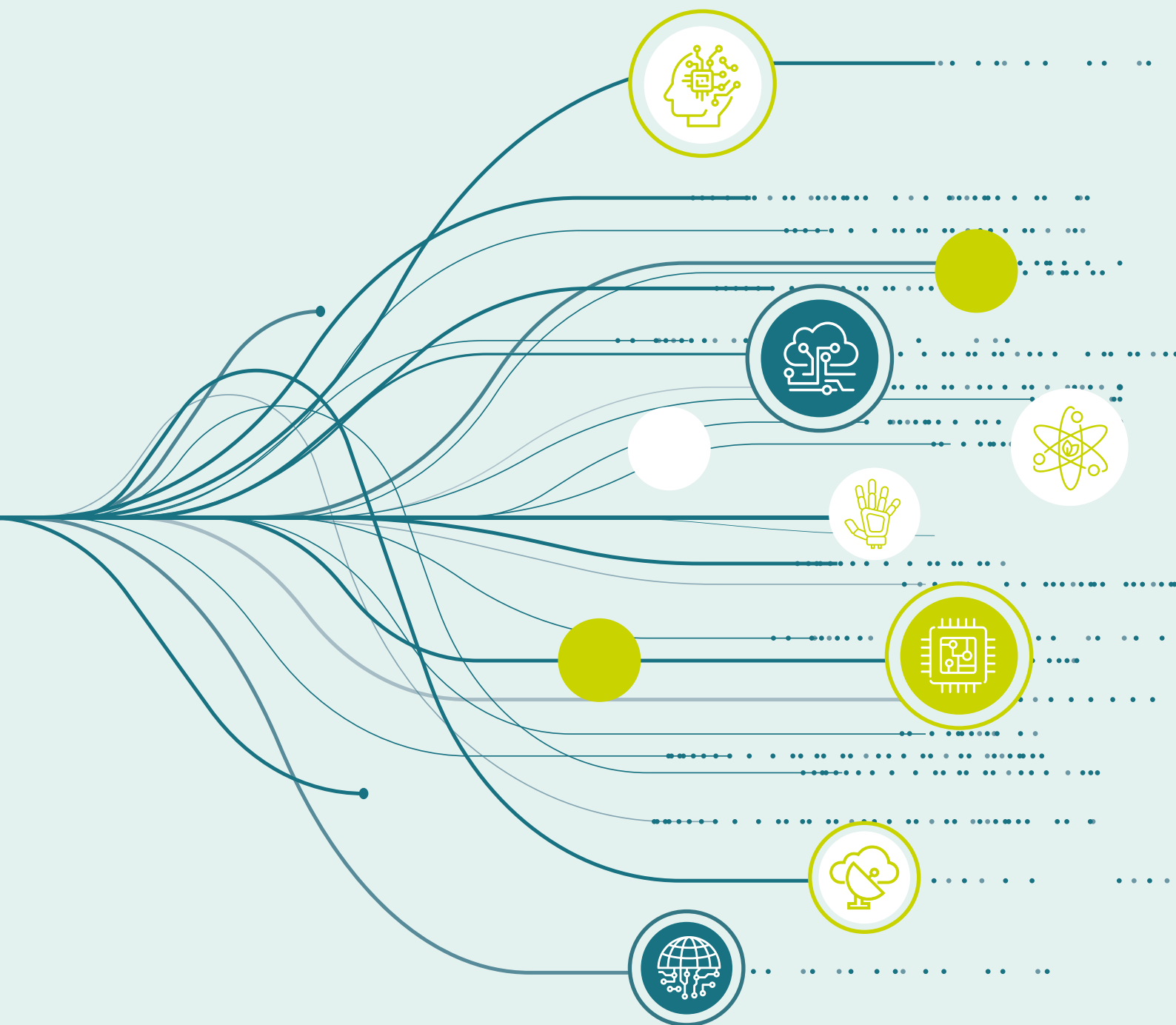


.experience

Three decades of innovation: Our journey through Tech and AI

A magazine by ERNI since 1999.



Editorial



Dear readers,

This year, ERNI celebrates an important anniversary – we are turning 30 years old. What started as a small team in Daniel Erni's flat in Lucerne has grown into a global player in the field of Software Engineering – with more than 800 employees in 18 cities in Europe, Asia, and the US. Almost the same age as the company is the magazine that you are holding in your hands, which has accompanied you through recent trends and technologies.

A profound boost for digital innovation came exactly 30 years ago, when Tim Berners-Lee invented the World Wide Web for the broader public. Today, artificial intelligence is taking the world by storm – a quantum leap in the world of technology. I can remember some years ago when we were discussing ChatGPT with colleagues, still on a theoretical level full of excitement about what it would bring when available to the public. For over a year the tool is exciting all of us. Companies are finding themselves in the fast lane, racing for who will deliver a better AI model to deliver more customer value.

Therefore, we have dedicated this edition of .experience to the two topics outlined: the company's 30th anniversary and artificial intelligence. Let us guide you on a journey from the AI megacycle and its transformation effects through the development of leadership in the AI era all the way to AI legislation and to AIDA – ERNI's own AI model.

I wish you an insightful read.

A handwritten signature in blue ink that reads "R. Botor". The signature is stylized with a long horizontal stroke at the end.

Rafael Botor

Table of contents

02

Editorial

By Rafael Botor

04

ERNI 1994 and today - a personal review and outlook

By Daniel Erni

06

Global ERNI milestones: An overview

By Mireia Ventura

10

ERNI AIDA: Why your company needs an internal ChatGPT

By Alberto Martín

12

Leadership in the AI era: Balancing artificial intelligence and human leadership skills

By Rafael Botor

15

Embracing the AI megacycle: Transformative impacts on industries and everyday life

By Patrick Ott

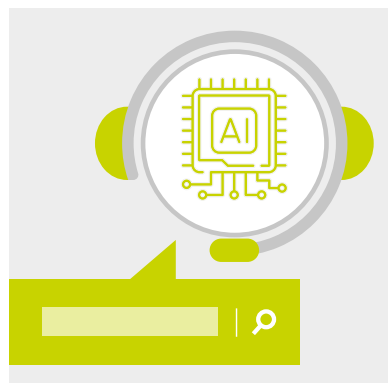
18

The EU's new AI regulation: Challenges and key insights for businesses

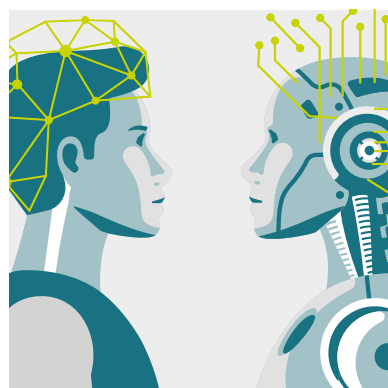
By Jose Oro Margarit



04



10



12

ERNI 1994 and today - a personal review and outlook

Our founder Daniel Erni talks about his initial founding idea, his first days as an entrepreneur and the vision for ERNI. He reflects on the last thirty years, but looks to the future with confidence. Because he believes in ERNI and the ERNIans.

