



# EXPERIAN. learningDAY 2022

Accelerate and maximize your data potential

# EXPERIAN **learning**DAY<sub>2022</sub>

**Welcome!**



**Veronica Flyckt**

Director of the Netherlands & Head of Analytics Northern Europe  
Experian Netherlands



# Welcome to the Power Station



- We hope to inspire you
- Optimise your road to an excellent customer journey
- Help you navigate how to make the best decisions
- Give you insights into the Experian Machine Room



# Our past is shaping our future

We never saw the global pandemic coming.

We never thought a conflict in Europe would break out.

*But unforeseen aspects continue happening – both globally, locally and probably even in your own business environments – therefore we believe that by strengthening our partnership we can help you navigate these changes by:*

- ✓ having the right data to gather customer insights
- ✓ trusting on reliable systems to help with risk management
- ✓ adapting to new regulations to remain competitive





# Housekeeping | Physical Attendees



**Exits**



**Mute your  
phone**



**Ask us**

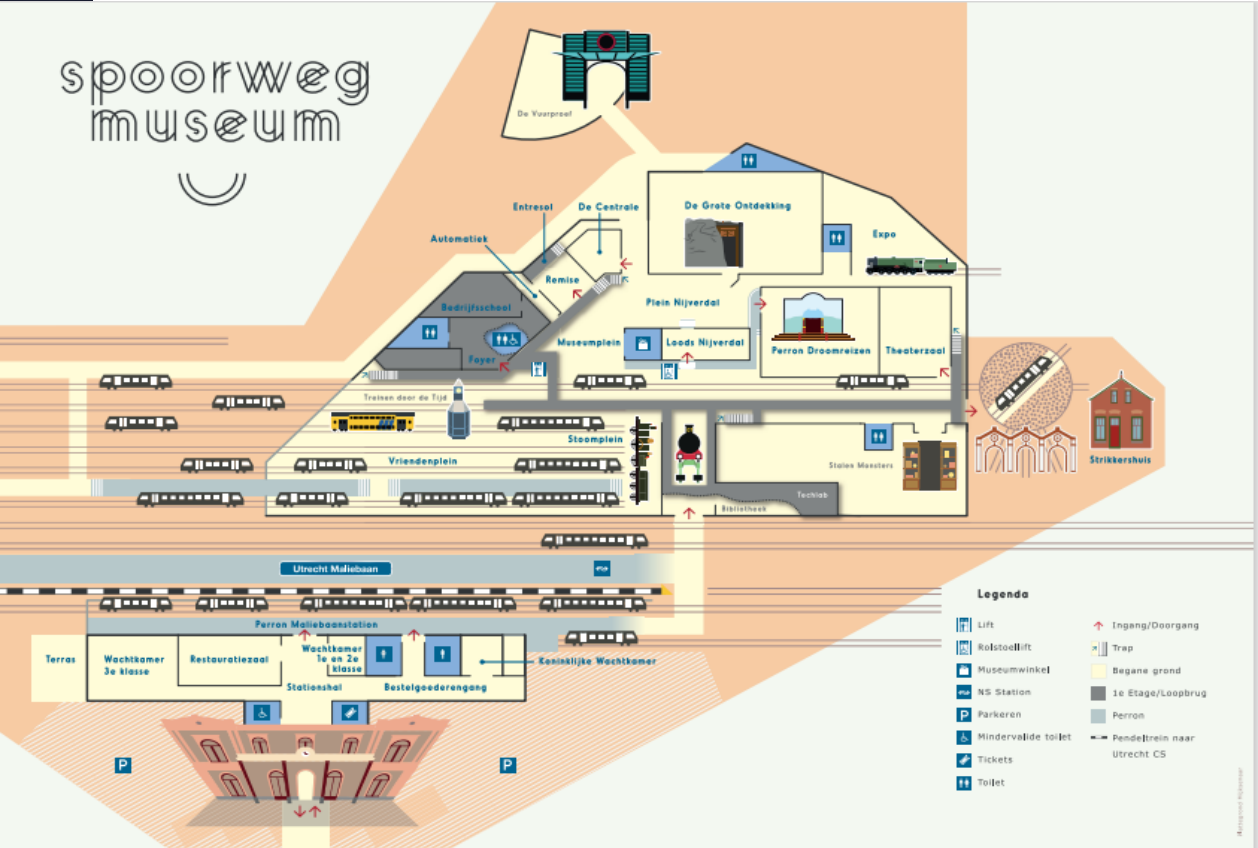
# Housekeeping | Online Attendees

**Use the Chat function**  
to ask questions and if  
you have technical  
issues.

**Camera & Audio**  
You must see and hear  
us – but we cannot hear  
you. 😊









# Agenda

10:00	<b>Intro &amp; welcome to Experian Learning Day</b> Veronica Flyckt – Director of the Netherlands and Head of Analytics Northern Europe, Experian Netherlands
10:10	<b>Customer experience update: your benefits as an Experian client</b> Jeroen Zuijndorp - Operations Service Director, Experian Netherlands / Emma Perkins - Head of Customer Experience, Experian EMEA
10:30	<b>Updates on compliance and regulations</b> Jennifer Crama - Data Protection Officer, Experian Netherlands
10:50	<b>Break</b>
11:00	<b>The role of a credit reference agency in driving innovation and gathering customer insights</b> Herman Peeters – Principal Consultant, Experian Netherlands
11:35	<b>A macro-economic analysis of the Dutch economy from a credit bureau perspective</b> Vincent Edelkoort – Business Development Manager, Experian Netherlands
12:00	<b>Break</b>
12:10	<b>Open Banking - Getting value from transactional data</b> Paul Heaton - Head of Product and Propositions Marketing, Experian EMEA
12:50	<b>Lunch break</b>
13:30	<b>Empower analytics through innovative data and tools</b> Benidine De Kock - Analytics Consultant, Experian Netherlands
13:45	<b>ESG Score - the Experian approach</b> Rodrigo Ciaran - Senior Consultant Regulatory Analytics, Experian Netherlands
14:00	<b>Artificial Intelligence and Machine Learning regulations</b> Leandro Guerra - Head of Data Science and Analytics Platforms, Experian EMEA
14:30	<b>Round up &amp; thank you!</b> Veronica Flyckt – Director of the Netherlands and Head of Analytics Northern Europe, Experian Netherlands

## Customer Experience update - Your benefits as an Experian client



**Jeroen Zuiddendorp**

Operations Service Director  
Experian Netherlands



**Emma Perkins**

Head of Customer Experience  
Experian EMEA



# Customer Experience in Experian

Three years ago, we launched our CX programme, and we have seen improvements reflected in the latest feedback



**Comments about behaviour & knowledge are favourable and highlight a high level of professionalism**



**The introduction of digital user forums, the launch of MyExperian and the Experian Academy has given Clients improved access to information**



**Launching the Experian Way of Closing the Loop has demonstrated we listen to our Clients and act on their feedback**



**We are innovating with new propositions to address changing Client Challenges such as MAX**



***“Provide support which understands our needs, problems and products.”***

***“Develop more new innovative products as the environment changes”***



# Working Together – Experian Proximity

## Current Improvements

- Focus on your feedback, regular meeting for Service Review
- Faster prioritization
- Taskforces to address bottlenecks
- Direct access to Product Teams

## Restructured Factory

- Change from Functional to Product oriented self sufficient agile teams in support.
- Central Delivery Hub for software projects and upgrades
- Cloud transformation!

## Optimize Processes

- Move to next level of agile maturity with constant improvements
- Moving to Experian Cloud SaaS



# ***“Experian offers you security”***

Experian are proud to share that across the Globe our Clients **Trust** us with the highest scores

We recognize the importance of keeping your data safe and secure

The World continually faces new Fraud threats

We constantly improve technology and IT infrastructure



# Bureau keeping your data safe

Upgrading the Services to enhance **Client experience** and to keep ahead on **Security**

## Modernization progress

- Simplified and consolidated platforms
- Added Security in design and embedded controls
- Re-development of Services and Products

## Benefits achieved

- Safeguarding data with highest Security focus
- Upgraded User interfaces and added Functionality
- Further increasing Data Quality and Data
- Service stability increase

## What's next?

- New data sources
- Focus to enhance and simplify interfaces / APIs
- Further added functionality and Service simplification



***“I would like  
to see a  
change in the  
approach to  
support  
services”***





# Investing in our 2nd and 3rd line support

Improving access to our experts to provide the level of support you need

## Single Sign on

Service access through one interface –and with added Self Service

## Enhance usability

We listen to client feedback and implement better help texts, improved process and functionality

## Access review focus

Further measures to protect data – we need your help on annual client validation of user access.

## Product Expert Access

Global Product Teams connected, knowledge sharing and quicker resolution



# In Closing.....

## Stay in touch

- Please continue to provide feedback, your insights are invaluable
- Ensure you have agreed to receive our local newsletter  
<https://www.experian.nl/en/events/newsletter>



## Sign up to MyExperian

- Our Client portal contains many resources that you will find useful
- We are continually adding new functionality and information to benefit our Clients  
<https://www.experian.com/lp/decision-analytics/global/myexperian/register>



## Client driven improvement

- Working together, building relationships and continuous improvement
- We continually look to improve your experience with a CX programme led by our Clients' voice
- We have an award winning Close the Loop process to ensure we listen, respond and take action

# EXPERIAN **learning**DAY<sub>2022</sub>

**Update on AI compliance and GDPR regulations**



**Jennifer Crama**

Data Protection Officer  
Experian Netherlands









# What will we cover today?

## **What is Artificial Intelligence?**

Artificial Intelligence defined through the years

Artificial Intelligence as defined by the AI Regulation

## **The principles of Trustworthy AI**

How does AI learn?

The 7 Principles of Ethical AI

## **Where AI and GDPR meet and clash**

GDPR principles and the principles of Trustworthy AI

Data Minimization vs. Training

## **Final thoughts**





# What is Artificial Intelligence?



# Defining Artificial Intelligence

How has the definition of AI evolved?

## Traditional:

The ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings.

## AI Regulation:

‘artificial intelligence system’ (AI system) means software that is developed with one or more of the techniques and approaches listed in Annex I and can, for a given set of human-defined objectives, generate outputs such as content, predictions, recommendations, or decisions influencing the environments they interact with.

# Defining Artificial Intelligence

How has the definition of AI evolved?

## Traditional:

(a) Machine learning approaches, including supervised, unsupervised and reinforcement learning, using a wide variety of methods including deep learning; (b) Logic- and knowledge-based approaches, including knowledge representation, inductive (logic) programming, knowledge bases, inference and deductive engines, (symbolic) reasoning and expert systems; (c) Statistical approaches, Bayesian estimation, search and optimization methods.





# The Principles of Trustworthy AI





“

Here's what I've learned:

The Five Principles of AI Weirdness:

- The Danger of AI is not that it's too smart but it's not smart enough.
- AI has the approximate brainpower of a worm.
- AI does not really understand the problem you want it to solve.
- But: AI will do exactly what you tell it to. Or at least it will try its best.
- And AI will take the path of least resistance.”

Janelle Shane – *“You Look Like a Thing and I Love you”*

# How does AI learn?

What is required to get a good functioning AI solution?

## Determine problem/task

- Artificial Neural Network
- Cells/Neurons
- Simple math
- What are you trying to solve?
- Simplicity is key
- Narrow

## Select input

- Representative data
- Relevant data
- Fair
- Lawful
- Transparent

## Continuous testing & monitoring

- Robust
- Human oversight
- Retro testing
- Document results



# The Principles of Trustworthy AI

According to the AI Working Group of the EU Commission



Technical robustness & safety



Accountability



Transparency



Privacy & data governance



Diversity, non-discrimination & fairness



Human Agency & Oversight



Societal and environmental wellbeing







# Where AI & GDPR meet and clash



# Where GDPR & AI meet and clash

GDPR and AI principles



## Adequate safeguards vs. Robustness

1. Resilience to attack
2. Accuracy
3. Fallback plan
4. Reliability & Reproducibility



## Transparency (GDPR & AI) & human oversight

1. Traceability
2. Explainability
3. Communication
4. Meaningful human review
5. Fundamental rights
6. Human agency



## Accountability and privacy & data governance

1. Auditability
2. Minimization
3. Quality & integrity of data
4. Access to data
5. Privacy & data protection



## Fairness vs. Fair & lawful processing

1. Avoidance of unfair bias
2. Accessibility & universal design
3. Stakeholder participation



# Data minimization principle

- Absolutely necessary
- Less is more
- Hungry Hungry Caterpillar
- Discussion EU level
- Data relevancy
- Connection to processing purpose

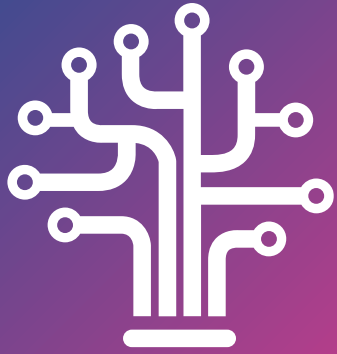


## Final thoughts



# Final Thoughts

Key takeaways from this session



AI is no longer something from  
the distant future



Regulation & practice may lead  
to tension



Strong data protection  
governance = reliable &  
compliant AI



ENJOY YOUR BREAK

We will resume at 11:00



# EXPERIAN **learning**DAY<sub>2022</sub>

**The role of a credit reference agency in driving innovation and gathering customer insights**



**Herman Peeters**

Principal Consultant  
Experian Netherlands

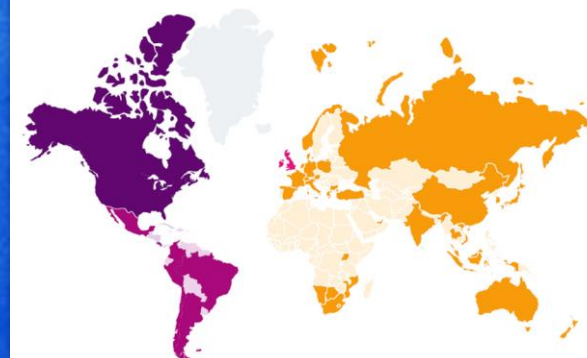


# Our Experian Credit Bureaus

Country	Bureau Operations		
	Consumer	Business	Vehicle
UK	√	√	√
US	√	√	√
Australia	√		
Austria	√		
Botswana	√		
Brazil	√	√	
Chile	√	√	
China		√	
Colombia	√	√	
Denmark	√	√	
Germany	√		√
India	√	√	
Ireland		√	
Italy	√		
Lesotho	√		
Malaysia	√	√	
Mozambique	√		
Namibia	√		
Netherlands	√		
Norway	√	√	
Peru	√	√	
Singapore	√	√	
South Africa	√	√	
Spain	√	√	
Uganda	√		

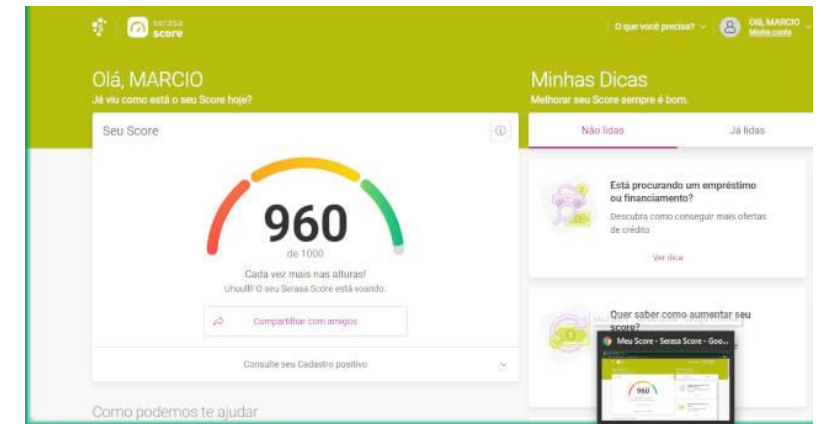
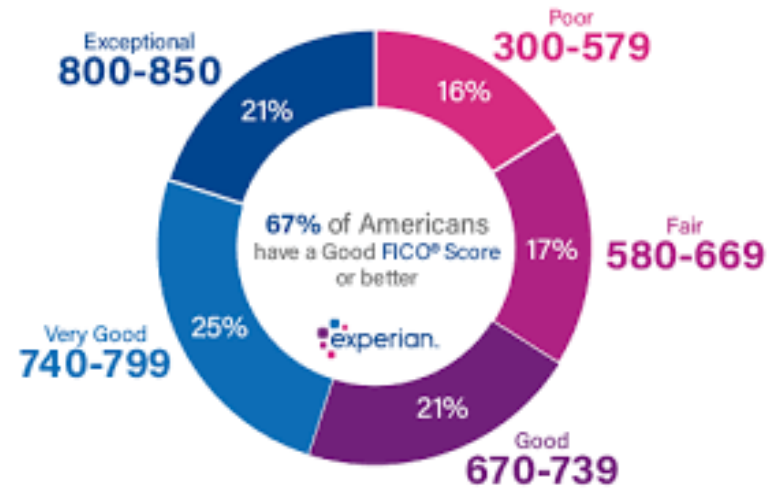
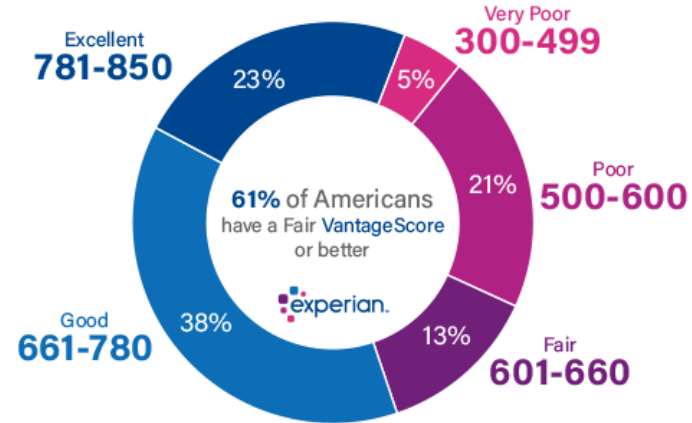
**Compuscan**  
an experian company

**arvato**  
BERTELSMANN  
Financial Solutions





# Credit Scores



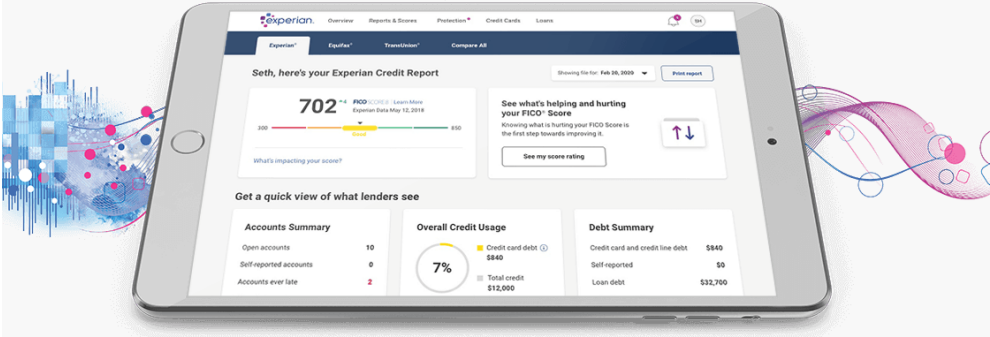
# Other Consumer Attitude

## Free credit monitoring

Monitoring your credit can help you detect possible identity fraud sooner and prevent surprises when you apply for credit.

[Start monitoring your credit >](#)

No credit card required




## Experian Boost™ has everyone talking



“ Boosting 21 points was like scoring a game winning touchdown.”

David & Emily



“ Experian Boost helped us get a lower APR.”

