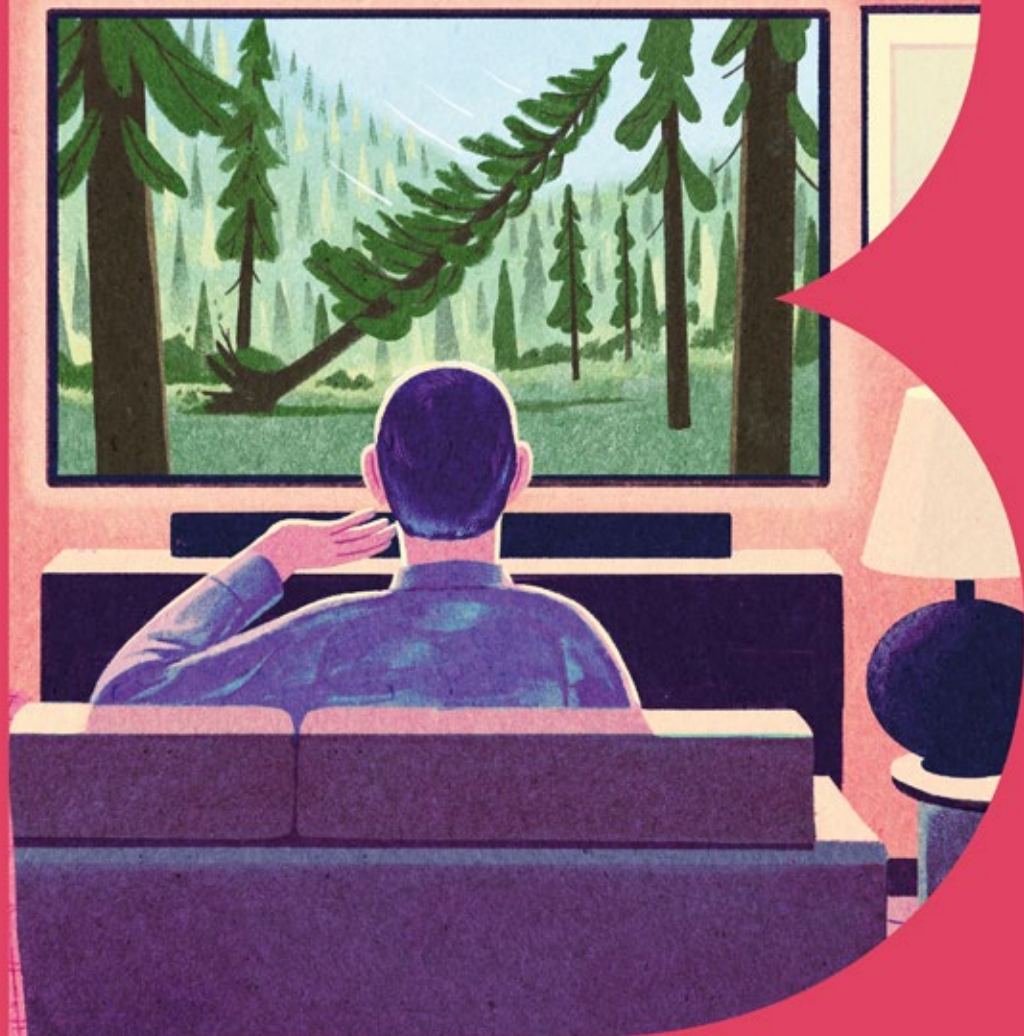


# Bollettino



**REALITY** — If a tree falls in a forest and no one is around to hear it, does it make a sound? The perception of reality is a question that needs to be re-addressed, given the many ways of manipulating it.

2023

# Bollettino



Generali Group Magazine since 1893

# The Bollettino is 130 Years Old. This, at Least, is Reality.

BY ANDREA SIRONI  
— CHAIRMAN OF ASSICURAZIONI GENERALI



What is real, and what is not, is the theme we explore in this issue of the Bollettino, the Assicurazioni Generali magazine founded in 1893. In that golden age of world's fairs, this company magazine, the oldest one still published in Italy, was born out of “the need to establish a channel of periodic communication with members of an increasingly large and decentralised organisation, which could be used to disseminate information and to promote professionalism and *esprit de corps*” (*The Age of the Lion*, Oct 2015).

