

ARTIFICIAL INTELLIGENCE IN THE FINANCIAL INDUSTRY

POSSIBLE BREAKTHROUGHS IN
THE NEXT YEARS TO COME

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STATE OF TODAY

Level of AI adaptation among banks in different use cases

2022

2021

01

Fraud Detection:
Transactions and Payments

31%

10%

02

Conversational AI

28%

6%

03

Algorithmic Trading

27%

13%

04

Fraud Detection:
AML and KYC

23%

7%

05

Recommendation Systems
(next-best-action)

23%

10%

06

Portfolio Optimization

31%

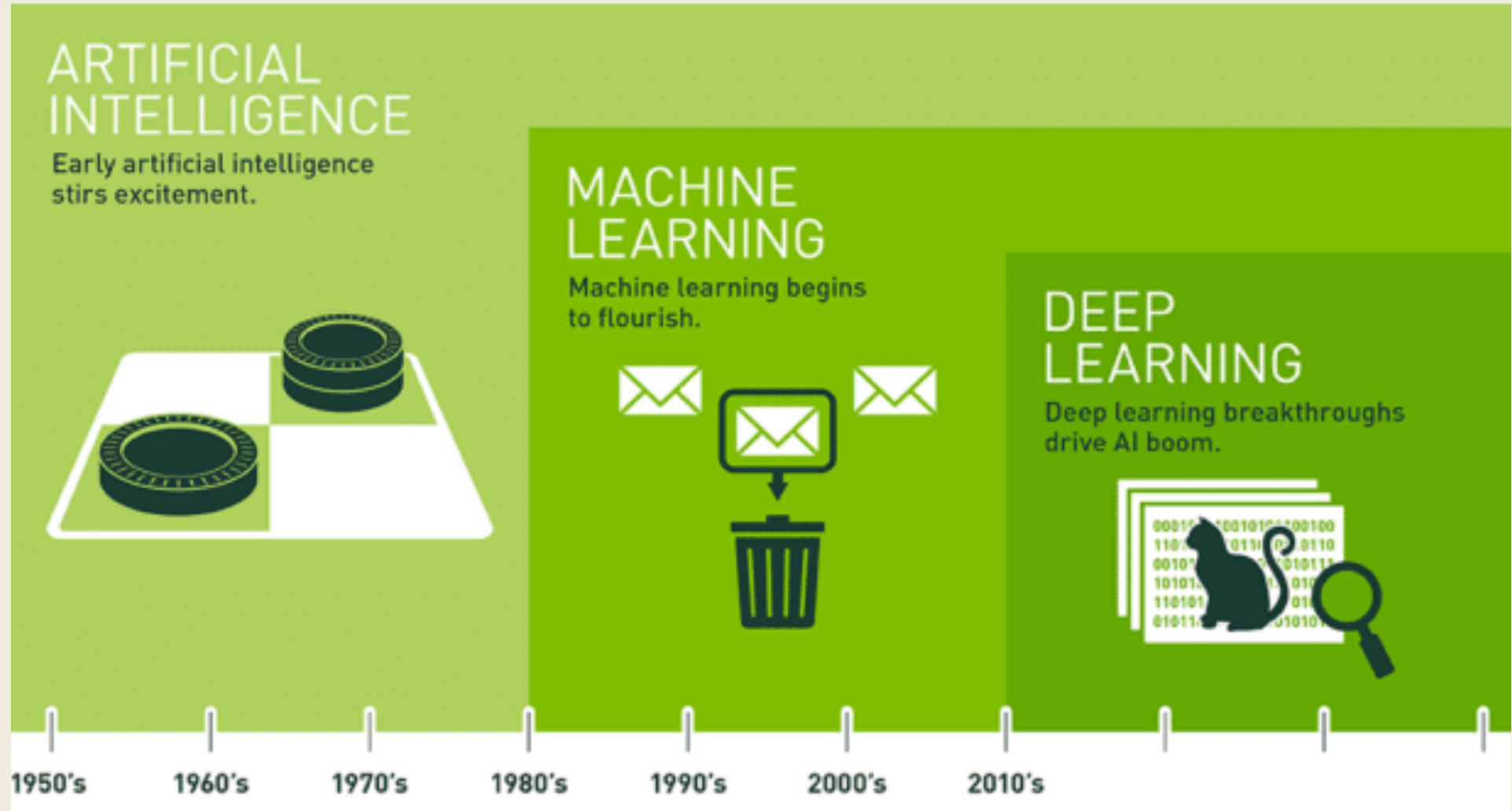
10%

Source: Nvidia

CONTINUOUS DEVELOPMENT OF AI

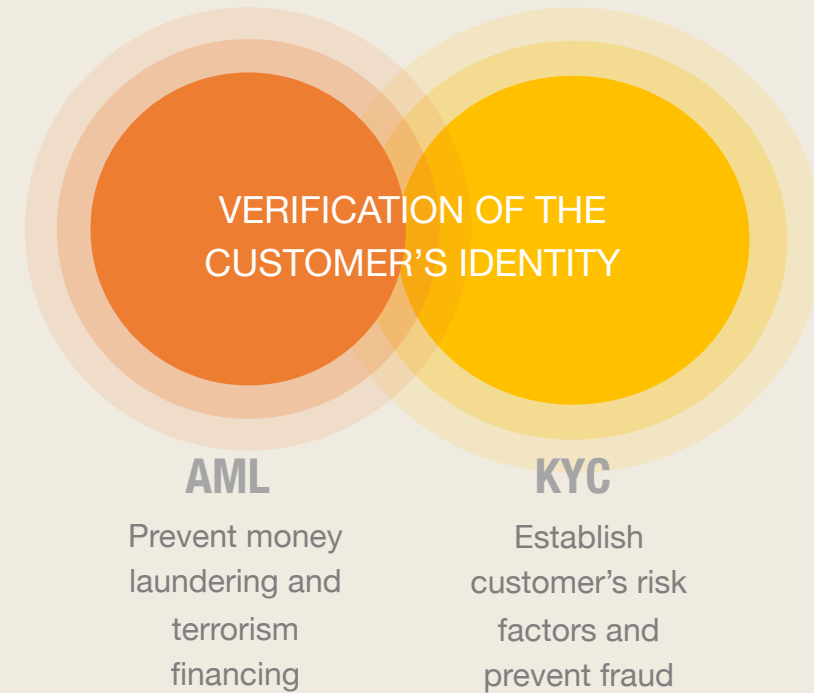
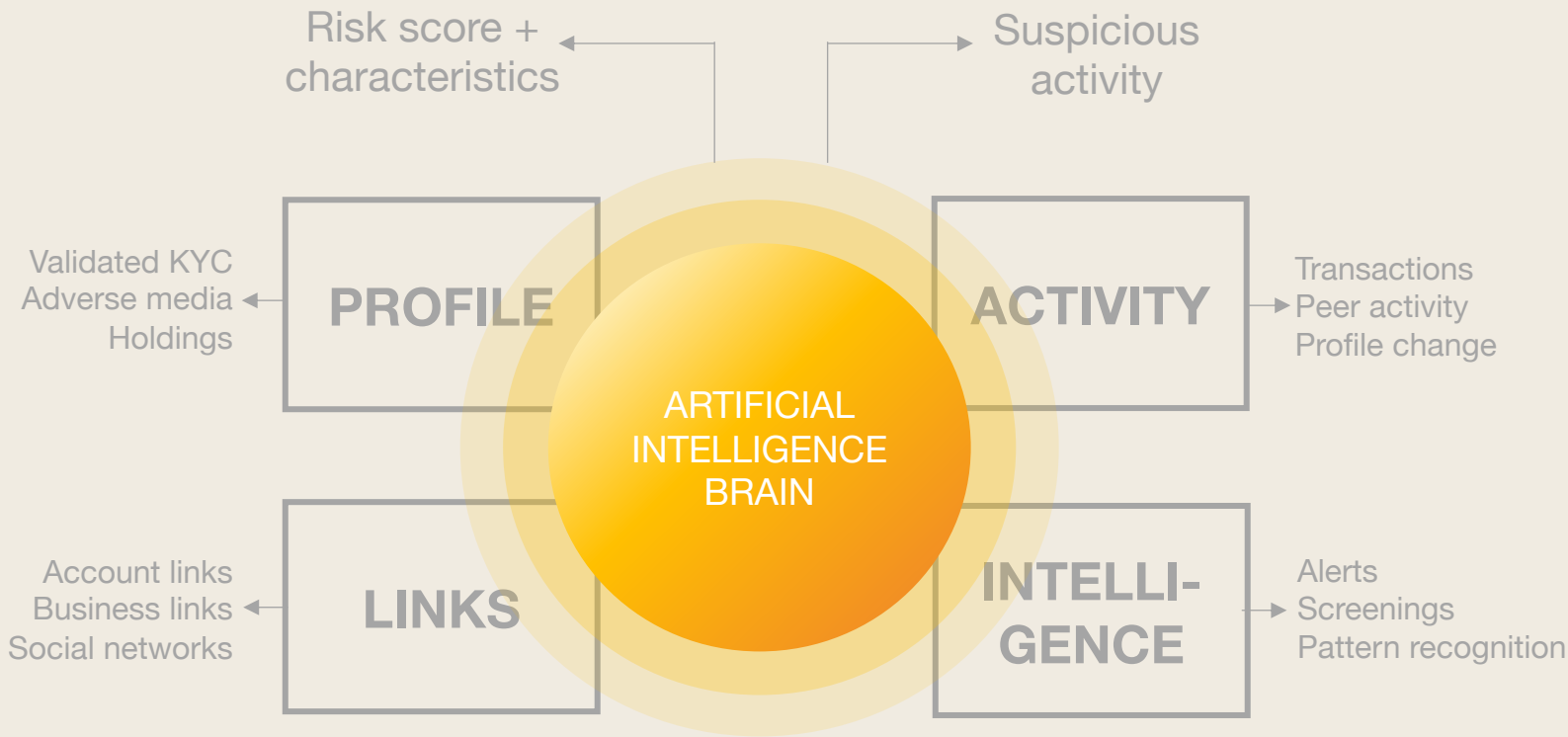
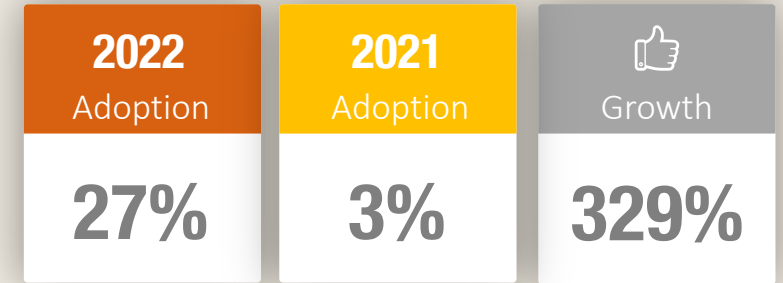
Evolution

