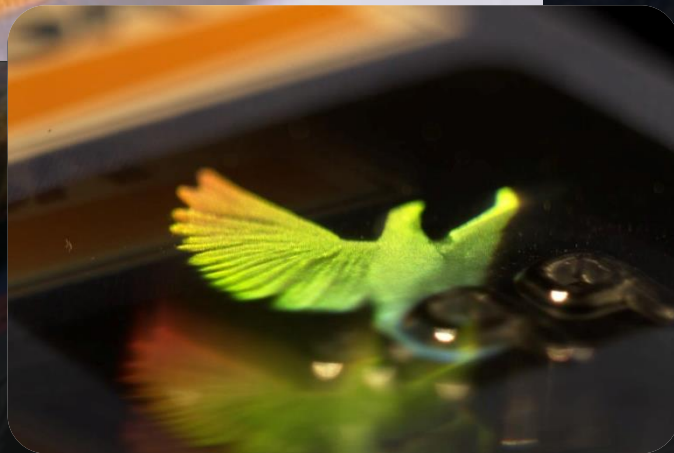
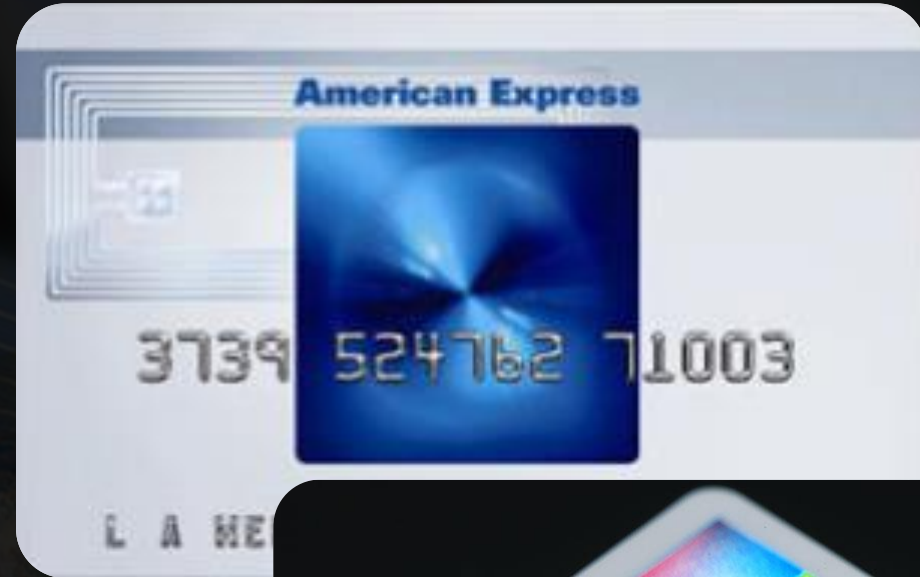


De La Rue is one of the pioneers in using holography as a form of optical security feature, with an unbroken history dating back to the 1980's. It is a centre of excellence for 3D holography.

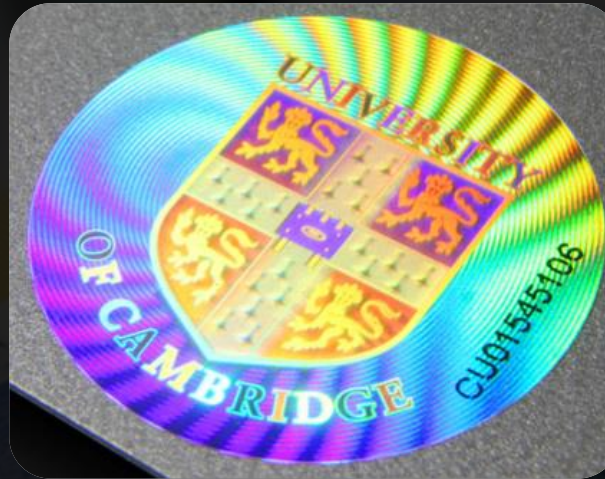
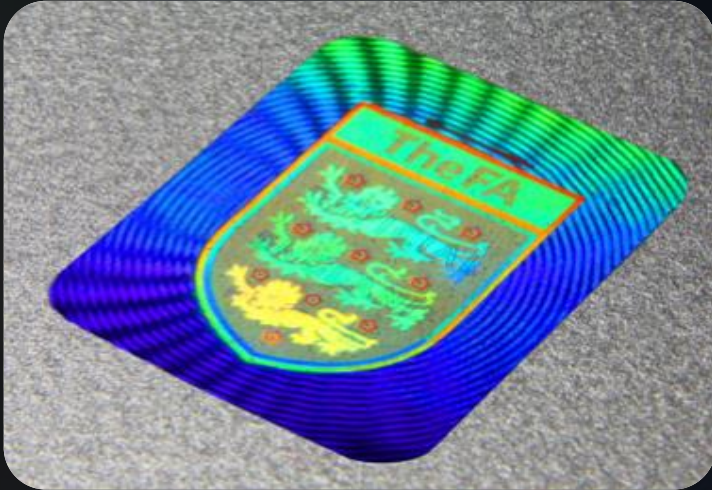
Currency examples



