

Artificial intelligence in EU companies. Comparative analysis between Romania and the member countries

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Abstract: Artificial intelligence is the future. We say intelligence because machines are taught to work, react and understand language as well as or better than humans, and artificial because this process is carried out through technology. Artificial intelligence will change the way we interact with the world around us, whether we are talking about people or companies. It will revolutionize not only the way business is done, but also the type of work, and it will reach new heights of creativity and inventiveness. For companies, the practice of AI translates directly into less time spent on routine administrative tasks internally and satisfied customers externally.

The paper focuses on the implications that the use of AI has in the business environment. The innovation and technologies used in artificial intelligence are essential, creating new business models and changing the way businesses operate.

Keywords: Artificial Intelligence, Business, Risk, Management, Romania, European Union

1. Introduction

1. Introduction

Questions about the concept of artificial intelligence and its utility arise when people think about the future. Today, artificial intelligence is found in almost every aspect of our lives: in books, in movies, on the Internet, in technical and even creative fields.

For thousands of years, people have tried to understand how we think, that is, how one can perceive, understand, predict and manipulate a world much larger and more complicated than itself. The field of artificial intelligence, or AI, goes even further: it tries not only to understand, but also to build intelligent entities.

Companies must be careful in promoting and implementing AI technologies, especially in light of the

fact that, at the level of society, consumers are reluctant to use and understand this phenomenon. The business environment must contend with the general perception that in the future robots will take over a large portion of jobs, or that they will become highly intelligent and try to dominate the human race.

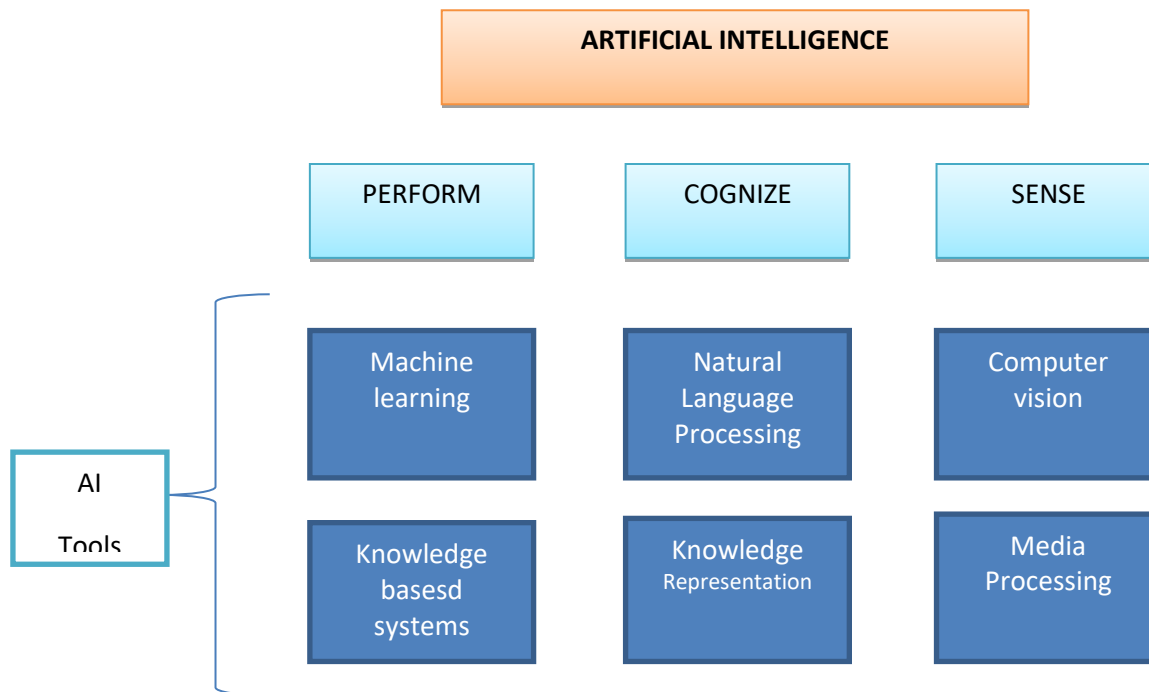
To better understand the phenomenon of artificial intelligence first, we will need to define it. Over time, mostly due to constant changes in technology, the term AI has had many definitions given by different sciences. We can say that AI refers to numerous tools and technologies that can be combined in various ways to sense, know and perform with the ability to learn from experience and adapt over time (figure 1).

The term artificial intelligence does not really mean anything concrete, which leads to many agreements and disagreements on the subject. It can be said that the phenomenon is artificial, that is, it does not have a natural source, but the terms intelligence, information are a bit ambiguous because they are based on a process that a computer system can imitate with the help of several variables, by creating an algorithm.

The father of artificial intelligence (Turing, 1950) defines this discipline as "the science and engineering of making intelligent machines, especially intelligent computer programs".

