

KOENIG & BAUER

DATA:

Is it the **Missing Link** to Creating a
Sustainable Future for Cash..?

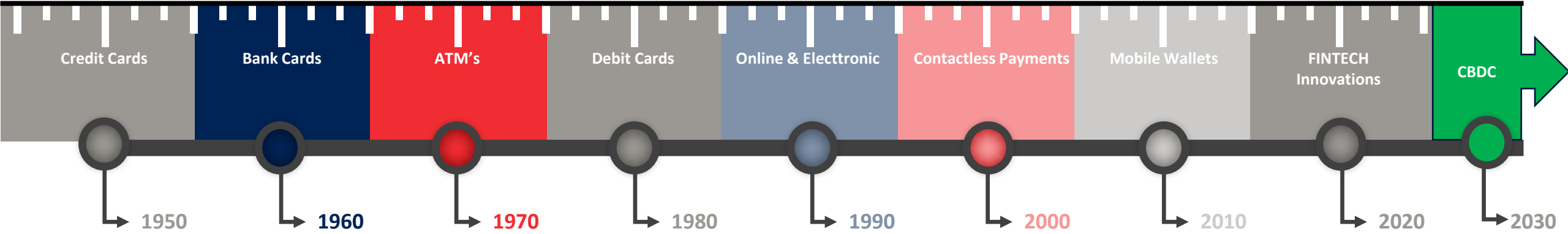
... we're on it.



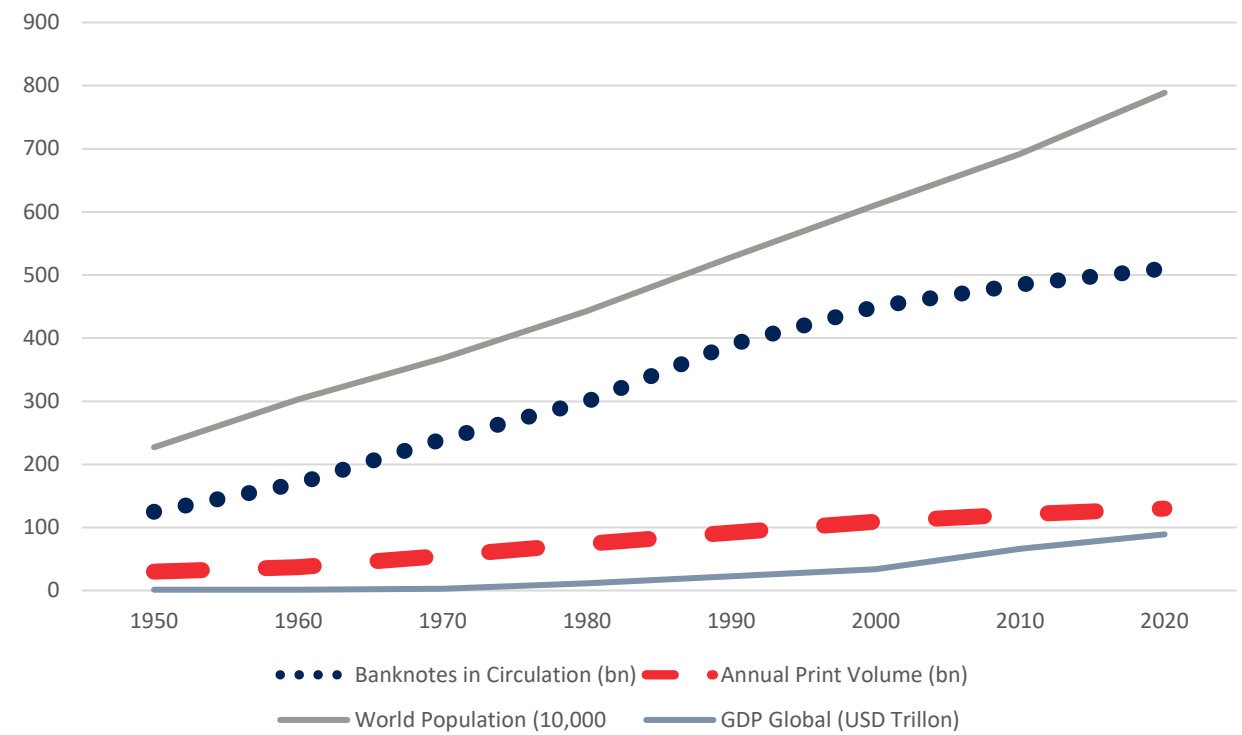
?

The Payments Landscape Today

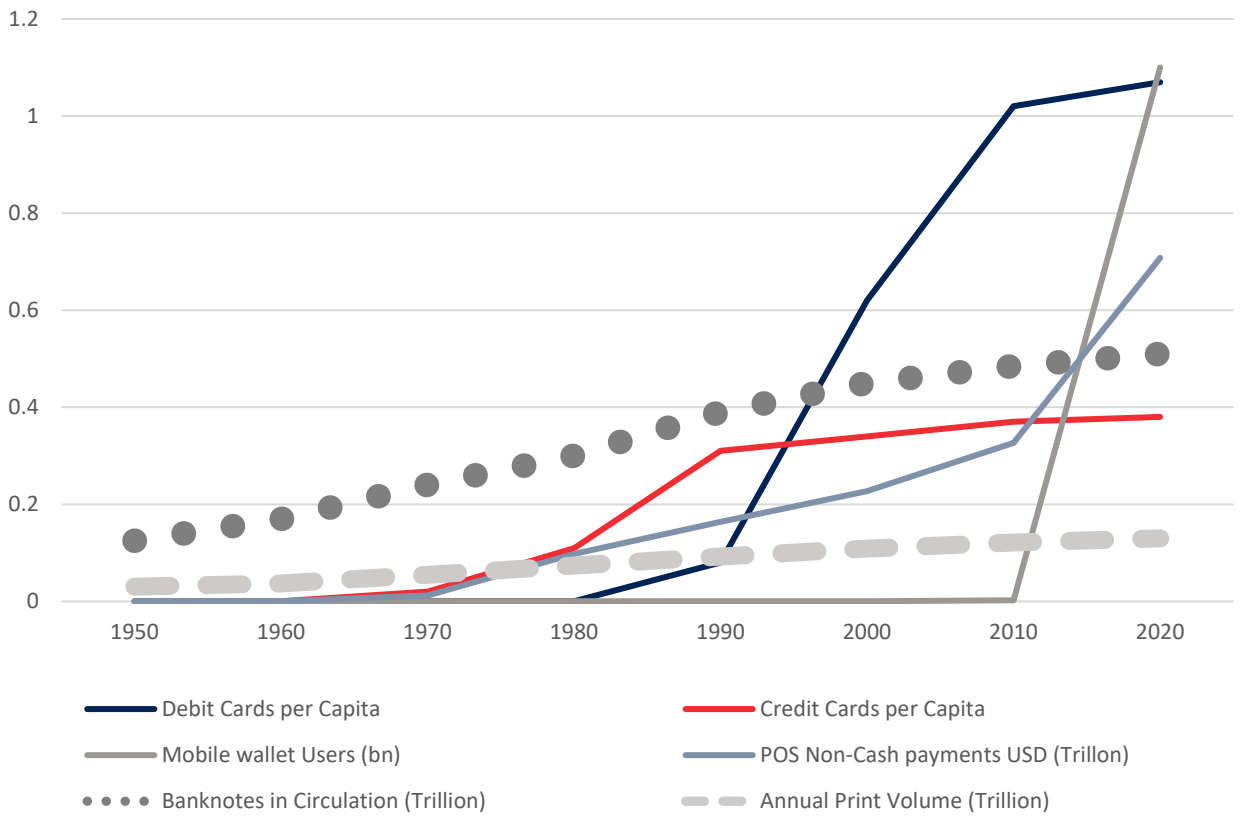




Banknotes & Economic Growth



Evolution Payment Tools Vs CIC/Print



“From a user’s perspective... there should not be any competition between cash versus non-cash, nor should it be an either/ or proposition.”