Since early optimism in the 50's, smaller subsets of AI - first machine learning, then deep learning, a subset of machine learning – have created ever larger disruptions

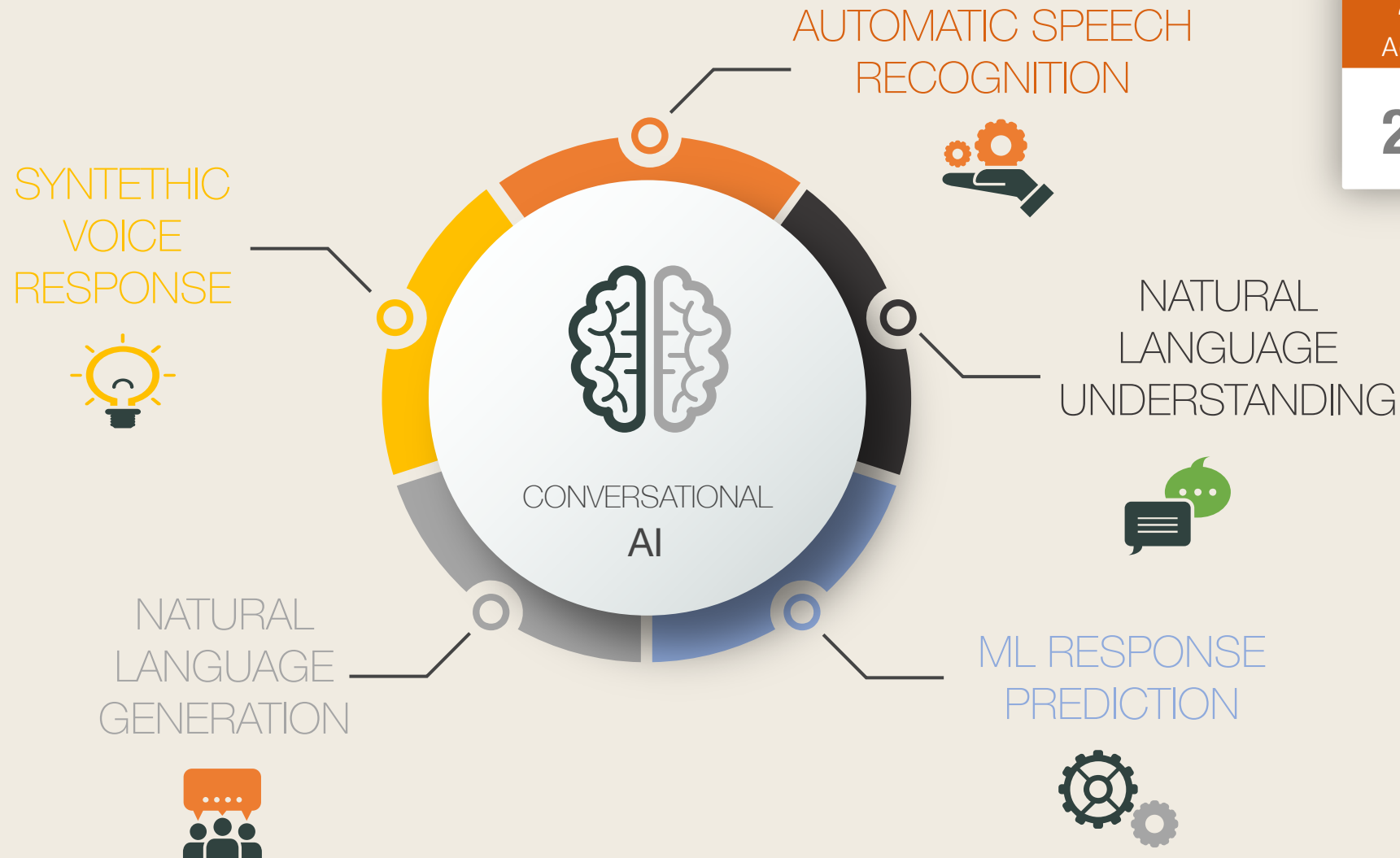


FRAUD DETECTION

INTEGRATION OF KYC FRAMEWORK AND AML TRANSACTION MODEL