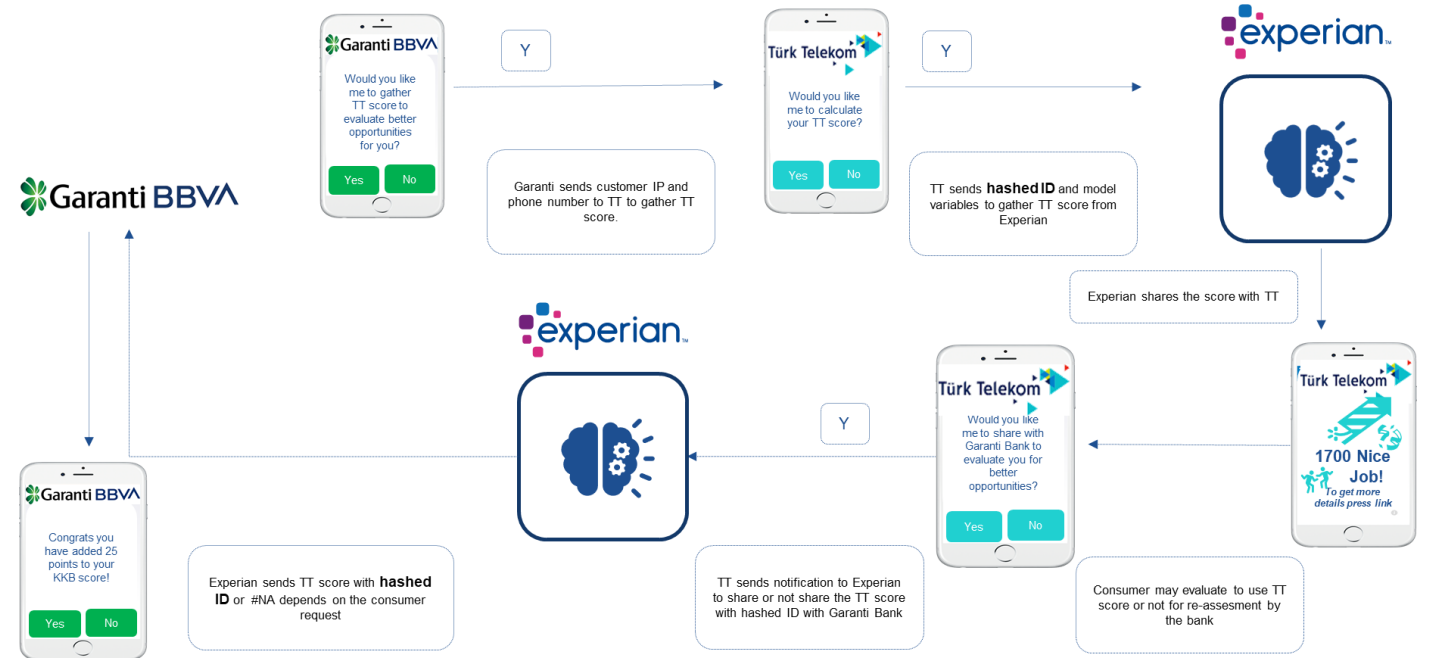
Kaitlin



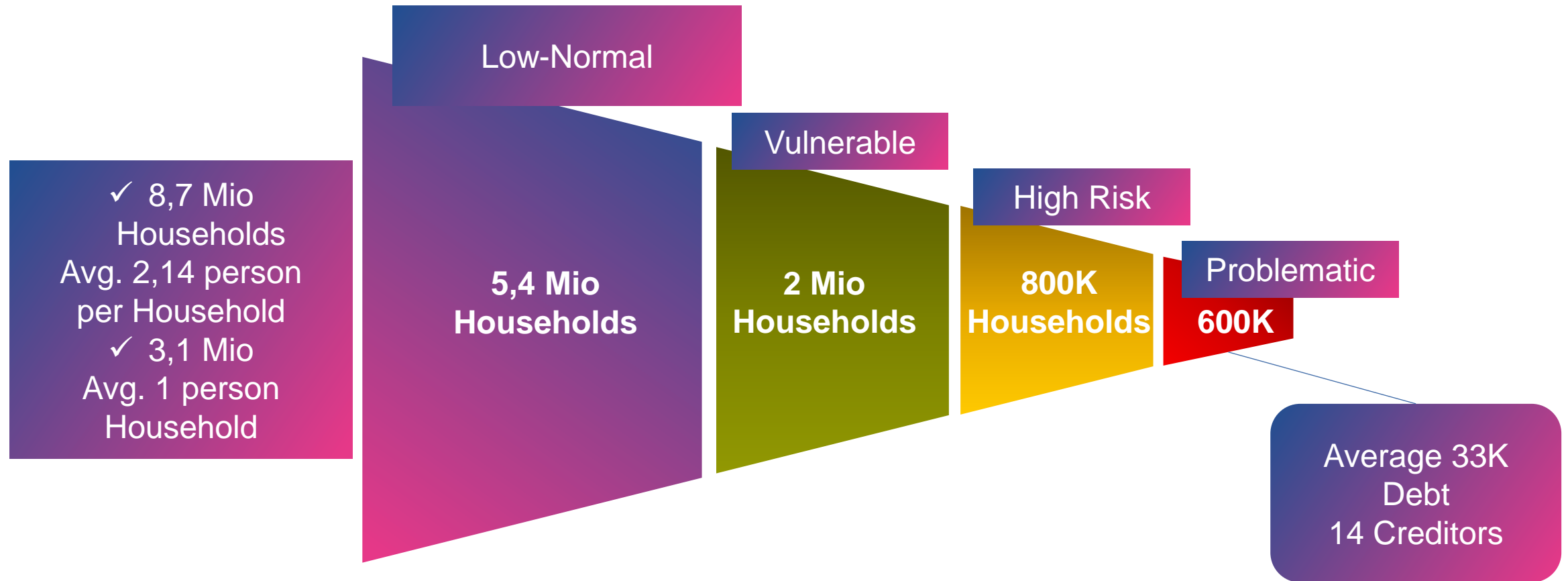
“ I Boosted my credit score by 52 points!”

Yasmine & Michael

# Score Boost



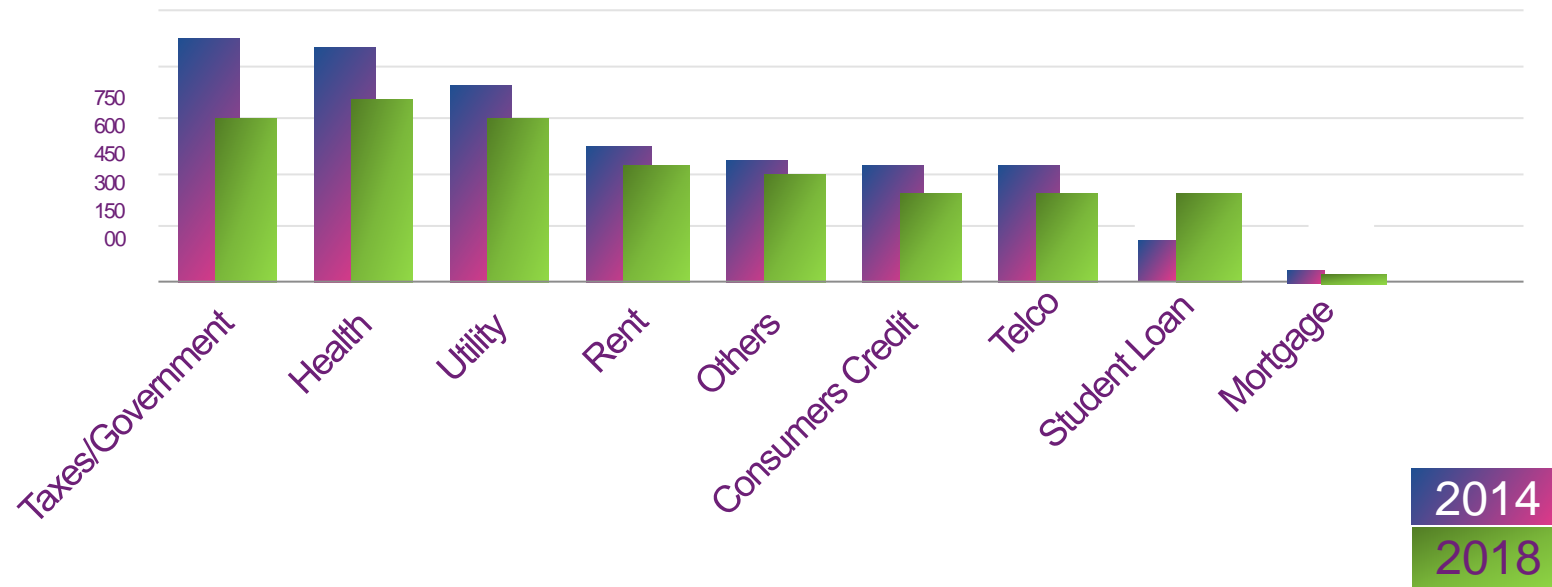
# NL Context



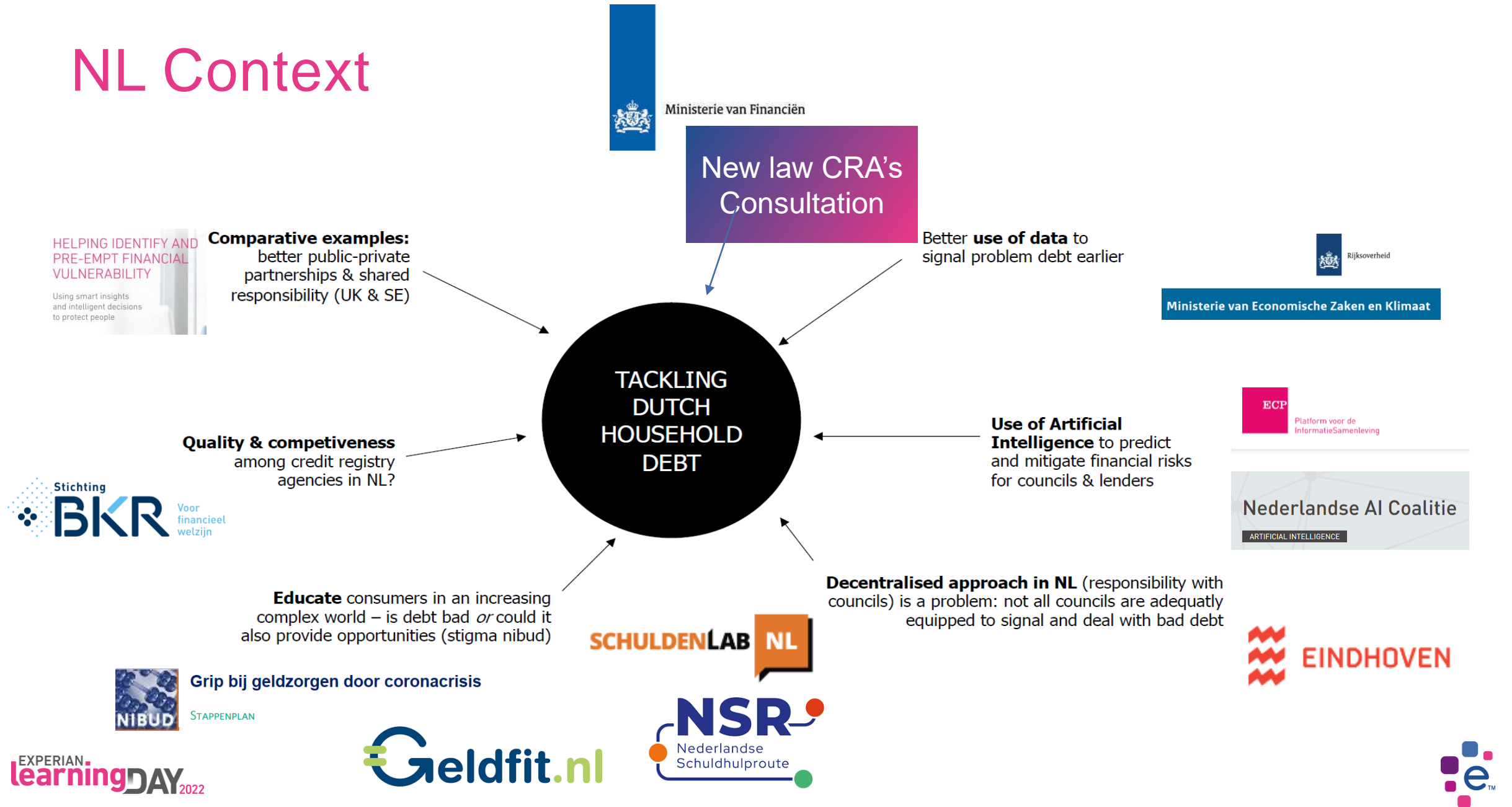


# NL Context

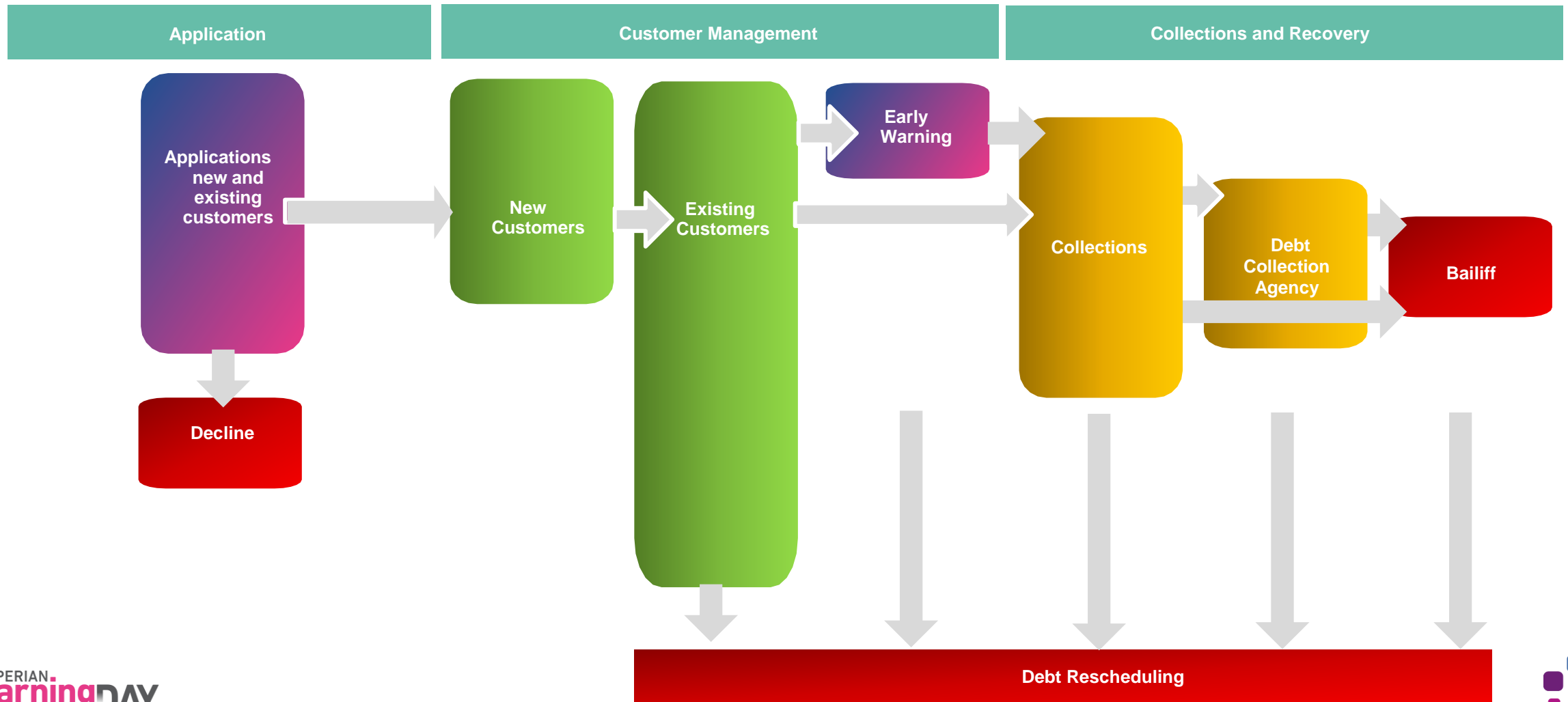
## Payment problems per product



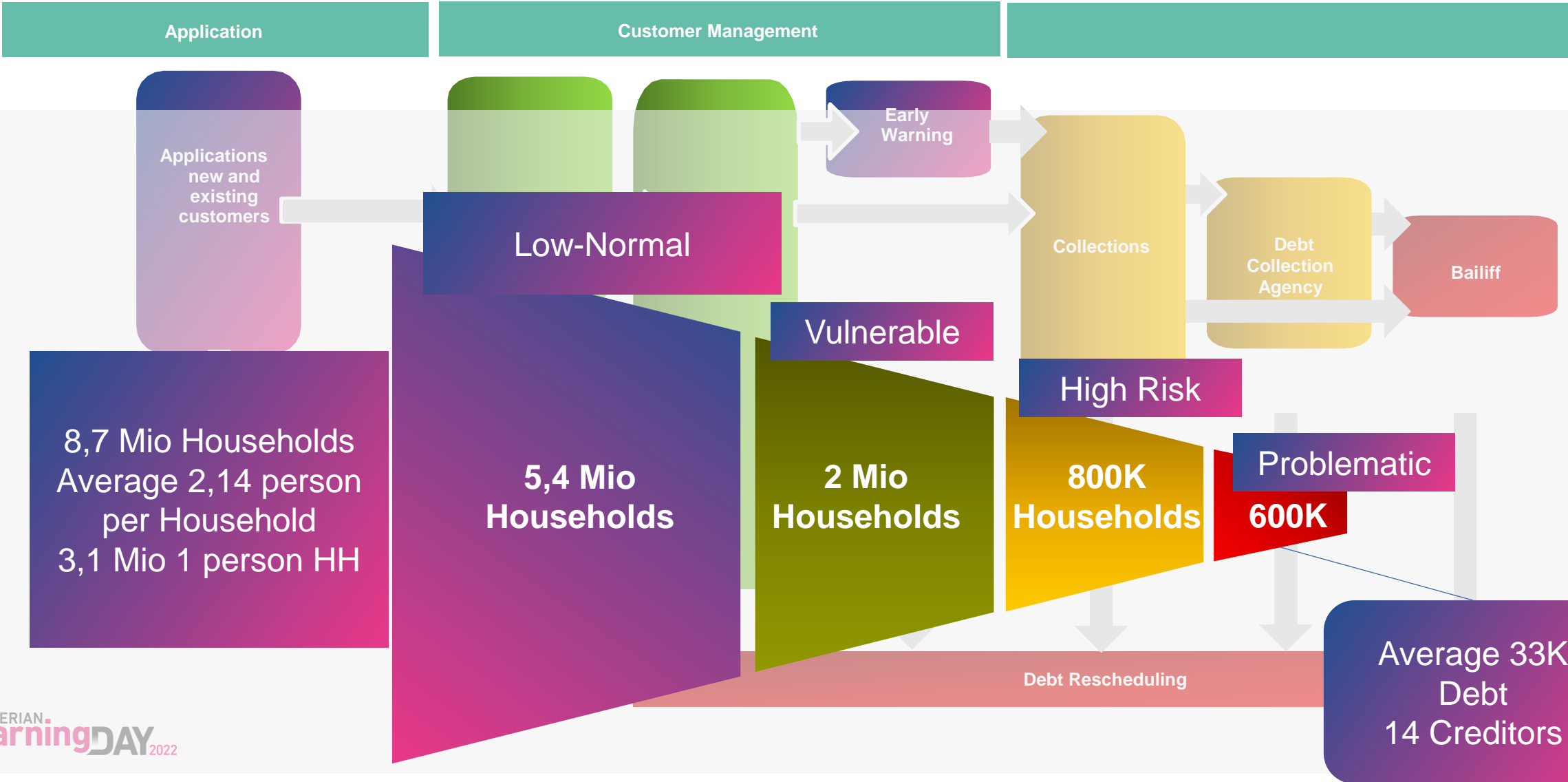
# NL Context



# Value



# Value





# Value of a Credit Bureau



Responsible access to credit and payment solutions

Protection Over indebtedness

Better and honest conditions

For Consumers



Access to trustworthy data

Companies without access to BKR still can make a proper risk assesment

More information about financial well being of consumers

Lower cost of risks and losses

For Companies



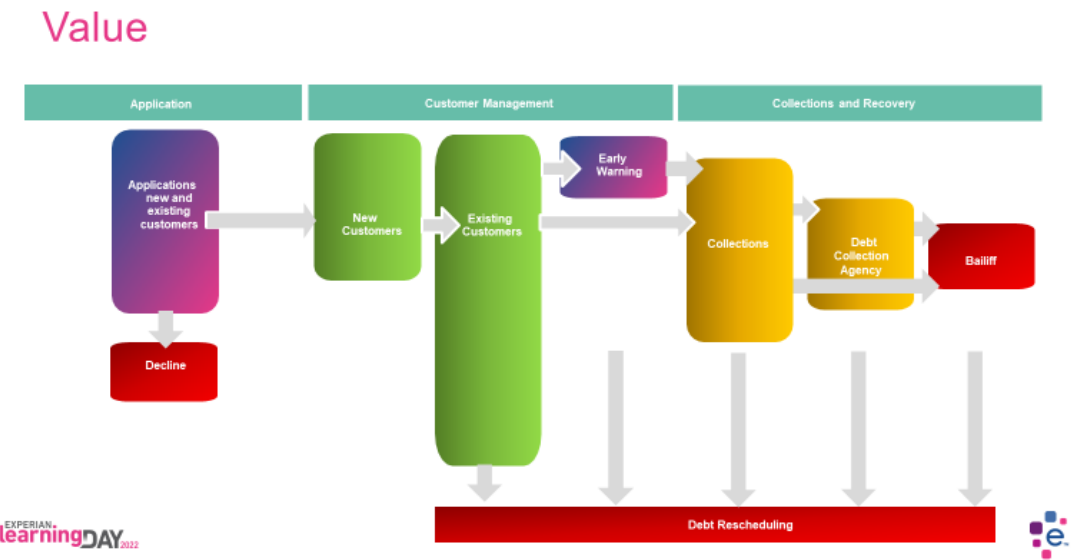
Responsible financial inclusion for regulated credit- and payment options

Less (credit) losses to be balanced via margin/pricing

Less households affected by increasing payment problems

For Society

# Value for you – We need you



Experian Boost™ has everyone talking

“ Boosting 21 points was like scoring a game winning touchdown.”  
David & Emily

“ Experian Boost helped us get a lower APR.”  
Kaitlin

“ I Boosted my credit score by 52 points!”  
Yasmine & Michael



# EXPERIAN **learning**DAY<sub>2022</sub>

**A macro-economic analysis of the Dutch economy from a credit bureau perspective**



**Vincent Edelkoort**

Business Development Manager  
Experian



**Experian's mission is to drive financial inclusion and help facilitate access to fair and affordable credit.**

“

Giving credit where credit is due is a very rewarding habit to form.”