By Daniel Erni, Founder of ERNI

Founding ERNI 30 years ago

It's 13th October 1994, a rainy autumn day in Horw, a suburb of 10,000 people in Lucerne, Switzerland's tourist city and the capital of my home canton. I'm sitting at a white-coated chipboard panel balanced on two painters trestles, overlooking the courtyard from my 3 1/2-room flat on the mezzanine floor in the Spitz neighbourhood. I had lived here since 1988 as a student in the final semesters of business administration, specialising in banking at the University of St. Gallen, and then as the business unit leader of a Zurich engineering company.

I had furnished the cheap flat with student thriftiness: Two mattresses, one in the bedroom, the other in the parlour, four rattan chairs at the kitchen table, and the aforementioned makeshift table in my study room: no pictures, no mounted lamps, no frills. I wasn't at home much, either. Once, when a colleague stood waiting outside my front door, and nobody opened it, my neighbour is said to have shouted into the stairwell: "I haven't seen him for a long time; he's probably moved out."

But on 13 October 1994, I was at home, on holiday, and immersed in the book "How can I become self-employed?" My free time in the previous months had been taken up with in-depth analysis and studies. I drew up a business plan for my intended self-employment. The documents I created became increasingly extensive and eventually filled seven federal folders. The business idea: renting out equipment and machines for hobby craftsmen.

I had already cancelled my employment contract, and my last day at work was approaching. Unexpectedly, the project was cancelled at the last minute. The business plan became redundant. "What am I going to do now?" was the question that I was thinking about intensely at the beginning of October 1994. My conclusion was that I would do what I had learnt to do in my professional life over the last five years. I was going to sell software engineering services. "I know that, I can do that!" I was brimming with confidence. It was clear: I gave up my well-paid managerial job and threw myself into my adventure full of confidence.



In a spontaneous move, I travelled to the commercial register office that rainy morning and had the sole proprietorship “ERNI Unternehmensberatung” entered in the register with the purpose of “providing services in the field of IT”. I was in a hurry because I was allowed to list all up-front expenses as costs in the accounts from the time the company was founded. This is what the book says: “How can I become self-employed?”. The costs were negligible at the time, but the economist in me shone through and accompanied me throughout my entire entrepreneurial journey.

30 years later

Today, 30 years later, ERNI is a global software engineering and digitalisation consultancy, employing around 800 people in 18 offices in major cities in Europe, Asia and the United States. We help our demanding customers from R&D, IT and business organisations to make their products better and processes leaner. For many of them, we connect the physical and digital worlds. That’s where we are really strong.

At 30 years old, the company has reached an advanced age for the IT sector – many of its competitors have already disappeared. I have now reached the autumn of my working life. What can I look back on? First and foremost, my dear family. A wife who has supported me with kindness throughout all these years, and our four children, who are thriving wonderfully. Have I achieved my vision? If you only look at the facts, probably not. In the first 10 years, I was only concerned with entrepreneurial survival, but after surviving the dotcom crisis at the beginning of this century, I became more ambitious. At that time, I developed a plan to build a large, globally active software engineering company, which 30 years later, when I reached retirement age, would have 100 offices worldwide, each with 100 engineers offering Swiss Software Engineering to demanding customers.

I missed this target by a long way. But what can we ERNIans be proud of? There are a few things: over 80% of our employees work abroad, and we generate over 50% of our turnover in five markets outside Switzerland. The ambition to take Swiss Software Engineering out into the world is recognisable. This is how we serve the foreign market. Eighty percent of our turnover comes from loyal regular customers, over twenty percent of our employees have been working with us for more than five years, and an increasing number for more than ten years, which deserves recognition in our dynamic industry.

The next 30 years

We have become a secure value for many people. They trust us. We can be really proud of that. Ultimately, our most tremendous success is that we are still independent and can decide our own future. What’s next? We will



Image title: The Endeavour of Captain James Cook, who “discovered” the world for England.

continue to determine our own destiny for the next 30 years. I will make sure of that, and I actually started 10 years ago: I handed over responsibility as CEO to my successor back then (although I loved the job), and a year ago, I handed over my role as Chairman of the Board of Directors (others are much better at this). Subsequently, the Board of Directors was expanded and rejuvenated and now includes two women, one of whom is my eldest daughter, who represents the family’s interests. A management participation program ensures better involvement of top management. It promotes their pride of ownership, which I expect will lead to better decisions and a continuation of sustainable business development. The family will fulfil its role as an anchor shareholder and ensure long-term, stable shareholdings.

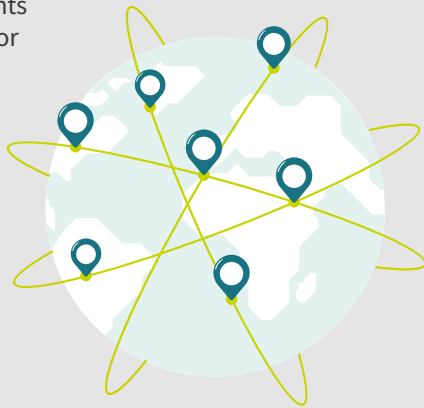
And the market? It will develop fantastically: software engineering, data and artificial intelligence – a mixture that places the highest demands on our customers’ projects. Many sectors will be affected and challenged. The world needs Swiss Software Engineering. ERNI will be there where it needs us: To connect the physical with the digital world, with a global Swiss engineering mindset and highly motivated and competent talents on-site. Maybe there will be a hundred of them – one day.

Global ERNI milestones: An overview

By Mireia Ventura, Global Marketing Manager

Highlights 1994 - 2010

Tim Berners-Lee invents the World Wide Web for the broader public.



Digital filming and DVDs appear.



Wi-Fi becomes publicly available.

1994

ERNI is founded in Lucerne.



1995

The domain ERNI.ch is registered among the first 500 domains in Switzerland.

1996

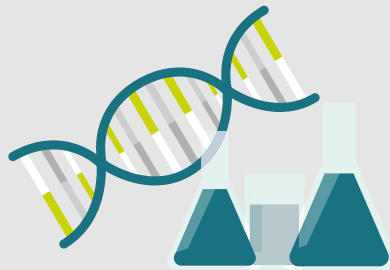


1997

We achieve our first ISO 9001 certificate testifying our high quality standards.



The Agile Manifesto is published, leading to the wide adoption of agile methodologies in software engineering.



The complete draft of the human DNA – our Human Genome – is sequenced.

The iPhone is introduced into the market, revolutionising the mobile phone industry.

