

Strategic Approach to Artificial Intelligence

A more robust foundation for the responsible development and use of AI in Denmark



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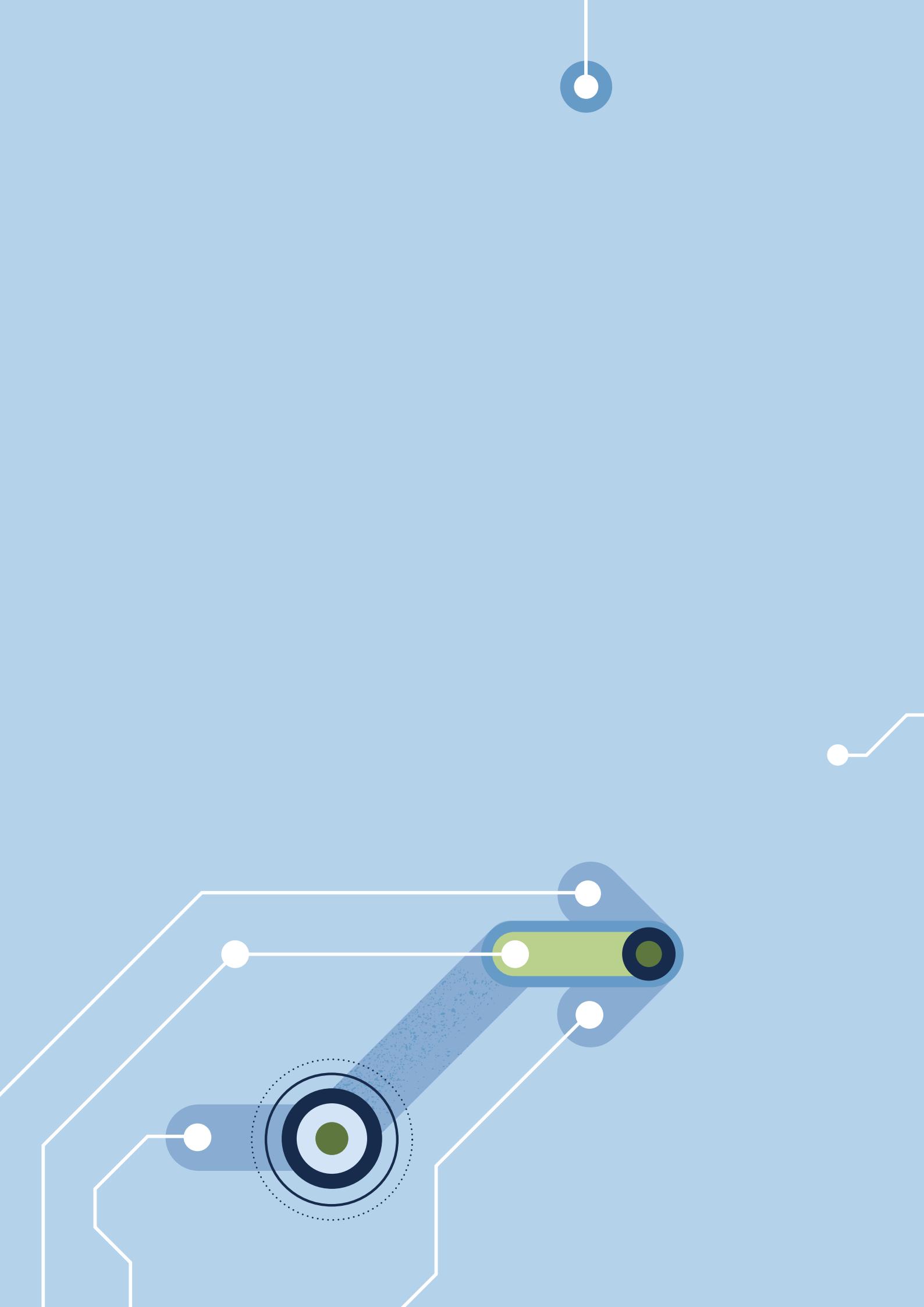
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Foreword

AI opens up a world of possibilities. We can organise ourselves smarter. We can minimise the amount of administrative work. We can use the effort to improve welfare and have more time in the healthcare sector to get more quality for our money in *all* parts of society.

However, if we are to capitalise on the new opportunities, we need to act responsibly and in time. The welfare of the future and the competitiveness of our companies depend on whether we in Denmark and Europe understand how to utilise them. Our flexibility and ability to develop and use AI will be a clear competitive advantage for Danish and European companies. If others are faster, we need to be smarter. The pace of development is rapid, and we have a mutual obligation not to fall behind in the international race.

Denmark is well-placed to use and develop AI. Denmark is one of the most digitalised societies in the world, and our companies are far ahead in AI compared to other European countries. Danes are generally positive when it comes to AI. We need to hold on to these advantages and capitalise on them.

AI does not come without risks, and, of course, we must deal with them responsibly. However, as a society, we should worry more about doing too little than too much. We must not miss out on the potential and benefits of the technology that is right in front of us, which is why we are taking an ambitious step with this strategic initiative – a step to accelerate the use of responsible AI in Denmark.

The government's clear vision is that developing and using AI should always be citizen-centric. Danish companies must be globally competitive, and Denmark should be a world leader in using AI in the public sector.

Specifically, we want to accelerate development by:

- The Digital Artificial Intelligence Taskforce rolling out AI solutions in the public sector on a large scale.
- A new research-based centre for advice on the responsible use of AI so that we can bring important knowledge about AI to life in governments and businesses.
- To accelerate the development of secure and transparent Danish language models to strengthen the foundation for the work on AI in companies and authorities.
- To make Danish data available open source so we can have many more high-quality AI solutions that work in Danish.

The new initiatives in this strategic endeavour do not stand alone. As you will read on the following pages, they should be seen in the context of the many other initiatives already in place or in the pipeline and in collaboration with leading countries and the EU. However, the new initiatives will help pave the way for more straightforward utilisation of AI across society.

This is the government's ambition with the Strategic Approach to Artificial Intelligence. In the grand scheme of things, we have only just begun developing AI. However, we are mutually committed to getting off to a good start and seizing the new opportunities.

The Government

What is Artificial Intelligence (AI)?

AI is a technology that can perform tasks traditionally requiring human intelligence. Tasks such as reacting to speech, qualifying decisions, translating between languages or recognising patterns in complex contexts.

What is generative AI?

Generative AI is artificial intelligence that can generate different types of content, such as text, images or sound, by learning from large amounts of data. Examples of this include chatbots and image-generation programs.

