A photograph of a modern, multi-story office building with a large glass facade. The building is identified by the 'Entrust Datacard' logo on its upper right side. The foreground features a paved area and a bed of purple flowers. The sky is clear and blue.

EVOLUTIONS IN THE DEBIT/CREDIT CARD MARKET with discussion of other payment methodologies, and the future of cash.

Presented by Theo Schoeman

CEO

Schoemans Group Namibia

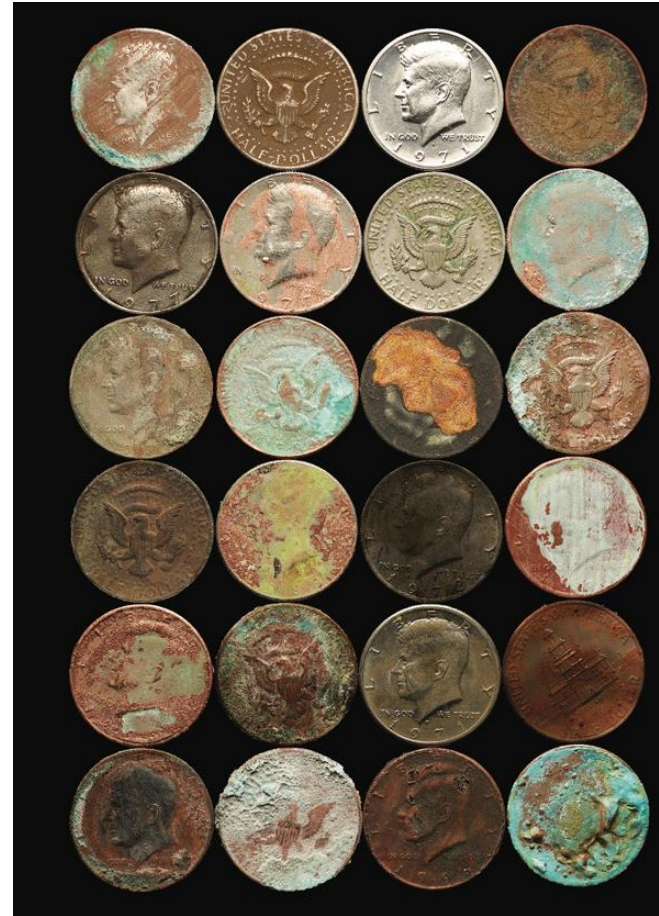
The future of cash

The beginning of the end ?



Cash Money

- Back in the day, money stood for something: *Gold* doubloons and *cowrie* shells had real value, and so they didn't need a government to stand behind them.
- Money has 3 main roles
 - It's a store of Value
 - It's a medium of Exchange for goods and services
 - Its Impersonal- not intended



Cash Money



- Until recently, coins had an intrinsic value and notes were backed by gold.
- Nowadays it is backed by Governments
- Countries now have central banks to oversee their money supply, as well as to set interest rates, combat inflation, and otherwise control their monetary policy.
- In 1861 the Gold standard was adopted almost world wide.
- World war 1 derailed the gold standard. They needed money for the war, so they just printed more.
- Many countries tried to revert to gold. South Africa formally abandoned the gold standard in 1932, but it remained a promise on the Rand notes until the 1960's.
- *"I promise to pay the bearer on demand in Pretoria" in Gold !!!*

The demise of cash

Money is no longer a thing...It's a process



- Cash's role is waning, as mobile, encryption, and other technologies let us plug directly into the digital economy
- Your earnings, your savings, your spending: Virtually all of it is now Digital/Virtual
- Anarchists, drug dealers, prostitutes, taxi drivers, and nannies all have a reason to prefer cash.
How about you? !!
- Will cash disappear? No
- "We should call it the less-cash society, not the cashless society,"
- The Nederland and Sweden are close to a cash free society.
Not without problems.
- China is not far behind
- but more significantly Mobile payment technology, eBanking and Cards worldwide, has reduced the use of cash

What replaces Cash?



- Debit & Credit cards & eBanking, but more recently advances in mobile technology has leapfrogged cash payments worldwide.
- In Kenya and in Tanzania, for instance, the cashless mobile-banking-system M-Pesa means millions of people now pay bills, collect salaries, buy livestock.
- They even conduct small transactions at local markets via accounts on their mobile phones.

• What about Namibia?

- Cash is still king. Particularly in the rural areas. Yet most citizens have mobile phones, but not smartphones.
- Namibian banks are charging heavily for cash deposits and other services.
- Banks want us to transact electronically, via financial card or the Internet.
- Its cheaper for them (they make more profit), but also cheaper for citizens.