It was a means of communicating information about the Company's activities and "events most relevant to our industry", according to the editorial of the first edition, dated March of that year. The magazine had no more than eight pages and would have accompanied the German-language newsletter, which had been published for some years in Trieste for the staff of offices

in the Empire and central Europe.

There was concern about how to unite an ever-growing community around information, given linguistic differences, and align it with a world that was changing rapidly under the effect of technologies, such as electricity, introduced by the second industrial revolution.

We are now living through the digital revolution, which brings similar concerns, although with less tangible reality. Was that photo actually taken, or was it produced by artificial intelligence? The technological evolution of systems for depicting reality throws enormous doubt on the credibility of information, which can travel around the world in a few minutes via social media, available to the roughly 6 billion owners of a smartphone.

Reality, or rather realities, are closer at hand but less collective. Populism must be seen in this light, along with recognition that different sections of the population live in different realities, where polarised information languages prevent in-depth analysis and research, even of divergent theses.

We urgently need an "algorithethics" capable of dealing with complex algorithms and diverse contexts, and ensuring that guarantee criteria are already established at the development stage in every field, from medicine to financial services, without loss of functionality. The European Union is taking steps in this direction with the Digital Operational Resilience Act and the Artificial Intelligence Act.

The advent of artificial intelligence has had a significant impact on operational aspects of the insurance industry, from risk calculation to claims management to fraud tracking, and on the development of policies, which are increasingly tailored to customer needs and characteristics, providing both protection and prevention services up to and including management of the customer relationship.

In many sectors, digital technologies have introduced "real" innovations. This has been an unexpected development in the art world, allowing artists to experiment with new creative possibilities that interact in different ways with different audiences.

But there are doubts about the applications of these technologies, associated above all with their seemingly limitless capacity for interconnection and self-generation. Do human workers risk being replaced?

There are those who suggest that interaction between algorithms and people will be at a higher level, with automation creating new jobs and opportunities.

These and other matters are developed in this issue of the Bollettino, which continues its 130-year history of chronicling the present and imagining the future, and seeking, in this tumult of possibilities, to promote the centrality of the human factor through thinking, in-depth analysis, and a multiplicity of views.

*Enjoy your read, and Happy Birthday to the Bollettino*

Reality, or rather realities, are closer at hand but less collective

# Reality?

TEXT  
THE EDITORIAL OFFICE

ORIGINAL ILLUSTRATION  
BY RYAN JOHNSON  
— ILLUSTRATOR

If a tree falls in a forest and no one is around to hear it, does it make a sound? No. Sounds exist in relation to a body with ears. Without that body there is no sound in the forest. Existence, in short, is relative.

Now that we are immersed in an unreality that masquerades as reality, an “augmented unreality”, the question is at least as important as the answer because it leads us to another: what is real? It is a question that was of relevance in the past, but new technologies make it increasingly difficult to answer.

From images and texts generated by artificial intelligence to deep fakes and fake news, reality is becoming an increasingly complex experience. The ability to record it and re-package it is, and will continue to be, a powerful tool in the hands of the marketplace, politics and communication.

If, therefore, technology and the way it is used become decisive not only in the interpretation of reality but also in its generation, how will we be able to examine new scenarios and plan responses to tomorrow’s needs? How, if tomorrow’s reality is artificial?

## Ryan Johnson

The award-winning illustrator lives in Brooklyn, New York. His illustrations have been called eccentric, inventive, vibrant and exaggerated. He has been officially recognised by the Society of Illustrators, Communication Arts and American Illustration.

His works have been published in, among others, the New Yorker, the Washington Post, the Wall Street Journal, Variety, Bloomberg Businessweek, the Smithsonian Magazine, the New Mexico Magazine and the Boston Globe.



[www.oldfloyd.com](http://www.oldfloyd.com)



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# Who's Afraid of Artificial Intelligence?



We increasingly encounter images that so resemble photography as to throw doubt on its veracity.

