

# Customer centricity leveraging AI

Ricardo Chaves

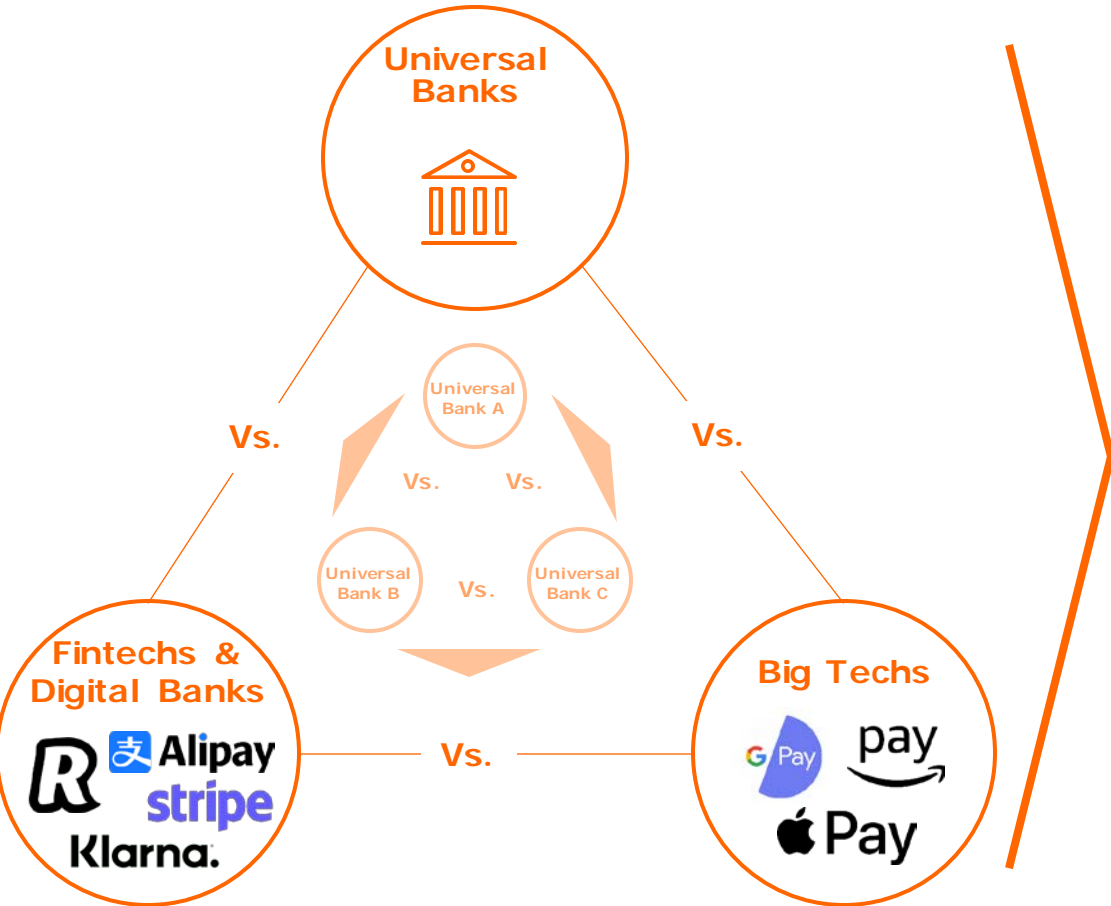
CEIA

2 1 0 9 2 0 2 3

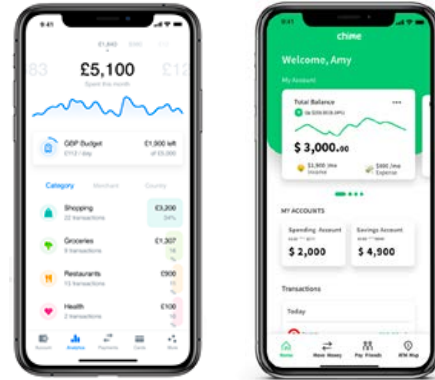
# What does it mean to be a universal bank today?

