



## **AI4FSI SURVEY**

Questions answered on the future of AI

2 0 2 1

**Deloitte.**



**Hi, I'm Dot,  
your AI digital assistant.**

**Welcome to AI4FSI survey**

**Ask me about  
the following themes:**

ABOUT THE SURVEY

AI APPLICATION

AI TRENDS

AI INVESTMENTS

BANKING HEATMAP

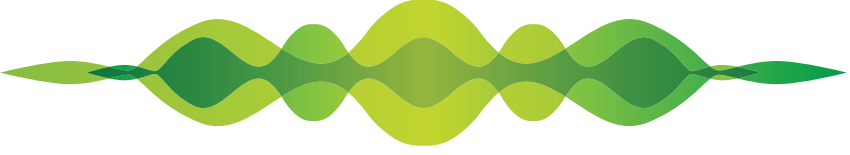
INSURANCE HEATMAP

USE CASES

AI STRATEGY

AI TEAM

**If you'd like, let me tell you  
the whole story!  
Access the audio presentation [HERE](#)**



# Welcome to AI4FSI survey

the survey launched by Deloitte on AI utilization in the financial service institutions and vendors to discuss top trends and answer all your questions on the future of AI. Sound interesting, right? Let's start!

## SURVEY PROTAGONISTS

### Countries involved



SURVEY PROTAGONISTS

## Stakeholders involved

The survey was sent to a wide range of European stakeholders in order to represent a broad spectrum of the FSI sector, as detailed below:

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10+ MEDIUM-LARGE BANKS (0/W 4 G-SIB)

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10+ MEDIUM-LARGE INSURANCE COMPANIES

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5+ PROVIDERS OF FINANCIAL SERVICES  
(E.G. CREDIT CARDS)

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SURVEY PROTAGONISTS

## Main vendors involved

We focused on prominent vendors that have already developed and launched AI solutions on the market:



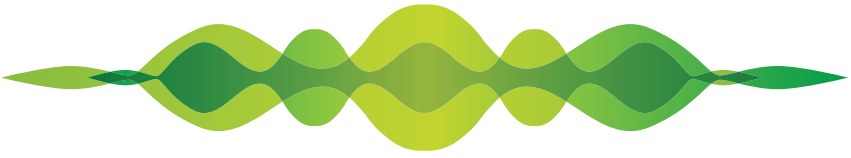
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**& others**



**Hey, Dot.  
Are financial institutions  
investing in AI applications  
to achieve tangible targets?**





Well, AI is becoming a crucial part of today's companies. Although investments in AI are currently related to reducing costs and increasing process efficiency, in the next few years they'll focus on more strategic targets.

Did you know? AI applications can emulate human cognitive capabilities within different areas of application like vision, analysis and language.



AI APPLICATION AREA

## Computer vision

DESCRIPTION

Tool able to understand images meaning in order to provide digitalized output data to enable the digitalization of processes further down the value chain.

CAPABILITIES

- > Image/video recognition
- > Image classification
- > Intelligence Optical Character Recognition

# Advanced analytics & data mining

DESCRIPTION

Algorithms that examine scattered digital data sets in order to find trends and enable a more data driven decision making.

CAPABILITIES

- > Clustering models
- > Propensity models
- > Forecasting
- > What-if simulation
- > Robo-advisor



# Natural language processing (NLP)

DESCRIPTION

Applications able to understand and manipulate language in a non-structured format, to manage conversation with questions and providing answers.

CAPABILITIES

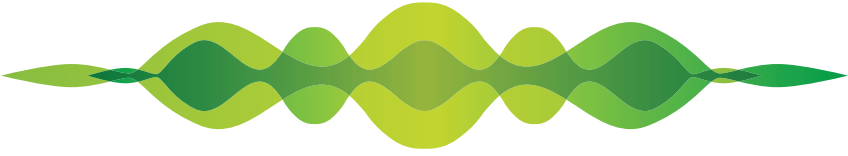
- > Conversational Analytics
- > Natural Language Generation
- > Sentiment analysis and brand reputation
- > Speech to text and Speech recognition
- > Chatbot



**Hey, Dot.  
What about AI trends  
for the future?**







**Our data suggests that the Covid-19 situation has not impacted on investments in AI.**

**The growing trend is confirmed and investments seem to be growing in line with the global trend. In this phase companies prefer to improve existing processes rather than implementing new services and business models.**

