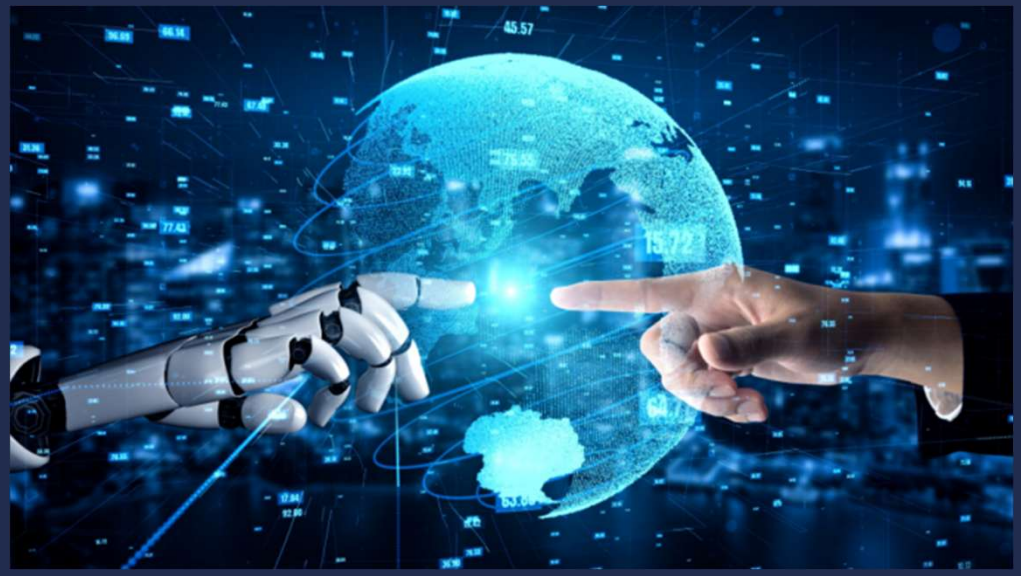
aecm

AECM – the family of Guarantee Institutions in Europe

The Future of Digital Financing: Open Banking and AI:

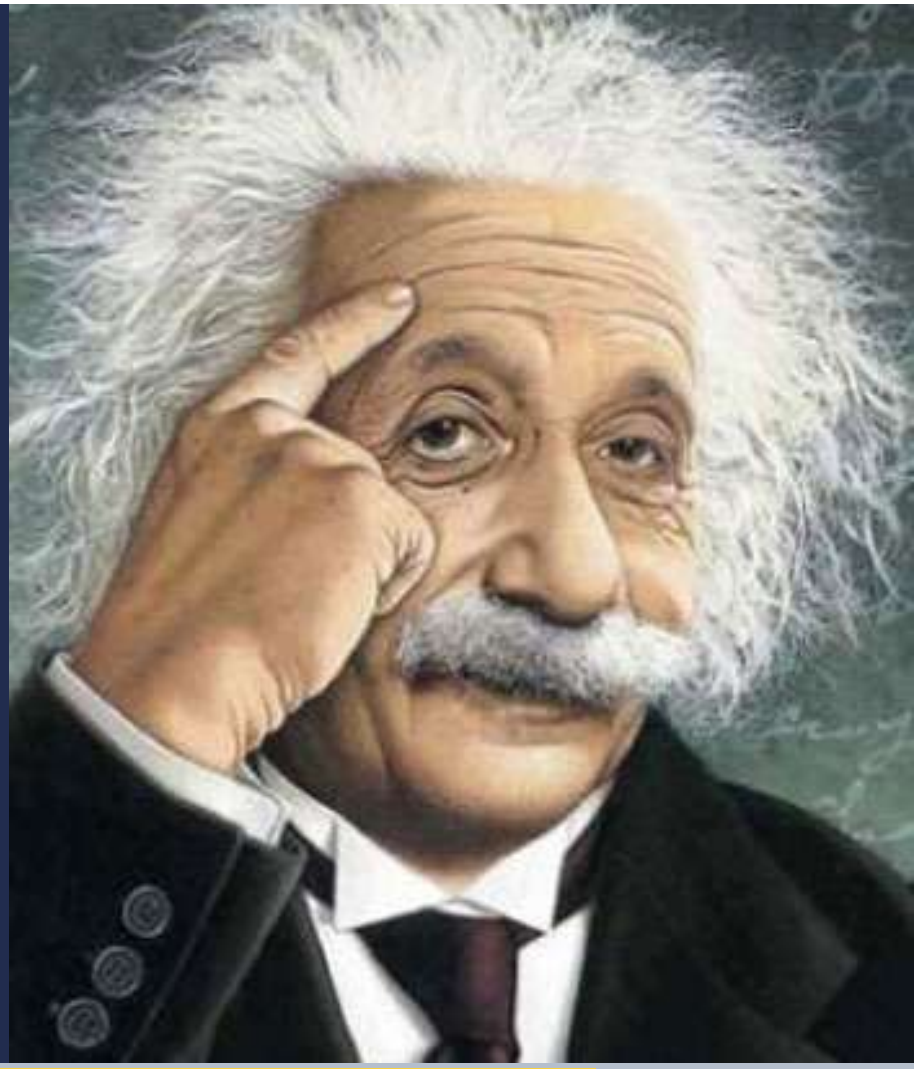


Malta, February 2025

“ The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking. ”

“ If you want to live a happy life, tie it to a goal, not to people or things. ”

Albert Einstein



Everyone thinks about changing the world, but no one thinks about changing themselves.

Tolstoi

Agenda

1) Definitions of AI

2) Digital Transformation in FI

3) Use of AI in Risk, Marketing and customer care and Payments

4) The future of AI in the financial Industry

5) How is my Entity doing?

Definitions of AI

The evolution of artificial intelligence

<table>
<tr><th colspan="4">Artificial intelligence</th></tr>
<tr><td rowspan="2">The science and engineering of making intelligent machines</td><td colspan="3">Machine learning</td></tr>
<tr><td>A major breakthrough in achieving AI</td><td colspan="2">Deep learning</td></tr>
<tr><td></td><td></td><td>An advanced branch of machine learning</td><td>Generative Ai
An advanced branch of deep learning</td></tr>
<tr><td>AI is the broad field of developing machines that can replicate human behavior, including tasks related to perceiving, reasoning, learning, and problem-solving.</td><td>Machine learning algorithms detect patterns in large data sets and learn to make predictions by processing data, rather than by receiving explicit programming instructions.</td><td>Deep learning uses neural networks, inspired by the ways neurons interact in the human brain, to ingest data and process it through multiple iterations that learn increasingly complex features of the data and make increasingly sophisticated predictions.</td><td>Generative AI is a branch of deep learning that uses exceptionally large neural networks called large language models (with hundreds of billions of neurons) that can learn especially abstract patterns. Language models applied to interpret and create text, video, images, and data are known as generative AI.</td></tr>
</table>

AI systems, models that make predictions or generate content based on their ability to detect patterns in data.

The volume and complexity of data that is now being generated, too vast for humans to process and apply efficiently, has increased the potential of machine learning, as well as the need for it.