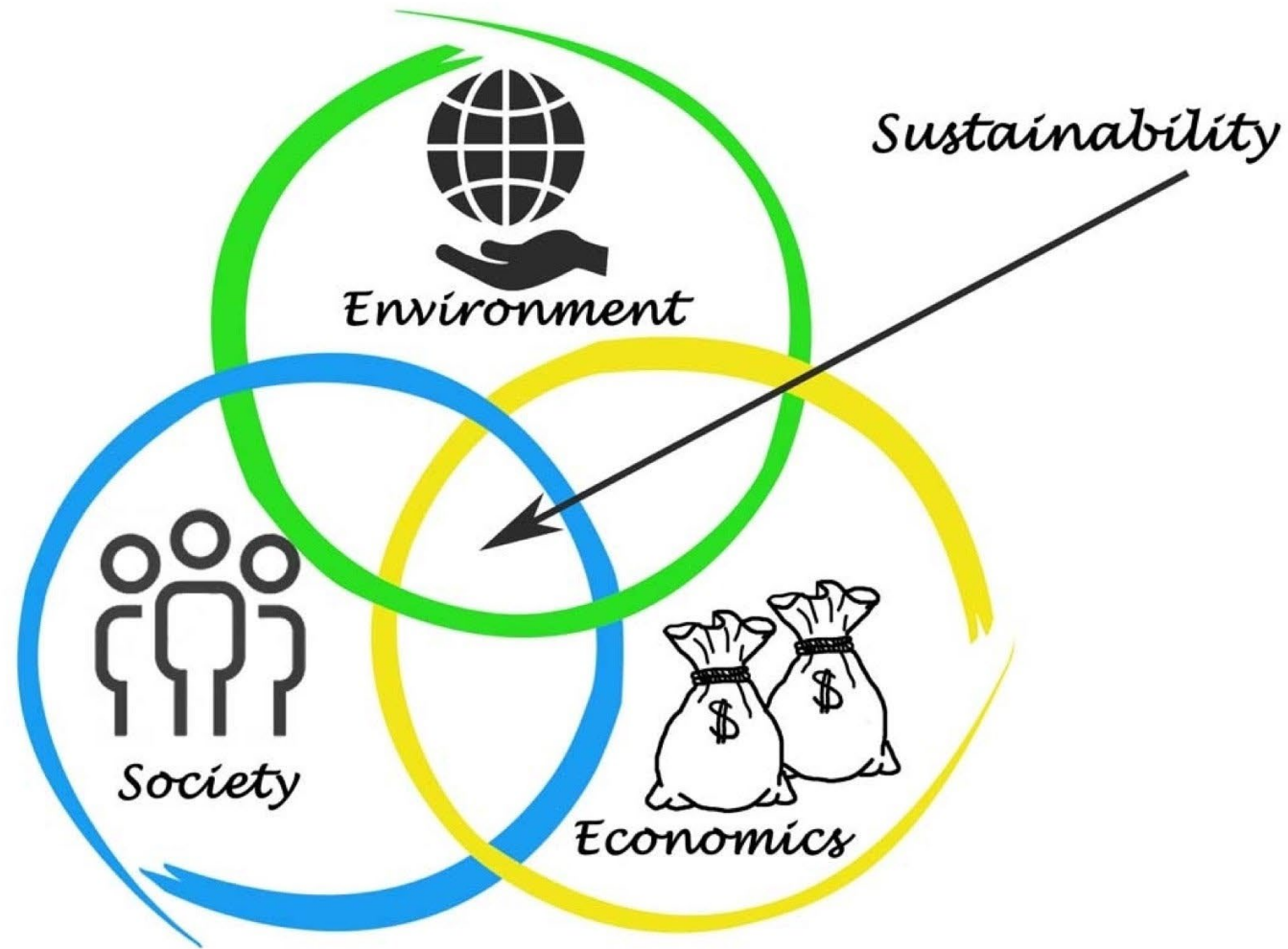
G4S World Cash Report 2018

Q: If Cash Works so well as a payments tool TODAY, why are we concerned about cash sustainability in the FUTURE?

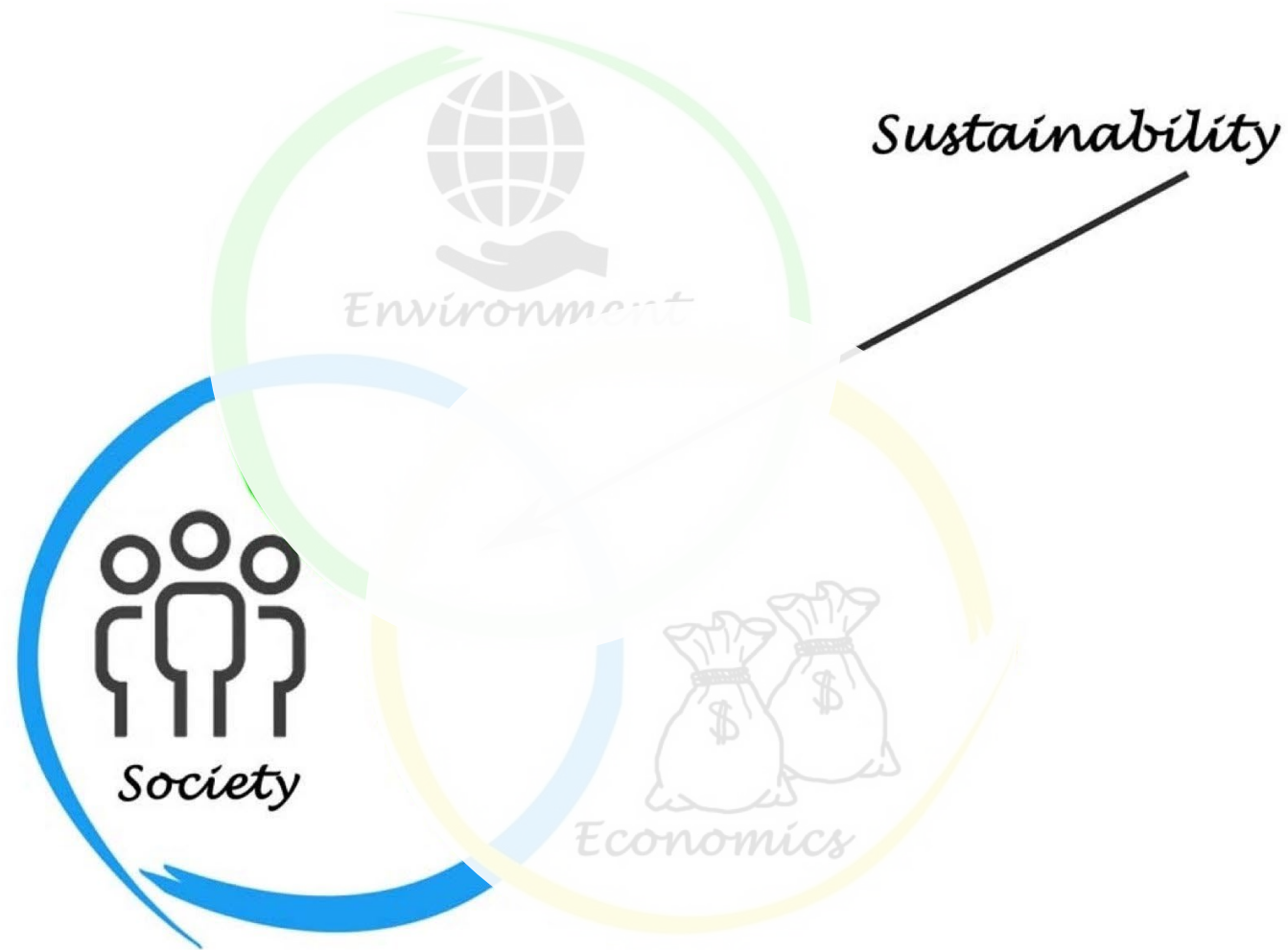
A: The way we organise and manage cash in society is having a significant impact on cash sustainability...and this impact will increase if we do nothing!

Cash Sustainability:

We must consider 3 things



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“Cash covers **all of the features** that society **most values** in a payment instrument.”

2018 G4S Global Cash Report

Why...?

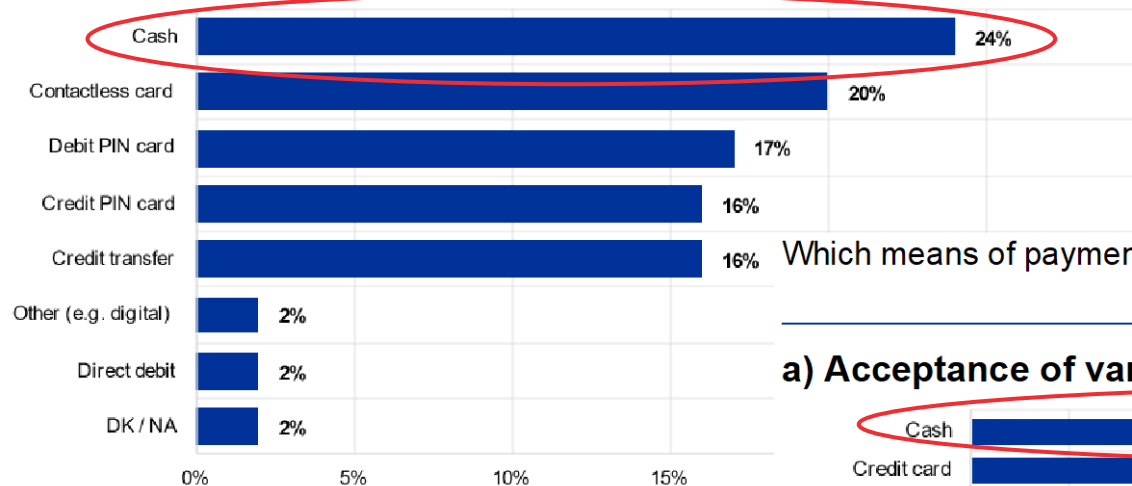
- Cash is trusted as legal tender
- Cash has near 100% availability and reliability
- Cash is considered free of charge to use by the consumer
- Cash retains anonymity
- Cash offers direct settlement
- Cash offers a safe haven and fall-back
- Cash is tangible and helps with budgeting
- Cash offers inclusion in a national payments tool for marginalized sectors of society



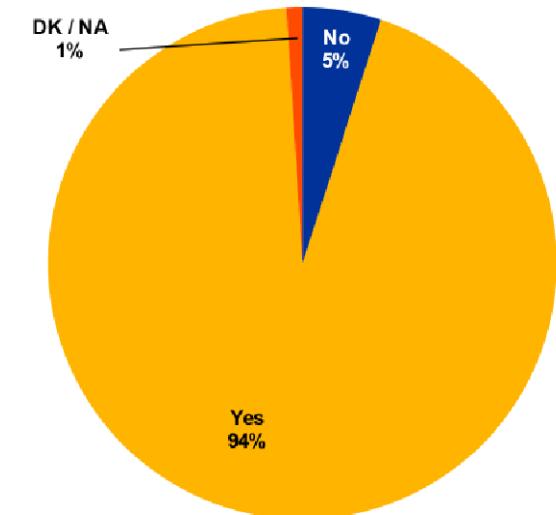
Cash Continues to Offer Choice to Society...