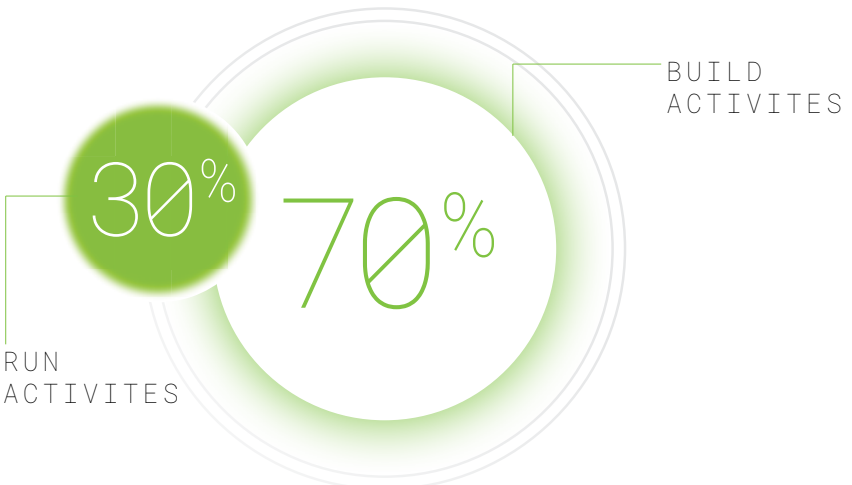


*My prediction is that the next few years will be characterized by higher investments for the adoption of more disruptive AI solutions!*

AI TRENDS

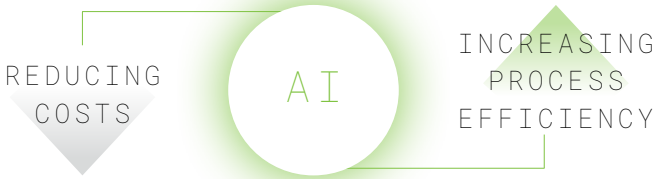
## Budget allocation

Budget allocation for Build activities is higher than Run activities as the launch of AI solutions is still at an early stage.



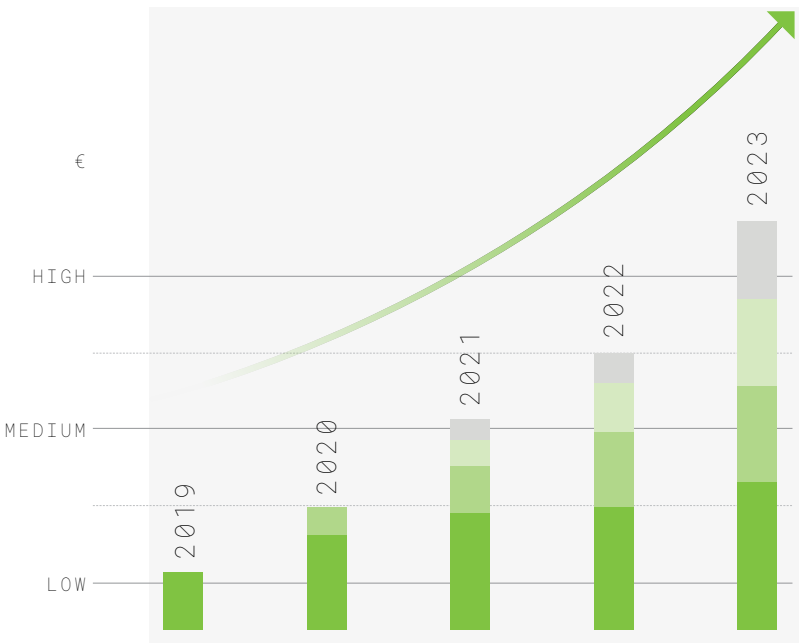
# Investments & expected benefits from AI

Investments in AI are currently related to reducing costs and increasing process efficiency. In the next few years, investments will focus on more strategic targets.