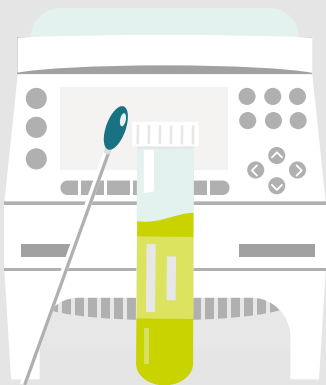
High-definition video conferencing appears as new technology.

2001

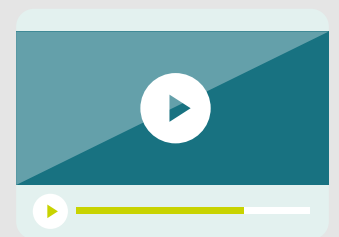
2003

2007

2010

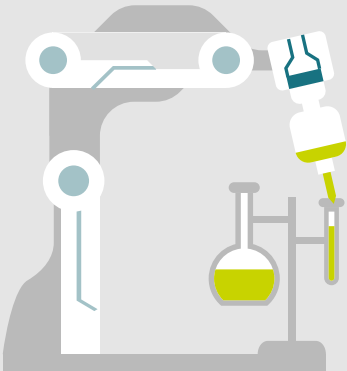


We deliver our first IVD (In Vitro Diagnostics) project, regarding a PCR blood screening system.

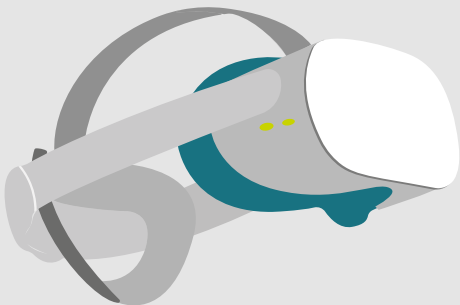


ERNI expands to other European markets like Germany, Spain, Slovakia and Romania.

Highlights 2011 - 2024



Many companies are developing their own VR headsets, including Apple, Amazon, Sony and Samsung.



Quantum computing becomes a reality.

2011

2016

2017

2019

2020

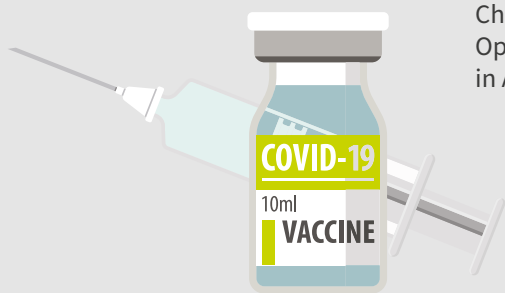
We open our first office outside of Europe – in Manila, the Philippines.

We open our MedTech Labs in Barcelona, Spain and complete our first ISO 13485 certificate for MedTech.



We start working on projects about computer vision technology and develop apps for VR (Virtual Reality) glasses.

We contribute to developing a diagnostic device that diagnoses more diseases in less time worldwide.



COVID-19 vaccines are developed.

2021

ChatGPT is launched by OpenAI, sparking a surge in AI model adaptation.

2022

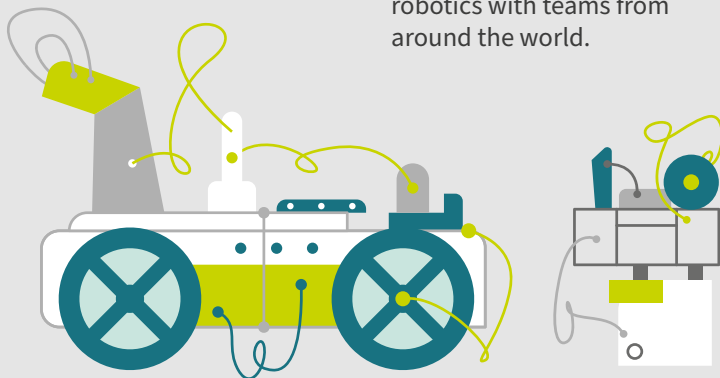
The first drug that slows Alzheimer's disease is approved.

2023



2024

We hold a hackathon about robotics with teams from around the world.



We contribute to the first worldwide digital PCR development.

We release ERNI AIDA – a generative AI platform for our employees.

ERNI AIDA: Why your company needs an internal ChatGPT

Last year, we embarked on a journey to understand the rise of AI and why it should matter to everyone at ERNI. After a thorough analysis, we concluded that to leverage AI fully, we needed a tool accessible to all employees. Thus, the idea of having an internal ChatGPT was born.

By Alberto Martín, Innovation Director

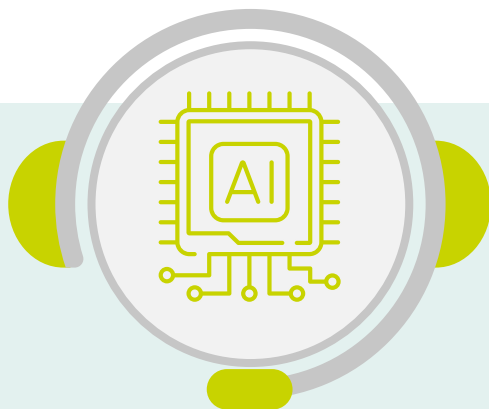
Why your company should have an internal ChatGPT:

1. Our use case

ERNI AIDA was launched for all ERNIans early this year. The application features a simple interface, so users do not need extensive technical knowledge. They can simply choose the model, adjust the so called “temperature”, and start using it. This ease of use has made it a popular tool among our employees.

2. Impact on productivity

AIDA represents the first step in ERNI’s journey to accelerate AI adoption. With the tool in place, we plan to provide training sessions to help employees maximise its potential. Additionally, we will organise a tournament to practise the knowledge acquired. This initiative aims to enhance productivity and foster a culture of continuous learning and innovation.



3. Security and compliance

ERNI AIDA is designed with security and compliance in mind. It adheres to ISO27001 standards, ensuring that we can use it for confidential information without the risk of the model being trained on the provided data or storing any of it. This level of security is crucial for maintaining the integrity and confidentiality of our business operations. Additionally, having an internal GPT reduces the risk of employees using external platforms, thereby preventing potential leaks of sensitive information.

4. Cost efficiency

We adopted a “pay-as-you-go” approach, which allows us to avoid being tied to a specific licence for a particular purpose. This flexibility ensures that we only pay for what we use, making it a cost-effective solution for our organisation.

5. Accessibility and updates

The tool is easily accessible and integrated with the latest models, such as GPT-4o, DALL-E 3, GPT4-Vision, and text-to-speech capabilities. This ensures that our employees always have access to the most advanced AI technologies, enabling them to perform their tasks more efficiently. It also incorporates the ability to upload documents and “ask questions” about them.

6. Innovation and future plans

We also aim to evolve the tool with new features in the field, such as a prompt marketplace, ensuring that we collaborate to share

the best and most useful use cases for each area and technology. To date, nearly 400 ERNIans are using the tool for various purposes. This forward-thinking approach positions us as innovators in the industry and demonstrates our commitment to leveraging AI for business growth.