- Universal customers
- Omni-channel
- Multi-segment

# New competitive landscape with different types of players



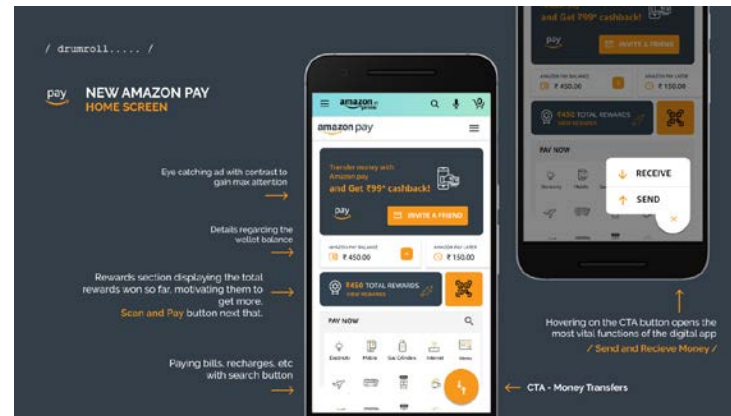
## Constantly challenged & reshaped UX



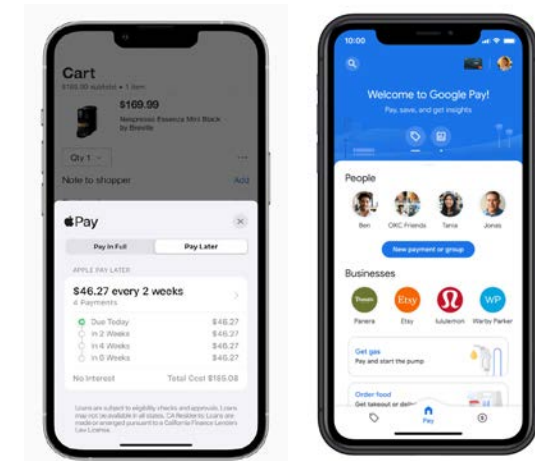
## Product replacement for APIs



## AI based rewards systems by big techs



## Embedded finance in OS



# What is more important: to be *data rich* or *data driven*?

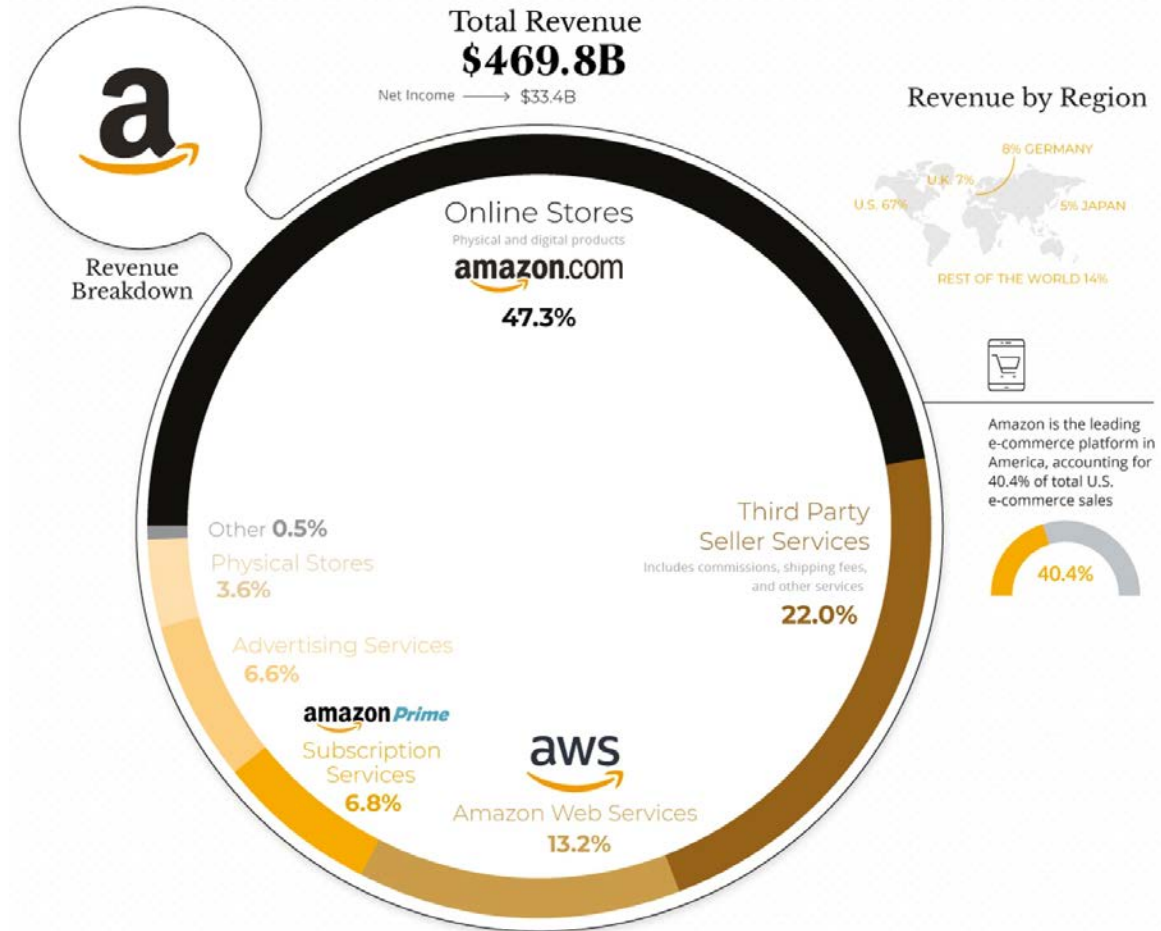
Customers who bought this...

## 1998

- Amazon announces intent to diversify from books

## 2005

- 44% of sales outside USA
- Launch of Amazon Prime
- 70% of sales in media
- 26% of sales in electronics
- >40% of sales in Marketplace from 3rd party sellers



- In 2000 who had better quality and scope of data about the customers needs: a bank or Amazon?
- And today?

# AI makes it possible to reinvent the way customers relate and interact with the bank



# To deliver a full transformation of a bank through AI it is key to have a well dimensioned and multidisciplinary team to ensure impact

Moving from:



To:



