

NEWSLETTER 1

Up•Skill



**Funded by
the European Union**

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or HADEA. Neither the European Union nor the granting authority can be held responsible for them.



**UK Research
and Innovation**



The Horizon Europe Up-Skill project, managed by HaDEA, is a year old and this first edition of the newsletter will provide an overview of the project's progress, Industry 5.0 related news, updates from our sister project Bridges 5.0, and upcoming events.

You can also stay up-to-date by following our channels on [LinkedIn](#), [X](#) and [YouTube](#) and the news page on our [website](#).

Through our communication channels, you can learn how Up-Skill can help businesses:

- Identify skills that existing workers will need to survive in the emerging digitalised workplace.
- Provide data and information for technological integration and decision making.
- Reduce costs in primary manufacturing through the efficient implementation of human-machine augmentation.
- Improve quality of output and productivity by addressing production methods and development cycles of new products.
- Reduce waste by enabling higher levels of reproducibility, and the use of software to make more efficient use of components.
- Quantify the value of skilled labour and craftsmanship through a reference framework which can be used to understand and express employee value across all levels of the business.

THE UP-SKILL PROJECT

The focus of the Up-Skill project is to develop a better understanding of how businesses, particularly in industrial and manufacturing environments, can lever value from human and machine integration. Businesses are already exploring how they can build business benefit from newly added capabilities such as big data, access to real time process data, the Internet of Things, automation, machine learning and artificial intelligence, amongst others. The next step will be integrating those technologies with human capabilities. The project will identify how the potential for automation and hu-

man input is being played out in a range of industrial, competitive and supply chain settings by creating detailed comparative case studies. Ethnographic research will be used to enable the creation of a unique and detailed understanding of the ways in which artisanal skills and automation interact and are managed, how the products are made, and the technologies and the specific human skills deployed to produce them. The approach will also take specific account of the firm strategy and managerial competencies that are delivering business sustainability and growth.



PROJECT VIDEOS

We are now amid a fourth industrial revolution where automation and digital technologies are converging. The emerging technologies promise huge improvements in efficiency, cost savings, quality, and the mass customisation of products. But they also pose threats of unemployment, lost skills and opportunities for innovation, and present searching questions as to how businesses and societies are organised.

FIRST VIDEO

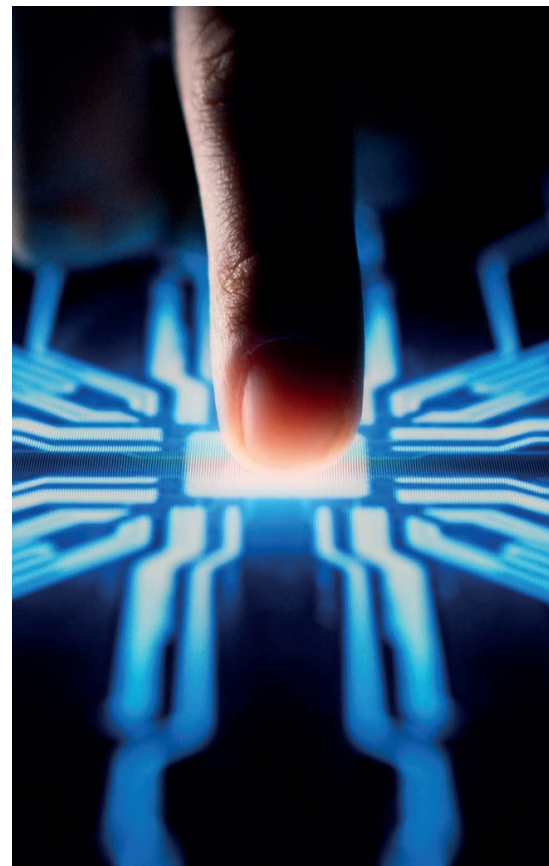
In the first Up-Skill project video, Professor Chris Ivory from Mälardalen University (MDU) talks us through the history of technological innovation and the positive and negative effects it had on businesses, workers and society, and how the Up-Skill project and the Industry 5.0 concept can help realign our perspectives of the emerging technologies from human replacement to one of human-machine inter-augmentation.

