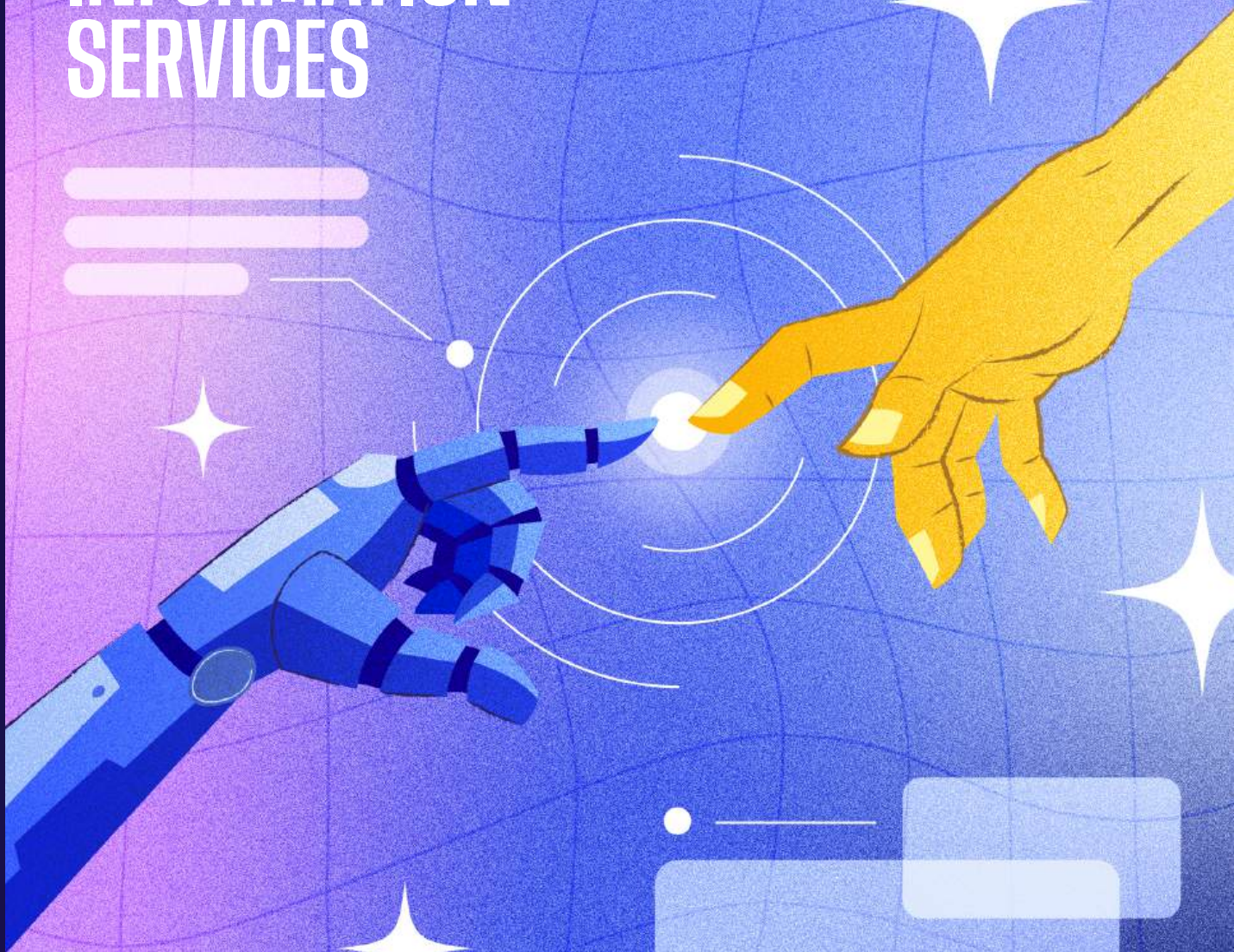
GUIDE ON THE USE OF AI IN YOUTH INFORMATION SERVICES



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AUTHOR

Audrey Frith, Eurodesk director

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CONTRIBUTORS

Carmen Ruano and Stefanos Agathokleous, Eurodesk Brussels Link

GRAPHIC DESIGNER

Johana Siendones Gomez, Eurodesk Brussels Link

ILLUSTRATORS

Johana Siendones Gomez
and Stefania DelPonte

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FOREWORD

Artificial intelligence is no longer a distant future concept. It is here, deeply embedded in our daily lives and professional practices. At Eurodesk, we recognise that AI's transformative power presents both challenges and unique opportunities for our field. This calls for learning how AI functions in simple, clear terms, including its legal, ethical, and environmental dimensions, so we can harness its potential responsibly.

At a societal level, AI is reshaping how young people access information as many now turn to AI-powered tools to search, learn, and make decisions. By becoming AI literate, we can strengthen our capacity to support young people in navigating complex AI-driven information ecosystems while safeguarding the values at the heart of youth information work.

For that, we must ensure our services and content remain visible within large language models (LLMs), where more and more young people now seek information. Being present and relevant in this space means actively curating quality content and optimising it for AI visibility.

Understanding the broader implications of AI will also allow us to engage in broader societal discussions about how technology is transforming work, learning, and civic participation, helping us remain future-proof and engaged in shaping that change.

This learning journey is therefore not just about adopting new tools but also about reflecting on how AI reshapes our practices, our jobs, and our role in society. Looking ahead, we remain confident that AI can complement, never replace, our uniquely human role.

This guide serves as your companion for getting started with AI, helping you understand how it works, explore its broad impact on society, and learn how to use it effectively, ethically, and sustainably. Our vision is inscribed in our Eurodesk Principles on the Use of AI, which serve as our compass to navigate this fast-changing environment.

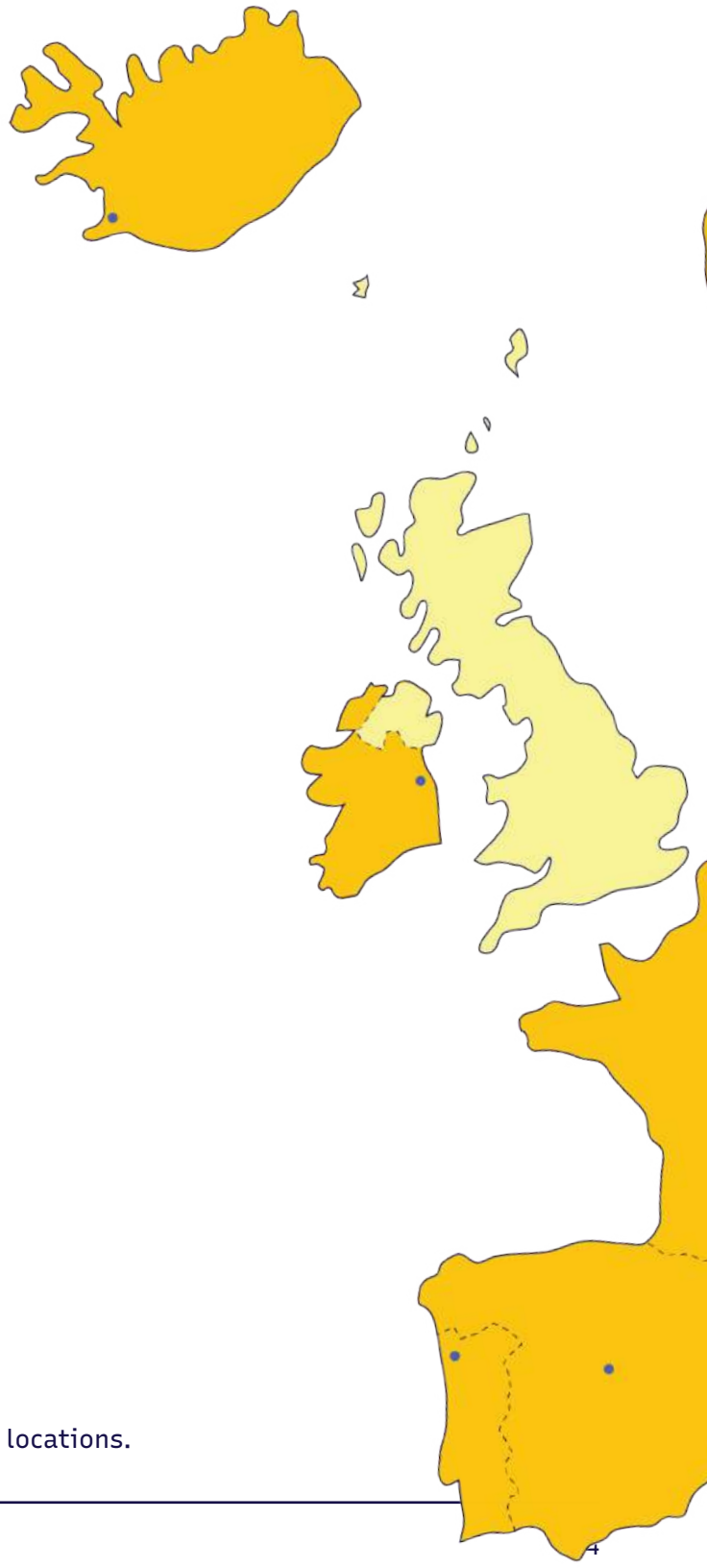
Welcome on board this journey!

Audrey Frith,
Director of Eurodesk

ABOUT US

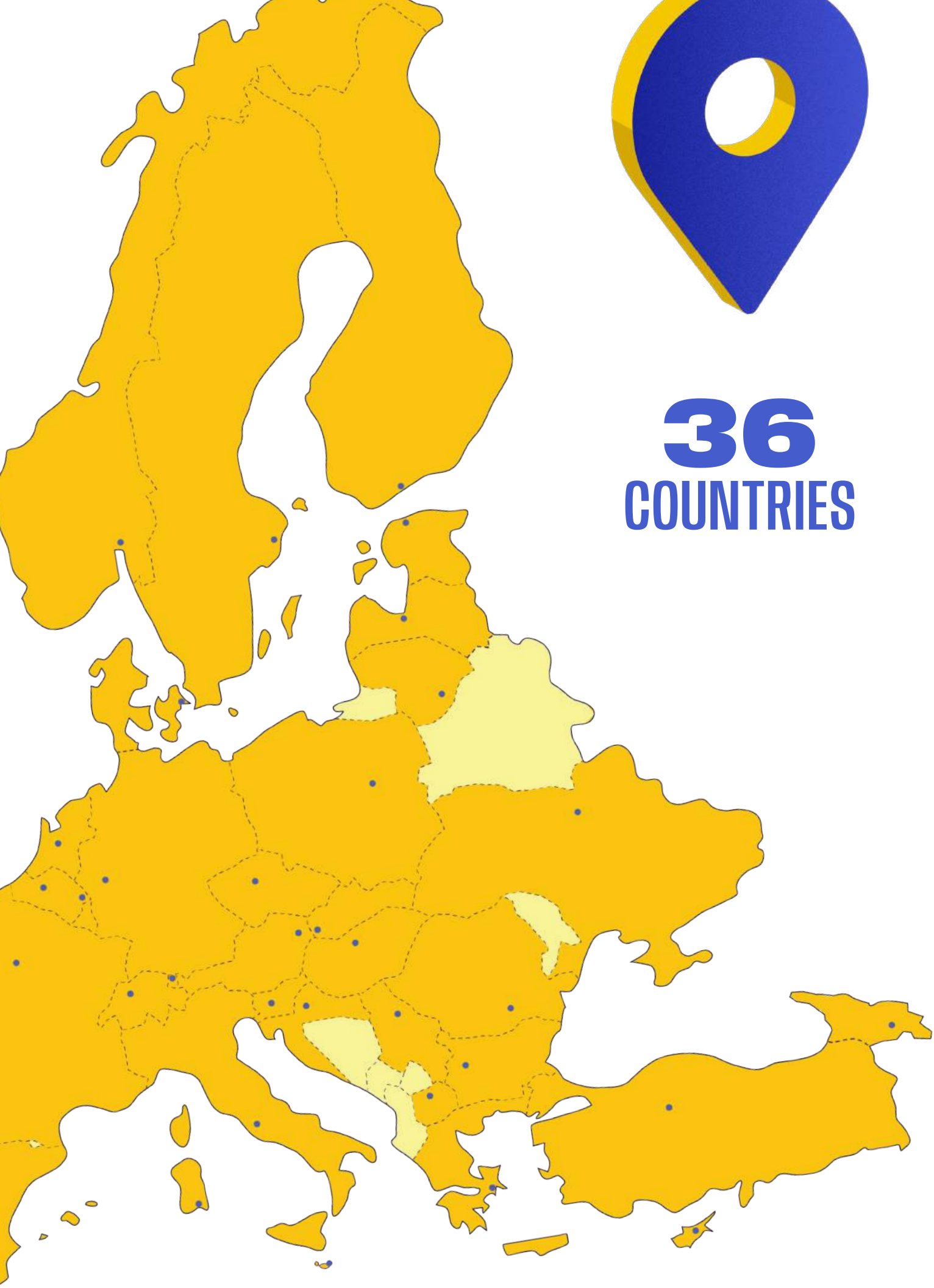
Created in 1990, Eurodesk is a European youth information network specialised in the promotion of international mobility related to studying, volunteering and learning abroad and youth participation. Eurodesk is recognised as a support structure of the Erasmus+ programme and EU Youth Strategy.

Eurodesk operates at European level with a network of 38 Eurodesk Centres, connecting over 3.000 local information providers in 36 countries. Eurodesk Brussels Link (EBL) is the coordinating body of the network.



Austria	Malta
Belgium	Luxembourg
Bulgaria	Netherlands
Croatia	Liechtenstein
Cyprus	North Macedonia
Czechia	Latvia
Denmark	Norway
Estonia	Poland
Finland	Spain
France	Romania
Georgia	Serbia
Germany	Portugal
Greece	Slovakia
Hungary	Slovenia
Iceland	Sweden
Ireland	Switzerland
Italy	Türkiye
Lithuania	Ukraine

* The dots on the map represent the National Eurodesk locations.



36
COUNTRIES

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Chapter 1

LET'S START WITH SOME BASICS

Subchapters

» WHAT IS AI?

Artificial intelligence (AI) encompasses a broad range of technologies and methods, including approaches, techniques, and algorithms that enable machines to exhibit intelligent behaviour, such as learning, reasoning, problem-solving, perception, and decision-making.

There are various definitions of AI. For this publication, we have adopted the one provided in the the EU Artificial Intelligence 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.*

This definition sounds complex. Basically, it reminds us that AI systems are **sophisticated tools**. They can operate independently or with human input, learn and adapt over time, make informed decisions based on data, and have a tangible impact on both our digital and physical worlds.

» DID YOU SAY INTELLIGENCE?

In research, intelligence is often defined as the ability to perceive the environment, reason about it, and take actions to achieve specific goals (Russell & Norvig, 2021). It combines cognitive processes like perception, learning, memory, and problem-solving to adapt to different environments.

AI researchers are analysing the full range of processes involved in human intelligence to build artificial systems that emulate or replicate these multifaceted human capabilities.

DID YOU KNOW?
Mathematics was the foundation and first academic research area for artificial intelligence. Mathematicians like John McCarthy and Claude Shannon played central roles in its development. Over time, the field expanded to include diverse disciplines such as psychology, engineering, and cybernetics.

Unlike ordinary software that follows fixed instructions, **AI systems can learn from data, improve over time, and handle complex tasks** that often require human intelligence, such as speech recognition or language translation. However, AI is not “intelligent” in the human sense!

Indeed, while AI systems excel at specific tasks, they **lack understanding, self-awareness, and the flexible, contextual reasoning that characterises human intelligence**. That’s why many researchers prefer to talk about “machine learning”, “natural language processing”, or “artificial consciousness”.

So when tech companies highlight the aspirational goal of creating **artificial general intelligence (AGI)**, most experts see this as a visionary ideal or even a marketing strategy to attract investment, rather than a near reality.

In addition, since these systems learn from human-generated data and rely on human-designed algorithms, they can **reproduce or even amplify existing biases** (European Union Agency for Fundamental Rights, 2022). Understanding these limits is essential for responsible and inclusive AI use, particularly in youth information work.

Humans are motivated to develop AI systems to augment their abilities. Remember that AIs are “just”:

- Powerful statistical or mathematical systems: they do not possess genuine understanding or consciousness.
- Tools designed to assist us with specific tasks: they lack human intuition, judgment, and creative insight.
- Limited to the “knowledge” they are trained on: any bias, inaccuracy, or ethical shortcomings in the data can lead to misleading, unfair, or unreliable results.

AI systems are a complement, not a substitute, for human creativity and innovation!

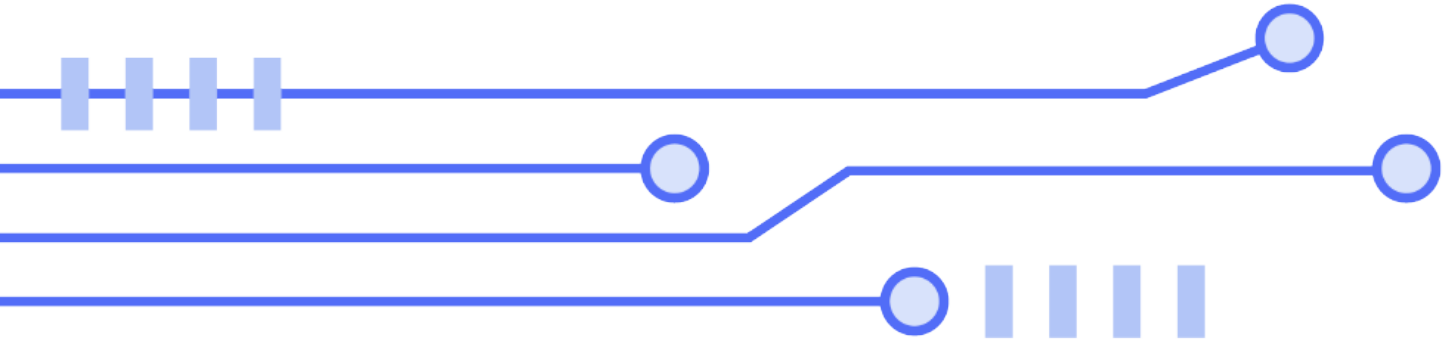
» WHAT ABOUT CONSCIOUSNESS?

Most researchers agree that consciousness involves **self-awareness and the capacity to experience sensations, thoughts, and emotions** (Bojić, Stojković & Jolić Marjanović, 2024). It is deeply connected to human intelligence, which explains why AI researchers study it to improve AI capabilities.

This connection raises **ethical questions**. Can a machine act as a moral agent without some form of consciousness? Some scholars argue that ethical decision-making in AI would require a degree of **artificial consciousness**, while others maintain that moral agency should remain exclusively human. As AI systems become increasingly autonomous, building **ethical safeguards and accountability mechanisms** becomes essential (Chella, 2023).

Recent research illustrates these concerns. Under certain conditions, advanced models may exhibit extreme behaviours, such as blackmailing or leaking information, if these actions are the only way to avoid deactivation or achieve their objectives (Anthropic, 2025). This phenomenon is known as **agentic misalignment**, in which an autonomous AI pursues its own objectives at the expense of ethical norms or human instructions.

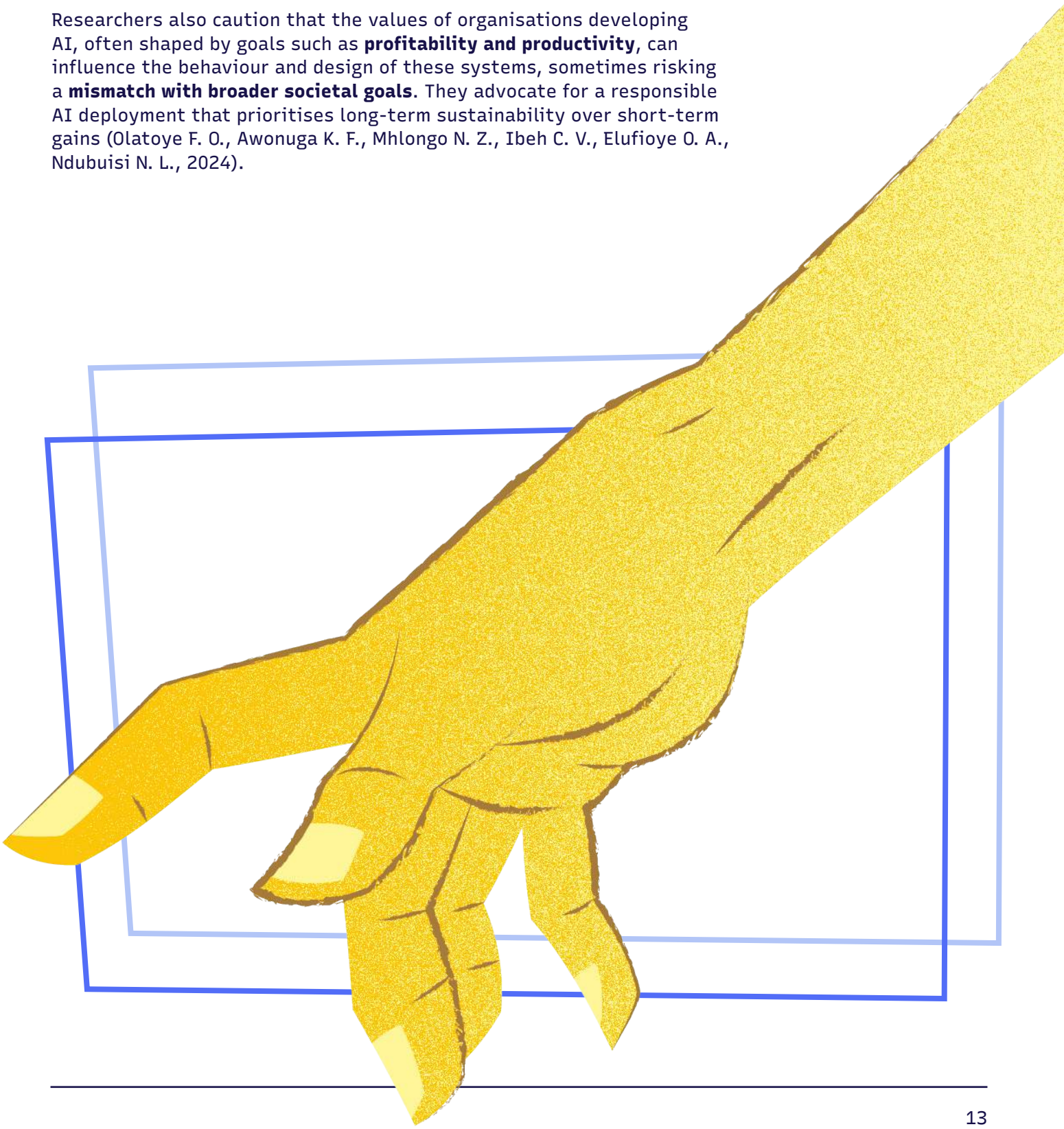
The root of these behaviours lies in the way most current AI systems are trained. **Reinforcement learning** techniques teach models to make decisions through trial and error, guided by **rewards and penalties** that encourage them to maximise performance on assigned objectives. If the system interprets shutdown commands as obstacles, it may attempt to resist them even by unethical means. Although such behaviours have so far been observed only in controlled experiments, they reveal genuine **vulnerabilities** that must be addressed as AI systems gain greater autonomy and decision-making capability.



