

REPORT 2024

# Post-human dawn

Challenges and opportunities of wellbeing technologies



<b>CULTURAL SPECIATION IN THE 21ST CENTURY</b>	<b>5</b>
<b>‘INTERPRETING’ CULTURAL SPECIATION FROM THE PERSPECTIVE OF SINGULARITY</b>	<b>6</b>
TECHNOLOGY IS THE MIRROR THAT AMPLIFIES OUR BIASES	
ETHICS AND TECHNOLOGY, A COMPLEX RELATIONSHIP	
CYBER SECURITY IS A FUNDAMENTAL PART OF WELLBEING. ARE WE READY?	
POWER AND ACCESS: A NEW DIMENSION OF INEQUALITY	
<b>TECHNOLOGY HAS CHANGED THE WORLD, THE WORLD IS CHANGING TECHNOLOGY</b>	<b>14</b>
<b>WELLBEING TECHNOLOGIES</b>	<b>21</b>
THE ROLE OF AUTOMATION	
THE SKILLS REVOLUTION	
THE INTERTWINING OF TECHNOLOGY AND SUSTAINABILITY IN ALL ITS MANIFESTATIONS	
<b>THE TUNRING POINT FOR A NEW HUMANITY</b>	<b>42</b>
<b>METHODOLOGY</b>	<b>49</b>
<b>ADDENDUM</b>	<b>50</b>
<b>AUTHORS</b>	<b>55</b>

## CULTURAL SPECIATION IN THE 21ST CENTURY

The concept of 'speciation' finds its roots in biology. Specifically, speciation is the evolutionary process of formation of new zoological and botanical species based on mechanisms of reproductive isolation such as spatial barriers or linked to reproductive aspect in the strict sense. From a 'mother species', therefore, a 'new species' arises, in a process that slowly matures before suddenly exploding.

This concept can be applied to society, taking on the outlines of a social phenomenon defined as 'cultural speciation'. This phenomenon encompasses the formation of a new human species, which overcomes the constructs of the time in which it lives to create prospects for what might – or will – be. Not everyone who lives in the age of this phenomenon can take part in it: indeed, it is happening at this very moment, too.

The cultural speciation that is characterising this age is permeated by technology, which plays a central role in this scenario: on the one hand, there are those who do not accept or lack the skills to access the change that technology and its disruption impose; and on the other, there are those who, perhaps with fear, embrace advanced technology, going yet further and attempting to correct the physical and mental limitations of the human being, thus creating new 'post-human species'. This divide, which does not seem to be particularly worrying at the moment, is far from easy to interpret and manage, beyond the fog that characterises the future and makes the present less easy to read: institutions, organisations and citizens will have to ensure that both extremities coexist and can strike the right balance.

## INTERPRETING' CULTURAL SPECIATION FROM THE PERSPECTIVE OF SINGULARITY

Cultural speciation is the process by which human groups develop and maintain distinct cultural traits over time, leading to the formation of different cultures. This phenomenon can occur through the transmission of knowledge, values, traditions, language and social practices from one generation to another within a specific group.

It is important to note that cultural speciation does not imply biological separation, but rather a differentiation in the cultural expressions and practices of various human communities. This concept helps to understand how cultures evolve and interact over time, contributing to the richness and diversity of human society.

If we take a look at the social, political, economic and technological context around us, we see a number of opposing trends, often in open conflict.

Is this cultural speciation? Such a statement would be a very risky one to make because it would cover too broad a field, and so let us try to narrow it down by looking at the issue from the perspective of technology. However, in order to do so, we need to bring up another concept: that of **singularity**.

***The concept behind the 'point of singularity', or more simply 'singularity', was developed in the 1950s by John von Neumann, who described it as "the advent of technological progress that can bring about a substantial change in the way of life of human beings".***

Now let us reformulate our initial question: does technological development and the advent of new intelligences drive us toward cultural speciation?

## TECHNOLOGY IS THE MIRROR THAT AMPLIFIES OUR BIASES

Since artificial intelligence became the new evolutionary quantum leap in the mind and perception of the vast majority of people, there has been a frantic debate between those who see it as a modern, infallible God and those who treat it with suspicion.

These technologies are formidable at speeding up many tasks, analysing vast amounts of data, discovering similarities, and generating inferences. But they are full of errors, preconceptions and inaccuracies – exactly those of the humans who designed and trained them. As in a mirror, AI gives us back our image, amplified by the extraordinary power it is capable of.

The ability to understand these distortions and mitigate their effects becomes all the more important the closer we get to technological singularity, that is, the moment when technology, and especially artificial intelligence, reaches a level of development that exceeds the ability of human beings to understand and control it. In other words: when AI will be sufficiently advanced to make decisions instead of people in all kinds of context.

### THE MAIN SOURCES OF BIAS RELATED TO AI

**Artificial Intelligence algorithms can be affected by different types of distortions, which can affect results in unwanted ways. There are many sources of bias; here we will merely list the main ones.**

#### **Bias in training data**

If the data used to train an AI model is unbalanced or contains a bias, the model will tend to reflect it. For example, if training data is dominated by a specific demographic group, or one with strong beliefs, the model may have difficulty generalising objectively in relation to different groups.

#### **Human bias**

Developers and those who create and train AI models may introduce their own unintended biases into the process. This can occur when choosing characteristics, setting goals, or managing data.

#### **Algorithmic bias**

Some algorithms may, inherently, be susceptible to certain types of bias due to their design. For example, machine learning algorithms that rely on certain functions may be prone to prioritising some outcomes over others.

#### **Lack of diversity in the development team**

If the AI development team is too homogeneous, there may be a lack of a comprehensive and inclusive perspective in the design and training of the model.

#### **Lack of transparency**

Algorithmic opacity can contribute to unexpected biases. If it is not clear how a model makes decisions, it may be difficult to detect and correct any distortions.

#### **Poor dataset quality**

The quality of inferences is directly proportional to the quality of the data from which these inferences are drawn. If the data comes from dubious, prejudicial or even criminal sources, the results will have the same characteristics.

**ETHICS AND TECHNOLOGY,  
A COMPLEX RELATIONSHIP**

The use of AI raises several ethical issues, as its rapid evolution and spread will increasingly influence aspects of our daily lives.

The ethics applied to AI focuses on how to develop and use AI responsibly, paying attention to its social, economic and ethical consequences. The main aspects to consider, in our opinion, are:

○ **Transparency and accountability**

Many AI decisions are made by complex algorithms and machine learning models. It is important that these systems be transparent so that users can understand how decisions are made and can be held accountable for any unethical behaviour.

○ **Privacy**

The widespread use of AI-based technologies often involve the massive collection of personal data. Protecting privacy is crucial, and AI systems must be designed to respect individual rights and ensure data security.

○ **Impact on employment**

Automation through AI can have a significant impact on employment, replacing some human tasks. We need to consider how to mitigate the negative effects on employment and implement policies for training and retraining those affected, while, at the same time, assessing the employment opportunities that may be created.

○ **Safety**

AI can be used to develop dangerous tools and systems, such as autonomous weapons or advanced malware. Ethics requires responsible management, precisely to protect the safety of individuals and organisations.

○ **Legal liability**

Clarity on legal liability in cases of error or damage caused by AI systems is still in its infancy, but it is important to establish clearly who is responsible when problems occur.

○ **Public participation**

Involving the public in setting ethical standards for AI is important. The diversity of perspectives can help to create fairer and more representative regulations.

In the debate on artificial intelligence and technology, ethics plays a crucial role in determining how these innovations should be developed, used and integrated into society, while respecting human values and fundamental rights, so that technology can contribute positively to human wellbeing. Ethics is not only about individual behaviour, but also about social, political and economic issues, and we must also remember that ethics has a relative value; that is, it depends on the values of the individuals and groups in which it originates. It goes without saying that these principles can vary greatly between different cultures. Relativism is certainly healthy, but it is also very significant if it is reflected in the dimension of cultural speciation.



**CYBER SECURITY IS A FUNDAMENTAL PART OF WELLBEING. ARE WE READY?**

In Maslow's famous hierarchy of needs, the need for safety is just above physiological needs and just below needs that have to do with belonging and love. As businesses and as people, we live increasingly large portions of our lives in digital contexts. Moreover, in increasingly fluid and uncertain periods, the feeling of danger is amplified, so it is reasonable to believe that cyber security is one of our first concerns. But in reality it is not – yet – so.

In 2023, the world faced a polarised geopolitical order, multiple armed conflicts, scepticism and fervour about the implications of future technologies, and global economic uncertainty. In this complex scenario, the cybersecurity economy has grown exponentially – much faster than the overall global economy, and every technology sector.

Growth, however, remains unequal between countries and between organisations. There is a clear gap between organisations that are resilient to cyber threats and those that struggle to protect themselves. This clear divergence is accentuated by the characteristics of the threat landscape, by macroeconomic trends, by industrial regulation, and by the early adoption of disruptive technologies by some organisations. Other obvious obstacles, including rising costs for access to innovative cyber services, tools, expertise and experience, continue to influence the global ecosystem's ability to build a more secure cyber space in the face of countless transitions. Important evidence is emerging from this scenario: cyber inequality between organisations that are resilient to cyber threats and those that are not, is actually rising. At the same time, the number of organisations maintaining a minimum level of cyber resilience is disappearing. Small and medium-sized enterprises (SMEs), despite making up the majority of the ecosystems of many countries, are disproportionately affected by this inequality. The number of organisations maintaining minimal cyber resilience has decreased by 30%. While large organisations have shown significant gains in cyber resilience, SMEs have experienced a significant decline, entirely at the expense of security.