[WATCH THE VIDEO](#) 

SECOND VIDEO

The second Up-Skill project video takes a deeper look into the case study being conducted at Zift AB in Eskilstuna, Sweden, and how the ethnographic research being conducted there can shed light on how workers interact with technology and the delicate balance between integrating new technologies and maintaining the human skill, creativity and innovation that are vital for a firm's resiliency and competitiveness.

[WATCH THE VIDEO](#) 



PROJECT PROGRESS

ETHNOGRAPHIC RESEARCH

One of the main tasks of the Up-Skill project is to identify the ways in which job roles and content are changing, or could potentially change, because of the introduction of Industry 4.0 and 5G technologies such as autonomous robots...

[READ MORE](#) 

INDIVIDUAL CASE STUDY REPORTS

The project aims to identify the changes brought about by emerging technologies and how they can be integrated effectively alongside human skills within a firm's overall business strategy and the market context through conducting ethnographic research in various industrial...

[READ MORE](#) 

WORK PACKAGE 1: ENABLING TECHNOLOGY ASSESSMENT

The State-of-the-Art Literature Review aimed to identify key technologies that need to be in place to facilitate the transition to Industry 5.0. Many of the technologies are already...

[READ MORE](#) 

CASE STUDY TECHNOLOGY SOLUTIONS

This second phase of the case study development was led by Lancaster University who have produced a report showing the best practice technology solutions selected for...

[READ MORE](#) 



NEWS & UPDATES

UP-SKILL AND THE JOURNEY TO INDUSTRY 5.0

Industry 5.0, the fifth industrial revolution, is a step forward from the artificial intelligence, automation, big data, machine learning, real-time data and Internet of Things connectivity associated with Industry 4.0.

This next stage of industrial progress now seeks to integrate these types of technology with human capabilities to draw the best out of both machines and people in the workplace.

Industry 5.0 is still a relatively new concept and...

[READ MORE](#) >

UP-SKILL, INDUSTRY 5.0 & THE WORKFORCE

Workers are not passive recipients of technology change; they also react to it. The history of technology change is replete with job roles that have proven unexpectedly resistant to elimination by automating technology. The recent experiences of digital technology and AI rollouts make it clear that human roles constantly emerge to...

[READ MORE](#) >

THE TRIPLE BOTTOM LINE & INDUSTRY 5.0

Within the Up-Skill project we aim to explore how the triple bottom line concept can be applied in Industry 5.0. Our research will focus on the strategic, social, environmental, economic and business contexts in which it does or does not make business sense to automate skilled, artisanal and craft roles.

The economic and financial impact of Industry 5.0 is the most obvious one...

[READ MORE](#) >

UPSKILL: COLLABORATIVE AND SOCIALLY RESPONSIBLE MANUFACTURING

Our focus is how Industry 5.0 will place a strong emphasis on producing customised and personalised products to meet individual customer needs. This approach contrasts with mass production in previous industrial revolutions. By tailoring products to specific requirements, companies will be able to reduce waste and overproduction, promoting a more...

[READ MORE](#) >

RELATED PROJECT

Bridges 5.0 is an exciting new project funded under the European Commission's Horizon Programme. The project started on January 1st, 2023, and over the next four years they will be examining how Industry 5.0 can lead to better outcomes for employees, the environment, business competitiveness, and society.

European industry has embarked on a path of digital transformation. Whilst the concept of Industry 4.0 has been driven primarily by productivity and technological considerations, the last ten years have clearly demonstrated the need for wider perspectives to make digital transformation work.

[LEARN MORE](#) 



BRIDGES 5.0 PROJECT NEWS



INNOVATION AS A COLLABORATIVE EFFORT

Innovation is sometimes seen as an individualistic act. An inventor works in a secluded environment on their ideas and then surprises the world. Such a role is viewed as a privilege.

There are several historical examples of Kings, Queens and Princes(ses) for whom innovation was a hobby. Their approach to innovation was essentially privileged and not meant to be encouraged among the general population...