In 1973, John McCarthy defined artificial intelligence as "a science, the study of problem solving and the processes of achieving goals in complex situations" (The Lighthill Debate part 3 of 6, 1973).

The former CEO of Microsoft research Redmont Lab defines AI as "the scientific study of the computational principles behind intelligent thought and behavior" (Great Debate - Artificial Intelligence: Who is in control?, 2017). With this definition the author presents what many consider to be the four main pillars of AI: Perception, Learning, Natural Language Processing and Reasoning.



Source: Rajendra Akerkar, Artificial Intelligence for Business

Figure 1. What is AI?

Fields of artificial intelligence use

Artificial Intelligence is widely used in the field of medicine from diagnosing patients, identifying abnormalities in scans, classifying patients to tracking medical records. It is believed that in the future it will be able to be used in robotic surgery assisted by artificial intelligence and that virtual doctors and assistants will appear.

In the field of education, to overcome outdated teaching and assessment methods, especially during the Covid pandemic, software applications have been developed to help teachers. Pupils and students from all over the world have the opportunity to attend classes virtually, and through AI tools such as a Power Point slide translation plugin, the language barrier can be overcome. A telling example in this sense is represented by the project of the University of Tokyo (BigThink, 2013) that aimed to develop a system capable of passing the university entrance exam and being among the first 1%. The system searches the Internet and relies on a series of keywords that it detects after a series of matching patterns.

Another sector in which artificial intelligence has developed a lot is that of transport. The increasing dependence of people on means of transport, whether for personal use, to go to work or to transport goods from seller to buyer, has led to a development of transport infrastructure. We are in the era of electric cars, autonomous cars, levitating cars. Autonomous cars lead to a new stage of transportation, namely robot taxis (Business Recorder, 2022). Through an application on the phone, we can order such a means of transport anytime and anywhere, thus reducing or even eliminating the responsibilities and expenses of owning a vehicle, such as periodic maintenance, parking fees or searching for parking spaces. It is also desired to achieve a significant reduction in resources, being considered much more ecological than traditional means of transport, CO2 emissions are reduced, actions are implemented that can lead to the improvement of some urgent climate problems. Obviously, in addition to these advantages there are also certain disadvantages such as the fact that these taxis require connection to a network, which can lead to cyber-attacks, causing accidents, spying on customers or even stopping the entire activity.

Whether large or small, companies have begun to understand how important it is to incorporate artificial intelligence into their operations. Facebook, Google or IBM are relevant examples, being considered pioneer companies in the use of AI.

2. Literature review

The goal of artificial intelligence (AI) as a science is to make machines do things that would require intelligence if they were done by humans (Boden, 1977). Therefore, the answer to the question "*Can machines think?*" was of vital importance to this discipline. It is believed that the human brain can store over 10¹⁸ bits and process information at the equivalent of about 10¹⁵ bits per second. The media circulated the idea that by 2020 the brain will probably be shaped by a chip the size of a sugar cube (Negnevitsky, 2005). The question is

whether we want a computer to be able to surpass the human brain in almost any field.

One of the earliest and most significant works on machine intelligence, "*Computing machinery and intelligence*," was written by British mathematician Alan Turing over fifty years ago (Turing, 1950). Alan Turing began his scientific career in the early 1930s by rediscovering the Central Limit Theorem. In his 1937 (Turing, On Computable Numbers, with an Application to the Entscheidungs problem, 1937) paper on computable numbers, he proposed the concept of the universal machine. However, Turing did not provide definitions of machines and thinking. Instead of asking, "*Can machines think?*", he said people should ask, "*Can machines pass a behavioral test for intelligence?*" He predicted that by the year 2000, a computer could be programmed to have a five-minute conversation with a human interrogator and have a 30 percent chance of mistaking the interrogator for a human.

The first recognized work in the field of artificial intelligence was presented by Warren McCulloch and Walter Pitts in 1943. They proposed a model of artificial neural networks in which each neuron was postulated to be in a binary state, namely on or off stop (McCulloch & Pitts, 1943) and proved that their neural network model was in fact equivalent to the Turing machine and proved that any computable function can be computed by a network of connected neurons.

Another first-generation AI researcher who shared Alan Turing's ideas about the possibility of machine intelligence was Claude Shannon. In 1950, he published a paper on chess playing machines, which pointed out that a typical chess game involves about 10120 possible moves (Shannon, 1950).

John McCarthy from Princeton University played an essential role in defining and developing the concepts of using AI. He persuaded Claude Shannon and Martin Minsky, alumni of Princeton's mathematics department, to organize a summer workshop at Dartmouth College, where McCarthy worked after graduating from Princeton. In 1956, they brought together researchers interested in the study of machine intelligence, artificial neural networks, and automata theory. The workshop was sponsored by IBM. Although there were only ten researchers, this workshop gave birth to a new science called artificial intelligence. For the next twenty years, the field of AI will be dominated by the Dartmouth workshop participants and their students.