Business Translators

Data Scientists

Data Engineers

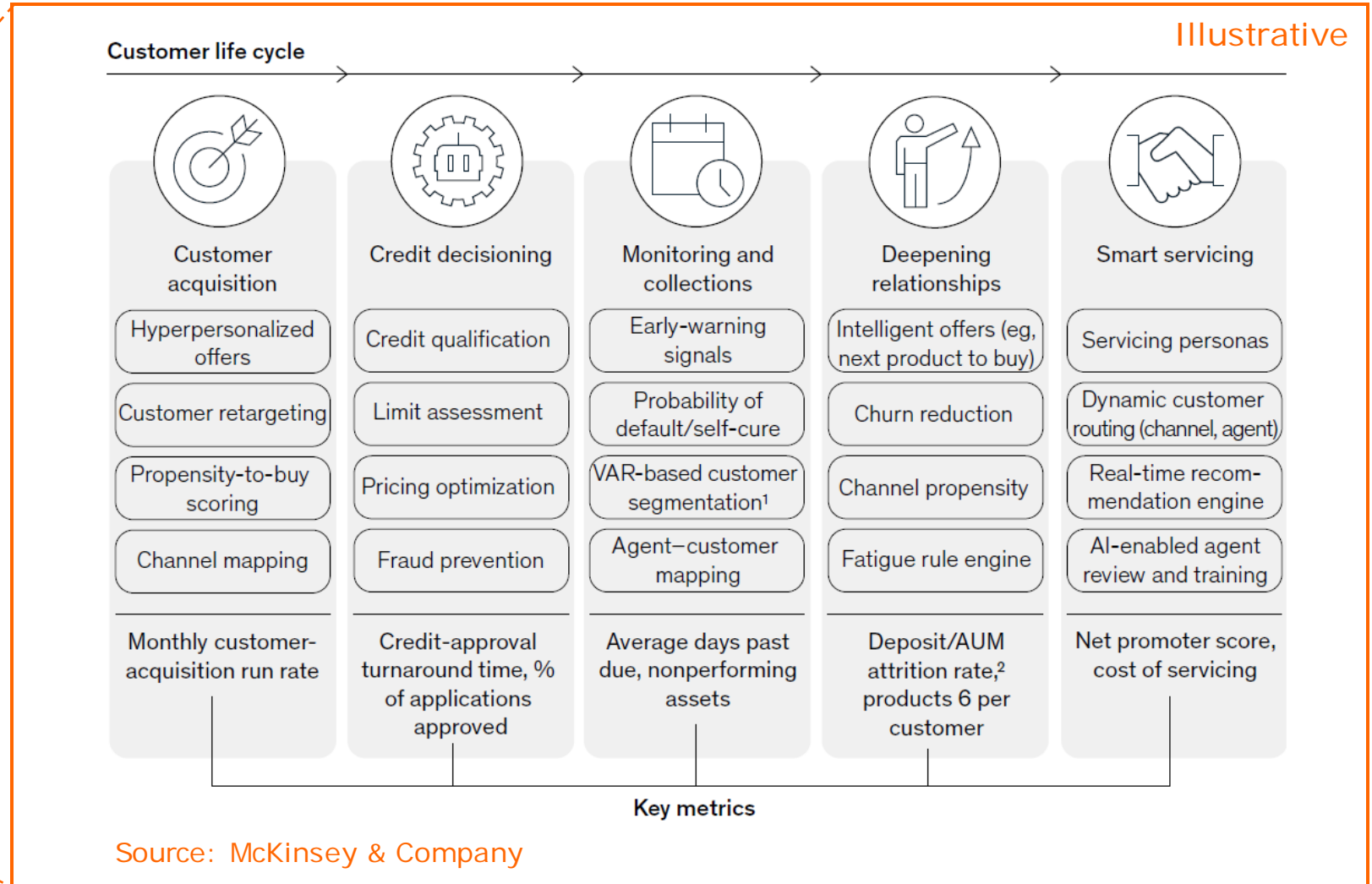
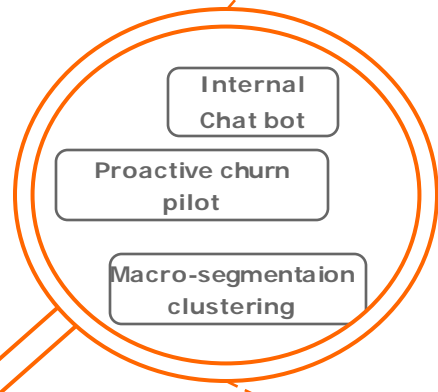


Dev. Ops

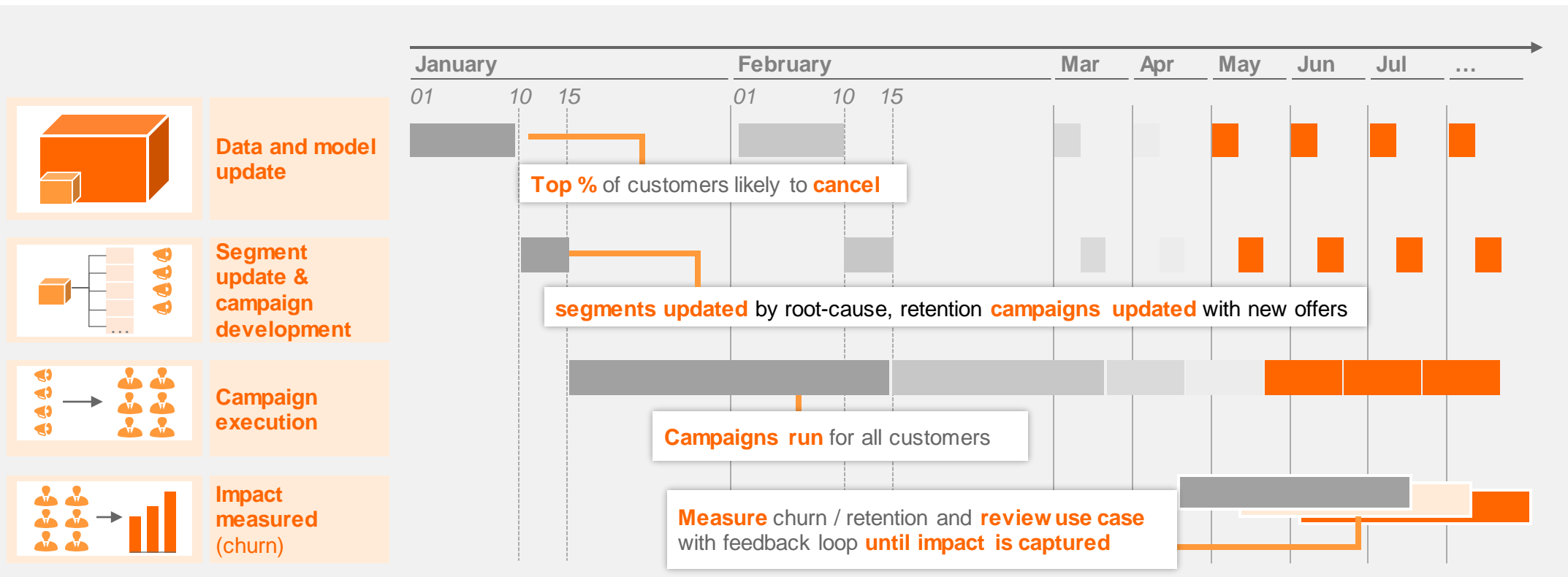
Product Owners

ML Engineers

# AI First: to achieve impact with AI, banks must move from “here and there” use cases to set up a full fledge portfolio of AI driven use cases