Payment card examples



Product authentication examples



Purpose and function

- Primary purpose is to protect against counterfeiting especially, the threat of reprographics and printing i.e. “digifeiting”
- A secondary purpose, less commonly articulated, is to increase the perceived value and visual appeal of host document or article
- As regards function, first and foremost it is a **public recognition feature**
- It must engage the public, presenting visual effects which are appealing, easily perceived and verified
- Its function is compromised if there is low public awareness & interest or if its effects are readily simulated by commercially available materials



Classification of holograms

- Fundamentally there only two forms of security hologram
- Embossed holograms, where the image effect is generated by microscopic surface undulations
- Lippmann holograms, where the image effect is generated by microscopic partially reflecting layers within the volume
- Following De La Rue's recent acquisition of DuPont's Izon® technology it is the only truly vertically integrated supplier of both forms of holography
- Both of De La Rue's holography platforms reflect the unique effectiveness of 3D imagery as an intuitive and intriguing form of optical effect



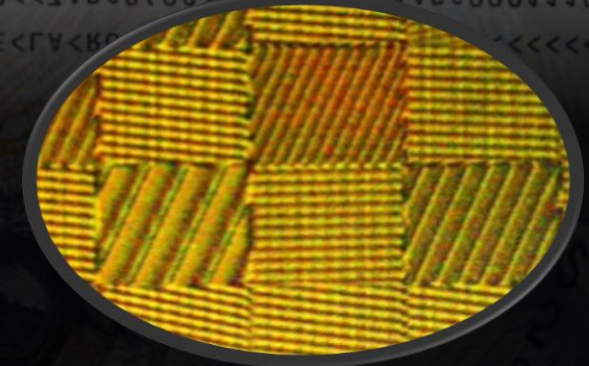
Advanced embossed holography

- De La Rue has been a supplier of high security embossed holograms for nearly 3 decades.
- In the Currency domain alone we have supplied in excess of 3 billion devices.
- Strong focus on innovation with 224 patents supporting this platform.
- The combination of advanced holographic origination or imaging capability with strong design, creates images with unique combination of 3D effects and vibrant colours.
- Wide suite of feature effects provides exceptional design versatility.
- Very suited for polymer banknotes.



Enhancing internal imaging capability

- The holographic films used in ID applications typically take the form of a 'full face' transparent laminate
- For embossed holograms this prevents the use of reflective metal coating (standard for products in other markets)
- To ensure the hologram remains highly visible it is necessary to prioritise image brightness over 3D effects
- We have addressed this requirement by recently investing in a new hologram origination system, which creates 2D image patterns of exceptional brightness and resolution (100,000dpi)
- The combination of these two in-house origination systems will give us a uniquely flexible imaging capability



Izon® Lippmann Holography

- Izon® is the ideal platform for 3D imagery
- Provides full parallax 3D effects which remain sharp and distinct under all lighting conditions
- Holograms are recorded in the volume of a highly proprietary photopolymer material
- In contrast to embossed holograms, Izon® is replicated optically and not mechanically
- The combination of proprietary materials, specialised processes & distinctive appearance ensures Izon® holograms are highly secure
- A key part of development strategy is to adapt the technology for use in Currency product lines