40% IT INVESTMENT TO SUPPORT AI IS ABOUT 40% OF TOTAL INVESTMENTS

+43% EXPECTED CAGR



INSTITUTIONS OBJECTIVES

- Increase process efficiency
- Enhance services & customer relations
- Discover new insights
- Enabling & create new business models

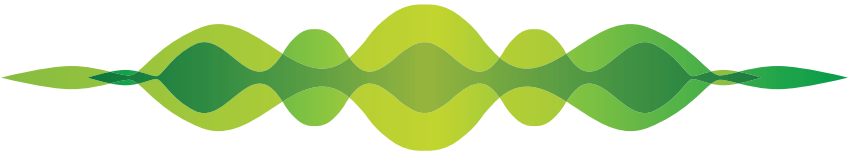
INVESTMENTS VALUE

- Low: 0-5 Mln €
- Medium: 5-15 Mln €
- High: more than 15 Mln €



**Hey, Dot.  
What about  
banking companies?**





**Check out our banking heatmap, it showcases the adoption level of AI applications in the various areas of the banking value chain.**



<CREATING>

Banking companies are creating new user experience for Payments also leveraging on Fintech's solutions in order to be more safe and easier.



<ADOPTING>

Banking companies are also adopting new lending processes supported by new AI insight to further specialize the product and to identify possible frauds and cyber risk in a more efficient way.



<UNDERSTANDING>

Using AI capabilities, these companies are learning constantly about the customer, understanding their needs, preferences and intrinsic nature.

# Levels of AI solution adoption

The level of adoption of the AI solution is calculated from the percentage of respondents based on these metrics:

 **HIGH LEVEL**  
% RESPONDENTS  
90-100

 **MID-HIGH LEVEL**  
% RESPONDENTS  
>60

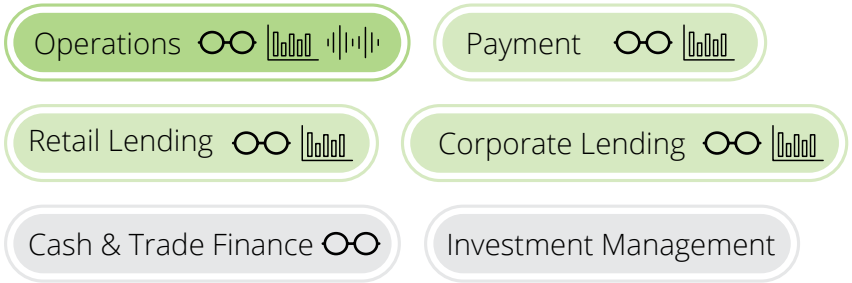
 **MIDDLE LEVEL**  
% RESPONDENTS  
30-60

 **LOW LEVEL**  
% RESPONDENTS  
30-60

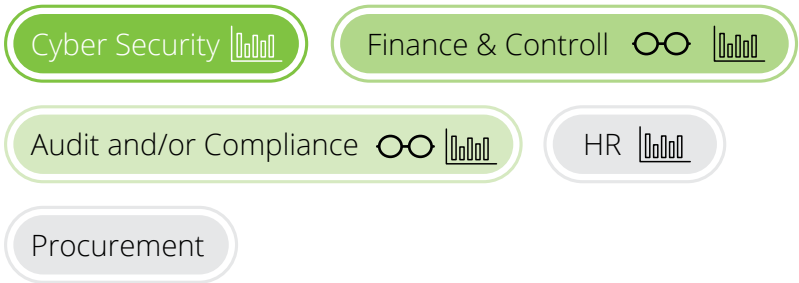
## Front Office



## Middle Office




## Back Office



AI APPLICATIONS - LEGENDA

  
Computer Vision

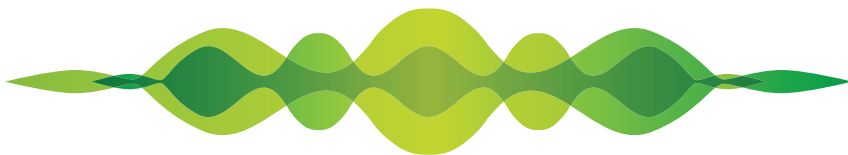
  
Advanced Analytics

  
Natural Language Processing (NLP)



**Hey, Dot.  
What about  
insurance companies?**





**Here are the key points and heatmap for AI applications in the insurance value chain.**



<ENABLING>

Insurance companies are enabling new levels of automation by digitalizing claims through IOCR technology and NLP.