Where to Namibia ??

- Do you want to pay for a banana with your mobile phone?
- Cash has become a smallish but unavoidable part of our lives, like umbrellas or toilet tissue.
- Some alternatives are: Debit credit cards, Prepaid debit cards, marginal digital script, eWallets, Cryptocurrencies and “out of bank” digital transactions; but Mobile is by far the biggest.



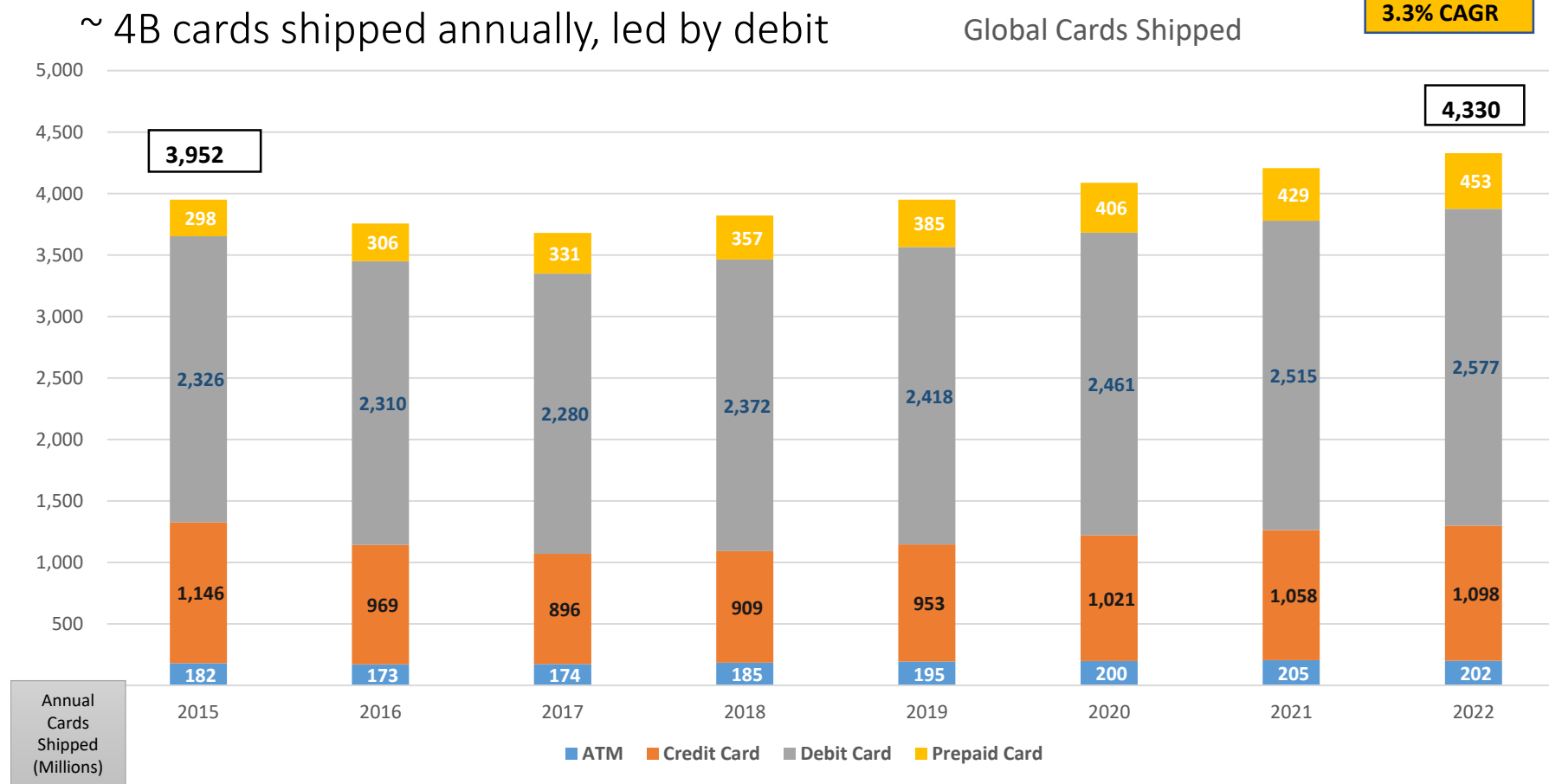
- Lets look at the Financial card Market first