7. General solution with comprehensive capabilities

While ERNI AIDA is a general solution designed to enhance productivity and innovation, our capabilities extend across the entire spectrum of data and AI projects. We specialise in delivering custom solutions tailored to meet our customers’ unique needs. Whether it’s developing advanced machine learning models, implementing data analytics platforms, or creating bespoke AI-driven applications, our team has the expertise to handle it. This versatility ensures that we can provide comprehensive support to businesses looking to leverage AI for their specific requirements.

Conclusion:

ERNI AIDA not only positions us as innovators but also helps us become more productive in our daily work. From a business perspective, the implementation of AIDA is a strategic move that can drive significant competitive advantage. By leveraging advanced AI capabilities, we can optimise operational efficiencies, reduce costs, and improve decision-making processes.

Furthermore, the insights gained from AI-driven analytics can identify new market opportunities and enhance customer experiences, driving revenue growth. Investing in such forward-thinking solutions demonstrates our commitment to staying ahead of the industry and continuously delivering value to our stakeholders.

Leadership in the AI era: Balancing artificial intelligence and human leadership skills

As we stand on the brink of a new era defined by rapid advancements in artificial intelligence, the role of leadership is undergoing a profound transformation. AI's integration into various facets of business operations promises unprecedented efficiencies, insights, and innovations. However, as we embrace these technological advancements, we must remember that leadership is not solely about leveraging cutting-edge tools; it's also about understanding and nurturing the human element within organisations. Let's explore the potential of AI to enhance leadership while assessing why human leaders remain irreplaceable.

By **Rafael Botor**, CEO ERNI Group

Leadership in the AI age

As in previous times, new technologies such as virtual meetings and e-mail communication have changed our leadership behaviour. Recently, AI has revolutionised various aspects of leadership even more. Advanced algorithms can process vast amounts of data at lightning speed, providing leaders with previously unimaginable insights. Predictive analytics can forecast market trends, optimise resource allocation, and suggest strategic decisions based on historical data. AI-driven tools can streamline administrative tasks, allowing leaders to focus more on strategic and creative endeavours.

Moreover, AI can enhance decision-making by eliminating human biases. Algorithms can objectively analyse data without the influence of emotions or preconceived notions, potentially leading to more rational and fair outcomes. In crises, AI can provide real-time informa-

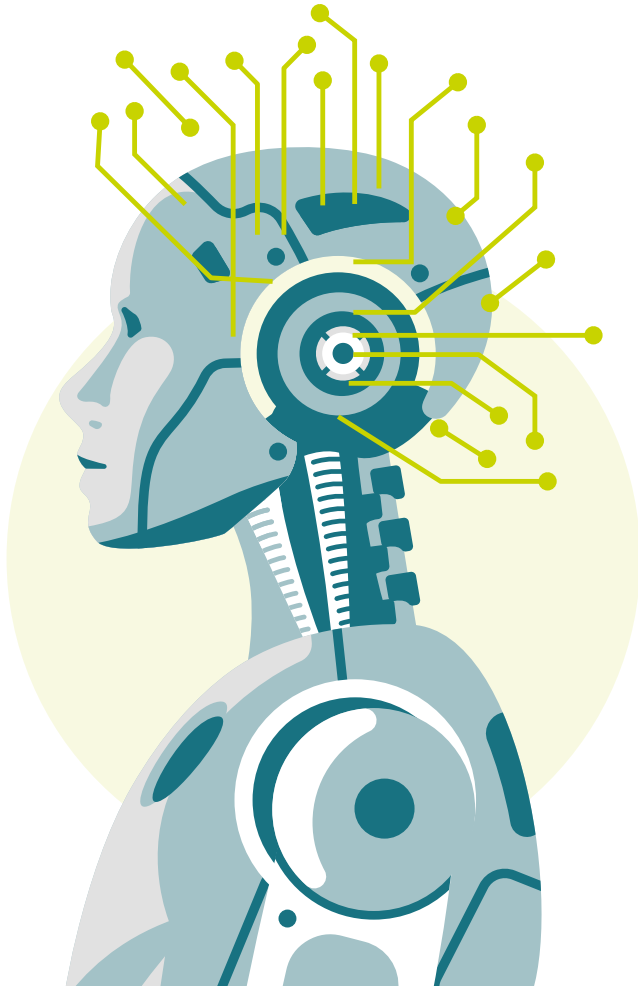
tion and simulations, helping leaders to make informed decisions quickly.

AI technologies bring significant advantages. However, these advancements also pose challenges to human leadership.

When should leaders rely on AI's strengths?

When do they need to apply critical thinking skills and emotional intelligence?

Are the ethical standards of oneself or the organisation reflected in AI?



Irreplaceable aspects of human leadership

At its core, leadership is about inspiring, guiding and nurturing people to achieve common goals. It involves understanding the complexities of human emotions, motivations and interpersonal dynamics. Despite current advances in AI, the core of effective leadership lies in qualities that are inherently human. It is, therefore, essential to recognise and celebrate irreplaceable traits of human leadership.

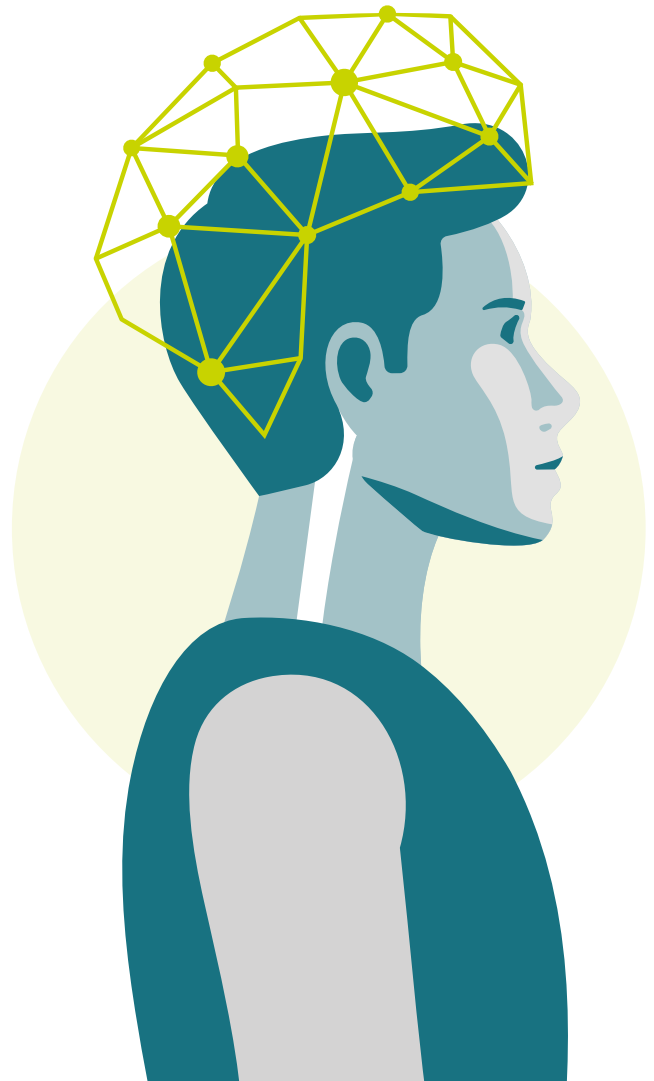
Self-awareness allows leaders to recognise their strengths and weaknesses. This awareness is crucial when integrating AI into business processes, as it helps leaders understand where AI can add value and where human judgement is indispensable. By acknowledging their limitations, leaders can make more balanced decisions and avoid overreliance on technology.