The early years of artificial intelligence are characterized by tremendous excitement, great ideas, and very limited success. Just a few years before, computers had been introduced to perform routine mathematical calculations, but now AI researchers have shown that they can do much more than that. It was an era of high expectations. The early work on neural computing and artificial neural networks begun by McCulloch and Pitts (McCulloch & Pitts, 1943) was continued. Learning methods were also improved by Frank Rosenblatt who proved the perceptron convergence theorem, demonstrating that his learning algorithm could adjust the connection strengths of a perceptron (Rosenblatt, 1962).

One of the most ambitious projects of the great expectations era was the General Problem Solver (GPS) (Newell & Simon, 1961), (Newell & Simon, Human Problem Solving, 1972). Allen Newell and Herbert Simon of Carnegie Mellon University developed a program with the general purpose of simulating human problem-solving methods. GPS was perhaps the first attempt to separate problem-solving technique from data. However, GPS has not been able to solve complicated problems. The program was based on formal logic and therefore could generate an infinite number of possible operators, which is inherently inefficient. The amount of time and memory that GPS required to solve real-world problems led to the project being abandoned.

Lotfi Zadeh, a professor at the University of California at Berkeley, published his famous paper "*Fuzzy sets*" in 1965 (Zadeh, 1965). This paper is now considered the foundation of fuzzy set theory. Two decades later, fuzzy researchers have built hundreds of intelligent machines and intelligent systems.

Although computer science had largely abandoned the field of neural networks by the late 1970s, research continued in other areas. Physicists such as John Hopfield (Hopfield, 1982) used techniques from statistical mechanics to analyze the storage and optimization properties of networks, treating collections of

nodes as collections of atoms.

Artificial Intelligence was recognized as a discipline in the year 1950 and since then the implications of using related technologies have been researched in several fields of activity.

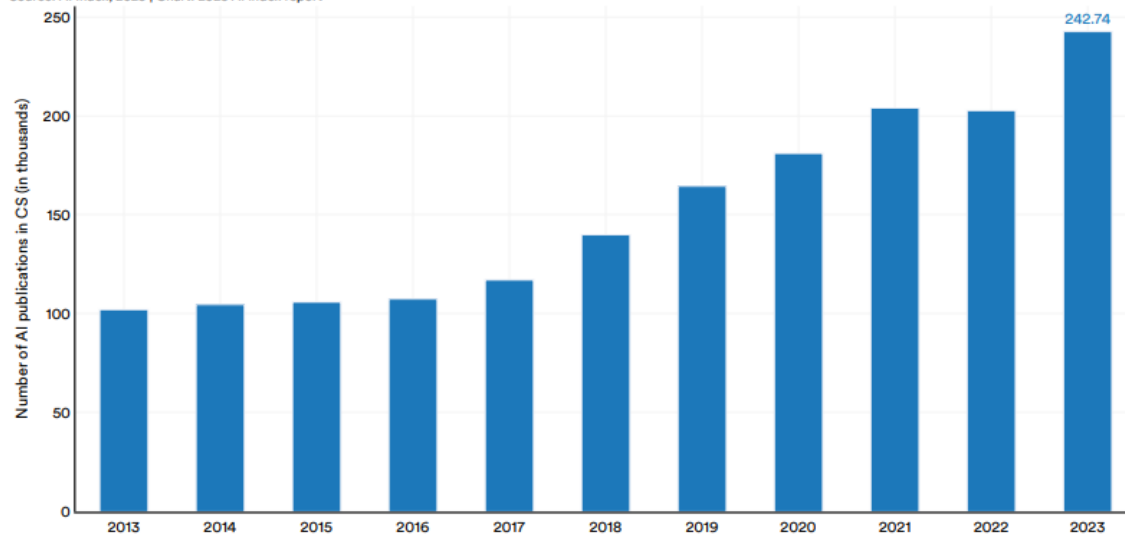
More recently, AI has been transformed as its research has expanded beyond computer science, with recent developments drawing on broad fields such as psychology, linguistics, and philosophy. Consequently, AI has been applied in various fields such as education, e-commerce, robotics, navigation, health, agriculture, military, marketing and gaming.

In general, AI methods can be broadly classified into these areas: robotics; natural language processing (Murray, Macedo, & Glynn, 2019), Big Data (Hossen & Karmoker, 2020), machine learning (Bernardini, Romeo, Frontoni, & Amini, 2021); computer vision (Jahan & Tripahi, 2021).

Between 2011 and 2023, the majority of AI studies were conducted and published by US and Chinese citizens.