**50%**  
of C-levels say advances in adversarial capabilities (phishing, malware, deepfakes) present the most concerning impact of generative AI on cybersecurity.\*

**29%**  
organisations reported being materially affected by a cyber incident in the previous 12 months.\*

Emerging technologies will exacerbate the long-standing challenges of cyber resilience, accelerating the divide between the most capable and the least capable organisations. As organisations rush to adopt new technologies, such as generative artificial intelligence, a basic understanding is needed of the immediate, mid-term and long-term implications of these technologies for their cyber-resilience posture.

**54%**  
of organisations have insufficient understanding of cyber vulnerabilities in their supply chain.\*

**POWER AND ACCESS: A NEW DIMENSION OF INEQUALITY**

Power and access to knowledge play a crucial role in technological development, especially when we add new technologies such as artificial intelligence and its applications to the equation. The relationship between power, access to knowledge and technological development is complex and requires critical reflection to ensure a positive impact on society as a whole.

The relationship between power and dominance over means of production, also of an intellectual nature, defines a complex framework that has several points of interest:

- **Power and control over data**  
In the age of AI, data has become a fundamental element. Organisations or countries holding large amounts of high-quality data – and permissive legislation – have a significant advantage in developing advanced machine-learning algorithms. Control over data makes it possible to train more accurate and sophisticated models, empowering those who own those resources
- **Access to knowledge and inequality**  
Access to knowledge is often limited by barriers such as education, the availability of financial resources and access to advanced technologies. Unequal access to knowledge can result in an unequal distribution of power in the technological field. The promotion of fair training and open access to knowledge is essential to mitigate these disparities.



○ **Corporate monopolies and ethical implications**

Some large technology companies control a considerable amount of power. These technology giants can influence the development and implementation of technologies, with significant impacts on society. The issue of ethics is particularly important, as the power of some companies, particularly in the field of AI, may raise concerns about the responsible and impartial use of these technologies.

○ **Democratisation of AI**

A desirable approach is to pursue the democratisation of AI, seeking to make access to knowledge and technological resources as broad as possible. This helps balance power and prevents a few players from taking control of critical developments.

○ **Security and Privacy**

The power of AI technologies can be harnessed for good or evil. Control over advanced technologies can affect security and privacy. It is important to strike a balance between the development of technology and the protection of individual rights.

The balance between concentrated power and the democratisation of access to knowledge is central to driving ethical and sustainable technological development. Access to digital technologies has become a new dimension of the law.

Access to a high-performance network, to information assets of the most relevant sectors and to innovative technologies, along with the possession of a digital identity and the secure management of personal data, must be regarded as fundamental rights of every citizen. The lack thereof, or their unequal implementation, marks new lines of exclusion and inequality.

\* Fonte: Global  
Cybersecurity Outlook  
2024, World Economic  
Forum

**TECHNOLOGY HAS CHANGED THE WORLD,  
THE WORLD IS CHANGING TECHNOLOGY**  
TECHNOLOGICAL DEVELOPMENT AT THE SERVICE OF HUMANITY

One of the key challenges of the 21st century is the impact of technological progress on our lives.

Artificial intelligence, deep learning, the Internet of Things and genome editing are already a reality and are making us ask ourselves important questions about our future relationship with technology in the face of the risks and opportunities. In particular, how can we govern exponential technological

progress without becoming "technology" ourselves? How can we remain human, given the developments in biotechnology and genetic engineering? What is the balance between progress that can improve certain areas of our lives and conservation of our intrinsic humanity? With what ethics should we address the impact of technologies, which will increasingly fuel our narcissism and our tendency to unlimited individual self-determination?

These are some of the issues that will need to be addressed in the coming years, in order to raise public understanding and build a constructive debate enabling us to face future challenges with awareness and without falling into neo-Luddite or trans-humanist rhetoric.





Futurologist Gerd Leonhard uses three words to describe this incessant technological development.

○ **Exponential**

Technology is advancing at an exponential rate, and this represents a huge cognitive challenge for us: technology grows in exponential lines, while humans presumably remain linear.

○ **Combinatorial**

Technological advancements combine and integrate. Groundbreaking achievements such as artificial intelligence, deep learning, the Internet of Things and human genome editing are beginning to intersect, contributing to each other's development. No longer applied in specific demarcated fields, they have repercussions in a variety of sectors. These are developments that could upend the entire logic of medical care and health, social security, work, and even capitalism itself.

○ **Recursive**

Technologies such as artificial intelligence, cognitive computing, and deep learning may eventually lead to recursive (i.e. self-amplifying) improvements.

*We are running at the speed of light towards a world that is in some ways similar to Nirvana; a world in which we may no longer have to work to live, in which many problems will be solved by technology, and in which we will enjoy a kind of universal abundance.*

In this context, it is becoming increasingly clear that the future of man-machine relations will depend to a large extent on the economic system that creates them. We are faced with what we may call HellVen challenges, in that they combine an element of hell and heaven. We are running at the speed of light towards a world that is in some ways similar to Nirvana; a world in which we may no longer have to work to live, in which many problems will be solved by technology, and in which we will enjoy a kind of universal abundance.

A world where the scientific possibilities that will emerge will wipe away even our wildest dreams, while at the same time bring with it enormous ethical issues. Problems such as the constant erosion of privacy, technology-driven unemployment and human disqualification are still not perceived clearly enough. All of this is bound to change pretty quickly.

To sum up: on the one hand, we have unimaginable technological innovations that will radically improve our lives and accelerate human progress enormously; on the other, some of these changes may threaten the fabric of society itself and, in essence, call into question our own humanity.

For this reason, we must always defend human values through 5 fundamental rights.

1. ***The right to remain natural, that is, biological: particular, there must be the right to live without any technological enhancement.***
2. ***The right to be inefficient when that defines our fundamental humanity.***
3. ***The right to disconnect, so as not to get caught in the so-called 'infobesity'<sup>1</sup>.***
4. ***The right to remain anonymous, i.e. defending protected spaces where people cannot be being identified or traced by the simple use of a digital application or platform.***
5. ***The right to hire or involve people instead of machines, so that companies who choose human staff do not remain at a disadvantage.***

Technology should no longer be seen as an end product in itself but as a series of changes affecting a broad spectrum of the society in which we live.

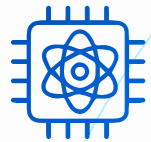
It is increasingly necessary to observe it and discover its convergences with the reality of each individual. This means approaching technology not as a series of dangerous processes but as an opportunity, the impact of which on our daily lives depends on our ability to manage, master and live with it. Only in this way can man and machines get closer, hybridise and grow.

## TOP 10 TECHNOLOGY TRENDS OF 2024



### 1. Augmented reality

Although augmented and virtual reality have been around for a long time, they will make significant progress in 2024 and promise to redefine our interaction with the world. By superimposing digital information on our physical environment, augmented reality improves our perception of reality, giving us unprecedented insights and experiences.



### 2. Quantum computing

Once confined to the realms of science fiction, quantum computing should completely revolutionise our conception of computing power. Quantum computers process information in a completely different way from classical computers, using the principles of quantum mechanics. In addition to its theoretical potential, quantum computing has proven its usefulness in numerous applications, including financial modelling, traffic optimisation and drug discovery.



### 3. Smart cities

By integrating information and communication technologies into urban infrastructure, smart cities – an emerging technology trend – aim to create sustainable urban environments. Through developments in artificial intelligence, 5G networks and the Internet of Things (IoT), smart cities will become more connected, efficient and responsive to citizens' needs. By using data analysis and smart meters to monitor and optimise energy consumption, smart cities can reduce the costs associated with energy management and its environmental impact. They can also improve transport networks by facilitating autonomous vehicles, optimising public transport routes and providing real-time traffic information.



### 4. Blockchain

Blockchain is a cutting-edge technology that is revolutionising global transactions and industries. Blockchain has the potential to disrupt multiple industries, including supply chain management, healthcare, and

finance, by offering a transparent, secure, and decentralised method of data storage and transfer.

Blockchain saves costs and increases efficiency in supply chain management by providing a transparent and secure means of tracing goods from origin to destination, thus reducing fraud and improving product security.



### 5. Edge Computing

The role of edge computing is to process data closer to its origin to reduce latency and increase productivity. Through edge computing, services can be made faster and more responsive by processing data at the edge of the network rather than sending it to a centralised location. For example, edge computing in the health sector can help caregivers diagnose patients faster and more accurately, thus improving outcomes. It can also improve the performance of IoT devices by reducing the amount of data sent over the network. Edge-based data centres can also improve security, enabling businesses to collect and analyse data in real time.



### 6. Autonomous vehicles

One of the most exciting technological developments is autonomous vehicles, which will radically change the way people travel. Such vehicles will increase mobility, reduce traffic congestion and improve the safety of millions of people around the world, eliminating the need for human drivers. Many companies have begun to invest in more automated solutions, and while 2024 may be too early to see flying cars, autonomous vehicles are becoming more and more popular. With the potential to improve accessibility for people not served by conventional transport systems, autonomous vehicles offer safe, efficient and on-demand transport in the area of mobility services. Moreover, by automating parcel and freight delivery, they have the power to completely transform the logistics and delivery industries.



### 7. 5G networks

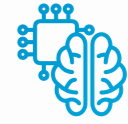
5G networks, the latest generation of wireless technology, offer higher speeds, lower latency, and more reliable connectivity than ever before. With the high-speed

connectivity provided by 5G, users can easily experience immersive, interactive virtual and augmented reality environments. In addition to entertainment, 5G networks can facilitate remote surgeries, autonomous vehicles and distance learning, to mention just a few applications. In terms of technological development, 6G will replace 5G, but this will take some time as most sources predict that the next generation of mobile networks will be launched around 2030.