The future of Debit and Credit Cards

and Payment Systems



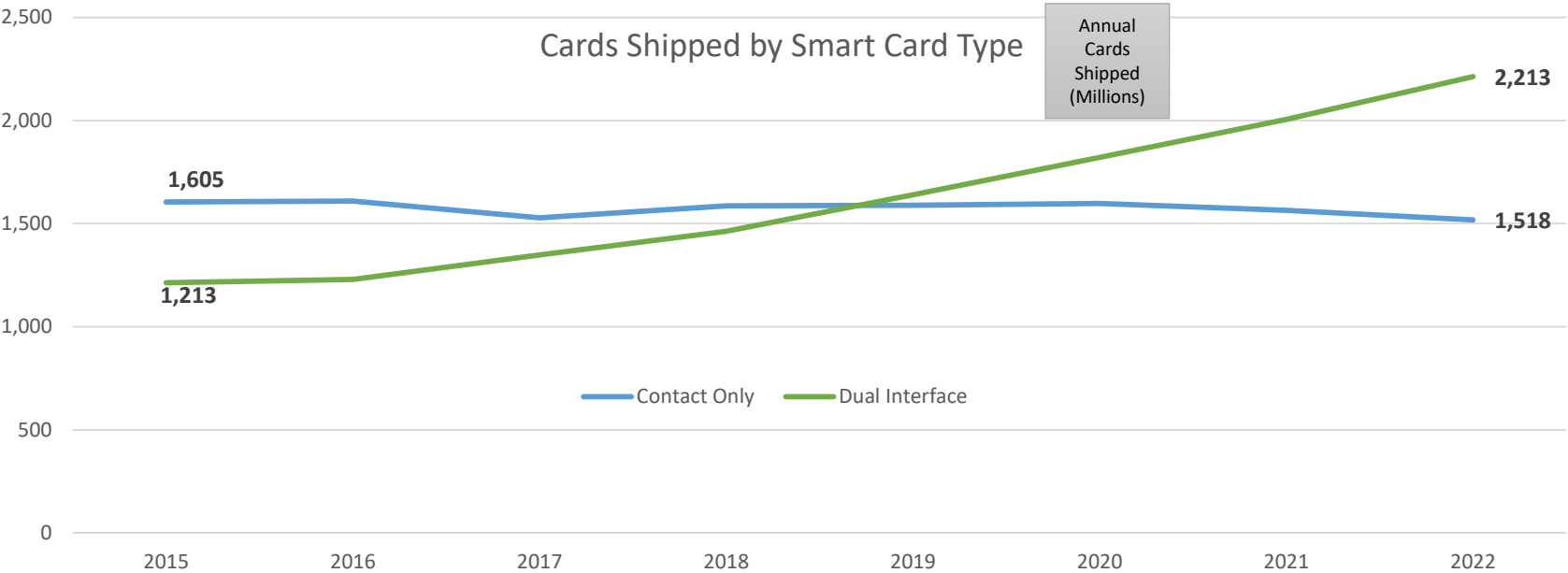
Compound Annual Growth Rate (CAGR)



- Overall positive Compound Annual Growth Rate of 3.3%
- India migration not happening as fast as originally forecast
 - US volumes are rebounding during 2018
 - China flat Year On Year

Cards are not Dead !

Dual Interface CAGR of 10.4% by 2022

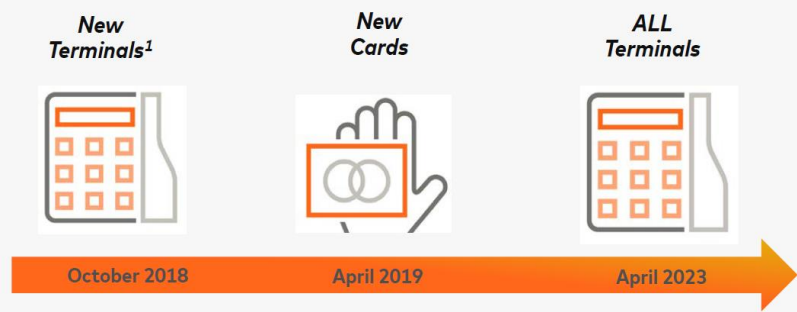


Acquiring

- Effective from **13 October 2018** all newly deployed POS Terminals must accept contactless payments
- Effective from **1 April 2023** all POS Terminals must accept contactless payments

Issuing

- Effective from **13 October 2018** all new and re-issued Visa chip cards configured for use at Visa point-of-sale (POS) terminals must support contactless.