Which means of payment do companies prefer to be paid with?

a) Distribution of preferences, euro area

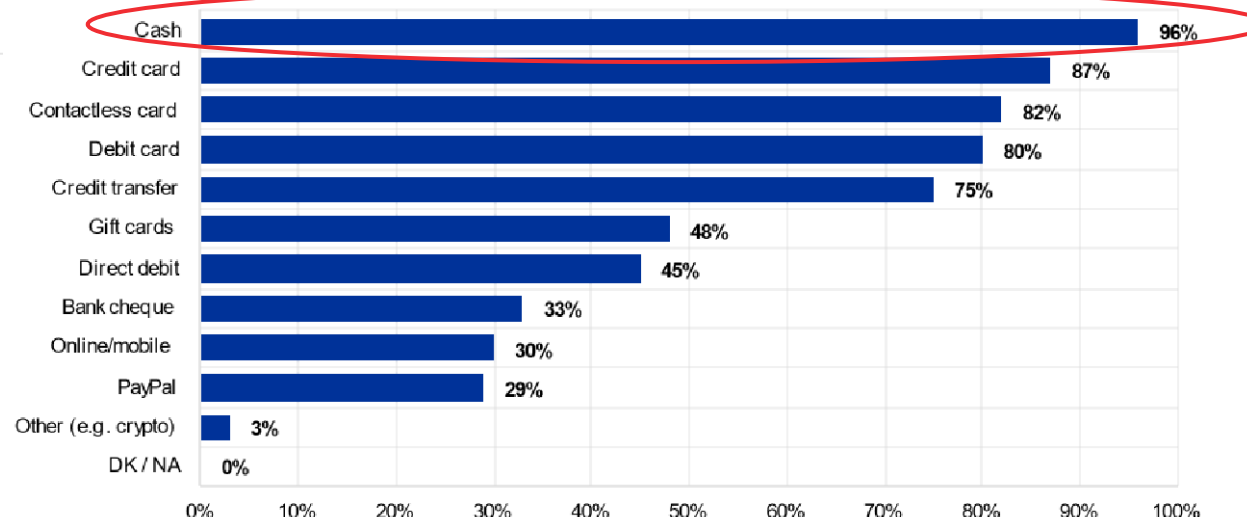


a) Future cash acceptance



Which means of payment do companies accept?

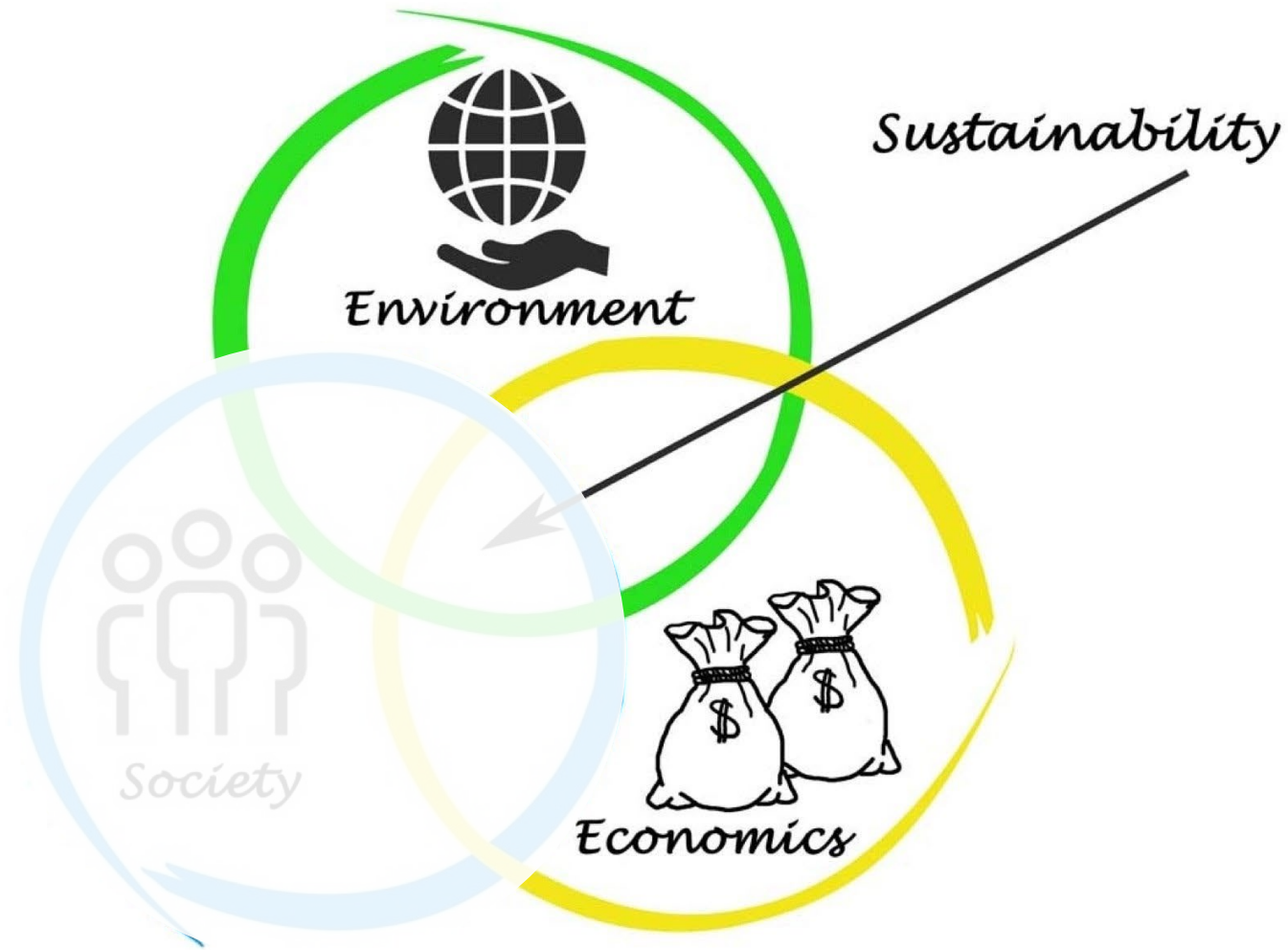
a) Acceptance of various payment instruments, euro area





<https://cashesentials.org>

So What about the Economic & Environmental Cost of Cash...?



2 Parts of the Same Whole...

But which of them is broken...?