Loretta Young (actress)



# Themes in the Dutch economy - news

NOS

Nieuws ▾

Sport ▾

Uitzendingen

## Duizenden extra klanten kloppen aan bij de voedselbank



Woensdag



ECONOMIE

### Miljarden coronaschuld fiscus komen niet terug

Bedrijven kunnen niet alle uitgestelde belastingen ophoesten, aldus staatssecretaris Van Rij. De Tweede Kamer bepleit mildheid.



NOS



Drie op de honderd meer dan 1 miljoen

VCMB

Thema's ▾ Agenda Over VCMB ▾ Nieuws Blog Waa

## 24,4 miljard euro: totale studieschuld loopt op door corona

By Ingrid Kok | 24 november 2021 | 0

Dit artikel delen:

Twitter

Facebook

LinkedIn

Email

WhatsApp





# Themes in the Dutch economy - trends



Covid



Inflation



Energy transition



What do we see back in our sector



# Net result



Uncertainty is driving overall volume  
is steadily increasing



Quick return to pre covid levels in  
many sectors, with a staring decline  
in q1 2022



Inflation pushes overall scores up, but  
expectation is that there will also be  
an influx of negative registrations  
coming in

# Credit score going up as a whole

The volume on score is building up as the sectors are preparing for the post covid bankruptcy wave.

The inflation is pushing up general scores as inequality is also increasing.

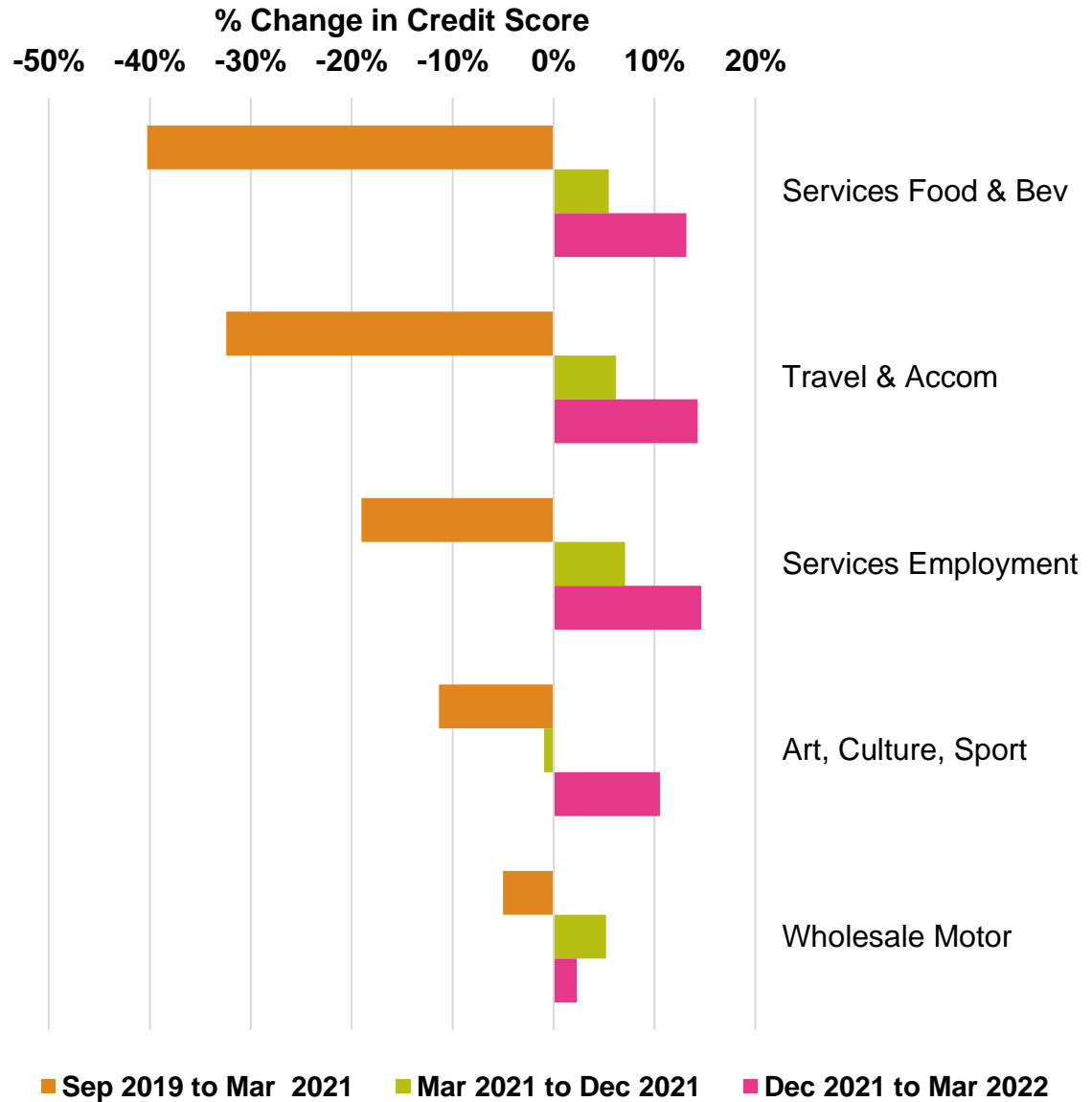


# Post Covid recovery is leveling off

Early Covid period there was a drastic increase in the risk profile, especially in the hospitality and trade sectors, this is now recovering due to inflation numbers and economy restarting.

In Q1 we see the recovery curve steadying and even declining as subsidies will need to be paid back

Impact of COVID-19 on Credit Scores by Sector





## SME Health by Sector - 18 Month Outlook

Credit Risk Scores (0 to 12, the higher the better)

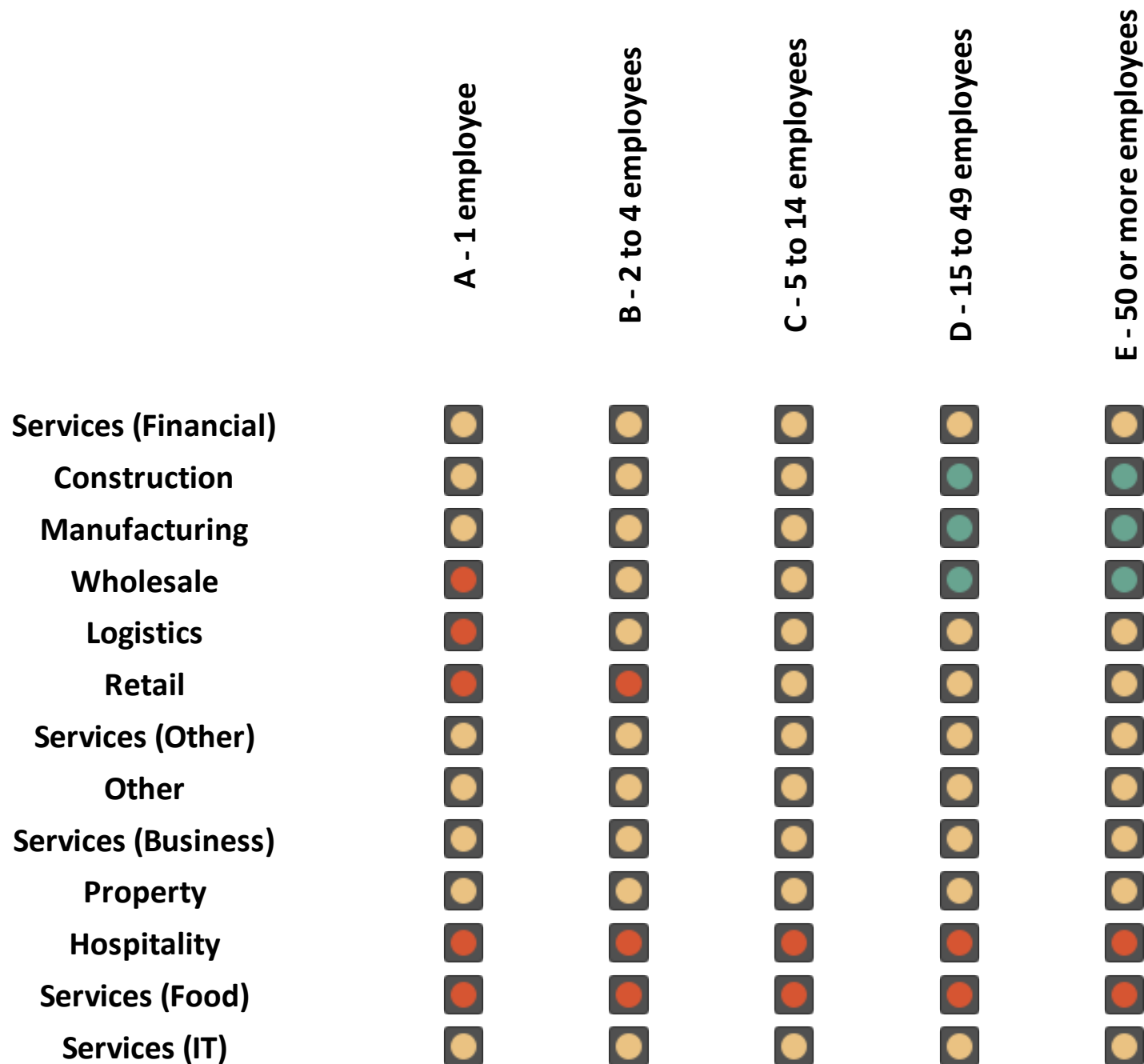


## SME segment

We see recovery in all sectors to almost better than pre covid levels, however the first impact of the energy shortage and war in Ukraine is visible in the Travel and Service sector.

# Expected Default Risk - Mar 2022 - 18 Month Outlook

Across the grid most of the SME segment is still medium risk





# Uncertainty in many sectors

Extending credit and doing business is more difficult now than ever before. Inflation coupled with the expected influx of bankruptcies makes taking risk a daunting prospect. But giving credit where this can be done is a reward.



# Market insights every quarter

Experian produces quarterly insights on risk profiles.

Visit our Experian Netherlands LinkedIn page and follow us to remain updated.



**Experian Netherlands**

IT Services and IT Consulting · The Hague, South Holland · 536 followers

EXPERIAN  
**learningDAY**<sub>2022</sub>





ENJOY YOUR BREAK

We will resume at 12:10





# EXPERIAN **learning**DAY<sub>2022</sub>

## Open Banking - Getting value from transactional data



**Paul Heaton**

Head of Product and Propositions Marketing  
Experian EMEA



# The value of transactional data

- Why transactional data is becoming so important
- What insight does transactional data provide
- How it adds value with applicable use cases



It is getting  
harder to  
understand the  
**true picture of  
financial health**



Changing working  
patterns and rise of  
thin-file applicants



External  
economic events



Desire for  
personalisation



Digital first  
consumption

# If you're only using traditional data Then you're only seeing part of your customer

**65%**  
Of businesses are exploring different types of data to improve accuracy of analytics







# Businesses recognise that using data more effectively is key to improve operational performance

*Q: Thinking about the data and insights your company uses to support operational performance, how much to you agree with the following statements?*

*% of respondents that strongly agree or agree*

**We want to make better use of in-house data to improve operational performance**



**We are exploring different types of data sets to improve accuracy of our analytics (e.g., open banking)**



**We need more data to fuel our analytics needs**



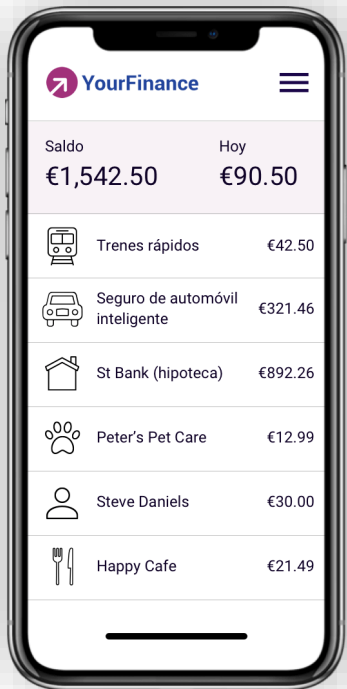




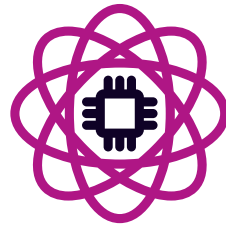
Every transaction generates data, revealing  
more insight into each customer

# ML powered categorisation turns transactional data into powerful insights

## Consent/Connectivity



## ML Powered Categorisation



**180+**  
Categories

**95%**  
Accuracy

**Completed  
in seconds**

## Income & Expenditure Blocks



### Consumer

- Main income
- Banking expenses
- Lifestyle expenses
- Family expenditure
- Financial/legal expenses
- Bank transfer receipts
  - Gambling
  - Retail expenses
- Insurance expenses



### SME

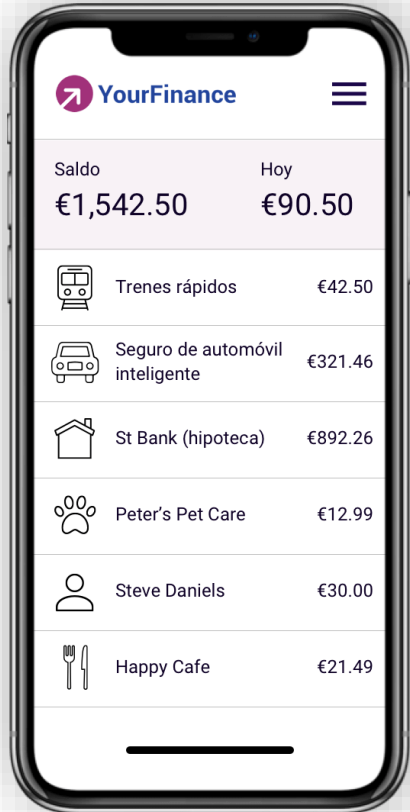
- Sales
- Cost of goods sold
- Operational costs
- Wages and Staff
- Loan receipts
- Finance costs
- Tax expenses
- Facilities and insurance
- Dividends

## Transaction insights



**Automation  
of decision**

# Helping answer the key questions



Advanced Analytics  
Insight generation

## Transaction insight allows you to answer key questions



Affordability

Does the applicant have improving or declining affordability?



Balance  
Characteristics

Dependency on overdraft?  
How quickly income is spent?



Income KPIs

What is her source of main income? Have they had an income shock?



Credit Risk

Early signs of potential customer default e.g late payment fees, payday loans, high and consistent credit card payment

# A rapid, in-depth understanding of creditworthiness and affordability

 **Jose**

ID: 689124

**Persona:** Discretionary Dynamo

**Finances:** Comfortable

**Commitments:** Low

Discretionary Spend  
**45%**

Expenses  
**55%**



**Income Sources**  
Eligible Income



**Loans**  
Committed expenditure



**Shopping**  
Essential expenditure



**Holidays**  
Discretionary expenditure



**Location:** Madrid  
✓ Low risk



Private Rent  
9 Years



Single  
0 dependents



IT Manager, Construction

✓ Low risk



Salary  
€34,000

## DISPOSABLE INCOME

Avg. monthly amount

**€453.00**

Change ▼ **5.30%**

## BALANCE INSIGHTS

Time spent in overdraft

**0 days**

Minimum balance

**€2,672.00**

## INCOME KPIS

Avg. monthly income

**€1,225.00**

No. of Salary Payments

**6**

## BEHAVIOURAL INSIGHTS

Avg. personal loan expenditure

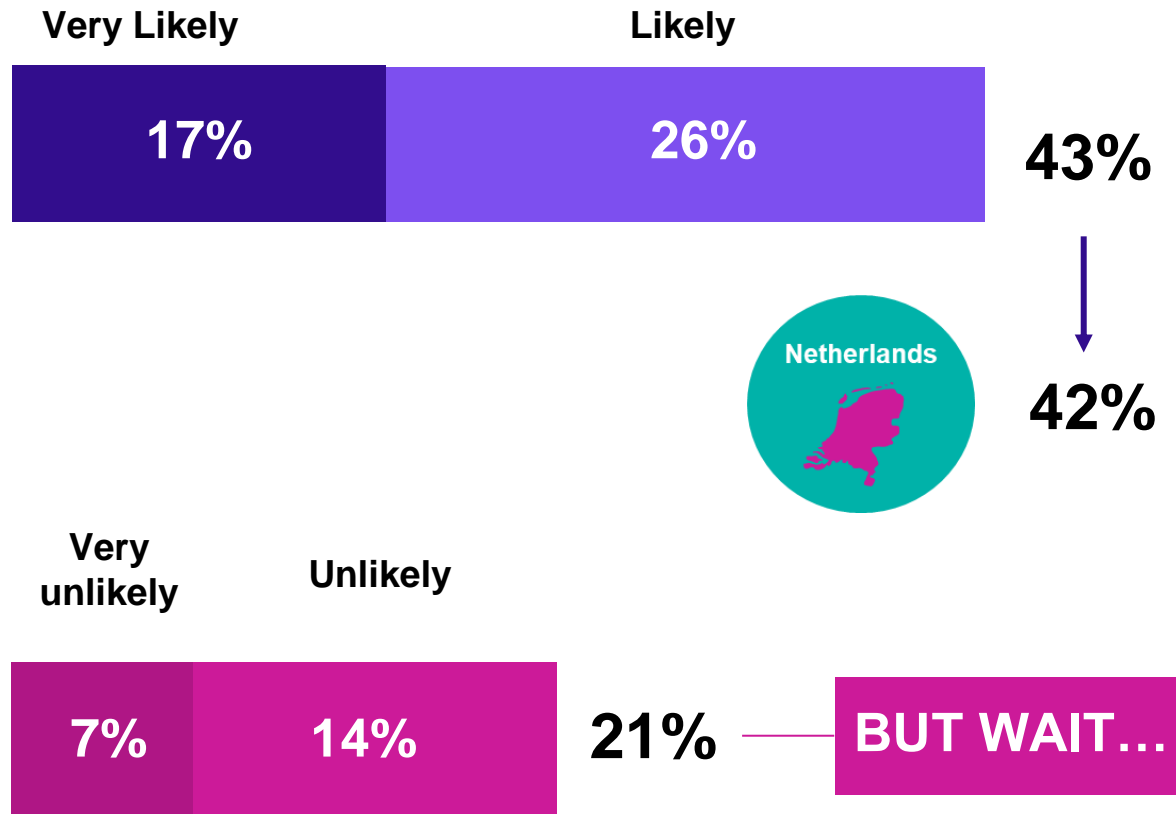
**€170.00**

No. of loans paid last 3 months

**2**

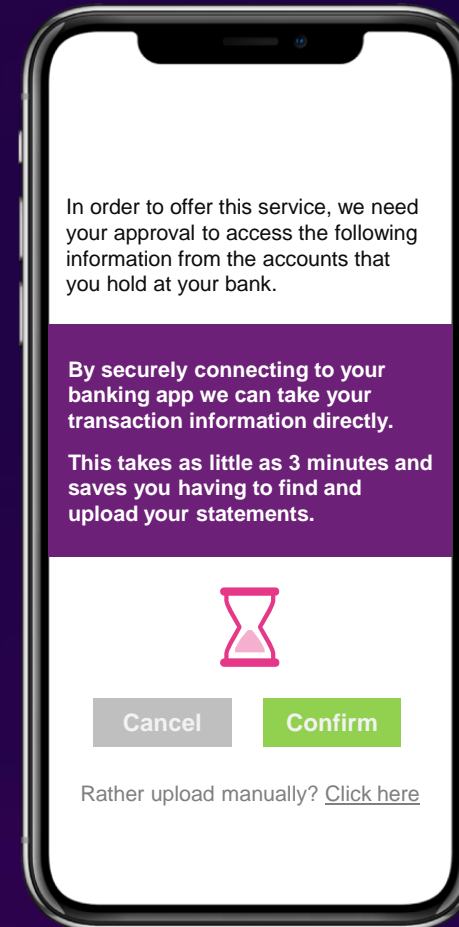
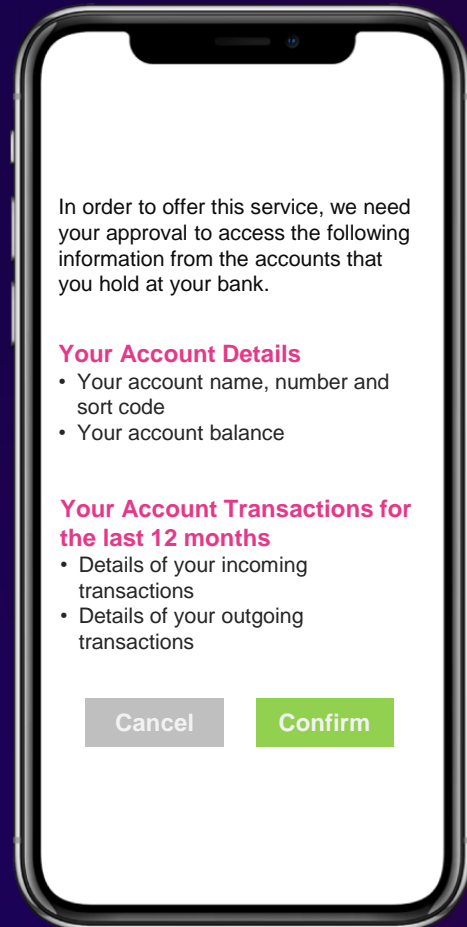