BY ROBERTO KOCH  
— PRESIDENT  
OF CONTRASTO



According to historian Geoffrey Batchen, before photography became a genuine invention it started as a desire to convert into permanent form images captured in the dark room. In a recent article, Chiara Bardelli Nonino mentions the recollection of Susan Sontag that in 1850 (only eleven years after the official recognition of the birth of photography), astronomers captured an image of the star Vega on a plate. The light that formed the image left Vega, twenty light-years

away from Earth, before the invention of photography was revealed to the world. The author comments that it is easy to understand how the combination of reality and photography, which has made the latter increasingly fascinating, has always been at the root of our aspirations and anxieties, as it still is.

The technological evolution of systems for representing reality, especially those related to photography, has seen significant growth and

←

Another America — AI-generated photos from the 1940s and 1950s.  
Project by Phillip Toledano.



development, especially in recent times. The rise of artificial intelligence (AI) has meant that our lives and imagination have begun to experience intrusion by systems that closely resemble photography, leading us to doubt about its existence.

Let's try to clarify things. The ability of AI to create apparently genuine images poses almost insurmountable problems regarding the credibility of information. It means that readers need defence mechanisms that allow them to distinguish between visual information that is genuine and simulations created by techniques and methodologies unconnected to representations of reality captured through classic analogue methods. Instead, these new techniques rely on interpretation and imagination.

The term "Artificial Intelligence" was coined in 1956, and following decades of growth of data processing, improved storage capabilities and the development

of advanced algorithms, AI can now mimic human reasoning.

AI is a computer system that learns from experience. It can adapt to new inputs, performing tasks in a manner similar to a human being. The definition of AI has evolved over the years, as have the applications that employ this technology.

AI can sometimes be seen as sinister. Science fiction stories have led us to see it as a potential threat to human existence,

AI creates almost insurmountable problems regarding the credibility of information



REUTERS / FABRIZIO BENESCH



Boris Eldagsen poses beside an advertising poster depicting his work "Pseudomnesia: The Electrician" which he had created with the usage of artificial intelligence and won the "Sony World Photography Award".



→\

90 Miles is a post-photography AI reporting illustration experiment exploring historical events and realities of Cuban life that have motivated Cubans to cross the 90 miles of ocean separating Havana from Florida. Project by Michael Christopher Brown.

possibly in the near future. However, AI is actually a generally harmless innovation, although it may have controversial consequences. If we are to use it safely, we must be aware of how it differs from photography.

The winners of the Sony World Photography Awards (SWPA), one of the world's most followed annual photography competitions, were announced recently. Victory in the "Open - Creative" category for single images created by both professional and amateur photographers, went to a black and white image titled "PSEUDOMNESIA | The Electrician" submitted by German photographer Boris Eldagsen. The jury described it as "an unsettling black and white portrait of two women that evokes the visual language of family portraits of the 1940s".

Eldagsen's victory sparked a debate in the press and on social networks because the image was not captured with a camera but generated with Stable Diffusion, an advanced AI-based technology, which uses commands in the form of text to create images.

Following the announcement of his victory, Eldagsen decided to turn down the award, raising questions about the definition of photography and stating that he could not accept it since AI is not photography. With regard to

information photography, we have had to deal with fake views for many years – reportages or individual images disseminated solely to artificially generate false news, which is often supported by deliberately falsified photographic evidence. This has severely tested media credibility in recent years.

A few months ago, The New York Times denied ChatGPT, an AI chatbot, the unpaid use of its articles to train the application's algorithms in the creation of more powerful and realistic images. Various successful entrepreneurs behave inconsistently on this issue. Elon Musk, for example, after opposing AI for a long time and stating that it could lead to the failure of many companies, has now created his own AI company, XAI, to control it.