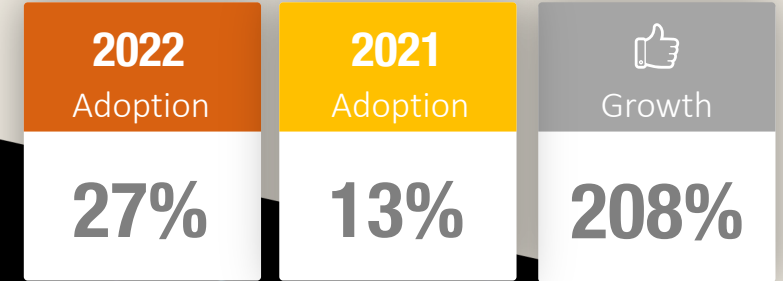
CONVERSATIONAL AI



2022 Adoption	2021 Adoption	Growth
28%	6%	350%

ALGORITHMIC TRADING

USING DEEP LEARNING TO MORE ACCURATELY PREDICT EQUITY MARKET VOLUMES



Predict consumer and market behavior based on historical data

Create real-time forecasts

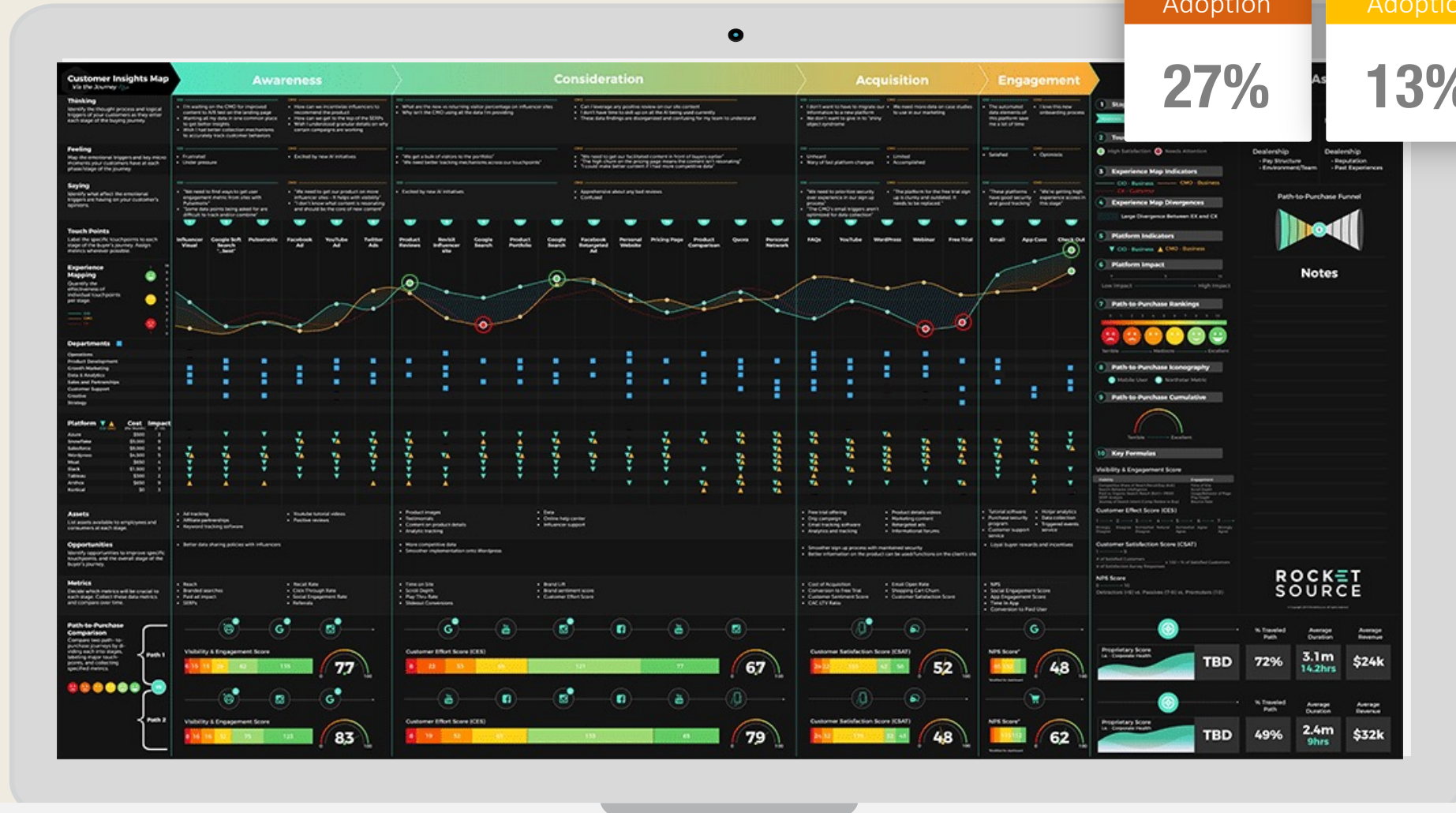