# From AI to impact: to ensure E2E business transformation the "Use Case" must be taken as the only acceptable "currency" of the transformation plan



**Use Case:** targeted application of AI to a specific business challenge, resulting in one or more measurable outcomes



# Prioritize a data architecture capable of sustaining the envisaged AI driven bank



From "On Prem" and *ad hoc*...



...To hybrid solutions that allow automation



Consumption

Management and regulation info

Business apps

Advanced Analytics and AI

Management and regulation info

Business intelligence

Front ends (e.g. App, site) / orchestrators (e.g. salesforce, Adobe, etc.)

Auto consumption

Advanced Analytics

Appification



Processing and storing

Centralized data pool

Ad hoc data marts

Centralized data pool

 Data lake

Analytics → Use case 1 ... Use case N

Universal → Domain 1 ... Domain N

Raw → Source 1 ... Source N



Sources and ingestion

Centralized batch

Ad hoc batch

Structured data / Data warehouse

Other data

Centralized batch

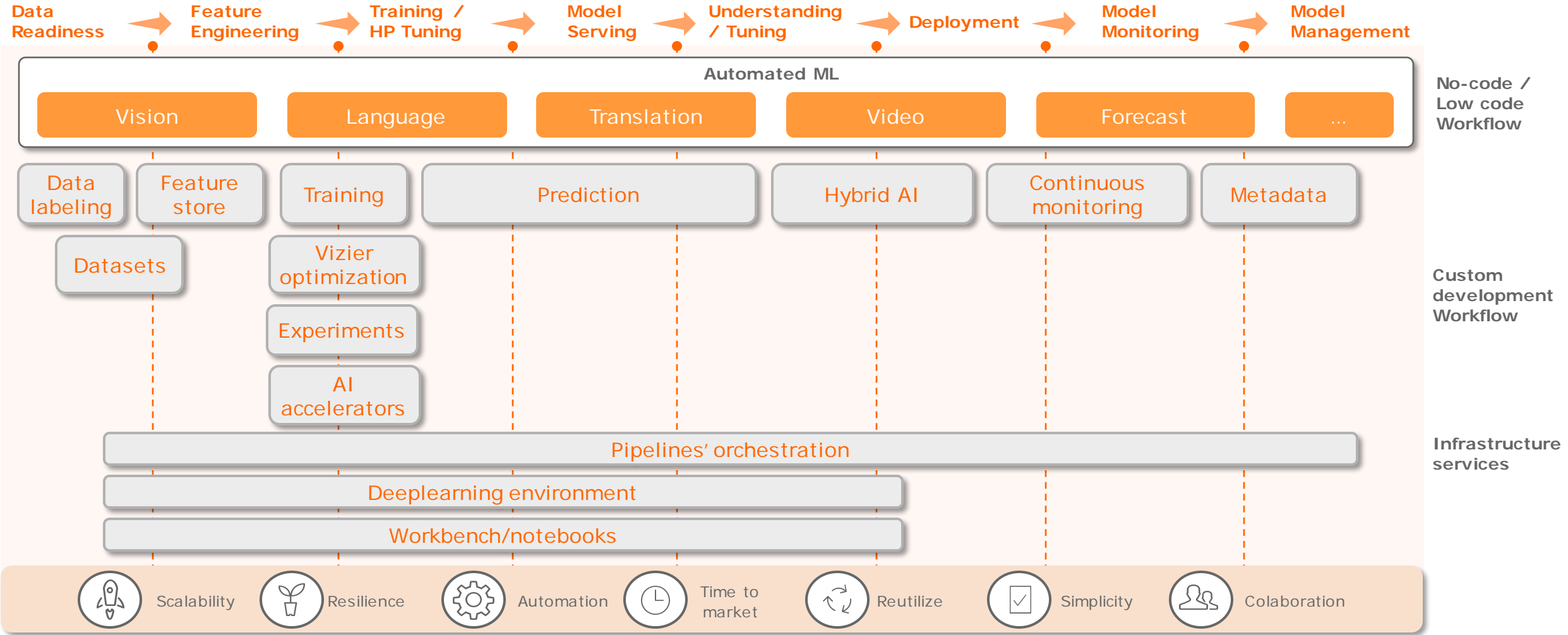
Batch

Real time

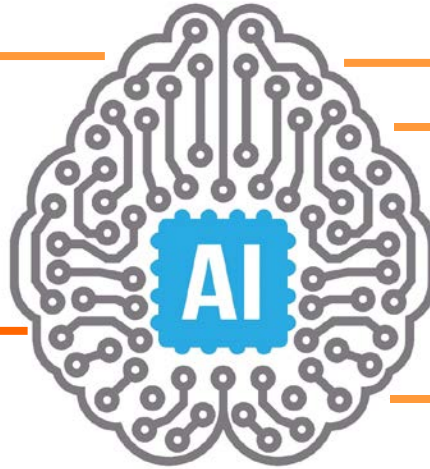
Operational data

Operational data

# Focus on ready to scale infrastructure and robust E2E processes (several state of the art cloud solutions available)



# BPI's AI strategy unfolds across 5 axis



## 1 Personalize experience and maximize engagement

- Automate interactions with customers with predictive analytics of needs, behaviors, context & lifecycle
- Align value proposition (product & journeys) with underlying segment (needs and behaviors)