**Banknote
Product**

+



**Banknote Service
System**

=



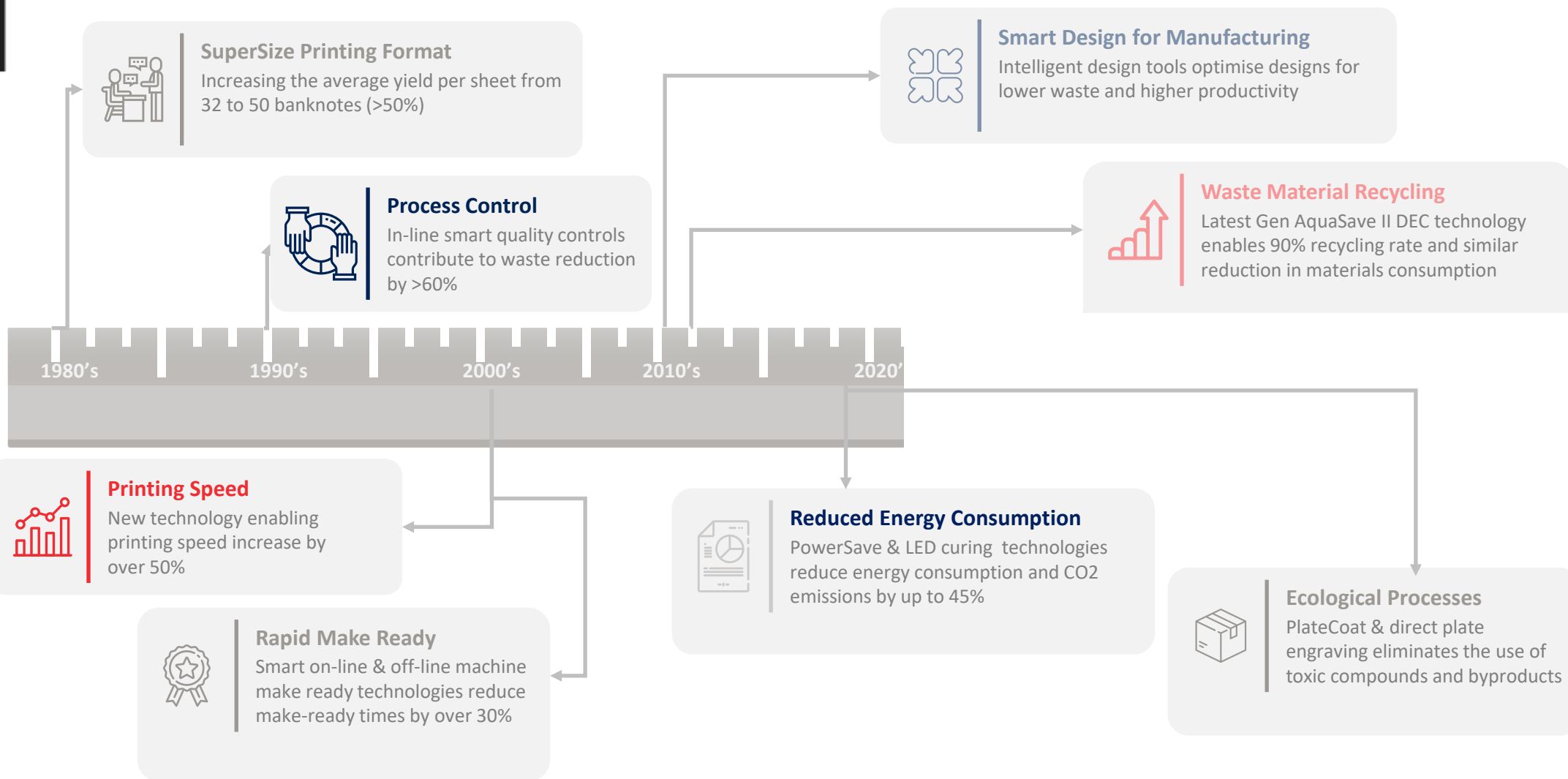
**Banknote
Ecosystem**



Banknote Product



>40% in process costs/eco impact



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The Energy Management System for the Printing and Packaging Industry

VisuEnergy X

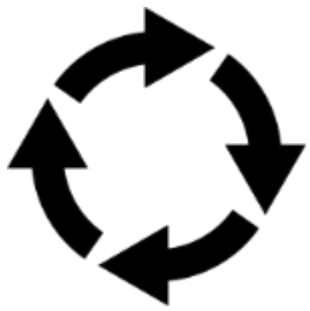
Protect the environment and reduce your production costs with the scalable energy management system (EnMS) for an energy-efficient printing and packaging production – ISO 50001 certified.

Drive digitalisation now and save sustainably!

VisuEnergy X

With the scalable energy management system (EnMS) VisuEnergy X, you achieve sustainable energy savings of 7 to 10 percent on average – typically realised from the first year.

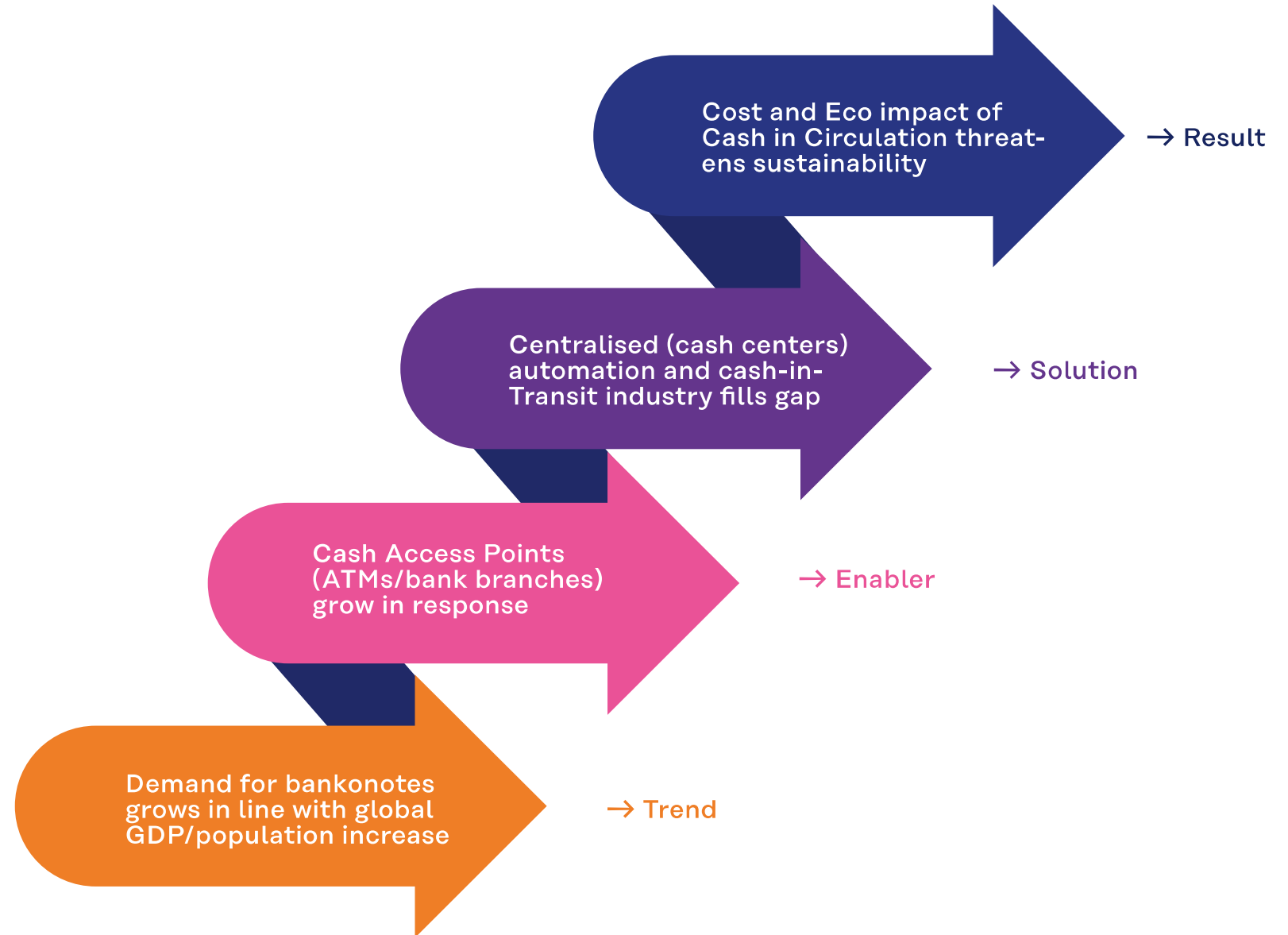
Saving money has never been this green.



Banknote Service System



Cost/Eco footprint of Cash Increasing



Production = Only 1 Part of Making Banknotes Work

COSTS:



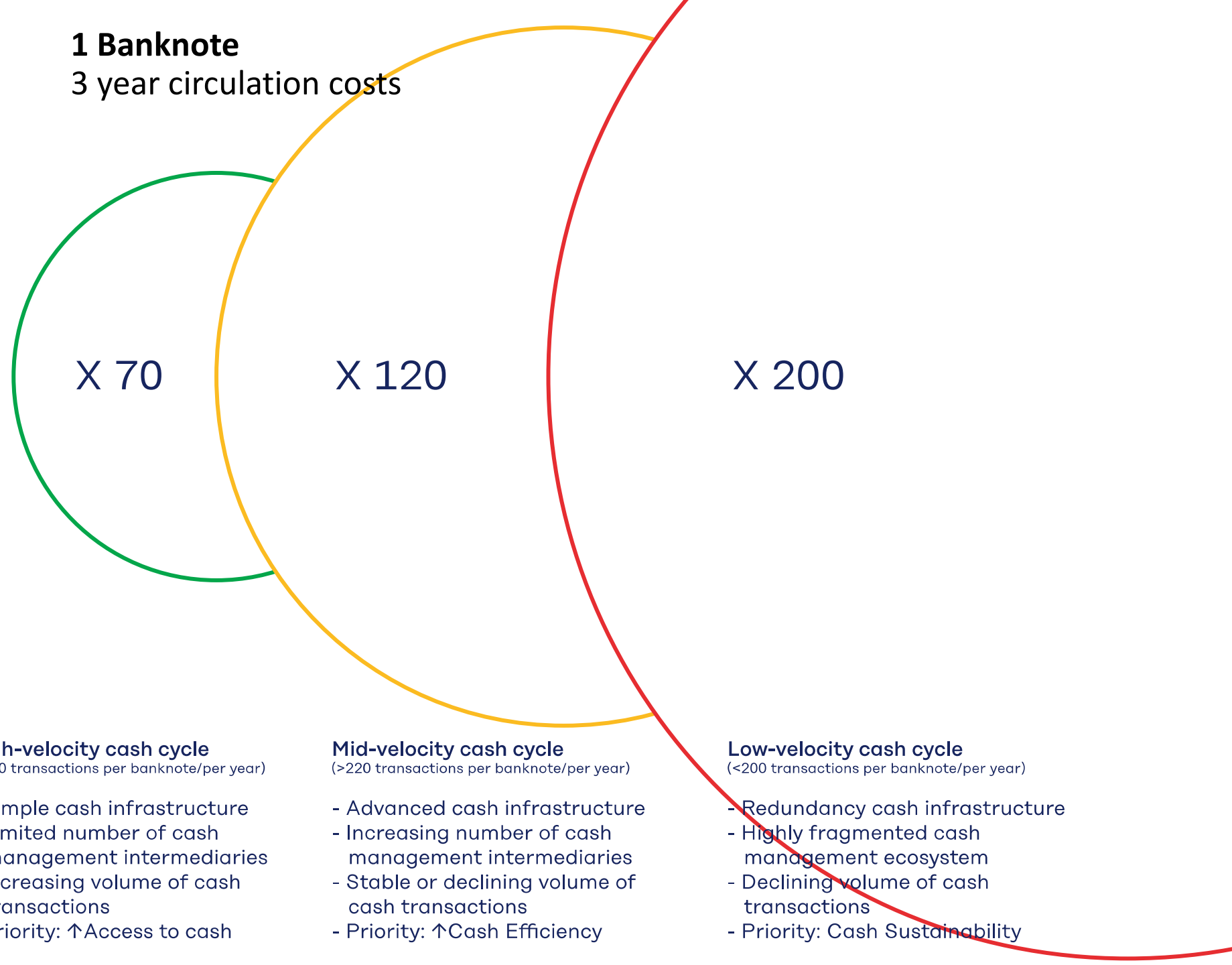
1 Banknote

Production costs



1 Banknote

3 year circulation costs



High-velocity cash cycle

(>300 transactions per banknote/per year)

- Simple cash infrastructure
- Limited number of cash management intermediaries
- Increasing volume of cash transactions
- Priority: ↑Access to cash

Mid-velocity cash cycle

(>220 transactions per banknote/per year)

- Advanced cash infrastructure
- Increasing number of cash management intermediaries
- Stable or declining volume of cash transactions
- Priority: ↑Cash Efficiency

Low-velocity cash cycle

(<200 transactions per banknote/per year)

- Redundancy cash infrastructure
- Highly fragmented cash management ecosystem
- Declining volume of cash transactions
- Priority: Cash Sustainability

Production = Only 1 Part of Making Banknotes Work

Eco Footprint:



& the **Bad News** is...

Without immediate action, the situation will
continue... **destabilising cash
sustainability**

Costs will continue to increase...

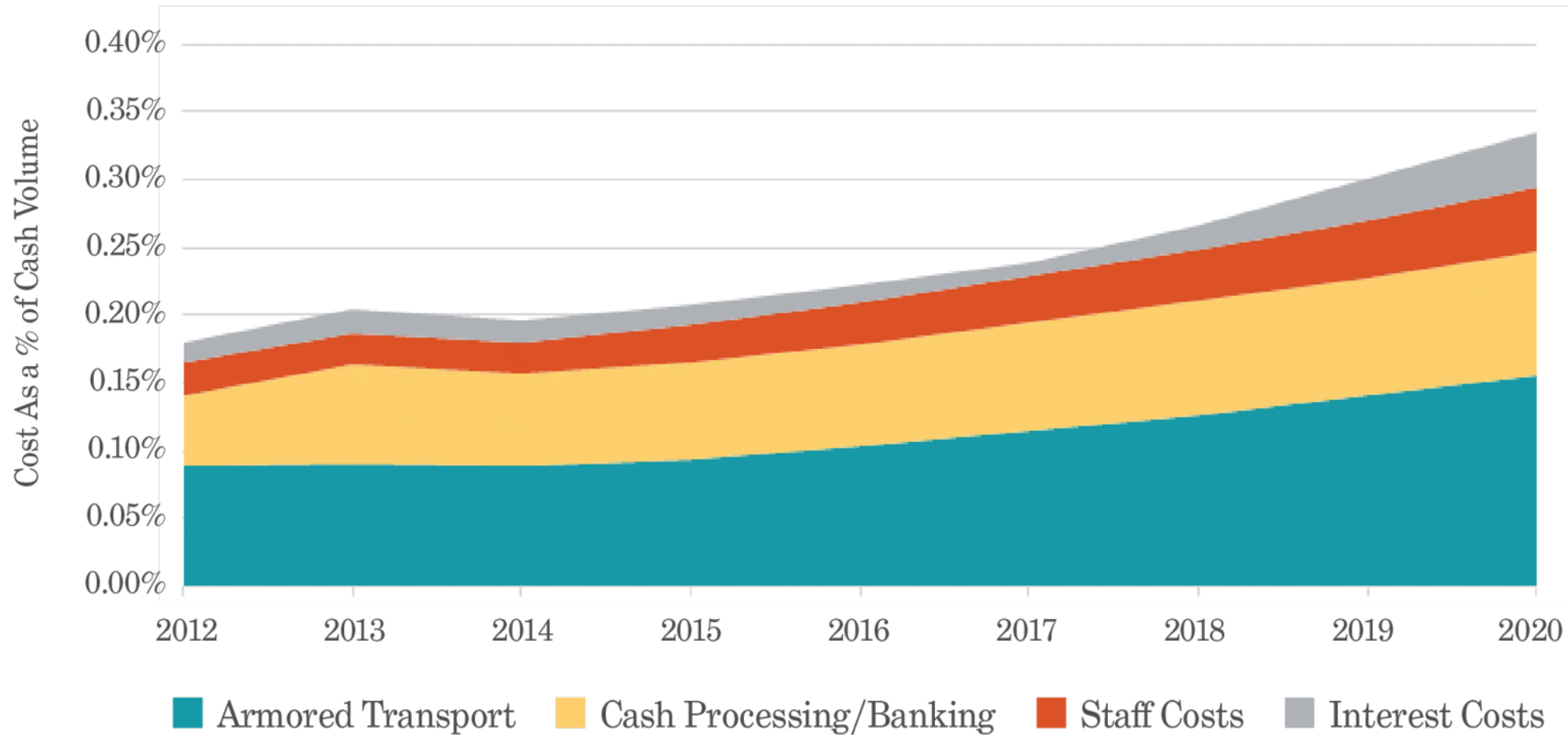
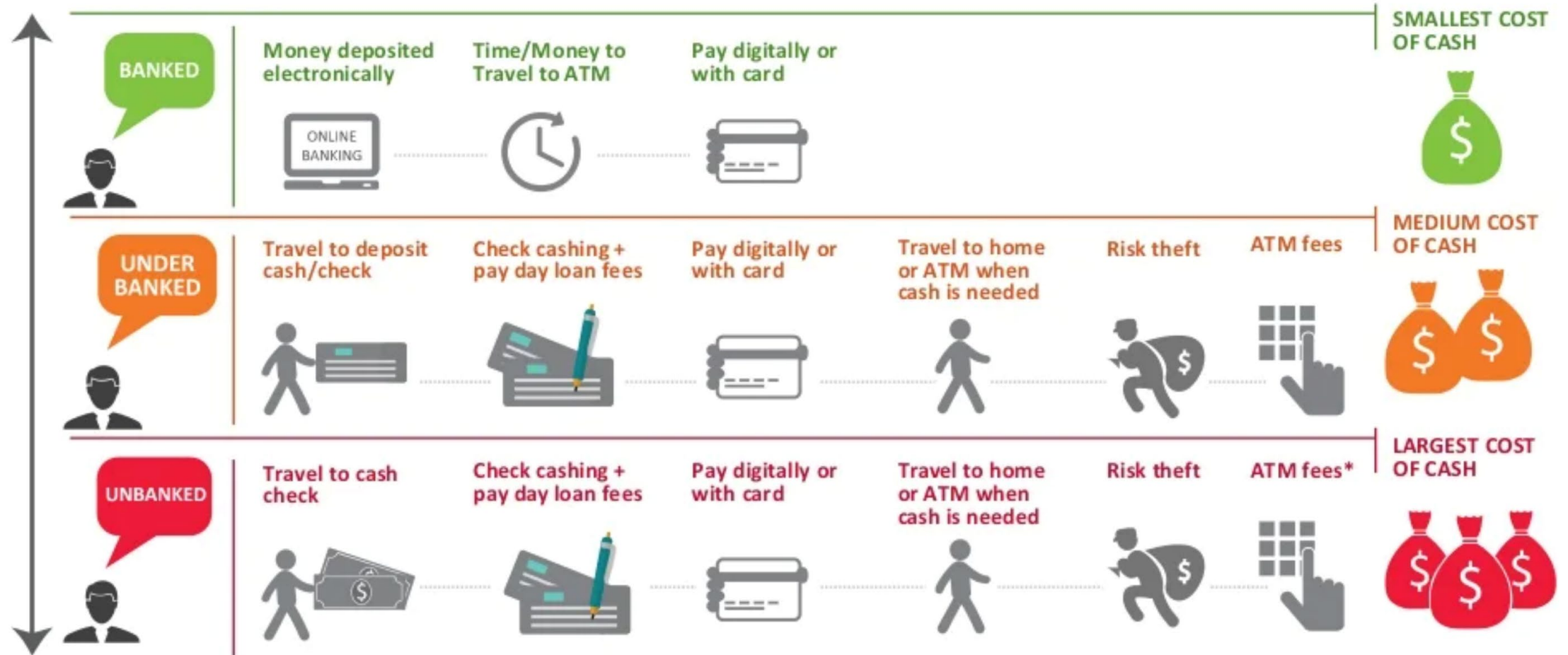