Three countries account for > 50% of total cards

1,39 Billion



China

- 29% of the world's cards in circulation (2018)
- 22% of the world's cards shipped (e2022)
 - 2.9% CAGR
- Card Growth coming from credit and dual interface
 - 6.9% CAGR

330 Million



US

- 12% of the world's cards in circulation (2018)
- 22% of the world's cards shipped (e2022)
 - 2.3% CAGR
- Card growth fueled by dual interface credit and prepaid
 - 26.7% CAGR by 2022

1,34 billion



India

- 11% of the world's cards in circulation (2018)
- 12% of the world's cards shipped (e2022)
 - 4.6% CAGR
- Card Growth coming from debit and credit
 - 6.9% 5.6% and 6.1% CAGR respectively by 2022

**52% OF TOTAL
CIC**

**56% OF TOTAL
CARDS
SHIPPED**

**COMBINED
CAGR OF 3.2%**

**2.2B CARDS
SHIPPED e2022**



PHYSICAL CARD MARKET

and Payment Systems



Physical Card disruption threats – Digital Payments via Mobile



QR Codes

- QR code-based mobile payment has almost entirely displaced cash in China
 - \$5.5 trillion worth of mobile payments made in China last year, most of which were done via QR
- QR code transactions are less expensive to process for merchants (0.6% vs. 1.1% for UnionPay) (Namibia est 3%)
- QR codes are seen as inexpensive alternative to POS machines
- EMV Co have officially released two QR code payment specifications
- Visa Ready enabling merchants to accept QR payments in emerging markets (15 countries)
- Starting now in Africa and Europe



Digital Wallets



- Many initiatives, many providers:
 - Non bank initiatives
 - Visa and MasterCard checkout solutions
 - Mono bank initiatives
 - Bank consortia initiatives
- Mobile wallets have become very popular post demonetization in India

70% of these e-wallets are linked to a debit or credit card



Physical Card threats – The **Digital Threat**



Cryptocurrencies & Block chain

- Like Bitcoin, several central banks (England, Sweden, China, Estonia) are looking at issuing a form of digital currency as a replacement to cash totally or as one of the form factors of monies.

Korona initiative in Hungary seems to have failed ?

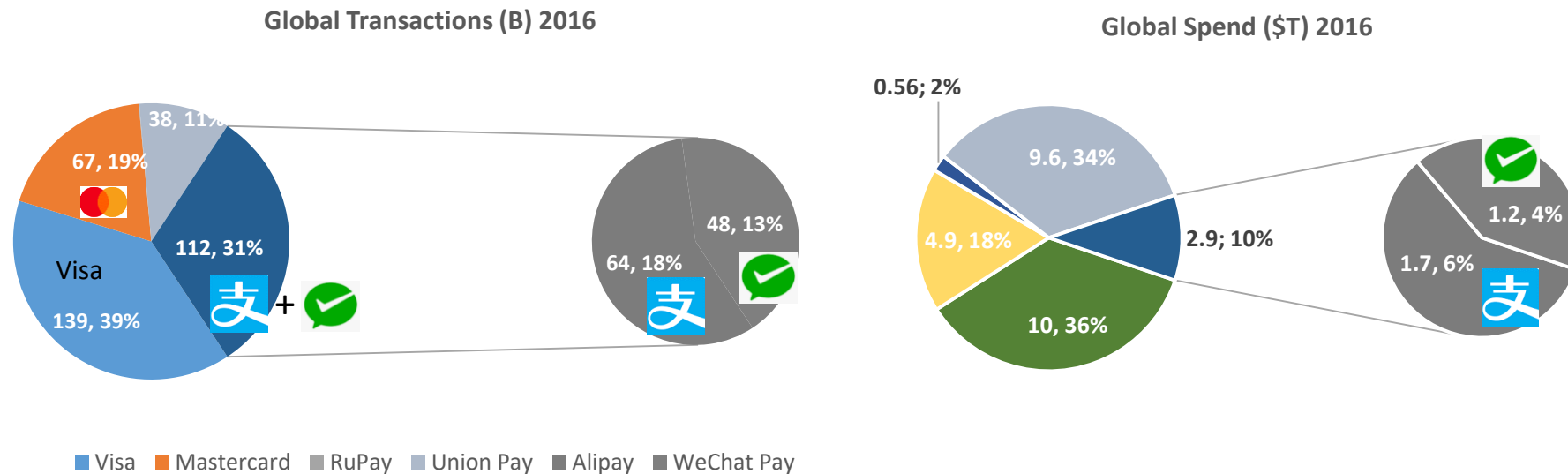
- Block Chain technology is under evaluation and experimentation for payment security (payment card verification/payment initiation/ resilience to attacks)
 - Looks promising Technology, but limited in transaction volumes
 - Cost of a transaction is extremely high (high energy consumption + mining)
 - Dutch National Bank just announced it Rejected it after (3 years testing)



- “IoP” is still an evolving protocol but holds the promise of being the next hyper-growth sector. IoP coupled with cloud, big data, analytics, artificial intelligence and biometrics, promises disruption.....