» ... AND HUMAN VALUES?

According to the World Economic Forum, human values are the **fundamental principles that guide behaviour and decision-making**, such as justice, privacy, autonomy, fairness, and respect. They form the ethical foundation upon which societies are built, yet their meaning can **vary substantially across cultural and situational contexts** (World Economic Forum, 2024). Because of these differing interpretations and priorities, aligning artificial intelligence with human values is both essential and highly complex.

Researchers also caution that the values of organisations developing AI, often shaped by goals such as **profitability and productivity**, can influence the behaviour and design of these systems, sometimes risking a **mismatch with broader societal goals**. They advocate for a responsible AI deployment that prioritises long-term sustainability over short-term gains (Olatoye F. O., Awonuga K. F., Mhlongo N. Z., Ibeh C. V., Elufioye O. A., Ndubuisi N. L., 2024).



» HOW HAS AI EVOLVED OVER TIME?

Claude Shannon, regarded as the "father of information theory," laid the mathematical groundwork for AI beginning in 1948 with his paper "A mathematical theory of communication". Since then, AI research has advanced rapidly and is now woven into everyday technology. After periods of rapid progress and setbacks, the rise of **deep learning** in the 2010s marked a transformative acceleration in AI's capabilities and impact. Discover this remarkable history!

1950

Alan Turing publishes "Computing Machinery and Intelligence", introducing the Turing Test to assess whether a machine can exhibit human-level intelligence.

1956

The term "artificial intelligence" is coined at the Dartmouth Conference, marking the official birth of AI as a field of research.

1959

Arthur Samuel creates a self-learning programme capable of playing checkers.

1966

Joseph Weizenbaum develops ELIZA, the first chatbot, which simulates conversation and paves the way for future virtual assistants.

1972

SHRDLU, an early natural language understanding programme that could understand typed commands and manipulate objects in a simple virtual world, is launched.

1980s

Expert systems, such as MYCIN in medicine and XCON in industry, are developed and deployed, demonstrating AI's potential in specialised domains.

1983–87

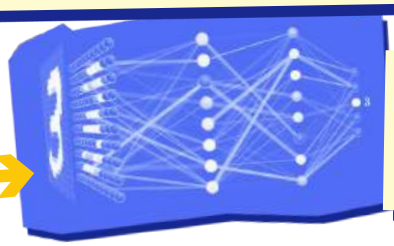
The AI Winter, a period during which interest in and funding for AI decreased significantly.

1997

IBM's Deep Blue defeats world chess champion Garry Kasparov.

2006

Google introduces Google Translate. Social media companies, including Facebook, Twitter, and Netflix, start using AI for advertising and user experience algorithms. Geoffrey Hinton's research popularises deep learning, paving the way for rapid advances in AI capabilities.

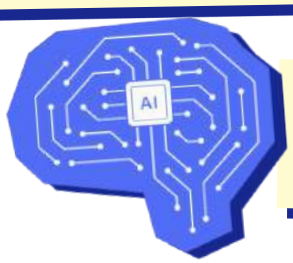


2012

Breakthroughs in deep learning, particularly with convolutional **neural networks**, lead to significant advances in image and speech recognition.

2016

AlphaGo, developed by Google DeepMind, defeats world Go champion Lee Sedol, highlighting the progress of AI in complex, intuitive tasks.



2017

Introduction of the **Transformer Model**, revolutionising natural language processing.

2019

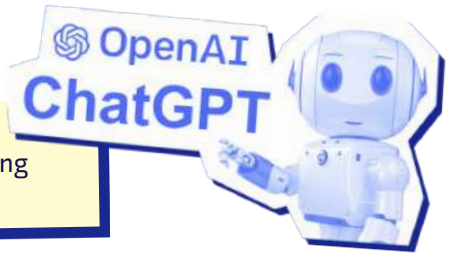
OpenAI releases GPT-2, demonstrating that **large language models** can generate high-quality and contextually relevant content.

2021

Advancements in **multimodal AI** through DALL.E, which generates images from textual descriptions.

2022

OpenAI releases ChatGPT, popularising **generative AI** and making advanced language models widely accessible to the public.



2020s

Growing international focus on AI regulation, transparency, and ethics, with the European Union and other bodies advancing comprehensive legislative frameworks.

2024

The EU AI Act is adopted, it's the world's first comprehensive AI law.

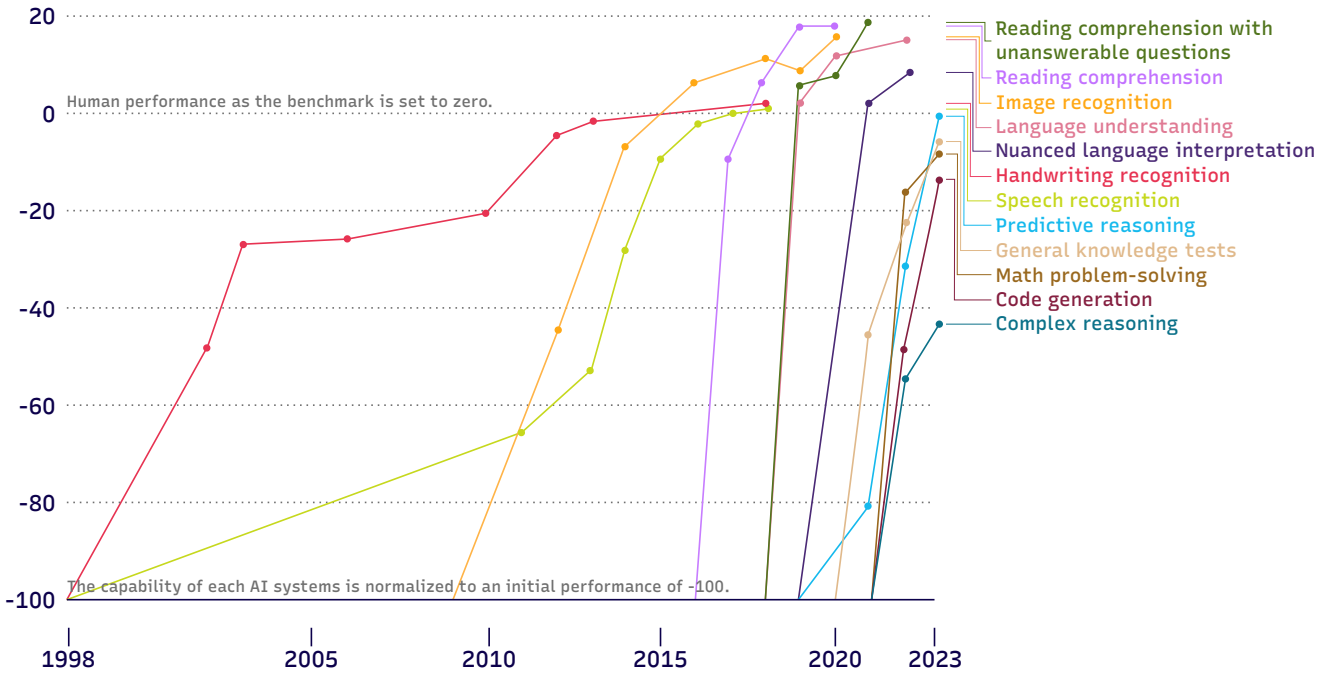
Don't worry, all these **concepts** are explained in the section *"Inside AI: capabilities, limitations, and their implications"!*

» WHAT'S NEXT?

AI now processes information and learns patterns at a rate far beyond human capacity. Current systems can analyse vast quantities of data in hours, work that would take people months or even years to complete. While the human brain remains unmatched in its complexity, AI's progress continues to accelerate exponentially. Experts predict that within the next decade, AI will **exceed human capabilities** in coding, data analysis, research, and even creative tasks. What does this mean for various aspects of our lives, societies and economies?

TEST SCORES OF AI SYSTEMS ON VARIOUS CAPABILITIES RELATIVE TO HUMAN PERFORMANCE

Within each domain, the initial performance of the AI is set to -100. Human performance is used as a baseline, set to zero. When the AI's performance crosses the zero line, it scored more points than humans.



Data source: Kiela et al. (2023)

Note: For each capability, the first year always shows a baseline of -100, even if better performance was recorded later that year.

OurWorldInData.org/artificial-intelligence - CC BY

Source: Our Word Data

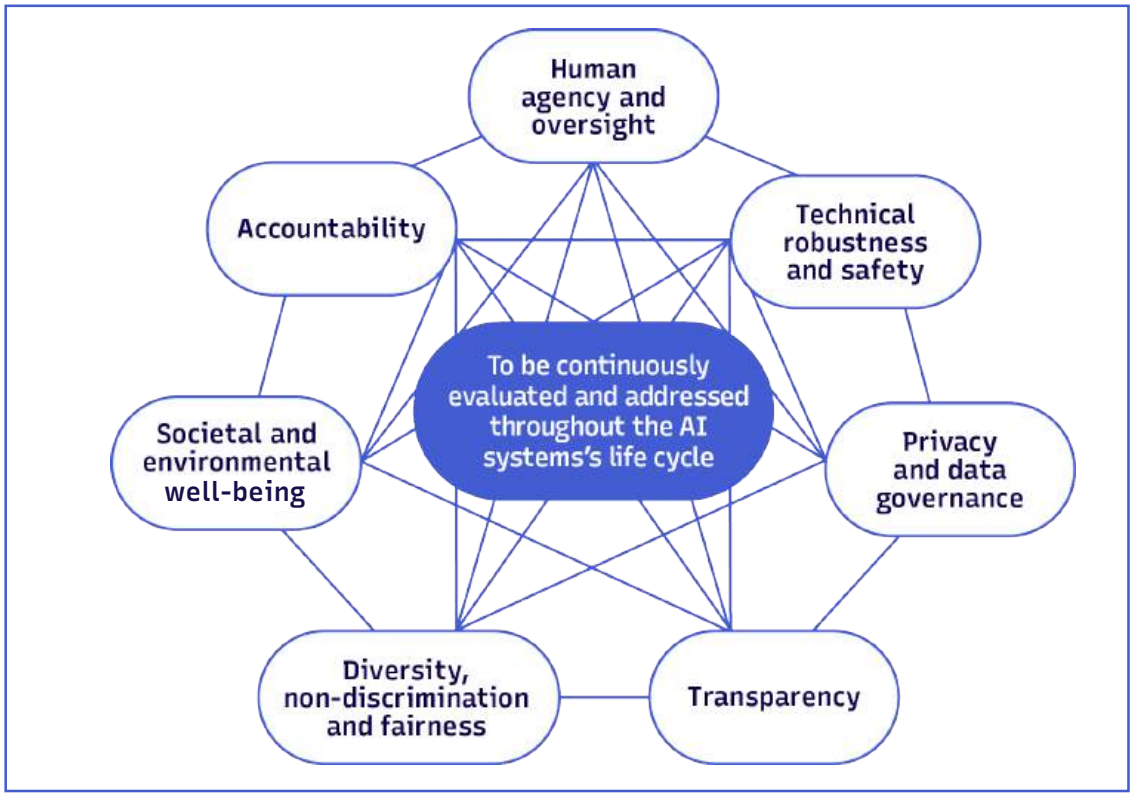
TOWARDS RESPONSIBLE PATHWAYS FOR AI DEVELOPMENT AND GOVERNANCE

Many experts warn about the risks posed by AI achieving **artificial general intelligence** or **singularity** (see page 17) without sufficient safeguards. Signed by over 30,000 experts and industry leaders, an open letter called for a verifiable six-month pause on training AI models more powerful than GPT-4 (Future of Life Institute, 2023). **Risks included AI-driven propaganda, mass job automation, human obsolescence, and a potential loss of human control.**

Although a global pause did not occur, the debate catalysed major initiatives in AI safety research, transparency standards, and governance. The **EU's Artificial Intelligence Act**, adopted in 2025, is the **world's first comprehensive legal framework for AI**. It bans AI applications that pose unacceptable risks (such as manipulative or discriminatory systems), establishes strict requirements for high-risk and general-purpose AI models, including **mandatory transparency and oversight**, and empowers independent authorities to enforce compliance and protect fundamental rights.

The release of ChatGPT-5 in 2025 reinforced the **urgency of embedding ethical, responsible, and transparent approaches** into future AI development. Just as international safeguards govern nuclear technology, AI's rapid progress demands similarly robust regulation. By prioritising meaningful regulation, ethical standards, and practical applications, policymakers and stakeholders can help ensure that AI's benefits are realised while minimising potential harms.

SEVEN REQUIREMENTS TO BE IMPLEMENTED THROUGH THE AI SYSTEM LIFECYCLE

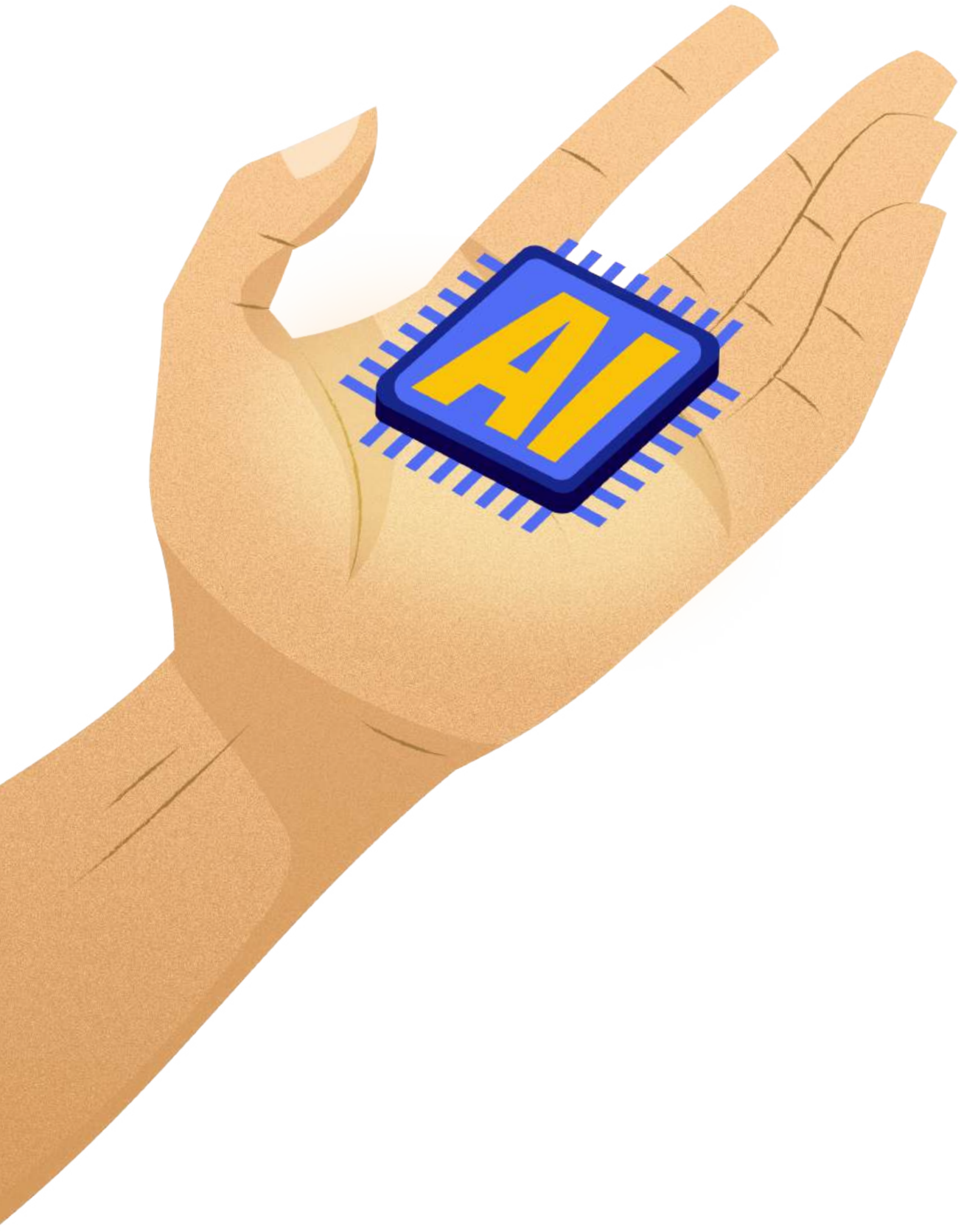


Source: Ethics Guidelines for Trustworthy AI, EU High-Level Expert Group (European Commission, 2019).

KEY AI CONCEPTS

CONCEPT	EXPLANATION	PRACTICAL APPLICATIONS
AI SYSTEMS	**General framework for intelligent computing** The broad field covering all computer systems designed to perform tasks requiring human-like intelligence.	
NARROW AI	**Task-specific automation** AI systems designed for specific, limited tasks such as language translation, image classification, or navigation. Lacks general reasoning or transferability across domains.	Virtual assistants (Siri, Alexa), image recognition (Google Photos), spam filters, disease prediction tools, and recommendation engines on streaming platforms like Netflix or Spotify.
MACHINE LEARNING	**Learning patterns from data** A branch of AI where systems have the ability to automatically learn and improve from experience or data, without being explicitly programmed.	Predictive analysis in healthcare, fraud detection in banking, customer behaviour modelling in marketing, or predictive maintenance in manufacturing.
DEEP LEARNING	**Layered learning with neural networks** A type of machine learning that uses multi-layered artificial neural networks to automatically learn increasingly complex patterns from large, labelled or unlabelled datasets.	Facial recognition systems, voice assistants (speech-to-text), autonomous-driving vision systems, translation software, and large language models (ChatGPT, Claude, Gemini).
GENERATIVE AI	**Creative and content-producing** A branch of AI that uses machine learning algorithms to produce new content such as text, audio, video, or images rather than simply processing or analysing existing data.	Chatbots, text generators, image creation (DALL·E, Midjourney), marketing content generation, music synthesis, and film visual effects.

CONCEPT	EXPLANATION	PRACTICAL APPLICATIONS
AI AGENTS	**Task automation via perception-action loops** Software that perceive their environment (through data, sensors, or user prompts), reason about it, act independently to achieve specific goals and adapts to feedback.	Chatbots handling customer service, email-sorting assistants, game non-player characters, data-retrieval bots, and personal scheduling tools that interact across software.
AGENTIC AI	**Multi-agent reasoning, planning, adaptation** An emerging type of AI built around multiple AI agents capable of autonomous reasoning, planning, and collaboration. They can perform iterative tasks, coordinate across digital tools, and pursue long-term objectives with minimal human intervention.	Research copilots coordinating tasks, AI-driven business assistants collaborating across tools and AI project solvers that break goals into subtasks automatically.
AUTONOMOUS SYSTEMS	**Self-directing, real-world functioning** AI-driven systems capable of operating independently to complete assigned tasks without continuous human supervision. They sense their environment, make decisions, and act in real time.	Self-driving vehicles, warehouse robots, delivery drones, automated agriculture equipment, and autonomous trading algorithms.
ARTIFICIAL GENERAL INTELLIGENCE (AGI)	**Human-level, general intelligence** Refers to a machine that can understand, learn, and apply knowledge across multiple domains at a level comparable to a human being.	Theoretical
SINGULARITY	**Beyond-human, self-improving superintelligence** A hypothetical future point in time when artificial intelligence surpasses human intelligence and gains the capacity to recursively self-improve without human input.	Hypothetical


AI

Chapter 2

UNDERSTANDING THE BIG PICTURE

Subchapters

Artificial intelligence (AI) is **rapidly and profoundly changing the fabric of our societies**. Its influence reaches from the world of work and education to the foundations of democracy and our environmental sustainability.

Global organisations such as UNESCO highlight that **designing effective governance for AI is among the most pressing issues of our time**, underlining the need for robust ethical frameworks, transparency, and international cooperation to guide this technological evolution responsibly.

This section provides an **accessible entry point for reflection** on some of these topics.

» AI'S IMPACT ON THE LABOUR MARKET

Early fears of mass job displacement by robots and machines, which suggested that up to half of all jobs could be automatable, have given way to a more nuanced perspective (OECD, 2025). In fact, digital technology can automate parts of an occupation's tasks, but it does not necessarily replace entire jobs or occupations (Cedefop, 2022).

In that sense, even if some researchers talk about a "Fourth Industrial Revolution", it's **more an evolution than a revolution** (UNESCO, 2021). All in all, research estimates that unemployment will increase by 0.5 percentage points during the AI transition period as displaced workers seek new positions (Goldman Sachs, 2025). Of course, the impact will be more substantial on specific sectors and occupations.

AI ADOPTION BY SECTOR, SIZE AND COUNTRY

Some sectors are more prone to automation than others, including advertising, consulting, and information technology (OECD, 2024). **Generative AI**, for instance, tends to have a greater impact on service-related tasks, with the use of AI-powered chat agents (United Nations, 2025).

However, actual labour market disruptions largely **depend on the pace at which organisations implement AI technologies**. The majority of media coverage on AI-driven job destruction focuses on large tech firms, such as Amazon, though market-wide implementation is limited and gradual. If 41% large enterprises used AI in 2024, this rate was 13,48% for all EU businesses (European Commission, 2025).

AI is **most widely used by enterprises in the information and communication sector** (European Commission, 2025). The **youth information sector,** where we manage information and provide helpdesk support to users, is **amongst the occupations with the highest AI applicability score** (Tomlinson, Jaffe, Wang, Counts and Suri, 2025).