FIGURE 2. Increase in the Cost of Cash
(Source: CMSPI estimates based on company annual filings and Euromonitor data)

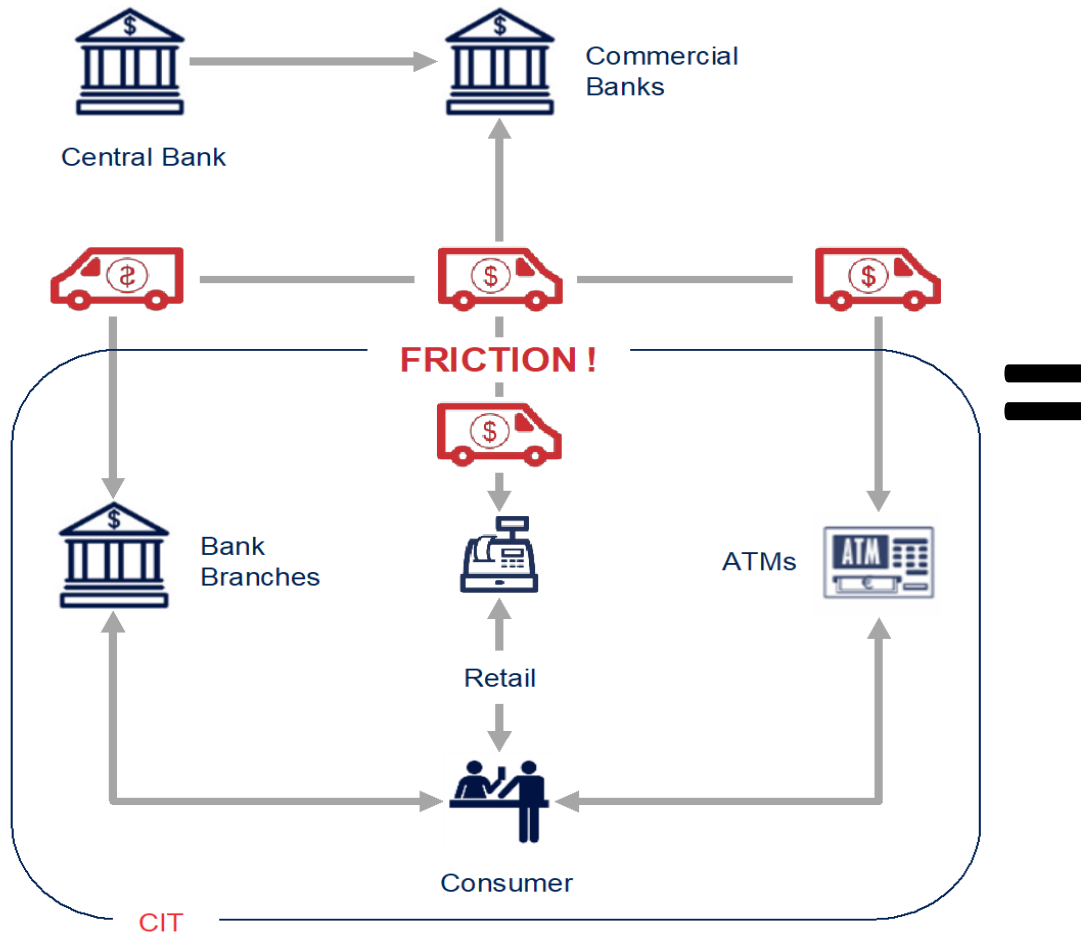
& the most fragile sectors of society will pay more....



So what is **Wrong** with
How We Manage Cash?

Problem Definition?

FRICION



> \$400- 600billion per year

Where did the FRICTION come from?

- Central Bank Clean Note Policies & Recycling Regulations
- Automation
 - ATM's
 - Vending/ticketing etc.
 - High-speed sorters
- Centralisation of Cash Centers
- Cash-in-Transit between access points & cash centers
- Fragmented industry
- No shared data networks
- Limited disruptive forces
- Inflexible business models



Providing Access vs. Cost & Eco Impact

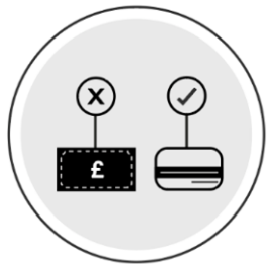
If we do nothing...?



**Cash deserts emerge
where it becomes
difficult to access cash**



Cash infrastructure fails



You can't spend cash



Banknotes & the way we **Move, Access**
and **Use** them must **Evolve** to ensure
future sustainability

How ?

Sustainable Cash Equation:



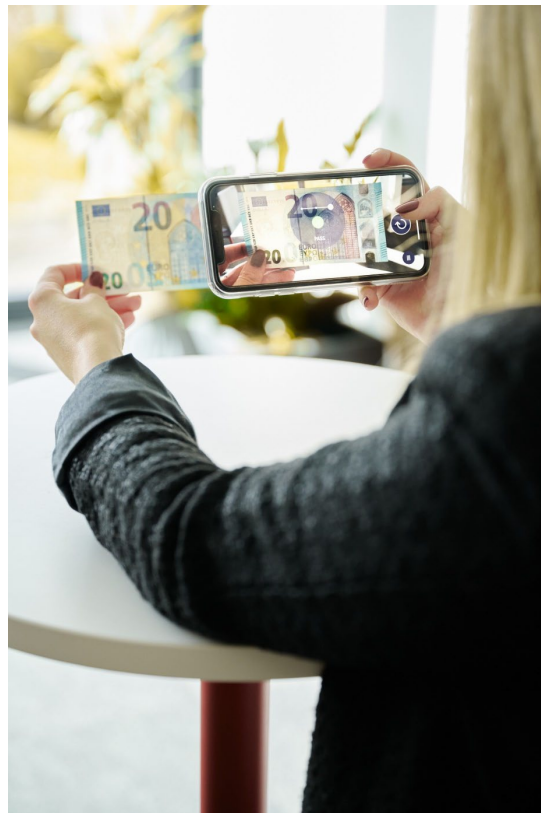
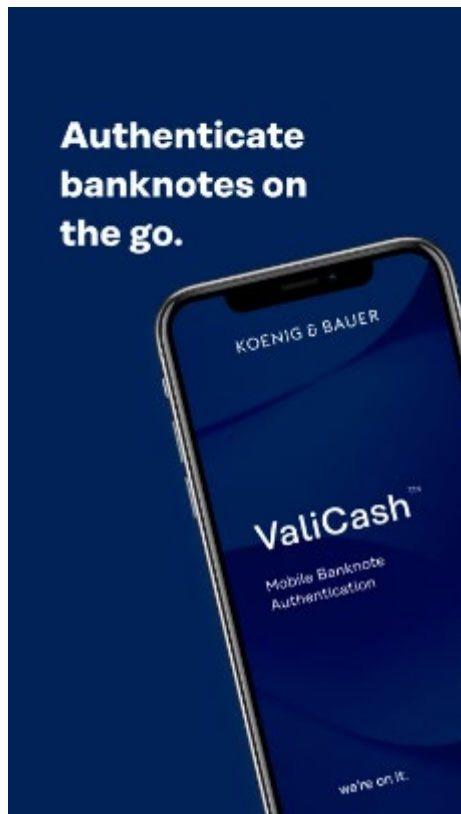
‘Data makes everything possible...’

- Max Levchin, Founder PayPal

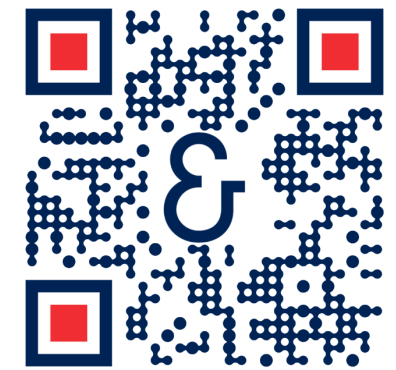
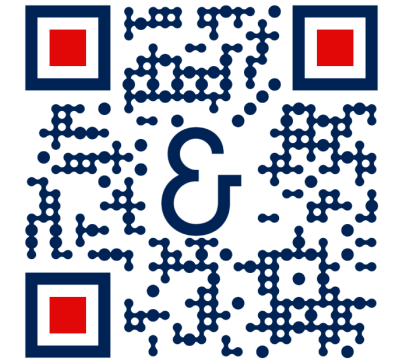
How...?

Using Data...