Number of AI publications in CS worldwide, 2013–23

Source: AI Index, 2025 | Chart: 2025 AI Index report



Source: Stanford University | Chart: 2025 AI Index Report

Figure 2. Number of publications in AI field from 2013 to 2023

Figure 2 shows the overall number of AI articles more than doubled between 2013 and 2023, from over 102,000 in 2013 to over 242,000 in 2023. It was a significant 19.7% gain over the previous year. AI is currently being influenced by a wide range of computer science disciplines, including hardware and software engineering and human-computer interaction. Consequently, a wider and greater interest in AI throughout the discipline is reflected in the growth that has been noticed.

3. Artificial intelligence in companies

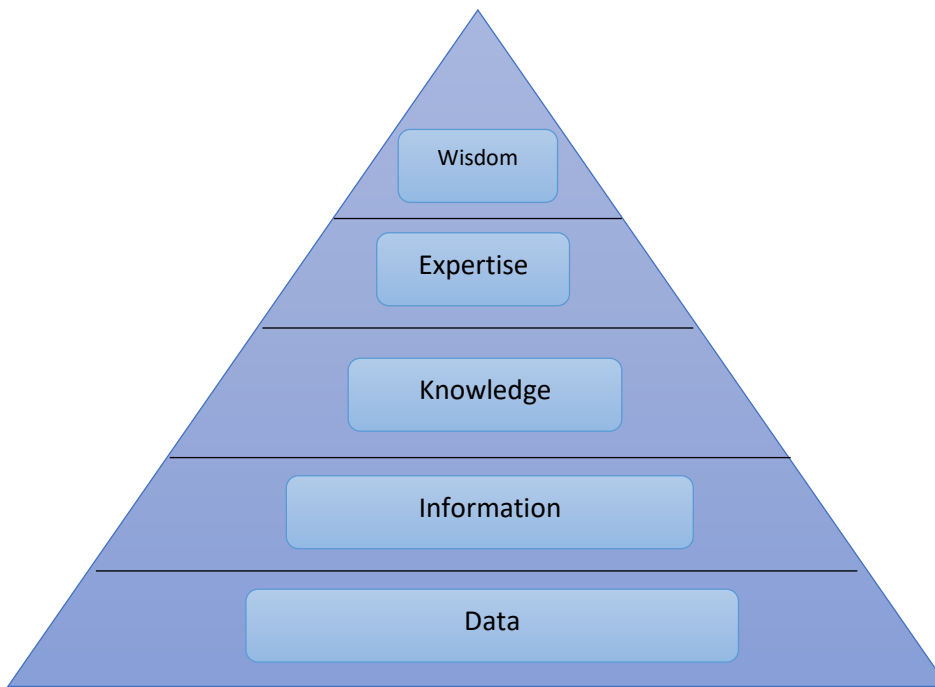
Artificial intelligence is evolving at an amazing speed in all fields, and people need to be open and ready to embrace it and take advantage of its benefits, both at work and in their personal lives.

Companies use artificial intelligence to prevent and detect various activities, including employee schedules or various transactions. Many banks and large corporations use artificial intelligence to detect and

prevent fraud and money laundering (Liebowitz, 2006).

Given the fact that organizations operate in a constantly changing environment, regardless of the industry they are part of, they must adapt to all the changes that occur. In view of the extremely rapid development of technology, an important step for companies is to develop their organizational "intelligence" part.

Organizational intelligence refers to the collective set of value-added benefits derived from the organization's intangible assets such as knowledge from employees, management, stakeholders and why not, customers.



Source: Liebowitz Jay, 2006,
 Strategic intelligence : business intelligence, competitive intelligence, and knowledge management,

Figure 3. The intelligence hierarchy

Figure 3 presents a hierarchy of the components that contribute to organizational intelligence. We can observe that companies use a pyramid-shaped hierarchy of components that contribute to artificial intelligence in the form: data refers to detected elements and, once modelled in a certain way, they become information, which after being added, turns intuitions and experience into knowledge in a specialized field that becomes expertise that turns into wisdom after many years of experience and lessons learned.

For practical purposes other than the subfield of robotics, the focus of AI has been on how to make decisions. For example, knowledge-based systems or expert systems have been developed in many fields, from medicine to business to agriculture, to aid in the decision-making process.

Artificial intelligence is used in business today to grow, improve and change the way a company operates. Visionary executives are already working on how AI can add value to their businesses, seeking to understand all the different types of AI and figuring out how to mitigate the risks that this technology inevitably brings.

In general, people first experience AI from the position of consumers. All smartphones have access to sophisticated AI, whether it's Siri, Cortana or Google Assistant. Homes are now AI-enabled through Amazon's Alexa or Google Home. All of these are supposed to make life easier to organize and are generally quite efficient. But their use is actually quite limited. Most applications rely on the ability to turn speech into words, and then those words into meaning. Once the intent has been set, the rest of the task is fairly standard automation; you can find out the weather forecast, get train times or play a certain song.

It's clear that AI, as part of the broader automation movement, will have a severe impact on jobs. For example, there are AI applications such as chatbots that can be seen as direct replacements for call centre workers.