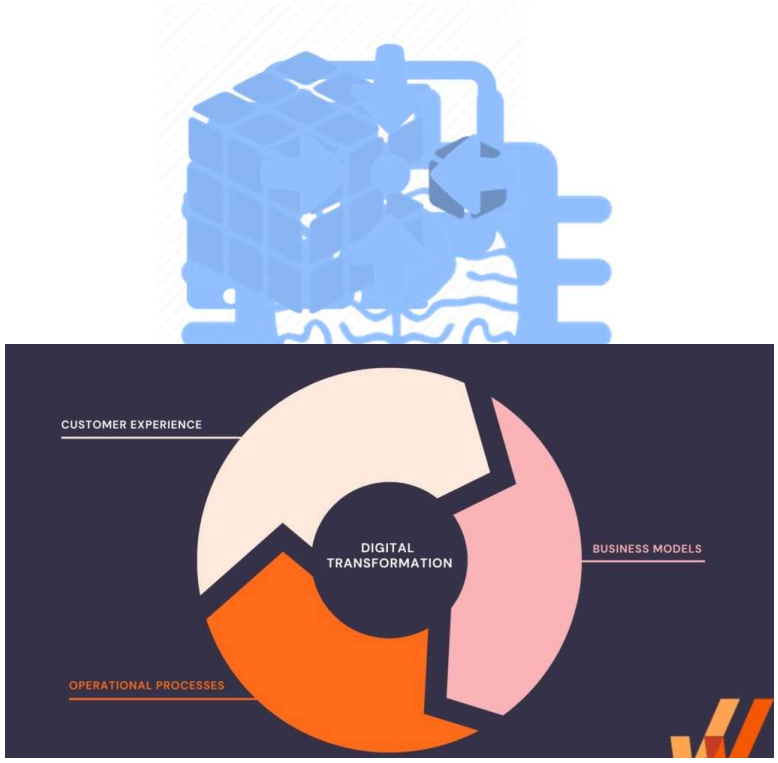
12/15 variables versus thousand of variables

Digital Transformation

Proccess automatization

Models evolution & Integration of models in the operation

Multi Channels



Warehousing of key information

Integral and compatible solutions

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Understanding Predictive Analytics

Historical Risk analysis and future context

Historical Perspective

assessing a borrower through traditional metrics

- Insufficient data
- Lack of accuracy and transparency in forecasting
- Subjective judgment from the evaluator
- Time-consuming processes
- Out-dated data

Today's Risk Analysis

assesing a borrower through ML and AI

- Enhance the accuracy of credit assessment
- Facilitate real-time decision-making
- Monitor and improve
- Personalize customer experiences
- Inform risk management strategies

- **Machine Learning (ML):** ML models learn from historical
- **Natural Language Processing (NLP):** NLP helps AI systems analyze unstructured data
- **Neural Networks:** These models excel at recognizing complex patterns
- **Decision Trees and Random Forests:** These models make predictions by splitting data into branches

Collections follow-up in SME´s

Early warnings

Target

Identify in advance those companies that are up to date today and that will end up having payment problems in the short term

Diferenciation

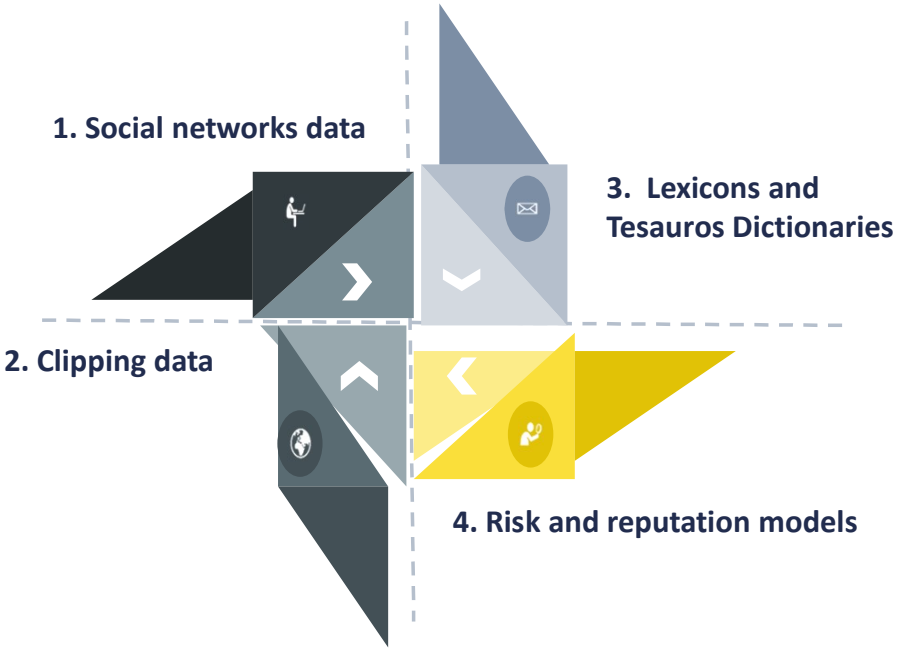
- Incorporate unconventional sources of information, combining it with traditional alert indicators
- ML techniques that allow you to get the most out of all the available information