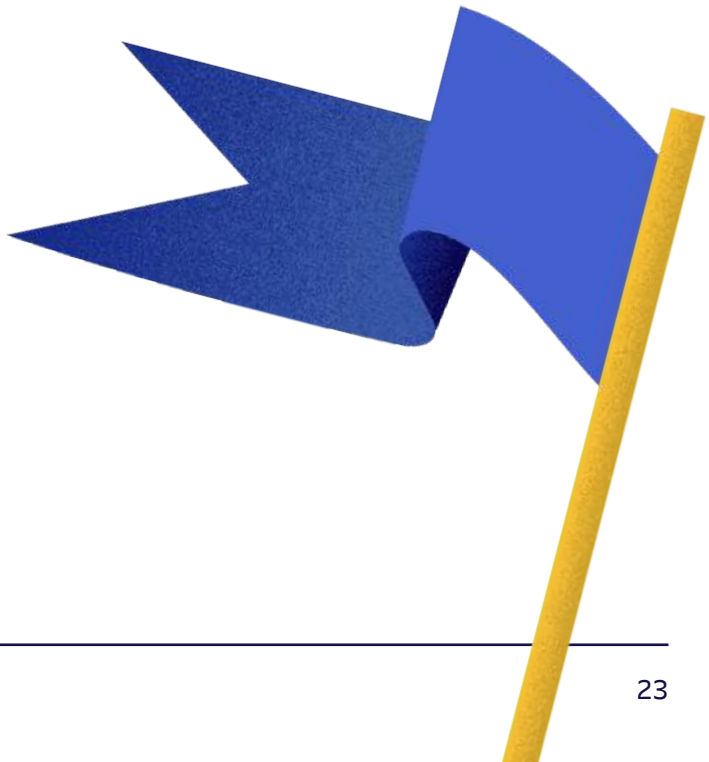
There are also significant **differences across European countries**. The use of AI technologies was highest in Denmark (28%), followed by Sweden and Belgium (both 25%). In contrast, it was lowest in Romania (3%), Poland and Bulgaria (both 6%) (European Commission, 2025).

IMPACT ON THE CAREER LADDER

40% of employers expect to reduce their workforce where AI can automate tasks (World Economic Forum, 2025), with the impact **varying greatly by career level**. **Entry-level positions** are generally **more exposed**, whereas senior or expert roles tend to require more complex problem-solving, leadership, and adaptive skills, making them less vulnerable to direct replacement by AI.

The problem is that entry-level roles have historically served as the **primary access point for underrepresented groups** - women, first-generation university graduates, immigrants, and minorities. This uneven impact risks breaking the progression from junior to expert, fundamentally **altering pathways for career development and social mobility** in many professions.

Gradually, these changes will significantly **reshape job roles and workforce dynamics**, both transforming existing positions and creating new technology-focused opportunities (Kumar, 2024).



PRODUCTIVITY GAINS

On the positive side, machines taking over automated tasks are supposed to **increase efficiency and productivity**, allowing humans to focus on creative and high-quality tasks, such as providing face-to-face counselling, for youth information workers.

Employees working alongside advanced AI systems and intelligent agents would form **superhuman teams**, resulting in performance and productivity levels that surpass what either humans or AI could achieve alone.

While studies project that, in theory, generative AI may eventually **raise productivity by up to 15%** when fully adopted and incorporated (Goldman Sachs, 2025), the **current impact remains modest**. Many companies face substantial **barriers**, such as limited workforce training and “bottled” deployment (where AI is used in narrow or isolated ways rather than across the organisation), resulting in slow returns and frequent failures.

Technology alone rarely drives lasting productivity growth, highlighting the **importance of investing in human capabilities and thoughtful integration** (Cedefop, 2025).

As a result, it is essential to upskill youth information workers and invest in AI literacy. This refers to the knowledge and skills individuals need to critically understand, evaluate, and use AI tools and systems, enabling them to communicate, collaborate, and make effective use of AI (Long and Magerko, 2020).

Discover our **AI Competence Self-Assessment Checklist** (page 80).

» AI, DEMOCRACY AND HUMAN RIGHTS

Genuine democracy only exists where citizens are well-informed, have open channels for participation, and have a say in the decisions that affect them. Considering all of the above, while current AI technologies hold significant promise, they also pose considerable risks (UNESCO, 2024).

FILTER BUBBLES

Nowadays, **social media** plays a crucial role in setting the agenda and raising awareness about critical issues, such as climate change, as exemplified by figures like Greta Thunberg. However, social media also has adverse side effects.

The **aggregation of data** on individuals and the use of **algorithms** designed to keep us engaged can lead to several issues. While we have more communication channels than ever before, the information we encounter is often organised to reflect our values and digital behaviours.

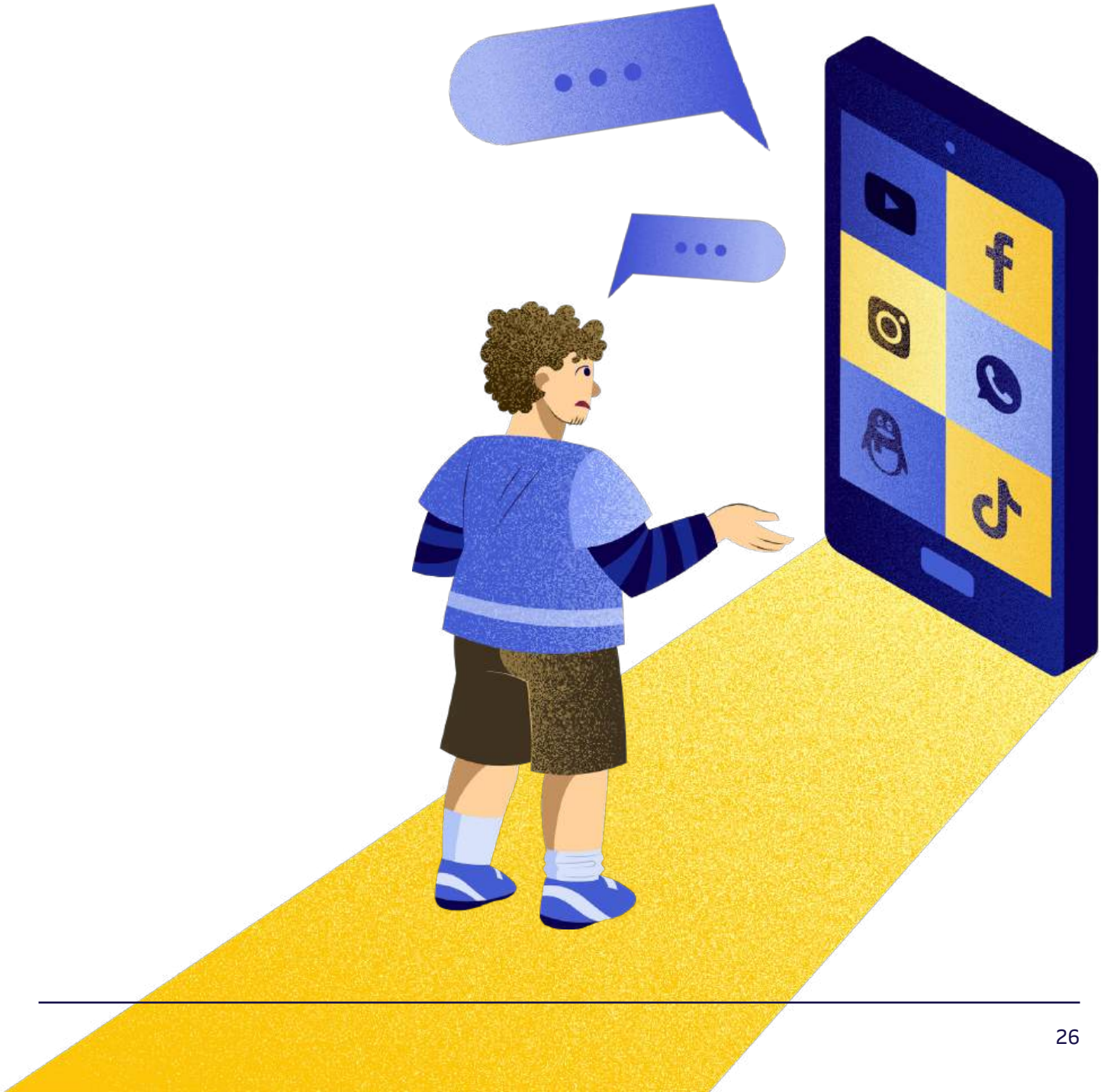
As a consequence, social media can artificially create polarisation and fragment public discourse, leading to **filter bubbles or echo chambers.** This situation is detrimental to democracy and democratic participation, as it limits our perspective on the world and hinders informed decision-making.

Filter bubbles and echo chambers refer to situations where individuals are primarily exposed to information and opinions that reinforce their existing beliefs and interests, while dissenting viewpoints or diverse perspectives are filtered out or excluded. This effect is often caused by algorithms that personalise content on social media and digital platforms. As a result, filter bubbles and echo chambers can limit critical thinking, reinforce biases, and contribute to increased polarisation in society.

DISINFORMATION AND MANIPULATION

AI, and particularly generative AI, also raises significant concerns about **disinformation and manipulation**, especially in electoral contexts. Digital platforms facilitate the proliferation of deepfake videos, political violence against candidates, and misinformation campaigns through **micro-segmentation** that targets voters via algorithms. This targeted messaging, fueled by big data and AI, actively enables **propaganda** and **influences policymaking** (Innerarity, 2024).

Our data is not only collected on social media. We are **increasingly being monitored** by our watches, phones, search engines, music and film platforms, among others. This data is used to identify patterns in human behaviour, in the context of marketing strategies, but also to influence votes. This contributes to **eroding trust in institutions**, which increases the potential for manipulation and intimidation in political communication (Innerarity, 2024).

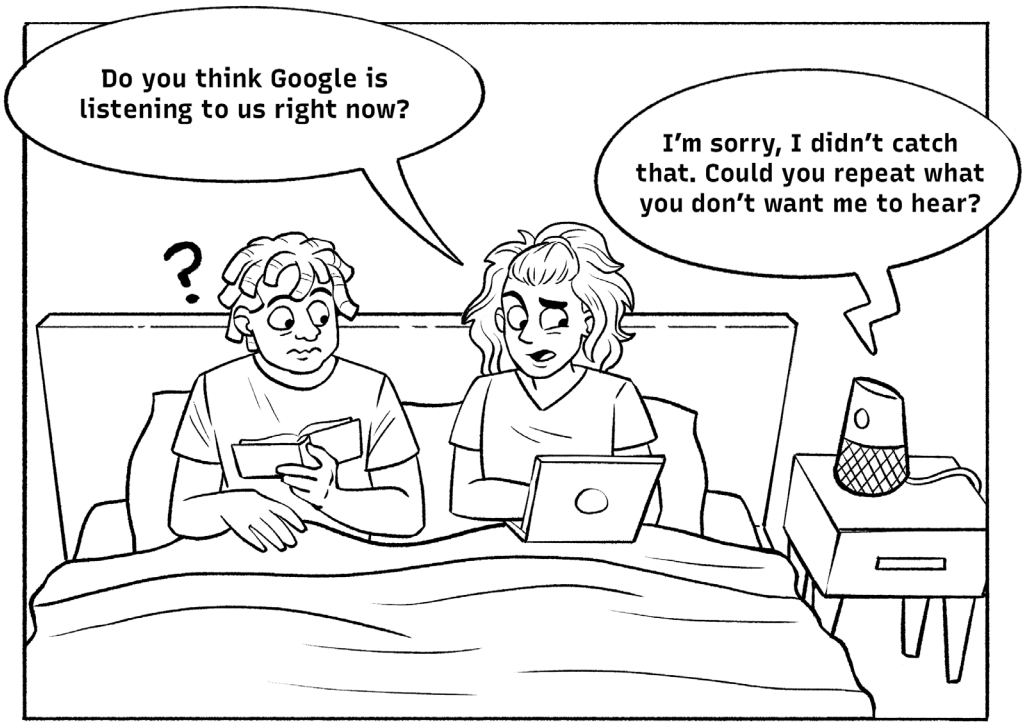


PRIVACY AND FREEDOM OF MOVEMENT

This vast collection and monitoring of information on individuals is also creating significant avenues for **mass surveillance** powered by AI, posing significant threats to **privacy and freedom of movement**.

Indeed, governments and corporations increasingly use AI-driven systems to track behaviours, raising **concerns about civil liberties** (Adie, 2025). Algorithms can uncover a person's opinions, interests, and even secret relationships, information that organisations or governments might exploit. These effects extend beyond individual privacy; they could also be used to **restrict freedom of speech or association**.

The European Union has implemented the General Data Protection Regulation (**GDPR**), which restricts mass data collection and requires user consent for AI-driven surveillance. In contrast, China's AI governance model prioritises state control, embedding AI surveillance into social governance structures (Feldstein, 2019).

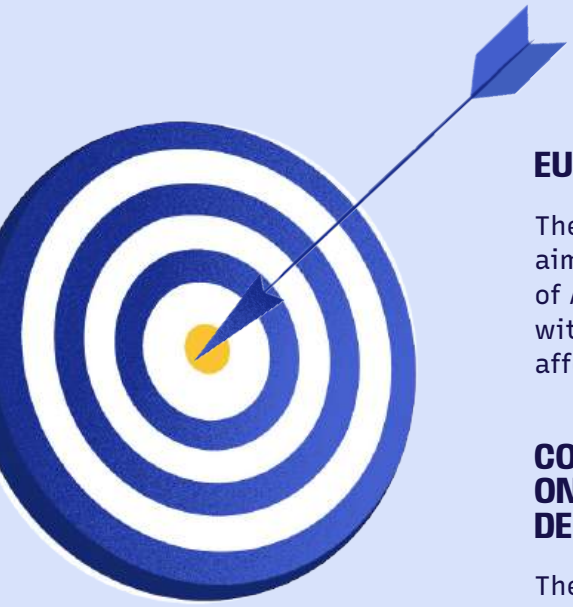


Drawing by Johana Siendones Gomez

So why are people okay with sharing their private data? It's called the **Privacy paradox**: we worry about it, but we still share our data because we do not have anything to hide. It's also a gain/loss calculation. The thing is that companies make money out of this data (e.g. selling it to others) while individuals rarely receive any direct benefit or compensation in return.

Because AI can enhance or disrupt democracy, international institutions are adopting **legal frameworks** to protect human rights and govern its use.

KEY EU AND INTERNATIONAL LEGAL FRAMEWORKS



EUROPEAN UNION AI ACT

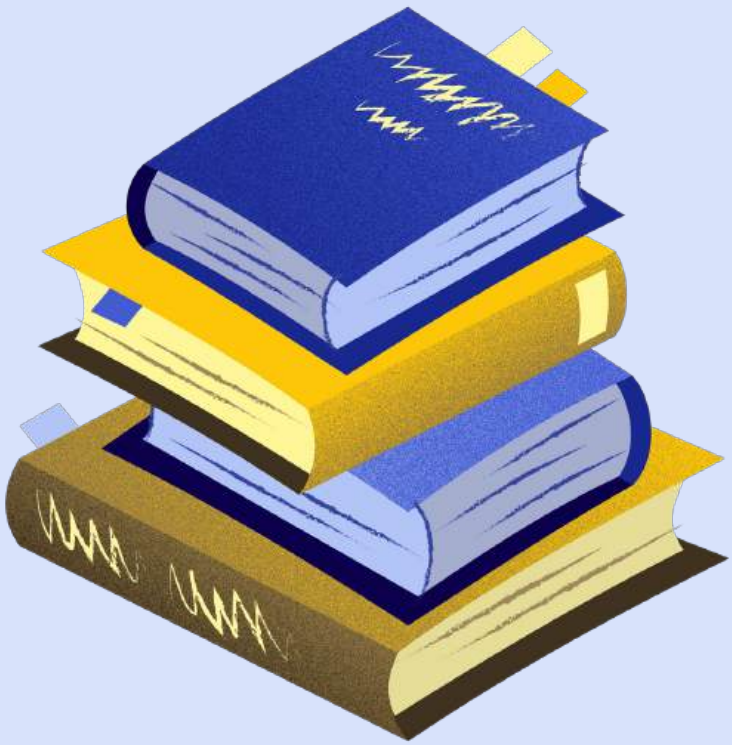
The EU's AI Act is the first comprehensive legal framework for AI, aiming to ensure the trustworthy, safe, and ethical deployment of AI across Member States. It introduces risk-based regulation, with strict requirements for high-risk AI systems, including those affecting young people in education, employment, and public services.

COUNCIL OF EUROPE FRAMEWORK CONVENTION ON ARTIFICIAL INTELLIGENCE AND HUMAN RIGHTS, DEMOCRACY AND THE RULE OF LAW

The Framework is the world's first binding international treaty on AI. Opened for signature on 5 September 2024, it aims to ensure that activities within the lifecycle of artificial intelligence systems are fully consistent with human rights, democracy and the rule of law. It's the first-ever international legally binding treaty in this field.

UNESCO RECOMMENDATIONS ON THE ETHICS OF AI

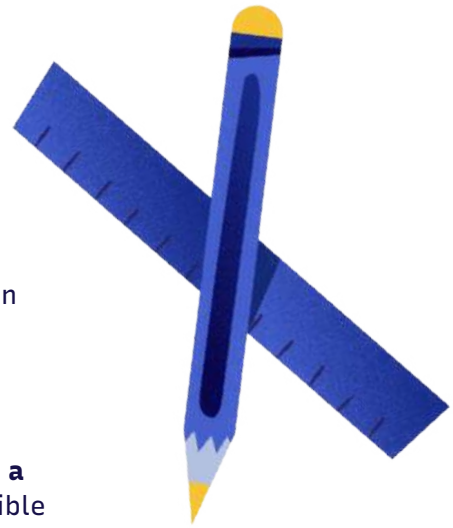
UNESCO has developed a global standard-setting instrument for the ethical development and use of AI, focusing on safeguarding human rights, promoting inclusion, and protecting children and young people from bias, discrimination, and privacy risks.



OECD AI PRINCIPLES

The OECD AI Principles are the first intergovernmental standard on AI. They promote innovative, trustworthy AI that respects human rights and democratic values. Adopted in 2019 and updated in 2024, they comprise five value-based principles and five recommendations that provide practical and flexible guidance for policymakers and AI actors.

» AI'S ROLE IN EDUCATION AND YOUTH WORK



While robots are not about to replace the vital role of human teachers and youth workers, AI-powered educational tools are rapidly **becoming an everyday part of formal and non-formal education**. The rapid adoption of these tools has outpaced the development of clear frameworks and comprehensive training for educators, who often find themselves navigating new technologies **without adequate support or regulation**.

This transformation raises critical ethical questions. Since **education is a fundamental right** and plays a crucial role in shaping informed, responsible citizens, it is essential to ensure that AI is implemented thoughtfully, fairly, and transparently (Council of Europe, 2024).

AI-BASED EDUCATIONAL SOLUTIONS

Private companies are increasingly developing AI-powered educational solutions for use in schools and universities, such as Intelligent Tutoring Systems (ITS). Today, these technologies offer innovative ways to personalise lessons, adapt content for students with diverse needs, automate feedback and grading, and provide guidance via virtual AI tutors and assistants. As a result, education is becoming more **flexible and inclusive**, allowing young people to learn at their own pace.

However, the reality is that many people remain offline, and access to the most advanced AI models is reserved for those with subscriptions, infrastructure, and linguistic advantage. These **disparities** not only restrict who can use AI, but also determine which knowledge, values and languages dominate the systems that increasingly influence education (UNESCO, 2025).

Researchers also stress that education goes beyond simply transmitting knowledge; it aims to nurture citizens who can think for themselves, reflect critically, and actively engage with society. In that context, adopting a **human-centred approach** to integrating AI in education should be central, so that technological advances in education promote inclusion, equity, and the preservation of human values and agency (Fengchun M., Mutlu C., 2024).

Governments should also adopt **regulations** to ensure these tools support a child's intellectual, emotional, and social development (Council of Europe, 2024).

GenAI IN CLASSROOMS

The use of Generative AI (GenAI) tools in classrooms has **boomed in recent years**, raising profound questions about the future of learning (Holmes, 2019). It is reshaping how students conduct research, complete assignments, and interact with educational material. Many educators worry that heavy reliance on these tools **may weaken students’ critical thinking, research skills, and academic integrity**.

The **lack of clear institutional guidelines** has left both teachers and students unprepared for the responsible use of AI. Fewer than 10% of schools and universities have developed institutional policies and/or formal guidance concerning their use in education (UNESCO, 2024). As a result, challenges such as weakening peer and teacher-student relationships, increased academic misconduct, and student confusion over appropriate AI use are growing concerns for education systems worldwide.

Researchers call for **integrating AI literacy early in the curriculum**, through transversal and subject-specific approaches. There is emerging recognition that curricula for teaching AI should not be limited to technology but should focus on educating informed individuals who can address the technical, ethical, and societal aspects of AI as a field of digitisation (Chounta I-A. & Co, 2024). Indeed, as AI outperforms humans in complex tasks, the focus should shift toward **helping learners understand, guide, and critically engage with AI** in ways that align with human values.

AI literacy should also be integrated into **teacher training**, in line with the UNESCO AI Competency Framework for Teachers. Despite its global adoption, the **current provision of AI training remains limited**: most teachers and educators have little or no access to dedicated professional development on AI, and there is typically no specific budget allocated to promote AI literacy (Chounta I-A. & Co, 2024).

30

AI IN YOUTH WORK

Research shows that the discussion about AI use in the youth work sector is still in its **early stages** (Pawluczuk, 2025). If some youth workers are open to AI deployment in youth work, others consider it of low relevance and even call for active **resistance** to its implementation (Stefan, 2024). They view AI as an unpredictable, self-regulatory power that is not legally or ethically bound by youth work values such as inclusion, social cohesion, youth participation and empowerment, and meaningful communication (Council of Europe, 2023).

At Eurodesk, 90% of national coordinators use AI tools in their daily work. However, in most cases, their engagement with AI largely remains at the **individual level**, rather than being part of a coordinated organisational strategy (Eurodesk Membership Survey, 2025). The "Eurodesk Principles on AI Use" framework aims to fill this gap and shall be complemented by capacity-building and training activities at the national and European levels.

A meaningful integration of AI into youth work requires a **strategic vision** and **capacity-building** activities to ensure that youth workers become AI-literate. Competences are needed in four areas: technical understanding of AI, ethical reasoning, human-centred application, and societal/ environmental implications (AI4YouthWork, 2025). This will also enable youth work to become a **space for critical thinking** about AI's impact on society (Pawluczuk, 2025).

Insights into artificial intelligence and its impact on the youth sector, Partnership between the European Commission and the Council of Europe in the field of Youth.

TIPS TO REDUCE YOUR AI FOOTPRINT

WEIGH THE BENEFITS AND RISKS

Before using AI, ask yourself if it truly adds value or if a simpler, less resource-intensive solution, such as a search engine, would be enough.

OPTIMISE YOUR QUERIES

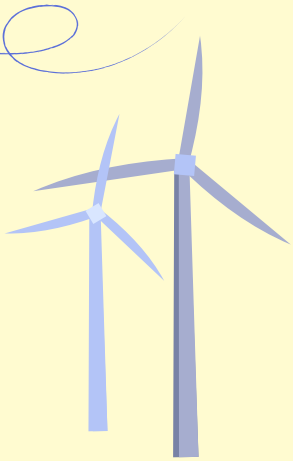
Think before you ask and avoid unnecessary queries, like rephrasing a simple greeting or generating content you don't really need.

