

Disclaimer

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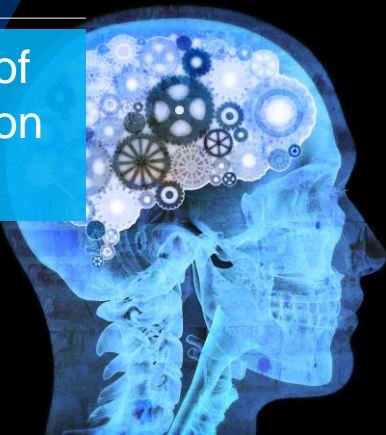
The report draws on a body of existing and ongoing research at McKinsey Global Institute, including the institute's analytical framework to estimate automation potential and an enterprise survey of firms integrating new technologies in their business processes.

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The new wave of digital automation and AI





New technologies opening up new possibilities for automation


Computer Vision

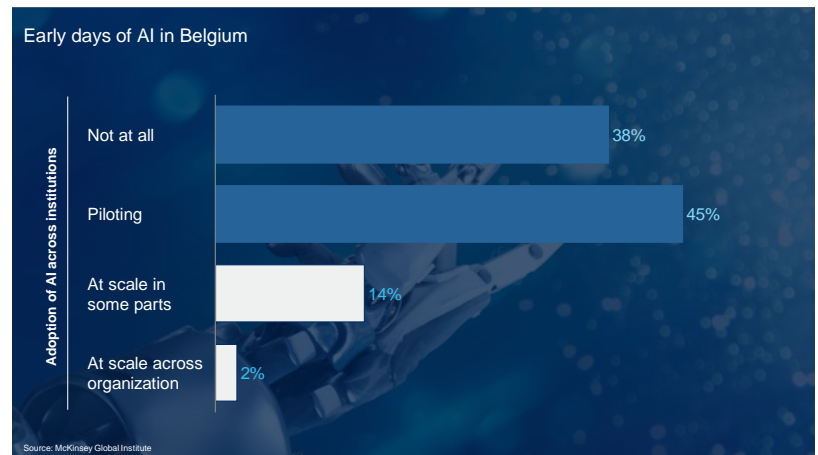

Language


Machine Learning


Robotics

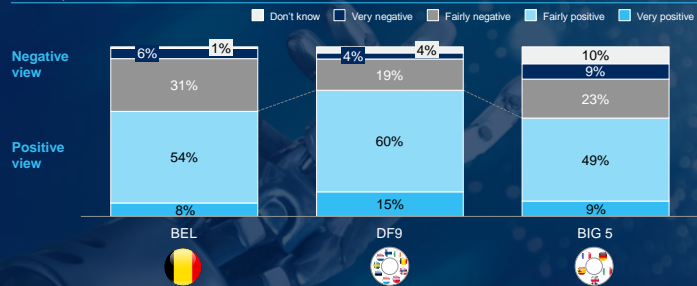

Virtual Assistants

“Artificial Intelligence (AI) is intelligence exhibited by machines, with **cognitive functions** that are associated to humans. Cognitive functions include all aspects of **perceiving, reasoning, learning, and problem solving**”



Belgian citizens have a positive view on the new wave of automation

View of robots and artificial intelligence in EU28
% of respondents, N=27,901

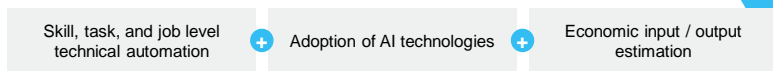


Source: EU Commission (2017), Digital Economy and Society Index 2017, European Commission, McKinsey

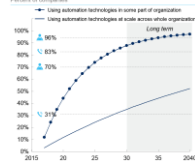
Fuel for the
Future of
Belgium



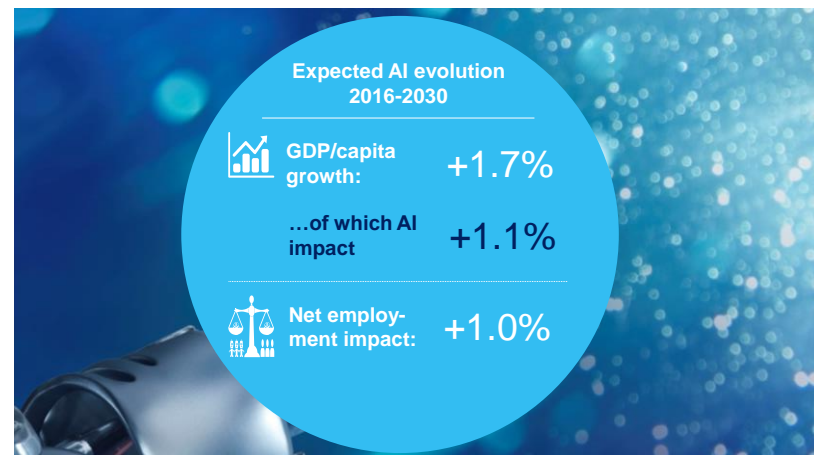
Our work: Comprehensive assessment of socioeconomics of AI