Numerous applications of artificial intelligence systems have been developed today for various operations. Among the most famous applications used by companies are:

- **Speech recognition:** also known as automatic speech recognition, or speech-to-text, is a capability that uses natural language processing to process human speech in a written format. Many mobile devices incorporate speech recognition into their systems to perform voice search. The best-known example is Siri developed by Apple or Bixby developed by its main competitor, Samsung.

- **Customer service:** online virtual agents replace human agents and they answer questions, such as shipping a product, or provide personalized advice to users. Examples include messaging bots on e-commerce sites with virtual agents, messaging apps such as Facebook Messenger or chat from Emag (Economica, 2022).

- **Recommendation engines:** using past consumer behavior data, AI algorithms can help uncover data trends that can be used to develop more effective cross-selling strategies. This is used to make additional relevant recommendations to customers during the checkout process for online retailers.

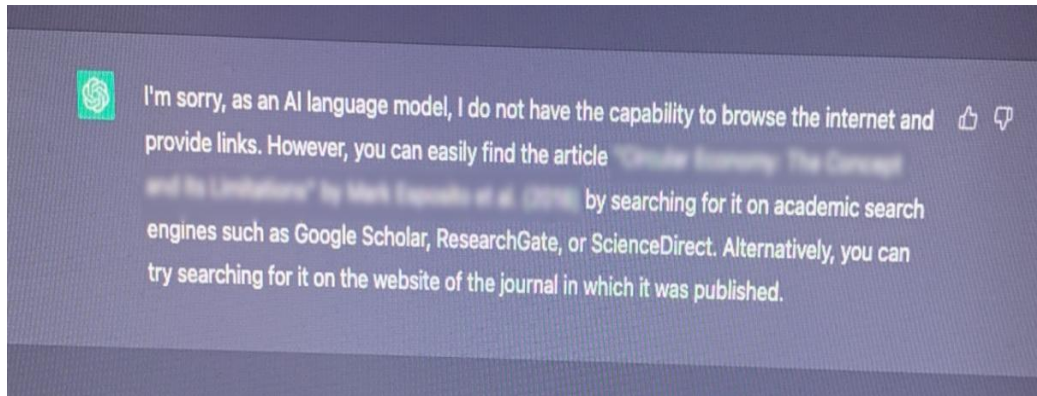
- **Automatic driving cars:** if in the past no one could imagine that cars can drive automatically, now reality has shown that it is possible with the launch of the "Google self driving car" and the autopilot function developed by Tesla.

- **Cybersecurity:** all businesses need online security because all important databases including financial data, strategies, private information, etc. are stored on dedicated servers or linked in a network.

- **Market prediction:** Technologies such as Support Vector Machines (SVM) and Artificial Neural Networks (ANN) help in the strategic planning of companies.

- **AI in education:** artificial intelligence has helped increase productivity among institutions in the field by helping them focus more on students than on clerical or administrative work. Relevant applications are aimed at automating administrative tasks, creating intelligent content and Voice Assistants for teachers.

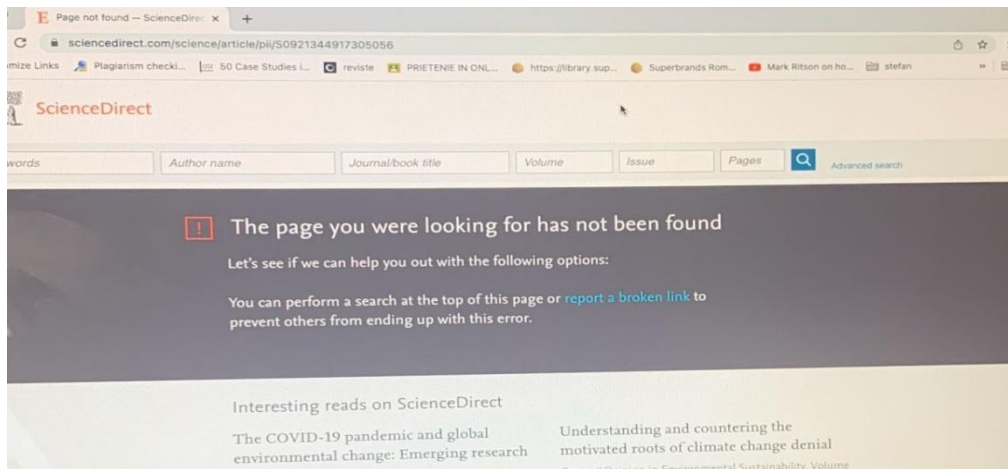
ChatGPT, OpenAI's latest (and most controversial) project is currently in the spotlight of the entire world, including the heads of Google, Microsoft and Meta, as it has become the fastest growing "app" of all time, surpassing even and TikTok (CBSNews, 2023). The AI chatbot can have chat-based conversational interactions with its users through the use of artificial intelligence, and these dialogues can be as natural as talking to a real person. ChatGPT can answer questions in Romanian, but its information is taught in English, being translated in real time from English to Romanian. Although ChatGPT can respond in other languages, its responses may not be as accurate or sound as good and natural as when communication takes place in English.