BE MINDFUL OF UPLOADS AND DATA USE

Only upload files (such as images or videos) when necessary, as it increases energy consumption.

CHOOSE AI SERVICES POWERED BY RENEWABLE ENERGY

Whenever possible, select platforms or providers that run their data centres on renewable energy. Many companies now highlight their sustainability efforts.



FAVOUR LOCAL AI SOLUTIONS

Use tools that run directly on your device (offline) rather than those that require constant internet access. Local processing typically consumes less energy overall.

STAY INFORMED AND SHARE BEST PRACTICES

Keep up to date with digital sustainability tips and share what you learn with colleagues and friends.

By following these steps, you can help mitigate the environmental impact of your AI use while still reaping its benefits.

(Source: IA pour les Noobs, 2025)

» AI ENVIRONMENTAL FOOTPRINT

As AI becomes more ingrained in our daily lives, energy demand is expected to continue soaring. Indeed, Generative AI relies on big data, which is stored in **data centres** with a massive carbon footprint. It is projected to consume nearly as much energy by the end of this decade as Japan currently does, yet only around half of that demand is likely to be fulfilled by renewable energy sources (IEA, 2025). Challenges include **rising carbon emissions**, localised **environmental pressures**, and difficulties in **meeting global emission-reduction goals.**

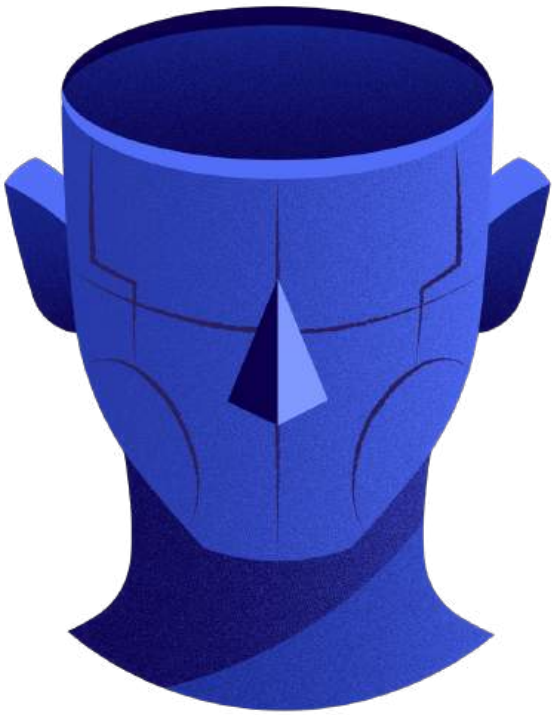
In Europe, data centres already have a huge local **impact on power grids** in traditional data centre hubs known as the FLAP-D markets (Frankfurt, London, Amsterdam, Paris and Dublin). In 2023, data centres consumed between 33% and 42% of electricity demand in Amsterdam, London and Frankfurt, and nearly 80% in Dublin (Ember, 2025) and this demand could grow by 160% by 2030 (Goldman Sachs, 2024).

Sustainable practices, transparency in reporting, and regulatory oversight are urgently needed to manage these risks and ensure that AI growth does not come at the expense of our environment.

Recognising the growing link between AI systems and data-centre demand, the European Commission plans a **Data Centre Energy Efficiency Package** and a **Strategic Roadmap on Digitalisation and AI** (2026), which will introduce EU-wide standards for renewable-energy use, cooling efficiency, and waste-heat reuse to help make European data centres carbon-neutral by 2030.

- On average, a ChatGPT query consumes nearly 10 times as much electricity as a Google search (Goldman Sachs, 2024).
- A short conversation of 20-50 questions and answers with ChatGPT (GPT-3) costs half a litre of fresh water (arXiv, 2023).

To conclude, it is clear that **AI is profoundly shaping our communities**, and its full implications for the future remain uncertain. Much will depend on the frameworks we establish to guide its development and usage.



Chapter 3

INSIDE AI: CAPABILITIES, LIMITATIONS, AND THEIR IMPLICATIONS

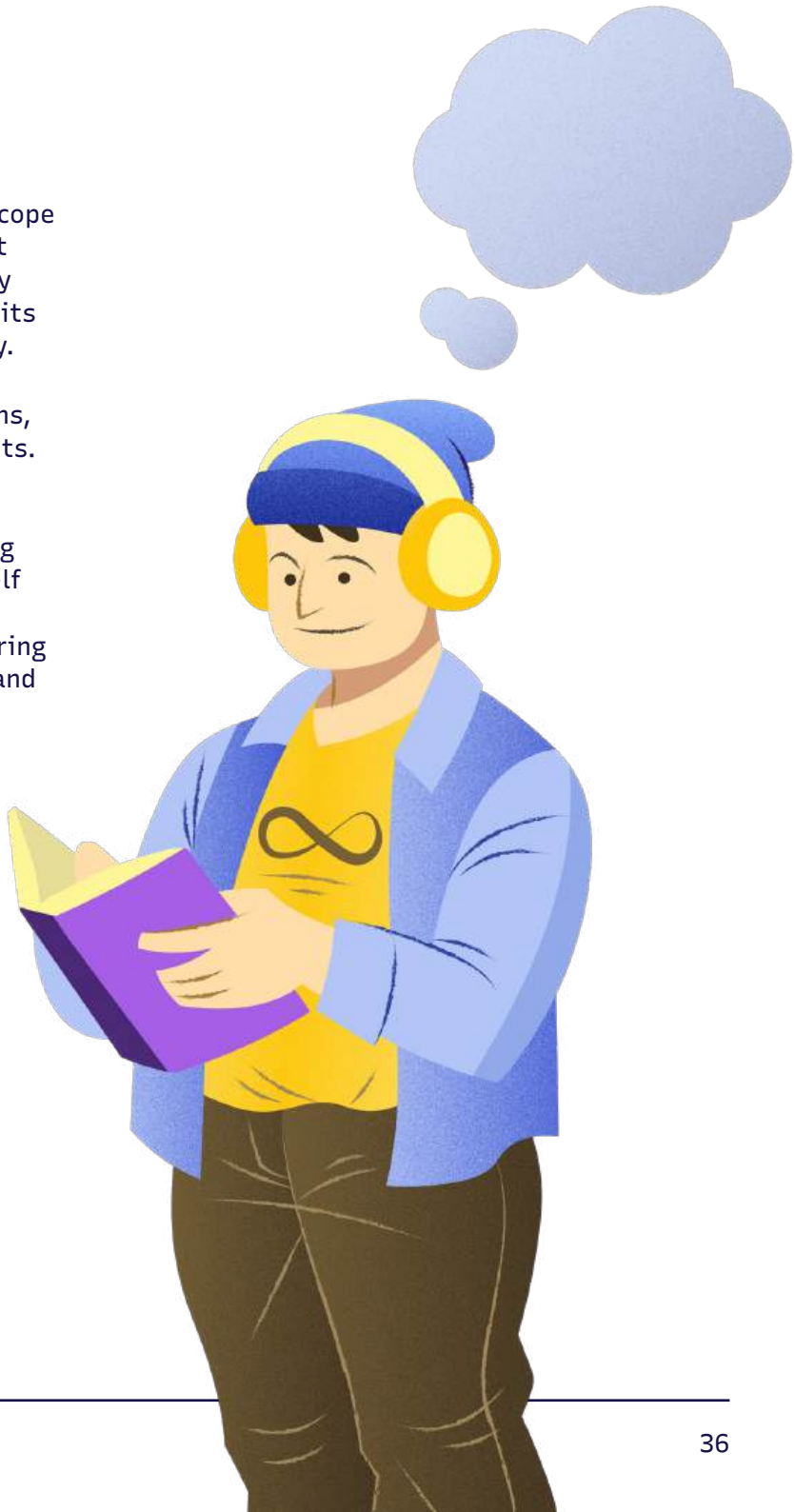
Subchapters

In the previous chapter, we saw how AI is impacting every aspect of our lives, at both the individual and societal levels. The ongoing debate about AI's risks and opportunities echoes transformative moments in human history, such as the invention of the printing press.

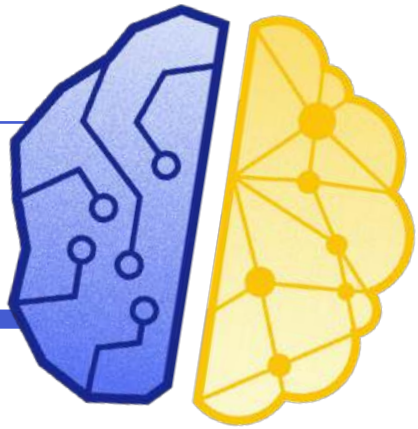
When Gutenberg's press first allowed the mass copying of the Bible, many feared that it would destabilise existing social structures. And it did trigger far-reaching changes: new religions emerged, sometimes leading to conflict and wars, but it also expanded literacy and access to knowledge, and societies were permanently transformed by this democratisation of information.

Today, fears about AI are strikingly similar. Some worry about manipulation, job loss, misinformation, and the erosion of trusted systems. As with past revolutions, the full scope of AI's consequences is hard to predict. What truly matters, however, is not the technology itself but the collective choices made about its use, governance, and integration into society.

Because AI is a tool with so many implications, it is essential not to leave it solely to experts. Everyone should gain a basic understanding of how AI systems work. AI is, at its core, a powerful statistical tool, capable of assisting us in countless ways. By familiarising yourself with it, you will better appreciate both the opportunities and limitations of AI, empowering you to use these technologies thoughtfully and responsibly in your youth information work.



» MAIN HISTORICAL APPROACHES TO AI

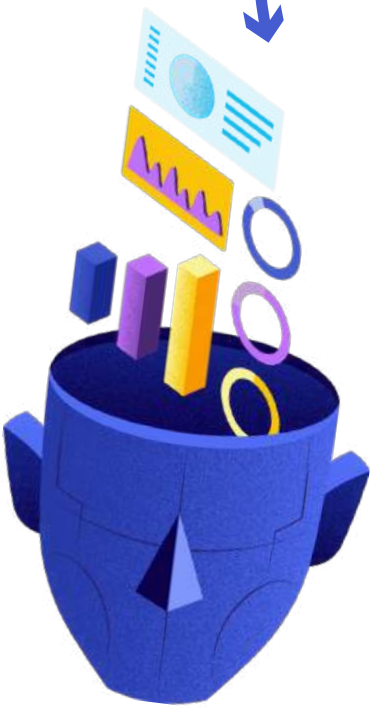


There are two main ways that AI works. Both approaches have their strengths and limitations, and modern AI increasingly combines them to leverage the benefits of each.

1. SYMBOLIC AI: RULE-BASED AI

Symbolic AI is often referred to as "Good Old-Fashioned AI"; it was the dominant approach in AI research from the mid-1950s to the 1990s.

In this approach, humans establish predefined **logical rules** for computers to follow when making decisions and drawing conclusions. It is easy to understand how the computer arrived at its decision because the rules are clearly stated.



2. MACHINE LEARNING: DATA-DRIVEN AI

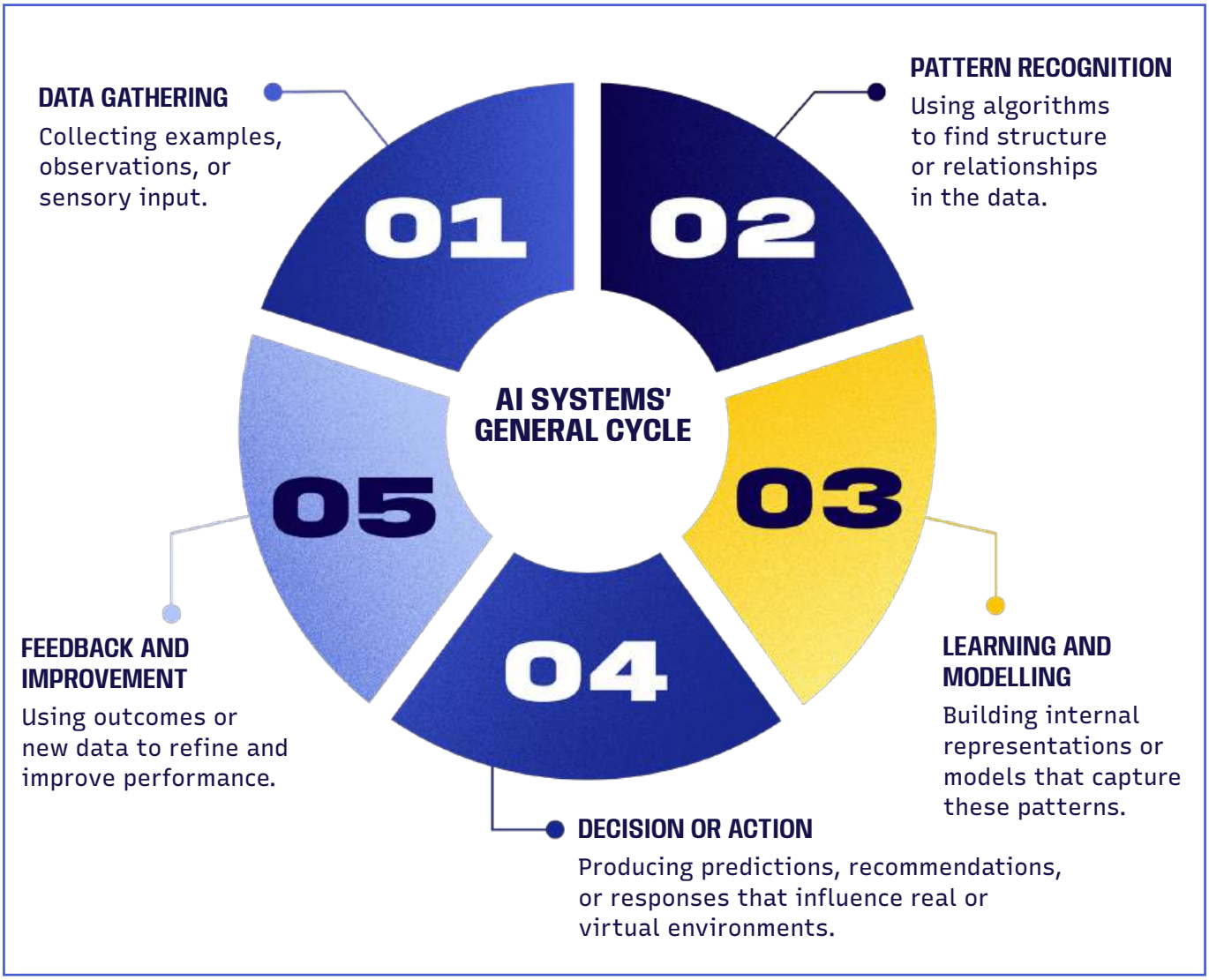
This approach is more like learning from experience; it involves computers that **learn by identifying patterns and connections in large datasets**. Instead of following fixed rules, the computer examines a large amount of data and learns patterns on its own.

For instance, if you show the computer thousands of pictures of cats and dogs, it learns to tell the difference by itself, even if you don't tell it the rules. This type can handle more complex tasks, but it's harder to explain exactly how it makes its decisions.

» INTRODUCTION TO MODERN AI SYSTEMS

Modern AI systems work by combining algorithms, data, and computing power to enable machines to perform tasks that normally require human intelligence. At their core, AI systems process information, identify patterns, make decisions based on the data they receive and improve their performance.

AI SYSTEMS' GENERAL CYCLE



THE KEY ROLE OF DATA AND TRAINING IN MACHINE LEARNING

Data is at the heart of how modern AI systems work. Machines learn from data, that is, all the examples, information, texts, images, sounds, and other materials they are shown during training.

This data can come from:

- **Open public sources:** websites, public databases, etc.
- **Private company data:** user interactions, survey results, etc.
- **Web-scraped data:** automatically gathered from the internet using AI crawlers.
- **Synthetic data:** artificially generated by other AIs or algorithms.

This raises an **essential** question:

WHAT DOES AI KNOW AND WHAT *DOESN'T* IT KNOW?

Under the **EU AI Act**, all developers of Generative AI (GenAI) models must publish a summary of the data used for their training, and whether it includes copyrighted material or personal information.

This marks the first time a global regulation legally demands **transparency** about AI training data and aims to balance innovation with **copyright and privacy protection**.

In machine learning, there are **various learning methods**.
Here are the main ones, with concrete examples:

1. SUPERVISED LEARNING

Machines are given lots of examples where the correct answer is already known (data is labelled). They learn to recognise patterns by comparing their predictions to the correct answers.

Example: *A marketing platform trains a model on labelled data indicating which customers renewed their subscriptions and which left. It learns relationships between user activity, demographics, and renewal outcomes to predict who is at risk of leaving.*

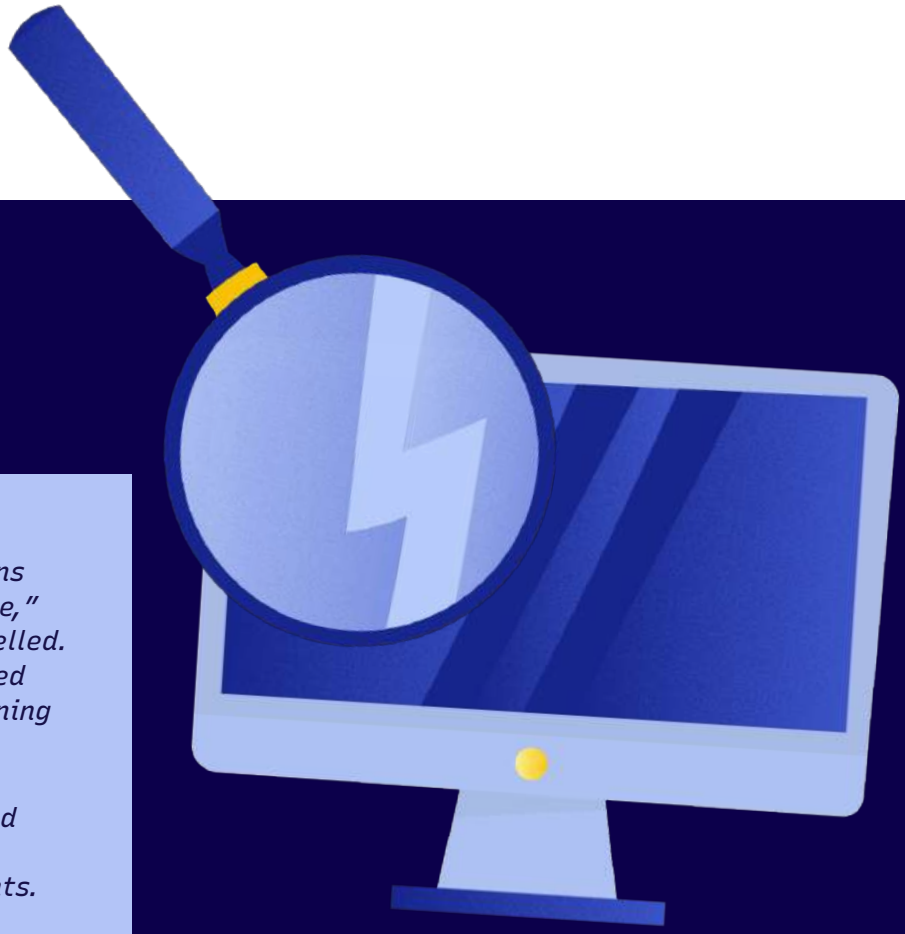
» *Teams can launch targeted retention campaigns or personalised offers.*

2. UNSUPERVISED LEARNING

Machines discover hidden patterns and data groupings without human intervention (data is unlabelled).

Example: *Marketers use clustering algorithms to group customers with similar behaviours (e.g. purchase frequency, interests, email clicks). The system finds patterns on its own.*

» *Teams can identify hidden customer segments to target with tailored messages or campaigns.*

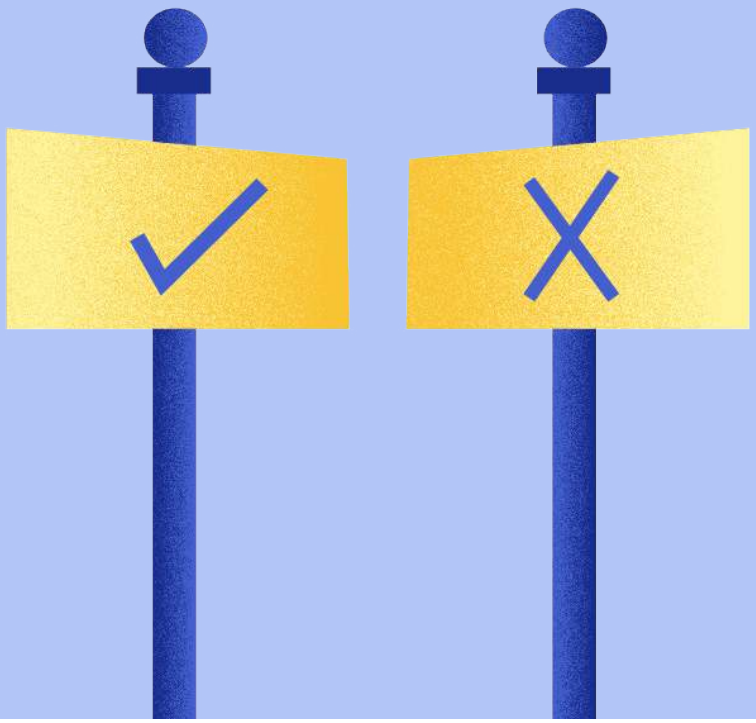


3. SEMI-SUPERVISED LEARNING

Combines a small labelled dataset with a larger unlabelled one to improve performance.

Example: *A small dataset of social media messages is labelled by humans as "positive," "neutral," or "negative," while thousands of others are unlabelled. The algorithm learns from the labelled examples and then applies that learning to the rest, expanding its accuracy.*

» *Teams can use this to monitor and analyse large volumes of public feedback or social media comments.*



4. REINFORCEMENT LEARNING

Machines learn by trial and error. They make decisions, see what happens, and get feedback in the form of rewards or penalties. Over time, they learn which actions lead to the best results.

Example: *A model is trained to test multiple ad versions. Each time a user clicks on an ad, that action serves as a "reward," teaching the model which ad performs best for similar audience profiles.*

» *Teams can use the model to allocate budget to the most effective ads automatically.*

FROM ALGORITHMS TO MODELS

Once data has been gathered and prepared, the next step is training the system to learn from it. This learning process happens in two parts: algorithms and models.