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DeLaRue

A closer look DLR Design™

Julian Payne
Creative Director

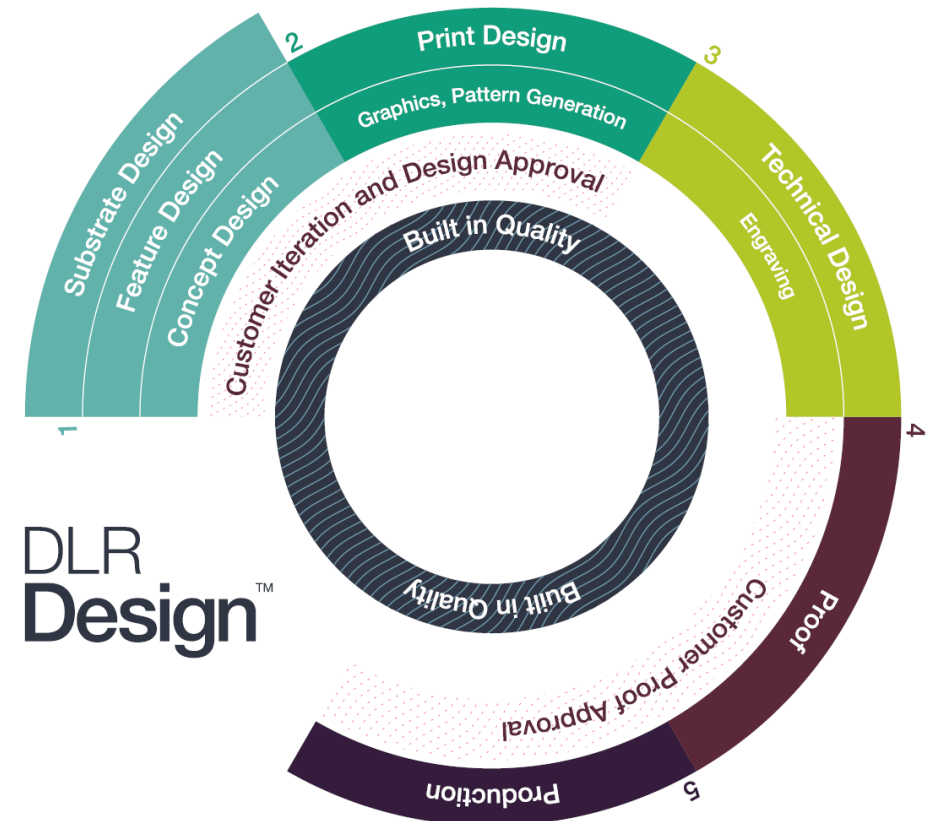
Integrated, end to end security design capability

22

co-located
creative designers
specialising in print,
paper, polymer,
security features and
holography

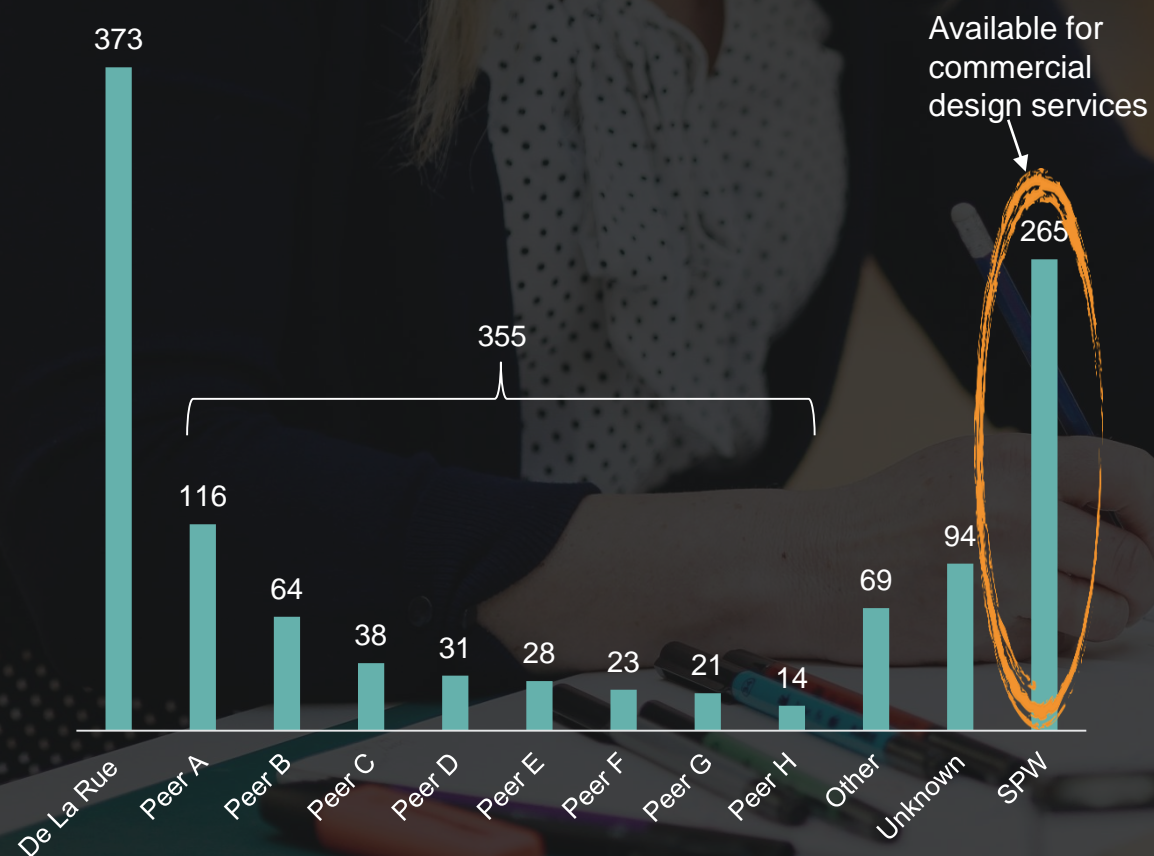
28

specialists in
technical design
including engravers,
studio, platemakers
and proofers



Leading design capability

Circulating denominations by designer (Dec 2016)



- Commercialised, modular design proposition, new approach
- Serving central and commercial banks, state printers, ID authorities and brands
- Integrated design for security features

Customer – centric design approach

The client is part of the design team



Customer context

Critical National Infrastructure project

Politically challenging

Experience

Deliver Confidence

It should be a fulfilling role

Inspire

Counsel and guide

Evidence led design methodology



End users

What are the use cases?