Internet of Payments

Alipay on par with Mastercard transaction volumes



- Alipay and WeChat Pay entered payment market in 2004 and 2013
- Combined, they made up **31%** of the total transaction volume in 2016 and **10%** of the spend
- Ant Financial (parent company of Alipay) recently opened an internet-only bank
 - Risk: traditional bank and card disintermediation since consumers can link Alipay to internet bank account vs. debit card
- Expansion beyond China
 - Alipay available in 26 Countries; WeChat Pay in 15 countries

Emerging opportunities for Cards

Contactless Transit Payment Cards

- “Open-loop systems will provide opportunity for payment cards and mobile devices to be included in the ticketing market” – ABI Research, Feb 2018
- Visa launched Visa Global Transit Solutions in November 2017
- Mastercard has now “City Possible” platform enabling citizens with contactless and better UX in cities, including transportation (Q4,2017)



Pcard, Corporate card, Public Organizations Cards

- Need for European states to better control State employees purchases and expenses



Fuel Cards

- Global Fuel Cards Market valued at \$595,720M in 2016, and is estimated to reach \$842,410M by 2023, growing at a CAGR of 5.3% from 2017 to 2023.
 - APAC region showing highest CAGR of 7.1%



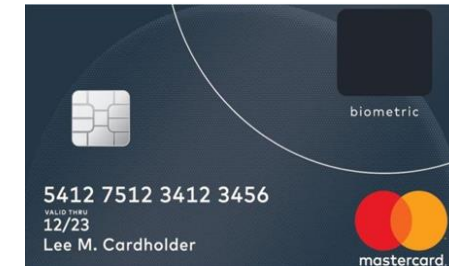
Next generation cards – small % of total cards in circulation

Next Generation Card Types

- DCV (Dynamic CVV)
- Biometric Sensor Card
- QR code changes for multiple uses
- Bluetooth BLE cards with multi-line display

Next Generation Card Market opportunity

- These cards only account for 0.004% of all payment cards in circulation in 2017
- Penetration will grow to 3.4% by 2022, but will remain a very small part of the payments market for the foreseeable future
- Card prices need to decrease for a compelling ROI
- Frictionless end-user experience and adoption