Empathy, in particular, is a trait that AI cannot currently replicate. Understanding and sharing the feelings of others is fundamental to building trust and fostering a positive organisational culture. Leaders who empathise with their team members are better equipped to address their concerns, provide support and foster an environment where everyone feels valued and motivated.

Another irreplaceable aspect of human leadership is the ability to envision a future and inspire others to work toward it. Visionary leaders possess a unique blend of creativity, foresight and passion that drives innovation and progress. They can articulate a compelling vision, rally people around it and navigate the uncertainties and challenges along the way.

To navigate these challenges, leaders need creativity which fuels innovation and problem solving. In an ever-changing business landscape, creative leaders think outside the box, generate novel ideas and adapt to unforeseen challenges. Unlike AI, which relies on existing data and algorithms, human creativity is boundless and can lead to breakthroughs that redefine industries.

Last but not least, passion is the fuel that drives leaders to persevere in the face of adversity. It is the emotional commitment to a cause or goal that inspires others to follow suit. While AI can process information and suggest logical courses of action, it lacks the intrinsic motivation and emotional drive that characterise passionate human leaders.



Human leadership skills and artificial intelligence

To navigate the complexities of the AI era, leaders must strike a balance between leveraging AI and nurturing their leadership skills. We consider the following strategies to achieve this balance:

Invest in continuous learning



Leaders should stay informed about the latest developments in AI and understand how these technologies can be applied to their organisations. Simultaneously, they should invest in developing their leadership skills through training and self-reflection. A commitment to continuous learning ensures that leaders can effectively integrate AI while maintaining a human-centric approach.

Foster a culture of collaboration



By bringing together diverse perspectives, organisations can develop AI solutions that are both technologically advanced and aligned with human values. A collaborative approach ensures that AI initiatives are implemented to enhance, rather than diminish, the human experience.

Enhance communication



Effective communication is essential for balancing AI. Leaders should transparently communicate AI's benefits and limitations to their teams, addressing any concerns and fostering a sense of inclusion. Open dialogue helps demystify AI and ensures that employees feel valued and supported during the transition.

Lead by example



By demonstrating a commitment to both technological innovation and emotional understanding, leaders set a powerful example for their teams. This dual focus inspires employees to embrace AI while maintaining a strong sense of empathy and collaboration.

Conclusion

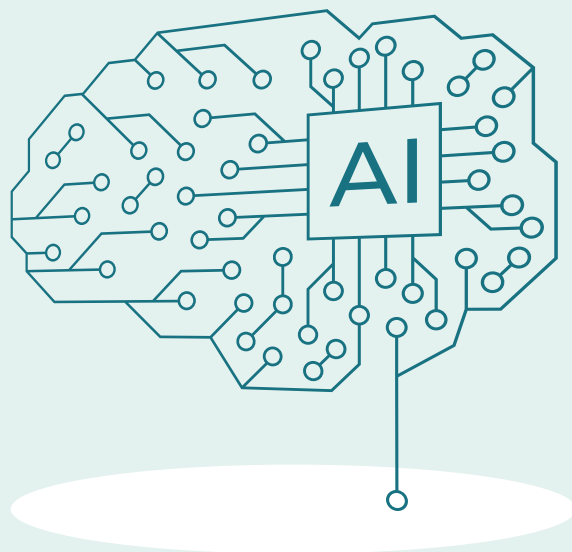
In the AI era, leadership is evolving to encompass technological prowess and emotional intelligence. While AI offers transformative potential, human leadership skills ultimately drive organisational success. By embracing the potential of AI while staying true to the core qualities that make us human, we can create a future where technology and humanity work hand in hand to achieve extraordinary outcomes. As we navigate this exciting new landscape, let us remember that the heart of leadership lies in understanding and empowering the people we lead.

Embracing the AI megacycle: Transformative impacts on industries and everyday life

In the evolving landscape of AI, balancing the integration of advanced technologies with established methods is crucial. For software engineering companies, it is essential to be able to recognise the importance of leveraging the latest AI innovations like transformer models and valuing the efficiency of traditional AI techniques. This allows us to create solutions that are both forward-looking and grounded in proven methodologies, ensuring that we meet the needs of our partners in a way that drives meaningful progress while maintaining operational simplicity.

By Patrick Ott, Global AI Director

The release of ChatGPT marked a significant milestone in the AI megacycle that has captured the world by storm. The so-called attention mechanism laid the foundation for transformer models like GPT (Generative Pre-trained Transformer), which have revolutionised natural language processing (NLP) and extended to image and video processing. Today's AI systems particularly excel in areas where humans face challenges, such as gaining a holistic understanding of large datasets and capturing the interdependencies within data items.



Real-world applications of AI models

AI is transforming industries by boosting operations and driving growth. For example, it predicts customer behaviour from vast datasets, enabling personalised marketing strategies and automating customer service through intelligent chatbots that improve response times. In supply chain management, AI forecasts disruptions and optimises logistics to maintain smooth operations.

Generative AI accelerates content creation, helping marketers develop ideas, conduct keyword research, and analyse competitors, all of which enhance campaign engagement. AI also optimises business processes, from HR to inventory control, driving efficiency and reducing costs. AI-powered chat agents and automation tools handle administrative tasks like scheduling appointments and handling emails, streamlining operations and improving job satisfaction.

Klarna, a global payments platform, leverages AI to dramatically enhance productivity while lowering costs. By using an AI assistant for customer service, Klarna performs the equivalent work of 700 full-time employees, handling two-thirds of customer queries and reducing resolution times by 80%. This automation has increased revenue per employee by 73% and saved the company \$40 million annually. The integration of AI has helped the platform boost revenue by 27% while keeping operating expenses flat.