Where are the threats?

People & Machines

Inspiration

Creatives that see beyond the obvious

In partnership with Governments

Integrated security

Integrated technologies

That enable easy validation

Materials

Specialist inks
Security features
Paper, polycarbonate, holographic foils

Manufacture

Prototype

Trust & integrity of the document

On time, to budget



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Integrated product design

Use case, security features, narrative and iconic themes





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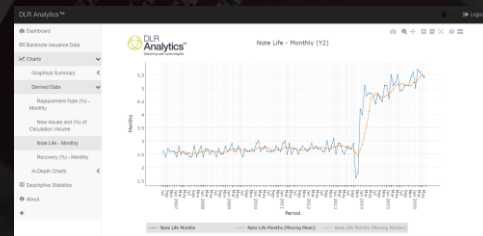
Software Development

Kevin Fraser
Software Engineering
Director

Digital solutions

Currency

DLR Analytics™



Only off the shelf
Banknote data
collection and analysis
platform

Identity

DLR Identify™



Citizen enrolment
CRVS
Data management

Partner Integration
Biometrics
Personalisation

Product Authentication

DLR Certify™



Serialisation
Track & Trace

Creating common
platforms ...

Core domain knowledge
Outsourced flexibility

Able to deliver scalable
Customer solutions

Global
Multiple partners
Multiple geographies

Digital solutions

The client landscape is increasingly complex

Digital solutions to serve our customer's citizens

Data Capture:

Biometric

Banknote features

Unique identifiers

Interoperability:

Personalisation

Readers

Customer Platforms

Secure:

GDPR

ISO/IEC 27034

PKI / Encryption

Customisation:

Meeting each
customer's needs

Support activity



DeLaRue

DLR Analytics™

Dr Nikki Strickland
Product Manager

Customer context

Movement towards being more transparent and data driven

Even sophisticated central banks are at early stages

Multiple data sources but no standardisation / easy approach

Aggregated data



Sampled data



All data



All data



Banknote lifetime metrics and distributions

Banknote speed of movement through the cash cycle

Banknote demand forecasting

Quality of banknotes in circulation and supporting policies

Sorter / sensor performance and calibration

Why do banknotes fail?

End to end banknote life mapping

Production Control



- Waste optimisation
- Impact of design
- Impact of specification
- Supplier quality
- Throughputs

Demand Forecasting



- Circulation
- Destruction
- Issuance
- Denomination mix
- Production
- Macro-economic factors

Circulation Quality Control



- Circulation velocity
- Banknote lifetimes
- Fitness standards
- Sorter performance
- Counterfeits

Cash Cycle Control



- Banknote migration
- Circulation velocity
- Processing
- Destruction
- Transportation
- Security

Specification Setting



- Banknote lifetimes
- Substrate selection
- Security feature selection
- Design
- Counterfeits