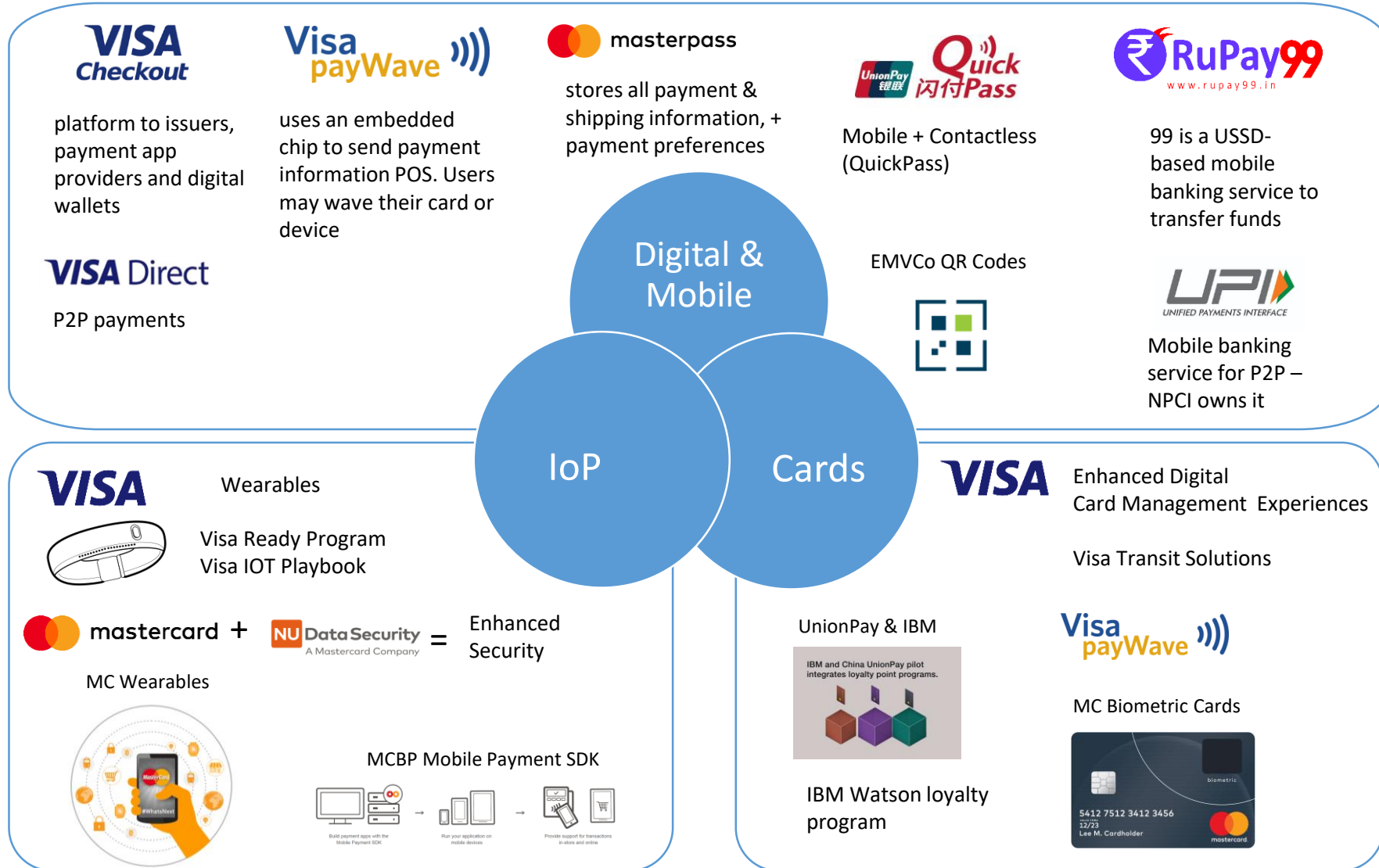
Dual function – threat or opportunity?

- Government cards are now adding payment functionality
- eID's, welfare cards, social security cards, health insurance and more
- Opportunity:
 - If it reaches the unbanked who never had a payment card

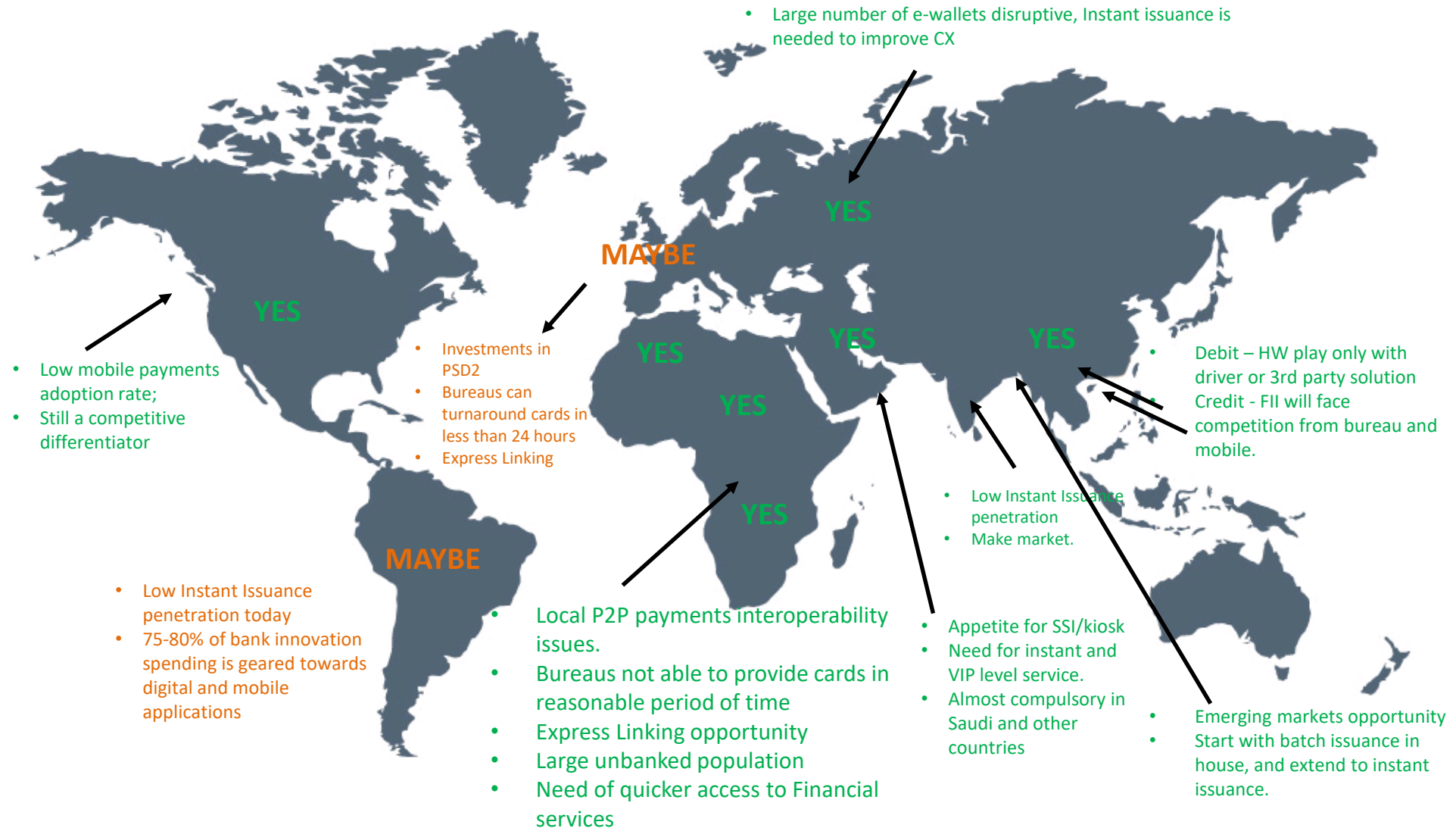
Common Features and Functions	
Identification	✓
Payment	✓
Smart Card	✓
Travel	✓
Public	✓
Private	✓
Biometrics	✓