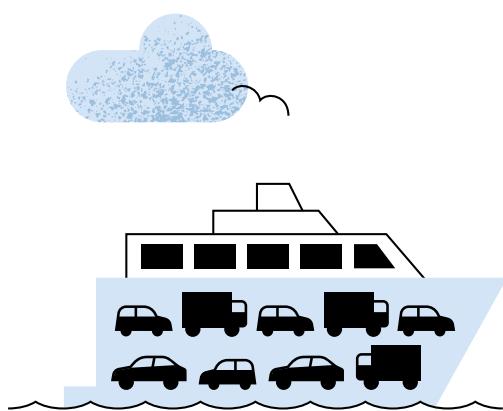
Examples of using AI

Today, AI is used in many places. Some examples are listed below:



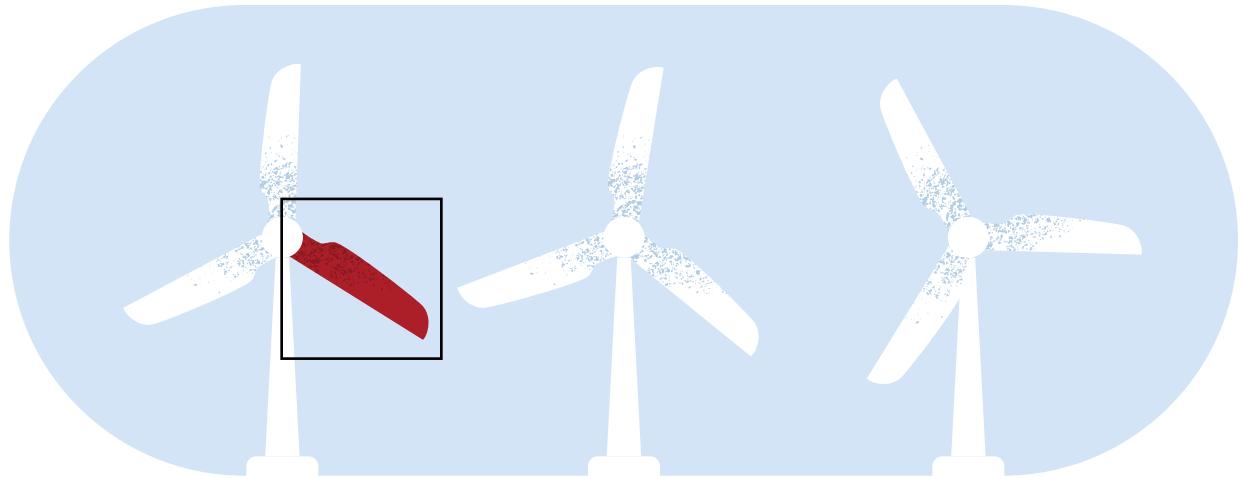
Precise routes in map apps

AI can help you find your way. Map apps on smartphones can calculate the fastest routes and arrival times very accurately and take traffic patterns into account.



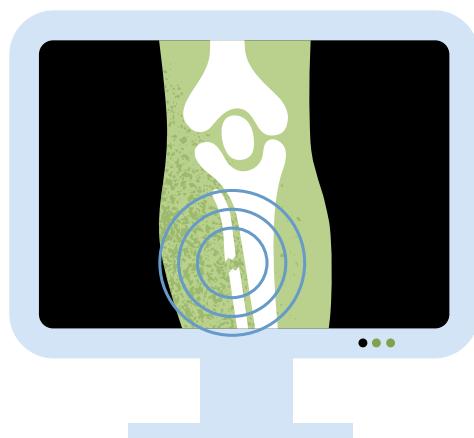
Minimise capacity waste

AI can predict traffic patterns. For example, predicting traffic patterns in ferry operations can help minimise wasted capacity. Specifically, a loading algorithm can use historical data to calculate more accurate vehicle numbers and arrival times for ferry departures.



Predict wind turbine servicing

Companies in the energy industry use AI to predict when components such as wind turbines need servicing, reducing downtime and improving efficiency.



Assessing X-ray images

Aalborg University Hospital uses AI to assess X-ray images. With up to 98% certainty, it can be determined whether there is a fracture, which reduces both waiting time and complaints.

Danish vision for AI

In Denmark, we have a solid starting point for working with developing and using AI, and we must prioritise this effort if we are to continue to have a world-class digital welfare society.

It's not only relevant to focus on what we *can do* with technology. It's also pertinent to focus on what we *want* from technology. Therefore, it is essential to ensure that we, in Denmark, utilise the potential of AI in the best possible way and actively

use the technology to improve both public welfare and our competitiveness in a global economy. This must be done with respect for citizens' fundamental rights and Danish values.

In this light, having a shared vision that can pave the way by creating a solid foundation and a clear direction for developing and using AI in Denmark is essential.



Danish vision for AI – three guiding principles

Denmark must lead the way when it comes to responsible utilisation of the opportunities offered by AI – especially regarding delivering better welfare, a more efficient public sector, freeing up time for core tasks and driving growth. With an eye on the fundamental rights of Danes, we must ensure that citizens, the research community, businesses and the welfare society can get the most out of technology.

The government wants using and developing AI in Denmark to be organised according to three guiding principles:



1

Developing and using AI must be centred on citizens' fundamental rights and in accordance with Danish values.



2

Danish companies must be globally competitive and, therefore, have the best opportunities –including in the EU – to develop, apply and sell solutions and business models based on the responsible use of AI.



3

Denmark must be world-leading in using AI in the public sector. AI is a crucial tool for freeing up labour, reducing administration and increasing quality in the public sector to benefit citizens and businesses.

Four new initiatives to help pave the way for responsible AI

Four new initiatives are being launched, all of which strengthen the foundation and pave the way for intensifying the use, spread and development of responsible AI in Denmark.

The development of AI is fast-paced and today driven by large international tech giants. It is important that Denmark and Europe stand stronger in this development and that we set a safe and responsible direction. So that Danish companies can streamline and develop new products, authorities can offer better services, and society can solve new and complex challenges in the future.

Therefore, the four new initiatives focus on areas central to developing and using AI. The government will roll out AI solutions throughout the public

sector and ensure advice on the responsible use of AI for companies and authorities from skilled researchers at Danish universities. The government will also develop a secure platform for Danish language models and release good Danish data on a large scale.

The Agreement on an ambitious and responsible strategy for Denmark's digital development from February 2024 allocated a financial framework of DKK 62.5 million in 2024-2027 for AI to fund Initiatives 2, 3 and 4. Furthermore, the agreement on the research reserve for 2025 allocates DKK 40 million to Initiatives 2 and 3. Finally, DKK 30.6 million has been set aside for the Digital Taskforce for Artificial Intelligence in 2025-2027.