# 43% willing to share their financial information via banking app but many more would for the right reason



% Very Likely/Likely to give permission...	
To guarantee a faster application	38%
To get a preferential offer (e.g., a better loan rate)	38%
To have a better chance of being accepted	38%
The company demonstrates that the process is secure	37%
To ensure you did not have to send an any physical paperwork	35%
To ensure you did not have to visit a branch	34%

# Make the value clear...to increase adoption and use of Open Banking



# Where do you see the **biggest opportunity** for **Open Banking** from a business perspective?

LOW OPPORTUNITY

BIG OPPORTUNITY

1

10



Increased decision accuracy from better data

9



Better customer experience

8



Improved portfolio segmentation and risk analysis

8



Faster customer onboarding

7



Growth from widening eligibility of prospects

7



Reduced operational costs

7



So, how can we use transactional  
insight to help your business?



# We're helping clients **in 4 key areas**

1



Transactional insight and KPIs to improve affordability/cashflow and limit management

2



Transactional insight to enhance existing probability of default models and scores

3



Transactional insight to enhance Early Warning performance and delinquency management

4

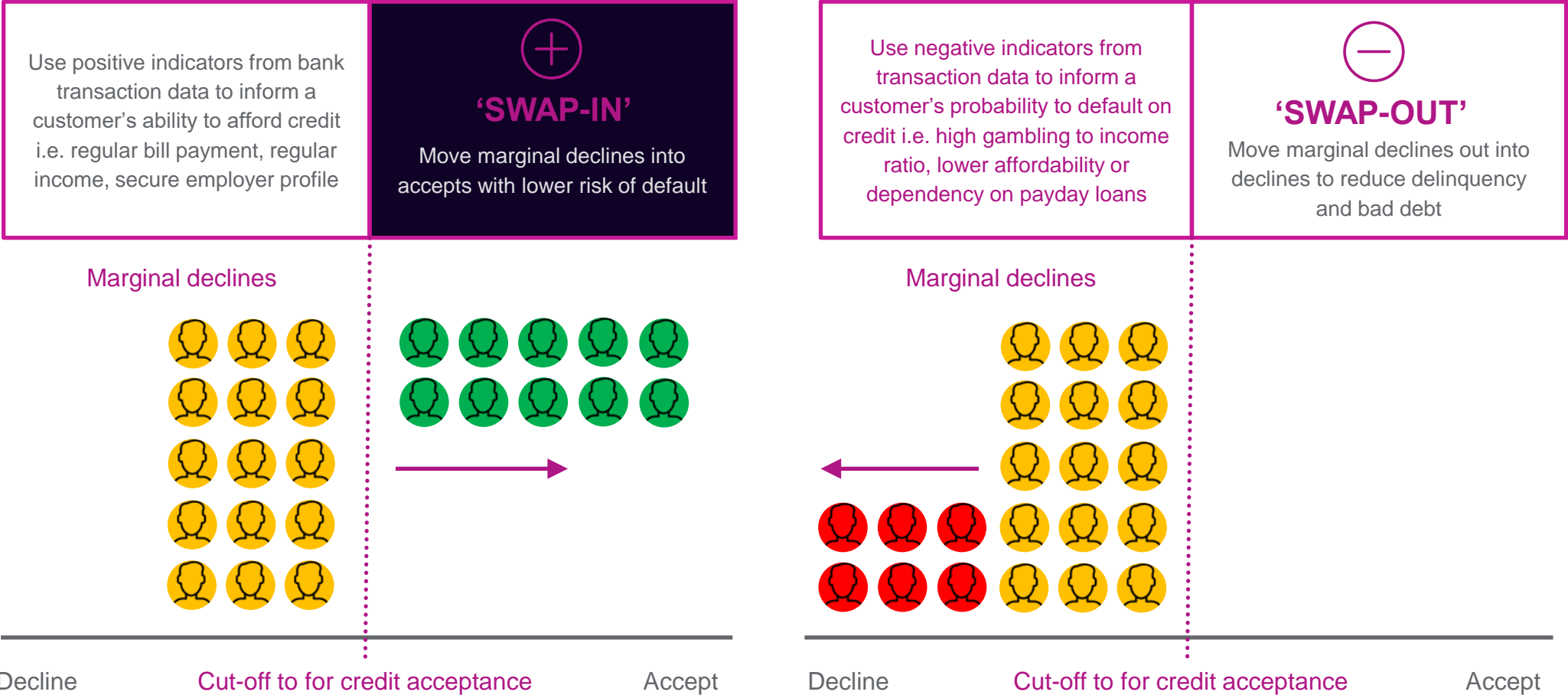


Transactional insight to deliver improved customer experience and faster 'time-to-yes'



# Improve creditworthiness decisions and broaden access to credit

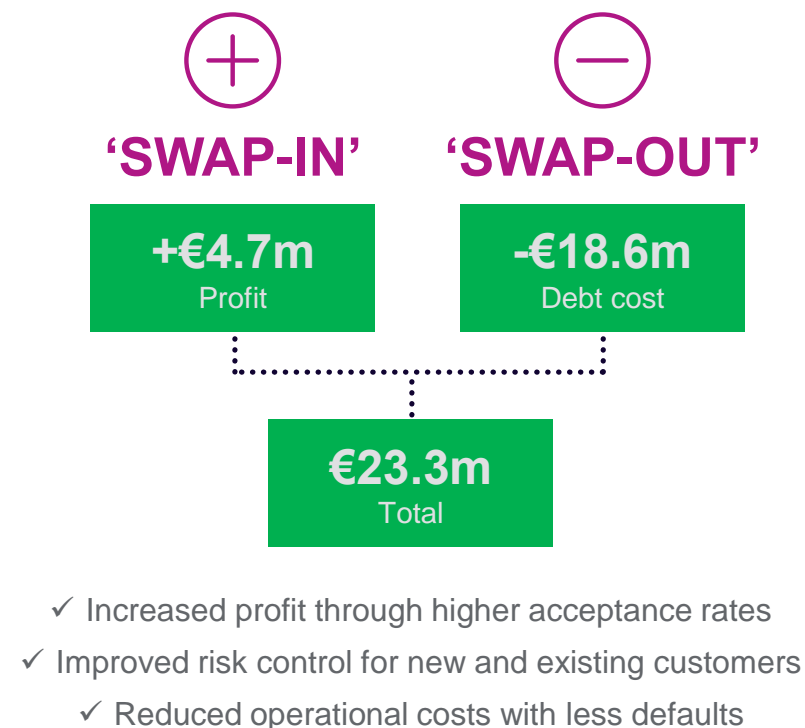
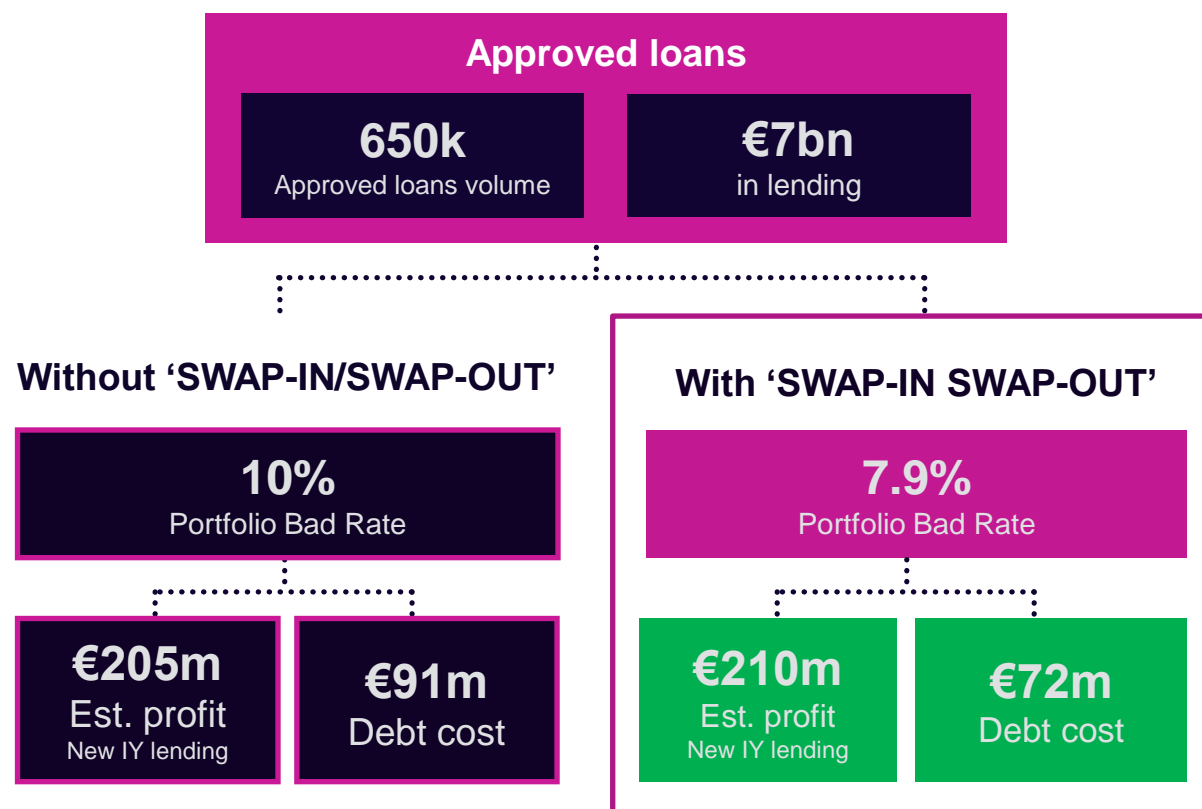
- 1
- 2
- 3
- 4



# 'Swap-in/Swap-out' Personal loans for Tier 1 bank



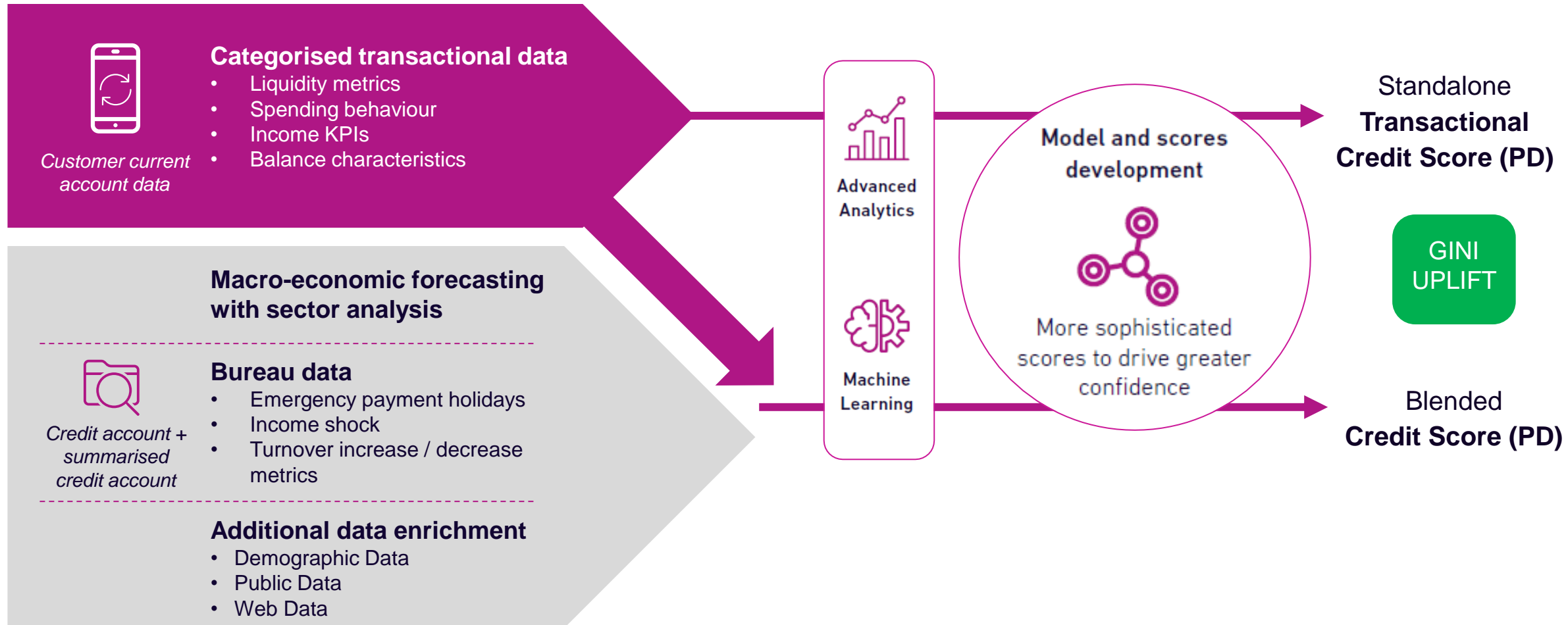
Improve understanding of affordability for marginals, increase acceptance rates and improve overall bad debt rates.



## Assumptions

1. Based on CAIS data on current loan book (yearly accepted applications and portfolio accept rate) – current coverage 3%
2. CAAS reduced default rates based on large bank POC
3. Profit based on €350 over lifetime of loan
4. Default cost based on €1400 per loan
5. Currency has been converted from £ Sterling to € Euros

# Transactional insight can be used for standalone scores or blended for **greater GINI uplift**

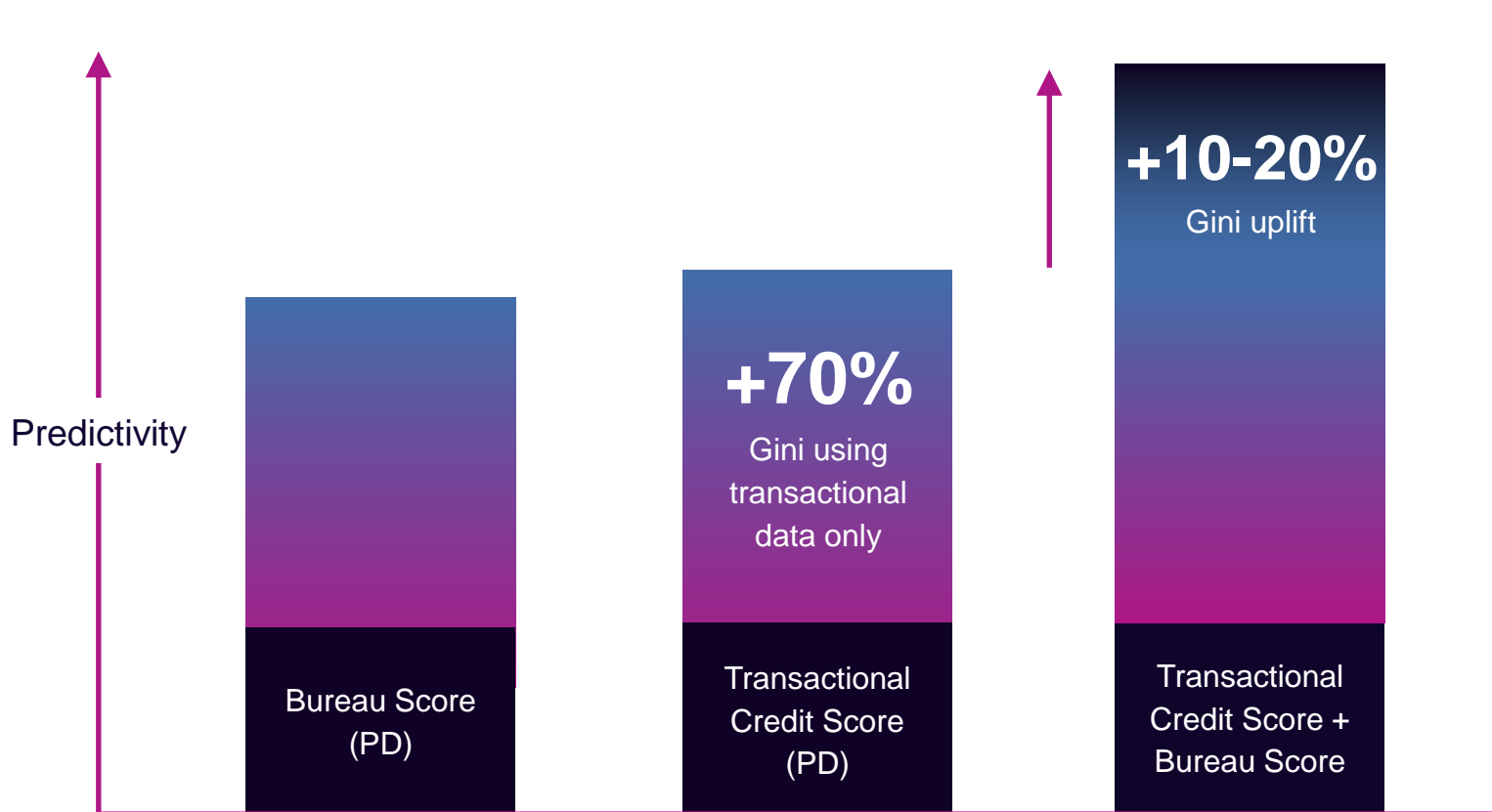




# Uplift performance with more predictive models and a step up in accuracy



Transactional data KPIs are optimised for credit risk, affordability, fraud/anomalies, and churn.



**+10-20%**  
Blended scorecards typically delivery higher predictivity than existing scorecards\*

Open banking-based scores shows higher predictivity than traditional origination models and when blended with bureau data provides significant performance uplift.

\*Based on existing assignments. Performance uplift for each client will differ depending on data inputs and existing performance levels.