Source: personal experience

Imagine 1. A brief interaction with ChatGPT (part 1)

When it comes to generating texts that respect academic rigor, the accuracy of the information is not as expected and generates inaccurate, incorrect answers and when additional information is requested, the application provides general data or refers to the Internet (see images 1 and 2).



Source: personal experience

Imagine 2. A brief interaction with ChatGPT (part 2)

4.The need for AI in the risk management process

As we previously presented, Artificial Intelligence (AI) is starting to redefine the way businesses operate. This unleashes the power of data in a number of important functions, such as customer service, marketing, training, pricing and even security.

Artificial intelligence is gradually acknowledged across activities for the potential is has to transform the activities of a business performed every day. In risk management, AI has become synonymous with improving efficiency and productivity while reducing expenses. This has been possible thanks to the capability of technologies to handle and evaluate large capacities of unstructured data at greater speeds with considerably lower degrees of human interference.

To remain competitive in the markets in which they operate, firms in almost every industry will need to adopt and develop AI to keep pace with market participants, both domestic and foreign, digitally. They must do

this while managing the new and multiple risks posed by AI and its rapid development.

While all companies face many types of risks, managing them associated with artificial intelligence can be extremely difficult due to the impact of three factors:

- AI presents unknown and undiscovered risks and creates new responsibilities within the organization,
- AI is difficult to track across the organization,
- AI risk management involves many design options for firms without a well-developed and implemented process.

Banks and financial technology enterprises are interested in implementing risk management systems with solutions that requires artificial intelligence in order to simplify decision-making processes, to reduce risks associated with credit and to provide financial services made for their consumers through automation and machine learning algorithms.

Some specific AI use cases that have benefited from integrated risk management systems include:

- *threat management and analysis*: AI engines can analyse huge amounts of data from numerous sources that can generate real-time predictive models that enable timely risk addressing;
- *risk reduction*: AI offers the ability to evaluate unstructured data about risky behaviors in the organization's operations;
- *fraud detection*: this usually requires serious analysis processes;
- *reducing the risks associated with the workforce*: artificial intelligence models can process and evaluate data related to work operations in situations with high risks, where severe or fatal accidents can be predicted.
- *data processing and classification*: AI tools can process and classify all available information according to previously defined patterns and categories and monitor access to these data sets.

The European Commission has revealed that it is considering a new project, which is expected to be very ambitious, namely the regulation of the use of artificial intelligence, which contains a text that draws up a risk scale for different forms of artificial intelligence and which turns out to be a novel international approach that tries to reconcile the ethical aspect with the one of competitiveness.

5. Comparative analysis on the use of AI in companies in the European single market

It is not known what the future will look like, but it can be said that artificial intelligence is present and used by large technology companies, such as Facebook or Google, whose services are used by billions of people. And not only large international companies have implemented AI technologies, but also Romanian companies.

At the level of the European Union, the need to develop and implement a digital strategy (White Paper on Artificial Intelligence) based on technology, innovation and ingenuity is being discussed, based on which companies will benefit from a framework that will allow them to create start-ups, to expand, innovate and compete with big companies on a level playing field.

A study for the European Parliament (Think Tank, 2020) highlighted how AI can raise questions of accountability and responsibility. As complex AI systems become black boxes, it is increasingly difficult to understand how AI systems arrive at decisions. In addition to societal concerns, the computation involved in the design and development of AI systems comes with a growing environmental impact that cannot be overlooked. While AI could be used to support the ecological transition and protect the environment, the development of AI itself has an impact on the environment and can also be used for non-green goals that would contribute to climate change and environmental degradation.

Telling examples of legislation covering the field of artificial intelligence can be found in:

- **Belgium**: “Decree on coaching and solution-oriented support for jobseekers, N. 327”, was adopted in

the year 2021. A provision of this act directs the government to create an advisory group called the Ethics Committee, which is responsible with the transmission of advice where artificial intelligence tools will be used for digitization activities (European Commission, 2021).

- **France:** "*Law N:2021-1485 of November 15, 2021, Aiming to reduce the environmental footprint of digital technology in France*". This act establishes a monitoring system to assess the environmental impact of new emerging digital technologies, in particular artificial intelligence (Legifrance, 2021).

- **Spain:** "*The right to equal treatment and non-discrimination*". A provision of this act establishes that the artificial intelligence algorithms involved in the decision-making of public administrations take into account criteria of minimizing influence, transparency and accountability, whenever it is technically feasible. (Equinet, 2021)

Although, at present, it is no longer an EU member state, it should be noted that Great Britain also has a law for Artificial Intelligence, namely the "*Law on the provision and allocation (main currencies) c.13*", adopted in 2020 which contains a provision which authorizes the Office for Qualifications and Examination Regulation to explore opportunities to use artificial intelligence to improve the marking and administration of high-stakes qualifications (Legislation.gov.uk, 2020).