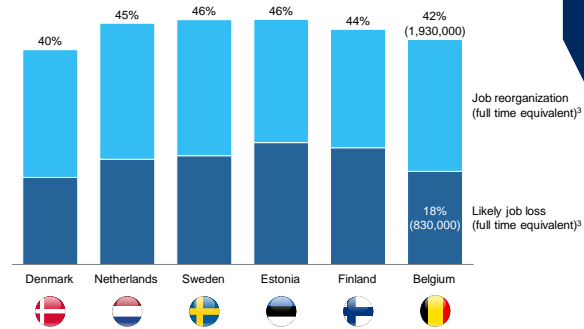
Diffusion of AI & automation technologies in companies, Percent of companies



Technology type	Impact on productivity	Impact on employment	Impact on GDP/capita
AI-powered chatbots	~10%	~10%	~10%
AI-powered recommendation engines	~10%	~10%	~10%
AI-powered fraud detection	~10%	~10%	~10%

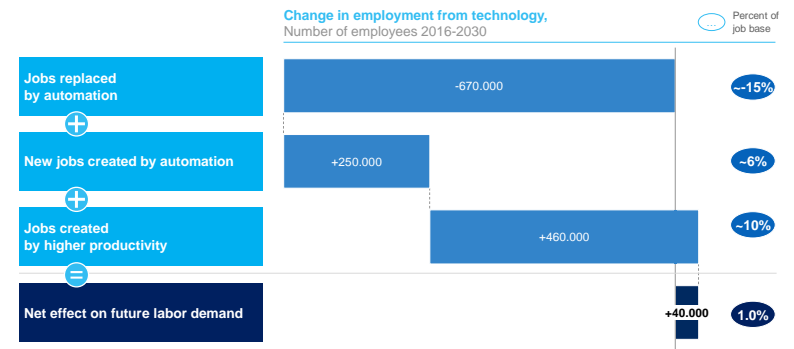


**What you hear is partly true:
Large part of jobs will be lost or re-organized**



¹ Job loss defined as jobs with more than 70% automation potential; job reorganization defined as jobs with less than 70% automation potential
Source: McKinsey Global Institute

However, there will be even larger amount of jobs created



Managing the transition is critical due to friction and re-skilling ("technological unemployment")

Impact by 2030	Economy with automation, no friction ¹	+ Lag between labor substitution and new jobs ²	+ Insufficient re-skilling ³	= Economy with automation and friction
Employment # workers	+40,000	-70,000	-90,000	-120,000
Unemployment rate percentage points	-0.9%	+1.5%	+2.1%	+2.6%

¹ Midpoint scenario compared to baseline with no automation

² Assuming a lag of 3 years between robots replacing workers, and new jobs are created from spill-over effects and new jobs directly linked to automation

³ Assuming insufficient re-skilling of 20% of the additional workers in need of re-skilling due to automation

"The trouble is you think you have time" – 5 critical implications for policy makers

1

More Demand for digital solutions; doubling digital labor demand towards 2030

2

Shift to new skill mix requiring more technical, social, and creative skills

3


Transition of workers to growing sectors, as jobs are replaced and created

4

New market opportunities can make up half of the gains from automation

5

Increase in international competitiveness due to higher productivity



Taking the leap: Managing towards prosperity

FIVE SUPPORTING POLICY AREAS

**Front run
AI adoption**
(social, infra-
structure, public
sector)

**Support the
build-up of
local AI
ecosystems**

**Educate
and train
the workforce**

**Support the
transition**
(welfare, job
markets)

**Shape the
policy
framework**



To sum up

- 1 | Automation and AI – an **important source of productivity for Belgium**
- 2 | Critical to assess impact at **task level** and impact will hit **differently by role and sector**
- 3 | **Humans and machines** will be needed in a **different kind of economy – requiring new skillsets**
- 4 | The shift will be **slow in macro, fast in micro**
- 5 | **Speed in reskilling critical**

SOURCE: McKinsey analysis

Thank you