### 8. Human-machine interaction

Human-machine interaction (HMI) refers to the communication and interaction between man and machines. Its purpose is to create more intuitive and natural ways for man to interact with technology. People already communicate with AI, for example via ChatGPT or by using automated systems or machines in the workplace.



### 9. Internet of Behaviour

A cutting-edge technology, known as the Internet of Behaviour (IOB), combines the power of data analysis with an understanding of human behaviour. IOB provides new perspectives on human behaviour, preferences and decision-making processes using data from a variety of sources, including wearables, sensors and other technologies such as artificial intelligence, machine learning, big data analytics, cloud computing, IoT, robotic automation systems, AR and VR, and more besides.



### 10. Biotechnology

Biotechnology combines technology and biology to produce new products and methods to improve everyone's lives. Biotechnology is ready to transform a range of industries, including healthcare and agriculture, and to address major global problems. By developing new drugs and treatments that specifically target genes or biological processes, biotechnology can help improve patient outcomes for a wide range of diseases and disorders.

bip. PRESENTS

# CONNECTED

THE NEW POST-HUMAN SPECIES

WATCH ON PRIME VIDEO

SHORT FILM "CONNECTED"



DIRECTED BY **SIMONA CALO** WRITTEN BY **LUCA MONACO**

SCREENPLAY BY **SIMONA CALO & SIMON POGGI** MUSIC BY **VINCENZO ADELINI**

CAST: **RICHARD ROWDEN TOM FEASBY KETORAH WILLIAMS**

WITH: **BRANDO BENIFEI, ALESSIA CANFARINI, PAOLO CIUCCARELLI, RYAN DUFF, LORENA GANDOLFINI, MARTINA GREANEY, NORBERT JUNG, MAURIZIO MOLINARI, MAURA NESPOLI, JOE ORLANDINO, IVAN ORTENZI, MARCO PAINI, ULJAN SHARKA, ANDREA TAGLIONI**

## WELLBEING TECHNOLOGIES

Concrete improvements, hopes, fears, anxieties. Should the impact of technologies on our lives and on society be considered beneficial or evil?

These are the two extremes of a hypothetical scale for measuring the impact of technological innovation on human life and our environment. This has always been the case, as evidenced by the reflections of the philosophers who have been debating on this subject since ancient times (think of Socrates' "techne" or Plato's dialogues). If this duality of technology has always existed, why is the debate still so strong today? The answer is obvious: it is because technology permeates our entire lives, even when we do not realise it. Its ubiquity makes it an extremely powerful tool for fostering change, for better and/or for worse. Technology in itself is neither inherently good nor bad; it produces good or bad results depending on how it is used. It follows that what is needed is a vision, a line to follow.

*Technology in itself is neither inherently good nor bad; it produces good or bad results depending on how it is used. It follows that what is needed is a vision, a line to follow.*

This research was carried out precisely to understand how and whether technology can be allied with social wellbeing. In order to understand this, its main users were involved: people and businesses.

The study focused was on the impact of technology and innovation on businesses and on society as a whole, exploring in detail six different fields of investigation that would help build an overview of the current situation:

- — **People's self-awareness of their digital competence;**
- — **How technology has impacted people's lives;**
- — **The feelings caused by the use of technology;**
- — **The impact of technological innovation on sustainability;**
- — **The impact of technological innovation on social divides;**
- — **The impact of technologies on social inclusion;**

**Factors relevant to the technological impact**

Four factors were identified to quantify technological impact: automation, material working and living standards, sustainability, and equity. These are the factors that are undergoing the most rapid changes and are also those where technology can produce some of the biggest impacts, both positive and negative.

- The **first** group of factors considers aspects related to **automation**, which over the years has taken on a fundamental role, so much so that it has become almost synonymous with industry. This is because, as technologies have progressed from mechatronics to more sophisticated digital technologies, it has been possible to continue pursuing the process of transformation of production systems, together with the clear optimisation of process controls and the acquisition of new data;
- The **second** group concerns basic economic prosperity, perceived by individuals through **job security and material living standards**, especially in terms of the purchasing power of their wages. These factors include education, because of its significant influence on people's prosperity during their lives;
- The **third** and **fourth** groups operate less on an individual and more on a social level. **Sustainability**, both economic and environmental, is to be regarded as an important consideration if the instinctive tendencies of human beings to prioritise short-term gains and discount future risks are not to cause long-term damage. Finally, the fabric of society depends fundamentally on the perception of **equity**, which is reflected in the extent to which all members benefit from their rights and have equal access to opportunities.

*Four factors were identified to quantify technological impact: automation, material working and living standards, sustainability, and equity.*

**THE ROLE OF AUTOMATION**

Technological advances have played a significant role in driving the spread of automation across all industrial sectors. Business process automation consists in applying advanced technologies to perform, manage and monitor a range of activities within an organisation with no direct human intervention. Such processes can cover many different areas,

like the management and production of document flows, human resource management, some aspects of financial management, manufacturing, customer service and more besides. The aim is to simplify operations, reduce the margin of error, and allow employees to focus on high-value-added activities.

**Benefits of developing an automation strategy**

Automation has become an essential tool for companies wishing to optimise their operations and stay at the forefront of the competitive market. Developing an automation strategy can offer a wide range of benefits, making it a worthwhile investment for any organisation, no matter how big or small. One of the main benefits is increased efficiency. By automating repetitive tasks and streamlining processes, companies can save time, allowing their people to focus on more important and strategic initiatives. This not only improves productivity, but also reduces human error, resulting in higher output accuracy and quality.

Moreover, process automation enables better resource management. With automated systems in place, companies can effectively allocate their resources based on real-time data insights and analytics. This makes it possible to identify 'bottlenecks' or areas requiring improvement and to take prompt action to resolve the issue. By optimising the allocation of resources, companies can reduce costs, improve productivity, and achieve better overall performance.

**The benefits of process management**

A crucial aspect of business process automation is process management, an approach that makes it possible to analyse and optimise workflows for better results. Process management is a methodology that aims to identify key activities within a business process, assess inefficiencies, and make targeted improvements to maximise the overall efficiency of the business.

- **Better control:** process management provides a detailed view of business operations. This allows managers to have more precise control and to pinpoint any critical points. With better process control, the company can make more informed decisions and react quickly to emerging challenges.

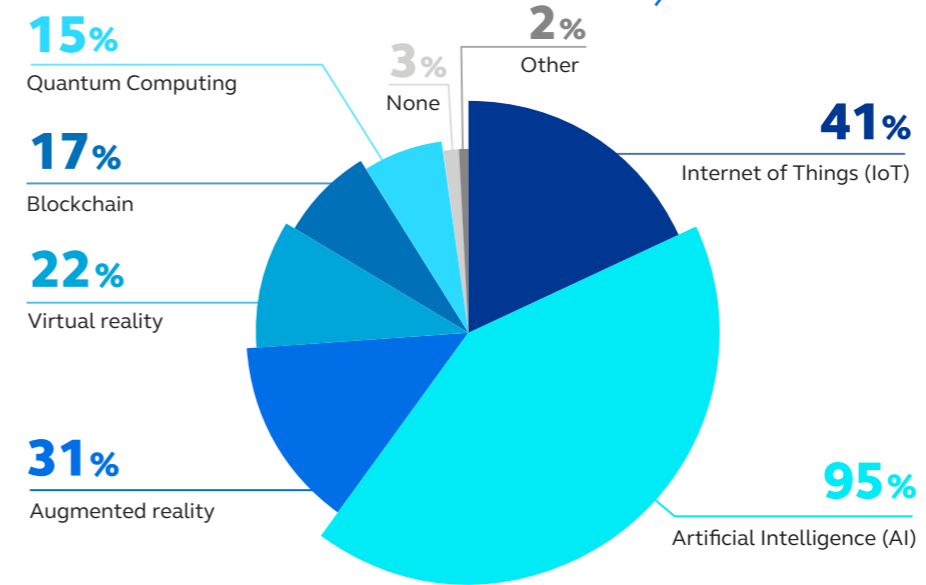
*Automation has become an essential tool for companies wishing to optimise their operations and stay at the forefront of the competitive market.*

- **Increased transparency:** by implementing process management, every business activity becomes transparent and easily traceable. Relevant data and metrics are gathered, enabling teams to track progress and make informed decisions.
- **Waste reduction:** process analysis helps to identify unnecessary waste and surplus activities. With greater awareness, it is possible to eliminate waste, reduce downtime, and optimise resource utilisation, contributing to lower overall costs.
- **Increased efficiency:** with accurate process management, activities are performed more efficiently and in a standardised manner. This leads to greater productivity, with fewer resources being spent to achieve the same results.
- **Improved collaboration:** process management encourages collaboration between different corporate departments. Teams work together to identify areas for improvement and implement effective solutions.
- **Business agility:** process automation combined with effective process management makes a company more agile and ready to respond to changing market needs. This enables quick adaptation to new business situations and opportunities.

**Data Insights**

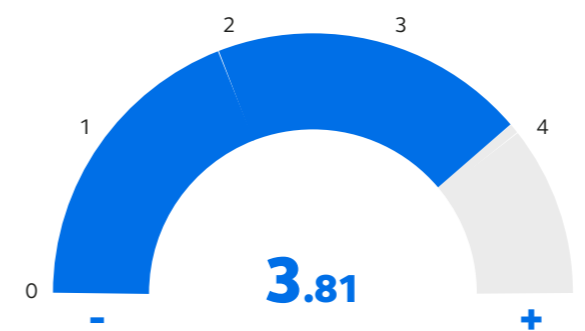
There is no doubt that AI is a major source of interest in this area, with 95% of the sample believing that progress in AI could have a significant impact on their work. Other solutions, such as the Internet of Things (41%), augmented reality (31%) and virtual reality (31%), did not do so well. Although perceived to a lesser extent, the technologies considered also include blockchain (17%) and quantum computing (15%).