# Early collections diagnostics with personalised action

KPIs specifically designed for Early Warning and Collections

Detect early vulnerabilities by observing the evolution of the balance and overdraft.  
Estimate the future trends and identify best collection date via KPI analysis.



Customer #4678

**High risk**

Highest balance in the month **€627.94**

Balance last day **€-178.16**



**Best day for  
monthly payment**

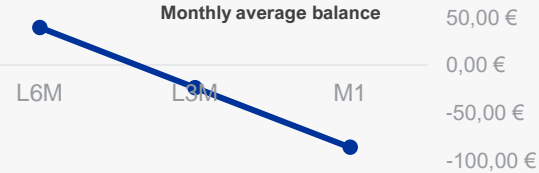


**29**

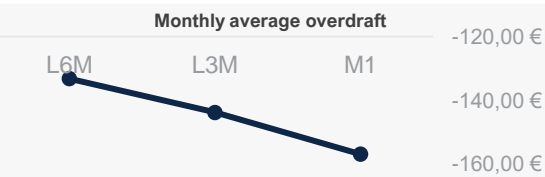
## Early Warnings

	Warning months	Indicator	Monthly mean
Salary	6	●	€857.15
Unemployment benefit	0	●	€0.00
Collections	1	●	€13.54
Overdraft	7	●	€-143.83
Loan repayment	7	●	€651.49
Mortgage	0	●	€0.00
Gambling	6	●	€37.14

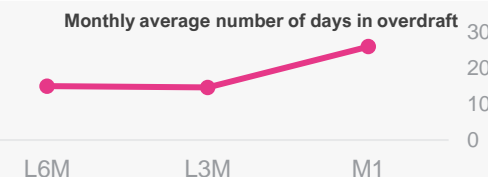
Monthly average balance



Monthly average overdraft

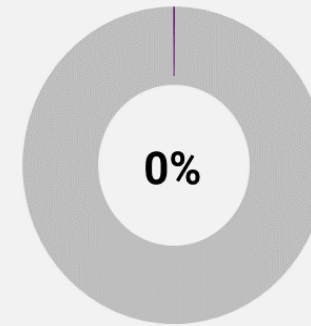


Monthly average number of days in overdraft



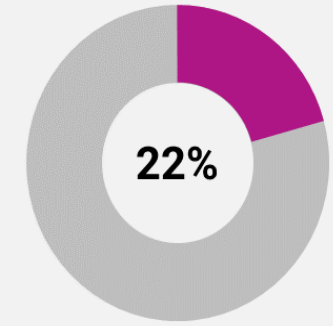
## Savings capacity

(1 - Expenses / Incomes)



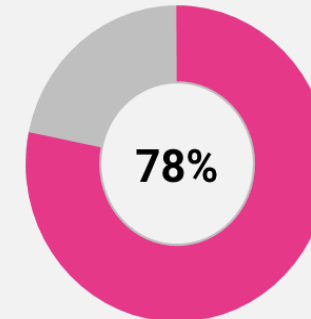
## Debt to income ratio

(Committed expenditure / Incomes)



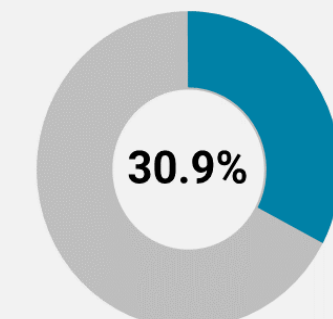
## Debt to eligible income ratio

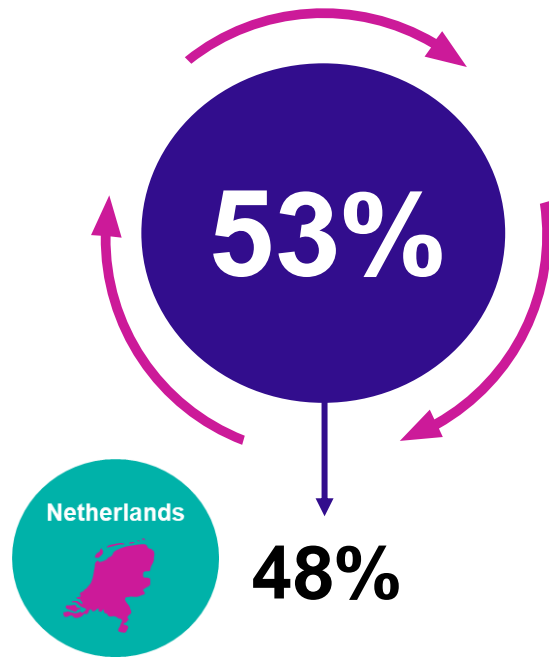
(Committed expenditure / Elig. Incomes)



## Financial charge

(Loans & mortgages / Salary & Pensions & Rent)





Of consumers would allow a bank or lender to **access their bank transactions regularly** so that it could monitor financial circumstances to **provide improved financial support**

“Yes, I  
would  
allow that”

AGE	18-24	25-34	35-44	45-54	55-64	65+
53%	60%	57%	52%	45%	45%	51%
Average	▲	▲	▼	▼	▼	▼

# Faster customer experience and “Time to Yes”

Streamline the customer journey whilst reducing OPEX cost



For your  
customers



For your  
business



**Make it painless**

*Less effort sourcing bank statements  
with a faster answer*

*Reduce underwriting cost with less  
manual processing of statements*



**Keep it digital**

*A simple and safe user experience that  
doesn't 'break' the digital journey*

*Straight through process with greater  
confidence to automate decisions*



**Make it personal**

*Personalise the offer so it is affordable  
for the specific individual*

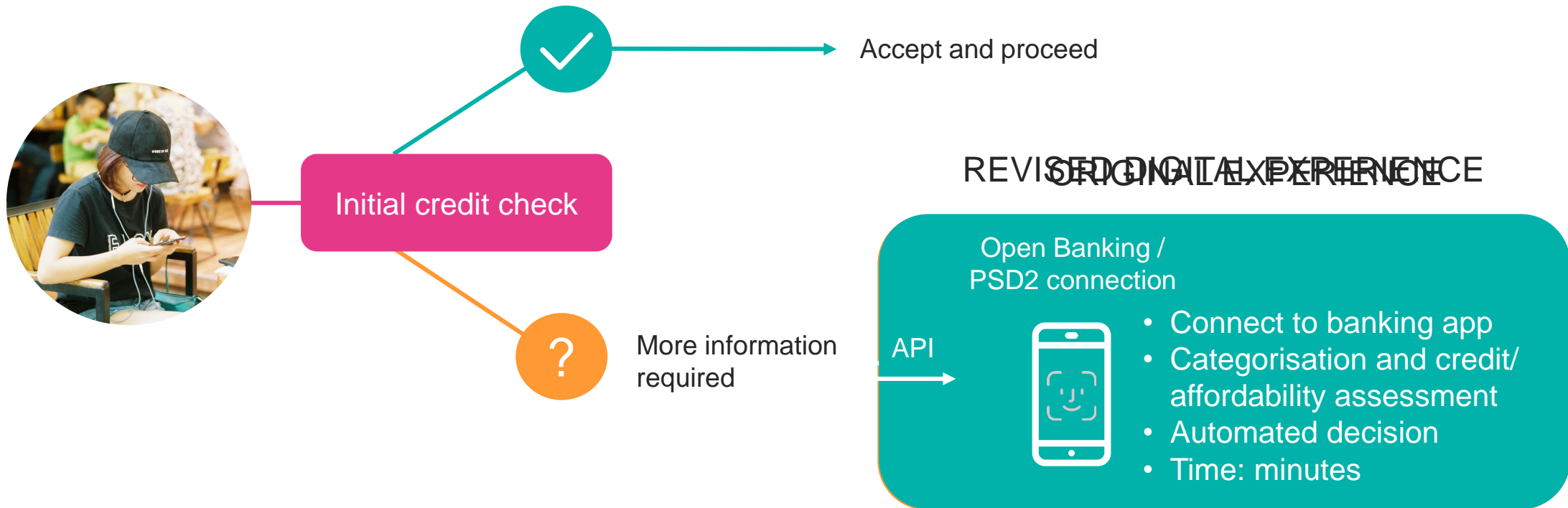
*Greater accuracy of affordability  
assessment with tailored offer*

## -80%

One client has now  
automated data  
collection and the time  
taken to collect customer  
financial information has  
reduced by 80%.



# Improving the customer journey whilst lowering risk



# Account access for automated identification and verification

Digital identification and automated KYC

1

2

3

4



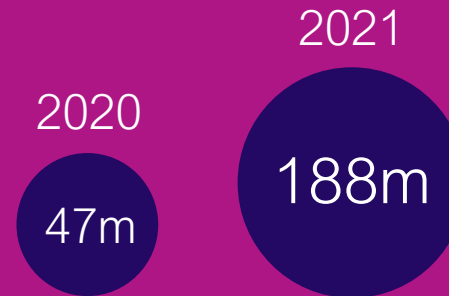
# The future is fast approaching



Open Banking is growing rapidly in the UK with other European markets gathering pace



The number of people choosing to share their data through open banking has tripled since the start of the Covid-19 pandemic



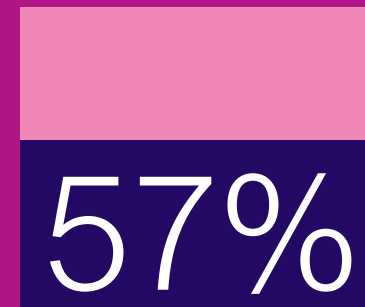
2020

47m

2021

188m

Experian's Open Data Platform saw more than 188 million data sharing requests (up from 47 million in February 2020)



57%

57% of lenders have adopted open banking technology in the last 12 months

# Key takeaways



Open Banking will provide increased accuracy with **depth and recency key to value**



**Find the right use case** to test Open Banking and even consider in-house data as a first test



Don't forget the **importance of communication** to **increase adoption** and conversion metrics

**64%**

of Dutch FS and Telco businesses see Open Banking as a high priority in the next 12 months



ENJOY YOUR LUNCH

We will resume at 13:30





# EXPERIAN **learning**DAY<sub>2022</sub>

**Empower analytics through innovative data and tools**



**Benidine De Kock**

Analytics Consultant  
Experian Netherlands





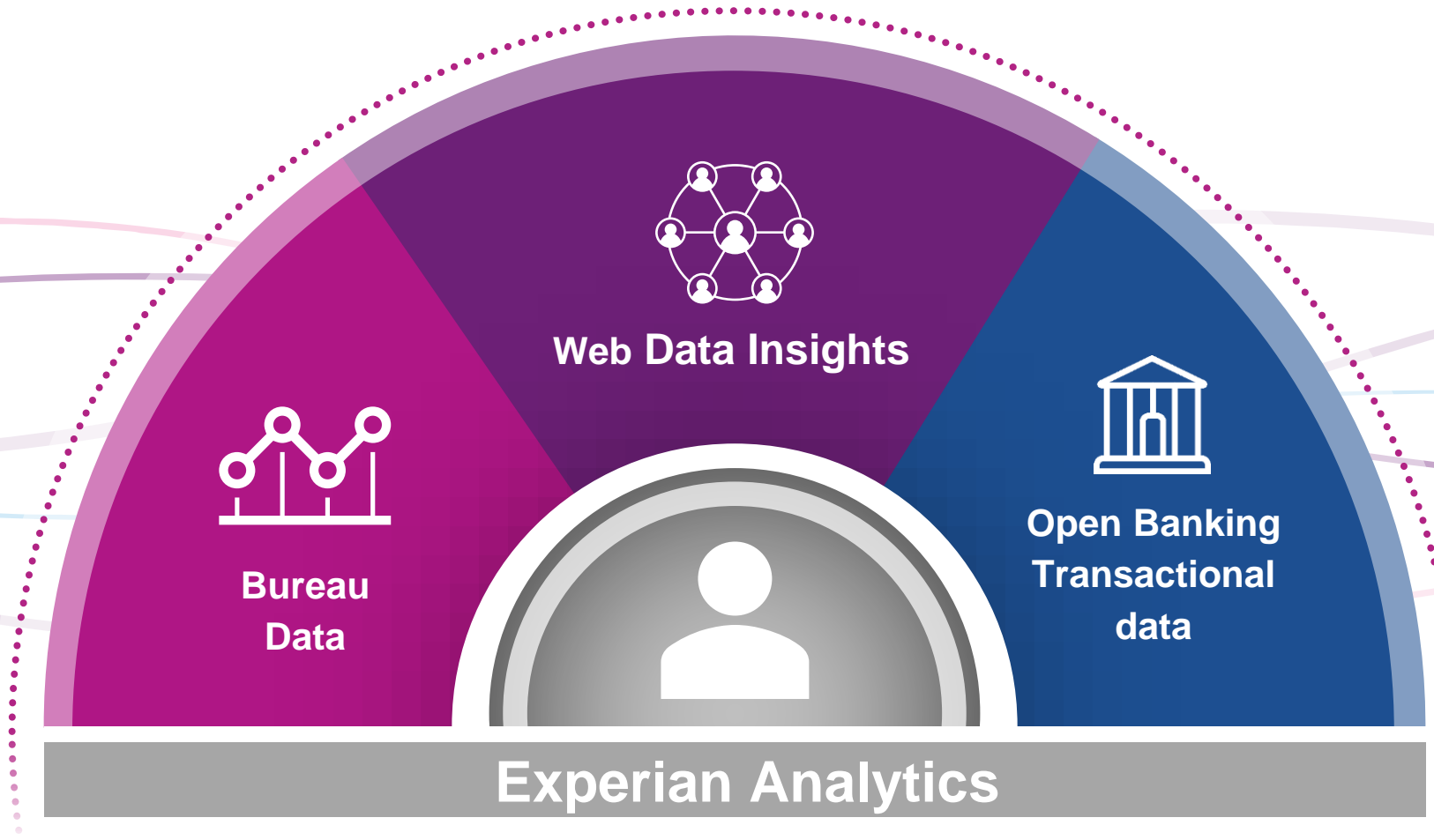
“

A recent study by Forrester showed that **10% increase in data accessibility** will result in more than **\$65 million additional net income** for the typical Fortune 1000 company.”

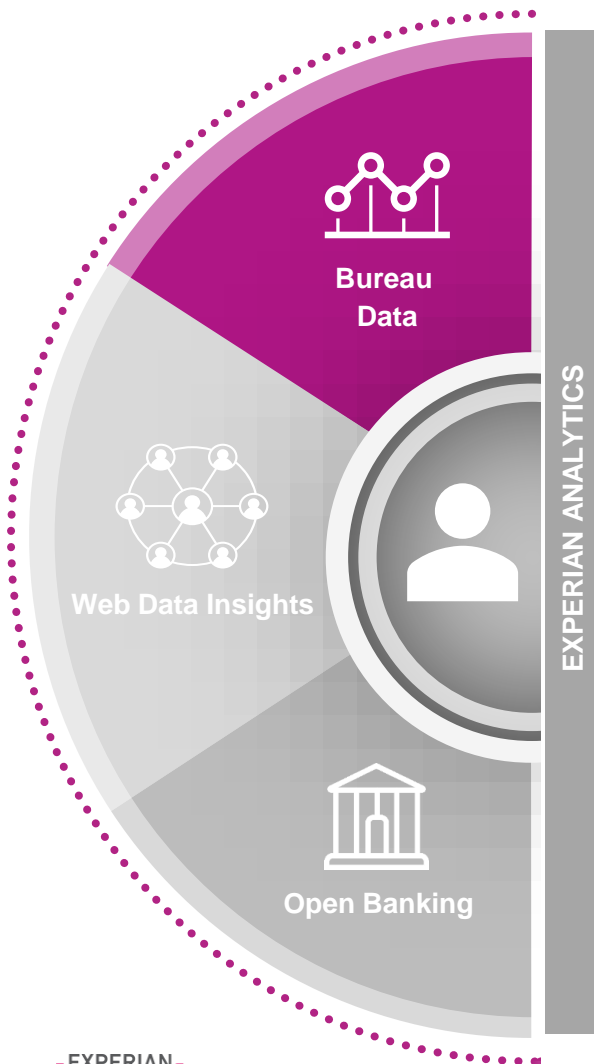
Forrester



# Empower your analytics with innovative data



# Experian Bureau Data



## Bureau Data



Credit Check

Trended variables

Triggers

Monitoring

Contractability info

## Bureau scores



Finance

eCommerce

Telco

Energy

PCCA

## Verification Services

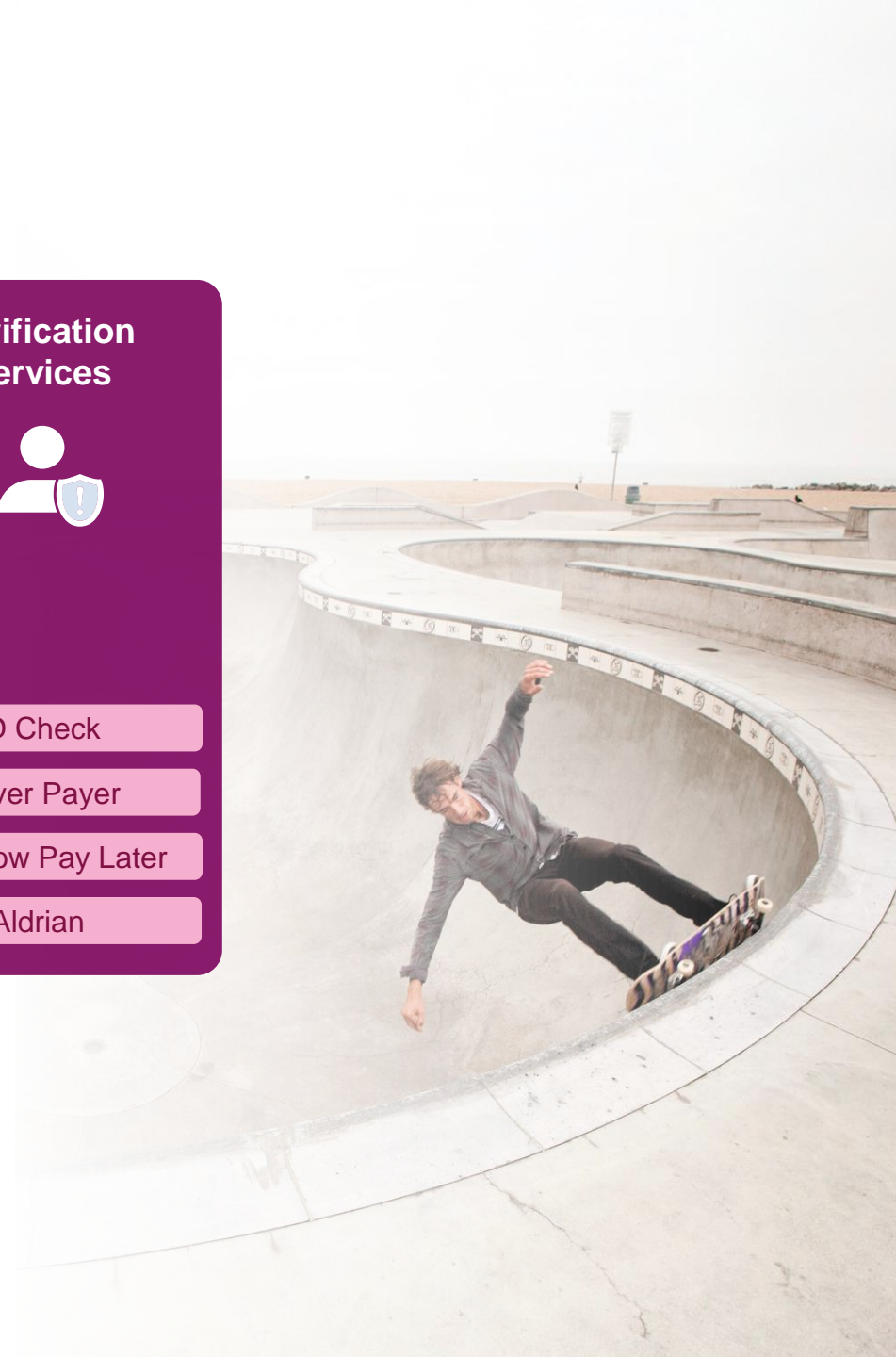


ID Check

Never Payer

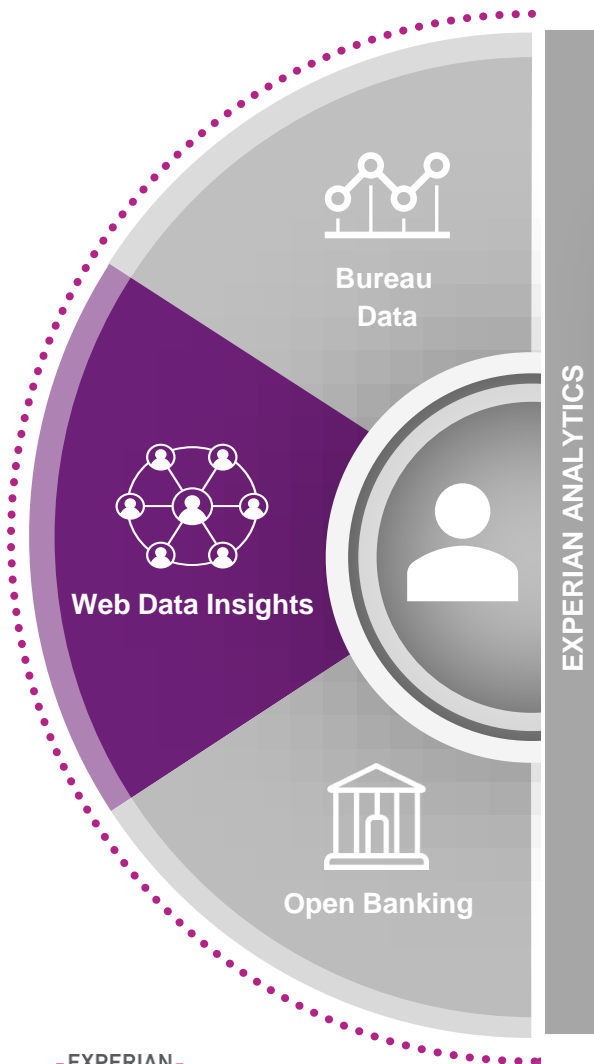
Buy Now Pay Later

Aldrian





# Web Data Insights



Web Data Insights uses publicly available data on companies to develop predictive ML models to enhance existing risk and fraud models.