1

The Digital Taskforce on Artificial Intelligence shall make the public sector world-leading



2

Centre for Artificial Intelligence in Society



3

Secure platform for developing transparent Danish language models



4

Danish text data must be freely accessible



Initiative 1

The Digital Taskforce on Artificial Intelligence shall make the public sector world-leading

The Danish public sector must be world-leading in using AI, which is already used in some areas in the Danish public sector, but the potential is much greater.

This also applies to the healthcare sector. There are examples of AI being used in some hospitals, for instance, by specialists assessing X-rays regarding breast cancer screening, where the technology can replace one of the two specialists assessing the screening examination. The tool frees up time among specialists and supports faster patient care. AI can also provide additional decision support for healthcare professionals. For instance, there are examples of AI used in emergency phone calls with patients where the technology is used to help detect signs of cardiac arrest. In this way, the technology can contribute to a faster and better assessment of patients and relieve essential resources in the healthcare service. In other words, the potential of AI is huge.

A third example is the home care sector, where speech-to-text technology could support increased quality and efficiency in task fulfilment. Speech recognition and text-to-speech technology will ease the documentation work for employees, allowing them to focus their time on their core tasks.

To accelerate the roll-out of AI in the public sector, the government, together with Local Government Denmark and Danish Regions, have established a Digital Taskforce for Artificial Intelligence (Task force). The Task force shall promote a structured

and coordinated initiative to develop and scale AI solutions in the Danish public sector, thereby helping to free up labour, reduce administration, and increase the quality of public services for the benefit of citizens and businesses.

Today, there are some organisational, technical and legal barriers to the utilization of AI in the Danish public sector. The Task force will focus on identifying the most critical prerequisites and, if necessary, propose adjustments to regulation, legislation and/or organisation.

The Task force will as its assignment develop a vision for using AI in the public sector. The vision must include specific objectives for the impact of the task force's work, including the number of FTEs that can be freed up through AI in the public sector by 2030. The vision must also include a proposal for which sectors or areas in the public sector where initiatives should be launched first. The task force must then deliver proposals for specific solutions that can fulfil the objectives in the vision.

In future financial agreements, the government, Local Government Denmark and Danish Regions will provide the necessary funding for the task force's work and for the implementation of specific solutions in the state, municipalities and regions. The parties also agree that the benefits of AI and new technology in the public sector must, to the greatest extent possible, be made available and prioritised politically.

AI can reduce waiting time for a new carport

AI can streamline the case processing of building applications for citizens and businesses. By using AI to screen applications to assess their completeness and whether the applications are ready to be included in case processing, administration in building projects can be improved and made more efficient. This can give citizens and businesses faster answers to whether they can build a carport or expand their warehouse.



Initiative 2

Centre for Artificial Intelligence in Society

Governments and businesses see great opportunities in using AI to improve efficiency, increase quality and drive innovation. However, many need more knowledge and advice on how best to use technology in a socially responsible and ethical way.

In 2023, 15% of Danish companies used AI. In 2024, this has increased to 28%. However, we need more people on board.

To equip governments and businesses for the new digital reality where AI enables the far-reaching transformation of our work, they need better access to the latest research-based knowledge and international experience, which will put them in a better position to handle the technological transformation. At the same time, we must ensure that technology development and its implementation reflect Danish values such as democracy, rights, ethics and responsibility.

The government wants to establish an interdisciplinary centre for research and advice on using AI in society. The centre will work closely with the Pioneer Centre for Artificial Intelligence, which involves several Danish universities.

The centre will serve as a single point of access to knowledge and advice on how authorities and companies can best use AI in practice. It must provide advice that combines technical solutions with social, political, cultural and ethical considerations. The centre will ensure that leading researchers in AI in Denmark contribute their expertise to increase the quality of the development of specific projects in authorities and companies. By bridging the gap between international research results and practice in Denmark, the centre can boost responsible innovation for authorities and companies working with AI.

At the same time, the centre will conduct independent research and practice-oriented evaluation and monitoring of generative AI. The centre will contribute to a dedicated research environment and retain and attract talented researchers in Denmark. With its interdisciplinary focus, the centre will create new and valuable knowledge and ensure that Denmark can actively and responsibly influence the development and roll-out of AI.

DKK 20.7 million will be allocated to the centre in 2024-2027. In addition, DKK 30 million will be set aside in the 2025 research reserve agreement.

Great potential for responsible language models

For example, generative AI is increasingly used for information retrieval and generating new text, images and sound, offering huge potential for innovation and resource optimisation in many parts of society. Generative AI can 'hallucinate', fabricate information, and not always provide source references. The centre will research how we can create more value and ensure transparency and fewer errors and misinformation when using generative AI.



Initiative 3

Secure platform for developing transparent Danish language models

There is a need to develop transparent Danish language models to solve limited tasks where understanding Danish norms and values and the Danish language is important.

Generative language models are AI capable of understanding and generating human language. For example, they can be used to develop chatbots that can understand and respond to users.

Therefore, a secure platform for developing and training language models based on principles such as transparency and data protection must be established for Danish companies and authorities to access. Smaller, specialised language models can be developed from the platform for Danish companies and authorities. For example, in healthcare, citizen contact or administration. Smaller, specialised language models could, for example, be used in clinical research in healthcare. When contacting the hospital or local municipality, chatbots can provide accurate and quick answers and guide you around the clock to the correct information.

The models will be freely available for, among others, companies and authorities to use and further develop Danish language models for their own contexts.

With the platform, the public sector and the business community can use secure, Danish-based language models to improve service levels, free up

resources for citizen-centric services and improve the competitiveness of Danish companies.

The initiative will be run under the auspices of the Danish Foundations Models – a collaboration between Aarhus University, the University of Southern Denmark, the University of Copenhagen and the Alexandra Institute on research-based development of language models. The models can be accessed free of charge (open source) by, among others, authorities and companies, which will pave the way for Denmark to utilise the potential of AI with accountability, data security and transparency at the forefront.

The initiative also interacts with the Danish Language Model Consortium, where the Alexandra Institute, IBM Denmark, the Danish Chamber of Commerce and a wide range of other stakeholders are working to secure more Danish data on which Danish language models can be safely trained.

DKK 20.7 million will be allocated to the platform in 2024-2027. Moreover, DKK 10 million will be allocated to research and innovation in Danish language models based on generative AI under the auspices of the Danish Foundation Models with the agreement on the research reserve for 2025.