<CREATING>

Thank to the use of AI applications insurance companies are creating more customized products and prices through a better understanding of clients.



<IMPROVING>

The implementation of a broad range of AI applications has led to a significant improvement of the customer experience, support functions, compliance and risk management.

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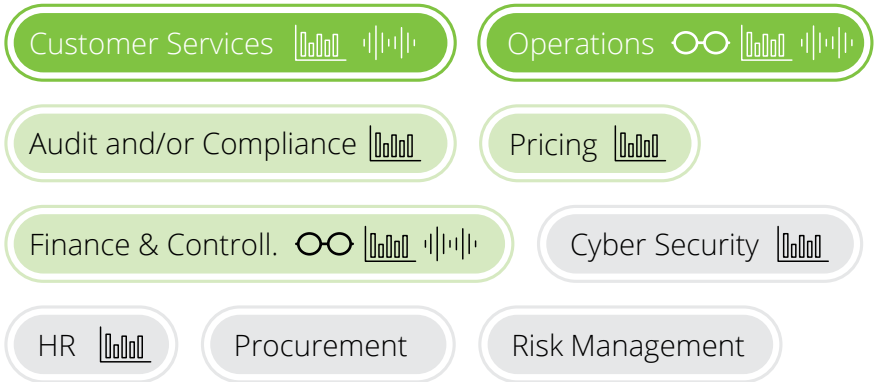
 **MIDDLE LEVEL**  
% RESPONDENTS  
30-60

 **LOW LEVEL**  
% RESPONDENTS  
30-60

## Core Functions




## Support Functions



### AI APPLICATIONS - LEGENDA

  
Computer Vision

  
Advanced Analytics

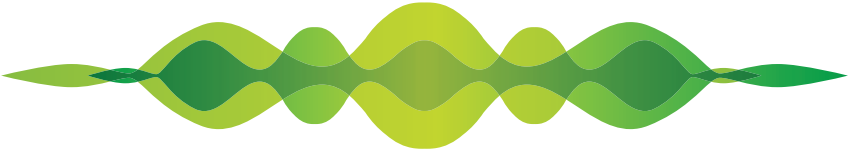
  
Natural Language Processing (NLP)



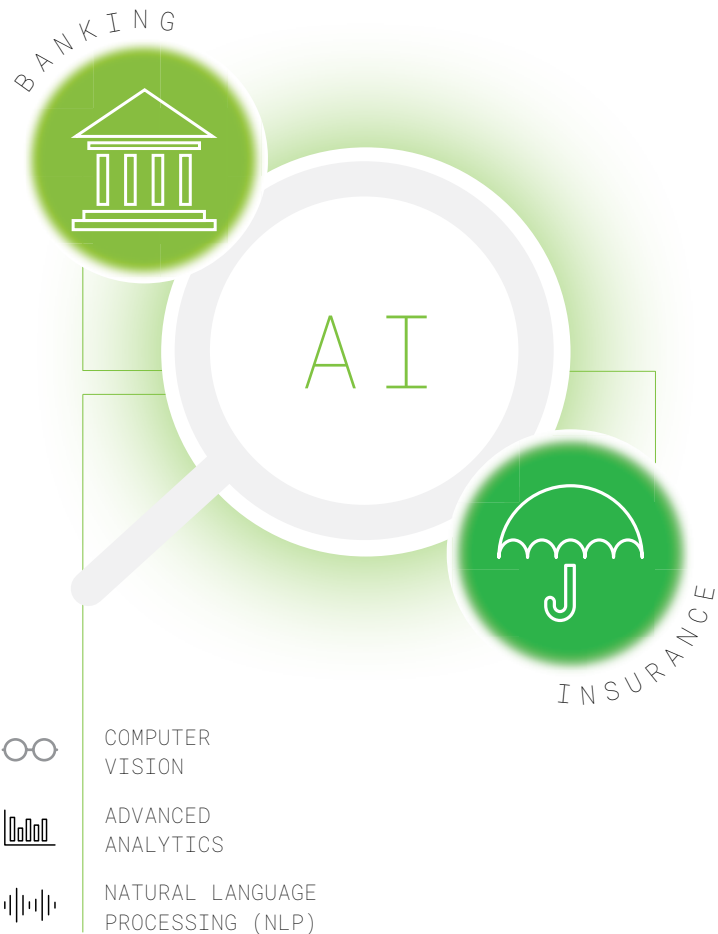


**Hey, Dot.  
Are there use cases  
to support that?**





Of course! During the AI4FSI benchmark analysis the most relevant and common use cases have been collected through interviews with respondents... Check it out!