Where it is located



How it can be reached



What people are saying about it



On which sites it is mentioned



Real-time risk assessment



Compliment existing predictive models



Data coverage for all companies



Multiple use cases

GINI performance



Spain



Italy



Bulgaria



France



Netherlands



UK



Germany



Poland





# Open Banking: Transactional data

Based on explicit consent customers can share **transactional information** from their bank accounts with other banks and third parties.



Behavioural KPI  
from transactional  
or balance data



Transaction  
categorisation



Development Data



Challenges:



Data privacy &  
compliance



Consumer  
trust



Computing  
power

# How to use data in existing process?

## Policy KO Rule

*Derive knock-out criteria based on own business driven threshold*

- Accept
- Refer
- Reject

## Model Risk Drivers

*Use information as risk driver within model development*

Target =  $f(X1, \text{Experian}, Xn)$

## Risk Matrix

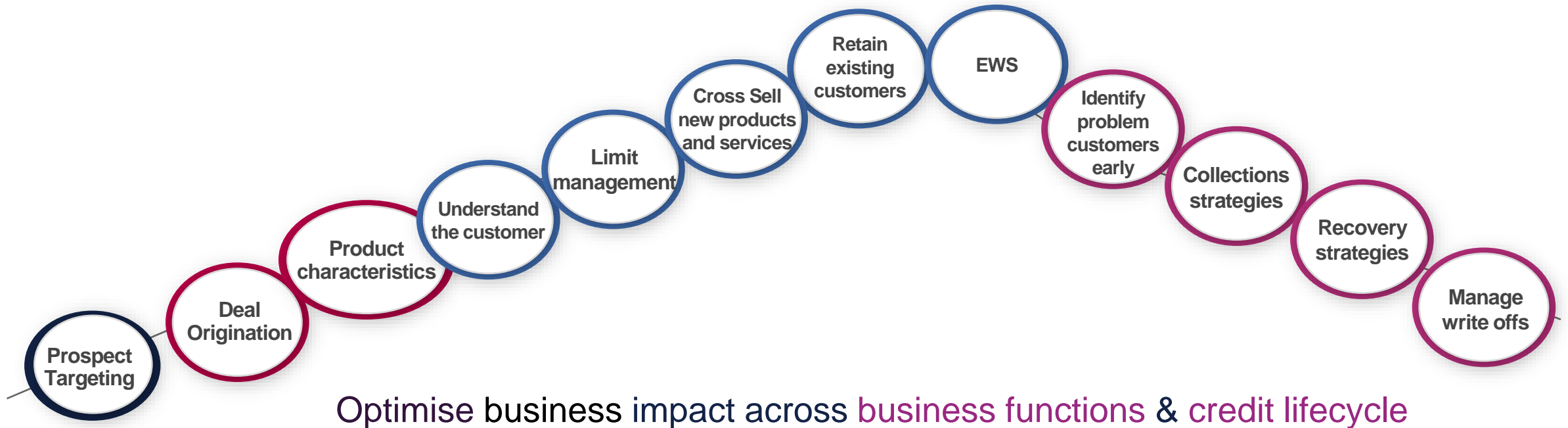
*Combine insight with current risk assessment in a risk matrix*

Default Rates - Adding WDI to an existing credit score

	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10
W1	54.0%	32.8%	32.8%	20.5%	13.7%	9.5%	6.5%	4.1%	3.0%	3.0%
W2	20.5%	13.7%	9.5%	9.5%	6.5%	4.1%	3.0%	1.9%	0.8%	0.8%
W3	13.7%	6.5%	6.5%	4.1%	3.0%	1.9%	0.8%	0.8%	0.5%	0.5%
W4	6.5%	4.1%	1.9%	1.9%	1.9%	0.5%	0.5%	0.5%	0.5%	0.1%
W5	4.1%	1.9%	0.8%	0.8%	0.5%	0.5%	0.1%	0.1%	0.1%	0.1%



# Optimize business impact across the credit life cycle using innovative data



**Prospecting**   **Origination**   **Customer management**   **Collections & Recoveries**



# Agile data strategy



Additional insights in uncertain market conditions



Optimise data management efforts & maintenance costs



Experienced use cases



Privacy by design



## ESG Score - The Experian approach



**Rodrigo Ciaran**

Senior Consultant Regulatory Analytics  
Experian Netherlands



# Why all financial industry will move quickly



# In recent years, EU has accelerated its propositions to promote a sustainable economy, with direct additions to banking regulation

2015



- **Sustainable Development Agenda for 2030** is developed by the UN, with 17 sustainable development goals
- **Paris Agreement**, establishes a maximum increase of 2°C until the end of 2100, compared to pre-industrial levels

2018



- European Commission (EC) **Action Plan on Sustainable Growth** :
  - **Reorienting capital flows towards a more sustainable economy**
  - **Mainstreaming sustainability into risk management**
  - **Fostering transparency and long-termism**

2019



- European Commission **Green deal**, promotes a circular and sustainable economy, with a primary objective : making Europe **climate neutral in 2050**

2020



- **EU Taxonomy** : defines a common framework for all ESG aspects

2020



- **ECB guide on climate-related and environmental risks for banks**
  - Climate and environmental risk become part of the banking supervision process
  - Includes physical risk for assets and transition risk to low carbon economy

2021



- **Management and supervision of ESG risks** : how ESG factors and risks should be included in the regulatory and supervisory framework: business strategies, governance, risk management and supervisory reporting
- Inclusion of ESG risks in **supervisory assessments**
- **Reporting** : Draft Pillar 3 disclosures of ESG risks (green asset ratio)

2021



- **BCBS principles** for the effective management and supervision of climate-related financial risks

# Examples of environmental factors

FACTOR	INDICATOR	METRIC
ENVIRONMENTAL FACTORS <sup>221</sup>		
Climate Change	Production of GHG/ CO <sub>2</sub> emissions	Total GHG emissions (broken down by scope 1, 2 and 3 carbon emissions)
		Tonnes of CO <sup>2</sup>
		Carbon footprint
		Tonnes of CO <sup>2</sup>
		Fossil fuel sectors
		% or total
	Energy efficiency	Lack of reduction initiatives in the use and production of fossil fuels
		% or total
		Compliance with Paris Agreement targets
		Lack of initiatives to reduce GHG/ CO <sub>2</sub> emission
		Energy consumption intensity
		In Gigawatt hours(GWh)
		Use of renewable sources of energy
		% or total
		Lack of initiatives to reduce the use of non-renewable energy

Environmental factors will be aligned with the EU Regulation and the EU taxonomy

- ☐ Climate change mitigation
- ☐ Climate change adaptation
- ☐ Sustainable use and protection of water and marine resources
- ☐ Transition to a circular economy
- ☐ Pollution prevention and control
- ☐ Protection and restoration of biodiversity and ecosystems



# Examples of social factors

FACTOR	INDICATOR	METRIC
<b>SOCIAL FACTORS <sup>223</sup></b>		
Community/ Society	Relations with local communities (networks)	Establishment of business in rural and economically and socially underdeveloped areas
	Social impact of products and services	Products' potential to reach rural areas and groups of society where development gaps exist
Employee relationships/labour standards	Freedom of association and right to organise	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Conventions 1 and 2
	Forced labour	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Conventions 3 and 4
	Minimum age and child labour	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Conventions 5 and 6
		Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Convention 7
	Equal remuneration	Average gender pay gap
		Average ratio of the annual total compensation for the highest individual to the median annual total compensation for all employees (excluding the highest-compensated individual)
	Discrimination	Observation and implementation of due diligence policies on issues addressed by the fundamental ILO Convention 8

**Social factors will be grouped based on the main stakeholders of the society**

- ☐ Society as a whole
- ☐ Employees
- ☐ Customers
- ☐ Stakeholders



# Examples of governance factors

FACTOR	INDICATOR	METRIC
GOVERNANCE FACTORS <sup>224 225</sup>		
Ethical considerations	Integrity of conduct/conduct frameworks	Alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights
	Values and Ethics	Alignment with the Charter of Fundamental Rights of the EU
	Bribery and corruption	Compliance with United Nations Convention against Corruption
		Identification of insufficient actions taken to address breaches in procedures and standards of anti-corruption and anti-bribery
		Convictions and violations of anti-corruption and anti-bribery laws (Number of cases and amount of fines)
Strategy and risk management	Accountability /Rule of law	Alignment with the Worldwide Governance Indicators (World Bank)
	Strategy Implementation, Operational Execution and monitoring	Alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights
Inclusiveness	Internal controls and risk management policies and procedures	Alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights
	Discrimination	Gap between males and females or any other minority groups in the given region in education access and/or outcomes, representation in government positions and/or boards, salary income, etc.
		Lack of a diversity strategy in place (e.g. age, gender, minority groups)

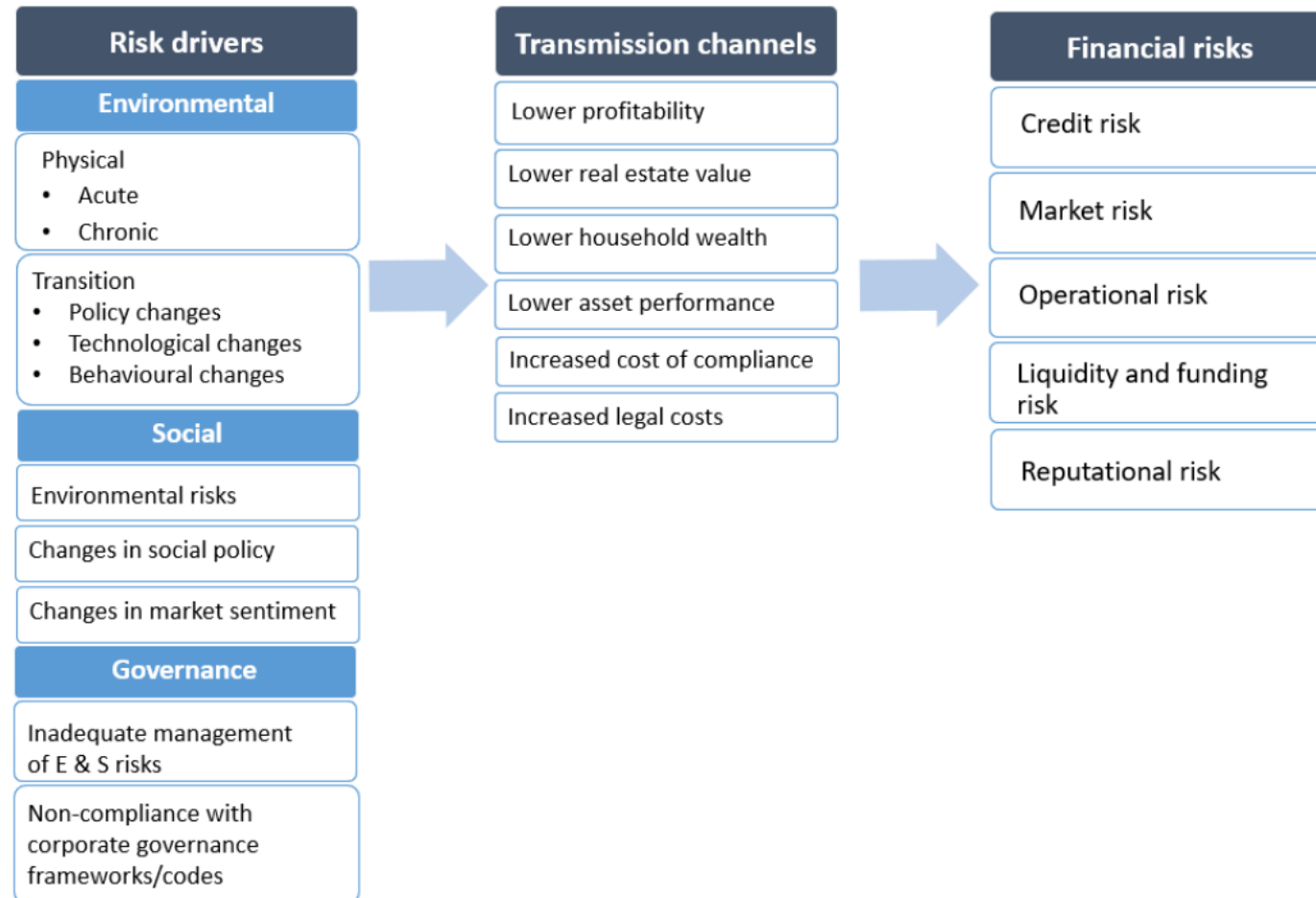
Governance factors will be grouped across four main categories

- ☐ Ethical considerations
- ☐ Sound risk management structures
- ☐ Organization
- ☐ Functioning of the management body and transparency

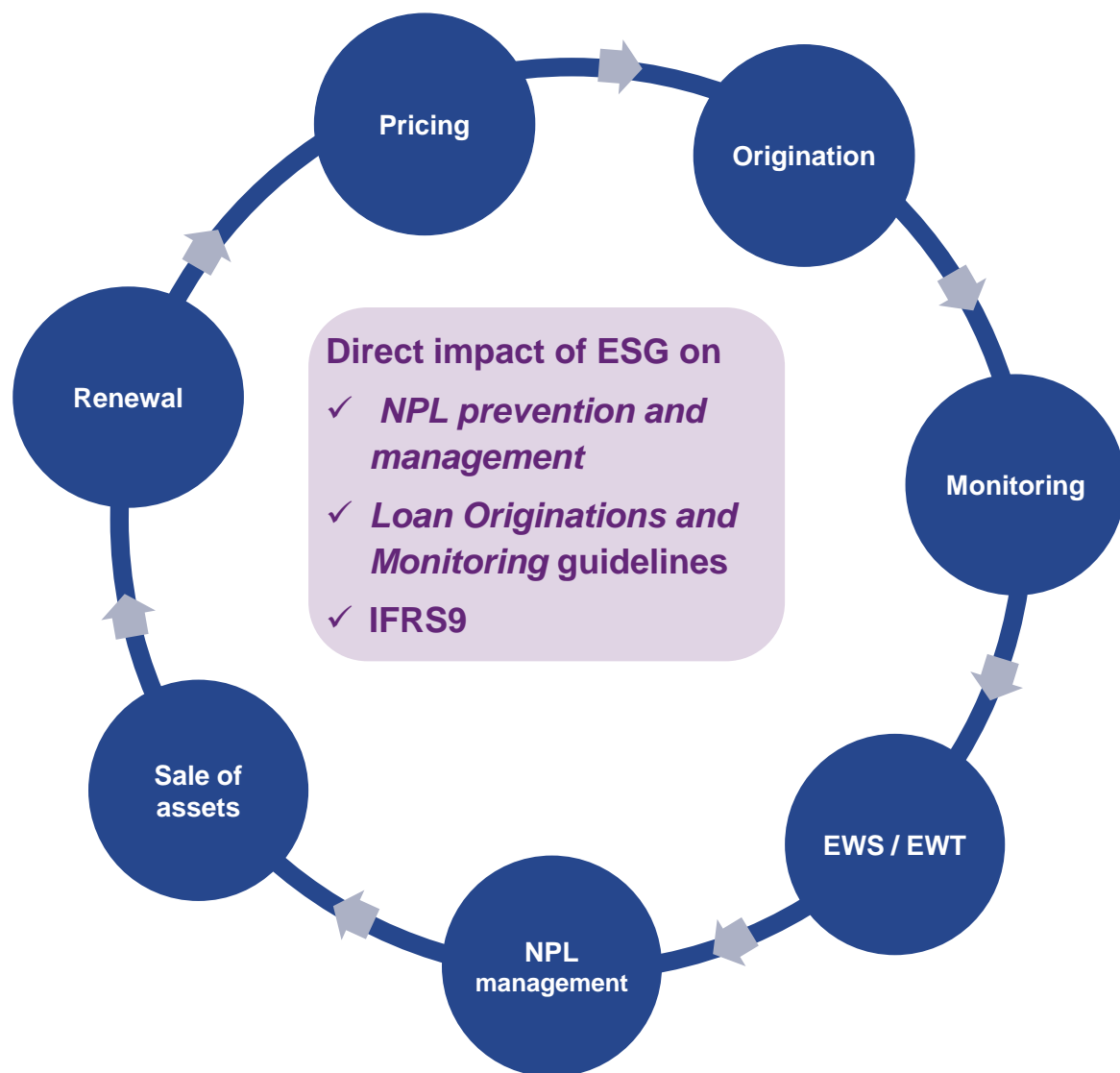




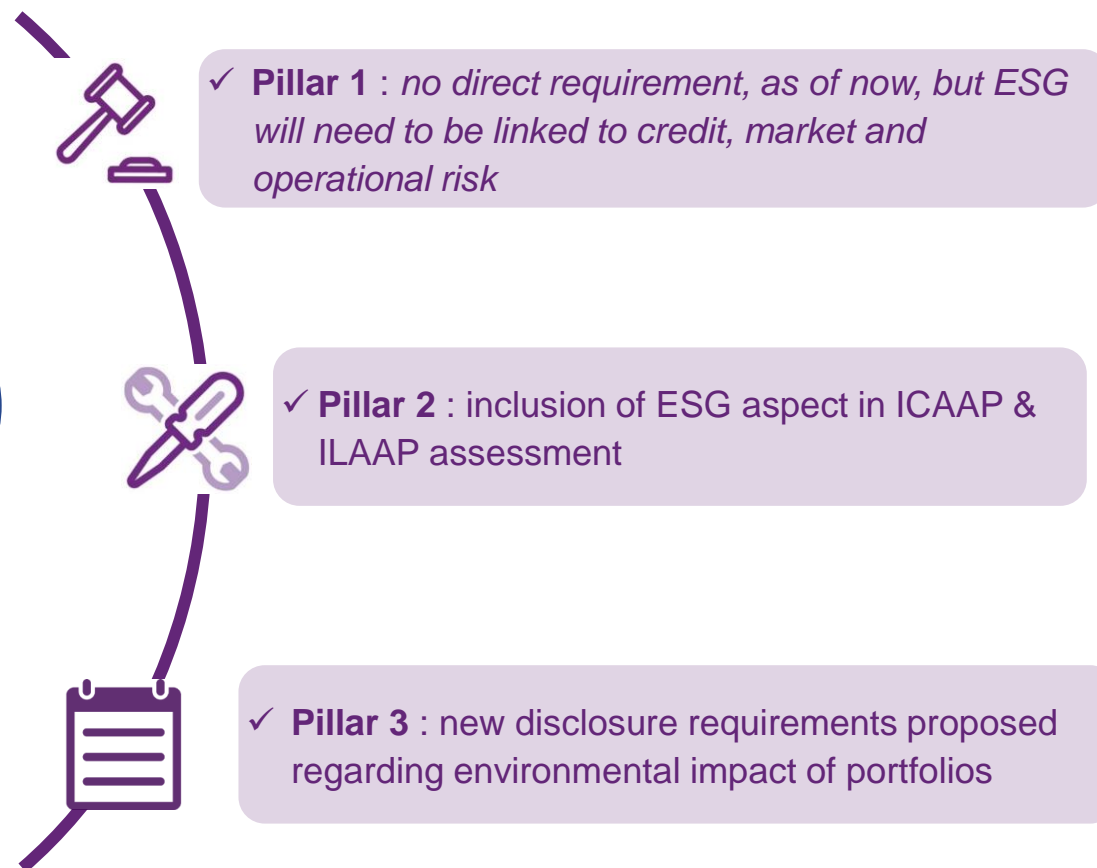
# ESG risk drivers, their transmission channels and impact on financial risk categories