A chatbot that helps patients

Rigshospitalet (a highly specialised hospital in Denmark) uses a chatbot in some departments that can answer questions from patients and relatives around the clock. For instance, the chatbot can answer questions about fasting rules, common side effects and restrictions after surgery. The chatbot will, in turn, direct patients to speak to a healthcare professional if, for example, they ask about life expectancy predictions.



Initiative 4 **Danish text data must be freely accessible**

Denmark is a small country with a unique language and culture. Language models are only as effective as the data they are trained on. Today, most major language models are developed by US tech companies and are primarily trained on English/US data. This can, for instance, reinforce American cultural values and traditions, which means these language models sometimes perform less effectively in Denmark.

In many contexts, it can be vital that a digital assistant – based on a language model – can be used in Danish and in a Danish context, such as if it is to help a doctor dictate patient records in Danish.

Danish text data is a critical prerequisite for ensuring AI performs well in Danish in the future – both in terms of language and cultural understanding. Therefore, Danish text data must be standardised and made open source and freely available for developing AI solutions, such as Danish language models.

The ongoing development of new language models and innovative applications has led to an increasing demand for Danish data to train models and algorithms. Making Danish text data available will support better integration of the Danish language, culture and values into language models and AI solutions. For example, Danish text data can enable companies to train their language models in Danish.

The initiative will initially provide open Danish text data from the Danish National Archives, the Royal Danish Library and the Danish Parliament. There are already large amounts of Danish data that can create tremendous value, such as in developing limited language models. However, this requires the data to be presented in a way that makes it accessible and in a format that can be used in, for instance, developing language models. At the same time, copyright and personal data considerations must be addressed. The initiative will explore the possibility of acquiring copyrighted data for free use.

Open-source text data will ensure easy and efficient access to data and thereby accelerating innovation in small and medium-sized Danish companies. With open-source text data, all stakeholders – both Danish and international – can use data to create competitive, Danish-language AI solutions. The available data must be accessible and open-source on sprogteknologi.dk, where it will be displayed alongside additional Danish language data.

DKK 21.1 million will be allocated to making Danish text data available from 2024-2027. In addition, the Agreement on the Entrepreneurship Package allocates DKK 30 million annually for the purchase of public Danish data, including focusing on text data for training models and algorithms.

MUNI helps citizens in their everyday lives

The chatbot MUNI helps citizens in more than 30 of the country's municipalities with everything from building projects, passport orders, and MitID to assistive technology, school enrolment, and elections, which has resulted in more than 400,000 conversations with citizens. Today, MUNI can answer questions in 70 categories with more than 8,500 built-in answers.

Danish digital strengths – a solid starting point for using and developing AI

Denmark has been at the forefront of digital development from an international perspective. For example, Denmark has long been at the top of the EU Digital Economy and Society Index (DESI), which is partly because strategically important political decisions have been made since the turn of the millennium that has paved the way for digital transformation in Denmark. Today, we are at the forefront of utilising the potential of digitalisation in all parts of society. For example, Danish companies are the most advanced in using AI in Europe. 15% of Danish companies used AI in 2023 – almost twice as many as the EU average, where 8% of companies used AI. In 2024, 28% of Danish companies will use AI.

The development has been driven by high ambitions across sectors where citizens, businesses and authorities have been ready for digital transformation. Today, the International Monetary Fund (IMF) estimates that the Danish labour market, compared to other countries, has one of the best

starting points for introducing AI. We must maintain and accelerate this solid starting point and ambitious approach.

In 2024, the Ministry of Digital Affairs conducted a survey of ongoing and planned initiatives concerning AI. The survey showed that over DKK 1 billion has been allocated to projects involving AI. The projects are spread across 18 ministerial areas, ranging from concept to operational. The most significant investments in AI have been made in research and education. Some projects investigate whether AI can be labour-saving or used for mapping and analysing large amounts of data.

AI is already embedded in many cross-sector initiatives that benefit society as a whole. These examples emphasise a strong foundation for developing and using AI in Denmark.

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Over DKK 1 billion has been allocated to projects involving AI.



Pioneer Centre for Artificial Intelligence

In 2021, a Pioneer Centre for Artificial Intelligence was established to put Denmark at the forefront of human-centric AI. The centre conducts world-class fundamental research and develops new platforms, methods and practices.

The centre is located at the University of Copenhagen with participation from the Technical University of Denmark, the IT University of Copenhagen, Aalborg University and Aarhus University. The centre was established in collaboration with the Ministry of Higher Education and Science, the Danish National Research Foundation, and four private foundations: Carlsberg Foundation, Lundbeck Foundation, Novo Nordisk Foundation, and the Villum Foundation. DKK 354 million has been allocated to the Pioneer Centre over 13 years (2021-2034).



Research reserve and funding for AI

In the agreement on the research reserve for 2024, a separate grant was earmarked for Innovation Fund Denmark for research into AI for the first time. With the research reserve for 2024, DKK 100 million was set aside for research into AI.

The agreement on the research reserve for 2025 again allocated DKK 100 million to AI, including DKK 60 million to Independent Research Fund Denmark for fundamental research in AI with a particular focus on ethical issues and explainability in mathematical models to understand their use better.



Super-computers

Supercomputers

Technological infrastructure plays a crucial role in developing and using AI. High computing power through so-called supercomputers is a highly sought-after technology in a rapidly developing global field. The need for supercomputing access in the Danish research and innovation environments is estimated to be huge.

Denmark is currently part of a European collaboration on supercomputer research infrastructure (EuroHPC) and co-owns several supercomputers, including LUMI (Large Unified Modern Infrastructure) in Finland, one of the world's fastest supercomputers, which possesses significant computing power that allows Danish players to process large amounts of data.

Danish Centre for AI Innovation - Gefion Supercomputer

A public-private partnership between the Novo Nordisk Foundation, NVIDIA and Denmark's Export Promotion Centre and Investment Fund (EIFO) means that one of the world's most powerful supercomputers, Gefion, is now on Danish soil. The Danish Centre operates the Gefion supercomputer for AI Innovation and offers entirely new opportunities for Danish researchers and companies.

The supercomputer is based on GPUs (Graphic Processing Units), which are particularly efficient for processing data for AI.

Gefion can help accelerate research and innovation through using AI while using this cutting-edge technology to develop the strengths and international competitiveness of the Danish business community. For example, companies can use Gefion to simulate virtual factories where AI is used to design and optimise production facilities and workflows, helping to develop the Danish business community in areas of strength such as green technologies and quantum technology.

With Gefion, Danish players will have unique access to computing power and software on a scale not currently available in Denmark, which is expected to significantly accelerate development opportunities for Danish research and the business community in three flagship areas: pharmaceutical and biotechnology research, accelerating the green transition and developing error-free quantum computers, which supports the development of innovative solutions to some of the world's biggest problems.