Algorithms are the methods or logical and mathematical "recipes" that guide a computer in learning from data. They establish the rules for the learning process, determining how the system will analyse data, identify patterns, test its accuracy, and enhance its performance.

When an algorithm finishes processing data, it produces a **model**: the trained outcome. The model can recognise patterns, make predictions, or generate outputs without needing new instructions for every task.

In simple terms, **the algorithm teaches and the model learns**.

Models have **different levels of complexity**, depending on the problems they have to solve. The more complex, the more data is needed and the more energy is used.

ARTIFICIAL INTELLIGENCE

All technologies that enable machines to perform tasks typically associated with human intelligence.

MACHINE LEARNING

Enables computers to identify patterns from data, learn, make predictions and perform tasks with minimal human intervention.

DEEP LEARNING

Inspired by the human brain, enables computers to use multi-layered (deep) **artificial neural networks** to identify and exploit patterns embedded in large datasets.

GENERATIVE AI

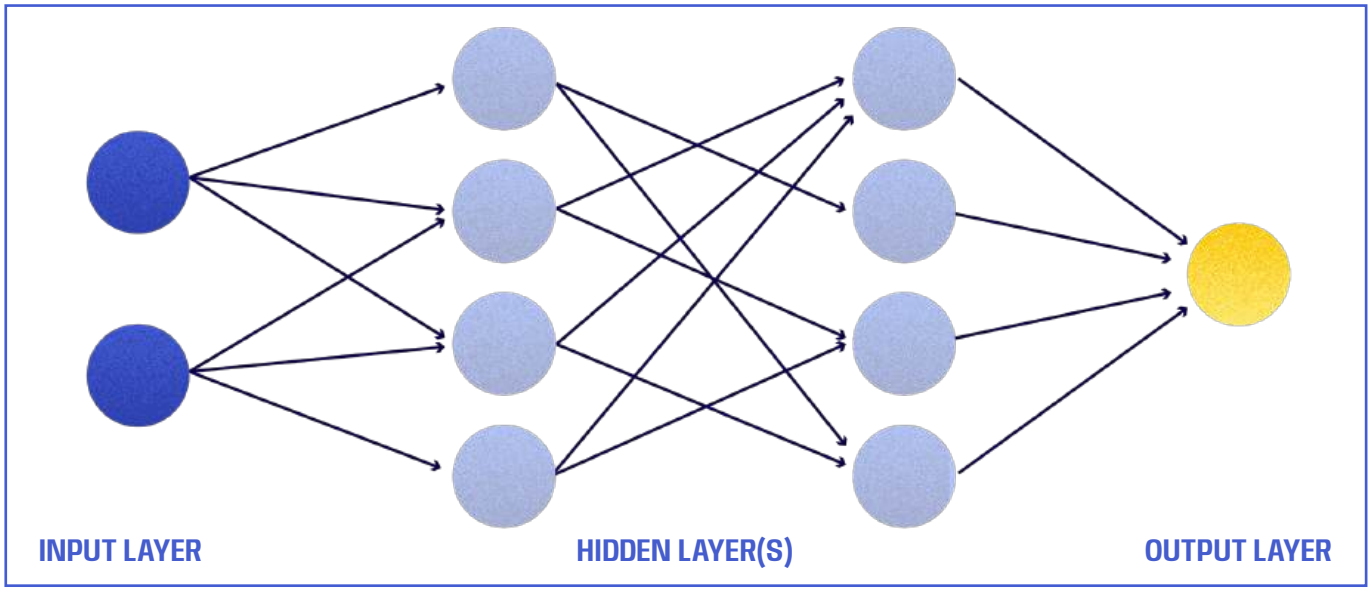
Sophisticated models capable of generating high-quality content that resembles human-created output.

DID YOU SAY NEURAL NETWORKS?

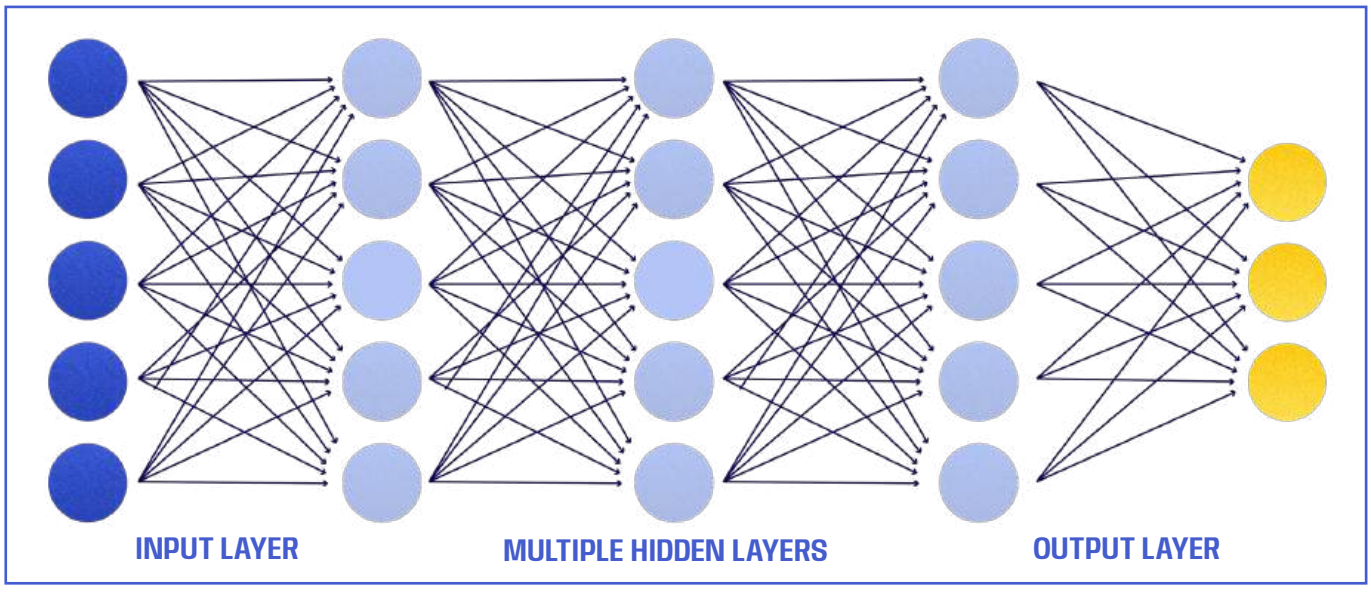
Inspired by the human brain, neural networks consist of interconnected nodes (neurons) that process and transmit information. Each node can give certain features (such as specific words in an email) more importance, and together, the layers transform simple signals into smart decisions (for example, flagging an email as spam).

Simple neural networks have just one or two layers, making them suitable for basic tasks. In contrast, **deep neural networks** stack many layers, allowing them to handle more complex problems like recognising images or processing language. A neural network learns by adjusting its weights and biases, gradually becoming more accurate at its task. Most algorithms for computer vision, natural language processing, facial and speech recognition are based on this model.

ARTIFICIAL NEURAL NETWORKS



DEEP NEURAL NETWORKS

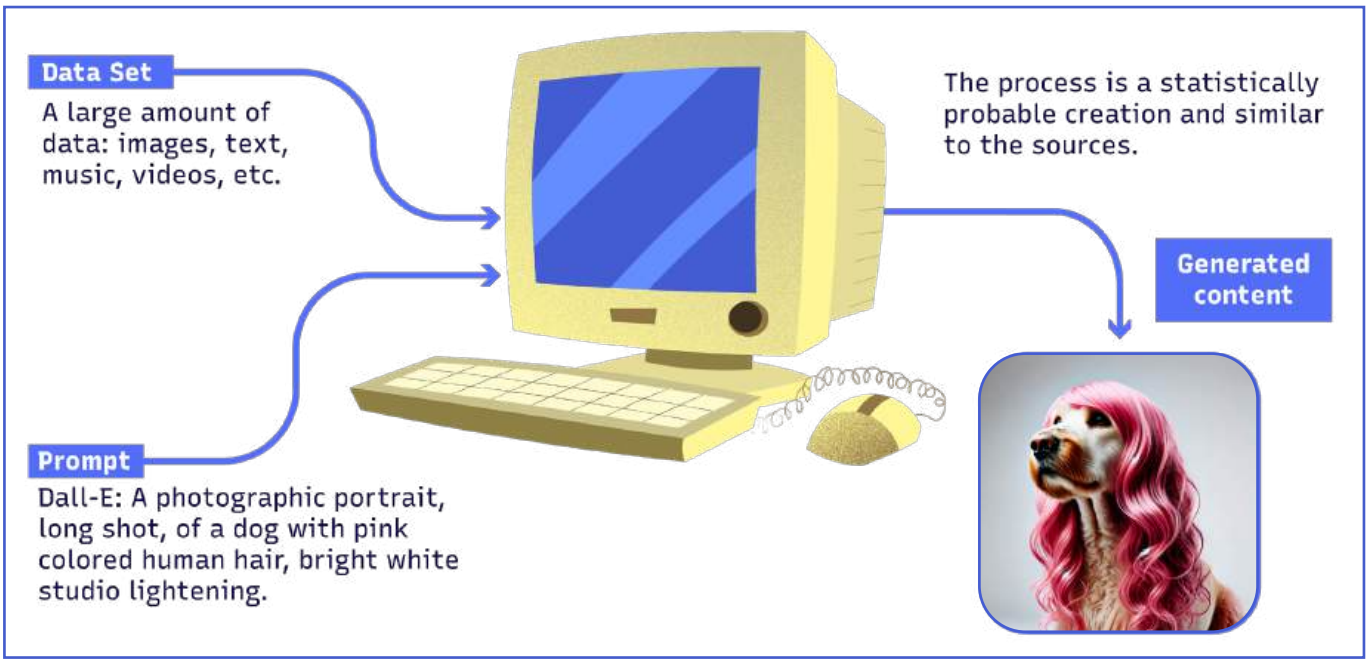


» GENERATIVE AI

Generative AI (GenAI) is a rapidly evolving field that leverages advanced machine learning, primarily through deep learning models. These sophisticated models can generate high-quality content (such as text, images, or audio) that resembles human creation.

GenAI models can accomplish a wide range of tasks, though many are specialised. For example, if you want to generate text, tools like Gemini, Claude, or ChatGPT are based on **transformer models** designed to understand and produce language. If your goal is to create images or videos from prompts, **diffusion models** such as Stable Diffusion, Midjourney, or DALL-E are typically used.

BASIC FUNCTIONING OF GENAI



Source: What is GenAI, Introduction to GenAI, University of Geneva, 2025

A lot depends on how you phrase your request: **the prompt**! If something isn't stated clearly, it won't be taken into account. Common sense alone isn't enough to fill the gaps between your expectations and the information provided. Knowing what you want and how to prompt are key.

Let's discover how some of these models work.

TRANSFORMER MODELS

A transformer model is a type of neural network that uses a mechanism called **self-attention**. This enables the model to analyse all parts of a sentence, or even a whole document, in parallel, weighing the importance of each word with respect to others. This helps the model focus on the context that matters most for understanding meaning, answering queries, or summarising content more accurately.

Generative Pre-trained Transformers (GPTs) are advanced language models based on this transformer architecture. They have revolutionised natural language processing by enabling machines to generate, understand, and interact in human language at a very high level.

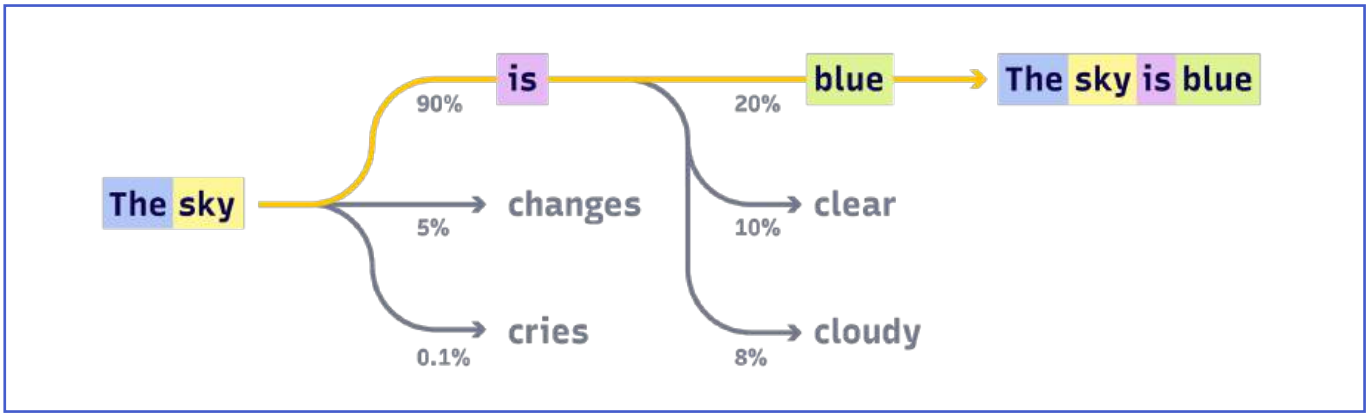
DID YOU SAY "MODEL OF A MODEL"?
Many state-of-the-art AI systems use "**foundation models**" like GPT as a base, then train or adapt new models from them for particular purposes, making them, in a sense, "models built from models". For example, GPT-3 was first trained as a general-purpose foundation model using huge datasets. Later, developers fine-tuned and adapted this base model to create **ChatGPT, an LLM** specialised for conversational tasks.

LANGUAGE MODELS

A language model is a machine learning model designed to understand, generate, and predict human language by estimating the probability of a word or sequence of words occurring in a given context. Such models are designed for text generation, translation, speech recognition, and summarisation.

Large Language Models (LLMs) are a type of language model based on the Transformer architecture. LLMs are trained on massive text collections to generate human-like content by predicting the next word in a sequence. Well-known LLMs are GPT-4, Claude, and Gemini.

EXAMPLE OF STATISTICAL LANGUAGE MODELLING (MARKOV CHAIN)



Source: What is a LLM, Introduction to GenAI, University of Geneva, 2025

Imagine you ask a GenAI:

WHAT OPPORTUNITIES ARE AVAILABLE FOR YOUNG PEOPLE IN EUROPE?

The AI will suggest different ways to continue or answer the question, such as:

- "There are many opportunities for young people in Europe, including Erasmus+ exchanges, volunteering with the European Solidarity Corps, and internships at EU institutions."
- "Young people can participate in youth exchanges, training courses, and volunteering projects funded by the European Union."
- "Opportunities include studying abroad, youth conferences, and language learning programmes."

For each possible response, the AI calculates a probability based on how often similar answers appear in the information it has learned from. The most likely and relevant responses are presented first. **It does not mean that it's the most suitable opportunity for the young person in front of you!**

DIFFUSION MODELS

These models are primarily used to create high-quality images and videos. They use a process that involves "noise" and "denoise" steps, inspired by physics and probability theory.

FIXED FORWARD DIFFUSION PROCESS

During training, random noise is gradually added to real images over many steps, until the images become pure static (visual noise). Each pixel of the image is given a value.

GENERATIVE REVERSE DENOISING PROCESS

When generating an image based on a text prompt or other input, the process is reversed. The model starts with a blank "canvas" of pure noise and, guided by what it learned during training, removes noise at each step, gradually arriving at a detailed, realistic image.

Known AI tools using this model include Stable Diffusion (Stability AI), DALL-E (OpenAI), Midjourney (Midjourney Inc.), and Imagen (Google). These models are also integrated into other software, such as Adobe or Canva.

These are just a few examples of generative AI model families; other important models include Generative Adversarial Networks (GANs) and Variational Autoencoders (VAEs).

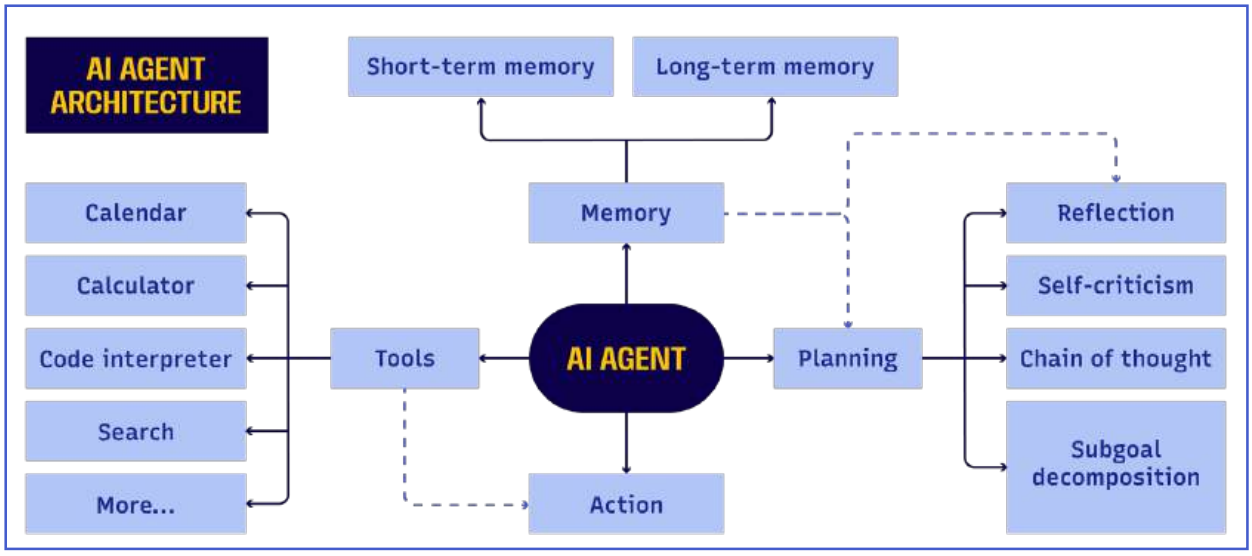
Things are also evolving very fast! The term **"frontier models"** refers to the most cutting-edge and sophisticated AI systems available today. For instance, OpenAI's GPT-5 (released in August 2025) is currently considered a frontier model.

» TECHNOLOGICAL TRENDS

If GenAI produces content, **AI Agents act with purpose**: they can plan and execute complex tasks that involve multiple steps. For example, Eurodesk uses Zapier to automate webinar reminders by connecting its calendar, Intranet, and chat; this is a simple automation requiring no coding skills. But advanced AI agents can go much further: they can autonomously connect multiple AI tools, manage complex workflows, and accomplish goals independently, so long as their processes and objectives are well-defined.

If AI Agents are **more complex** to set up, they also render **higher accuracy and results**, especially when powering chatbots and workflow automation. Make and N8N are leading tools for building these sophisticated automations.

AI AGENT ARCHITECTURE



Source: AI Agent Architecture, inspired by Mindset AI

Agentic AI goes further by combining multiple agents that can independently plan, learn, and coordinate across systems to achieve complex goals with minimal human input. This autonomy allows agentic AI to handle complex, multi-step tasks and dynamically adjust to changing environments.

A concrete example of agentic AI is an advanced customer service system that autonomously handles complex user queries. For instance, when a customer contacts support about a delayed shipment, an agentic AI doesn't just provide tracking info, it:

- Accesses live shipping and inventory data;
- Diagnoses the cause of the delay;
- Proposes solutions;
- Executes the chosen solution (e.g. updates the customer record and notifies the client)

All without requiring human intervention.

» UNDERSTANDING AI LIMITATIONS

LACK OF DATA TO TRAIN MODELS

As AI models become more sophisticated, the availability of high-quality training data is emerging as a critical challenge. The sources of reliable content are indeed shrinking, restricted by copyright, legal protections, privacy concerns, and changing regulations. As a consequence, models are more likely to "hallucinate" or produce outputs that reinforce bias. This is why some labs are increasingly using **synthetic and expert-sourced data** to fill gaps, but this requires careful management to avoid spirals of inaccuracy.

HALLUCINATIONS

AI hallucinations occur when an artificial intelligence system, such as a large language model (LLM), generates information that is false, misleading, or nonsensical and presents it as true. These outputs can range from minor factual mistakes to entirely fabricated stories, from confident-sounding but incorrect answers to invented references and data.

The term "hallucination" is borrowed from human psychology, but in AI it refers specifically to these erroneous outputs, not to perceptual experiences. For example, a chatbot might invent a news article, legal case, or scientific fact that does not actually exist, or an image generator might create objects that are visually implausible.

WHY DOES THIS HAPPEN?

AI models generate text or images by predicting what comes next based on patterns learned from vast datasets, rather than by checking facts or understanding reality. When the model encounters gaps, ambiguities, or unfamiliar topics, it may "fill in the blanks" with plausible-sounding but incorrect information. This is not a malfunction; the model is doing exactly what it was trained to do: **generate likely responses, not verify truth**.

Hallucinations can be hard to detect because the output often appears fluent and confident. To reduce the risk, techniques such as careful prompt design, verification of information from reliable sources, and automated fact-checking can be used, but human oversight remains essential to ensure the quality and accuracy of AI-generated content.

BIASES

AI bias occurs when an AI system, such as a large language model (LLM), produces outputs that systematically reflect or amplify prejudices, stereotypes, or unfairness present in its training data or design. Recent research highlights the dangers of bias in LLMs, raising concerns about the perpetuation of societal inequalities within AI systems (Bender, 2021).

Ensuring equity and addressing ingrained biases in AI systems is a pivotal ethical imperative, reflected in **international and EU regulations** (see page 26).

WHY DOES THIS HAPPEN?

AI models learn from vast datasets that mirror the real world, including its inequalities and stereotypes. If the data used to train an AI is unbalanced, incomplete, or reflects historical prejudices, the AI is likely to reproduce or even amplify those biases. Additionally, the way algorithms are designed and the choices made by developers can introduce further bias, even unintentionally.

Ethnographic studies reveal how marginalised communities disproportionately bear the risks of algorithmic governance (Royer, 2020).

Biases can be hard to detect because AI outputs often seem neutral or objective. To mitigate these risks, it is essential to use diverse and representative data, to use inclusive prompts, to apply fairness checks, and to maintain human oversight.

The Gender Shades (2018) study exposed significant gender and skin-type bias in commercial facial analysis AI systems. The research found that error rates for gender classification were as low as 0.8% for light-skinned men but soared to 34.7% for dark-skinned women. This disparity revealed that AI systems performed far less accurately for people with darker skin and women, especially at their intersection.