# ESG risks impact the whole credit lifecycle, and as such are also being included in the existing regulatory framework



## Basel framework / CRR / CRD



# Key pillars and supervisory expectations for credit institutions

## Business Models and Strategy



### □ Business Environment

*Understand the impact of ESG (climate-related and environmental, social and governance ) risks on the business*



### □ Business Strategy

*Integrate the ESG risks in the business strategy*

## Governance and Risk Appetite



### □ Management body

*Consider ESG risks when developing longer-term business strategy and objectives*



### □ Risk appetite

*Include ESG risks in the risk appetite framework*



### □ Organizational structure and reporting

*ESG roles and responsibilities of management and 3 lines of defence. Reporting of ESG risks*

## Risk Management



### □ Risk management framework

*Incorporate ESG risks indicators as categories in the risk management framework:*

- ✓ Credit risk at all stages of the lending
- ✓ Operational risk
- ✓ Market risk
- ✓ Liquidity risk



### □ Stress testing and scenario analysis

*Include ESG risks in the baseline and adverse scenarios*

## Disclosure



### □ Policies and procedures

*Disclose information and key metrics related to ESG risks*



### □ Disclosure of assets affected by climate change

*Series of templates included in Pillar 3, including Green asset ratio*

# Impact of C&E physical and transition risks on risk management

Risks	Physical Risks		Transition Risks	
	Climate	Environmental	Climate	Environmental
	<ul style="list-style-type: none"> <li>❖ Extreme weather</li> <li>❖ Chronic weather patterns</li> </ul>	<ul style="list-style-type: none"> <li>❖ Water scarcity</li> <li>❖ Resources scarcity</li> <li>❖ Pollution</li> <li>❖ Biodiversity loss</li> <li>❖ Soil deterioration</li> <li>❖ Other</li> </ul>	<ul style="list-style-type: none"> <li>❖ Policy and regulation</li> <li>❖ Technology</li> <li>❖ Market sentiment</li> </ul>	
Credit	PD and LGD of sectors and geographies vulnerable to physical risks		Energy efficiency standards may trigger high adaptation costs and low profitability, leading to higher PDs and lower collateral values	
Market	Severe events may lead to shifts in market expectations, repricing assets and causing market volatility		Transition risks may generate sudden repricing of securities and derivatives	
Operational	Banks' operations may be disrupted by physical damage to branches and offices		Changing consumer sentiment towards climate issues may lead to reputational damage for the bank	
Other (liquidity, business model...)	Liquidity risks – customers withdrawing funds to repair damage to properties, facilities, etc.		Transition risk drivers may affect the viability of some business lines and lead to strategic risk for some business models Abrupt repricing of securities may depreciate the banks' high-quality assets	

# Global Score: a solution for ESG risk management

Lenders *must comply* with *regulation* that ask to supervise and manage ESG risks of BI portfolio.  
We want to provide an end-to-end solution that through data, analytics and Experian platforms can allow to *monitor BI portfolio* - with low IT impact – and *measure impact in credit risk with stress test scenario*.



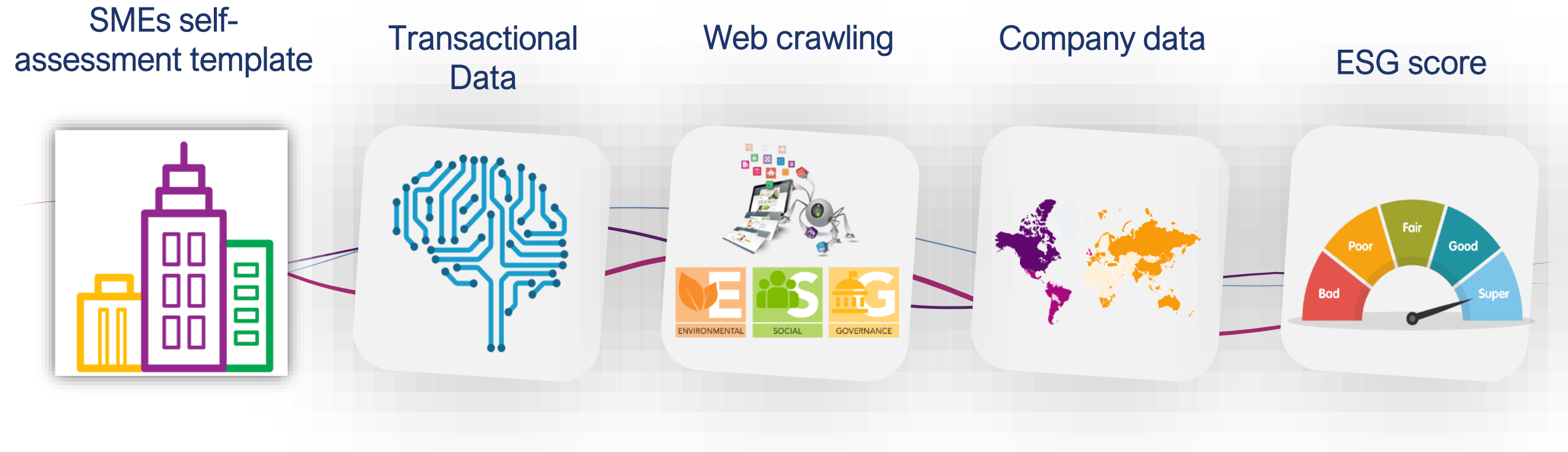
Experian can help banks to  
*monitor BI portfolio*  
complying with ESG  
regulation to measure ESG  
impact in *credit risk stress*  
*tests*



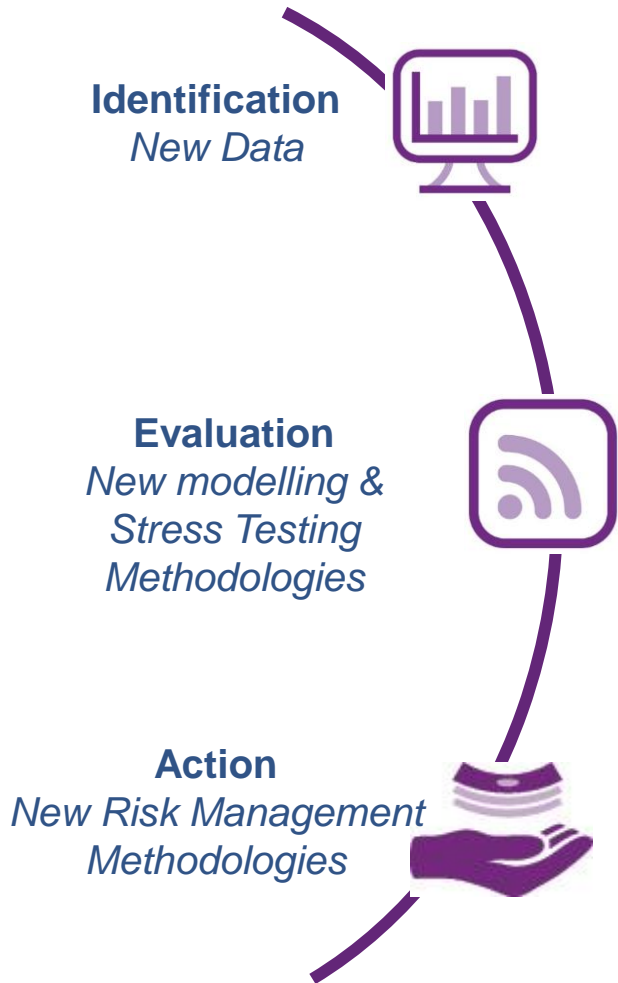
# Proposed solution

Experian Approach	Risks		
	Environmental	Social	Governance
Web score	Web score to gather information from the internet space and link that to pre-defined categories for environmental, social and governance risks		
Questionnaires	The customer will fill in questionnaires to provide information for important financial parameters (EBIDA, number of employees, investments, etc.), business information, environmental risks to the entity and its counterparties, social risks and governance structure. Self-assessment tool – predefined questions and list of possible answers and ranges provided by Experian		
Transactional data	Score based on transactional data to measure spending in terms of electricity, fuel, water, etc.		
Business information	Data coming from business information providers (like Apis and ICAP). Financials, employees, location, business sector		Data coming from business information providers (like Apis and ICAP). Financials, employees, location, business sector
Climate Scenarios	When the relation to climate changes is estimated climate scenarios can be used to estimate medium- and long-term impact on the business of the client – its customers and suppliers. <b>Experian can provide climate impact scenarios from NiGem platform</b>		

# Global Score – Companies



# How Can Experian Help?



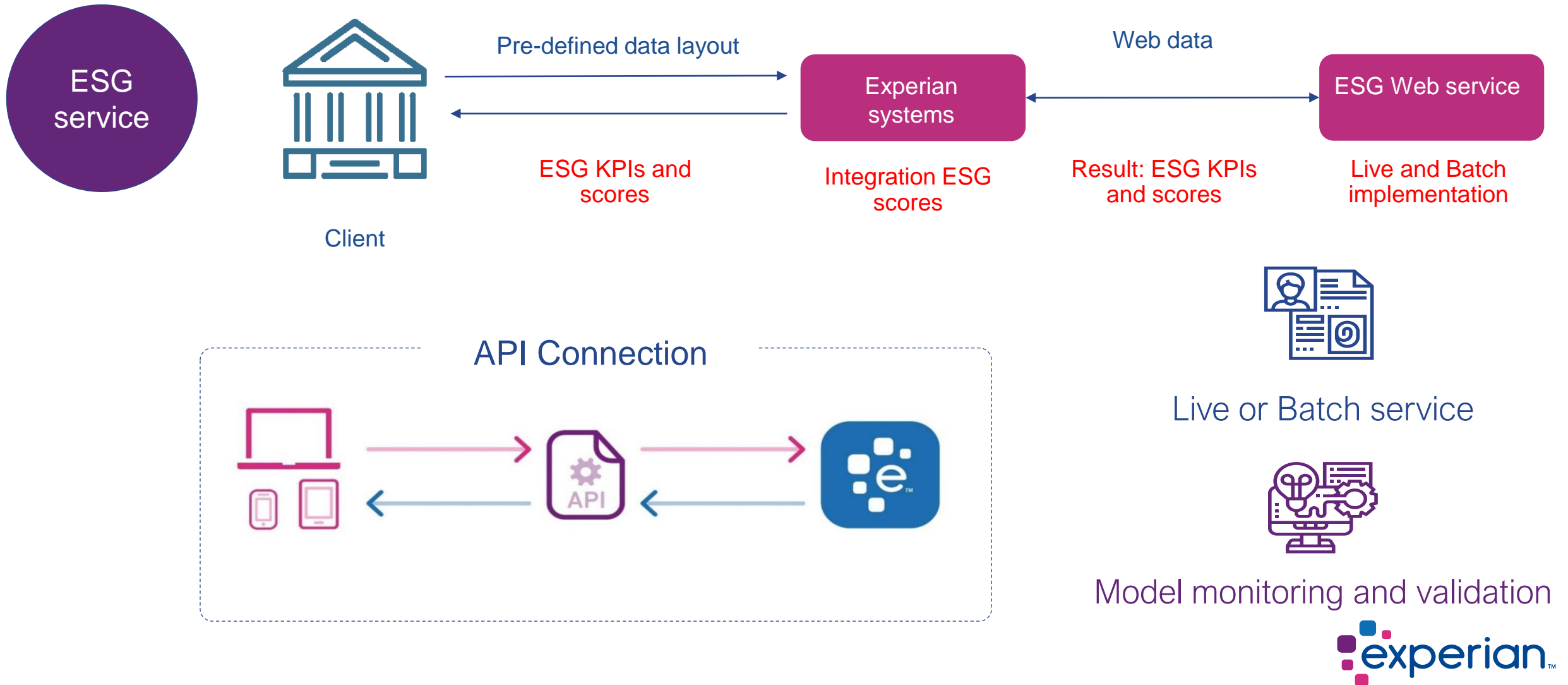
- ✓ **Advanced analytics to capture and analyze ESG data**
- ✓ **Web-based data** to capture timely information on ESG

- ✓ **Individual assessment of ESG risk of each exposure :**
  - Transparent, simple and can be linked to KPIs used in the organization / systems
  - Established methodology, using multiple criteria on each dimension of the ESG

- ✓ **Risk framework method**, sensitivity analyses to analyze dynamic impact of ESG :
  - Forecasts that account for ESG risks, including their feedback loops
  - Capacity to handle regional and sectorial analysis
  - Consultancy and data support to EBA's 2022 Climate Change Stress-Test

- ✓ **Integration of ESG metrics in business strategy, governance and risk management**
  - ESG integration into credit risk evaluation process and credit decisioning
  - Development and delivery of new generation Risk Management, Loan Origination and Monitoring models, EWS and triggers that are forward-looking and incorporate ESG impact

# Proposed Design



## Artificial Intelligence and Machine Learning regulations



**Leandro Guerra**

Head of Data Science and Analytics Platforms  
Experian EMEA





# Introduction

Artificial Intelligence and Machine Learning regulations

.01

Why **ML models** will become the new normal

.02

Why **Explainability** is the key to unlocking the ML potential

.03

**5 tips** for implementing ML with Explainability

# Explainability

The output of a statistical model is explainable when its internal behaviour can be directly understood by humans (interpretability) or when explanations (justifications) can be provided for the main factors that led to its output.

# Businesses see the **AI** potential

**66%**

of organisations state that adopting Advanced Analytics capabilities is a top business priorities over the next 12 months

**53%**

of businesses plan to engage with an external supplier for support with AI or Machine Learning in the next 12 or 24 months

**52%**

of businesses have increased their budget for Advanced Analytics for next 12 months

**66%**

of businesses believe Advanced Analytics, including AI and Machine Learning, are going to radically change the way they do business

The background image is a blurred photograph of a person holding a smartphone. In the foreground, a robotic hand is holding a credit card. The entire image has a purple tint. A dark purple rectangular box is overlaid on the left side, containing the text.

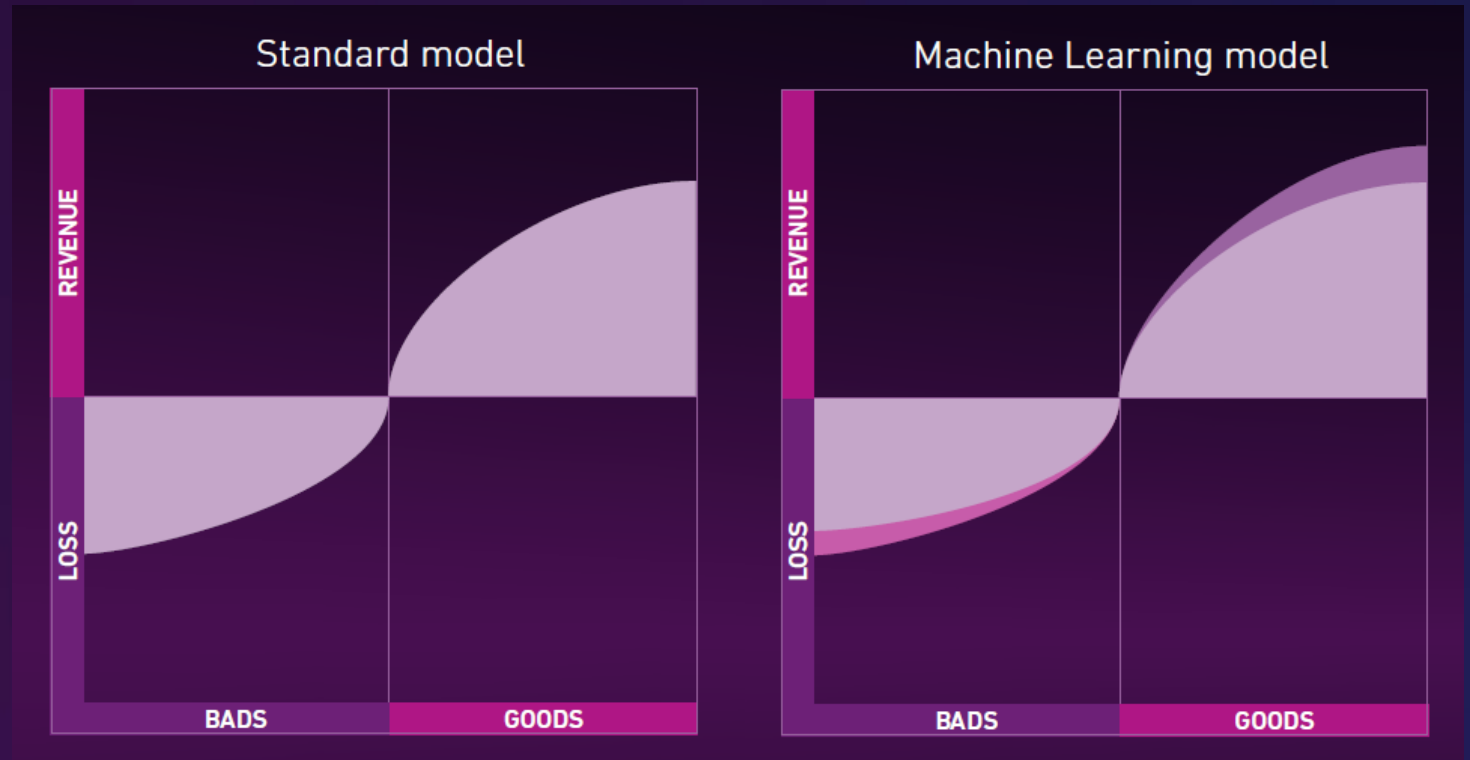
# .01

Why **ML models** will become the new normal



The more predictive and accurate the model the more profit realised

ML can deliver significant model performance improvement which translates to improved acceptance and reduced bad debt.



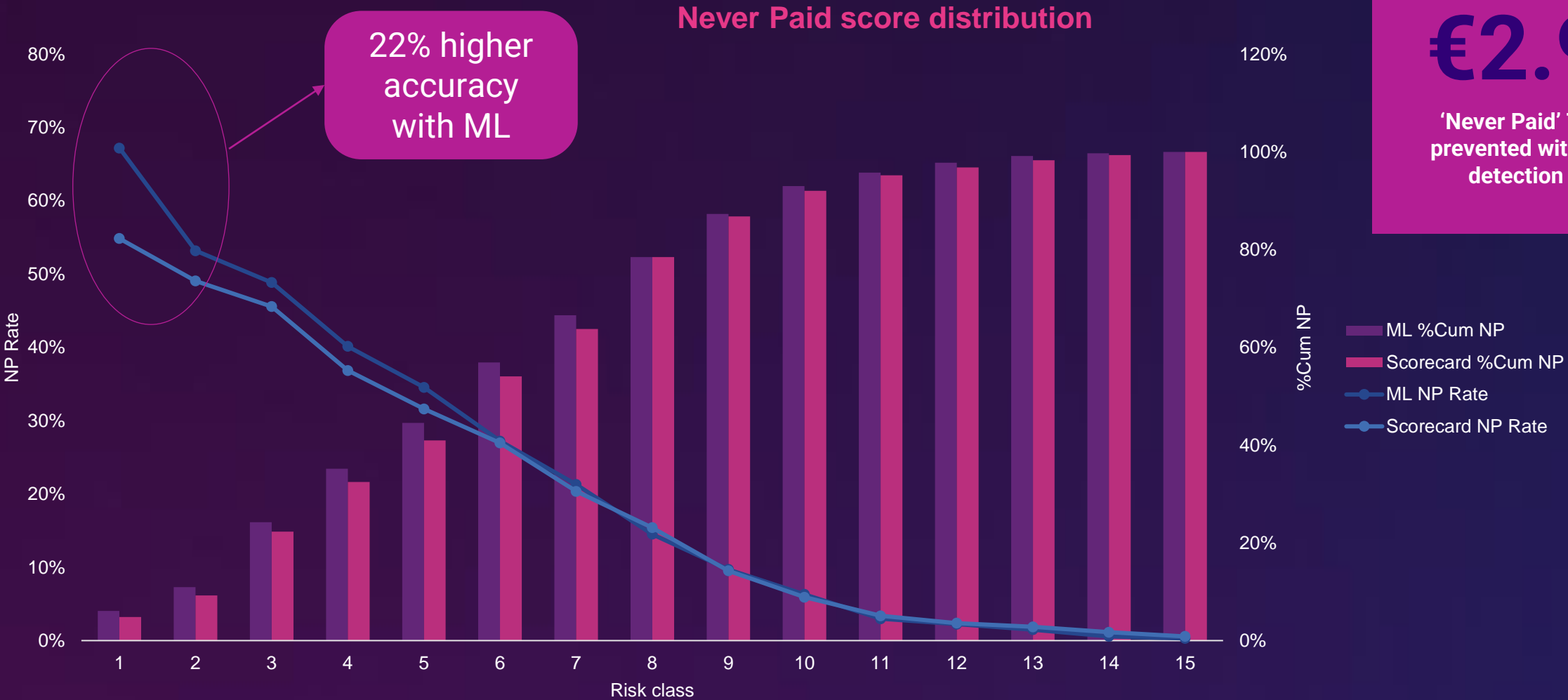
ML models allows you to more accurately assess “goods” and “bads” whilst lowering operational costs.