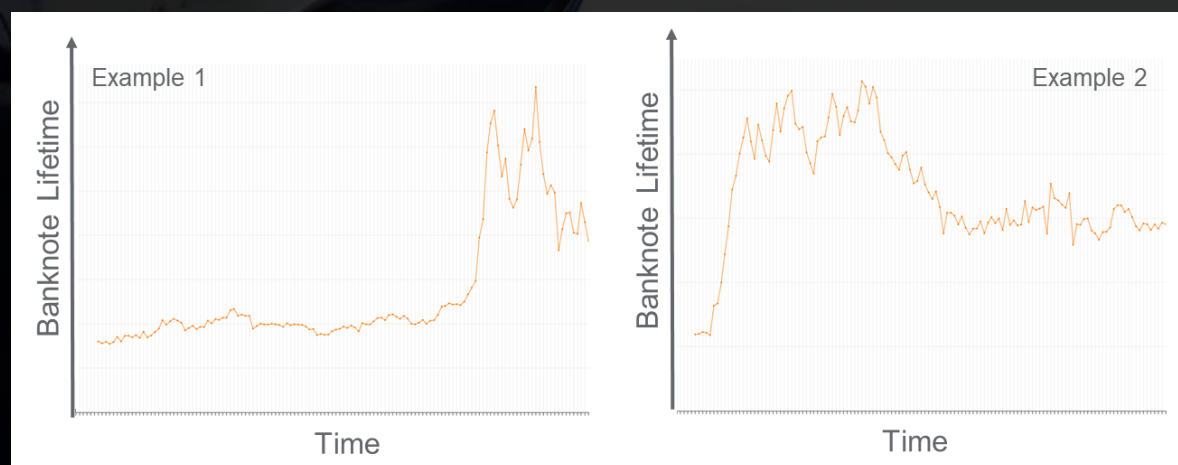
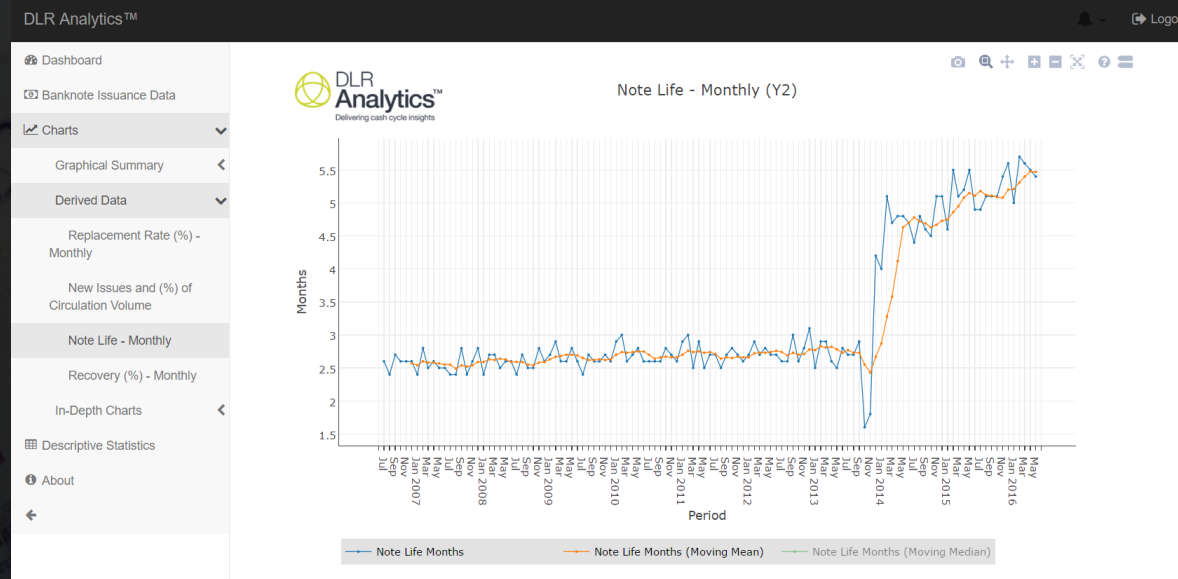
Approach, value, differentiation

The only off-the shelf solution that is available and accessible to all central banks globally