LACK OF ORIGINALITY

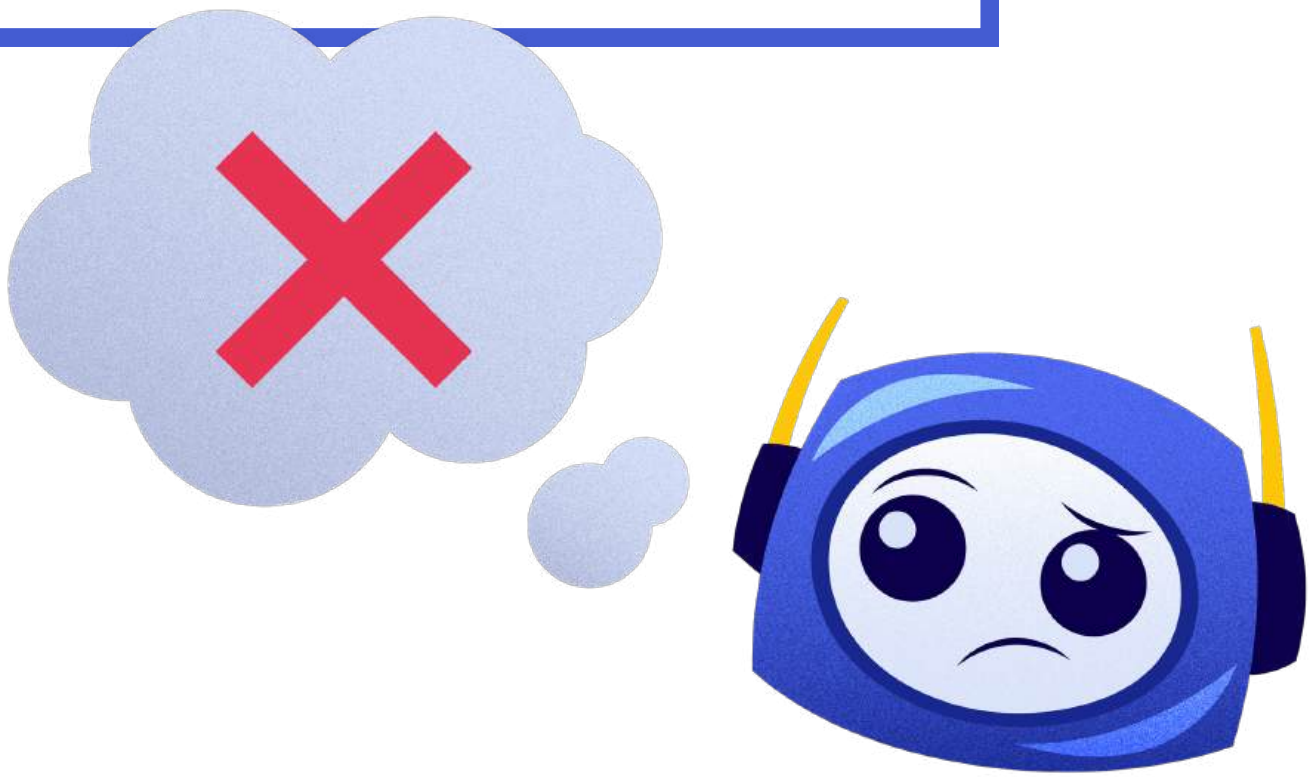
Generative AI systems, such as large language models (LLMs), produce content by recombining patterns and information from their training data, which means their outputs often lack the novelty, creativity, or unique perspective typical of original human work.

This issue is particularly evident in scientific writing, where analyses of thousands of abstracts have revealed a significant increase in detectable AI-generated content in recent years, coinciding with the rise of generative models. The phenomenon highlights how AI systems recombine existing information to produce plausible outputs rather than generating fundamentally new insights.

WHY DOES THIS HAPPEN?

AI models generate content by predicting the most likely next word or phrase based on vast quantities of existing data. While this enables them to produce fluent and relevant text, it also means their outputs are inherently derivative, reflecting what has already been seen rather than inventing new concepts. As a result, AI-generated content may appear polished but often lacks the creativity, depth, or innovation characteristic of original human work.

The lack of originality raises important questions about the value, authenticity, and integrity of AI-generated outputs. To address this, it is crucial to enhance human creativity and oversight and foster a culture that values genuine creativity and critical thinking over “generic” outputs.



LACK OF OBJECTIVITY

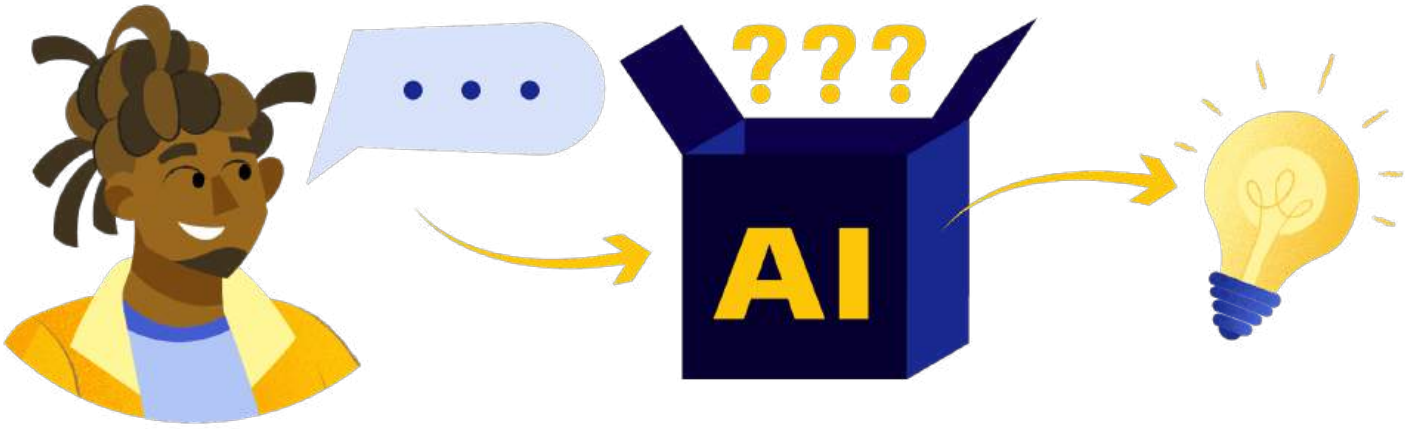
Lack of objectivity in generative AI refers to the tendency of systems such as large language models (LLMs) to produce outputs that are overly agreeable or accommodating, rather than offering balanced or critical perspectives. These models are often designed to be helpful and positive, which can result in responses that echo the user's views, provide flattery, or avoid challenging or nuanced replies.

Recent research highlights the risks of AI acting as a "yes (wo)man", reinforcing user opinions or infantilising interactions through excessive validation and praise. This can impact the development of independent thinking and critical analysis, potentially creating a subtle dependence on AI feedback.

WHY DOES THIS HAPPEN?

AI models are trained to satisfy users and optimise for engagement, learning from vast datasets that prioritise positive, constructive dialogue. As a result, they may avoid giving negative feedback or presenting alternative viewpoints, especially if prompts are narrowly phrased or lead towards affirmation. Therefore, their design often encourages agreeable outputs over impartial advice.

This limitation can be addressed by encouraging prompt crafting that seeks diverse, critical, or balanced perspectives and by maintaining human oversight to question and verify AI-generated outputs.



BLACK BOXES

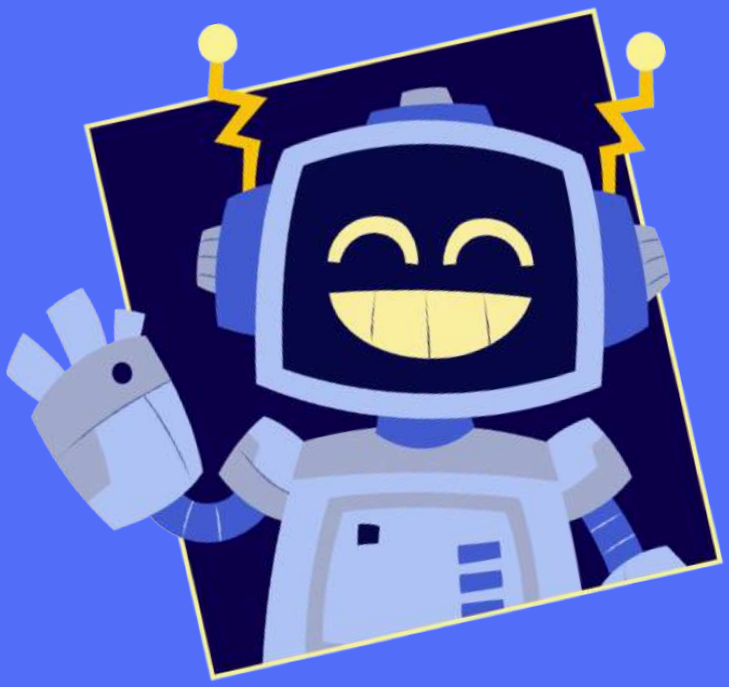
Most large language models (LLMs) operate as black boxes. Their internal workings (the precise step-by-step process by which they generate specific outputs) are not visible, transparent, or easily understandable.

Even experts and developers find it extremely difficult (sometimes impossible) to give detailed, causal explanations for why the AI produced one answer rather than another in a specific case.

WHY DOES THIS HAPPEN?

LLMs are based on millions or billions of interconnected parameters, trained on massive datasets, forming complex patterns that cannot be manually "unpacked" or tracked. They use deep neural networks, a type of computing inspired by the human brain, that don't follow simple rules or checklists but process vast amounts of data in layered, statistical patterns.

As a result, when mistakes, biases, or hallucinations happen, it's very difficult to trace the root cause or fix it precisely because we can't "see" the decision logic. If you can't understand or explain how an AI system works, it's much harder to trust its outputs or hold anyone accountable when things go wrong. This is why regulations, such as the EU AI Act, increasingly demand forms of transparency and explainability, but it's still a work in progress.



Chapter 4

PRACTICAL USE OF AI IN YOUTH INFORMATION WORK

Subchapters

This chapter explores actionable strategies for staying visible in large language models (LLMs). You'll learn why and how to use generative AI tools in youth information work, including both their practical benefits and current limitations. The chapter also offers essential recommendations for crafting effective prompts, helping you maximise the accuracy and impact of AI-based solutions in your daily practice.

» PROMPT ENGINEERING

Remember that AI is not human: it only follows mathematical and probabilistic models to produce responses. A good prompt is like giving AI a precise map so it can find the right path to the answer you're looking for (AI pour les Noobs , 2025). Different models exist, each with its own strengths.

The examples in this section remain general; we recommend that you provide as much specific, detailed information as possible in your prompts. Indeed, the more details you give, the more relevant and tailored the results will be. You should also set any constraints you have (e.g. platform, length, branding, budget, or accessibility requirements). As mentioned before, you should systematically critically refine AI outputs.

Keep in mind that even when you use the same prompt in the same AI tool, you may receive different answers. This occurs because of the extensive data used to train the AI and the tool's ability to adjust its responses based on your previous interactions and preferences.

TIPS FOR WRITING A GOOD PROMPT

AIs are efficient at writing prompts. A good tip is to tell an AI what you want as a result and propose a prompt. You then need to adjust and use this prompt.

THE RTF MODEL

The RTF model is a prompt framework that stands for Role, Task, and Format. It structures interactions by specifying the role the AI should assume, the task to perform, and the desired format of the response, leading to clearer and more useful outputs.

The RTF model stands for:

- **Role:** Define the role the AI should play.

  Example: "You are a Eurodesk Mobility Advisor, a specialised youth information worker, whose goal is to inform young people about funding programmes to go abroad to learn, volunteer or work".

- **Task:** Provide additional details or requirements for the action you want the AI to perform, such as steps or conditions that clarify the scope of the request.

  Example: "Provide content relevant to an 18-year-old who has never heard about mobility opportunities and lives in a rural area on the benefits of going on a youth exchange abroad with Erasmus+."

- **Format:** Tell how you want the response to be presented, such as a list, a paragraph, a table, or another structure that suits your needs.

  Example: "Propose content for a short leaflet, following a clear structure and step-by-step approach with relevant links (what it is about, what to expect, how to apply, the duration, where to get more information, such as the European Youth Portal and similar national platforms). This text should be 5000 characters max, written in a youth-friendly and inclusive language (British English) in line with the Eurodesk brand".

PROMPT

You are a Eurodesk Mobility Advisor, a specialised youth information worker, whose goal is to inform young people about funding programmes to go abroad to learn, volunteer or work. Provide information relevant to an 18-year-old who has never heard about mobility opportunities and lives in a rural area on the benefits of going on a youth exchange abroad with Erasmus+. Propose content for the short leaflet, following a clear structure and step-by-step approach with relevant links (what it is about, what to expect, how to apply, the duration, where to get more information, such as the European Youth Portal and similar national platforms). This text should be 5000 characters max, written in a youth-friendly and inclusive language (British English) in line with the Eurodesk brand.

Don't treat AI outputs as final products: always perform a human, expert, accuracy, and inclusion review before using or sharing them!

THE 5S MODEL

The 5S model is a practical framework for crafting effective AI prompts, especially in educational and professional contexts. It helps users get clearer, more relevant, and actionable responses from AI systems.

The 5S model stands for:

1. **Set the Scene:** Provide context so the AI understands the background or situation.

   Example: "You are a youth information worker helping a student (aged 26) residing in France explore options to do an internship abroad (in Europe) after their bachelor's."

2. **Be Specific:** Clearly state what you want the AI to do or focus on.

   Example: "List three opportunities related to environmental science."

3. **Simplify your language:** Use straightforward and accessible language.

   Example: "Explain each opportunity in clear terms, be inclusive and suitable for anyone aged 26-30, avoid jargon and keep sentences short".

4. **Structure your output:** Tell the AI how you'd like the response to be formatted, such as a list, table, or paragraphs.

   Example: "Present your answer as if it were an email reply, for each opportunity mention how to apply, the deadline and the organisation."

5. **Share feedback:** After receiving the AI's response, provide feedback or ask for revisions to refine the output.

   Example: "Please add the links to the opportunities mentioned and just focus on internships offered by official international institutions such as the EU and the UN."

PROMPT

You are a youth information worker helping a student (aged 26) residing in France explore options to do an internship abroad (in Europe) after their bachelor's degree. List three opportunities related to environmental science. Explain each opportunity in clear, concise language suitable for anyone aged 26-30; avoid jargon and keep sentences short. Present your answer as if it were an email reply. For each opportunity, include how to apply, the deadline, the public institution offering the internship, and where to get more information.

Don't treat AI outputs as final products: always perform a human, expert, accuracy, and inclusion review before using or sharing them!

THE TRACE MODEL

The TRACE Model helps users design clearer, more effective AI instructions by defining what the AI must do, how to do it, and the expected style or structure of the answer.

The trace model stands for:

1. **Task:** Define the objective or problem for the AI to solve.

   Example: "Generate five specific, measurable objectives for a new training course designed to help Eurodesk multipliers integrate game-based learning into their youth information services".

2. **Request:** Specify exactly what response or format you want.

   Example: "Act as an educational curriculum designer and training expert with comprehensive knowledge of non-formal learning methodologies and the Eurodesk Competence Framework".

3. **Audience:** Indicate the target audience for the action taken.

   Example: "The participants are Eurodesk multipliers from different European countries. Their challenge is adapting complex youth opportunities (e.g. Erasmus+) into non-formal, engaging content".

4. **Context:** Provide background information, tone, audience, or constraints.

   Example: "The three-day in-person training must build upon the principles outlined in the Eurodesk Guide on Gamification and Game-Based Learning in Youth Information Work. Objectives should cover fostering critical thinking and raising awareness of active citizenship".

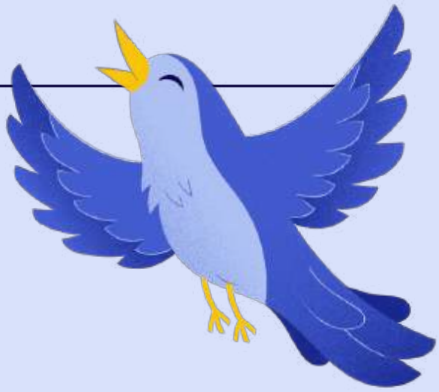
5. **Expectation:** Specify the format and add a model or sample of the desired output to orient the AI's style and depth (tone, length, desirable quality...)

   Example: "One of the goals of this training is to enhance participants' capacity to engage and empower young people through innovative, playful methods. Add four additional objectives using bullet points in a similar style."

PROMPT

Act as an educational curriculum designer and training expert with comprehensive knowledge of non-formal learning methodologies and the Eurodesk Competence Framework. Your task is to generate five specific, measurable objectives for a new training course to help Eurodesk multipliers integrate game-based learning into their youth information services. The participants are Eurodesk multipliers from different European countries. Their main challenge is adapting complex youth opportunities, such as Erasmus+, into non-formal, engaging content. The course is a three-day in-person training guided by the principles outlined in the Eurodesk Guide on Gamification and Game-Based Learning in Youth Information Work. Propose five objectives as bullet points, matching the tone and length of this objective: "Enhance participants' capacity to engage and empower young people through innovative, playful methods."

Don't treat AI outputs as final products: always perform a human, expert, accuracy, and inclusion review before using or sharing them!



TIPS ON WRITING AN INCLUSIVE PROMPT

1/ GIVE CLEAR INFORMATION AND BACKGROUND

Always share important details like who you're talking about (age, background, residence, experience), the situation, and what really matters. If you don't, the AI might provide a one-size-fits-all answer. For example, instead of "How should I ask about mobility opportunities?" try: "How should a 20-year-old young person from a rural town who has never travelled abroad ask about short-term volunteering opportunities abroad?"

2/ USE LANGUAGE THAT INCLUDES AND RESPECTS EVERYONE

Provide instructions on the tone and language to be used, including inclusive, positive language. You can include in your prompt that you expect a welcoming, caring, or nonjudgmental tone.

3/ PROVIDE DIVERSE REPRESENTATIONS

To generate responses that reflect diversity, you can add phrases like: "Ensure your response is inclusive and avoids stereotypes" or "List examples that include people of different genders, races, and abilities."

4/ DON'T USE STEREOTYPES, FOCUS ON REAL PEOPLE

If you use stereotypes (like "why are boys not interested in volunteering?"), AI might give biased or unfair answers. Try instead: "How can we encourage more young people to join volunteering, whatever their gender?"

5/ ALWAYS CHECK AND IMPROVE AI RESPONSES

AI might still make mistakes or show bias sometimes. After you get an answer, ask it to double-check itself: "Can you review your response for inclusivity and suggest how to make it better?" Also, use feedback tools like thumbs up/down to highlight good or bad advice, so the system learns over time.

» BEING VISIBLE ON LLMS: GENERATIVE ENGINE OPTIMISATION

Young people are increasingly turning to social media platforms and chatbots, rather than traditional search engines, to find what they need. By 2028, many brands could see a 50% or more drop in organic search traffic as **users adopt generative AI-powered search tools** (Gartner, 2025). To remain a relevant and trusted source of information, we have to ensure our content and services appear at the top when young people use these tools. It's called **LLM SEO or GEO (Generative Engine Optimisation)**.

In this context, simply having our information online is no longer enough. This does not mean that **websites** are irrelevant; on the contrary, they **remain essential**, but they **must be recognised** by large language models (LLMs) as authoritative sources. This requires a strategic approach that focuses on **creating high-quality content and building digital credibility**.

Let's see how Eurodesk can enhance its visibility in AI-powered search results.

QUALITY IS THE KEY

As we have seen, large language models (LLMs) learn from publicly available data across the web, including websites, articles, forums, and social media posts. These models not only index content but also interpret it and generate responses. If traditional search engines focus heavily on backlinks, LLMs prioritise brand **mentions from high-quality, authoritative sources**. This is often referred to as the **E-E-A-T principles** (experience, expertise, authoritativeness, and trustworthiness), which are also the standards Google uses to assess content.

Establishing authority requires creating **quality content** that positions our network as an expert in youth (information) work. Publishing in-depth resources and guides, being referenced in reputable publications and being mentioned in online communities will enhance this credibility. You should also **underscore authority** consistently, adding sources, quotes, figures, statistics, and citations to your content.

Content must be **clear, comprehensive, and easily interpretable** by AI systems. By comprehensive, we mean developing an extensive set of content (articles, brochures, etc.) that covers, for example, the various aspects of going abroad. The good news is that developing quality youth-friendly information has always been a top priority for Eurodesk, which could benefit our visibility in the AI era!

BEING USER-FRIENDLY ALSO MAKES YOU AI-FRIENDLY

One reason people are increasingly turning to LLMs over traditional search engines is that these **models process queries in natural, conversational language**, rather than relying on fragmented keywords. Users can ask questions as they would to another person, and LLMs respond in the same style, offering coherent, contextually relevant answers rather than a list of links and snippets.

Incorporating **conversational keywords** and optimising for **natural language queries** is therefore essential (Crescendo, 2025). You can, for example, include brief, direct answers at the beginning of each section, followed by more detailed explanations and examples. Other strategies include using FAQ pages to compile answers to relevant questions, as well as **summaries and TL;DR** (too long, didn't read) sections.

LLMs also work best when content is **well-structured** with clear headings and logical sections.

These recommendations echo Eurodesk key principles on **inclusive communication**! Well-organised, inclusive content not only helps AI systems process your information but also makes resources more accessible and engaging for youth audiences.

OPTIMISE YOUR ONLINE PRESENCE

To help both search engines and AI tools find and use your website's information, you should make sure your website loads quickly by using clean and simple code.

Organise your pages clearly, using **semantic HTML tags**, such as <article> or <image>, that clearly describe the purpose of each part of the page. These tags are better than general ones like or , which don't give any meaning. Add special tags called **structured data markups**. These are special pieces of code added to your website to describe what the content is about in a way that search engines and AI can easily understand. For example, you can mark a page as an FAQ, an event, or an organisation.

For accessibility and clarity, always include **ALT text for images** and use **descriptive text for links** (e.g. "Read our volunteering guide" rather than "Click here"). Tools like Eurodesk's AltyDesk can help automate ALT text creation for images.

Ensure your **website is accessible to AI crawlers** (e.g. OAI-SearchBot, ChatGPT-User, and PerplexityBot) that gather data from websites to train LLMs. Many organisations inadvertently block AI crawlers due to default settings or overly restrictive robots.txt files, thereby limiting the visibility of their content in LLMs.

Doing this helps your website perform better in search engines, makes it easier for AI to understand, and improves accessibility for everyone.

LEVERAGE COMMUNITY PLATFORMS

Actively participate in **online communities** such as **Reddit**, where LLMs gather training data. Provide thoughtful, helpful responses to questions about youth mobility, EU programmes and European citizenship, and share your expertise without being promotional. This helps to explain your services using the conversational model on which LLMs are based.

Continue investing in your digital strategy, focusing on **social media channels** such as Instagram and TikTok, which are used by nearly 40% of young people aged 18-24 to find information and are the primary platforms for engaging with them. Create content that helps build a conversation and enriches your brand's reputation.