- Reduced bad debt
- Improved acceptance



# The ML effect: ML fraud model helped Telco client prevent fraud loss with increased accuracy

Combatting first payment default

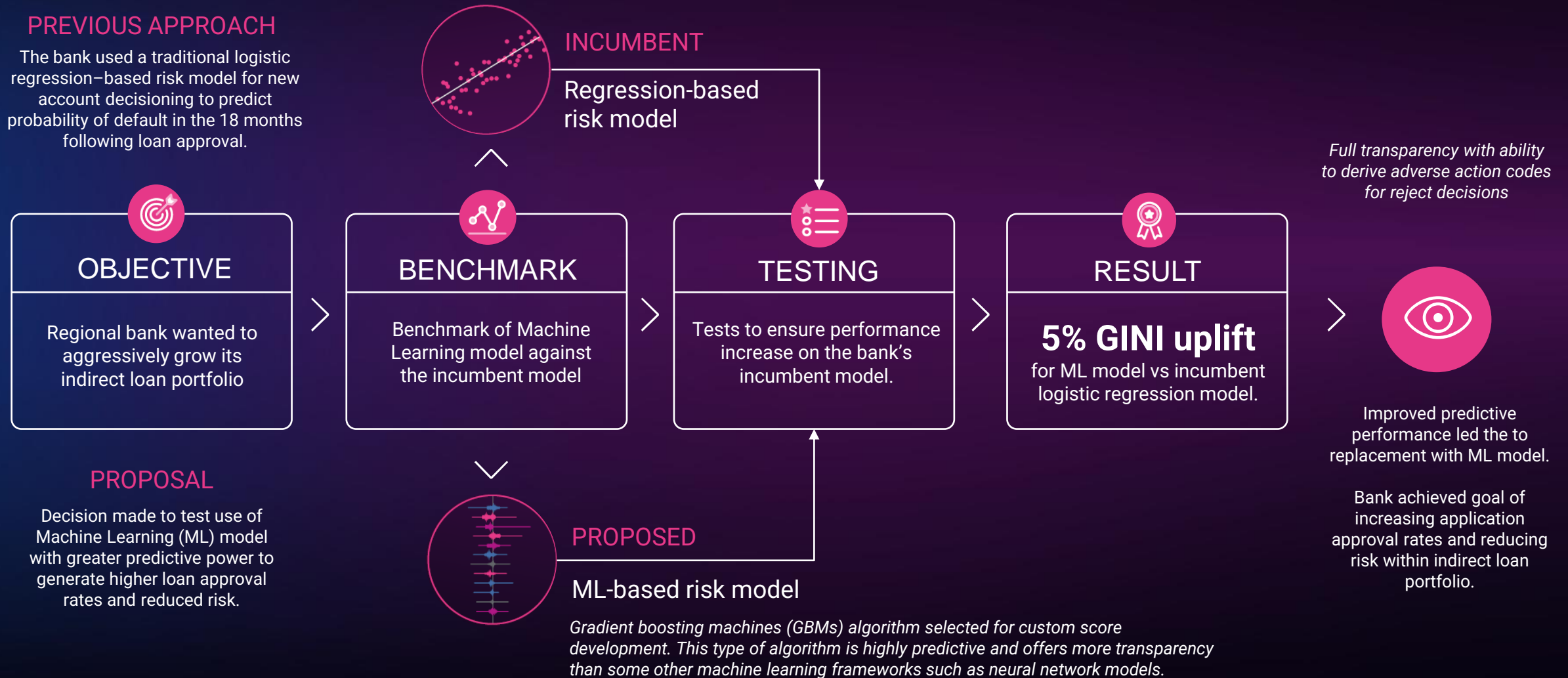


€2.9M

'Never Paid' Total Loss prevented with ML Fraud detection models

# ML in risk: Development of a custom credit risk score for a bank using Machine Learning

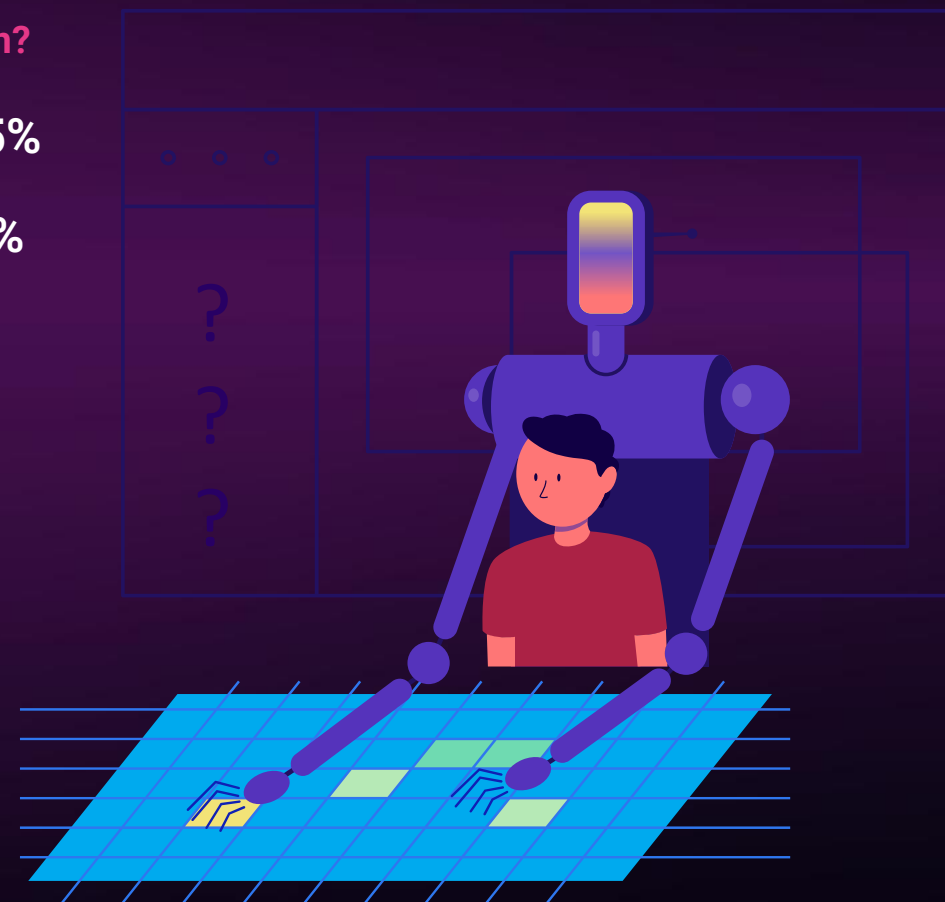
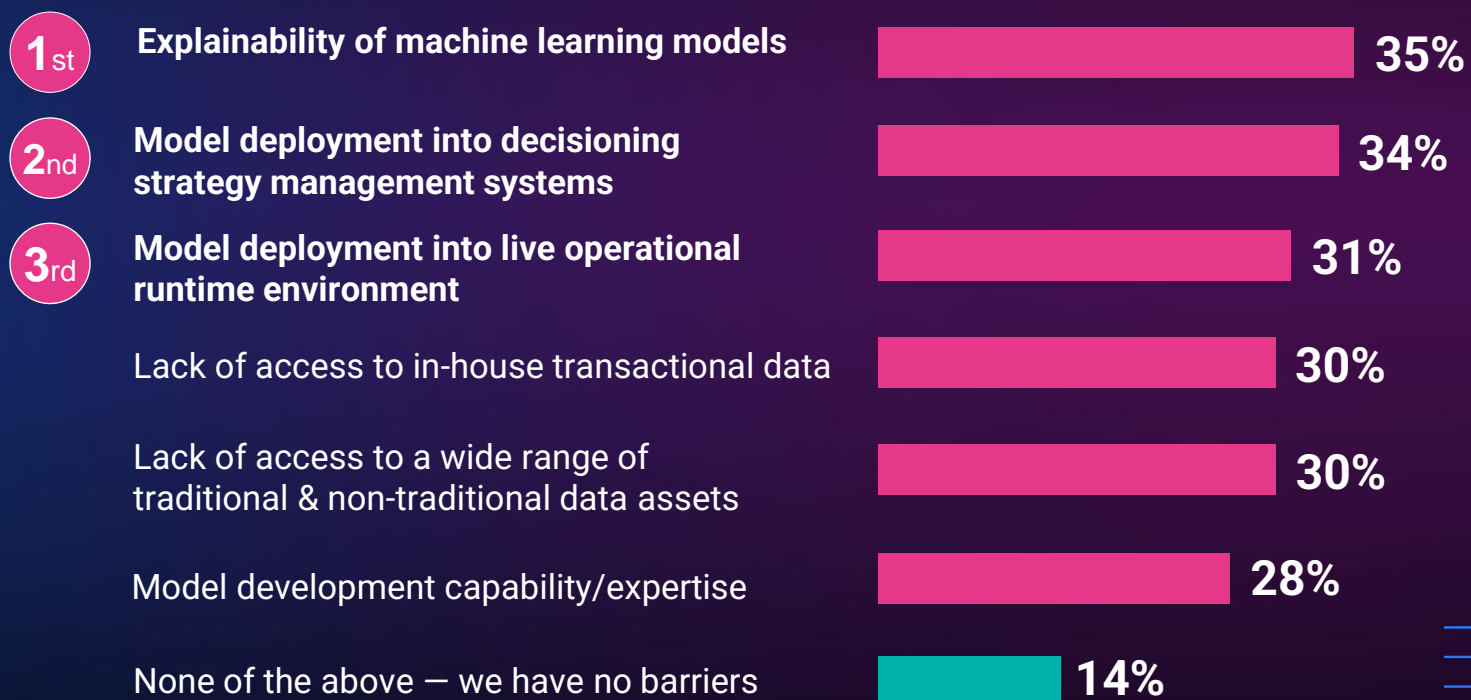
Business moved from a regression model to an ML-based model to increase acceptance and grow customer acquisition



# But to effectively implement ML you must provide explainability... and lack of explainability is the single biggest barrier to ML adoption

Understanding why a model has produced a certain output is a critical factor when optimising credit risk management

## What are the main barriers to adopting Machine Learning in your organisation?



# .02

Why **Explainability** is the key  
to unlocking the ML potential





# Why Explainability?

**To Justify**

*Why was this loan rejected?*

**To Control**

*Why was this loan accepted?*

**To Improve**

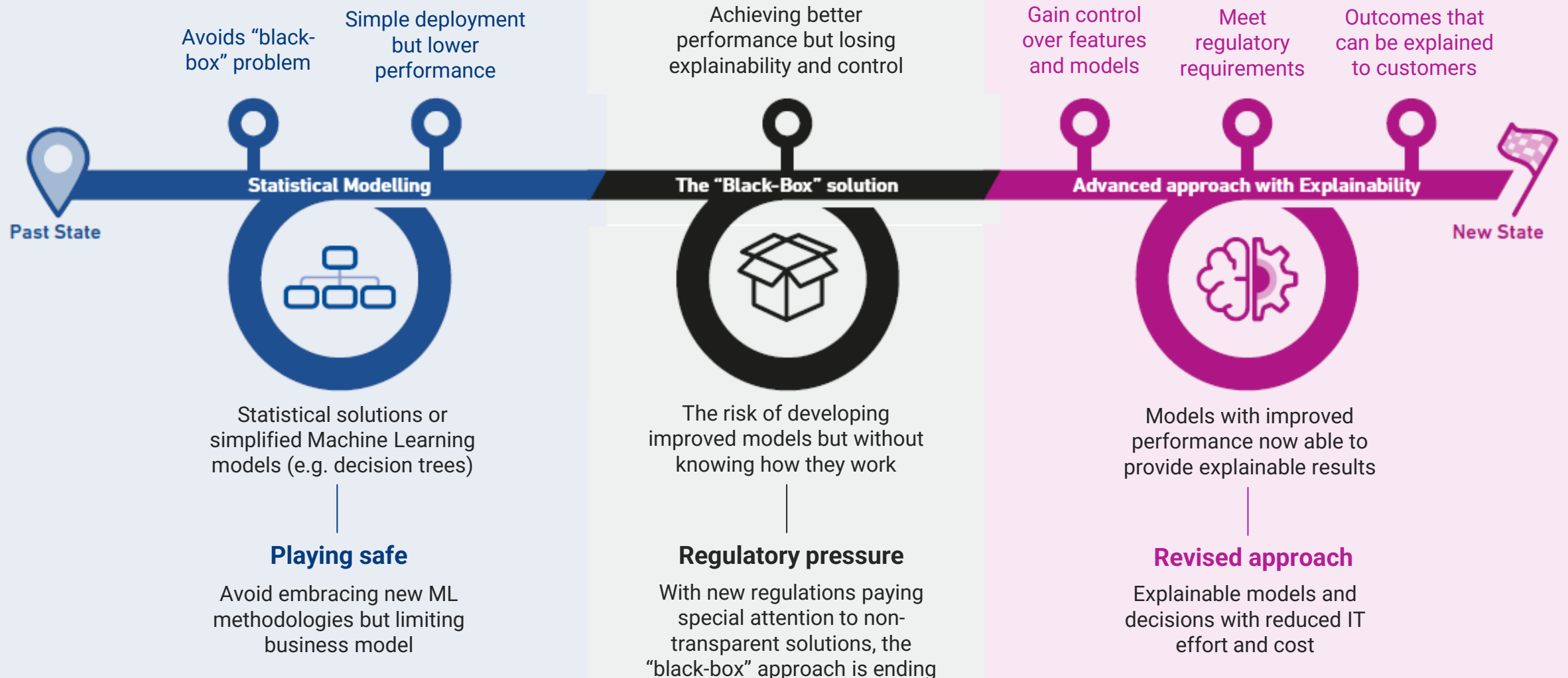
*How can these variables be adjusted  
to improve approvals or rejections?*

**Discover**



# We've progressed to a point where businesses can get the uplift from complex ML but now with the ability to provide explanation of outcome

## Breaking out of the black box



# SHAP value explained

Imagine  
two things



## A game

The “game” is  
reproducing the  
outcome of the model

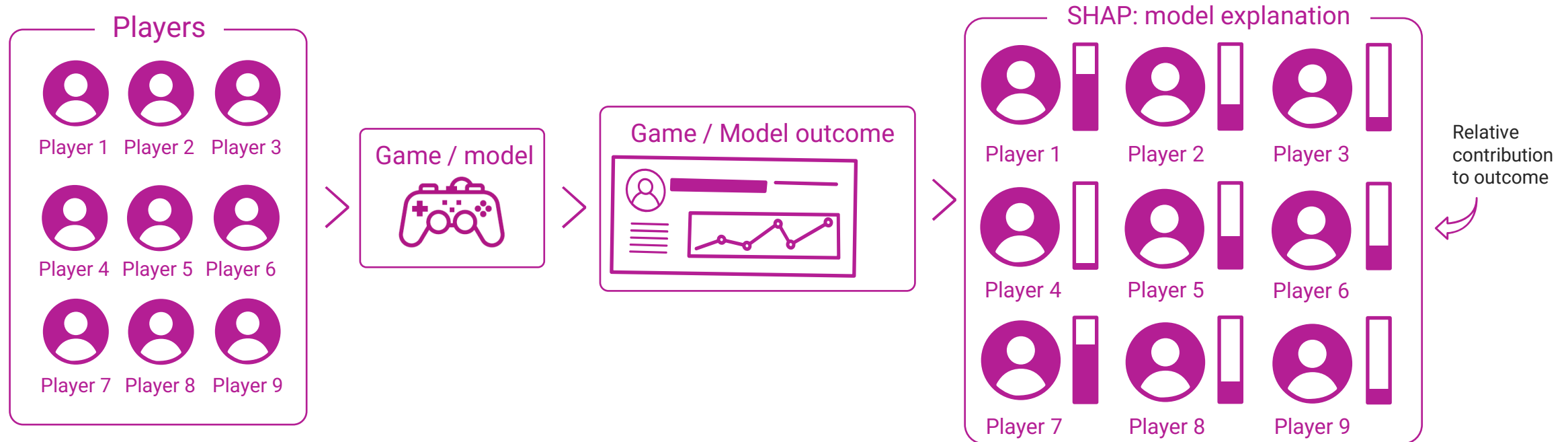


## The players

The “players” are the  
features included in  
the model.



Imagine now  
that we have a  
predictive model



What Shapley does is quantify the contribution that each player brings to the game.

**How does this apply to machine learning explainability?** SHAP does the same thing for the model by quantifying the contribution that each feature brings to the prediction made by the model.

This allows us to understand the features that contributed most and least to the result. From that we take a confidence level and understand the importance of the individual features that enables the decisions to be **explained** and **interpreted**.





.03

5 tips for implementing ML  
with Explainability



## 5 TIPS FOR IMPLEMENTING ML WITH EXPLAINABILITY

- 1 Improve outcomes for borrowers:** ML allows for individualised credit scores that better assess borrowers' creditworthiness
- 2 Reduce the cost of lending:** By increasing efficiency in risk management, ML models can lower the costs of lending
- 3 Better decision-making:** ML helps provide objective, consistent, decisions through analysis of borrowers' relevant credit data.
- 4 Support financial inclusion:** ML supports access to credit for certain groups that may otherwise have limited access
- 5 Enhance accuracy:** ML is more sensitive to real-time indicators of creditworthiness, such as current level of income, and forecasted earnings.



# Experian has developed a standardised framework for developing and deploying ML models with the required level of explainability

1 Business Understanding

2 Data Understanding

3 Data Preparation

50% faster

Experian has improved methodologies to bring 50% faster time to value on the traditional modelling steps.

Enriched process

The process has been further enriched with a standardised and innovative framework for the required level of explainability.

4 Modelling

5 Evaluation

6 Deployment & Production

7 Monitoring and Validation

## Machine Learning Explainability

1 **Relative Feature Importance** ...> By calculating scores for each feature, you can determine which features attribute the most to the predictive power of your model.

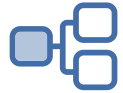
2 **Partial Dependencies** ...> A partial dependence plot can show whether the relationship between the target and a feature is linear, monotonic or more complex.

3 **SHAP Values** ...> SHAP Values shows the average expected marginal contribution of one attribute after all possible combinations have been considered.





# Working with Experian: you can now ingest, map and deploy ML models without the need to invest heavily in data scientists and developers



Our Explainability plugin is compatible with tree based ML models imported in PMML (Predictive Model Markup Language) such as Random Forest and Gradient Boost.



The PMML model and training data is imported into the plugin offline.



Before production we work with you to verify that all explanations support regulatory compliance.



Explanations are produced in the form of variable importance values which are automatically added to the model and can be easily converted to reason codes.



This outcome data enables you to continuously improve your ML decision logic – enhancing your decision strategies and customer outcomes.

# EXPERIAN learningDAY<sub>2022</sub>

Thank you



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