## 2 Increase efficiency and accuracy of risk management

- Improve risk management through controlled use of ML (financial, operational)
- Improve efficiency and accuracy in compliance
- Upgrade fraud management to AI first

## 3 Improve efficiency and customer satisfaction in key processes

- Automate "document heavy processes" with document AI
- Improve forecasting and resource allocation
- Promote "smart" automation by adding AI layers to robotics

## 4 Bring generative AI to full impact across key areas

- Leverage generative AI to promote automation, acceleration and augmentation of selected use cases (marketing & sales, operations, dev ops and legal, risk & compliance)

## 5 Provide data insights service

- Develop Advanced Analytics and Customer Insights service lines for areas with analytical synergies (e.g. Marketing, Quality Control, ...)

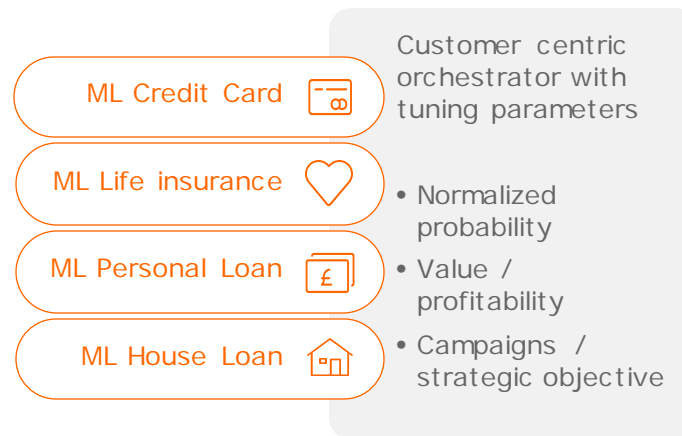
# AI personalization architecture needs to follow a coherent archetype considering existing infrastructure and competences

## Recommendation System



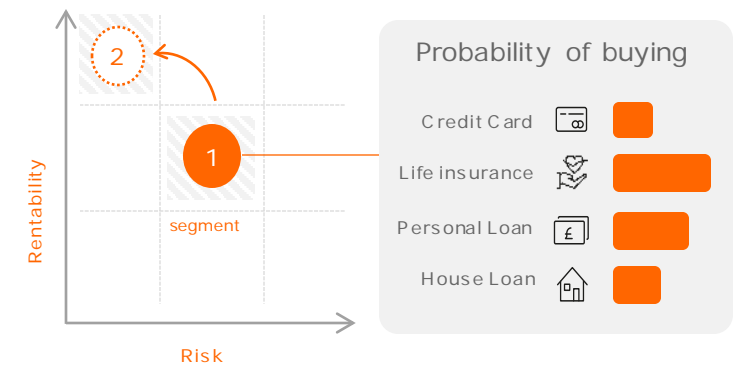
- + Easy to implement
- Unlinked to real probability

## ML Propensity Orchestrator



- + Client centric prioritisation normalized by sale probability
- Heavy on ML skills and ML Ops maintenance

