The Flemish Ministry of Economy, Science and Innovation has made 30 million euros available to get Flanders to the head of the pack on AI. In the coming years, this AI-impulse program will be centered around three main pillars:

- Strategic basic research
- Technology transfer and industrial applications
- Supporting activities (awareness, training, ethics...)

Where automation ends and articifial intelligence begins

The impulse program defines AI in four stages of increasing complexity. These are also the program lines that will guide the AI research in the coming years:

1. **Supporting complex decisions**: how can AI algorithms help to extract information from a complex dataset that you wouldn't notice (or not so quickly) as a human being? The most basic form of AI in which software can help people make an informed decision. Think of the support of a diagnosis by a doctor.
2. **Making own decisions in the edge**: the moment when systems make their own decisions in a complex and changing environment. At a speed that does not allow information to be sent up and down to the cloud. So that the intelligence has to be created in the device itself (in the edge). For instance, in environments where people and machines work together, such as a warehouse or an industrial production line.
3. **Interact autonomously with other decision-making entities**: a stage in which AI systems that have been programmed independently of each other have to enter into a dialogue in order to figure out a suitable solution. Without a central unit that supervises the entire system or has authority over all other devices. For people, this is well reflected in team sports. In the case of AI systems, this could for example be relevant in a dialogue between (self-driving) cars, smart traffic controllers, etc.
4. **Seamless communication and collaboration with humans**: there will be applications in which AI systems have to conduct complex reasoning with people and also have to process non-factual contextual information such as social behavior and cultural background. A thorough understanding of the environment and natural language processing are an important part of this. Think of environments where people and machines have to work together on unpredictable tasks.

For each of these challenges, concrete proof-of-concepts will be developed from which knowledge and technology can be transferred to the business community. While the focus will be on three sectors – industry 4.0, healthcare and mobility&logistics – the results will also be more widely applicable.

Where companies can go for help

Coordinated by Flanders Innovation & Entrepreneurship (VLAIO) and the Flemish department for Economy, Science and Innovation (EWI), the partners in the AI impulse program are actively supporting the translation of knowledge and research into concrete added value for the (Flemish) industry.

To do this effectively, no new programs will be set up, but the existing instruments will be used with an increased focus on projects with an AI aspect. Some of these instruments are generic and target an entire sector or a larger number of companies. Others are partnerships between a small number of companies, with or without knowledge institutions. Others allow specific support to be offered to one company or are specifically aimed at spin-offs and startups.

And there is more

In addition to technological research, imec and the partners in the AI impulse program are also working on related activities:

- **The AI barometer**. Based on the results of an online questionnaire, imec will make a report available on the adoption of AI in the Flemish (business) landscape.
- **AI-experience centres**. Physical hubs will be set up at various locations in Flanders where companies can come into contact with the possibilities of AI.
- **Think tank for AI and ethics**. A group of specialists from academia and industry will specifically address the ethical and moral aspects of AI.
- **Outreach and training**. There will be various possibilities for training on AI. Accessible to companies and a wider audience. For example, imec is already working with some partners to develop an educational kit to teach students the basic principles of machine learning.

Want to know more?

- For more details, please visit the VLAIO website, or contact ai@imec.be.

The AI impulse program is a collaboration between the following partners, initiated by the Flemish Ministry of Economy, Science and Innovation (EWI):