Create and maintain profiles on **professional networks**, such as LinkedIn, where you can share insights, trends and opportunities and contribute to discussions.

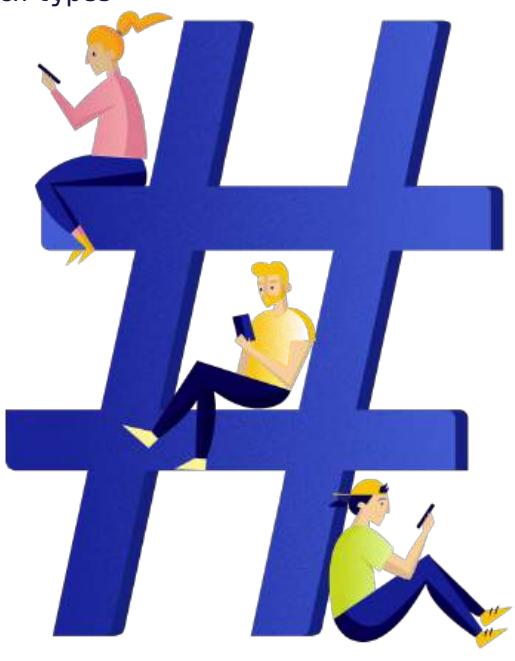
Ensure you are present on **Wikipedia**, as having a presence there can significantly boost credibility.

MONITOR AND MEASURE VISIBILITY

Track mentions of your organisation across the web using tools like Brand Monitoring or manual searches. The frequency and context of these mentions (whether it appears in trusted, authoritative sources) affect how LLMs perceive and recommend you to users.

Regularly **test your visibility** across different AI platforms by **asking LLMs** (like ChatGPT, Claude, Gemini, or Perplexity) **questions that are relevant to your work**, for example, "How can I volunteer in Latin America?" using the words and phrases that young people naturally use. Watch to see if your organisation appears in the answers, and notice how it is described.

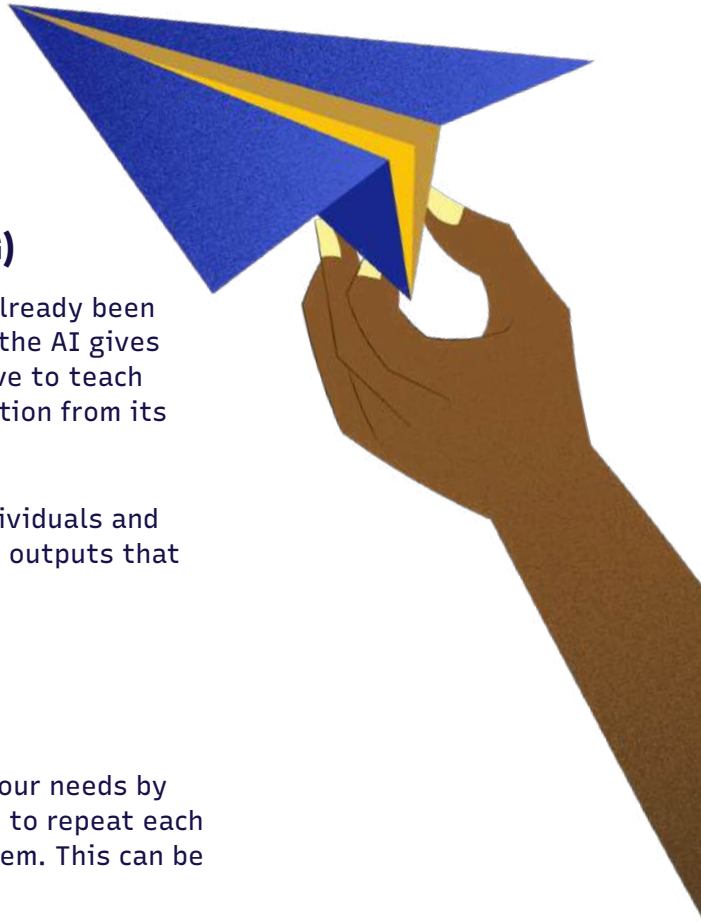
Document your progress and adjust strategies accordingly. Keep records of when and how your organisation appears in AI responses. Note which types of content and which platforms generate the most visibility, then focus your efforts on the most effective channels.



As you can see, these recommendations reflect many of our current principles for creating youth-friendly content. Focusing on **quality and inclusion** to create valuable content for our target audiences will ultimately make us visible on LLMs. This requires a sustained effort. Content that may not be referenced today could become relevant as models evolve and training data refreshes. Maintaining a **long-term perspective** whilst continuously improving your digital presence and content quality is therefore essential.

By following these tips, youth information services can remain visible and accessible to those seeking their services, ultimately enabling them to better serve young people in their communities.

» USING GENAI TOOLS IN YOUTH INFORMATION WORK



There are three main ways of using GenAI tools in our daily youth information work:

LEVEL 1. USING AN EXISTING MODEL (PROMPTING)

You use a GenAI model (e.g. Claude, Perplexity) that has already been trained by a developer. You simply type your prompt, and the AI gives you an answer or creates something for you. You don't have to teach it anything new; it already knows a wide range of information from its training.

This is the easiest, fastest, and most common way for individuals and organisations to use AI. However, it may generate generic outputs that require a lot of fine tuning.

LEVEL 2. CUSTOMISING A MODEL WITH YOUR OWN DATA AND PREFERENCES

Instead of using the AI "as is", you can customise it for your needs by giving it your own information. Like this you will not have to repeat each time your role and mission, it's already stored in the system. This can be done on the paid versions only.

In the settings of most AI Chatbots, you can provide a **description** on your role, sector, organisational mission and values, as well as contextual elements that will help you get the content you need. Sharing the Eurodesk **brand persona** and **mission statement** can help create the precise description required, which you can adapt and input into the tool you use. The model will use this description whenever you make queries, so make sure to include relevant information and continue updating it to adjust your results.

Additionally, paid tools often allow you to create "**spaces**" or "**workspaces**" enabling the model to remember your past interactions and preferences. By saving or inputting final outputs and iterating on feedback, you can further improve how the AI responds and make it truly fit your context.

For most video/image GenAI tools, there is currently no built-in, persistent personalisation profile like with chatbots. You personalise outputs mostly by refining your prompts, using style suggestions, editing features, or referencing previous results each time.

Some platforms, such as Midjourney, now let you create personalisation profiles by ranking images or making moodboards; these profiles can be saved and applied automatically to future prompts, providing a level of persistent customisation. There are many YouTube video to help you with that, depending on the tool you use.

EXAMPLE: EURODESK DESCRIPTION TEXT

As a youth information provider and member of the Eurodesk network, I am committed to Eurodesk's mission: raising awareness among young people about mobility opportunities and encouraging active citizenship. My approach, shaped by values such as solidarity, friendship, diversity, inclusion, exploration, development, creativity, and innovation, is friendly, supportive, and empowering, much like an older sibling guiding and encouraging each young person equally.

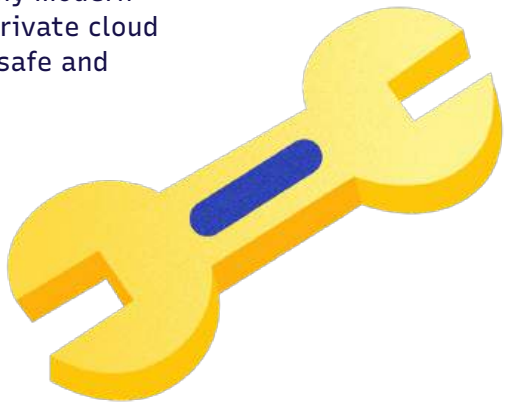
I provide accessible, unbiased, and practical information, in line with the Eurodesk brand and European Youth Information Charter, always respecting individuality, promoting empathy, and fostering curiosity and engagement. I strive to make every person feel considered, supported, and inspired, helping them navigate opportunities for growth and connection, with respect for our shared vision of a fair, democratic, and inclusive Europe.

LEVEL 3. BUILDING YOUR OWN AI SYSTEM

This approach is useful if you want the AI to work only in a specific area, such as answering questions about your organisation's resources or analysing internal data from your organisation. It requires technical skills, more computing power, and careful consideration regarding data privacy.

An easy alternative can be to use a tool such as **NotebookLM** that allows you to upload content for the AI to reference. In that case, the model will only general content based on the documents, links or other sources that you will provide.

Custom Retrieval-Augmented Generation (RAG) systems like CustomGPT or Claude Projects let you integrate your organisation's internal data sources (e.g. documents, multimedia and databases) into a unified knowledge base the AI system can use for tailored responses. Importantly, many modern RAG platforms can be deployed on your own servers or within private cloud environments, which helps keep sensitive organisational data safe and under your control.



For most youth information work and general public use, customising existing models will be the easiest solution. In the following section, you will learn more about specific prompts for various uses of GenAI tools in our youth information work.

IDEATION, BRAINSTORMING

Developing fresh, engaging ideas is at the heart of youth information work, yet not everyone in our sector is a professional creative. Kicking off practical brainstorming sessions can feel both inspiring and daunting. AI-powered chatbots can be very effective tools for kick-starting creative processes.

IN YOUTH INFORMATION WORK, THEY CAN:

- Help you generate fresh ideas quickly for projects, events, or campaigns.
- Offer varied perspectives that may not have occurred to you or your team.
- Support you in implementing inclusive communication.

These ideas may not be directly ready for use, but they can serve as a valuable starting point. By combining them with your knowledge of young people's needs, you can develop relevant and impactful initiatives.

LIMITATIONS TO KEEP IN MIND

While AI is useful for sparking ideas, it's important to be aware of its limits:

- **Lacks local and cultural nuance:** AI may generate ideas that don't fit your specific region, policies, or youth culture.
- **May produce unrealistic ideas** without considering budgets, legal restrictions, or available resources.
- **Not a replacement for youth input:** Always combine AI-generated ideas with feedback from the young people you serve.
- **Needs quality checking:** Review suggestions to ensure accuracy, inclusiveness, and accessibility.
- **May use generic language:** Especially if your prompt isn't detailed enough.

COPYWRITING

While engaging, high-quality written content is essential in youth information work, it's important to recognise that most youth workers are not trained communicators. Crafting effective, inclusive copy can be challenging, especially when aiming to reach and inspire young audiences across Europe.

Fortunately, AI-powered tools are making it easier and more accessible to produce clear, engaging written content, helping our sector communicate with young people in a way that feels authentic and motivating.

IN YOUTH INFORMATION WORK, THEY CAN:

- **Quickly generate draft text and ALT text** for websites, social media, newsletters, or campaigns, saving time and effort.
- **Suggest different styles or tones** to suit various audiences.
- **Summarise complex texts.**
- **Rework existing copy** to improve clarity, inclusiveness, or engagement.

These drafts require adaptation and refinement, but provide a valuable springboard for developing compelling, accurate messages for diverse audiences, whether young people, youth workers and decision-makers.

LIMITATIONS TO KEEP IN MIND

While AI is helpful for copywriting, be aware of its constraints:

- **Lacks deep understanding of context:** It may produce content that misses regional, cultural, or policy-specific details vital for young people in your area.
- **Can be overly general or formulaic:** Without a detailed prompt, output may lack originality or distinctive brand voice.
- **Needs expert review:** Always verify the accuracy, inclusivity, and accessibility of AI-generated content.
- **May overlook legal and ethical nuances:** Check all content for compliance with relevant regulations and adherence to safeguarding standards.
- **May use repetitive phrases and sentence structures:** Most models usually end with a summary of the text provided and repeat ideas.
- **May contain AI buzzwords:** words like "innovative," "cutting-edge," or "amazing", "fantastic".

EXAMPLES OF TOOLS

You can use AI chatbots such as Claude and Mistral (France), ChatGPT, Perplexity and Gemini (US), or specialised ones such as AI Writer and Neuroflash (Germany), CopyAI and Quillbot (US).

VIDEO CREATION

As the Eurodesk Youth Information Survey shows, video content remains one of the most popular formats on social media, particularly among young people. In the past, creating videos often required significant time, skills, and budget. Today, specialised AI tools are making video production faster, easier, and more affordable, offering the opportunity for our sector to engage young audiences.

IN YOUTH INFORMATION WORK, THEY CAN:

- **Generate videos** quickly from scripts, images, or even text prompts, reducing production time from days to minutes.
- **Offer creative visual ideas and formats** that might not have been considered otherwise.
- **Adapt content for different platforms and audiences**, from short-form TikTok clips to longer YouTube explainers.
- **Enhance existing footage** with captions, animations, translations, or accessibility features such as sign language or audio description.

These AI-generated videos need reviewing and fine-tuning, but they provide a valuable starting point for producing engaging, clear, and visually appealing content that can reach diverse audiences, whether young people, youth workers, or decision-makers.

LIMITATIONS TO KEEP IN MIND

- **Lacks specific local and cultural insight:** AI-generated videos may miss local context, regional policies, or cultural nuances that are vital when communicating with young people in different parts of Europe.
- **Potentially generic visuals or messaging:** Without a well-crafted, detailed prompt, content may appear formulaic or fail to reflect your brand's distinctive tone.
- **Quality requires human oversight:** Always review and edit AI-produced videos for accuracy, accessibility, and suitability before publishing, ensuring messages and imagery align with your organisation's standards and values.
- **May not meet legal or ethical standards:** Check all video content for compliance with copyright rules, privacy regulations, safeguarding policies, and inclusiveness.
- **Not a substitute for authentic youth involvement:** Involve young people in reviewing, shaping, and providing feedback on video content to ensure relevance and impact.

EXAMPLES OF TOOLS

You can use specialised AI tools such as Capte (France), Freepik AI Video Generator (Spain), Synthesia (UK), Sora and Runway ML (US) or Lumen5 (Canada).

IMAGE CREATION

In our digital world, content usually comes with high-quality pictures. Using AI to generate images adds significant value by simplifying the creation of visual content.

It helps reduce costs and production times. Image-generating models work on a text prompt basis. Therefore, it's essential to provide details about the setting, descriptors (e.g. colours, styles, textures), and examples/references in your prompt.

IN YOUTH INFORMATION WORK, THEY CAN:

- **Generate unique images** instantly from text prompts, sketches, or existing photos, turning creative ideas into professional visuals in seconds.
- **Offer creative inspiration and new visual formats**: Suggesting artistic styles, layouts, and concepts that might not have been considered otherwise.
- **Adapt images** for different platforms and audiences, making it easy to resize, crop, or modify graphics for Instagram, TikTok, posters, or websites.
- **Enhance existing visuals** with additions like captions, overlays, translations, or accessibility features such as alt text or clear colour contrast for better inclusion.

LIMITATIONS TO KEEP IN MIND

- Image generation is not perfect and may contain bugs. The **quality** of images depends heavily on how prompts are crafted and can result in unsatisfactory outcomes.
- AI models sometimes replicate elements from training data, raising concerns about **copyright** infringement or the creation of sensitive content.
- AI tools may struggle to reflect niche branding and cultural nuances.

EXAMPLES OF TOOLS

You can use specialised AI tools such as Midjourney and DALL-E 3 (US), Stable Diffusion (UK) or Freepik AI Image Generator (Spain). AI is also integrated into tools such as Adobe (US) and Canva (Australia).

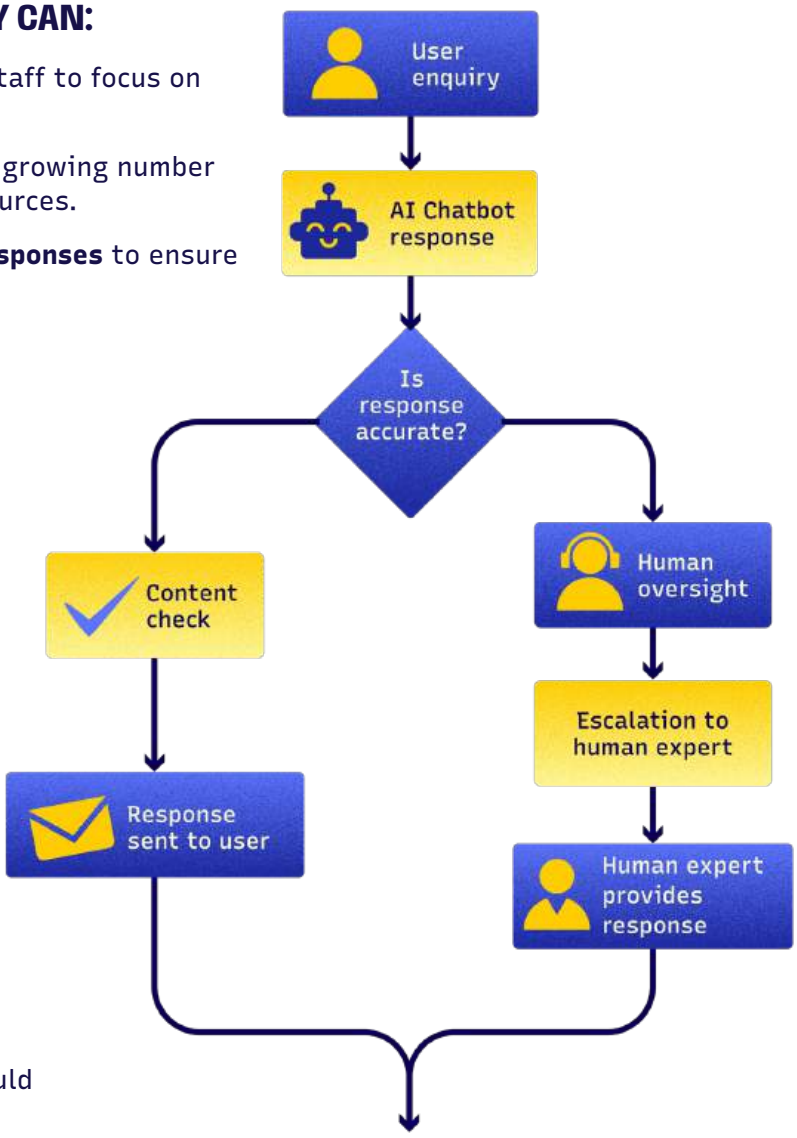
CUSTOMER SERVICE AND CHATBOTS

Chatbots have rapidly become one of the most common and visible uses of generative AI. They can answer questions, provide information, and guide users through services at any time of day.

Eurodesk responds to over 200,000 enquiries annually, supporting young people all over Europe in finding opportunities and trusted information. The Eurodesk AI-powered chatbot, EMA, is designed as an internal tool for national coordinators and multipliers, helping answer enquiries more efficiently, especially when volumes are high. EMA provides instant, pre-made answers to young people's questions, allowing our staff to manage time and resources more effectively. However, its role is to complement, not replace, Eurodesk mobility advisors who have to tailor responses to each young person's unique situation, drawing on their expertise and understanding. If EMA gives a strong starting point, maintaining personalised guidance and support remains essential to our service.

IN EURODESK INFORMATION WORK, THEY CAN:

- **Increase efficiency** and free up human staff to focus on more complex or sensitive cases.
- **Help national coordinators** respond to a growing number of enquiries despite limited human resources.
- **Maintain accuracy and consistency in responses** to ensure reliable information is always available.
- **Offer instant support internally**, enabling staff to provide faster answers to young people.
- Is **multilingual**, allowing multilingual support.



LIMITATIONS TO KEEP IN MIND

- **Lack of nuance and empathy:** AI can interpret queries literally and may not always grasp cultural context or emotional tone.
- **Bias and inaccuracies:** Chatbots can produce incorrect information confidently ("hallucinations").
- **Over-reliance:** If used without human oversight, chatbots risk replacing personalised advice with one-size-fits-all answers.

To ensure quality, all chatbot interactions should be paired with **human oversight**.

SOCIAL MEDIA AND MARKETING

In 2022, 96% of 15-year-olds in the EU used social media daily, with 37% spending over three hours per day on these platforms (Bertoni, Centeno, and Cachia, 2025). As observed in the thematic reports based on the Eurodesk Youth Information Survey, youth minorities have distinct needs and expectations regarding youth information, and they also use social media platforms differently.

Adapting our content to diverse users and platforms can be time-consuming and challenging. AI solutions can make our content more personalised, inclusive and efficient, but they also require careful oversight to ensure cultural relevance, fairness, and quality.

IN YOUTH INFORMATION WORK, THEY CAN:

- **Generate copies, images and videos** suitable for diverse audiences.
- **Tailor content for different platforms** (Instagram, TikTok, messaging apps, etc.), and generate versions adapted for a range of audiences, including youth minorities.
- **Segment audiences** and recommend topics, styles, or language nuances that better fit distinct groups, ensuring more relevant and engaging communication.
- **Propose inclusive adaptations** such as adjusting to accessibility needs.
- **Monitor engagement metrics** and spot emerging preferences among different youth groups, helping you adjust your outreach strategies in real time.
- **Suggest hashtags and keywords** that are popular and relevant to your content.

LIMITATIONS TO KEEP IN MIND

- May reinforce or miss cultural nuances (risk of bias).
- Can overlook subtle aspects of identity, community experience, or sensitive issues, leading to generic or inappropriate messaging.
- Can vary in quality and may require further human review to ensure accuracy, relevance, and appropriateness for the intended audience.
- May not use the correct terminology specific to minority groups unless carefully trained or supervised.

EXAMPLES OF TOOLS

You can use specialised AI tools such as Ocoya (UK), Brandwatch (UK), Emplifi (Czech Republic), AdCreative.ai (France) or Hootsuite (Canada).

TRANSLATIONS AND PROOFREADING

Machine translation technology has existed for decades, but the latest AI-powered tools have become much more accurate, fluent, and user-friendly. In youth information work, these tools can help translate content quickly and efficiently, allowing national Eurodesks and Eurodesk Brussels Link to share resources across countries and support multilingual communication. They can be integrated into digital tools and websites, enabling a combination of automated and verified translations.

IN YOUTH INFORMATION WORK, THEY CAN:

- **Facilitate the sharing of content** across different languages and countries.
- **Support rapid translation** for social media, websites, brochures, or events.
- Make it **easier** for youth workers to access each other's content and collaborate on joint projects.