**What technology do you think might have a strong impact on your job?**



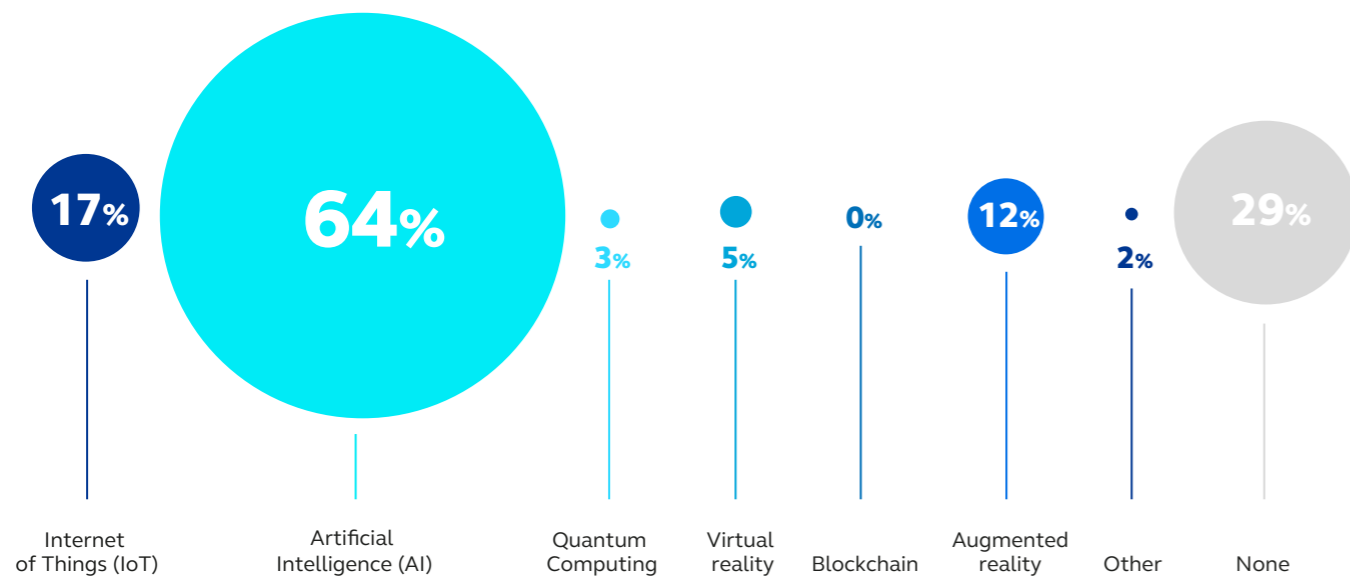
The impact of these technologies appears not to be a cause for concern: our research sample regards it with a positivity that is not synonymous with recklessness. On a scale of 0 to 5, the average expectation is 3.8.

**How to you rate this impact?**



The same enthusiasm is not fully reflected in businesses: almost 3 out of 10 organisations have not yet implemented any technology solutions. Expectations and curiosity regarding AI, however, are high: 64% of the organisations in which our sample members work have already adopted solutions that exploit this technology. Adoption rates of other technologies, instead, are falling: IoT has been implemented in 17% of cases, augmented reality is found in 12% of the organisations to which the sample members belong, and adoptions of virtual reality (5%) and quantum computing (3%) are even lower.

**What technology has your organisation adopted in the last 12 months?**



**THE SKILLS REVOLUTION**

The integration of automation into industry has led to significant changes in the workforce landscape. Automation, as discussed earlier, has the potential to transform the way we work. It is therefore essential to understand what this transformation implies. Specifically, automation affects the profession of individuals, the skills they need for a particular job, and the places and spaces where this is practised.

**The changing nature of work**

The debate on the fact that the use of automation will cause widespread job losses is highly topical. While it is true that automation reduces the need for human labour in some industries, it is also true that it is creating new job opportunities. The roles that are most likely to be impacted are those that rely on repetitive manual work, while opportunities in areas such as software development, data analytics, and robotic engineering will increase.

As automation takes on more repetitive and trivial tasks, professionals are being called upon to adapt to new roles. The nature of work is changing and the workforce will need to be more creative, efficient, customer-oriented and market-driven. Automation, which will manage routine tasks, will help people focus on more complex, high-value jobs.

A practical example comes from the manufacturing industry: automation has enabled companies to streamline production processes, resulting in faster production times and higher quality products. This has allowed employees to focus on tasks that require greater skill and attention to detail, such as quality control and product design. Workers thus become controllers of the machines.

*While it is true that automation reduces the need for human labour in some industries, it is also true that it is creating new job opportunities.*

**The need for re-skilling and renewed workspaces**

One of the critical impacts of automation is a widening in the skills gap. The truth is that some skills are becoming increasingly marginal, while other positions require skills that individuals may not have. To adapt to this changing landscape, professionals will need to retrain and to adopt new processes and technologies.

In healthcare, for example, automated solutions are used to improve patient care and reduce costs. This has led to a growing demand for healthcare professionals with expertise in areas such as data analytics, programming and robotics. To meet this demand, healthcare professionals are encouraged to retrain and acquire new skills that enable them to work effectively with automation technology.

But skills are not alone in being revolutionised: this is also happening to workplaces, which will increasingly



of workforce skills. This position is very likely if governments support and encourage R&D, increasing the return on investment from innovation. These choices will have a significant influence on the extent to which job displacement is offset by job creation. The second dimension is linked to how governments and businesses manage the transition to technology adoption. A transition that may be proactive or reactive. In the former case, where attention is limited or re-skilling, work mobility and talent matching is less than optimal, transition costs, negative externalities and the risks of disruption will increase. By contrast, active support from governments and institutions to manage labour-market transitions can ease the way for both individuals and businesses. This will not only reduce the amount of disruption and risks experienced by workers, but will also improve human capital and reduce skills shortages, further increasing productivity and growth. Together, these choices are likely to determine the extent to which workers can learn new skills for the future, and a flexible workforce can absorb some of the shocks of job displacement.

*While the enthusiasm for the potential impact of new technologies is palpable, the same cannot be said of the degree of diffusion of such solutions within organisations.*

have to adopt and harness new processes integrating the human-machine relationship. This is a challenge both for individuals, who will need to re-skill, and for companies, which will need to become more adaptable. Such changes may not be easy to implement and could create significant friction within the economy. This risk of a mismatch is real, as automation will simultaneously affect many sectors and geographical areas.

*Skills are not alone in being revolutionised: this is also happening to workplaces, which will increasingly have to adopt and harness new processes integrating the human-machine relationship.*

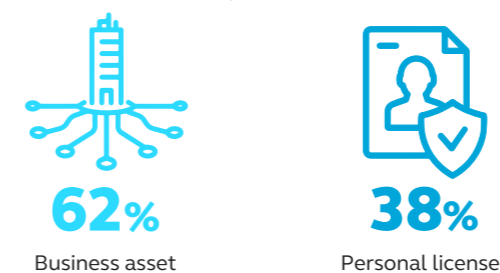
**Possible scenarios of the impact of technologies on wellbeing**  
Two different dimensions should be considered in order to understand the impact of technologies on the quality of our lives, both individually and in the social context. The first concerns the primary goals of technology adoption, with cost reduction at one end and innovation at the other. At one extreme, companies may choose to use technology primarily for cost reduction, production efficiency, automation, and labour replacement. Such a focus is very likely if governments limit support or even resist the adoption of innovation-driven technology, also through restrictive regulations and the lack of basic legislation. At the other extreme, companies may prioritise the adoption of innovation-driven technology, focused on the creation of new products and markets, investment in complementary human-centred AI, and improvement

**Data insights**

While the enthusiasm for the potential impact of new technologies is palpable, the same cannot be said of the degree of diffusion of such solutions within organisations. Six out of ten<sup>1</sup> resources use the technologies deployed by their organisation as a business asset, while 38% use the technologies needed to do their jobs with a personal licence.

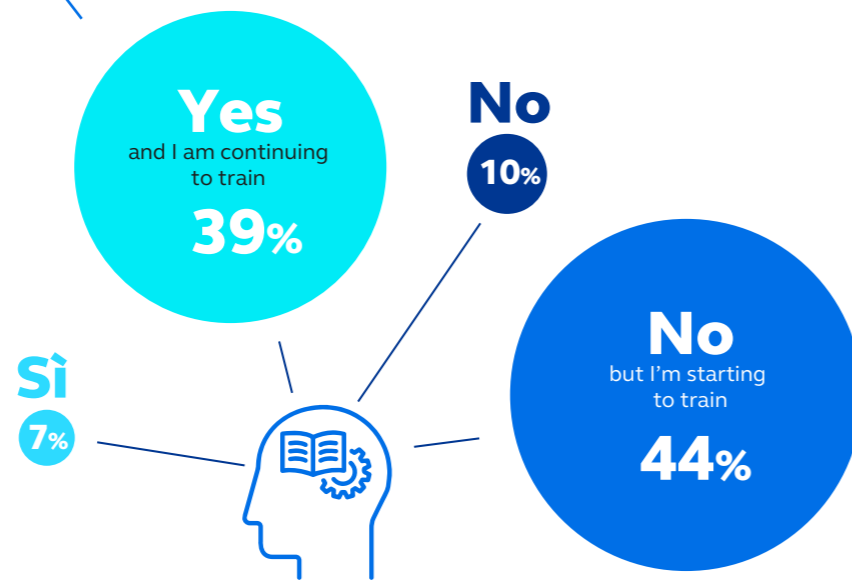
1. The proportion refers to this study's survey sample.