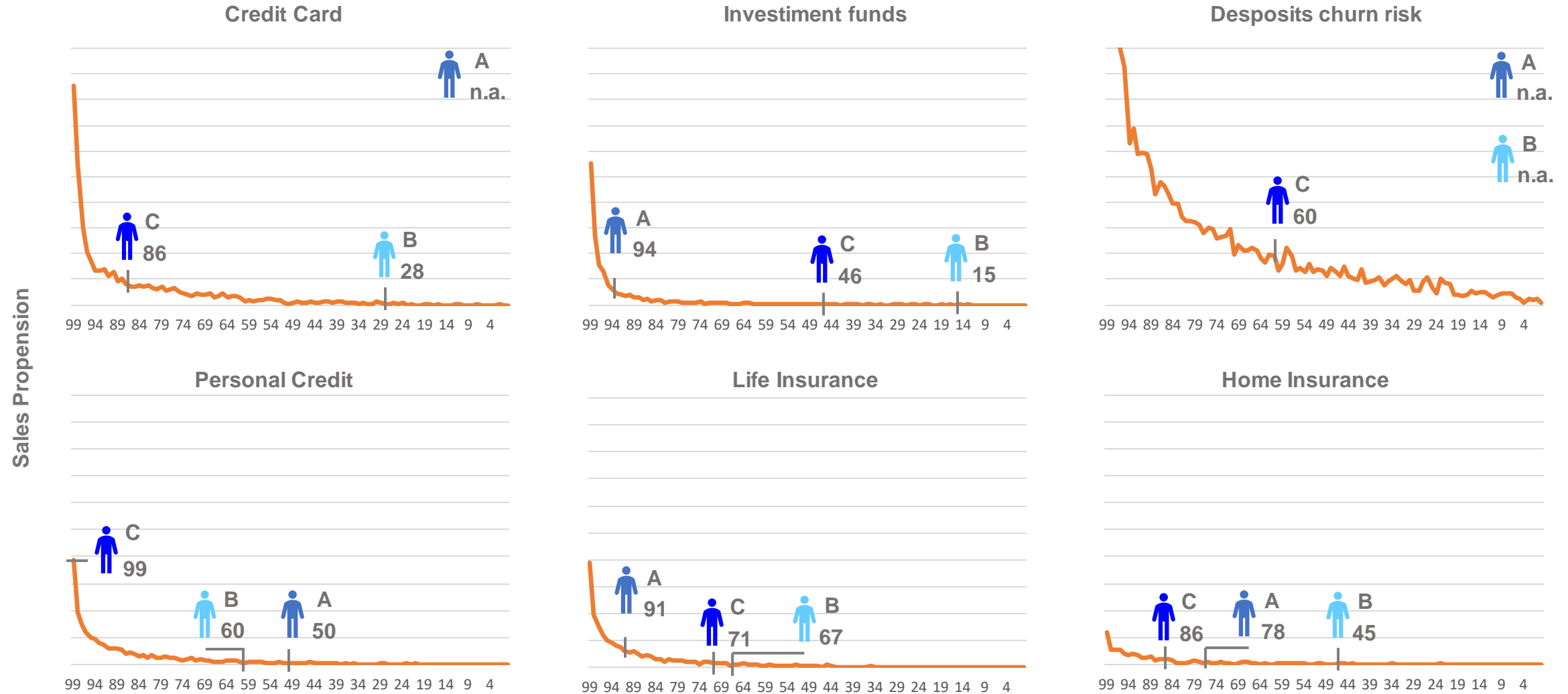
## Micro Segmentation



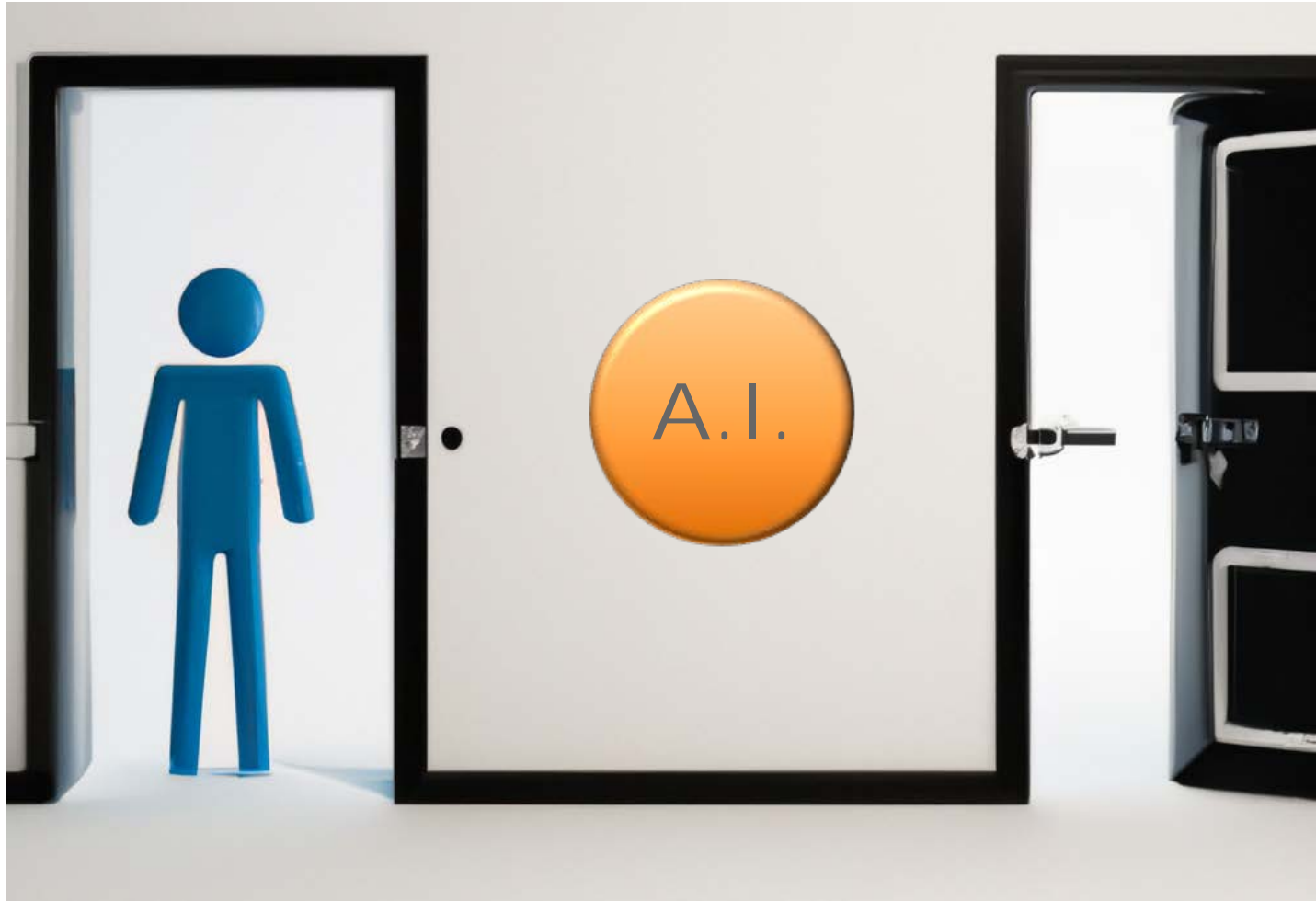
- + Increases customer management levers (actions, products, segment transition)
- Complex to model requiring high maturity on data structure and AI modelling

Complexity

# AI builds an unique "propensity" portrait per customer allowing for a fully customizable approach

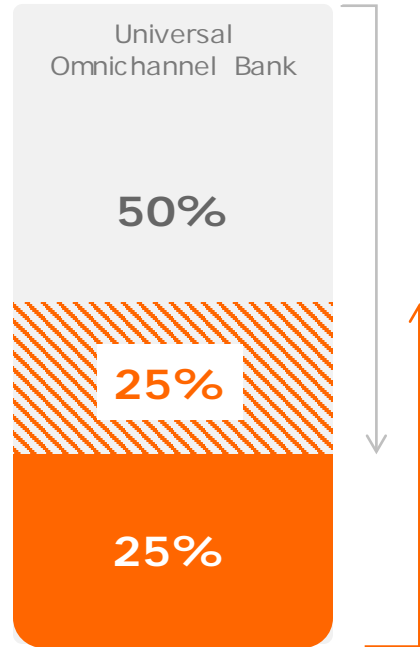


Pushing the AI button will move the bank from every customer being a stick figure to become real people: different and unique