# Banking & insurance use cases

## #01 Marketing Return on Investment

### DESCRIPTION

Having a clear vision on the **key success drivers** behind a **marketing** initiative is a fundamental step in the maximization of sales performance - MROI.

### STAKEHOLDERS

- > Marketing & Communication
- > Sales

### APPLICABILITY



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## #02 Dynamic tasks allocation

### DESCRIPTION

Increase **offices efficiency** through **cross-collaboration** and **optimal tasks allocation** based on forecasting seasonal peaks along with personal skills.

### STAKEHOLDERS

- > Operations
- > Multiple areas

### APPLICABILITY



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## #03 Regulatory controls on documents

### DESCRIPTION

Intelligent technology provides you with a single source of information about up-to-date regulations. A **document classifier** enables you to do exactly so, by **transforming** your **risk department and operations**.

### STAKEHOLDERS

- > Marketing
- > Quoting & underwriting
- > Procurement

### APPLICABILITY



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## #04 Churn Prevention

### DESCRIPTION

A new **engagement strategy** aimed at **optimizing client retention** and **profitability**, driven by analytical results from **customer segmentation**, **price sensitivity** and **churn propensity models**.

### STAKEHOLDERS

- > Marketing
- > CVM
- > Customer Service&Support

### APPLICABILITY



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## #05 Intelligence Virtual Assistant

### DESCRIPTION

Chatbots are smart agents that leverage on **Natural Language Processing models** in order to **simulate** the interaction with a **human operator**, with applications in areas such as **customer service** and **personal finance**.

### STAKEHOLDERS

- > Operation
- > Customer Service&Support
- > Sales
- > CX

### APPLICABILITY



# Banking use cases

## #06 Lending Intelligent Documentation

### DESCRIPTION

Digitization of **lending documentation management** in order to reduce **time-to-market loan closing** and **manual activities** along the entire loan lifecycle.

### STAKEHOLDERS

- > Operations (MO & BO)
- > Credit Risk Office
- > Portfolio Monitoring and Loan Servicing Function

### APPLICABILITY



## #07 Client Profitability Analysis

### DESCRIPTION

Definition of clusters for clients with the aim of **identifying the key factors that drive profitability**, as well as of **tailoring** the private banking offering to each client's stage in the **investment lifecycle**.

### STAKEHOLDERS

- > Sales
- > Marketing
- > CVM
- > Private Banking

### APPLICABILITY



## #08 Predictive Maintenance ATM

### DESCRIPTION

Application of **predictive models** in order to **preemptively identify** the risk that an ATM might be subject to malfunctions and **automatically activate maintenance** routines.

### STAKEHOLDERS

- > Operations Area
- > Customer Support

### APPLICABILITY



## #09 Credit & Counterparty Risk Platform

### DESCRIPTION

Systematic estimation of the **credit risk of borrowers and financial counterparties** (e.g. in OTC derivatives), aimed at the **fine tuning** of the bank's **exposures and provisions**, the execution of **stress tests** and the **automation** of loan approval and counterparty screening.

### STAKEHOLDERS

- > Loan Origination
- > Risk Management

### APPLICABILITY



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## #10 Financial Fraud Engine

### DESCRIPTION

An advanced framework that will enable financial institutions to automate the **detection and management** of potentially **fraudulent activities**, based on the analysis of anomalous **patterns in financial transactions**.

### STAKEHOLDERS

- > Risk Management
- > Compliance

### APPLICABILITY



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## #11 Smart Pricing

### DESCRIPTION

Structuring a Smart Pricing strategy needs a **strong technical framework** capable of matching the power of **machine learning techniques** with several business needs, with the goal of creating an **adaptive model** capable of reaching a **high level of accuracy**.

### STAKEHOLDERS

- > Pricing
- > Loan Origination
- > Marketing
- > Sales & Offering

### APPLICABILITY



# Insurance use cases

## #12 Automotive claims estimation

### DESCRIPTION

The client organization lacked severe automation capabilities and desired an AI algorithm to alleviate the specific problem of mapping damage to cost-of-repair based on image recognition on damaged cars.