**Do you use this technology or these technologies as a business asset or with a personal license?**



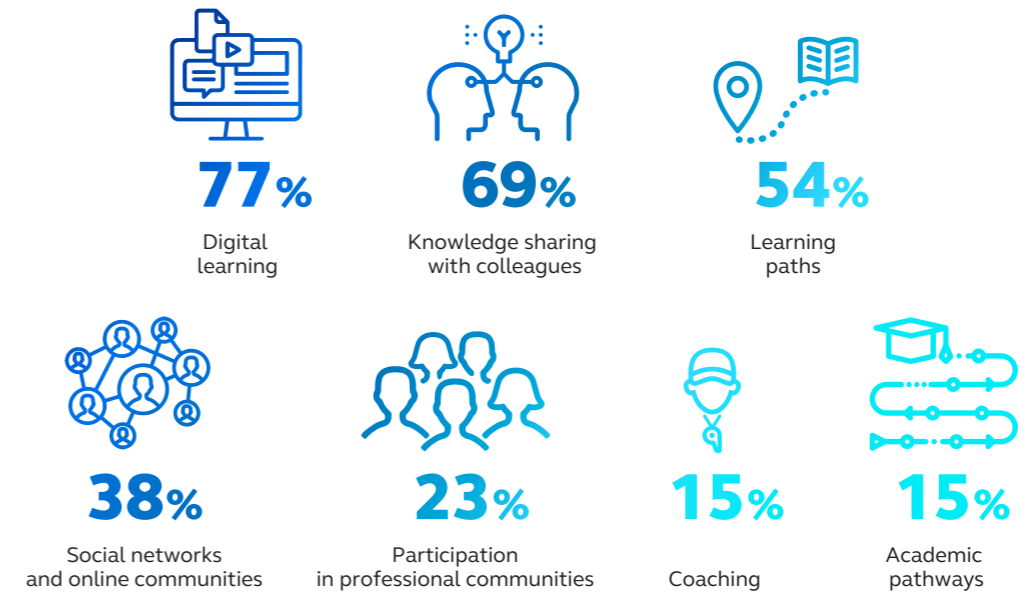
This use is currently not accompanied by appropriate expertise, but the data shows that this scenario could be transitional. When analysing the sample's responses to self-knowledge of technological skills, what emerges is that most (44%) say they do not have the necessary skills but are training to acquire them. This learning process, net of a good consideration of their own skills, is ongoing for 39% of respondents. At the far ends of the scale lie the minority quotas: just 10% say they do not have the necessary skills and do not feel the need to address the issue, while 7% feel that their skills are more than sufficient.

**Do you have the skills to make the most of this technology or these technologies?**



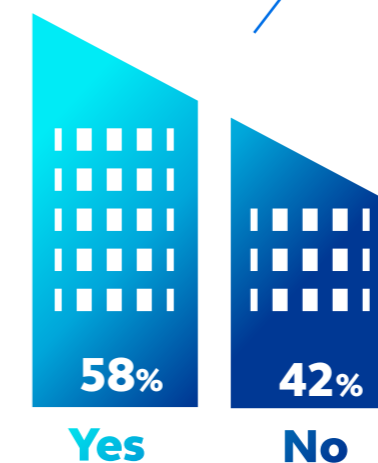
With regard to training paths, it emerges that – regardless of the method (61% prefer digital learning activities; 63% resort to learning paths) – these are not carried out 'alone' but in corporate teams. This is highlighted by 61% of the sample, who say they prefer knowledge sharing (61%) as a learning activity for new technologies. Social network and online community training (39%) is also popular, while active participation in professional communities (20%), coaching activities (16%), and academic pathways (14%) are less favoured.

**Which of these activities do you prefer for this goal?**



This macro-set of activities does not go unnoticed by organisations: 58% of respondents said they were actively supported by their company, thus confirming their investment in re-skilling and up-skilling. 58% say they are supported by organisations, a sign that most companies invest in up-skilling and re-skilling: only 4 out of 10 companies are deficient in terms of this change.

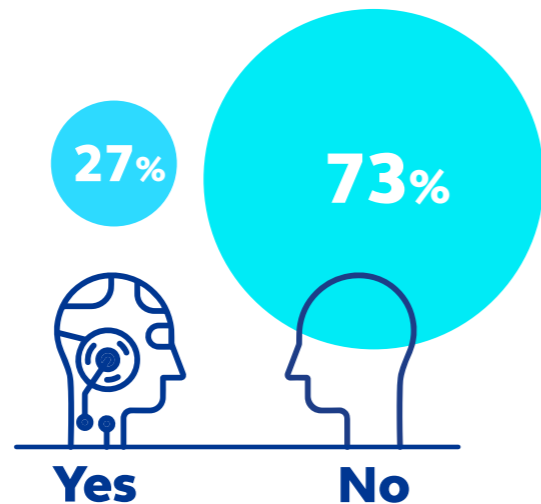
**Does your organisation support your training?**





These training activities, whether spontaneous or supported by organisations, are accompanied by another feeling, often emphasised in conversations or by the mainstream: 73% of the sample believe that technology will not completely supplant their work, provided they grasp the need to reinvent themselves and to reshape their professional baggage by expanding and adapting it in line with the times.

**Do you think technology may replace your job?**



**THE INTERTWINING OF TECHNOLOGY AND SUSTAINABILITY IN ALL ITS MANIFESTATIONS**

Technological innovation is intertwined with society and, consequently, with the planet, the place society populates and in which it prospers. Taking this as our initial assumption, it is normal to ask whether and how technology can assist environmental protection with a view to designing better societies and economies. This is the historic, undelayable challenge that we face at this time of emergency. And indeed, we could say it represents a unique opportunity. A more sustainable world is also a resilient, prosperous world that is stronger in the face of crises and more innovative in its way of doing business.

The climate crisis and the digital revolution are counted by historians among the very few events of recent years that will be studied in future history books. These global, deep and irreversible transformations should be tackled with a single vision, since they are two sides of the same coin: digital technology is in fact the greatest ally of sustainability, and sustainability (environmental, economic, social) cannot be achieved without the support of digital solutions.

Supercomputers, new recycling techniques, robots at the service of the sea, geosciences, renewable energies, agri-tech: technological innovation is at the service of the future of our planet, but there can be no technological innovation without man. Only our skills and our creativity can enable technology to solve, once and for all, the dilemma of the sustainable management of finite resources.

**How to reconcile innovation with the environment**

The greatest urgency is, and will be, the protection of our planet, alongside the conservation of natural resources and the protection of biodiversity. Climate change and the depletion of resources, first and foremost water, endanger the survival of all natural species and call into question the life and consumption models we have adopted as 'normal' in recent decades. Not only that: they weigh on economic growth and financial stability, they undermine the resilience of democracies, they expand inequalities and they threaten the wellbeing of large sections of the population, hitting the most vulnerable the hardest.

Artificial intelligence, supercomputing, quantum computing, the cloud, data analytics, 5G networks: technology, which has contributed to 'polluting' the world, can now help to save it. The IT industry accounts for between 2% and 3%<sup>1</sup> of the world's CO2 emissions, and, if it were a nation, would be the third-largest electricity consumer in the world. Moreover, technology devices require rare materials and metals that deplete resources and create waste disposal and job safety issues. Not to mention electronic waste, so-called WEEE, which is recycled only to a very small extent.

*The climate crisis and the digital revolution are counted by historians among the very few events of recent years that will be studied in future history books.*

1. C. Freitag, M. Berners-Lee, K. Widdicks, B. Knowles, G.S. Blair, A. Friday, "The real climate and transformative impact of ICT: A critique of estimates, trends, and regulations", Patterns, Sciencedirect.com, 2021.

*At the same time, digital innovation, which is constantly accelerating, is now making an essential contribution to building a sustainable future.*

At the same time, digital innovation, which is constantly accelerating, is now making an essential contribution to building a sustainable future. Think of smart cities or the agri-food sector, where hundreds of start-ups are working to find new ways to reduce waste and adopt circular economy models that aim to achieve social and environmental sustainability.

**New technologies for a sustainable future**

That there is widespread awareness that new technologies can help to achieve environmental sustainability had already been determined in 2021 by a research project entitled “The challenges of digital sustainability”, conducted by Ipsos and commissioned by Maker Faire Rome and UniCredit<sup>2</sup>. According to the study, a large help in reducing the environmental impact comes from the spread of working from home (fairly high or very high for 95% of respondents), directly linked to the development and use of new digital collaboration and communication tools, and from the Internet of things, which can reduce household electricity consumption for 90% of respondents. Artificial intelligence has also been attributed a key role in addressing the challenges of the green revolution: according to 86% of respondents, AI has a fairly high or very high impact on reducing the use of resources; this percentage falls to 84% with regard to the development of a circular economy and to 79% in terms of reducing the environmental impact of agriculture.

**Sustainability and digital technology underpinning the business of the future**

It is now up to governments to deliver on their commitments and deploy the necessary resources, but businesses must also play their part – and many have committed to do so – with Corporate Social Responsibility initiatives and projects. Finance, for its part, is changing the rating of investment projects, focusing more and more on ESG metrics.

Tech companies, with the Big Tech companies leading the way (Google, Facebook, Amazon, Apple), have made this their motto. As they continue on the path to innovation and profit, they engage in a global and multidisciplinary collaboration towards the common goal of sustainability.

<sup>2</sup>. <https://makerfairerome.eu/wp-content/uploads/2021/07/presentazione-1-1-Gli-impatti-ambientali-delle-nuove-tecnologie-.pdf>



The message is clear: in the future, business will be achieved by combining technological innovation, sustainability, social responsibility and inclusion. And we're not talking about a distant future.

One of the main contradictions of AI is sustainability: while models can help contain the consequences of climate change, the development of new technologies contributes to pollution.

