AI in manufacturing
The policy perspective

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6 Commission priorities for 2019-24

A European Green Deal
Europe aims to be the first climate-neutral continent by becoming a modern, resource-efficient economy.

A Europe fit for the digital age
The EU's digital strategy will empower people with a new generation of technologies.

An economy that works for people
The EU must create a more attractive investment environment, and growth that creates quality jobs, especially for young people and small businesses.

A stronger Europe in the world
The EU will strengthen its voice in the world by championing multilateralism and a rules-based global order.

Promoting our European way of life
Europe must protect the rule of law if it is to stand up for justice and the EU's core values.

A new push for European democracy
We need to give Europeans a bigger say and protect our democracy from external interference such as disinformation and online hate messages

European Commission

Political priorities

European Green Deal
- The first climate-neutral continent by 2050
- At least 55% less net greenhouse gas emissions by 2030, compared to 1990 levels
- 3 billion additional trees to be planted in the EU by 2030

A Europe Fit for the Digital Age
- €250 billion boost to digitalisation from Next Generation EU
- 80% of EU population should have basic digital skills by 2030
- €43 billion of policy-driven investment will support the Chips Act until 2030

European Commission

Circular regenerative economy

"The European Green Deal is our new growth strategy. The novelty and the difference to our fossil fuel based model is that we will foster growth that is **not extracting resources but that gives back more to the planet** than it takes away.

This is what economists call the **regenerative growth model**."
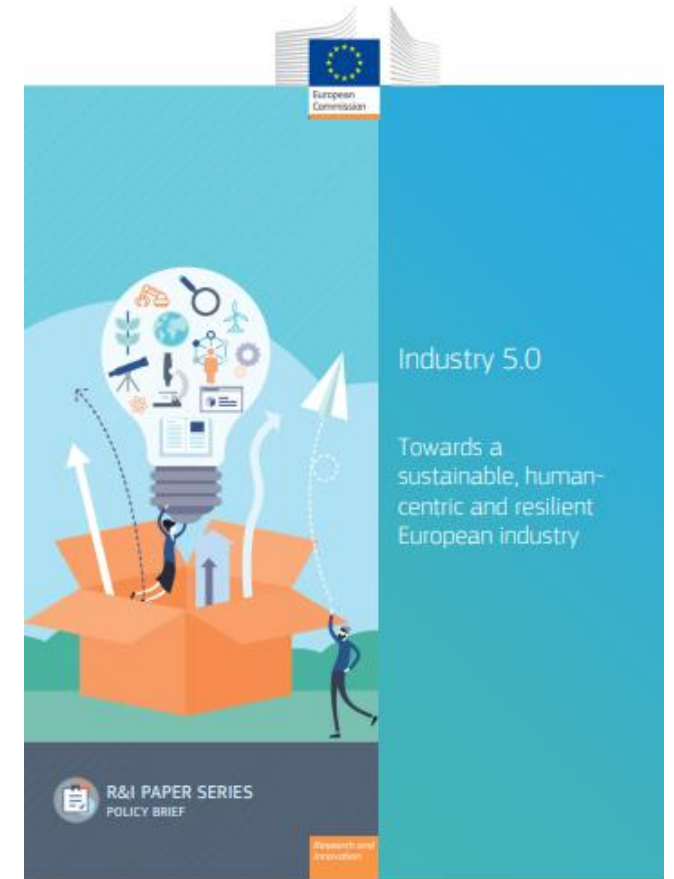
European Commission

Industry 5.0

*Industry 5.0 recognises the power of industry to achieve societal goals beyond jobs and growth to become a **resilient provider of prosperity**, by making production **respect the boundaries of our planet** and placing the **wellbeing of the industry worker** at the centre of the production process.*

Industry 5.0

Towards a sustainable, human-centric and resilient European industry

R&I PAPER SERIES POLICY BRIEF

THE INDUSTRY 5.0 AWARD
Recognising outstanding EU-funded projects

HUMAN-CENTRIC   RESILIENT   SUSTAINABLE

@EUScienceInnov   #Industry5.0   #ResearchImpactEU

Deadline for applications:
01/09/2023

Who can apply?

- Eligible projects must have obtained funding from Horizon 2020, Horizon Europe or the European Institute of Innovation and Technology.
- Projects involving deep-tech start-ups are particularly encouraged to participate.