Using AI in the business community

According to Eurostat, Danish companies are the most advanced in using AI in Europe. 15% of Danish companies used AI in 2023, double the EU average, with 8% of companies using AI. The EU also has a target that at least 75% of companies with at least 10 employees will use AI, cloud, or data analytics technology by 2030. The latest data from Statistics Denmark also shows that Danish companies' use of AI will increase to 28% in 2024.

Large companies are quicker to adopt and utilise new technologies than smaller companies.¹ More than half of companies with at least 250 employees use AI, while just over one in ten companies with 10-49 employees do so, see Figure 1.

The relevance of AI also depends on what the technology can be used for. In Danish companies, technology is most frequently used for producing written text or spoken language and analysing text, see Figure 2.

Figure 1.
Danish companies' use of AI, 2024

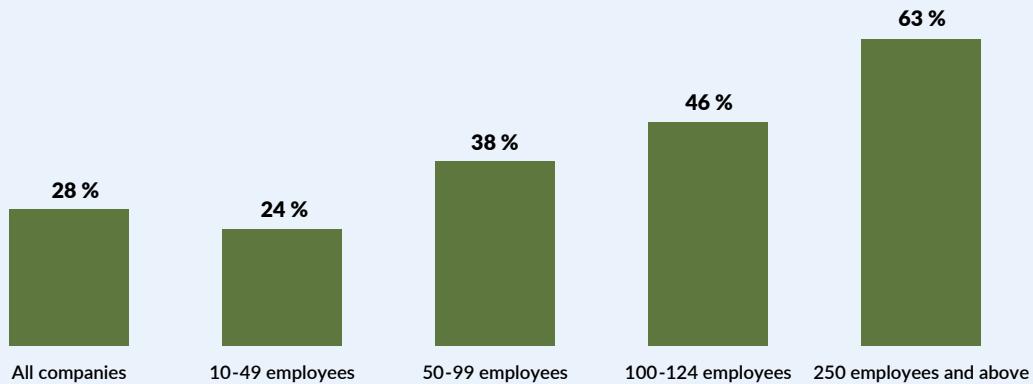
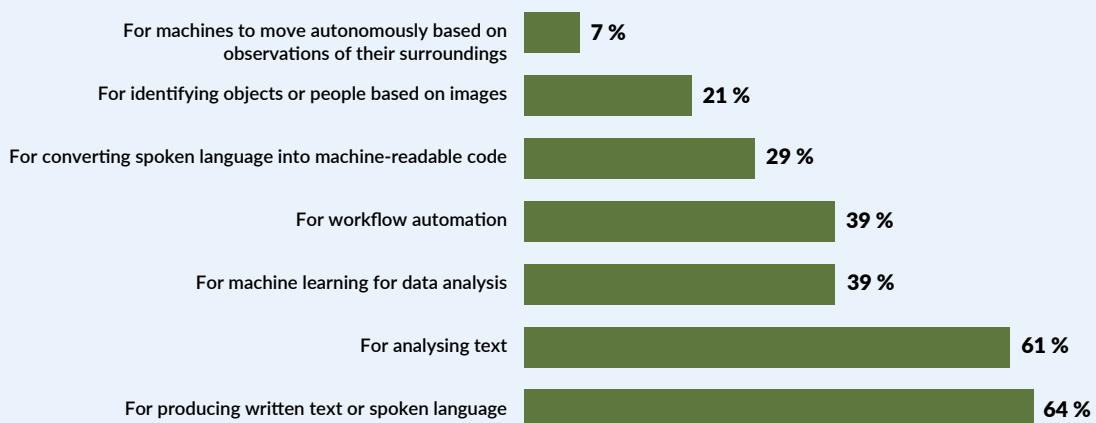


Figure 2.
Applications of AI in Danish companies, 2024



Source: Eurostat, Statistics Denmark and own calculations.

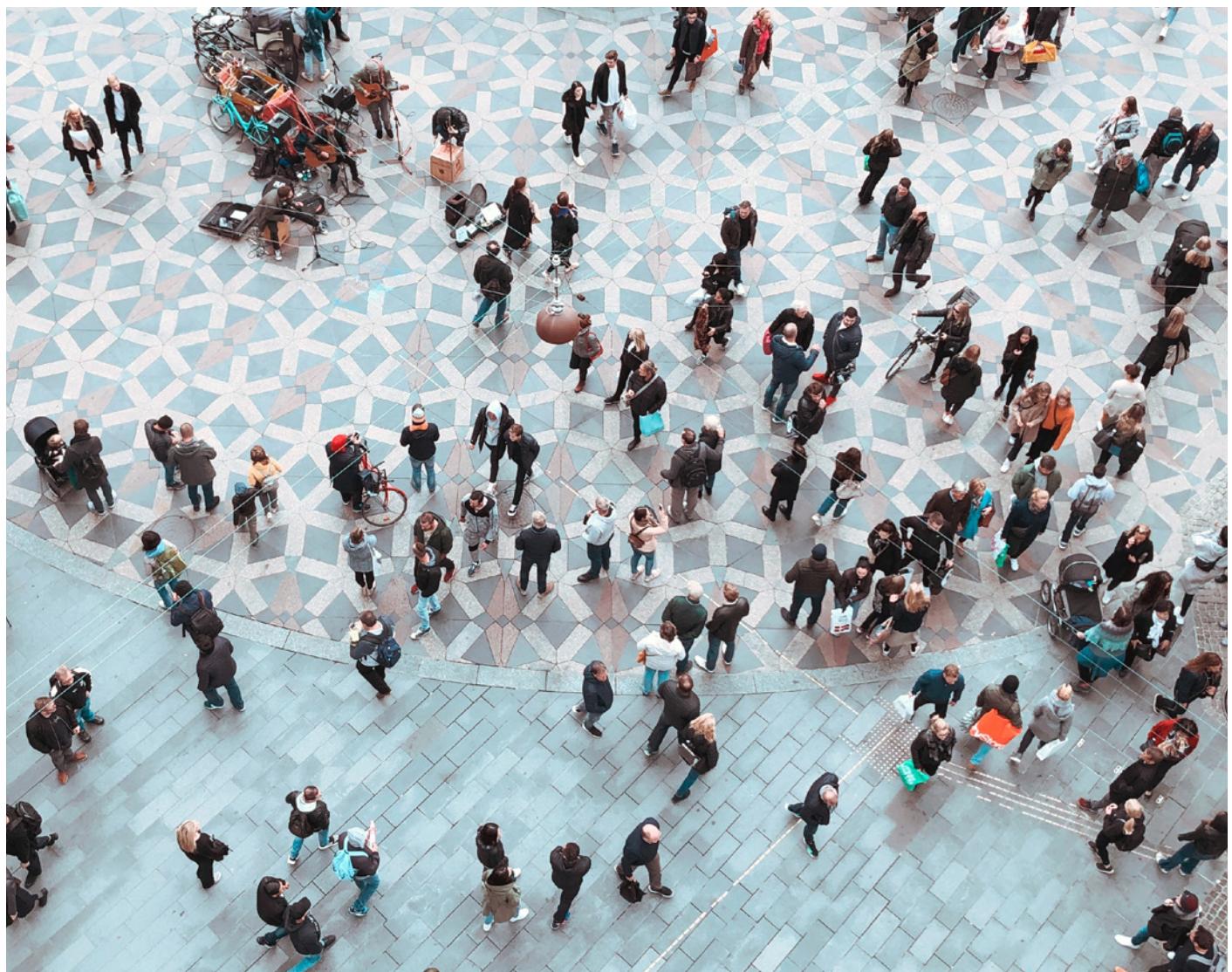
¹ The same picture is seen when using other technologies such as cloud, big data, robotics, etc.