Standardised approach to data collection and analysis

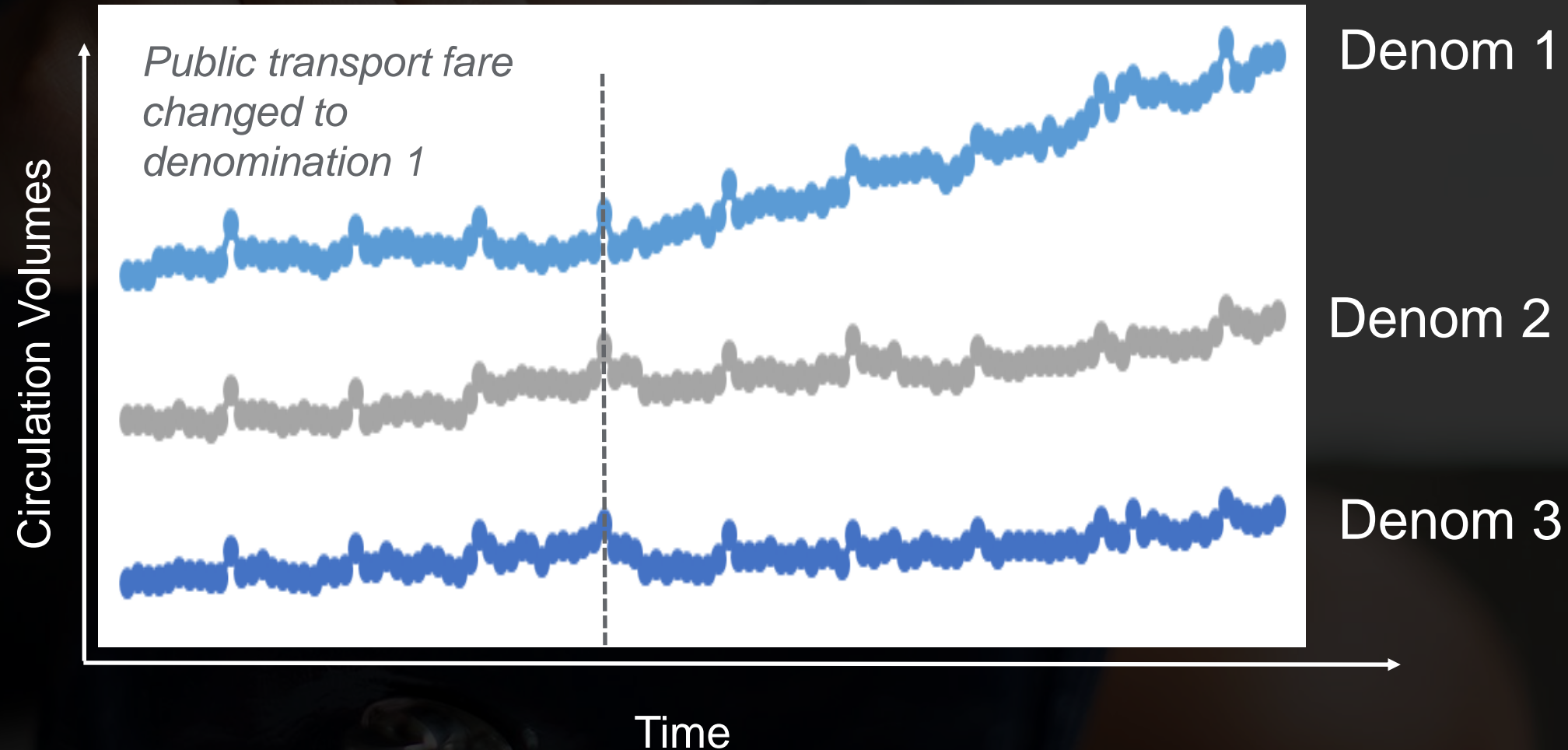
Global data - individual data is aggregated and anonymised by us – the best possible view of what is happening to cash