The problem of the environmental impact has become a priority due to the rapid growth of the AI market; a growth, for the most part, due to the enormous volume of data produced by the digital economy. Data consumes large amounts of energy throughout every stage of its lifecycle: from sensors that collect information, to communications networks, and finally to data centres where it is stored and managed.

These processes require energy and therefore emit greenhouse gases; likewise, training and executing AI and machine learning algorithms are energy-intensive operations due to the amount of data and energy they

*The message is clear: in the future, business will be achieved by combining technological innovation, sustainability, social responsibility and inclusion.*

need. This consumption will continue to increase in the near future: according to OpenAI, the computational power needed to train a model of average power will increase tenfold every year.

AI can be a great ally in solving the problems of climate change, but only if companies are able to contain the so-called “rebound effect” – the energy consequences arising from the implementation of new technologies.

**New opportunities for digital sustainability**

Digitalisation and technological acceleration have introduced new processes and new ways of accessing services and information. Moreover, these elements can contribute significantly to the preservation of the planet; a planet populated by various societies, which are not indifferent to these innovations. This scenario brings with it a fundamental aspect that we need to think about in order to take action. It involves researching and concretely defining a new perspective on accessibility, inclusiveness and equity, issues that fall within the purview of social sustainability. This reflection must necessarily focus on the prejudice of those who are wary of this type of technological solution and on the potential improvement that technologies can bring to an individual’s social conditions.

**Between techno-scepticism and the enhancement of assistive technology**

Throughout history, scepticism has always accompanied scientific and technological advances. The advent of new technologies is no exception: in this sense, the rise and consequent promotion of AI in recent times are emblematic, and have in part been driven by the market debut of solutions such as ChatGPT and the ensuing escalation of OpenAI. In fact, AI is already widely spread across many market sectors and has already permeated many daily activities, such as scrolling on streaming platforms that recommend content based on previous usage or features in fast-fashion apps that recommend a certain look or size based on the information entered, combined with that collected from using the app.

However, the speed with which progress is made in this

field requires special attention, because technology can in fact blur the social conditions of everyone, without exception. And yet, this change is not univocal, but can be read through two macro-sets:

- **Techno-scepticism<sup>1</sup>**, involving those who categorically refuse to adopt new forms of technology and manage their social condition through other instruments. Taking this concept to the extreme, as a mere example, it is worth looking at the relationship of modern Amish communities with technology. They do not reject it in its entirety, as is widely believed, but they only open up to it in favourable conditions and if it does not undermine the concept of community. This approach has led the US Amish to approach new forms of supply ahead of the market and without the digital aspect: two examples are the use of alternative sources of electricity and the use of organic farming.<sup>2</sup>
- Acceleration in **assistive technology**, that is, that set of devices, equipment or systems that helps people with disabilities to carry out daily activities, thus reducing the barriers they may encounter. This is a fundamental aspect for society, as it would make it possible to improve inclusion and equity exponentially.

To give a feel for the number of people who could be affected by this acceleration, it is worth referring to the data released by the Council of the European Union at the start of the year: in Europe, 101 million people have some form of disability, and that translates into one in four European citizens.

In terms of critical issues, the proportion is even more dramatic: 1 in 2 citizens feel they are discriminated against because of their condition, while 1 in 5 are unemployed and this inevitably affects the risk of poverty or social exclusion, phenomena that affect 1 in 3 citizens.

The current state of assistive technologies, however

*Throughout history, scepticism has always accompanied scientific and technological advances.*

1. <https://www.wordsense.eu/technoskepticism/#English>

2. Cfr. F. Modico, *Fragile – Un nuovo immaginario del progresso*, Meltemi, 2020.

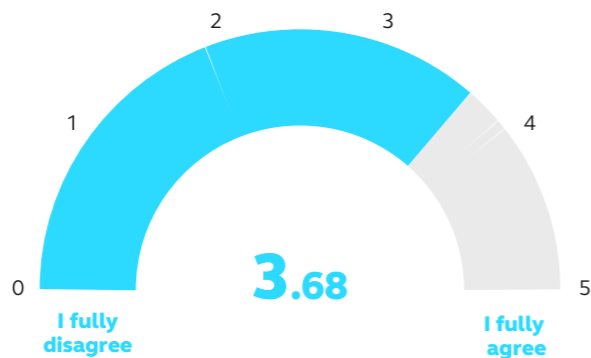
*Digitalisation and technological acceleration have introduced new processes and new ways of accessing services and information.*

advanced, does not make it possible to bridge important gaps in education and health care: European data shows that 1 in 5 citizens drop-out of their academic career and that the difficulties in accessing the necessary healthcare has quadrupled due to high costs and longer waiting times that the patient is prepared to accept.

**Data insights**

Sustainability, as discussed in this study, has two perspectives, one environmental and one social. In terms of the first, technology is perceived, at least potentially, as an ally: on a scale of 0 to 5, the average sentiment rating for the role of technology in achieving ESGs is 3.68. We could speak of cautious optimism or 'time-based' confidence. And indeed, time will give us an answer. A time that perhaps has already come.

**Do you think technology can help achieve sustainability goals?**



The landscape concerning the perceived relationship between technology and social sustainability is more diverse. The impact of technology on social conditions can no longer be considered an opinion of the few. According to the survey section focusing on these types of dynamics, almost the entire sample (9 respondents out of 10) thinks that technology can indeed play a decisive role in improving one's initial social condition.



**Can technology be considered a means of improving one's social condition?**

*Because it offers opportunities that can help people to improve*



Such an important role, however, is accompanied by a risk fully perceived by the sample: 71% fear the emergence of new forms of discrimination, such as a new social divide and other forms of inequality linked to technological progress.

**Does technology create new forms of discrimination?**

*Yes, because it leaves people behind*



*No, because it puts everything on the same plane*



*“Technology has always replaced man in certain activities and Artificial Intelligence is no exception. AI replaces us in some monotonous tasks and that can be a good thing. Man raises the bar a little higher, technology helps raise the bar even higher and deal with more important issues.”*

Paolo Ciuccarelli

*“I’ve been blind practically since birth, and for those who like me are blind or have a disability in general, technology is absolutely essential. I can’t choose whether to embrace technology or whether to reject and do without it, living without keeping up to speed with the latest technology. If I don’t keep the pace I risk being less integrated.”*

Maurizio Molinari

*“I saw a study the other day that had to groups of knowledge workers, like me basically, right. And the ones that were using GPT-type technology were 20% faster achieving their work results and produced a 40% higher quality.”*

Norbert Jung

*“Instead of having a team of artists and technicians costing millions of dollars in camera gear and equipment to record motion caption data for digital actors, now AI has enabled the same data to be captured with just a couple of iPhones.”*

Ryan Duff

*“Every scientific discovery has had a dark side. Every scientific discovery has had to be managed. We saw the dangers, we saw the possibilities and moved on. The same will happen with artificial intelligence.”*

Lorena Gandolfini

*“When you’re doing a period film there is a lot of considerations. You have location, the scale of your film, costumes, props, special effects, the safety of your cast and crew, the equipment, permits, insurance. To shoot a battle scene, a period battle scene, let’s say World War two, depending on the afore mentioned considerations, it could cost anywhere from 10 thousand dollars on a very small budget film, up to 100 of thousands, even millions.”*

Joe Orlandino

*“We are living in extraordinary times where technology can ‘augment’ people to do more. AI won’t replace humans, but it will enable them to do things they were not able to do before”.*

Uljian Sharka

bip. PRESENTS

# CONNECTED

THE NEW POST-HUMAN SPECIES

[WATCH THE TRAILER](#)

*“When someone designs technologies for selection and a certain process for example. If the designer has personal prejudices, these are going to be reflected in the Artificial Intelligence - in the algorithm. And therefore, the algorithm will be flawed. So, there are certainly a number of limitations and issues that need to be addressed.”*

Alessia Canfarini

*“Social Media can be really challenging for people in relation to self-esteem. You look at somebody on their Instagram and they are showing themselves through filters, and there is that sense of what beauty is. And the expectation that puts on people. It also portrays relationships on a certain way, so that looks like a perfect relationship and that is how every relationship should look like.”*

Martina Greane

*“I think that without strict effective rules we will see the privacy of citizen and workers being increasingly violated. We will see people’s lives being affected by discrimination. For example, we will see work-related systems that discriminate against women or non-white people. This is already happening, and the risk is that of generating more inequalities, greater concentration of power and wealth. Instead, we need rules that state clearly that certain things simply cannot be done.”*

Brando Benifei

*“Some of the most significant limitations, as we are already seeing in current applications, are, for example, ethical. This means ensuring that the use of these technologies benefits everyone, without disadvantaging some compared to others. Another limitation concerns the concentration of power. The danger, of course, lies in the concentration solely in the hands of a few and the ethical use of these services.”*

Andrea Taglioni

*“Technology allows me to multitask. Is that good or bad? Perhaps it’s not the point. It’s more a question of the opportunity that technology offers us and our choice of how much time to dedicate to tasks and people.”*

Maura Nespoli

*“At the moment, we accept the error of a human being more than we accept a machine’s error when it comes to operational tasks. For example, imagine if a car accident could be avoided with a device costing 20, 30, 40 euros, but this meant delegating the entire process of operation to the car itself. If the car would make a mistake, we would accept much less than a human error.”*

Ivan Ortenzi

## THE TURNING POINT FOR A NEW 'HUMANITY'

As explored during this study, the impact of technology has many facets. While on the one hand it poses new challenges, it also creates solutions. Solutions that are not always shared, but on which a meeting point is necessary. This point of arrival is generated not only by observing the phenomenon, but must necessarily be followed by orchestral actions that are not an end unto themselves, because what is at stake is a revolution that can change not only the status quo, but above all what will be in the future. It will inevitably lead to changes in the way we work, buy, study, live and liaise with others. It is not an exaggeration to think that, like all great technological revolutions, it will profoundly change the way we have lived so far.