Danes have a balanced and optimistic view of AI usage

Trust is a crucial factor in reaping the benefits of AI.

In February 2024, the Ministry of Digital Affairs, in collaboration with TrygFonden, held a public consultation on AI for a representative population sample. The themes were labour market, welfare, digital security and democracy. The purpose was to provide insight into what Danes think about AI.

The consultation showed that the population has a nuanced and generally optimistic view of using AI.



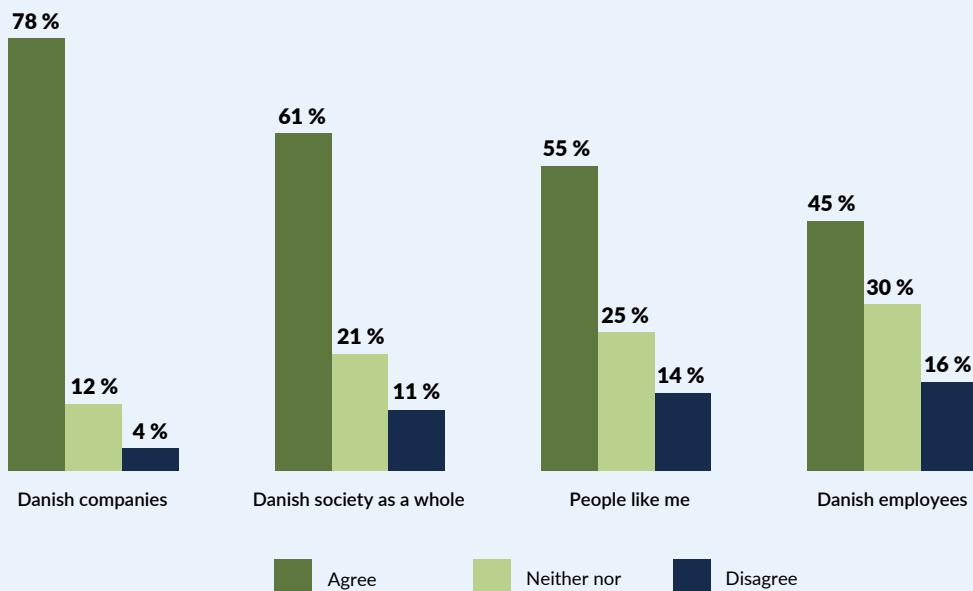
Public consultation on AI

Public consultation is a method that can be used to involve the population in complex issues. At the public consultation on AI in February 2024, 356 representative Danes from all over the country and in all age groups from 18-90 discussed various topics about AI over two days. Before the consultation, participants received material on different aspects and perspectives of AI.

Concerning the public consultation, a questionnaire was sent out to more than 25,000 Danes before, during, and after the consultation about Danes' views on AI, of which just over 1,500 answered the questionnaire.

Of the just over 1,500 respondents, a majority believed just before the public consultation that developments in AI would benefit Danish companies (78%), Danish society (61%) and people like themselves (55%) in the next 20 years.

Figure 3.
**Overall, the development of AI over the
next 20 years will benefit**



Note: For the category "Danish companies" and "Danish employees", it is N=1500, for the category "Danish society as a whole", it is N=1501, for the category "People like me", it is N=1502.

Out of the 1,500 respondents, 356 were representatively selected to participate in the public consultation. Participants answered the same questionnaire both before and after the public consultation to explore how participants' attitudes changed as they became more informed about the topic and engaged in the democratic conversation about AI. Before and after the public consultation, most of the Danes who participated had a positive attitude towards AI. Participants

generally moved from the wings towards the centre, making the most insecure feel safer and vice versa. Overall, participants have overwhelmingly become even more supportive of AI. Danes believe that technology has the potential to solve societal challenges in areas such as welfare and the labour market, and many, therefore, want to see a general increase in the use of AI in society. At the same time, a majority also believe there is a need for regulation in this area.

Note: The response categories "Strongly agree" and "Mostly agree" are grouped into the "Agree" category, while the response categories "Strongly disagree" and "Mostly disagree" are grouped into "Disagree".

A responsible framework for AI in Denmark

In Denmark, we must support a solid foundation to accelerate the development and use of AI in Denmark.

Therefore, we need a common and clear playing field for using and developing AI.

In Denmark and Europe, we believe that the development and use of AI must be credible and human-centric. The potential of AI must not be realised at the expense of our fundamental rights, safety, or health.

In Denmark, we must maintain our fundamentally positive approach to new technologies. However, we should never be blind to valid concerns and naively adopt new technologies without reflecting

on the pros and cons. This is why it is necessary to establish safeguards and ensure a common legal framework for the use of AI, so that the technology is not misused to violate our fundamental rights, privacy, or freedom of speech.

The legal framework for working with AI systems in Denmark includes, among other things, EU regulations. With the adoption of the Artificial Intelligence Act (AI Act) in June 2024, we got the world's first comprehensive regulation of AI. This regulation establishes binding rules to ensure that citizens are better protected from inappropriate and harmful use of AI. It regulates the development and use of AI systems based on a risk-based approach.



The purpose of the AI Act²

The AI Act represents the first comprehensive set of binding rules for AI. The AI Act came into force on 1 August 2024 and aims, among other things, to promote the responsible development and deployment of AI across the EU. Specifically, this is achieved through a risk-based approach to AI usage, ensuring that AI systems posing a higher risk to citizens and society are subject to more restrictive rules.