Source:

<https://www.klarna.com/international/press/klarna-ai-assistant-handles-two-thirds-of-customer-service-chats-in-its-first-month/>

<https://www.klarna.com/international/regulatory-news/klarna-h1-earnings-compounding-growth-generates-27-revenue-rise-sek-11-billion-profit-improvement-and-over-sek-1-trillion-annualized-gmv/>

To mention a case from our own project pool, a partnership with a major transportation company aimed to optimise capacities through AI. By developing a machine learning algorithm, the project improved occupancy forecasts, helping to distribute passengers more efficiently across assets. Integrating diverse data sources into a cloud-based platform, and bringing expertise in machine learning and data engineering enabled better planning, load management and resource allocation, resulting in enhanced operational efficiency and customer experience.

Foundational models and their possibilities

Foundational models, large-scale AI systems trained on diverse data, are revolutionising the AI landscape. These models go beyond traditional language interpretation to include multi-modal capabilities, integrating text, images and other data types. For instance, OpenAI's GPT-4 and Google's BERT have demonstrated these multi-modal capabilities, opening new avenues for AI applications. Foundational models are being developed for various advanced applications, including autonomous driving, managing bureaucratic loads, and enhancing decision-making through querying other models.

The versatility of foundational models allows them to interact and complement each other, leading to more robust and informed decision-making.

Integrating these models across different domains significantly enhances their capabilities. For example, combining image recognition and language models enables detailed visual and contextual analysis. This cross-domain integration is crucial as robots perform more everyday tasks, promising autonomous performance in complex tasks across industries from manufacturing to healthcare.

One exciting application of foundational models lies in managing the increasing bureaucratic load within companies.

Imagine an AI that interacts seamlessly with both employees and customers, understanding and streamlining company operations while providing feedback for continuous improvement. This kind of foundational model will revolutionise business processes, increasing efficiency and productivity. The ability to create and deploy such versatile models will drive innovation and operational excellence across various sectors, opening new possibilities and improving outcomes in previously unimaginable ways.



The value of older AI methods

While transformers and generative AI are powerful, older AI methods still hold significant value. They excel in processing large datasets and handling tasks like automated warranty claims, risk assessment in banking, and predicting stock levels for logistics. Traditional models remain effective in the fraud detection, recommendation systems and predictive maintenance. Their development, training and operationalisation are often faster and cheaper than their transformer-based counterparts.

The software industry as well as the data science industry should leverage both new and old AI tools, applying the most efficient technology to each challenge. Existing business process automations should remain if they function well, aligning with the principle of Occam's Razor: the simplest solution is often the best. Newer AI models can augment and enhance existing automation algorithms, increasing productivity without the need to start from scratch.

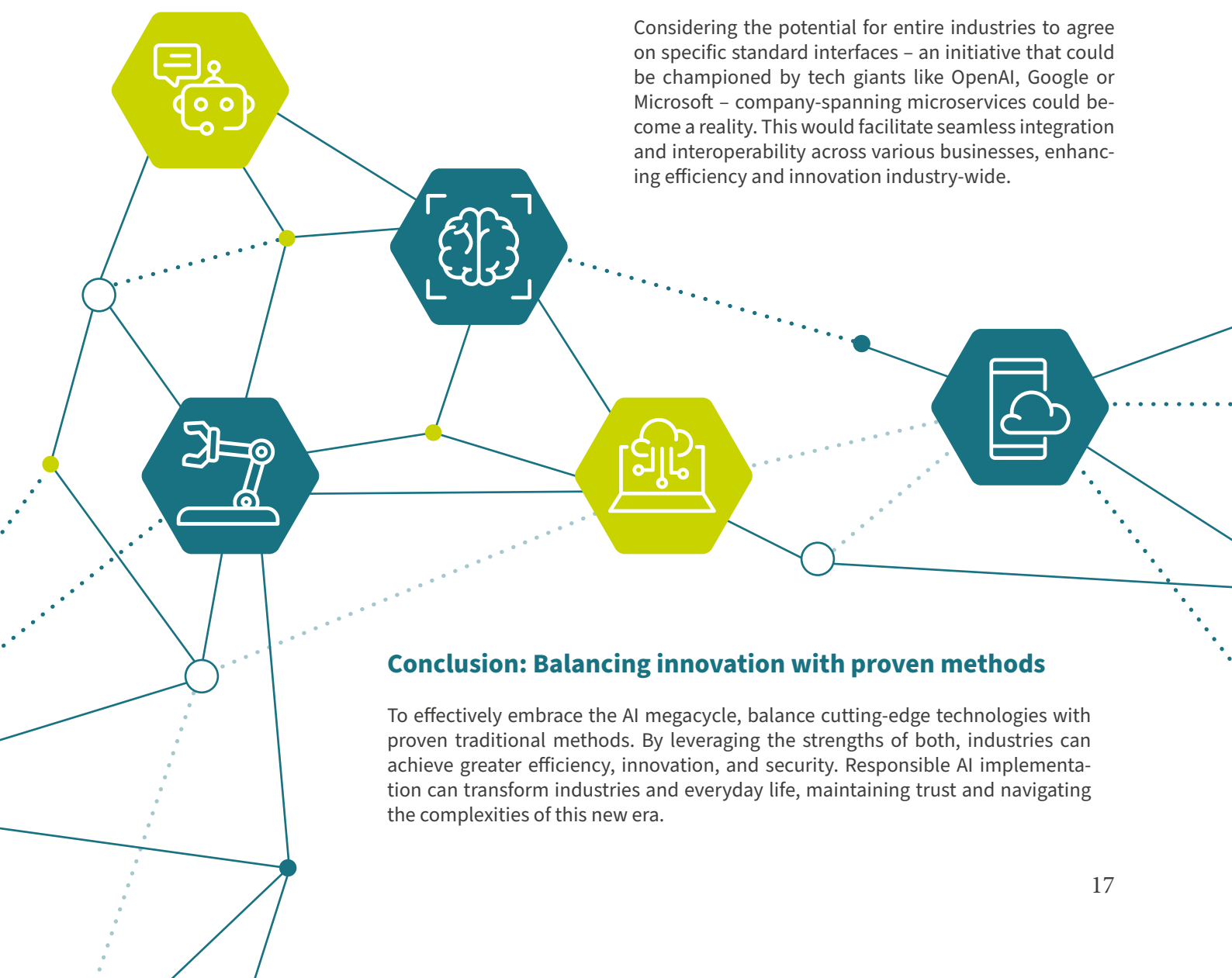
Standardised interfaces and data

One crucial aspect that companies should focus on is the standardisation of internal and external data interfaces, along with proper data description and cleansing.

Standardising data interfaces not only allows for scaling potential AI use cases but also accelerates the development of AI automation by reducing the manual data engineering required to make the AI work.

Imagine a standardised interface for booking data in the airline industry. AI can be employed for quick, text-based searches of bookings and for changing bookings using fully automated chat agents capable of interacting with customers in natural language, including speech. Once established and properly described, this data could be utilised to enable other use cases, such as analytics, or to scale the use case to partner airlines.