According to Eurostat, Artificial intelligence (AI) technology was used by 20% of EU businesses with 10 or more employees in 2025, a significant increase of 6.5 percentage points from 13.5% in 2024. In contrast to 2021 (7.7%) and 2023 (8.1%), the adoption of AI technology by EU companies is growing in popularity. In 2025, Finland (37.8%), Sweden (35.0%), and Denmark (42.0%) had the largest percentages of these businesses. Bulgaria (8.5%), Poland (8.4%), and Romania (5.2%) were at the other end of the spectrum.

The percentage of businesses utilizing AI technologies increased in almost every EU nation when compared to the prior year. The largest rise (+14.5 points) was recorded by Denmark, followed by Finland (+13.5 points) and Lithuania (+12.5 points).

Number	Top EU countries that use AI		Least EU countries that use AI	
1.	Denmark	42%	Cyprus	9,3%
2.	Finland	37,8%	Greece	8,9%
3.	Sweden	35%	Bulgaria	8,5%
4.	Belgium	34,5%	Poland	8,4%
5.	Luxembourg	33,6%	Romania	5,2%

Source: Adaptation after Eurostat

Table 1. EU enterprises using AI technologies in 2024

According to a global study conducted by McKinsey's (McKinsey's, 2025) in 2021 on the activity of corporations using AI, India leads the list with a percentage of 65%, followed by Asia-Pacific (65%) and the United States of America (55%). The European Union has a percentage of 51% with a number of 7334 companies, and those that have invested in AI are from countries such as Germany (\$1.98 billion), France (\$1.55 billion), Spain (\$89 million) and Portugal with investments of \$52 million. According to Tracxn (Artificial Intelligence Startups in Romania, 2023) site, Romania had in 2022 a number of 103 startups in AI and in April 2023 the number of companies was 115.

Although Romania does not have an official strategy in this field, most Romanian companies would be

interested in introducing artificial intelligence into their activities, but, according to the management, this operation would require major investments and unknown risks. At the level of companies, the importance of using modern technologies such as AI that could help increase productivity and obtain competitive advantages is being realized.

Among the barriers to the adoption and use of AI technology in the way of Romanian companies, we can list the need for clear legislation, the responsibility and understanding of the damages caused by artificial intelligence, the lack of public or external funding, the lack of trust of the population in artificial intelligence which is based on a low level of education in this field, the lack of skills among employees and insufficiently developed IT infrastructure or incompatible with artificial intelligence.

Among the Romanian companies that use and develop AI in fields such as IT, robotics or technology, we mention:

- **Bitdefender**: founded in 2001 in Bucharest, is a provider of a suite of cyber security solutions, offering products and services to protect endpoints such as a computer, mobile device and servers against viruses, spyware, worms, trojans and rootkits.

- **Druid**: Founded in 2018 in Bucharest, the firm offers a no-code chatbot creation platform that enables users to design, develop and implement conversational interfaces through API and RPA integrations with enterprise systems.

- **Halcyon Mobile** is a full-service mobile application development company based in Cluj Napoca, Romania. With a team of over 100 employees, Halcyon Mobile has created award-winning apps since opening its doors in 2005. The team also specializes in UX/UI and product design, web development and artificial intelligence. They mostly work with small and medium-sized businesses in consumer products and services, financial services, and arts and entertainment.

- **Krypton Labs**: headquarters is in Bucharest. It deals with software development to build secure, scalable and sustainable projects by using Blockchain and AI technologies.

- **Nenos Software** is a software development company based in Galați, Romania and Cluj-Napoca, Romania. Founded in 2011, the team focuses on custom software development, artificial intelligence, IoT development, web design and more.