# Capturing impact of personalization in a universal bank depends on an effective omnichannel deployment

Sales distribution per type of Bank



Digital Channels

Other Channels



## Digital Journey

- Engagement
- Advertisement
- Sales

## Proactive sales approach

- Client centric contact prioritization
- Personalized sales approach

# It is important to prioritize according to calculated probabilities and prediction windows

Illustrative

		Prediction window	
		Short (1 to 3 months)	Long (+3 months)
Sales Probability	High	Personal Loan	House Loan
	Medium	Specific insurances	Retirement Savings Account

## Priority

Leads to be contacted urgently given increased probability, amount of data, number of positives, model maturity and short prediction window

## Exploring/Radar

Leads to keep under watch due to 1) increased probability, amount of data, number of positives, model maturity or 2) short prediction window

- **Long journeys** (mild awareness) vs **push on contextual sales opportunities** (short-term)
- **Human** (better for closing with hybrid customers) vs **digital** journeys (better for discovery & exploration or specific digitized segments)

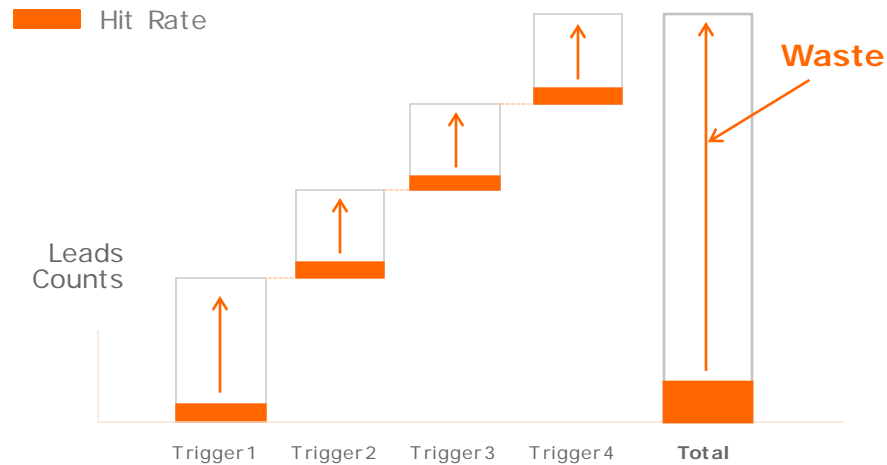


# Machine Learning based customer interactions are easily prioritized and thus improve efficiency in allocation of contacts

## From a trigger based approach...

Highly inefficient and overwhelming customers with undesired contacts and irrelevant offers

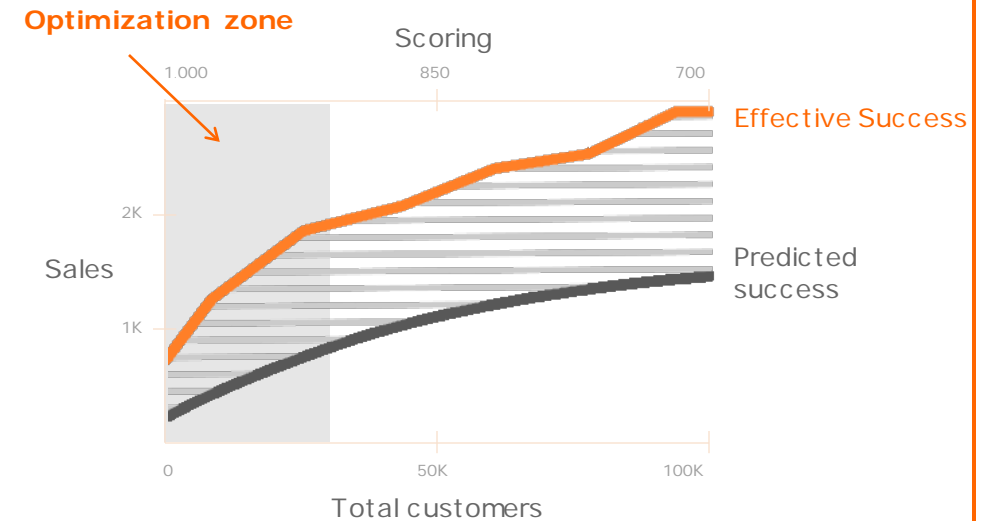
- Hard to prioritize
- Lots of "noise" with customers



## To an AI based approach (ML models + orchestrator)

Customers prioritized by propensity to buy or engage and contact/engagement only above defined interest threshold

- Less, but better contacts
- Higher conversion rates
- Sales effectiveness predictable



# Customers are prioritized by propensity along with “explainability” based on individual underlying drivers translating into “unique” conversation

Call center operator



## Approach for Customer 1

Score

850

Explainability

- High amount of payments done with credit card in recent days
- Annual credit card *plafond*
- Significant percentage of *plafond* usage

Script

“Did you know many of those who frequently used credit card opted to acquire personal loans instead? It allows you to have a controlled installment at lower interest rates.”

## Approach for Customer 2

Score

850

Explainability

- Considerable number of credit simulations within last months
- Frequently initiates credit proposals in the last months

Script

“Considering the interactions you’ve had lately searching for personal loans, we would be delighted to better understand your needs to be able to address them accordingly.”