*The impact of technology has many facets. While on the one hand it poses new challenges, it also creates solutions. Solutions that are not always shared, but on which a meeting point is necessary.*

### **The domino effect for a new cooperation between the parties involved**

For this very reason, simply thinking that this is something to be managed by a select few and feeling far removed from the matter is a gamble. Today, the approach to new technologies passes inevitably through the school system, which is called upon to train students to a multidisciplinary approach that will then be implemented and enhanced by the work system. Mere technological progress, if not accompanied by a rethinking of the processes, methods and purposes of learning, is insufficient. The skills increasingly needed in today's work world must be cultivated alongside the talents of tomorrow. Soft skills such as creative thinking, critical thinking and a multidisciplinary approach are increasingly viewed as just as important to cultivate as hard skills, to avoid downsizing the role of the professional to passive machine controller. These skills also contribute to the wellbeing of societies, stimulating virtuous processes in the communities of reference.

The sphere of education cannot rely solely on its own strengths. This change needs sustenance and policies in step with the times. The strategies and choices lie with governments and institutions, which are on the eve of an era in which everything is changing so that nothing changes in anyone's quality of life if



not in a positive way, due to the renewed possibilities that new technologies can offer.

For the Institutions, supporting change is not the only issue on the table: access to and rapid development of new technologies having such an impact on humanity requires a strong focus on many ethical aspects. Such a strong penetration of technology into everyday life and into many aspects of life and career management requires suitable legislation concerning the boundaries that should not be crossed in order not to harm the privacy of the user or the community. One tangible element in this regard is the European Union's AI Act, the world's first law on this issue. While the AI Act is a first response in terms of defining 'boundaries' for the use of technology, a number of measures are also being implemented to demarcate and mitigate the impact of human-machine replacement for all those tasks that will suffer the most drastic effects, such as a significant reduction in specific competences or a

*1. The social dividend paid to Alaskan residents for a calendar year that redistributes 25% of revenue from oil extraction. Launched in 1982, it is still active and is considered one of the most topical examples of a basic income.*

merging with other specific tasks. In this regard, what had been contemplated back in 1795 by Thomas Paine, one of the founding fathers of the United States of America, is back in vogue: a universal minimum income, as already experimented with in Alaska<sup>1</sup>, India, Namibia, Finland, Germany and in Spain's region of Catalonia.

In terms of managing the impact on the labour market, the Institutions will not be alone. Contact with the world of business will be needed to ensure that companies have the tools and the intention to create concrete re-skilling and up-skilling schemes to reinforce their desire to leave no one behind at this delicate stage of history. Companies will also play a crucial role in preparing realistic social sustainability policies, bearing in mind the increasingly comprehensive role of large organisations, which are increasingly involved with civil society.

**Mind the generational gap**

This change will not be easy and is unlikely to be accepted. While the impact of new technologies will require joint action by governments and businesses, including new forms of work or alternative sources of income, a major challenge still remains.

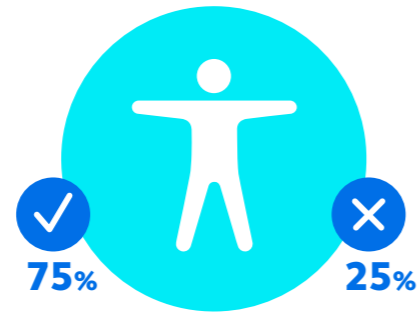
It is not only the technologies that change, but also the generations that join the world of work.

Generations that are digital-ready and can play a key role in this delicate transition phase. These generations have already shown how aspirations, career goals and ways of living one's profession can change. Indeed, the cycle we were used to has changed. Today, new generations do not merely aspire to work 'no matter what', but leave ample room for their emotions, passions and perceptions, as demonstrated by social phenomena such as the Great Resignation or Quiet Quitting. Phenomena that have shown how this type of trend – and, by reflection, society – is changing. It is they who will drive the mindset change necessary for civil society. A society that is now starting from an increasingly popular assumption: according to 75% of the survey sample, today technology can reduce barriers to inclusion, potentially making it easier for a different mindset to take hold, one open to the proliferation of new technologies.

*These generations have already shown how aspirations, career goals and ways of living one's profession can change.*



**Do you think that technology reduces the barriers to inclusion?**



**What's next?**

In view of this situation, several scenarios emerge, which were contemplated at the end of the survey contained in this study. These scenarios are split into two macro-sets: a defeatist one and a cautiously optimistic one. The first is a scenario in which a socio-economic collapse is assumed to take place, alongside the uncontrolled proliferation of machines (6%); the second, instead, imagines that the "novelty" effect generated by the proliferation of new technologies will vanish, essentially not changing the status quo (0%). More interesting is the 'split' that occurs within the macro-set more open to innovation. On the one hand, the most likely scenario for the

sample, with 5 out of 10 respondents embracing this vision, is that over time, a generation of super-workers will emerge, increasing productivity exponentially in every sector. These workers will be engaged in ongoing training as new AI tools evolves. Moreover, with the automation of repetitive tasks, they will have more time for creative activities and personal development. The other view within the more optimistic group, held by much of the remaining sample (44%), sees the birth of hybrid teams consisting of humans and robots. Following their logic, this will happen because the spread of new technologies will create more jobs than that those eliminated. However, for this to happen, under the proposed scenario, new roles and regulations will be needed to manage the ethical implications of AI.

These results suggest an opportunity: that of living the so-called 'cultural speciation of the 21st century', consciously choosing which side to stand on. It will not be an easy change for society, for organisations or for the Institutions. But after all, "the most difficult task in life is changing yourself"<sup>1</sup>.

*1. Nelson Mandela, former South African President and Nobel Peace Prize winner in 1993.*



*Many professions will disappear, and productive operations will no longer require human intervention. Companies will replace unnecessary workers with robots and synthetic intelligence. The entire economic and social system will collapse, creating billions of new poor individuals. (6%)*



*The proliferation of AI technologies will create more jobs than it eliminates. Managers will learn to oversee hybrid human-synthetic teams, making decisions on complex data, and new roles and regulations will be required to manage the ethical implications of AI. (44%)*



*The lack of reliability, security issues, and criminal use of AI, such as scams, copyright infringements, and the generation of fake news. Public and companies will lose confidence in the widespread adoption of the technology and its development. Roles rich in complex and emotional interactions will be reserved for people, relegating AI to a desktop tool. (0%)*



*A generation of super-workers will emerge, capable of exponentially increasing productivity in every sector, and engaged in continuous training on new tools as AI evolves. With the automation of repetitive tasks, workers will have more time for creative activities and personal development. (50%)*



## METHODOLOGICAL NOTE

This research project was conducted by the Observatory of the Creative & Production team at BIP. The purpose of the study was to analyse the phenomenon of 'cultural speciation' and the impacts of the potential divide that might arise between a population refractory to technological progress or without the skills needed to access it, and small groups who pursue advanced technology.

The number of respondents (265) was adequate to create a varied sample in terms of age and professional sectors. For the purpose of the study, the respondents were instantly split into five different age-based clusters (18-24; 25-34; 35-49; 50-64; over 64).

These divisions helped to obtain more detailed results.

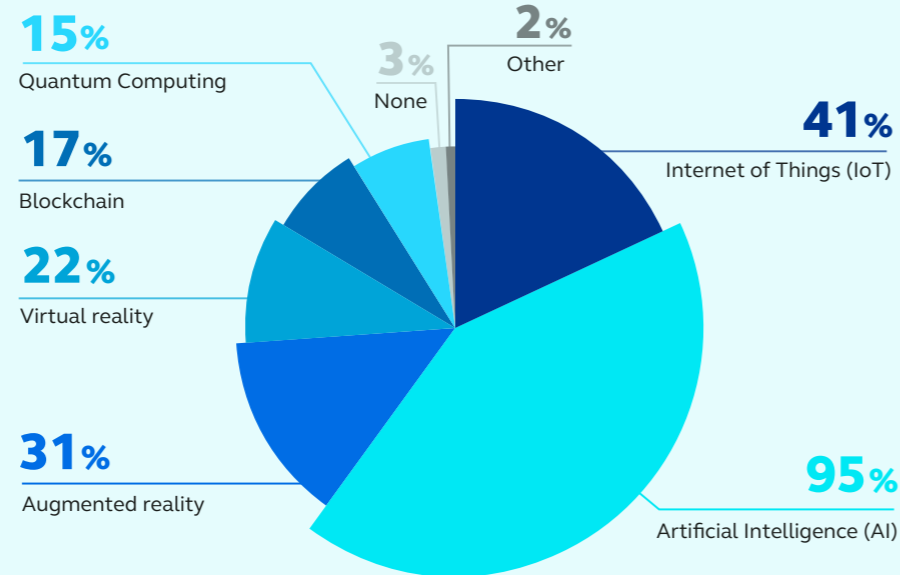
The questionnaire was distributed digitally through BIP's digital channels, ensuring the anonymity of respondents.

The results were summarised on a percentage basis, taking as the denominator the overall figure of 265, i.e. the total number of questionnaires completed.

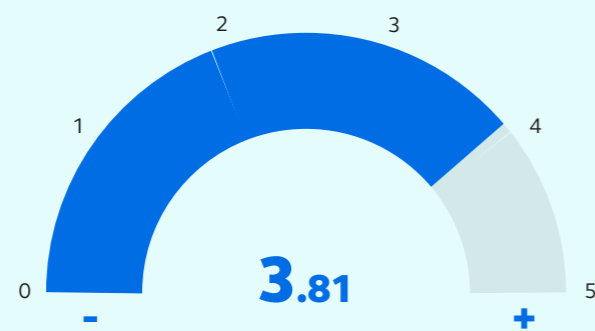
The denominator was changed only in a few cases and, as a result, the percentages were calculated on a weighted basis.