- Developing **bridging technologies** to enable innovation

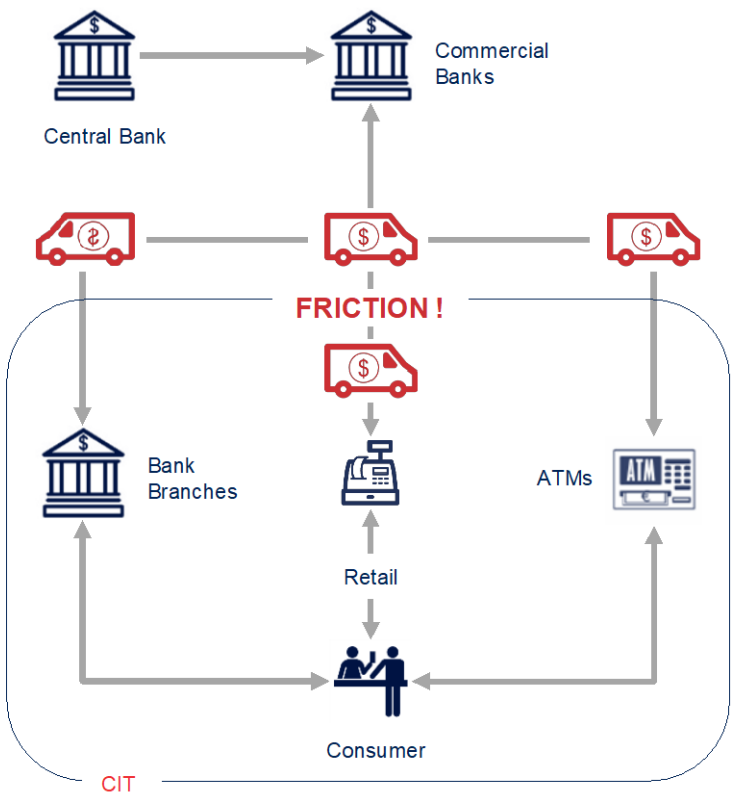


store **money**
content on
a banknote

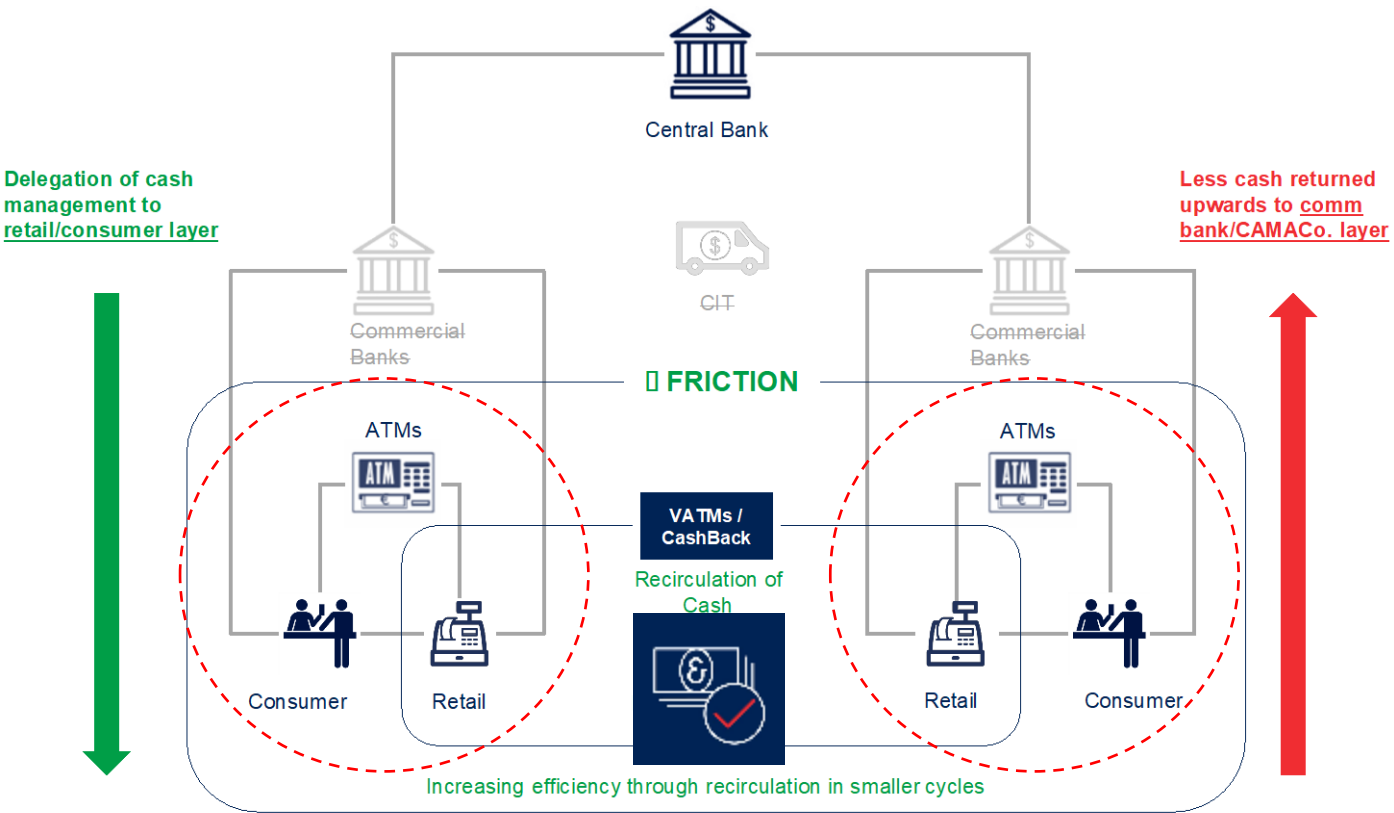


Fix the Product Service System

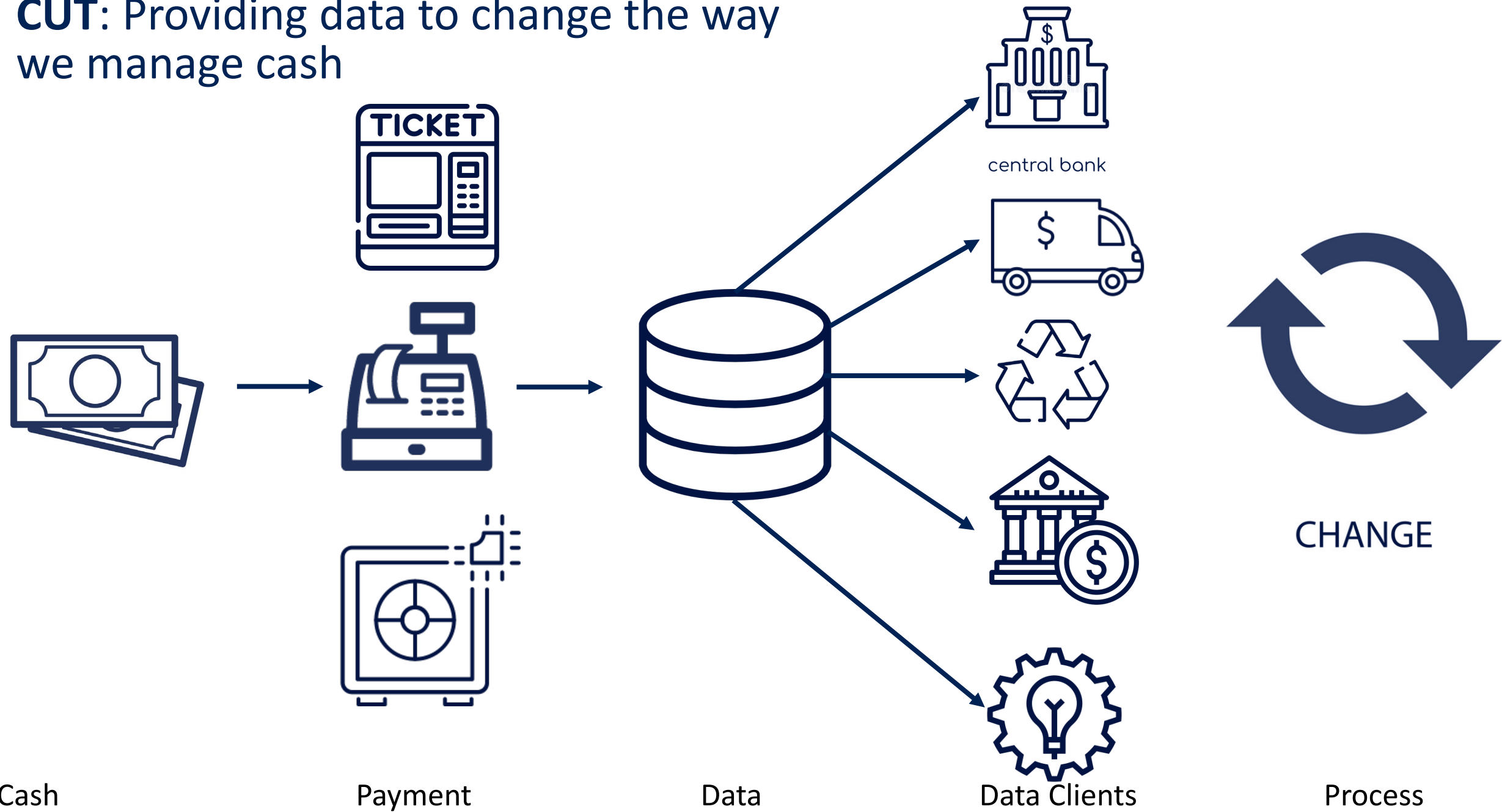
Today: Centralised Cash Cycle (CCC) = Friction