Payment schemes focused on enabling all payments



Is the instantly issued (Fii) card fundamental?

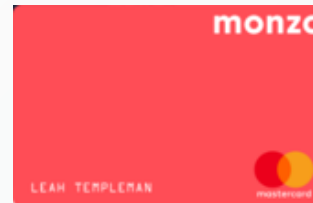


PHYSICAL AND DIGITAL CONVERGENCE



Digital Companies issuing payment cards

Mobile and digital-based B2C money management applications are now offering physical cards



Monzo
Neo Bank

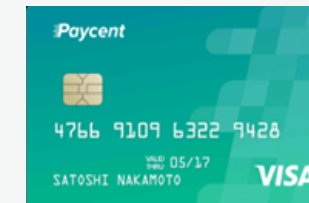


Revolut
Account & Money Management

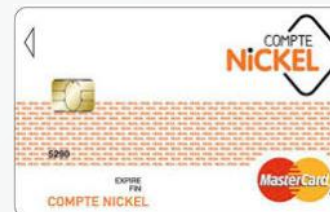


N26
Neo Bank

Consumers load their cryptocurrencies onto cards in order to transact



Alternative online lending companies or non-banks leveraging cards



Compte Nickel
(account without Bank)



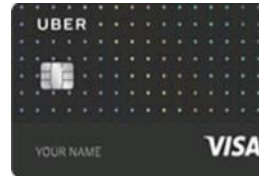
TransferWise:
International spending on linked account



HyperWallet: Real-time transfers to linked debit account

Digital Companies issuing payment cards

Mobile and digital-based payment applications are now offering physical cards



Uber



PayPal



Starbucks

Peer-to-Peer mobile payments can move funds to a physical card



mPesa
Africa



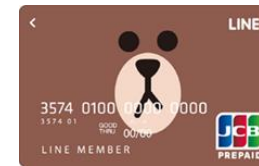
Venmo
US



PayTM
India



Orange Money
Africa



Line
Japan



PayMaya
Philippines



Europe



Brazil

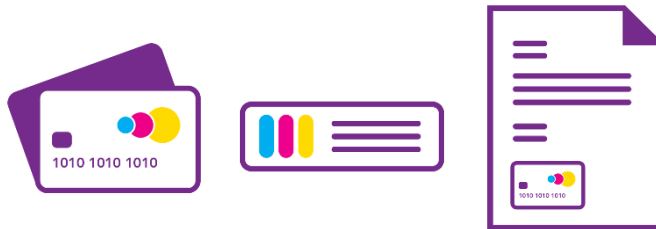


US

CARD PORTFOLIO OPTIMIZATION

Print-on-Demand Personalization

High-impact **cards, labels and carriers**



On-Site
branch

In-

Back Office

Central
Issuance via
Mail or Branch



It's all about engaging your customers and prospects — capturing mindshare and earning brand trust — while driving operational efficiencies.