### STAKEHOLDERS

- > Claims management
- > Customer Service&Support

### APPLICABILITY



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## #13 Insurance Claim Risk Assessment

### DESCRIPTION

A centralized platform for the automation of insurance claim risk assessment, based on ML algorithms capable of identifying potentially fraudulent claims and designed to respond to risks in real time.

### STAKEHOLDERS

- > Claims Management
- > Risk Management

### APPLICABILITY

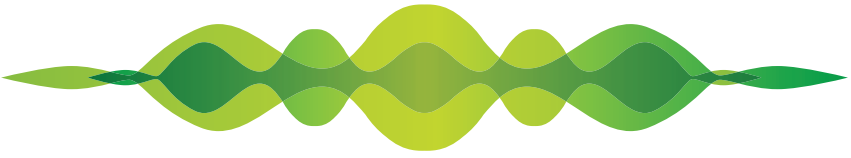




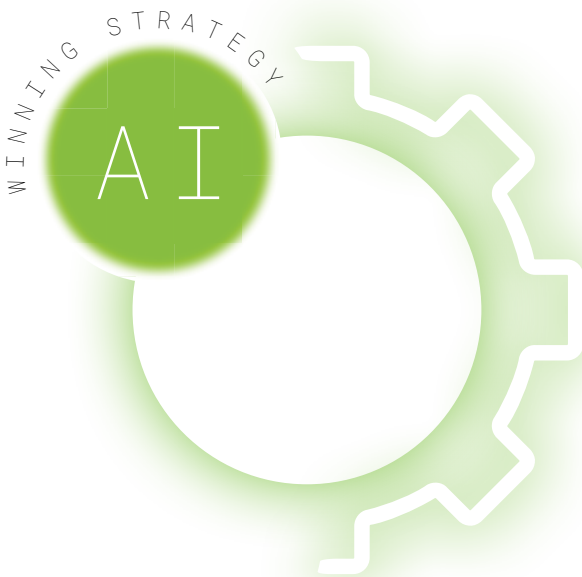
**Hey, Dot.**  
**What are the ingredients**  
**for a successful AI strategy?**







I'm glad you asked. Here are some key takeaways for a winning and effective AI strategy!



01

KEY TAKEAWAYS

## Get Business Buy-In

Starting an AI implementation project will certainly bring many benefits to the organization, but to make this happen it is necessary that the whole value chain is involved, without leaving anyone behind

**For this reason, it is crucial to bring resources on board, have sponsorship, align with the business strategy, and ensure that the benefits of adopting an AI solution are clearly visible to all**

02

KEY TAKEAWAYS

## Explore first

**The range of AI solutions is very wide - It is always advisable to have an external support in order to identify the best solutions for each company**

Often, high-impact solutions do not bring the expected benefits in despite of a building-block approach which allows the achievement of targets in a gradual way (e.g. using the concept of Minimum Viable Product, in order to show early the effectiveness of the solution and at the same time get feedback to improve the solution)

03

KEY TAKEAWAYS

## Leverage your people

The adoption of a new AI solution does not necessarily imply the need of a massive new hiring.

**Once the model-making STEM people are onboarded from the market, all you need is to leverage internal resources, who know the company's processes and products in detail to achieve the perfect mix and proceed with the AI implementation journey**

04

KEY TAKEAWAYS

## Invest wisely

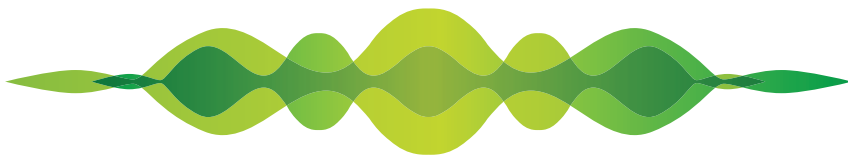
**Implement an AI solution "it's not only money for IT department" - An high level of joint effort is required from both Business and IT to understand the target tools and technologies to satisfy all needs**

Plug-and-play market solution not always result to be the most cost-effective choice: if lot of customisation is required, think about building in-house effective and tailored solutions



