CATVOLUTION

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L'INTELLIGENZA ARTIFICIALE AL SERVIZIO DEI PAGAMENTI

OPPORTUNITÀ, CASISTICHE E PROSPETTIVE FUTURE

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Automation and AI include a variety of models in constant evolution that can be combined

	Robotic Process Automation (RPA)	Artificial Intelligence			
		Traditional Machine Learning	Natural Language Processing	Neural networks/ Deep learning	Generative Al
	Low		Complexity level		High
What it is	 Automation of repetitive and rules- based tasks using software robots 	 Machines learn from data to make classifications and predictions (e.g., via logistic regression and other statistical models) 	 Combination of computational techniques and ML enabling machines to understand and interpret human language 	 ML mimicking the human brain via different layers / neural networks Deep-learning characterized by more than 3 layers 	 Al models that can generate new structured or unstructured data by studying the distribution of input data
Example of applications	 Automated invoice management Monitoring and enforcement of compliance Onboarding of new hire 	 Calculation of credit risks and identification of low/ high risk individuals Identification of potentially fraudulent transactions 	 Sentiment analysis Chatbots, and voice assistants Translation and correction software 	 Recognition of image and speech Text classification (e.g., topic labeling) Prediction of relevant products based on clients' needs/interests 	 Creation of new content Images Videos Text

The combination of advanced technologies and automated processes leads to hyper-automation

E.g., Fraud Mgmt: Machine and Deep Learning to analyze data and define rules to prevent frauds + RPA to automatically decline suspicious transactions + GenAI notify to clients

The emergence of Foundation Models and Generative AI have changed the landscape of Artificial Intelligence

A step change in Artificial Intelligence

Rise of Foundation Models:

Foundation models provide a general-purpose building block for solving unstructured data problems Building applications on top require up to 1000x less data for tuning and maintenance

Rise of Generative AI:

Generates new content, e.g., text, image, video, software code, synthetic data These models also perform traditional ML tasks such as classification and entity recognition more effectively

Enabled by several recent breakthroughs

"Why now"

Improvements in GPU performance

Reduction in compute costs

Massive public data availability

New model architectures and training techniques

E.g., Transformers, Reinforcement Learning from Human Feedback

Growth in AI research funding

Few consolidating players in Foundation models

Language models

OpenAl

Chat GPT

Chat GPT

Al21 labs

Al21 labs

Al21 labs

Co:here

Image models

Image models

Dall-E

Across industries, companies are already leveraging genAI to drive new levels of innovation

Morgan Stanley	stripe	Coca:Cola	salesforce	Carrefour
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Many genAI use cases fall under a set of technical archetypes

Content generation



EXAMPLE

Generate **personalized marketing assets** (document generation, blog posts, newsletter, tailored product description, summaries)

Generate **personalized content** (newsletter, e-mail)

Advanced analytics



EXAMPLE

Classify and group items

(customers, products, ...) into consistent and relevant categories

Group sentences using sentiment analysis (e.g., positive vs. negative social media messages) and generate a range of recommended or automated responses

Personalized chatbot



EXAMPLE

Answer customer questions about product offerings and inquiries

Suggest and enable orders with personalized suitable products

Provide advice on products to buy

Information retrieval



EXAMPLE

Generate synthesized key points, FAQs, etc., from structured (e.g., internal documentation) or unstructured input (e.g., emails from employees)

Respond to specific requests & questions related to policies, products, services, etc.

+ more to come

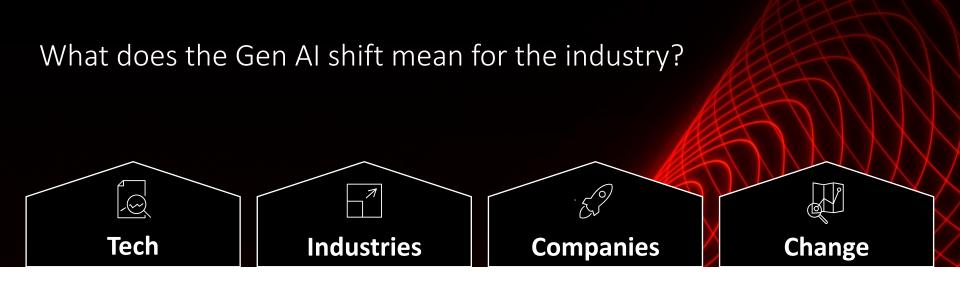


EXAMPLE

Establish a *deep understanding* of a new topic instantly

Generate common or standardized materials

Design/ develop new product opportunities based on wide range of inputs



Tech **barriers to entry** have vanished

Al is now available as a commercial product

Tech play is over, time for **use case play**

Tech is mature and **business**ready

Al race starts now in **every** industry

Size doesn't matter, insurgents are ahead

combine AI products with your company data

Seek best opportunities to

Proprietary data is key

Decision: first mover vs. fast follower

Need to (re)think your AI operating model

Exploratory process & willingness to take risks

Accelerate with **external** expertise

New regulation?

Tavola rotonda