Tools

Powerful automatic tools for capturing and analyzing external information for modelling

Clipping

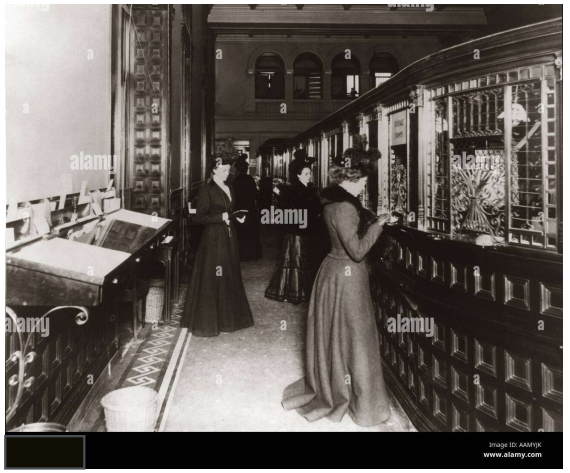
Traditionally, manually check annual results and filings, examine the credit bureau, commerce details, and assess the entrepreneur's track record in order to identify attributes of risk.
Now, we are using open banking to retrieve the SME's transaction details and perform risk assessments by analyzing and categorizing thousands of transactions. By doing this we can predict the probability that an applicant will default within 12 months. ML to include NSDB



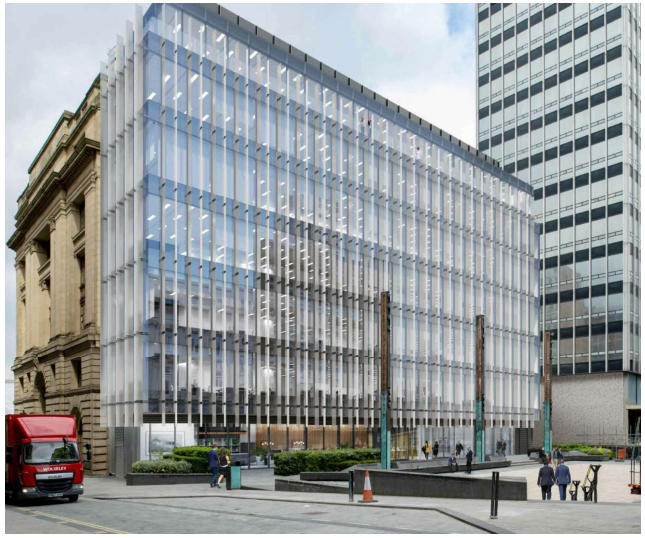
Bank office

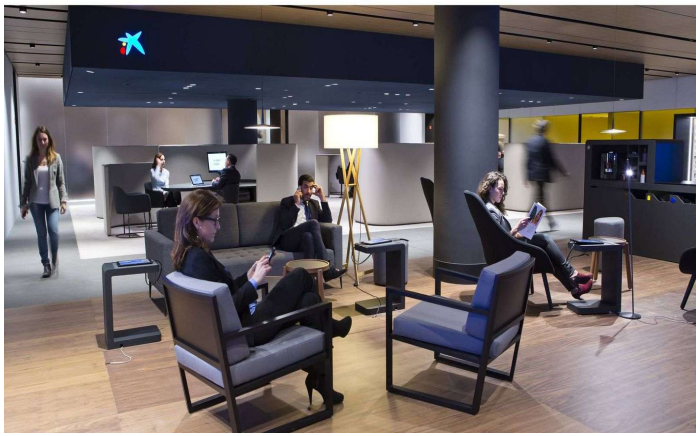
Before and Today

20/25 % space for customers
75 % for back office



No back office in sight





Customer journey

TENDENCIES TO WATCH

Before, it was common for customers to accept some of the friction and difficulties required to access a particular product or service

Today, the game has changed. Multiple financial solutions are available, some digital and seamless requiring less effort from the consumer's perspective.

