

INDUSTRY 5.0

human-centric, sustainable
and resilient

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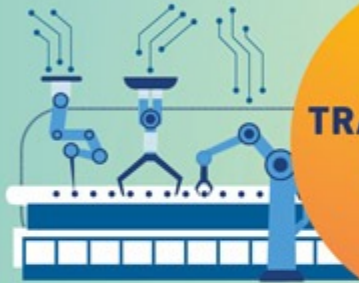
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Digitalisation is ...

76% of executives agree that organizations need to dramatically re-engineer the experiences that bring technology and people together in a more human-centric manner. (Accenture)



...
TRANSFORMING
European
industry



...
ACCELERATING
production
processes



...
CHANGING
the role of
workers

Primary target
increase efficiency & productivity

This transformation is Industry 4.0



From shareholder to stakeholder value
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Not a revolution

Industry 5.0 ...



... promotes talents, diversity and empowerment



... is agile and resilient with flexible and adaptable technologies



... leads action on sustainability and respects planetary boundaries

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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.



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Why Industry 5.0?

Improved
SAFETY and
WELL-BEING

**REDUCED
COST** due
to resource
efficiency

**EMPOWERED
WORKERS**
remaining in
control

Competitive
industry by
**ATTRACTING
BEST TALENT**

Adapted
**TRAINING FOR
EVOLVING
SKILLS**

**COMPETITIVE
EDGE** in new
markets

Industry
5.0 is a
**SOLUTION
PROVIDER**
for people
and for our
planet

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Industry That Works for People

- From technology-driven to **human-centric approach**
- **Safe** and **qualitative** jobs, **wellbeing** of the worker
- Workers as **investments**, not a mere cost
- Technologies to **enhance** workers' **capacities** and foster **creativity**



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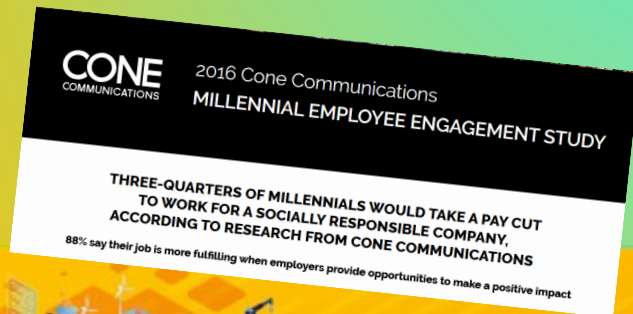


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Attracting the Best Talents

- Scarce skillsets in the digital age
- Young people want employers who share their values

*By 2025, 75% of the workforce will be millennials.
75% of millennials would take a pay-cut to work for a socially responsible company.
40% of millennials said they have taken one job offer over another because of the company's sustainability.
Nearly half of Generation-Z says they would prioritize a job offer that gives them mobility, freedom, and flexibility.*



Article
The Deloitte Global Millennial Survey 2020
Millennials and Gen Zs hold the key to creating a "better normal"
Deloitte research reveals "resilient generations." In the face of unprecedented health and economic disruption caused by the COVID-19 pandemic, millennials and Gen Zs express resolve and a vision to build a better future.



*World Economic Forum:
creativity #3 most important skill in 2020, after critical thinking and problem-solving.
50% of all employees will need reskilling by 2025, as adoption of technology increases
LinkedIn: creativity is #1 top skill companies need.*

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Sustainable Industrial Production

- resource efficiency = doing “better with less”
- adopt **full product life-cycle** perspective
- improve environmental outcome
- help reach **Sustainable Development Goals** (SDGs)
“Industry, Innovation and Infrastructure” (#9) and
“Responsible Consumption and Production” (#12)

*Industry is responsible for 15 % of the EU's emissions.
Between 1990 and 2019, the EU industry reduced its CO2 emissions by 40% (compared to 25% overall reduction).
Between 1990 and 2016, the energy efficiency of industry in the EU improved by 38%, or 1.8% per year.*



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Resilient Industry

- Response to **geopolitical and climate challenges**
- **Flexible and adaptable** technologies
- Appropriate **skillsets**
- Revisiting **supply chains**
- **Societal role** of industry



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Industry 5.0: Making It Happen

Concrete **actions** are needed, in a wide range of **policies**, including:

- **environment**: industrial waste prevention, secondary materials markets, ...
- **technology**: R&D for human-centric technologies, ...
- **education**: develop STEM skills, women's engagement, entrepreneurial skills, ...
- **employment**: evolving skills needs & employability, labour market transformation, ...
- **social**: social security, inclusiveness, ...
- **regional**: supporting European regions facing major transitions, ...
- **taxation**: tax policies for industry promoting green, human-centric industry



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Industry 5.0: Making It Happen

- First-Ever **Industry 5.0 Award**
- **Roundtable with Industry Leaders** to Identify Priority Measures
- Topics in **Horizon Europe** Work Programmes
- Developing Industry 5.0 Curricula with **EIT-Manufacturing**



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How EU-funded research contributes to Industry 5.0

Some examples

1

BEYOND 4.0



Examining the future impact of new technologies on **JOBS, BUSINESS MODELS AND WELFARE**

2

HuMan Manufacturing



Demonstrating ways **FACTORY WORKERS AND AUTOMATION** can operate in harmony, increasing productivity, quality, performance, satisfaction and safety

3

KYKLOS 4.0



Showing how cyber-physical systems, product life-cycle management, life-cycle assessment, augmented reality, and artificial intelligence technologies and methods can transform **CIRCULAR MANUFACTURING**

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https://ec.europa.eu/info/research-and-innovation/research-area/industrial-research-and-innovation/industry-50_en

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