## Approach for Customer 3

Score

750

Explainability

- Increased volume in transactions in previous months
- Regular withdrawals
- Average annual insurance expenses

Script

“Considering the present economic context it is normal that household expenses arise. In that sense, we would like to offer you a way being able to pay those bills in smaller installments.”

### Key challenges:

- Promote proactive choreography adoption
- Learn how to use scorings and explainability to generate contextual sales script
- Launch adoption forcing devices

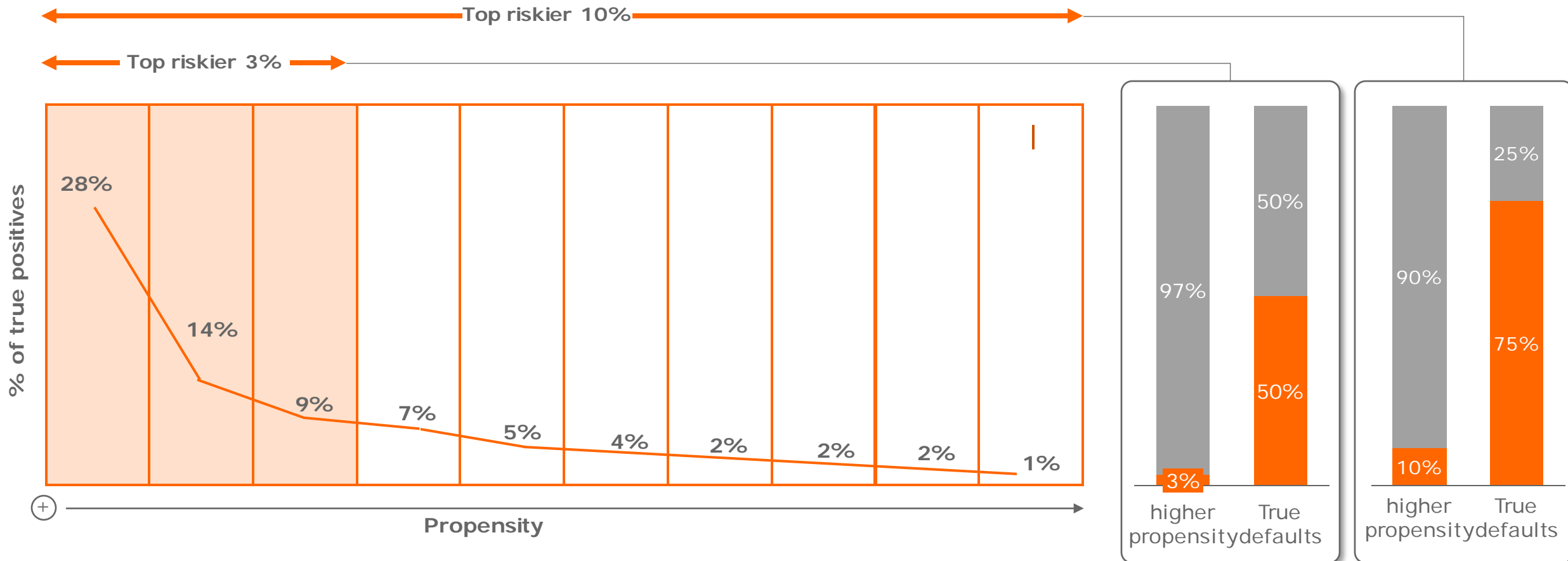
# A more contextual approach based on customer propensity is key to achieve higher quality engagement and increased involvement



# A predictive model currently under test to support an early warning system for the SME segment is able to anticipate 50% of true positives in top 3% of propensity

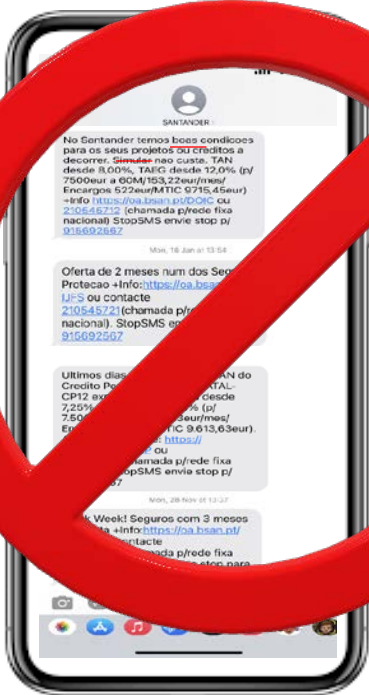
Early warning system developed with machine learning to predict default in next 180 days

Model currently under validation and not yet industrialized



# To personalize focus on the customer is key: to be closer to the customers needs and context is what it means to be more "humane"

"Are you sure you're not interested in any of the products we've been showing you lately on your phone? We currently have a campaign but it will end soon"



Is it possible that they guessed what I was thinking? It was right on time...

I currently have 3 savings accounts and they keep asking if I need credit... Do they really know who I am?

"We see that you've often been using your credit card often and we imagine you could improve your expenditure planning. For that reason, we believe it could be valuable for you to acquire a personal loan in which you could unify all your expenses in a single instalment with improved financial conditions."



"It's the perfect timing! I was in fact wondering whether there were better solutions for me ..."



"Please accept the contract in App and approval will take place immediately!"

"Do not forget to fulfill the form we sent you last week. In order to proceed, we'll need you to bring it signed to our branch!"



*Grupo*  CaixaBank

© BANCO BPI, S.A.  
Sede: Avenida da Boavista, 1117, 4100-129, Porto, Portugal  
Capital Social: € 1.293.063.324,98  
Pessoa Colectiva e Matrícula na Conservatória do  
Registo Comercial do Porto sob o n.º 501 214 534