Considering the potential for entire industries to agree on specific standard interfaces – an initiative that could be championed by tech giants like OpenAI, Google or Microsoft – company-spanning microservices could become a reality. This would facilitate seamless integration and interoperability across various businesses, enhancing efficiency and innovation industry-wide.



Conclusion: Balancing innovation with proven methods

To effectively embrace the AI megacycle, balance cutting-edge technologies with proven traditional methods. By leveraging the strengths of both, industries can achieve greater efficiency, innovation, and security. Responsible AI implementation can transform industries and everyday life, maintaining trust and navigating the complexities of this new era.

The EU's new AI regulation: Challenges and key insights for businesses

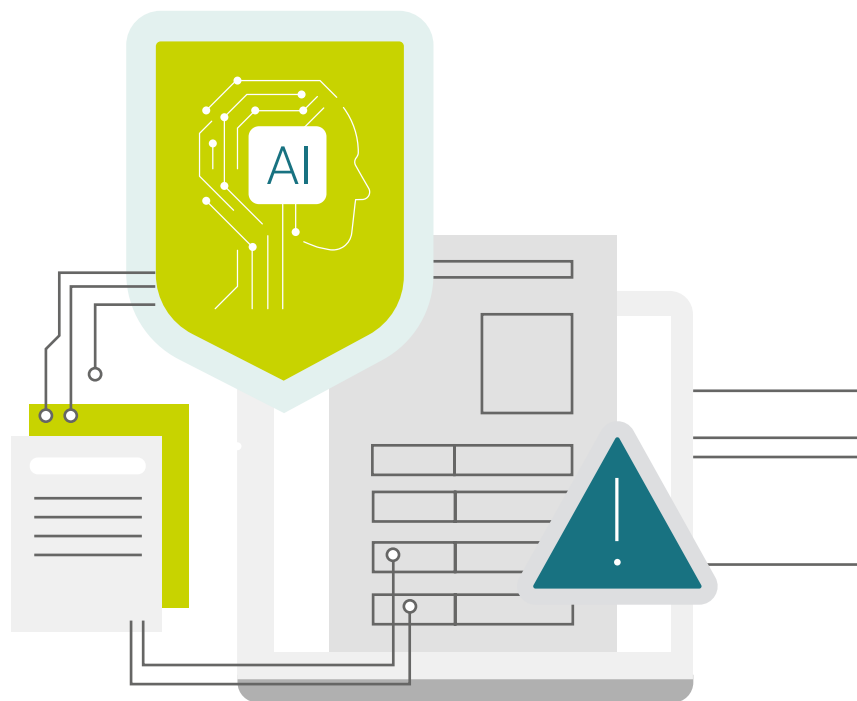
Navigating the complexities of AI regulation requires a strategic approach that balances innovation with compliance. It is crucial to focus on a comprehensive risk assessment process to identify and manage the potential vulnerabilities of AI systems throughout their lifecycle. Only by aligning one's own practices with evolving regulatory standards can businesses get support in implementing AI solutions that are not only innovative but also responsible and compliant with the latest legal frameworks.

By Jose Oro Margarit, Data Protection Officer

Artificial Intelligence has experienced exponential growth, changing the way we interact with technology. This rapid development has prompted the European Union to introduce the world's first binding regulation for AI, establishing a unified framework for the use and supply of AI systems within the EU.

In this article, we explore key takeaways and challenges presented by the new AI Act, focusing on important aspects such as the classification of AI systems and the “risk-based approach” to compliance.

Business leaders in AI-driven industries, both within the EU and beyond, must consider the profound implications of this legislation, which came into effect in August 2024. Non-compliance could result in penalties as high as 7% of global annual turnover.



What is an AI system under the AI Act?

‘AI system’ means a machine-based system that is designed to operate with varying levels of autonomy and that may exhibit adaptiveness after deployment, and that, for explicit or implicit objectives, infers from the input it receives, how to generate outputs such as predictions, content, recommendations or decisions that can influence physical or virtual environments.

Who is affected by the new AI Act?

The AI Act applies to providers and deployers who offer AI systems in the EU market, whether based in the EU or outside, as long as their systems’ outputs are used within the EU. There are some exceptions to this scope, but the Act broadly affects a wide range of businesses.

How are AI systems classified in the new AI Act?

The AI Act classifies AI systems using a tiered, risk-based approach. General-purpose AI models (GPAI), including foundation models and generative AI systems, follow a separate classification framework.



Prohibited AI systems

The AI Act prohibits AI systems that pose unacceptable risks, can be used to undermine a person’s fundamental rights, or may subject individuals to physical or psychological harm. Examples include social scoring systems that evaluate individuals based on behaviour, leading to detrimental treatment, or indiscriminate facial recognition databases populated through mass data scraping.



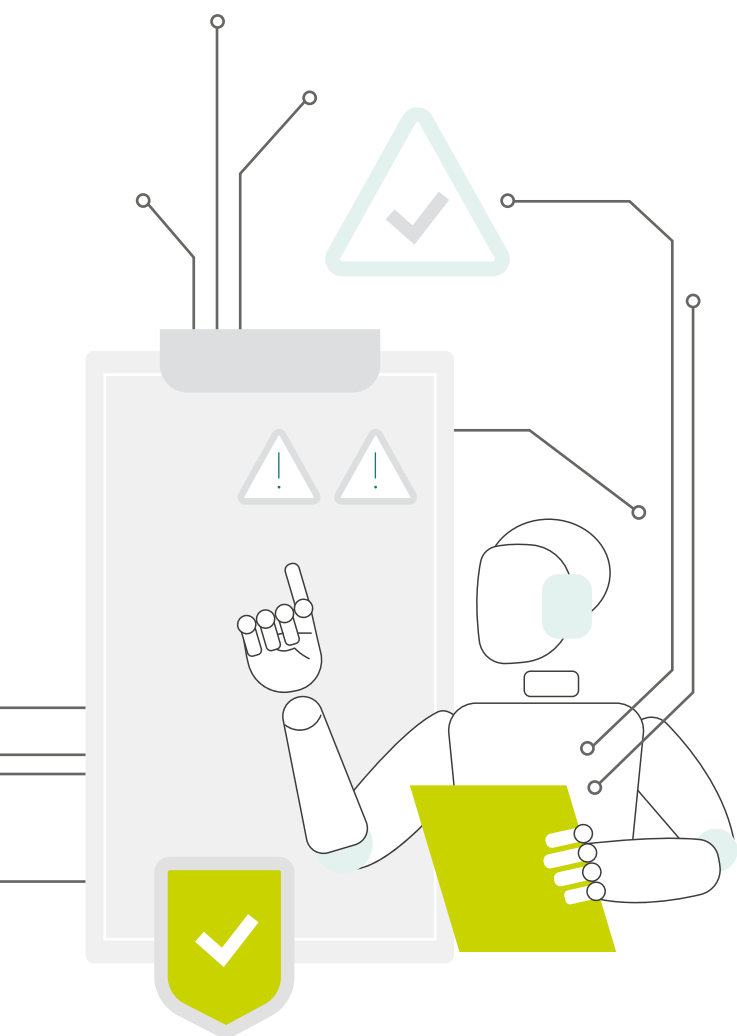
High-risk AI systems

The AI Act identifies several use cases in which AI systems are considered high risk because they can potentially create an adverse impact on people’s health, safety or fundamental rights, with some exceptions. Currently, these include AI systems integrated into products covered by EU legislation, such as medical devices, railway systems or criminal activity analytics.