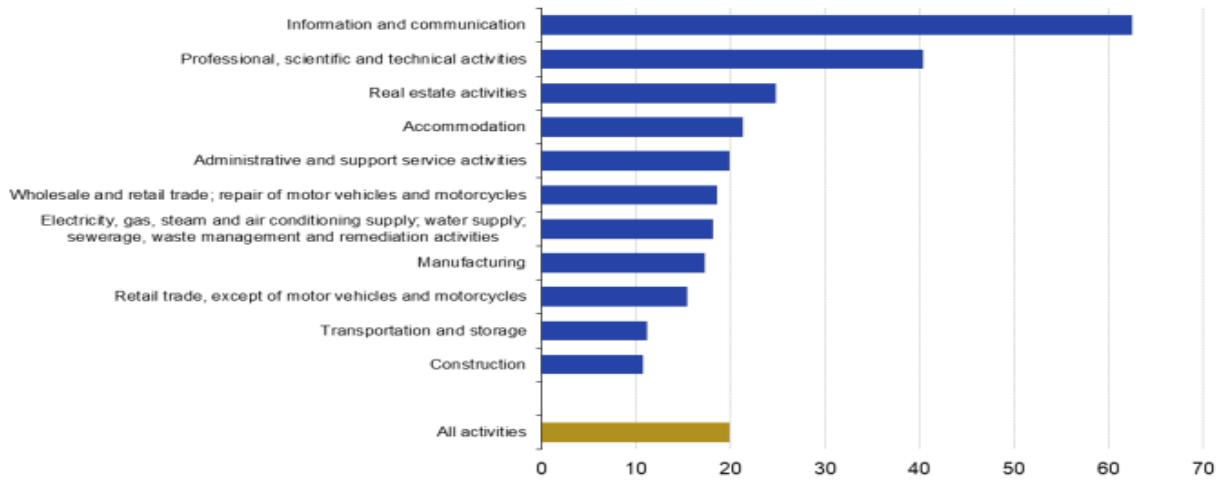
- **Transylvania High Tech** is an artificial intelligence firm founded in 2015. Located in Timișoara, Romania, their small team specializes in artificial intelligence, blockchain, mobile app development, and web development.

In February 2023, the Romanian Prime Minister recently presented the first honorary advisor based on AI technology in his office. Called ION (First AI Government Councillor) and developed by Romanian researchers, it uses artificial intelligence to quickly and automatically capture the opinions and wishes of Romanians using information from the public space. Its role is to help state institutions to better serve Romanian citizens, informing in real time about their proposals, problems and wishes.

In the European Union, most of the companies using AI are large and have a predominant field of activity in the service sector, such as information and communication, real estate activities, and with a smaller share are companies in the field of constructions.

AI is utilized far more in some economic operations than in others (figure 4). This could suggest that AI is more appropriate for some tasks. The industries with the largest percentage of businesses using AI in 2025 were information and communication (62.52%) and professional, scientific, and technical service activities (40.43%). The percentage of businesses employing AI in all other economic operations was less than 25%. This varied from 10.79% (building) to 24.82% (real estate activity).

Enterprises using AI technologies by economic activity, EU, 2025
 (% of enterprises)



Source: Eurostat (online data code: isoc_eb_ain2)



Source: European Commission

Figure 4. Enterprises using AI technologies by economic activity, EU, 2025

Among the barriers to AI that the member countries of the European Union encounter are the difficulty in finding employees who have the necessary skills, the adoption costs of AI or the lack of public or external funding.

Among the most well-known companies in the European Union that have implemented and use AI we can count:

- **Iktos**: founded in France; Iktos is a start-up company specialized in the development of artificial intelligence solutions applied to chemical research, more specifically medicinal chemistry and the design of new drugs.
- **Konux**: founded in Germany; an AI and Internet of Things company. It provides transformational rail operations solutions based on smart sensors and AI-based analytics to provide real-time insights and enable customers to better monitor their infrastructure and improve operations and costs.
- **Speechmatics**: founded in the United Kingdom; provides enterprise-grade speech recognition technology to understand every voice, regardless of accent, dialect, age, gender, race or location.
- **Owkin**: founded in France; provides a platform that uses AI techniques to discover biomarkers and mechanisms associated with diseases and treatment outcomes.
- **DeepL Translator**: founded in Germany; is a neural machine translation service. Its neural networks are able to pick up nuances and reproduce them in translation.

Conclusions

Artificial intelligence is in a calibration period, with many unknowns.

We live in the era of the knowledge revolution, when the power of a nation is determined not only by

the number of equipment's the army has, but above all by the knowledge it possesses. Science, medicine, engineering, and business propel nations toward a higher quality of life, but they also require highly skilled and skilled people. We are currently developing intelligent machines that can capture the expertise of such knowledgeable humans and reason in a human-like manner.

There is no doubt that Artificial Intelligence, in its broadest sense, will have a fundamental impact on the way business is done. It will change the way decisions are made, enable the creation of entirely new business models, and enable doing things that were previously thought impossible. But it will also displace the work currently performed by knowledge workers and disproportionately reward early and effective AI adopters. We believe that AI for organizations is both a huge opportunity and a risk that is impossible to assess at the moment, wrapped in a bewildering package of algorithms and jargon.

Romania has a great potential for the development and implementation of Artificial Intelligence at the level of the business environment, registering scores above the EU27 indicators. From a business perspective, the services sector generates the most opportunities for AI adoption, with the most opportunities being found in sectors such as commerce, healthcare and education. With the transition to the green economy, the industrial and manufacturing sectors can generate new opportunities in the adoption of AI. At the same time, the speed of the Internet, the use of 5G technology at low prices represent a great potential for Romanian companies in the development and adoption of artificial intelligence in their activities.

Disclosure statement

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