[READ MORE](#) 

AN INTERVENTION STUDY

BRIDGES 5.0 is dedicated to evaluating and enhancing two established forms of training intervention, namely Teaching and Learning Factories. These interventions are designed to address the skills required in manufacturing industry, targeting both individual companies and associations of public-private organisations. The objective of these interventions is to facilitate skill adaptation in response to the Industry 5.0 paradigm shift. To achieve this, a comprehensive...

[READ MORE](#) 

CONCEPTUALISING INDUSTRY 5.0 TO UNDERSTAND WORKFORCE SKILLS

The European Commission's Directorate General for Research & Innovation sees the core of Industry 5.0 as follows:

"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..."

[READ MORE](#) 

INDUSTRY 5.0: A DIALOGUE

Bridges 5.0 is all about dialogue, sharing insights, experiences and aspirations about how we can create human-centred, sustainable and resilient businesses. Our aim is to create a highly engaged community of companies, social partners, policymakers and researchers as the definitive focal point for information, knowledge-sharing and collaboration.

To begin, we need to understand how your organisation...

[READ MORE](#) 

EVENTS

MÄLARDALEN INDUSTRIAL TECHNOLOGY CENTRE EVENT: DESIGNING SUSTAINABILITY INTO MODERN MANUFACTURING

Mälardalen Industrial Technology Centre (MITC) hosted an event on October 12th, 2023, which brought together over 130 industrial, manufacturing, and technological research stakeholders to discuss the topic of “Designing sustainability into modern manufacturing.”

[READ MORE](#) 



VOCATIONAL EDUCATION AND TRAINING SUMMIT 2023

Up-Skill and Bridges 5.0 will be participating at the Vocational Education and Training Summit in San Sebastian, Spain, 22nd – 23rd November 2023. The aim of the summit is to reflect, together with speakers of the highest level, on the influence of the latest technological developments in training, employment, economy, and society.

[EVENT WEBSITE](#) 

TWI DIGITAL MANUFACTURING CONFERENCE IN CAMBRIDGE, UK

Up-Skill and Bridges 5.0 will be presenting at the TWI Digital Manufacturing Conference in Cambridge, UK on November 29th, 2023. The event will offer insights and information on the growing digital manufacturing industry, focusing on developments in artificial intelligence, automation, big data analytics, the Internet of Things (IoT), machine learning, robotics, smart systems, and virtualisation.

[EVENT WEBSITE](#) 

COP28 SIDE EVENT IN BRUSSELS, BELGIUM

Up-Skill will be participating at a COP28 side event organised by the European Commission's Health and Digital Executive Agency (HaDEA) in Brussels, Belgium on December 5th, 2023.

The focus of the event will be on empowering a human-centric industry for the green and digital transitions and how to tackle key elements for this transition such as skills, learning and teaching, customisation of manufacturing processes, AI, and enhanced human-machine collaboration, with a view to translating them into systems that place human needs and societal well-being at the heart of the process.



Up-Skill will contribute with our project video being shown as an introduction to the event, and a talk and discussion about Up-Skill and Industry 5.0 presented by Professor Chris Ivory from MDU.

[EVENT WEBSITE](#) 

COMING UP IN THE NEXT EDITION!

In the second edition of the Up-Skill newsletter, we will provide more updates on the project's progress with reports on the installation and trial of technologies at the Up-Skill case study locations, and the training requirements that have been

identified.

We will also provide news and updates on Industry 5.0, related projects, events, and much more! Don't forget that you can stay up-to-date by following our channels on *LinkedIn*, *X* and *YouTube* and the news page on our *website*.



www.upskill-horizon.eu

 info@upskill-horizon.eu

 [@UPSKILL_HORIZON](#)



[@UPSKILL_HORIZON](#)



[up-skill-project](#)

Up·Skill



Mälardalen
University

MITC

MÄLARDALEN INDUSTRIAL
TECHNOLOGY CENTER



UNIVERSITÀ DEGLI STUDI DI MILANO

helicopter



Kneia

webber
brenner-technik



Lancaster
University



**Funded by
the European Union**

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or HADEA. Neither the European Union nor the granting authority can be held responsible for them.



**UK Research
and Innovation**