Personalized Experiences for Customers (CX).
Improved Mobile Banking Experience
Importance of AI-Powered Tools Like Intelligent Virtual Agents
Self-service Banking
Digital Over Physical Banking
Security and Privacy improvements
Assistance with Finance Management
Rise of Blockchain Technology
Banking as a Service (BaaS)

PSD 3 and PSR

The third Payment Services Directive (PSD3) and the Payment Services Regulation (PSR) are a new set of legislative proposals from the European Commission that bring changes to the foundational framework of the European payments market

What are the key differences between PSD3 and PSR?

The European Commission has concluded that PSD2 was largely successful. It significantly reduced fraud, enhanced security, boosted innovation and saw the successful emergence of Open Banking. However, there is room for improvement, and, to address this, the new regulation has been divided into two parts.

PSD3 remains a directive, focusing primarily on licensing and the operation of payment service providers. It will continue to be incorporated into local legislation.

The rest of what was previously under PSD2 is now covered by PSR, a regulation that covers most of the banks' responsibilities, and automatically becomes law for all EU member states.

agentic systems

. Furthermore, using natural language rather than programming code, a human user could direct a gen AI–enabled agent system to accomplish

Since EU member states are usually granted an 18-month transition period, the PSD3 directive and the PSR regulation will likely start to apply during 2026.

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Cash payment in the future

Digital Banking – The Future (1)

next decade we will see more changes than in the past 100 years.

Data	**Will become widely available**	challenges include cleansing and tagging requirements, privacy and bias concerns
Business Model	**Traditional boundaries will disappear**	Neobanks, other sectors include banking services, "platformication"
Regulation	**New ways to identify and manage risk**	New technologies may create new and unforeseen risks
Technology	**A I, Blockchain, Biometrics, 5G, Cloud computing, IoT, AR/VR and Quantum computing**	

 AI &(ML) AI and ML	Will automate tasks currently requiring human intelligence, resulting in customer service being transformed immense quantities of data produced by IoT being analyzed, and enhanced security.
 Dist Ledger Tech	DLT will decentralize the mgment. of customer transaction data, providing a more open platform. Blockchain will ensure that historic transactions will never be able to be altered. Transparency across all businesses who service the customer.
 Biometrics	Passwords and PINs will cease to exist, replaced with biometrics like facial and voice recognition, enabling constant, real-time user identity validation and advanced behavioral profiling.
 Cloud computing	Cloud computing will remove the hardware burden on data storage and processing, allowing the bank to provide everyday consumers with immense data processing capabilities, accessible from any internet-enabled device.
 5G	Super-fast mobile internet will have the potential to reach over 1 gigabyte per second downloads, vastly improving the user experience and delivery of services in real time.

Digital Banking – The Future (2)

The banking industry of 2030 will look very different from what it looks like today