Find anomalies in the market

Transfer knowledge and models from one task to other target

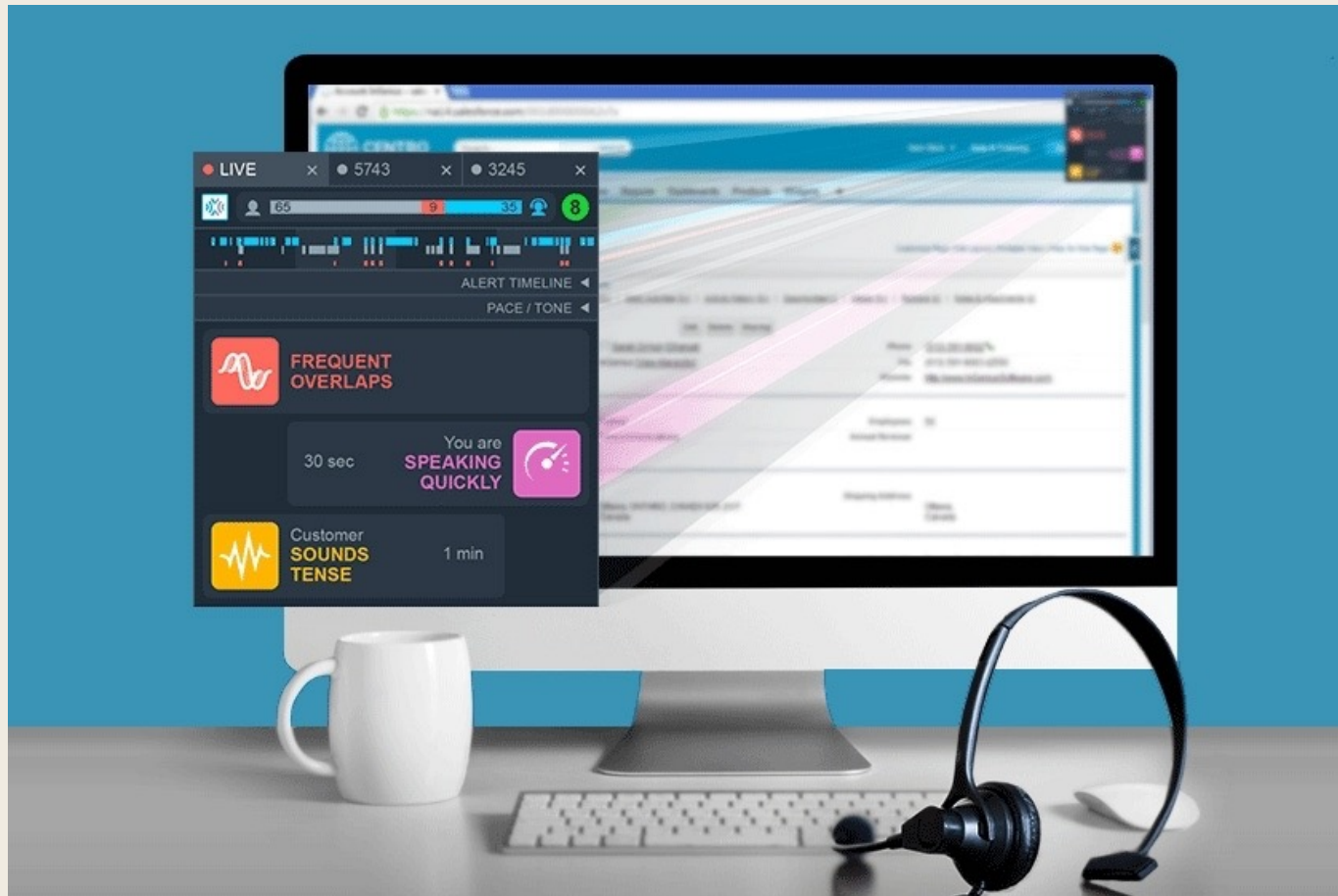
Build trading strategies

RECOMMENDATION SYSTEMS: NEXT BEST ACTION

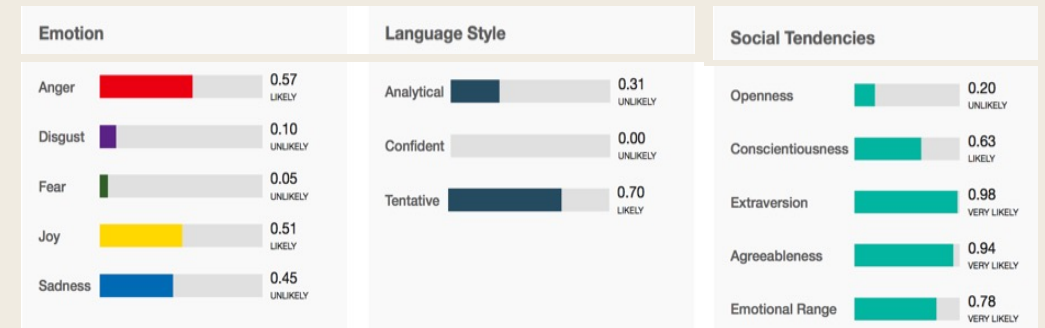
2022 Adoption	2021 Adoption	👍 Growth
27%	13%	208%