1/3rd of market signed-up



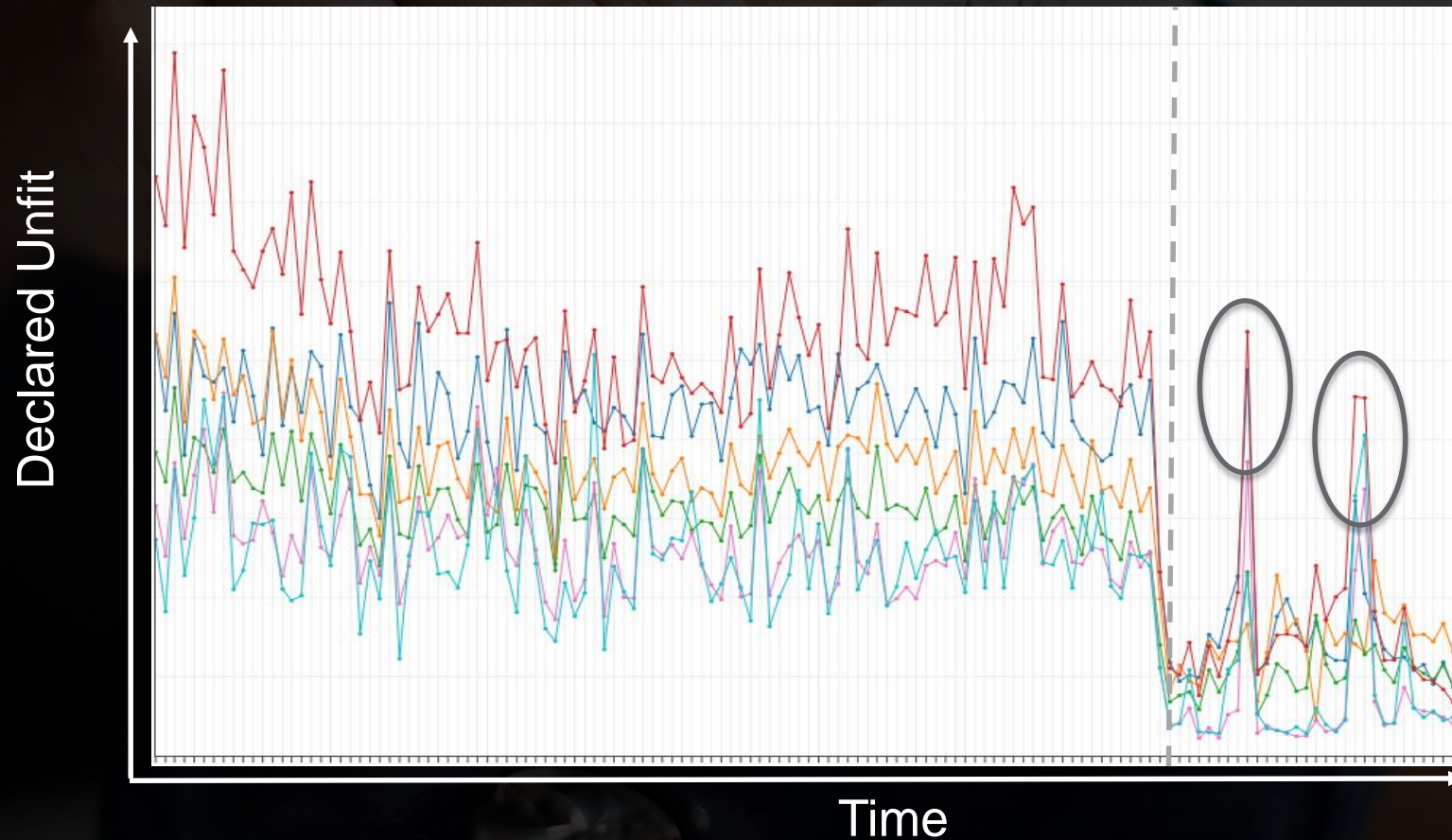
DLR Analytics examples

Impact of external change on volumes



DLR Analytics examples

Quantifying the impact of issues



New sorters and fitness standards were introduced.

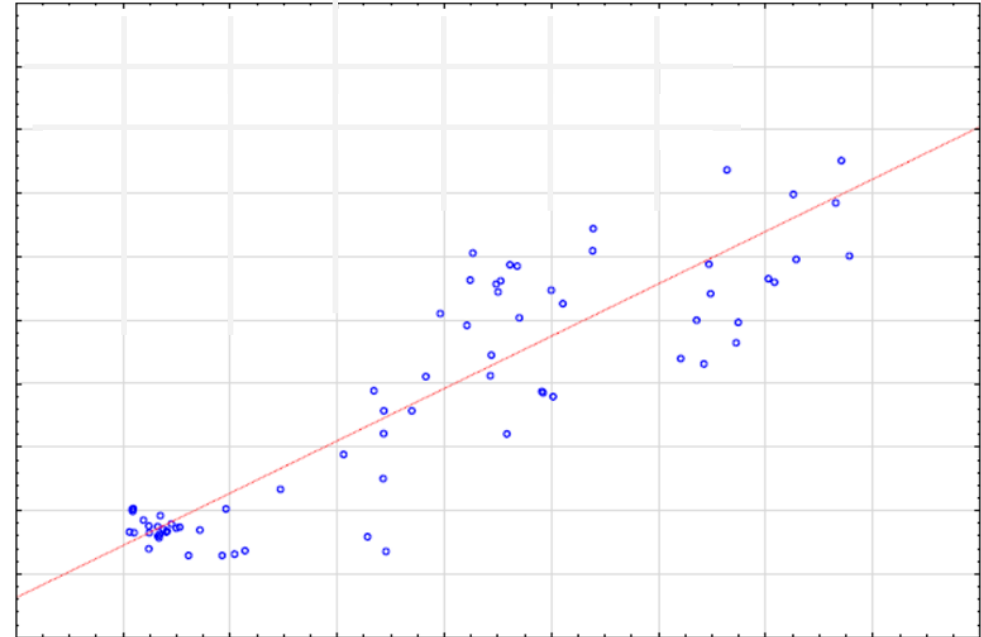
Sorter issues causes unnecessary destruction spikes.