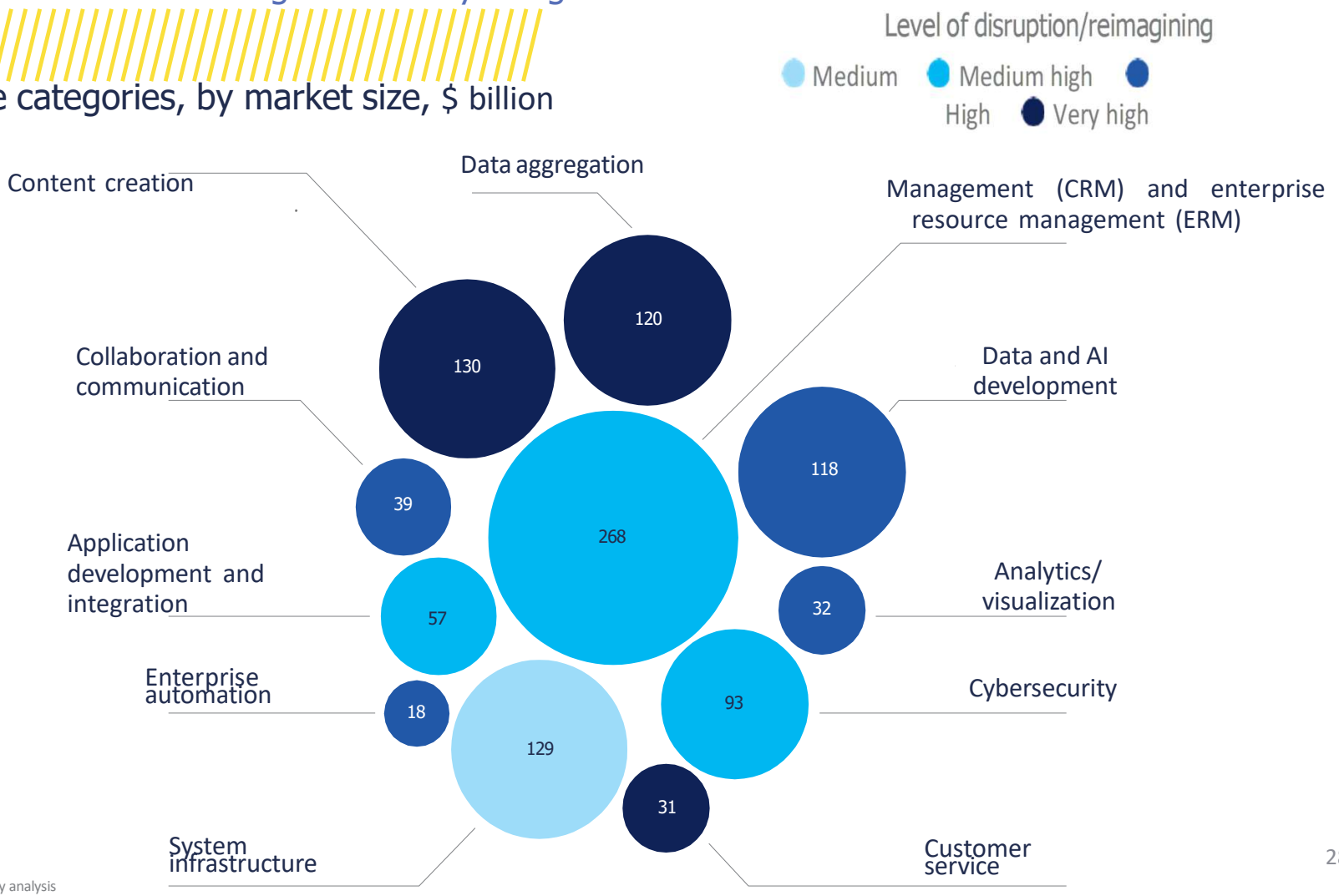
 Quantum Computing	Will be the enabler of processing vast volumes of data made available through IoT, and will also help AI and ML learn faster in their goal to automate manual tasks.
 Internet of Things (IoT)	Everyday objects will be able to connect to the internet and produce data, far beyond the smart speakers and wearables of today, allowing products and services to be highly personalized, and all aspects of a consumer life to be frictionless.
 Augmented Reality (AR)/ Virtual Reality (VR)	Will allow banks to display rich information in the real world to help customers to make decisions more effectively, and become more accessible to those who may not be able to visit a branch. https://youtu.be/0ENObW0WvwU

These technologies do not work in silos, and often it is their intersection that gives us a glimpse into the impact of these technologies for businesses and customers of 2030.

https://assets.kpmg.com/content/dam/kpmg/ua/pdf/2019/09/future-of-digital-banking-in-2030-cba.pd.pdf

Generative AI will disrupt the software market-- its relative impacts will differ across a wide range of industry categories.

Software categories, by market size, $ billion



Source: IDC; McKinsey analysis

How is my Entity doing?

OPEN / DIGITAL BANKING STATUS

AI TECHNOLOGY APPLICATIONS

Risk, Collections, Cybersecurity,

CUSTOMERS BEHAVIORAL ANALYSIS

Customer journey, anticipation of needs, satisfaction, churn/retention

RESPONSE TIME TO AN APPLICATION

instant / 2or 3 days

EMBEDDED FINANCE

Digital services in Cos., their day-to-day operations.

COMPETITIVE ENVIRONMENT

What are competitors doing ?

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