RECOMMENDATION SYSTEMS: AI-EMPOWERED HUMAN ADVICE



VOICE TONALITY



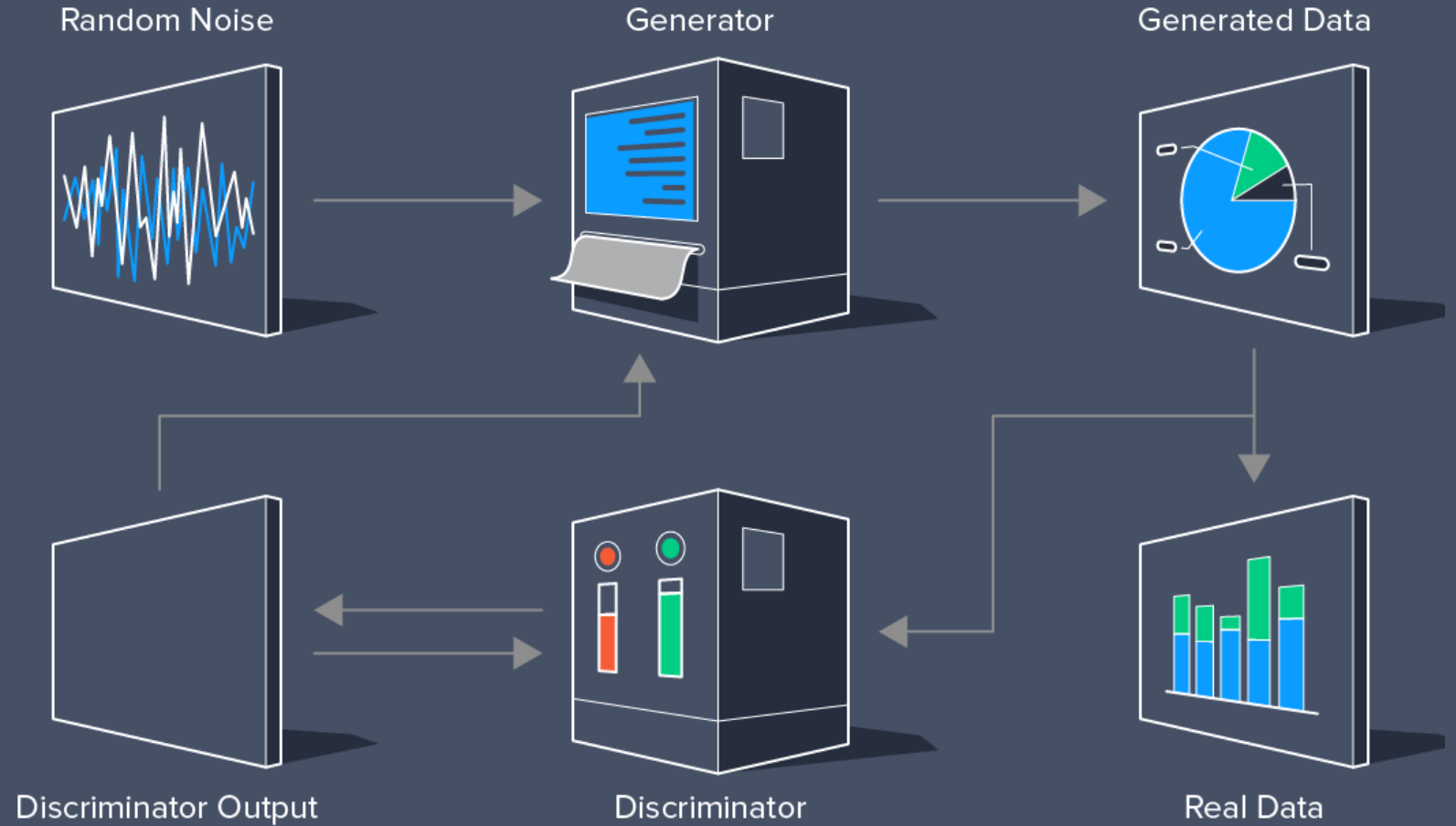


WHAT'S NEXT?

4 AI TRENDS THAT WILL REVOLUTIONIZE
THE FINANCIAL INDUSTRY

01 GENERATIVE AI

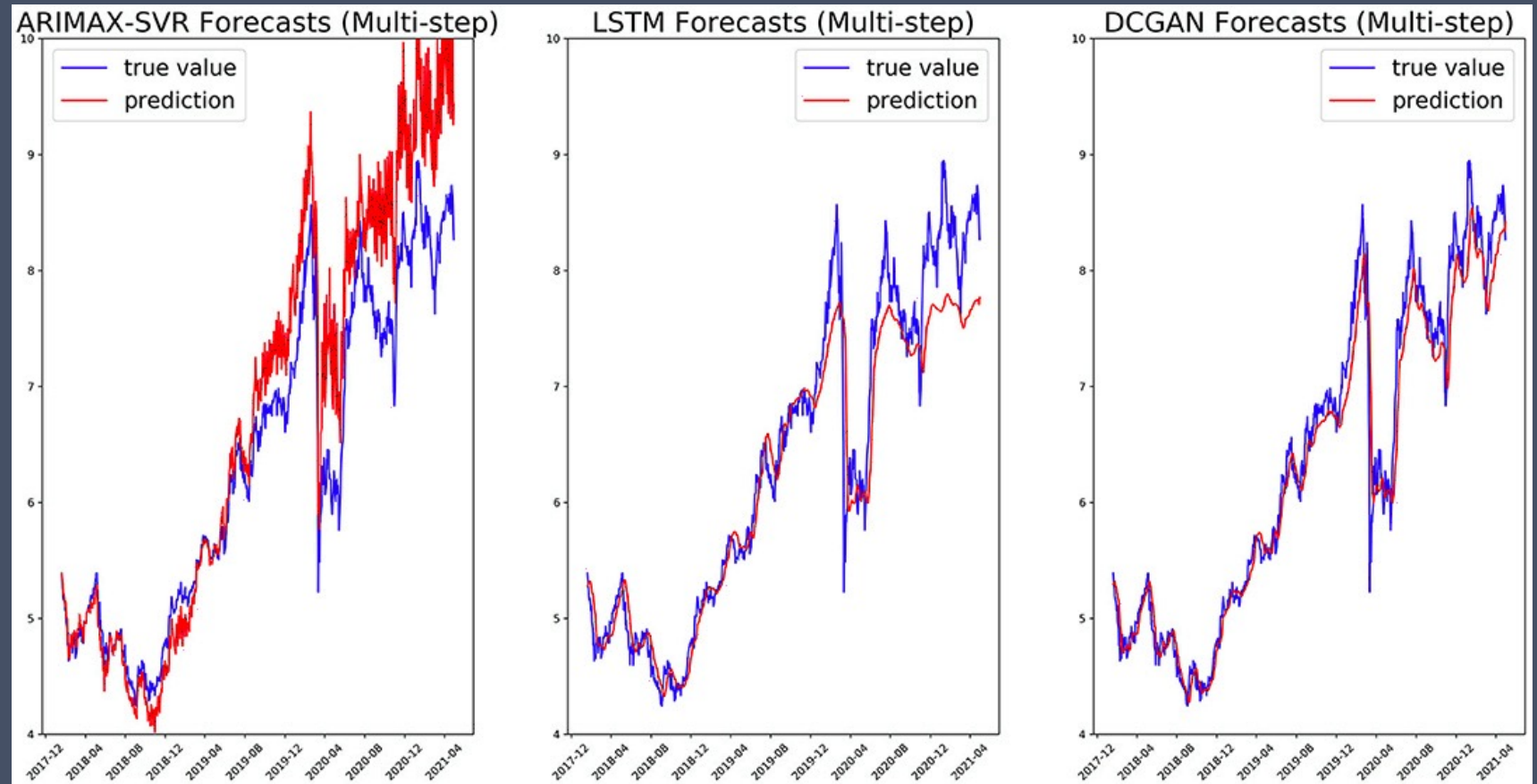
In banking and investment services, the application of generative adversarial networks (GANs) and natural language generation (NLG) can be found in most scenarios for fraud detection, trading prediction and risk factor modelling.