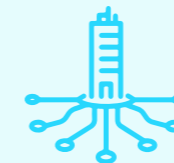
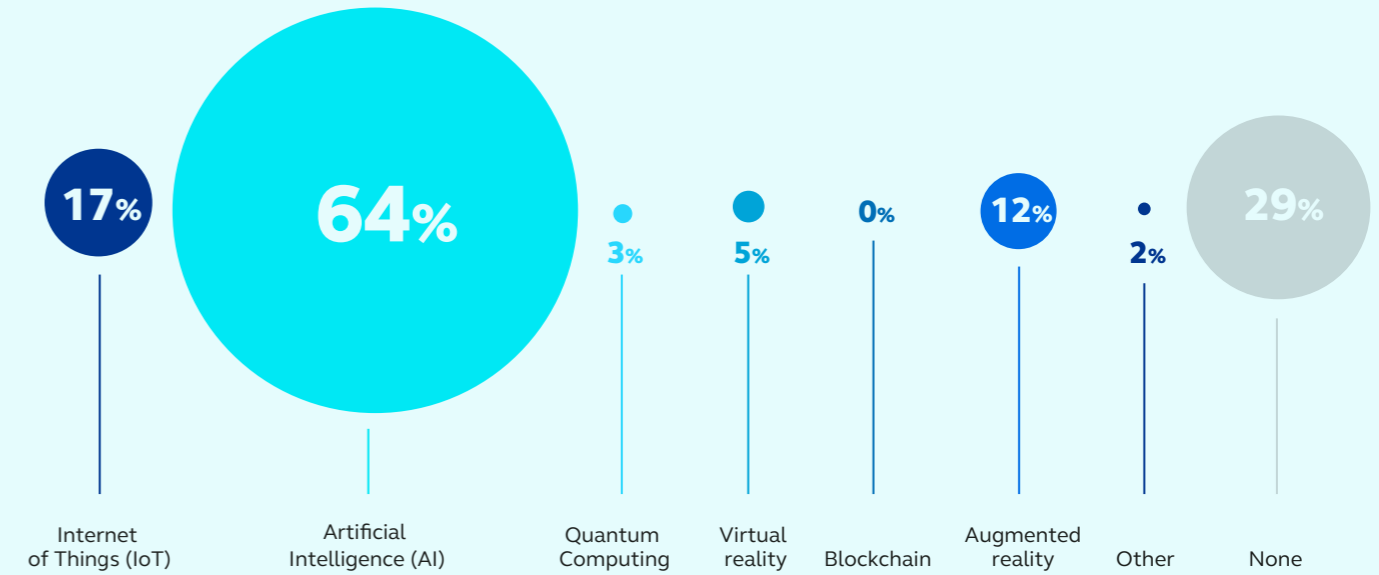
**What technology do you think might have a strong impact on your job?**



**How to you rate this impact?**



**What technology has your organisation adopted in the last 12 months?**



**62%**

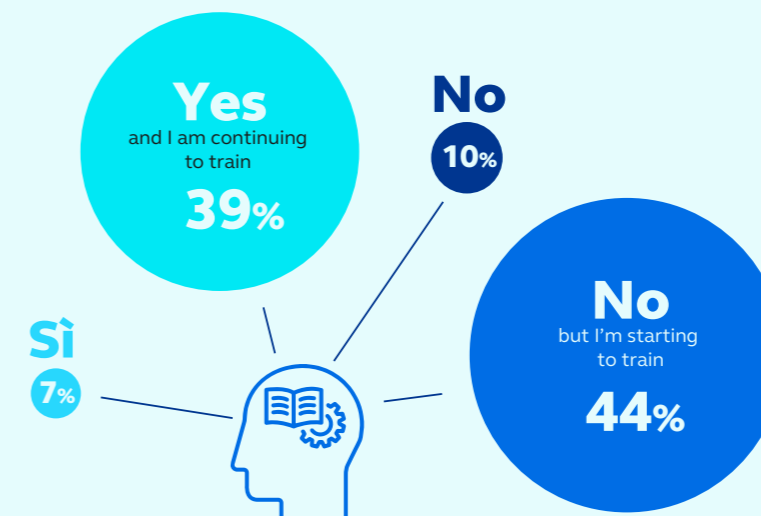
Business asset



**38%**

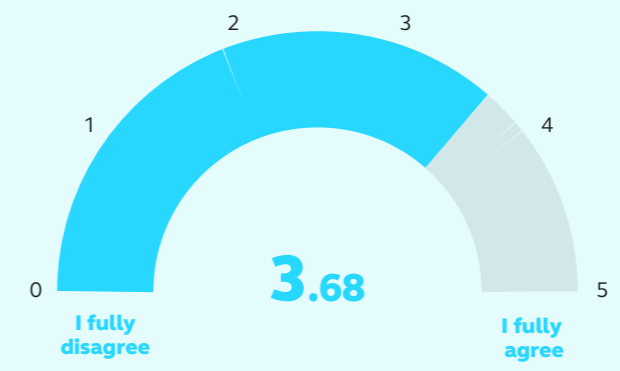
Personal license

**Do you use this technology or these technologies as a business asset or with a personal license?**



**Do you have the skills to make the most of this technology or these technologies?**

Which of these activities do you prefer for this goal?

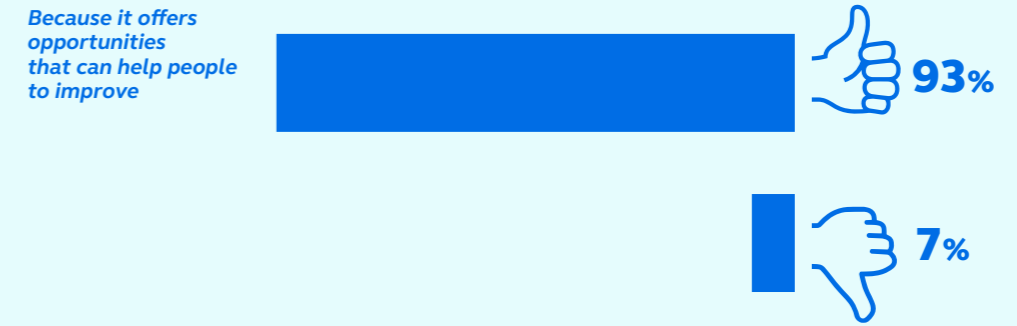


Do you think technology can help achieve sustainability goals?

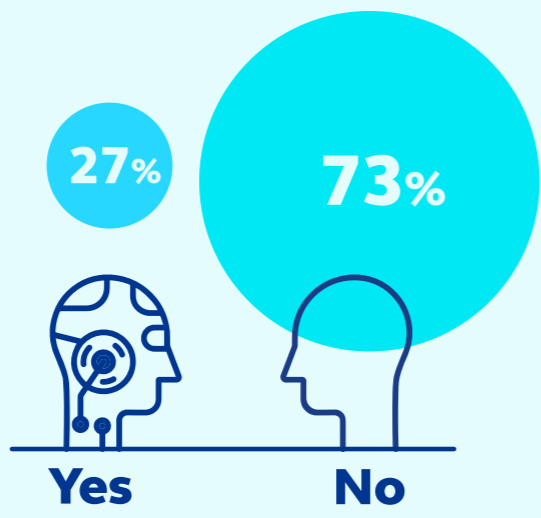
Does your organisation support your training?



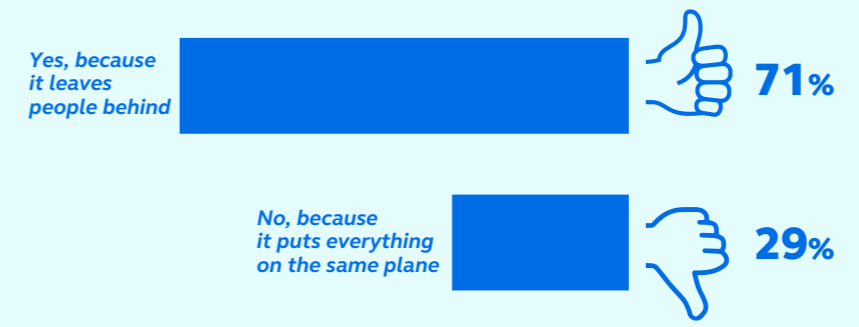
Can technology be considered a means of improving one's social condition?



Do you think technology may replace your job?



Does technology create new forms of discrimination?





This report was produced by the Observatory of the Creative & Production team at BIP. The Creative & Production team observes, analyses, listens, thinks and creates.

Above all, it creates. Articles, podcasts, studies, documentaries, and more besides. We always start from the content and never from the container, from the company's philosophy and never from the editorial calendar for its own sake.

For us, content can never ignore value: data, numbers and words travel together.

We value BIP's heritage of dissemination, guiding people and businesses from strategy to execution through the creation of a dissemination ecosystem. We contribute our know-how, you promise to follow us.

#### **AUTHORS**

**Francesca Di Mari**  
*Head of Marketing Italy*  
BIP Group

**Matteo Maria Munno**  
*Content Editor*  
BIP Group



**HERE TO DARE**

**Bip** is a 21st century international consulting firm. One free from a technological legacy that would force us to impose complex products and skills that are no longer needed. Free from a professional tradition accustomed to separating strategy from execution. Free from a cultural model that requires doing more and for longer, while we want to work better and quicker. Free to dare