**Hey, Dot.  
What if I'd like to implement  
AI applications into my business?**





**That's easy. The AI Deloitte Team will help and guide you through the best solutions, according to your needs. Get in touch!**

THE PEOPLE

## AI Deloitte Team



**Alessandra Ceriani**  
aceriani@deloitte.it

PARTNER  
OPERATIONS  
TRANSFORMATION



**Luigi Mastrangelo**  
lmastrangelo@deloitte.it

PARTNER  
ENTERPRISE  
TECHNOLOGY &  
PERFORMANCE



**Alfredo Maria Garibaldi**  
agaribaldi@deloitte.it

PARTNER  
AI & DATA



**Andrea Leuzzi**  
aleuzzi@deloitte.it

PARTNER  
OPERATIONS  
TRANSFORMATION



**Marco Leani**  
mleani@deloitte.it

PARTNER  
AI & DATA



**Elio Santoro**  
 esantoro@deloitte.it

DIRECTOR  
 ENTERPRISE  
 TECHNOLOGY &  
 PERFORMANCE



**Federico Cardone**  
 fcardone@deloitte.it

MANAGER  
 OPERATIONS  
 TRANSFORMATION



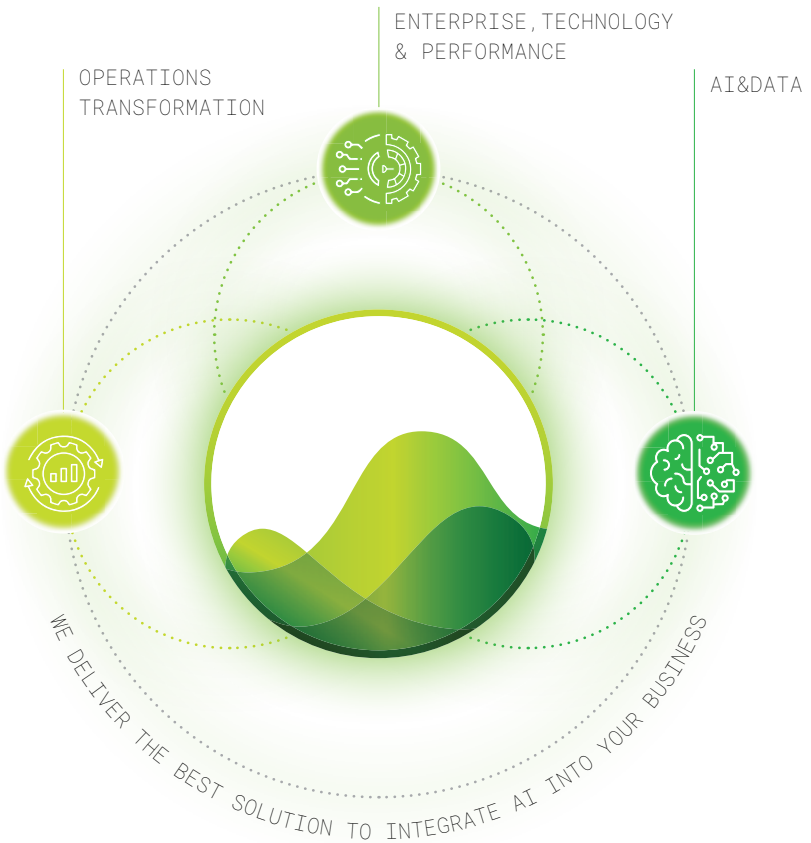
**Raffaele Russo Spena**  
 rrussospena@deloitte.it

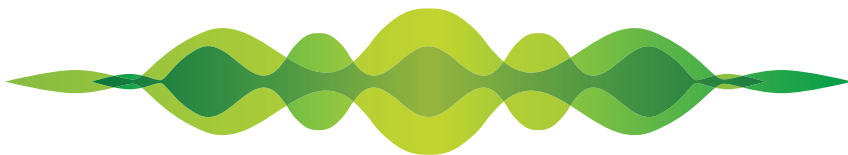
MANAGER  
 ENTERPRISE  
 TECHNOLOGY &  
 PERFORMANCE



**Bianca Giardino**  
 bgiardino@deloitte.it

MANAGER  
 AI & DATA





**Thank you for your attention.  
Hope you enjoyed that.  
If you need me just say:**

Hey, Dot.

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