01 GENERATIVE AI IN FORECASTING

STOCK PRICE FORECASTING BY A DEEP CONVOLUTIONAL GAN

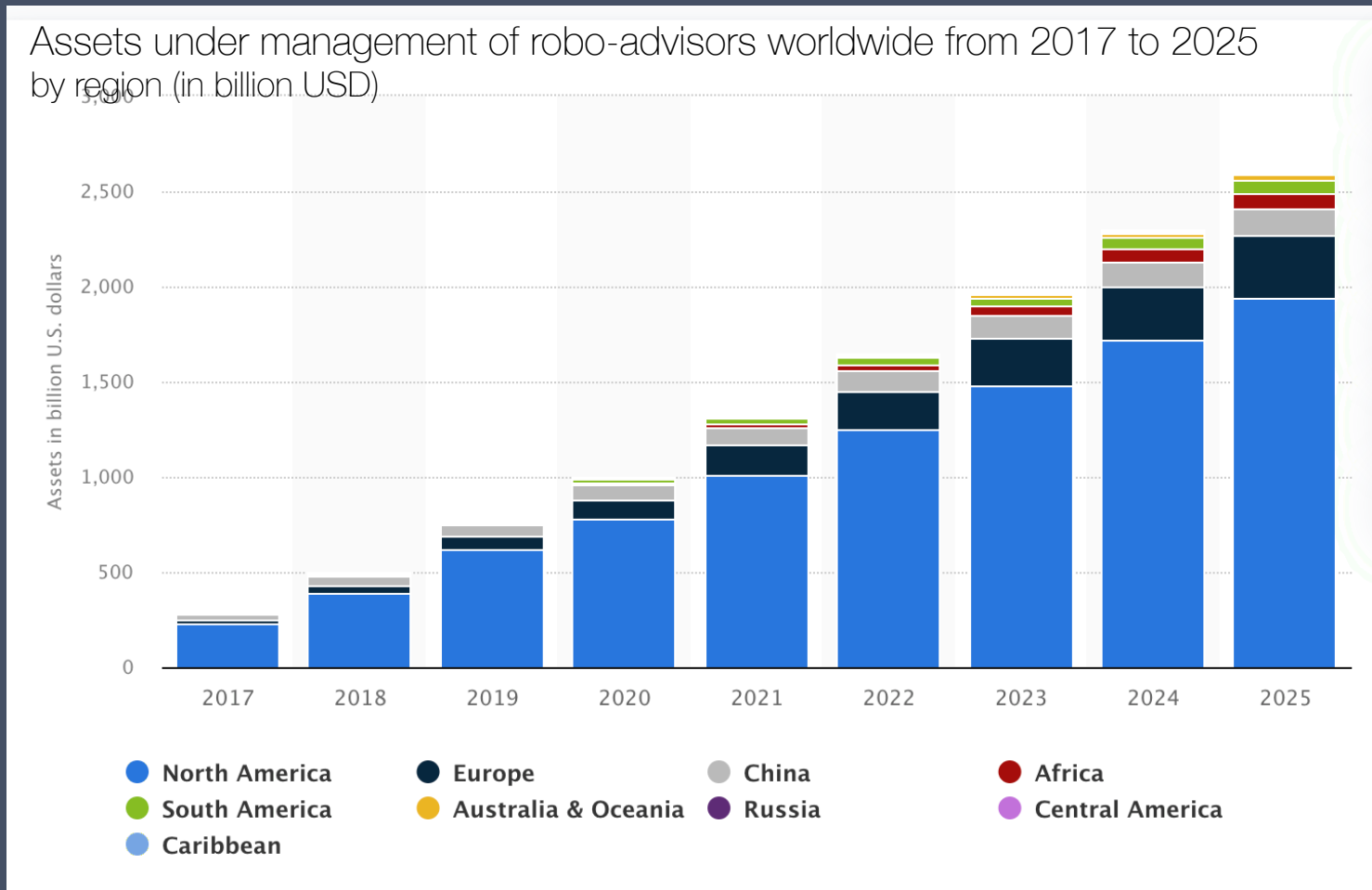
Generative adversarial networks (GANs) for financial time-series modeling for example the linear unpredictability, the heavy-tailed price return distribution, the volatility clustering, leverage effects, the coarse-fine volatility correlation, and the gain/loss asymmetry.