DLR Analytics examples

Impact of central bank decisions on banknote lifetime

Decisions about how many banknotes to issue can impact the banknote lifetime

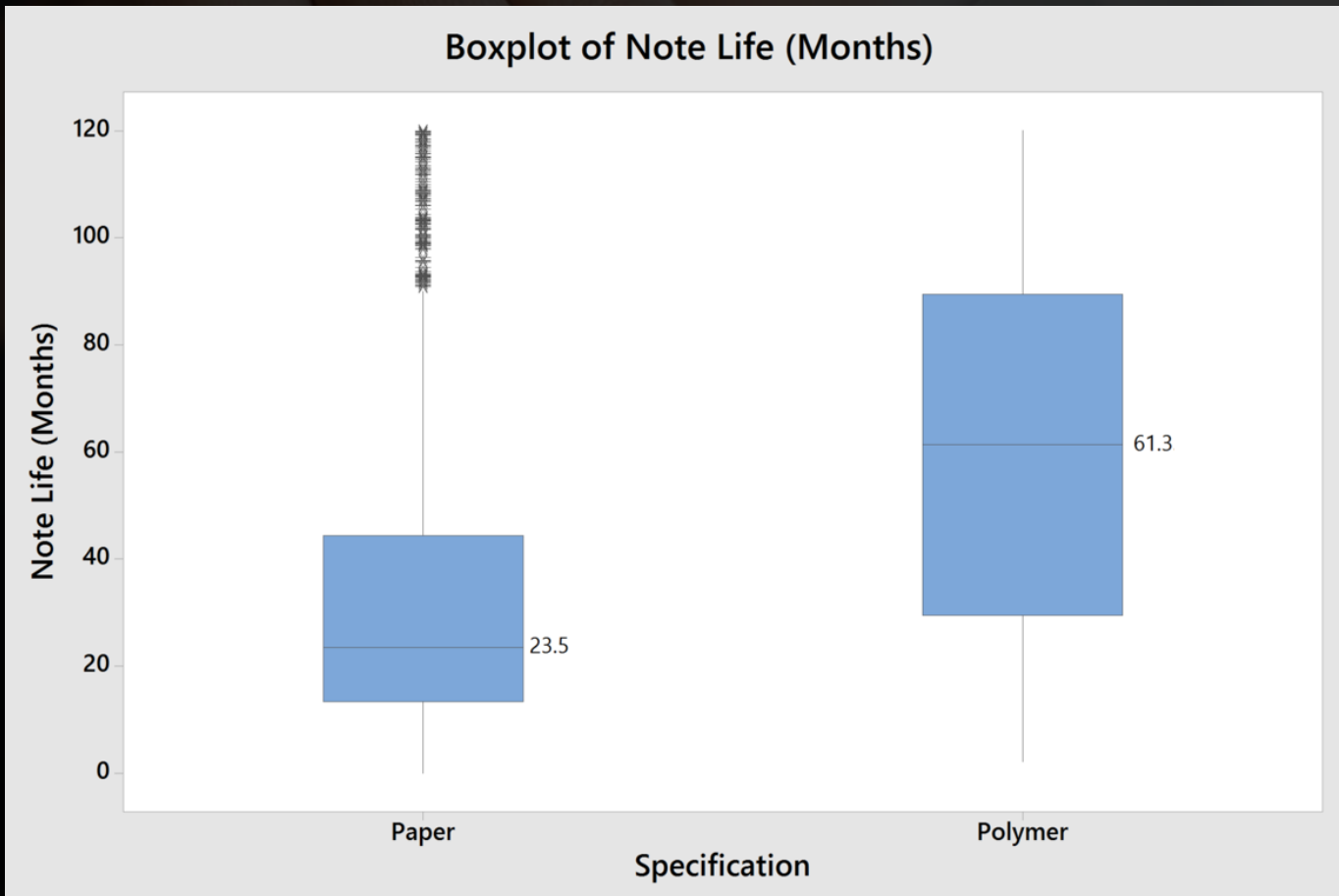
Note Life (months)



Circulation Volumes

DLR Analytics examples

Aggregated and anonymised data



Polymer banknotes lasting > 2.5 times longer than paper banknotes on average

Ability to predict the benefit of moving to polymer, from comparison to banks in a similar situation who have made a similar decision

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10:30	Part 1: Security features & holography	Ulrich Walter & Dr Brian Holmes	
11:00	Break		
11:10	Part 2: DLR Design™	Julian Payne	
11:40	Part 3: Intro to digital & DLR Analytics™	Kevin Fraser & Dr Nikki Strickland	
12:10	Q&A		
12:30	Lunch		
13:15	Product demonstrations (25 mins each)		
	DLR Analytics™	Product Management	
	DLR Identify™	Product Management	
	DLR Certify™	Product Management	
	Design & holography	Design Centre and R&D Centre	
15:15	Conclusion	Jitesh Sodha	Chief Financial Officer



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Q&A



Agenda



9:30	Opening remarks	Martin Sutherland	Chief Executive Officer
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15:15	Conclusion	Jitesh Sodha	Chief Financial Officer

Product demos

	Red Group	Blue Group	Grey Group	Purple Group
13:15 – 13:40	DLR Analytics™	DLR Identify™	DLR Certify™	Design and Holography
13:45 – 14:10	DLR Identify™	DLR Certify™	Design and Holography	DLR Analytics™
14:15 – 14:40	DLR Certify™	Design and Holography	DLR Analytics™	DLR Identify™
14:45 – 15:10	Design and Holography	DLR Analytics™	DLR Identify™	DLR Certify™
15:10 – 15:15	Return to Penthouse Conference Room			

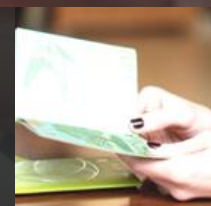
A journey to transform De La Rue

**Capital-intensive
manufacturer**

Deliver operational excellence



Invest for growth



Strengthen financial position



Drive high performing culture



**IP/technology-led
security product
and service
provider**



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Thank you