The objectives of the AI Act are to:

- Improve the functioning of the internal market and promote adoption of human-centric and trustworthy AI by facilitating market access for safe and innovative AI solutions with consistent regulation across EU Member States.
- Ensure a high level of protection of health, safety and fundamental rights against the potential harmful effects of AI systems.

² AI Act, Article 1(1)

The AI Act follows a Risk-Based Approach

The AI Act follows a risk-based approach where the level of obligations corresponds to the level of risks to citizens' health, safety and fundamental rights.

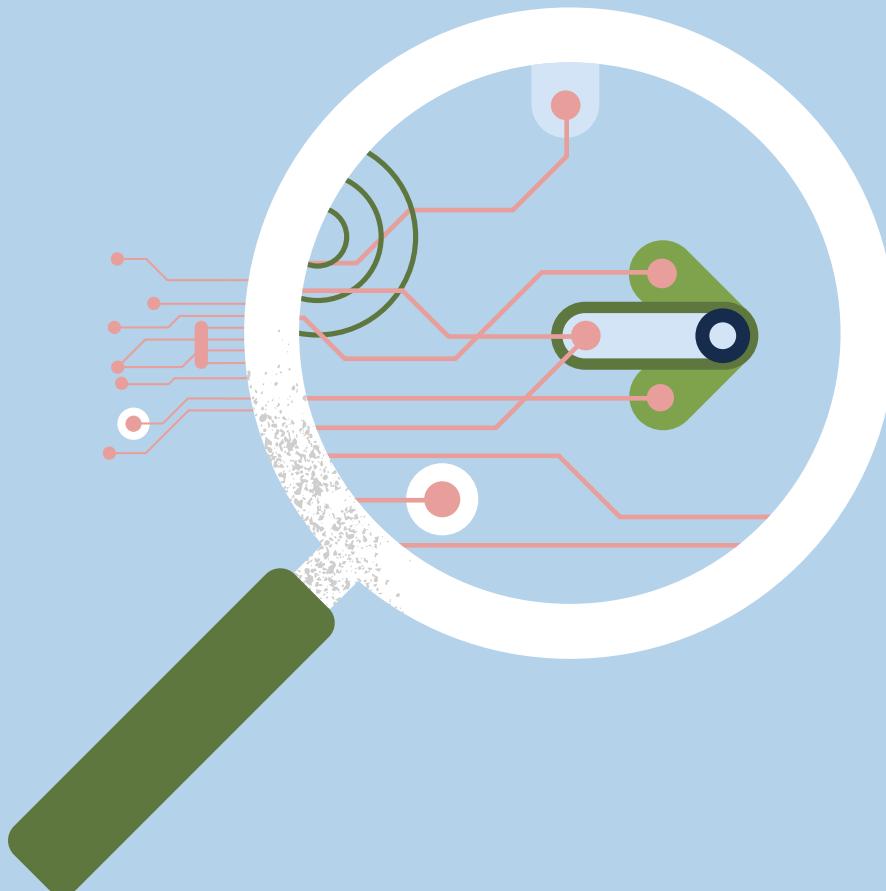
In practice, this means that AI systems posing an unacceptable risk are banned, while high-risk AI systems are subject to strict requirements. For example, high-risk systems must be subject to human oversight.

AI systems with limited risk will be subject to transparency obligations, and AI systems with minimal risk will not be subject to obligations.

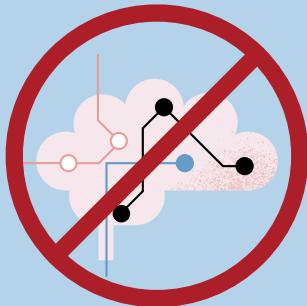
The regulation provides for a phased implementation. The bans on AI systems with unacceptable risks will come into effect as early as February 2025. The high-risk requirements will be phased in, starting in August 2026 and continuing in August 2027.

The AI Act stipulates that all parties involved in the development, deployment, import, distribution or production of AI systems must comply with the obligations outlined in the regulation. At the national level, it is competent authorities are responsible for overseeing compliance with the AI Act.

In Denmark, the Danish Agency for Digitisation is designated as the central point of contact and fulfils the role of the national coordinating supervisory authority. In this capacity, the Danish Agency for Digitisation will provide advice and guidance on the regulation.

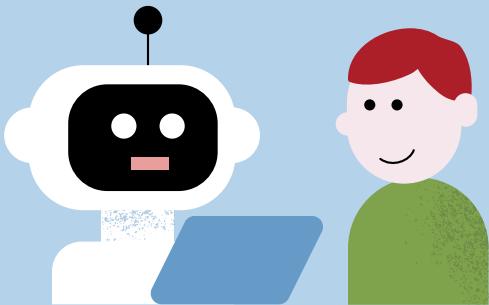


Examples of AI system Application



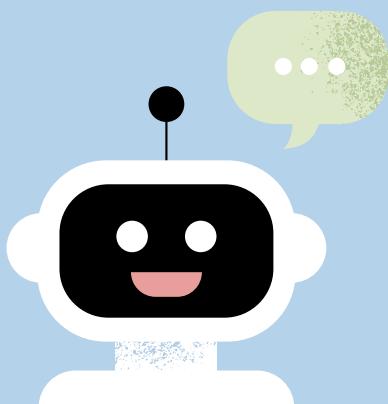
Prohibited use

- AI systems used for social scoring.
- AI systems that intentionally manipulate a person's behaviour.
- AI systems that exploit vulnerabilities of vulnerable groups or individuals.



High-Risk Applications

- AI systems used to determine admission to educational institutions.
- AI systems used to recruit or select candidates for job interviews.
- AI systems used as security components in the management and operation of critical digital infrastructure.



Limited-Risk Applications

- AI systems used in advertising.
- Chatbots with AI.



Minimal- Risk Applications

- Spam filters.
- Recommendations from streaming services.

A Safe Path to using AI

AI is a rapidly evolving field of technology. In addition to enforcing the AI Act, we in Denmark must also continuously focus on creating and implementing necessary frameworks and guidelines. This must be done as the technology evolves, ensuring we can harness its potential while safeguarding our fundamental rights and ensuring transparency and accountability in both development and use.

This is why it is essential that the necessary advice and guidance is available for authorities and businesses. Such support will help ensure that compliance with the AI Act is not disproportionately burdensome. Unclear rules must not hinder the development and use of responsible AI in Denmark.