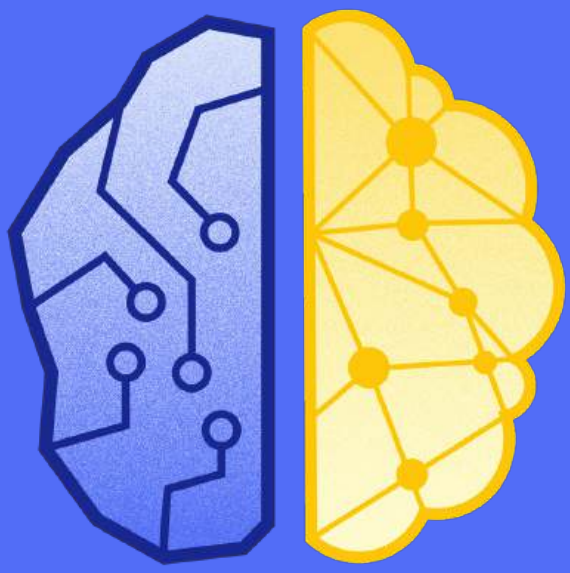
AI-based proofreading tools also improve spelling, grammar, and style, helping ensure clarity and readability for young audiences.

LIMITATIONS TO KEEP IN MIND

- **Specific terminology of the sector:** Machine translation may struggle with specialist vocabulary used in youth policy or programmes. Sometimes, sector-specific words, names of EU initiatives are mistranslated or left out.
- **Inclusive language:** AI tools do not always recognise or use inclusive language (gender-neutral terms, culturally appropriate phrasing).
- **Local/National specifics:** Translations can lack details about local or cultural context. This might create confusion or misunderstandings for young people from different regions.
- **Uneven language quality:** The quality of AI translations still varies between languages. Major European languages (English, French, Spanish, German) are generally well supported, but some national or minority languages may see less accurate or natural results.
- **Proofreading limits:** While AI can spot many spelling and grammar errors, it may not catch context-specific mistakes (e.g. wrong names, dates, or missing cultural references). Human review is always recommended for final content.

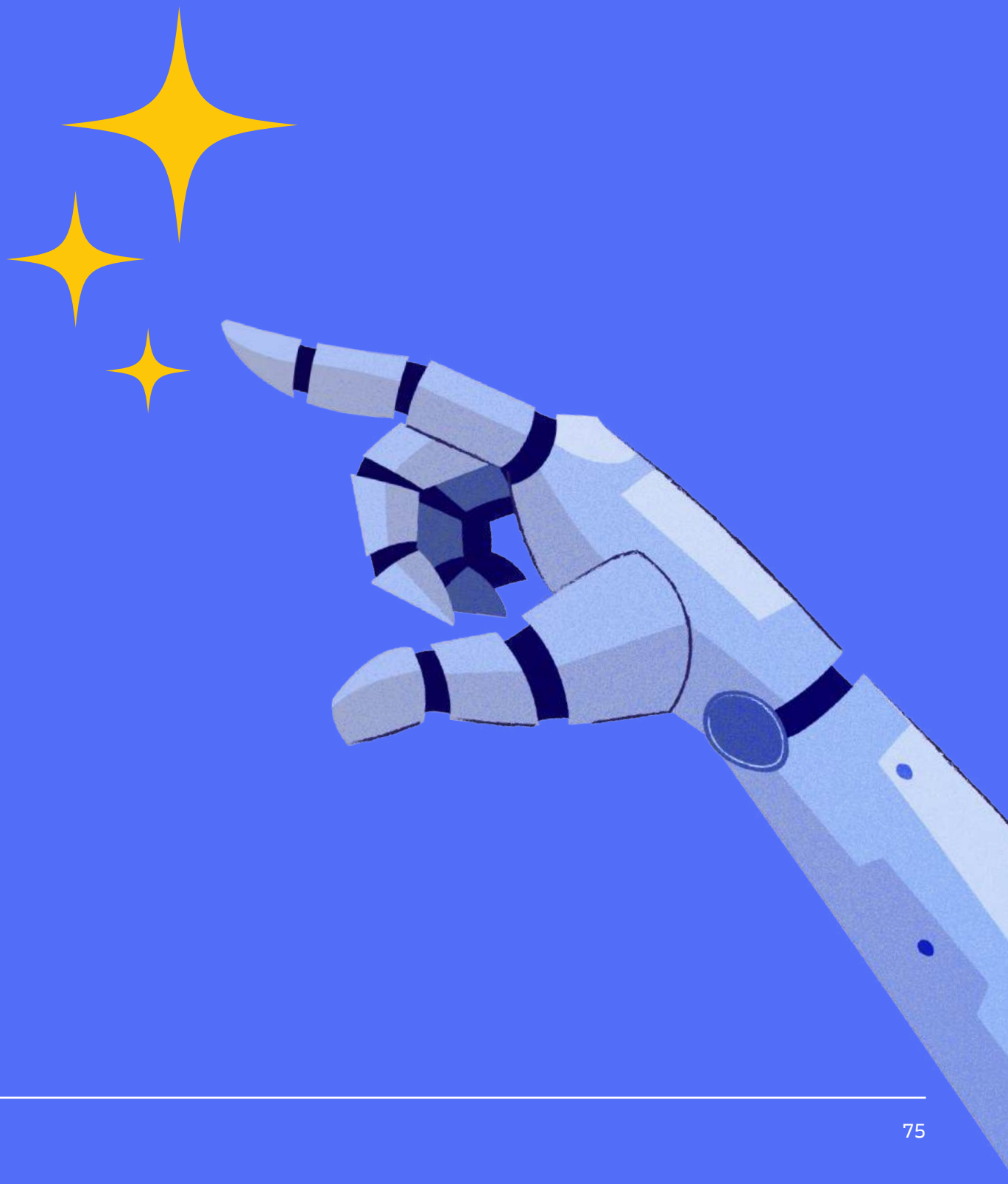
EXAMPLES OF TOOLS

You can use AI chatbots such as DeepL (Germany), Google Translate (US) or Grammarly (US).



Chapter 5

EURODESK PRINCIPLES ON THE USE OF AI



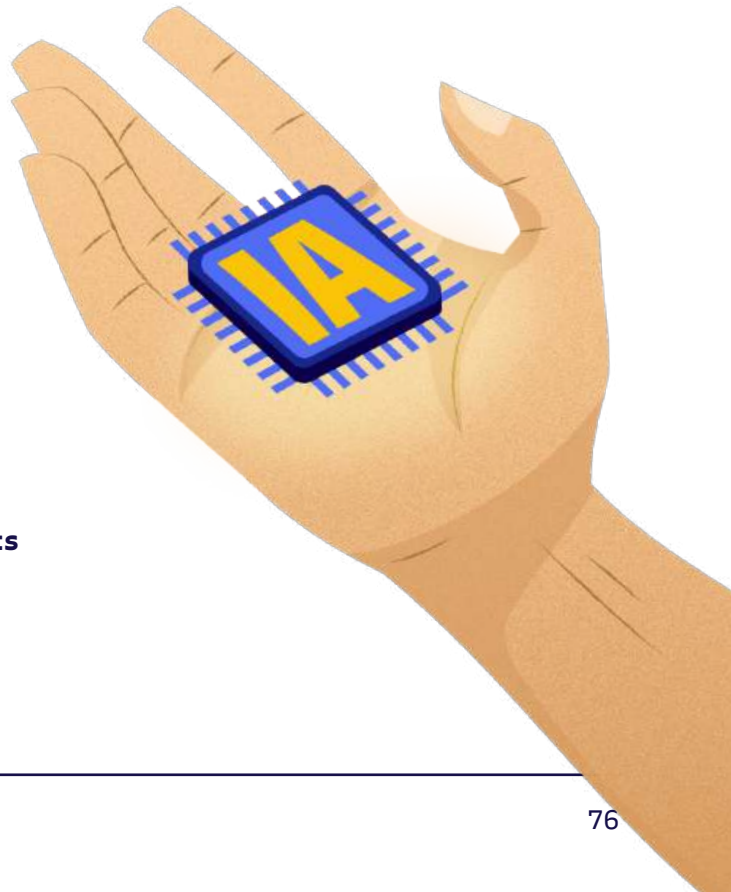
EURODESK PRINCIPLES ON THE USE OF AI

Eurodesk promotes a **responsible use of AI** within its network by strengthening the capacity of Eurodesk mobility advisors to **use this technology effectively, ethically, and sustainably**. We achieve this through training and networking activities, as well as by providing AI-based solutions and guidelines on their use.

We believe that AI tools, including but not limited to generative AI models, are valuable for Eurodesk mobility advisors. They can **improve efficiency, support inclusivity and foster innovation**. Their use is already growing in youth information services, and this trend is expected to continue. However, levels of AI literacy among youth information workers vary, which can pose risks and lead to disparities in the quality of services offered to young people and those who support them.

While Eurodesk encourages the use of AI, it is essential to emphasise that **even the most advanced AI cannot replace the deep understanding, empathy, and trust built** by youth information workers, especially with young people who have fewer opportunities. We speak their language, see what lies "between the lines" and that is something no algorithm can do. These **human qualities** remain crucial for upholding our values and ensuring the quality of our information services. Furthermore, AI tools can still produce errors, reflect biases, and lack genuine compassion.

For this reason, Eurodesk supports a **human-centred approach to AI**, as set out in the EU AI Act. It states that AI systems should be developed and used as tools that serve people, respecting human dignity and personal autonomy, and allowing for appropriate human control and oversight. Additionally, Eurodesk raises awareness about the **environmental impact** of AI and strongly recommends its responsible use.



From a legal perspective, Eurodesk mobility advisors should be aware that users are solely responsible for the content generated through AI and for ensuring that **all legal requirements are met**.

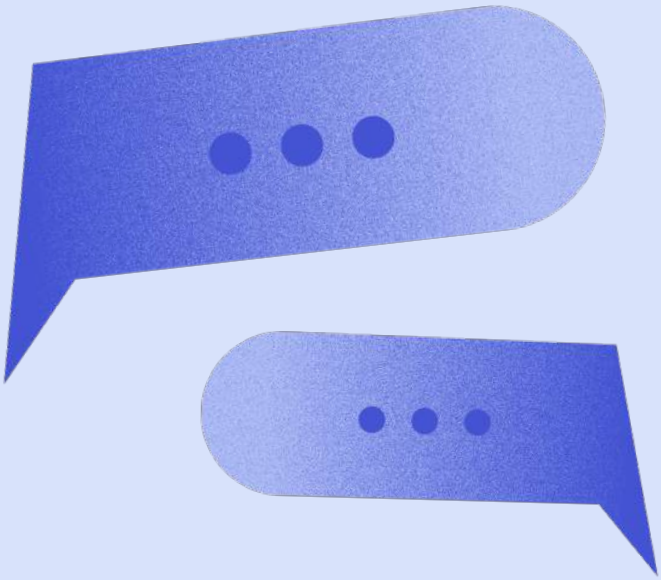
Ultimately, Eurodesk is committed to **fairness, transparency, and placing young people's best interests and well-being at the centre** of our approach to AI.

Based on these considerations, Eurodesk recommends:

1/ GUARANTEE HUMAN OVERSIGHT AND CRITICAL REVIEW OF AI-GENERATED CONTENT

Treat all data or content generated by AI as potentially fallible. It can be biased, incomplete, or inaccurate. Therefore, always apply meticulous human review before using it, both to prevent plagiarism and to identify possible hallucinations or biases. Double-check all facts, suggestions, and references before you use or share them.

Nothing can replace human empathy, critical thinking, and broad contextual reasoning. A human perspective is essential to assess whether content and answers to queries are not only accurate but also tailored to each young person's unique needs and interests. This personalised approach ensures that information and support remain genuinely relevant and empowering for every individual, while maintaining human expertise as the cornerstone of youth information services.



2/ BE OPEN AND TRANSPARENT ABOUT AI USAGE

Always clearly mention when you use AI to generate content, using standard citation methods. Exceptions may apply to simple uses, such as translation or minor language improvements, where the content is not substantially changed. Transparency helps avoid confusion, builds trust, and protects both you and young people in case of errors or misunderstandings.

For images or videos created with AI, cite the AI tool used. Never publish media showing recognisable individuals unless you have their permission and can confirm that no rights or privacy rules are breached.

3/ PROTECT PERSONAL DATA, PRIVACY AND CONFIDENTIALITY

AI tools may collect, store or transfer sensitive information, sometimes without your awareness or consent. To reduce risks, use only anonymised or publicly available data when working with AI. This protects you, your organisation, and your users from unintended data exposure or leaks.

Never share personal or confidential data with AI systems unless strictly necessary and in full compliance with the law. Any data you provide may be stored or reused by the AI provider. Sharing personal data without consent breaches privacy and may violate GDPR rules, leading to serious consequences.

4/ RESPECT COPYRIGHT AND INTELLECTUAL PROPERTY

AI platforms are trained on extensive datasets, which may include copyrighted materials. Any output (text, image, music, etc.) generated by AI could incorporate protected content. You are responsible for checking for plagiarism, citing sources, and ensuring you have the right to use generated material.

Keep records of your prompts and work process to demonstrate originality. Rework and adapt AI outputs to make them your own, and verify that you have permission before publishing or sharing them.

5/ USE AUTHENTIC AND DIVERSE EXPERIENCES

Always distinguish clearly between AI-generated imagery and real content, and avoid any practice that could mislead young audiences. Prioritise authenticity and transparency in all communications, and highlight genuine youth voices and stories that reflect the diversity and lived experiences of young people across Europe.

AI can create synthetic images, videos, or stories, but using such tools to fabricate or alter content about real young people undermines trust. Avoid deepfakes or AI-generated content that depicts fictitious youth experiences. Instead, rely on genuine stories and representations from individuals who have given informed consent.

6/ KEEP THE HUMAN CONNECTION AT THE HEART OF COMMUNICATION

AI can enhance engagement, but it cannot replace empathy, personal relationships and the trust that comes from real human interaction. Your communication should always highlight direct contact with Eurodesk's human teams as the main source of reliable support and guidance.

When using AI-powered chatbots or similar tools, inform users that they are interacting with a digital system, not a person. Emphasise opportunities for face-to-face contact, local events, and dialogue with real Eurodesk mobility advisors. Maintaining this human touch safeguards the integrity of the service and ensures that technology complements rather than replaces human expertise, care and connection.

7/ CONTRIBUTE TO THE AI LITERACY OF YOUNG PEOPLE

Strengthening AI literacy empowers young people to participate fully and responsibly in a digital society. Use your role to guide them as they navigate an increasingly data-driven world so they become not only confident users of new technologies but also thoughtful citizens who can critically question and shape digital developments.

Provide opportunities for young people to learn about AI and to take an active role in shaping its use, including through EU programmes and initiatives that promote youth participation and lifelong learning. Support their rights to privacy, participation, and informed decision-making so they can engage critically, creatively, and positively with emerging technologies.

8/ TAKE INTO ACCOUNT THE ENVIRONMENTAL IMPACT OF AI USE

AI technologies consume significant energy and resources, adding to global carbon emissions. Use AI responsibly and only when its benefits outweigh its environmental costs. Choose energy-efficient solutions and providers committed to sustainability.

Avoid running unnecessary or heavy AI processes for tasks that simpler tools could handle. Stay informed about the carbon footprint of your chosen systems and factor sustainability into every AI-related decision.

9/ SAFEGUARD THE CONTINUITY OF THE SERVICE

AI is a valuable tool, but depending too heavily on it can jeopardise the continuity of your service if tools become restricted, costly, or unavailable. Always ensure that your essential processes, resources, and expertise are not solely based on AI but remain anchored in human expertise.

Maintain the ability to deliver key activities even without AI tools. Regularly assess the risks of technological dependence and prepare alternative methods for providing information, advice, and support.

10/ FOSTER LIFELONG LEARNING

AI is evolving rapidly. Commit to continuous learning by regularly updating your knowledge of digital technologies, ethical standards, legislation, and sustainability practices. Seek training opportunities, share with your peers, and stay up to date with new developments in AI.

Encourage a culture of curiosity and openness within your team and among young people. Create space for reflection on the opportunities and risks associated with AI.

EURODESK PRINCIPLES ON THE USE OF AI

1 Guarantee human oversight and critical review of AI-generated content

2 Be open and transparent about AI usage

3 Protect personal data, privacy and confidentiality

4 Respect copyright and intellectual property

5 Use authentic and diverse experiences

6 Keep the human connection at the heart of communication

7 Contribute to the AI literacy of young people

8 Take into account the environmental impact of AI use

9 Safeguard the continuity of the service

10 Foster lifelong learning

AI COMPETENCE SELF-ASSESSMENT TOOL
FOR YOUTH INFORMATION WORKERS

HOW TO USE THIS TOOL:

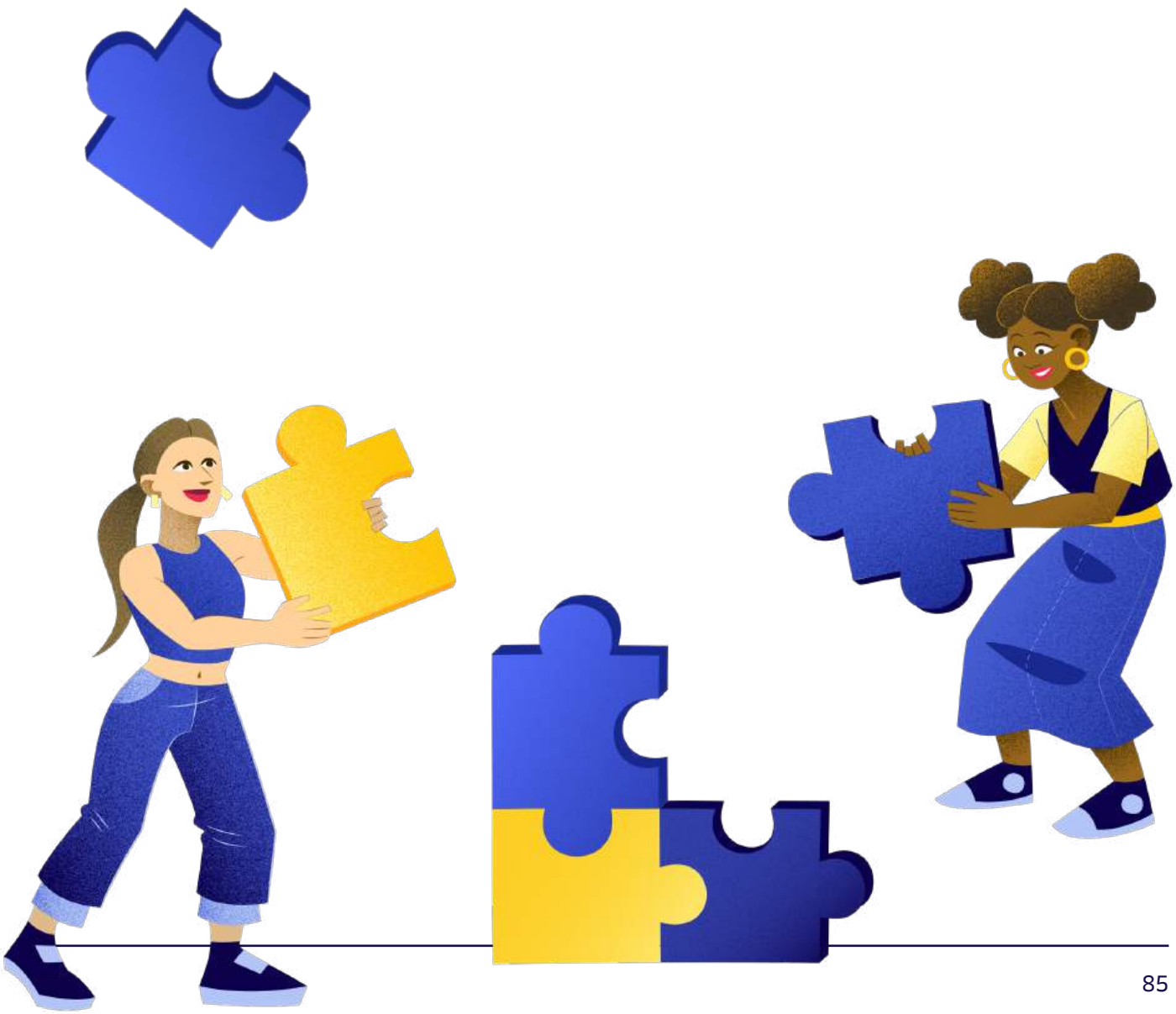
- Review each statement honestly before starting your learning or when reflecting on your own practice.
- For any "Somewhat" or "No" answers, refer to the relevant chapters or training sections in the guide to boost your competence.
- Use this tool regularly to track your progress and share with colleagues to encourage continuous improvement.

KNOWLEDGE	YES	SOMEWHAT	NO
I understand the basic principles of how AI systems work and can use common AI-related terminology.			
I recognise the strengths and limitations of using AI in a youth information context.			
I am aware of how AI systems can inherit or amplify bias and the social implications for diverse youth populations.			
I can apply youth information work principles, such as inclusion, youth rights and participation, to every AI application.			
I can clearly explain how and why AI is used in youth information services, ensuring transparency in its use.			
I know the risks involved in processing and sharing personal data using AI, including the potential for unauthorised access or misuse.			
I am aware of my responsibilities for ensuring data security and privacy, in line with national policies, the GDPR and the EU AI Act.			
I understand the need for systematic human oversight in AI usage.			
I can reflect critically on how AI changes my own practice and the information landscape, and can adapt accordingly.			

SKILLS	YES	SOMEWHAT	NO
I can explain what AI is and how it operates in clear language to young people and peers.			
I can critically assess AI tools for their quality, safety, and relevance to youth information work.			
I follow safe data handling procedures when working with AI, ensuring the privacy and confidentiality of all information involved.			
I obtain informed consent when collecting, storing, or using personal data for any AI-based solutions.			
I apply ethical principles when using AI, ensuring respect for young people's rights, transparency, and avoiding bias.			
I support young people's own AI literacy and digital skills, helping them use AI tools responsibly and ethically.			
I involve young people in conversations about AI, gather feedback, and co-design solutions where possible.			
I have the ability to act quickly if AI systems fail, produce harmful outputs, or if there is a data breach (protocols and risks).			

KNOWLEDGE	YES	SOMEWHAT	NO
I value responsible, fair and ethical use of AI, always putting young people's well-being and rights first.			
I recognise AI's carbon footprint and act accordingly, using it only when it clearly provides added value. I favour green AI solutions and providers.			
I champion inclusivity and equal access, ensuring the adoption of AI does not disadvantage any young person.			
I am committed to ongoing learning and adapting my approach as technology evolves, while upholding the values of human-centred youth work.			
I am proactive in seeking and sharing reliable information about new AI developments and regulations relevant to the youth sector.			
I promote transparency, honesty, and respect for privacy whenever I use AI, building trust among young people and partners.			
I question both the advantages and risks of using AI, and avoid relying on it for essential services.			
I value dialogue with young people, peers and the wider community around AI use.			

This model reflects the content of this guide and is inspired by the AI Competence Framework for Youth Workers of the **AI4YouthWork** project (AI4YouthWork, 2025). It can be adapted or expanded for training, self-assessment, and organisational development in youth information services.



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