DON'T JUST FULFILL DEMAND... OFFER SOMETHING UNIQUE!

KEY TECHNOLOGIES AVAILABLE IN THE MARKET



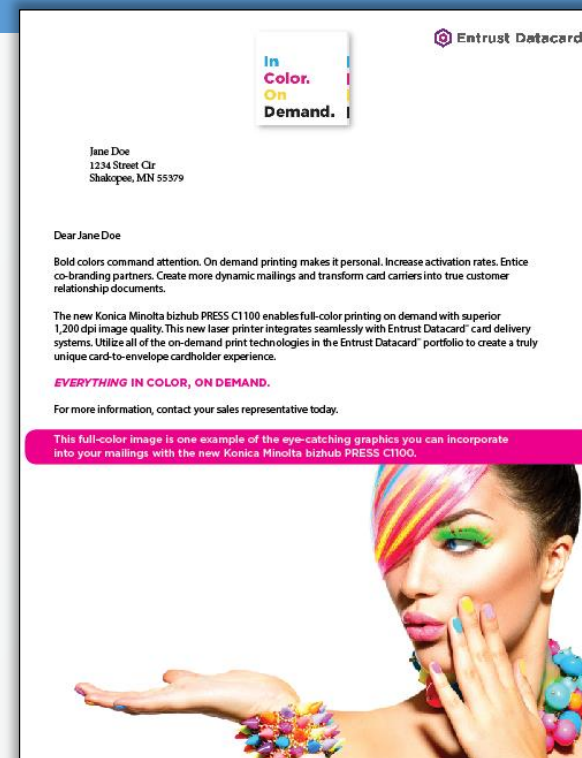
Edge-to-Edge Dynamic Card Printing

- Keep the card top-of-wallet by offering images designs specific to an event or customer
- Create additional revenue by co-branding with an association



Color Label Printing

- Customers are trained to read the label, change the message change the response
- Direct the reader to the insert, card carrier, website or digital media



Carrier Printing

- Add details to your message by adding information to the card carrier or insert



WHAT IF...

The **CARD** was not just to fulfill a demand, but to offer something unique

The **CARD** could make an emotional connection

The **CARD** could change with marketing campaigns

With Color Retransfer Technology you CAN...

- ✓ **Print High Quality Card**

Create litho-like cards inline with full personalization capabilities

- ✓ **Unleash Your Creativity**

Create unique segmentation within your card portfolio



Typical financial card with no emotional connection

- ✓ **Differentiate Your Program**

Offer personalized cards as a one-to-one marketing piece

- ✓ **Drive Customer Loyalty**

Build an emotional connection with your customer by offering cards that get used



Unique and self-expressive card that you are excited to use

- Easily transition to print-on-demand with pre-set gallery images
- Allow customers to choose the image that fits them best

Gallery Images

1. Choose Your Image Type



Music



Travel



Nature



Hobby



Animal



Art



2. Preview Your Card



Design YOUR Card YOUR Way!

PROVIDE OPTIONS YOUR CUSTOMERS ARE PASSIONATE ABOUT

Co-Branding

- Build partnerships within the industry, market or region
- Allow partner organizations to promote their brand by being featured on your cards
- Revenue stream opportunity



Personalized Cards

- Give customers control over their card customization
- Allow customer-supplied images of their family, pet, vacation photo, etc.
- Promote customized cards to create customer creativity and card satisfaction

Make it personal from phone to card



Spot Color to Differentiate using retransfer

Get creative and let the metallic shine show off a sleek and modern look that differentiates your cards from the market

- Add a metallic effect without the cost and effort required for metal cards
- Let metallic silver and gold ribbons create impact to card designs
- Utilize creative artwork and the printing process to bring the card to life
- Add a protective topcoat for a long lasting, quality customer experience



Basic



Preferred



Platinum



Where to Namibia ??

- We have a very good banking system in Namibia. Banks however need to become more flexible.
- We could do with a national card/mobile payment solution like M Pesa, or WeChat pay, but national and interoperable.
- We may even see an “out of bank” system such as Revolut in the UK and Compte Nickle in France.



- Lets make use of Digital technologies for a better Namibia!!!!

Thank You



Questions Please ?????

Whether Financial, ID, Loyalty or Access card – Schoemans can help you