Guidance for Businesses and Authorities

Implementation of the AI Act:

The Danish Agency for Digitisation coordinates the implementation of the AI Act. In collaboration with other competent authorities, the Danish Agency for Digitisation establishes a governance structure ensure appropriate oversight of the regulation. The Danish Agency for Digitisation provides ongoing information about the implementation process and guidance on the content of the AI Act at [digst.dk](#). The Agency for Digitisation regularly involves stakeholders from the business community, civil society and other sectors in discussions about the need for guidance on the regulation.

Guides for the Responsible Use of Generative AI:

The Danish Agency for Digitisation has developed guides for businesses, authorities and citizens on the responsible use of generative AI. These guides aim to inspire relevant considerations when using generative AI. Additionally, an inspiration catalogue has been published, containing seven examples of how authorities are already using generative AI to benefit employees and citizens. More information is available on the Agency for Digitisation's website³.

Lessons Learned on Experience Gathering:

The Danish Agency for Digitisation regularly publishes summaries of experiences related to the use of AI within public authorities. This includes insights about the so-called signature projects - 40 projects initiated from 2020-2022 in regions and municipalities with the aim of testing the use of AI across the tasks of public authorities. The ongoing experience gathering identifies barriers to AI adoption that need to be addressed and provides guidance for authorities wishing to implement the technology. More information can be found on the Danish Agency for Digitisation's website⁴. The Danish Data Protection Agency has also published a guide for public authorities that will develop and use AI that involving the processing personal data.

³ [New guides for the responsible use of generative AI](#)

⁴ [Lessons learnt from the signature projects](#)



Regulatory Sandbox for AI

As part of the government's digitalisation strategy, the Danish Agency for Digitisation and the Danish Data Protection Agency has established a regulatory sandbox for AI where companies and authorities can access relevant expertise and guidance on GDPR and the AI Act when developing or deploying AI solutions.

The sandbox is designed to support innovation and the use of effective AI solutions by providing project- and practice-oriented guidance on specific regulatory frameworks, helping to ensure the responsible and lawful use of AI solutions.

It also aims to reduce the time from development to deployment and ensure that fewer projects fail or are cancelled due to uncertainty about the regulatory framework.

The sandbox offers businesses and authorities access to relevant expertise and guidance, initially, focusing on GDPR and eventually expanding to include the AI Act. More information can be found on the websites of the Danish Data Protection Agency and the Danish Agency for Digitisation^{5,6}.

⁵ [Regulatory sandbox for AI](#)

⁶ [Regulatory sandbox \(datatilsynet.dk\)](#)



Denmark and AI in an International Perspective

Denmark's efforts to responsible development and use of AI continues both in Europe and globally. The EU plays a central role in setting responsible frameworks for utilisation of AI through the AI Act as well as promoting innovation and productivity through the development and dissemination of the technology. Such initiatives across EU Member States are necessary, as individual countries typically do not have the resources to implement them alone.

With the adoption of the new regulation, the EU can now focus even more on supporting development, innovation, investments and capacity building in AI for both businesses and governments. Mario Draghi's report on the future competitiveness of the EU highlights the need for this. The EU must take a central role in the development and use of European language models. Denmark is already actively contributing through the Alliance for Language Technologies⁷. Global models often build on data from the most spoken languages and cultures, such as English and American, which can create linguistic, cultural, socio-political, and gender-related biases that can amplify inequalities. Therefore, it's crucial that Denmark works for responsible data and knowledge sharing, as well as the development of language models that reflect Danish language and values, to ensure credible and locally relevant use of AI.

The 2024 AI Innovation Package is an important step towards strengthening Europe's AI ecosystem. Improved access to supercomputing power, quality data and European language resources will help drive AI-based solutions and business models. Denmark is working for the EU to accelerate the rollout of AI across the public and private sectors - including an ambitious Apply AI Strategy as mentioned in Ursula von der Leyen's political guidelines for 2024-2029.

With the EU Act as a framework and in close coordination with Member States, the EU must take the lead in ensuring responsible global governance of AI. This means promoting a risk-based, human-centric, trustworthy and responsible use of technology which also takes energy consumption into account. Therefore, Denmark must actively participate in international forums such as the UN, ITU, UNESCO, OECD, G20, G7, GPAL, Council of Europe, D9+ and the AI Action Summit. Here, conventions and declarations are signed, which are important steps towards a broad international consensus on the responsible use and development of AI.

From a broader international perspective, it is crucial that Denmark has access to world-leading knowledge and innovation environments within AI. This ensures that Danish researchers, authorities, and companies can develop, test and implement new solutions based on AI that are necessary to keep Denmark at the forefront and maintain our global competitiveness. The Danish innovation centres, which work strategically with AI innovation players, are located in leading countries such as the US, China, South Korea, Germany, Israel and India. It is important to strengthen these existing partnerships while also focusing on new growth regions, such as Africa, where an innovation centre in Kenya is planned. By ensuring Danish players utilise these networks, Denmark can remain at the forefront of developments to support Danish strengths in life science, digitalisation and the green transition.

⁷ https://language-data-space.ec.europa.eu/related-initiatives/alt-edic_en



An active Danish Effort in the EU

An active Danish initiative in the EU regarding the dissemination and use of AI is crucial, which is also the ambition of the European political agreement from 15 December 2023. The new Commission is expected to launch several new initiatives on AI. For example, the so-called "AI Factories Initiative" that aims to give companies and startups access to supercomputing power. Additionally, an Apply AI Strategy is expected to increase industrial use of AI and improve the delivery of public services, as well as a new legislation on cloud and AI development.

The EU proposals will impact the opportunities for Danish companies and authorities to develop and use AI. The government will, therefore, focus strongly on its EU efforts, including those connected with the Danish EU Presidency, where active and early advocacy will help ensuring that the upcoming EU proposals on AI support Danish ambitions.



European Alliance for Language Technologies (ALT-EDIC)

The Alliance⁸ focuses on building enabling infrastructure to develop competitive and European alternatives to English language models. For example, ALT-EDIC tries to coordinate and engage in development projects under the Digital Europe Programme. Denmark has been a member since May 2024.

⁸ https://language-data-space.ec.europa.eu/related-initiatives/alt-edic_en



Test facilities for AI Product Testing

As part of the Danish government's digitisation strategy, Denmark supports Danish players in AI test and experimentation facilities (TEFs) under the EU's Digital Europe Investment Programme.

These facilities enable companies to test and validate AI-based products based in realistic environments. The TEFs are designed to accelerate the market introduction of responsible and ethical AI, in line with European values. Danish stakeholders include business clusters, municipal organisations and knowledge institutions. TEFs have been created within:

- Manufacturing: AI-MATTERS
- Agrifood: Agrifood TEF
- Health: TEF Health
- Smart cities: Smart Cities and Communities – CitCom.ai



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