Minimal-risk AI systems

Certain AI systems intended to interact with natural persons or to generate content may pose specific risks of impersonation. Therefore, such systems need to fulfil specific information and transparency requirements. Also, systems presenting minimal risk for people will not be subject to further obligations beyond currently applicable legislation. There are plenty of use case examples of this kind of AI system: chatbots, visual/audio content manipulation by AI systems, photo editing software, etc.



Compliance for high-risk AI systems

Providers of high-risk AI systems must implement specific measures to ensure compliance and mitigate the risks associated with the system, including:

1.

Implementation of an AI risk and quality management system

2.

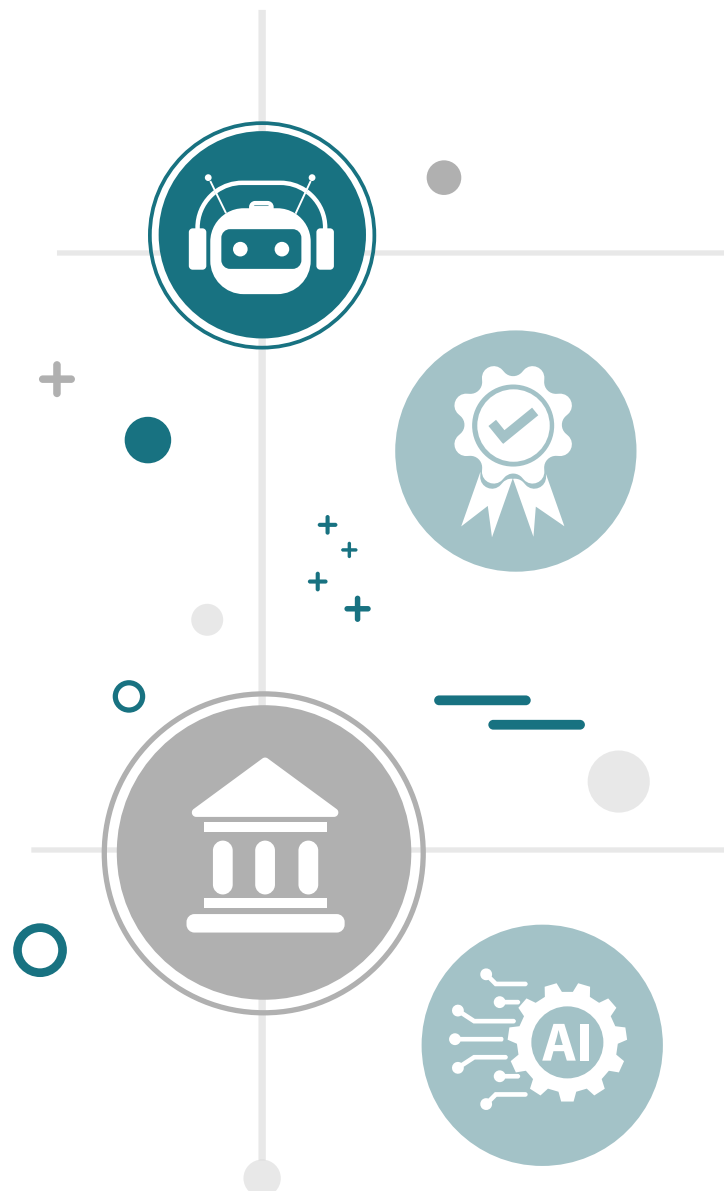
Registering high-risk AI systems on the EU database before market release

3.

Conducting conformity assessments, preferably starting in the design phase

4.

Continuously monitoring compliance, managing non-conformities, and reporting incidents to authorities



Conversely, minimal-risk systems have fewer obligations. They primarily focus on transparency and user information to ensure clarity in interactions, label AI-generated content, and obtain user consent.

One of our recent projects was to implement a tool to make a holistic risk assessment of our AI applications. For those AI projects likely to be labelled as high-risk, AI risk assessment is coordinated by our Information management system team, who provide support to the business considering expert inputs from our privacy, information

security and compliance experts. This AI risk assessment is key to identifying potential risks and vulnerabilities throughout the AI lifecycle and improving our overall project decision-making approach.

As AI continues to evolve, the EU's AI Act marks the first of many legal frameworks that businesses will need to navigate. Understanding the implications of both current and emerging regulations is crucial for building an effective AI governance system that ensures compliance.



About ERNI

ERNI stands for Swiss Software Engineering. What are we really interested in? How we can support you and your employees better than any other company in developing and marketing software-based products and services. Our global platform for software development, in combination with a sound understanding of the market, forms the framework for our customers' success. Our team also implements complex projects, empowers people and delivers outstanding customer solutions in the shortest time. We apply the Swiss mentality with behaviours such as consensus building, pragmatism, integration, reliability and transparency on a global scale – and have done so since our foundation in 1994 together with our great team, which is the basis for successful software projects. Today, the ERNI Group employs more than 800 people worldwide.

About .experience

In this magazine, which is published a couple of times per year by ERNI, we provide information about important learning experiences that we have had in our daily work in the areas of collaboration, processes and technology.

Imprint

Issue 2/2024

ERNI

Swiss Software Engineering
betterask.erni

Publisher

ERNI Management Services AG

ERNI Locations

ERNI Schweiz AG

Bern
Zürich
Lucerne
Lausanne
Basel
Geneva

ERNI Consulting España S.L.U.

Barcelona
Madrid

ERNI Development Center Spain, S.L.

Valencia

ERNI (Germany) GmbH

Frankfurt
Munich
Berlin
Schorndorf

ERNI Development Centre Philippines Inc.

Manila

ERNI Development Centre Romania S.R.L.

Cluj-Napoca

ERNI Singapore Pte Ltd.

Singapore

ERNI (Slovakia) s.r.o.

Bratislava

ERNI USA

New York

.experience Magazine

Edition

1,000 Copies in German
1,000 Copies in English
ISSN 2235-7262

Contact

ERNI Management Services AG
Löwenstrasse 11 | 8001 Zürich
Email: marketing@betterask.erni
Phone: +41 58 268 12 00

ERNI on the social networks

betterask.erni
linkedin.erni
facebook.erni
instagram.erni
youtube.erni
twitter.erni

© 2024
by ERNI Management Services AG