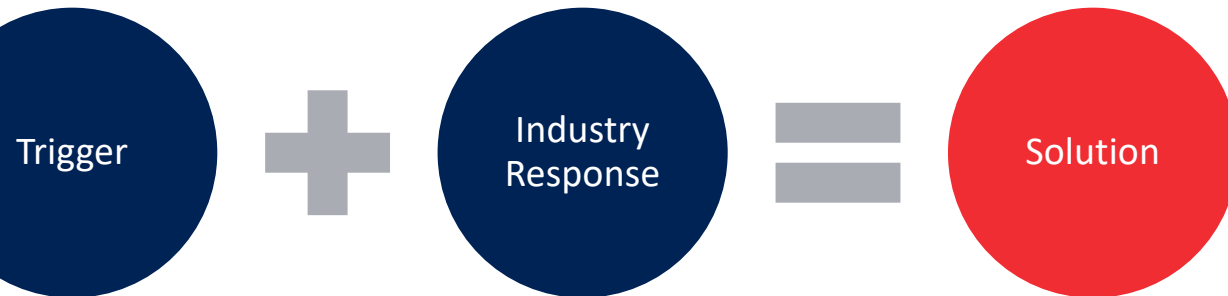
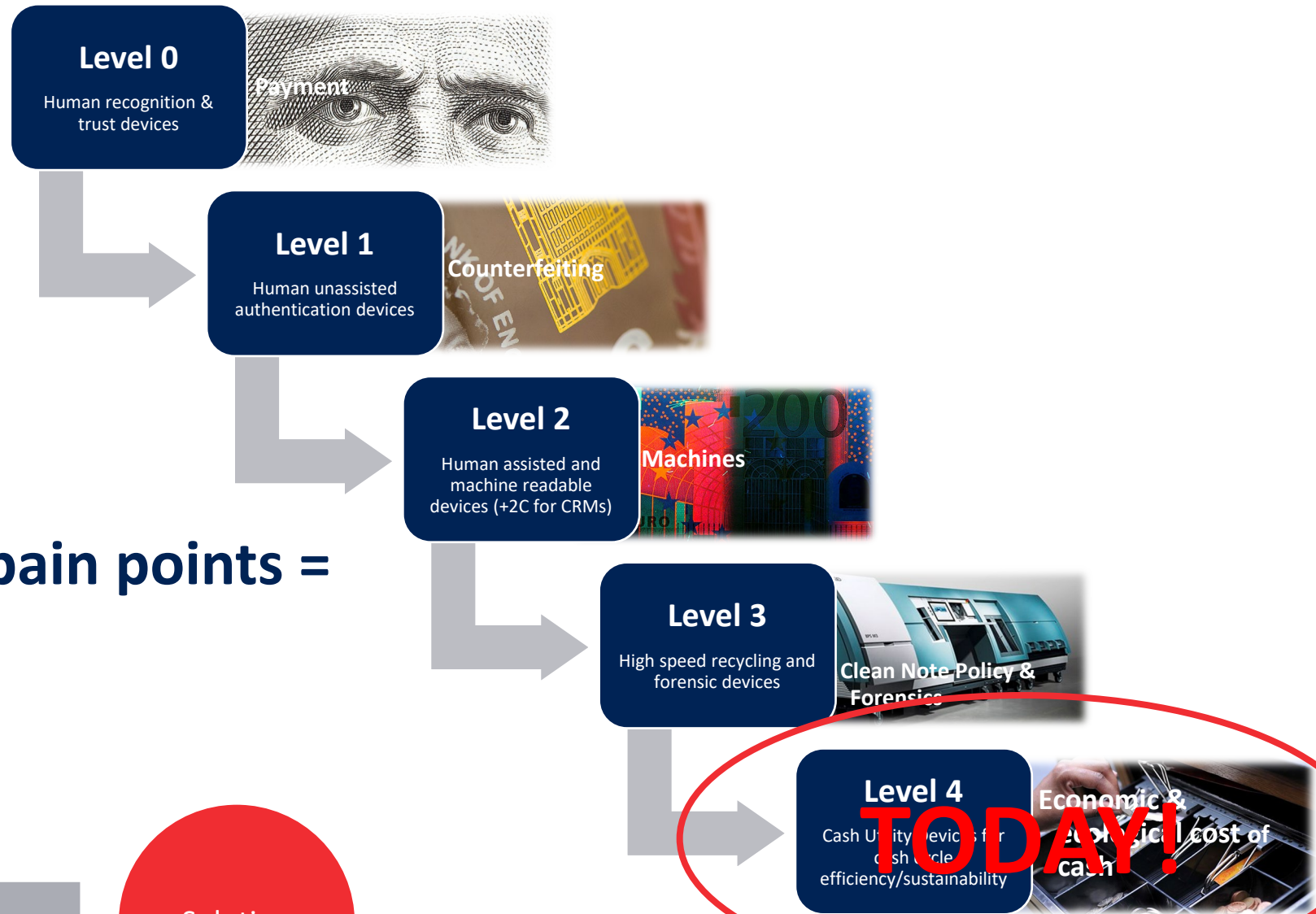
Tomorrow: Distributed Cash Cycle (DCC) = Reduced Friction



CUT: Providing data to change the way we manage cash



“Changing stakeholder pain points = evolution of solutions”



CUT: Part of the Change Process?

A shared and equitable cash community investment with a quantum return for all

✓ Central Bank

- Invests in building blocks and makes them available to the cash community

✓ Cash Cycle Actors

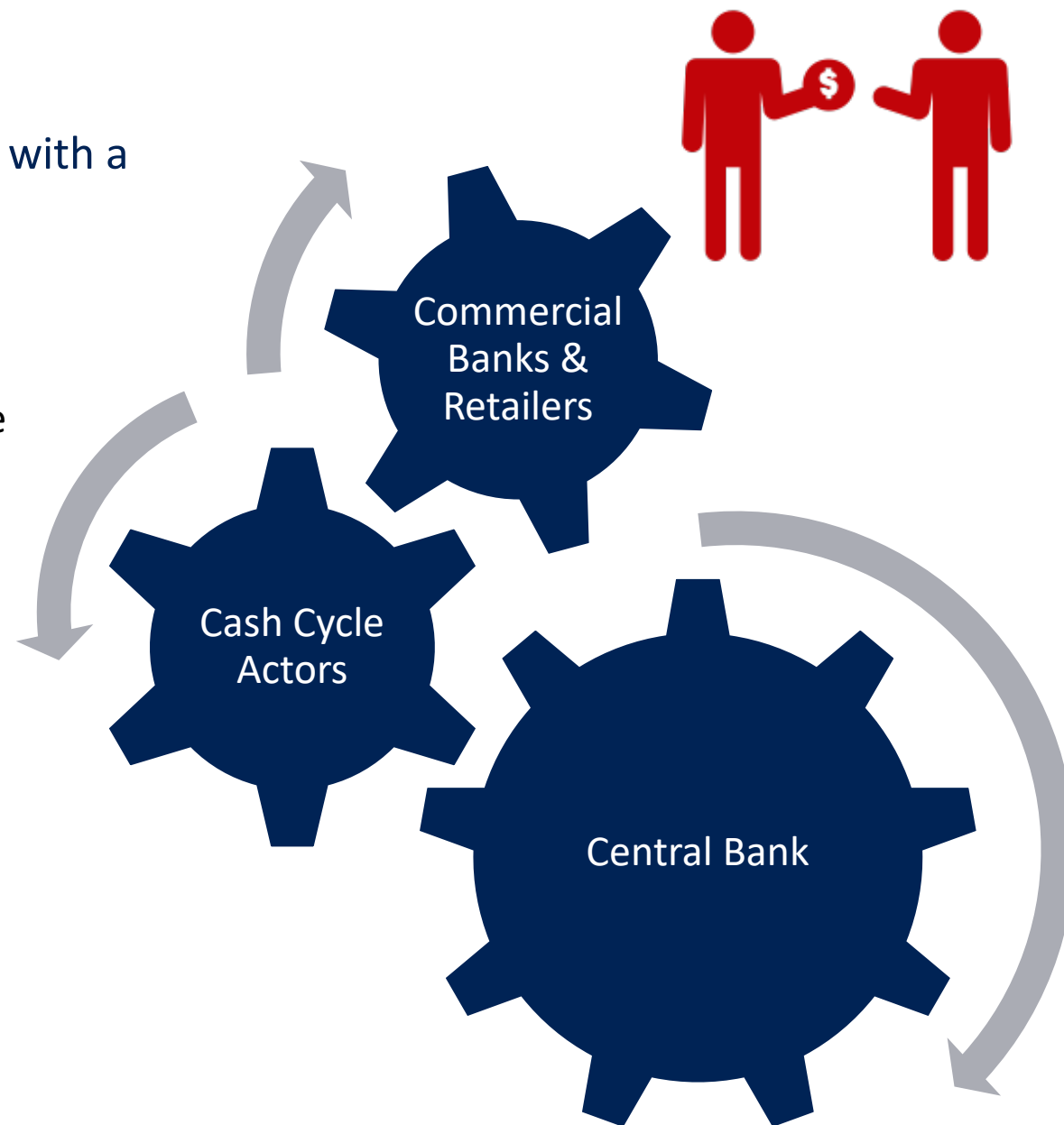
- Exploit CUT to develop more efficient cash management processes and more sustainable business models

✓ Commercial Banks & Retailers

- Enjoy a lower cost/eco footprint of cash and promote cash access/acceptance

✓ The Public

- Continue to enjoy the convenience of cash access and acceptance and cash remains a sustainable payment choice



...Key **TAKEAWAY** today

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TECHNOLOGY



CHANGE



CASH SUSTAINABILITY



COMMUNITY

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