European Commission

Pathway to sustainability

Table 12.1: Indicators measuring progress towards SDG 12, EU

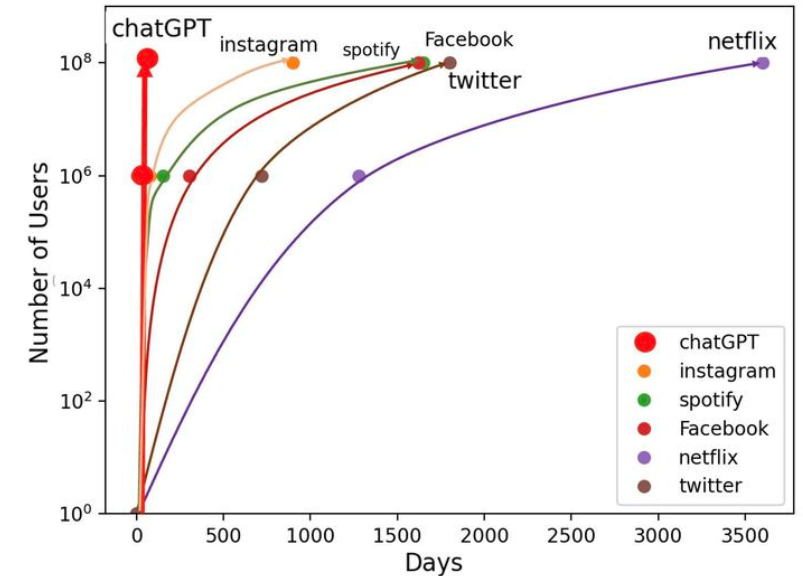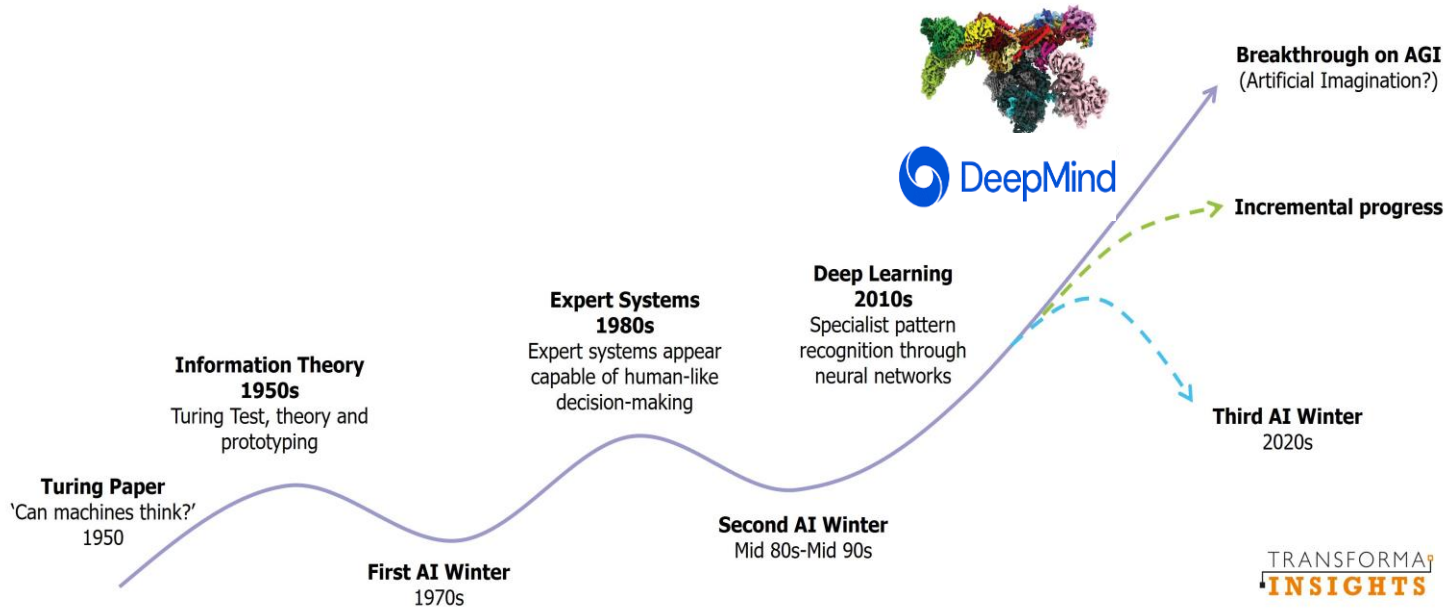| Indicator	Long-term trend (past 15 years)	Short-term trend (past 5 years)	Where to find out more
Decoupling environmental impacts from economic growth			
Consumption of hazardous chemicals	↗	↘	page 224
Material footprint	↗	↓	page 225
⊚ Average CO_2 emissions from new passenger cars	↗ (¹)	↘	page 226
Energy productivity (*)	↑	↑	SDG 7, page 141
Green economy			
Gross value added in the environmental goods and services sector	↑	↑	page 228
Waste generation and management			
Circular material use rate	↑	↑	page 229
Generation of waste excluding major mineral wastes	↘ (²)	↓ (³)	page 230

(*) Multi-purpose indicator.
(¹) Past 13-year period.
(²) Past 14-year period.
(³) Past 4-year period.

Source: Eurostat SDG Monitoring Report

Will AI breakthrough or another winter is ahead?

Turing Paper
'Can machines think?'
1950

Information Theory
1950s
Turing Test, theory and
prototyping

First AI Winter
1970s

Expert Systems
1980s
Expert systems appear
capable of human-like
decision-making

Second AI Winter
Mid 80s-Mid 90s

Deep Learning
2010s
Specialist pattern
recognition through
neural networks

DeepMind

Breakthrough on AGI
(Artificial Imagination?)

Incremental progress

Third AI Winter
2020s

TRANSFORMA
INSIGHTS

Tech

ChatGPT Becomes Fastest-Growing Platform In The World As It Hits 100 Million Users In 2 Months

January 31 sees the highest traffic, bringing in 28 million visits from 15.7 million unique visitors.

AI in manufacturing

Horizon Europe

- *Made in Europe*

- *AI, data and robotics*

- *EIT manufacturing*

2024 calls on AI in manufacturing

- HORIZON-CL4-2024-TWIN-TRANSITION-01-03: Manufacturing as a Service: Technologies for customised, flexible, and decentralised production on demand

- HORIZON-CL4-2024-TWIN-TRANSITION-01-05: Technologies/solutions to support circularity for manufacturing

- HORIZON-CL4-2024-DIGITAL-EMERGING-01-03: Novel paradigms and approaches, towards AI-powered robots– step change in functionality

- HORIZON-CL4-2024-DIGITAL-EMERGING-01-04: Industrial leadership in AI, Data and Robotics boosting competitiveness and the green transition

European Commission