02 AUTONOMIC SYSTEMS

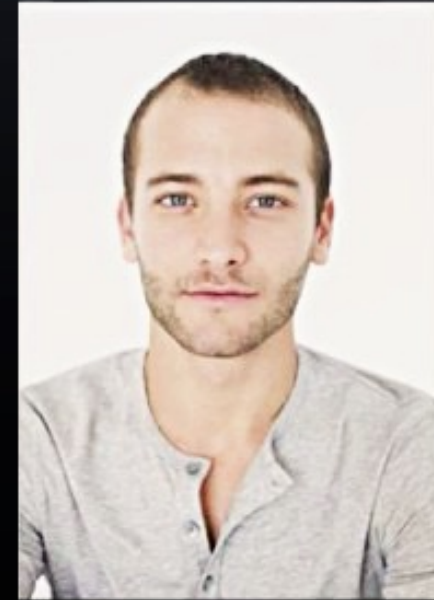
Autonomic systems are applied in autonomous investment, debt management, personal finance assistants and automated lending.

By 2024, 20% of organisations that sell autonomic systems are predicted to require customers to waive indemnity provisions related to their products' learned behaviour (source: Gartner 2022)



02 AUTONOMIC SYSTEMS AND "REAL LIFE" CONVERSATIONS

AI used to create a realistic 3D virtual self with just one smartphone image, transported to any AR and VR environment.



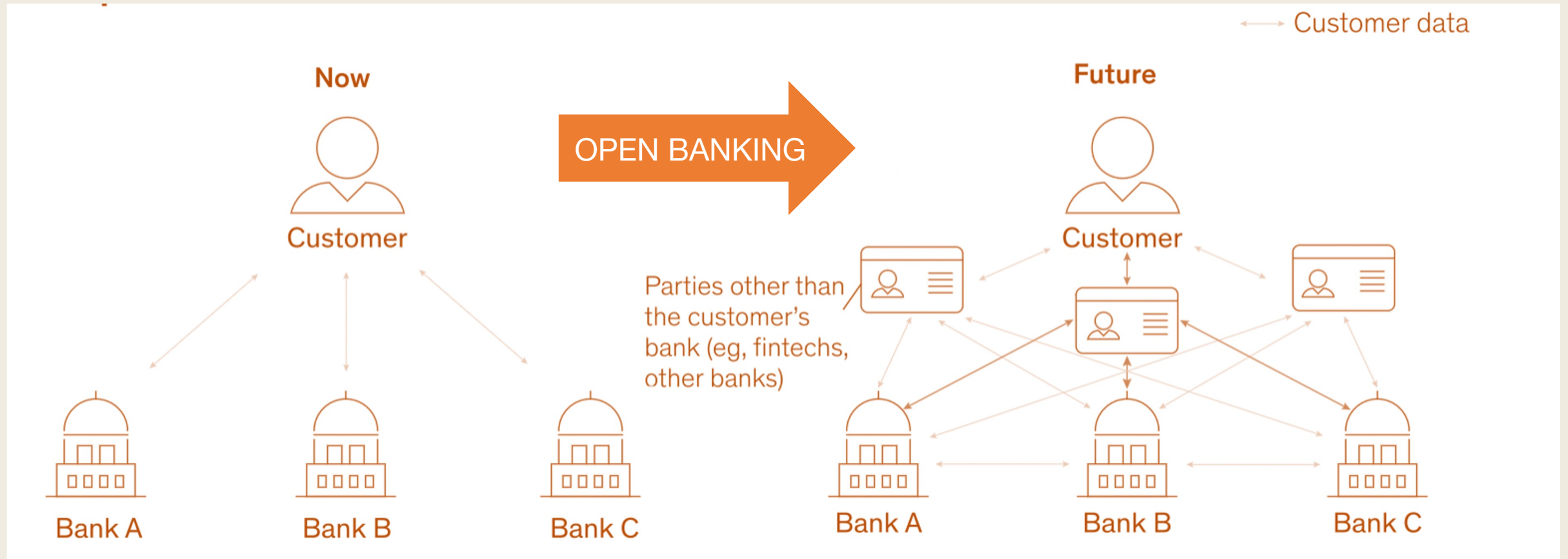
03 PRIVACY-ENHANCING COMPUTING



Privacy-enhancing computation (PEC) secures the processing of personal data in untrusted environments — which is increasingly critical due to evolving privacy and data protection laws, as well as growing consumer concerns

03 PRIVACY-ENHANCED COMPUTING WILL BE NEEDED IN OPEN BANKING

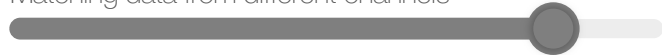
A MORE COMPLEX ENVIRONMENT



04 AI FOR SUSTAINABLE FINANCE

The role of AI in helping creditors, investors and business managers in making optimal ESG-based decisions

Matching data from different channels



Mutualization of information



Generating AI Scoring



THANK YOU FOR
YOUR ATTENTION

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