Extraordinarily realistic images (even if revealed to be not real) can be produced using AI software without the need to visit a location, thereby challenging the principle that applies to all photographs according to Roland Barthes – simply, that what we see "once was". It doesn't apply to AI, because what we see possibly "never was". On the other hand - as Joan Fontcuberta correctly points out in her latest book "Against Barthes" - in 1989, the year when the fall of the Berlin Wall changed





the world in a new and extraordinary page of history, photography was also undergoing a revolutionary transformation. At the beginning of 1989 two brothers, Thomas and John Knoll, sold Adobe System Inc. the licence for the first version of a photo processing and retouching software called Photoshop, giving birth to what came to be called post-photography, which saw huge

The principle that applies to all photographs – simply, that what we see “once was”, is thereby challenged

development in subsequent years. Photoshop has become synonymous with the artistic manipulation of photographic images, effectively “transforming” them while leaving no visible evidence.

The problem we face is how to enable readers to identify questionable aspects in different methods of

presenting information. In analysing any image we definitely need to acknowledge that photographs, almost by definition, always lie insofar as they show a representation, not truth. A degree of healthy scepticism is therefore always wise.

Another important factor is the credibility and authority of the creator

of the images we are considering. Credible information is more likely to come from someone already trusted for other reasons rather than from lesser-known and less reliable sources.

But we can be helped in this if we understand the use of the term "intelligence" and examine how it applies to the processing and production of images.

Intelligence is a specifically human function with various features, one of which – absent in AI - is that healthy sense of flexibility and adaptability revealed by objective examination of intelligent behaviour. It is a quality that is virtually exclusive to human beings, whose actions are guided by their minds and not by abstract algorithms. Only experience can help us develop the autonomous judgment to guide our investigations.

The work of Michael Cristopher Brown, an internationally well-known photographer and a respected member of Magnum in past years, has generated much discussion in recent times. He sees himself both as a photojournalist and as an artist who uses AI as a storytelling tool, and always specifies the limits and characteristics of his work. For his Instagram site he has created various AI images of Cuba, a country he knows very well, at least visually.

These images (one of the purposes was to sell the entire series as NFTs) show an impressive realism that combines the power of Cuba's historical legacy with Michael's experience as a photographer. The result is a "storytelling" project, as the author describes it, i.e. a work of fiction, an autonomous narration, although it may appear to be documentary photography. The visual

narrative focuses on situations in which it is impossible to participate as a witness - an essential prerequisite for any photojournalist - as is true of any episode, past or future. Michael Cristopher Brown uses personal memories, impressions developed over years travelling and living in Cuba, along with the storytelling and memories of the protagonists, to generate a fictional narrative close to reality, constructed from images rather than words.

Perhaps what should guide us in all our judgments is the realisation that any conflict between AI and photography is fundamentally a misguided battle that can never be won. A speeding train cannot be stopped with bare hands. Similarly, we cannot and should not hold back the future or the development of technology, but should instead ensure that we use the tools at our disposal with

The result is a "storytelling" project, as the author describes it, i.e. a work of fiction

awareness of the limits and potential of the two languages, so similar but so different, of documentary photography and AI creations.

However, the number of instances in which AI has invaded the field of information with false visual news or creations promoting a view or an objective is high and growing. They include

propaganda such as the fake arrest of Trump and, in the same week, an image of the Pope wearing a white feathered jacket. Many artists have experimented with the use of AI to create similar images.

In another field, the cinema, the strike by Hollywood writers in protest against AI competition is creating considerable unease, with the two sides taking increasingly extreme positions. We must ensure that future developments can be managed with intelligence, perhaps human rather than artificial. We all stand to gain from this, as will photography itself, which, although its survival has been under threat for decades, has reached an unprecedented level of popularity that demonstrates its extraordinary and inexhaustible vitality.

#### Roberto Koch

Roberto Koch is a publisher, curator, photographer and organiser of photography-based cultural events. In 1986 he founded Contrasto, the leading Italian photographic agency, and in 1994 founded the publishing house of the same name, which has more than 800 titles dedicated to great international photography. He is the creator and president of Milan's Fondazione Forma per la Fotografia. Since 2020 he has been directing the La Grande Fotografia Italiana project for the Gallerie d'Italia in Turin.



# Facts and Reality in the Age of Populism

A supporter of former U.S. President and Republican presidential candidate Donald Trump shows off her socks before a 2024 presidential election campaign event at Sportsman Boats in Summerville, South Carolina, U.S.

## Faced with attacks from populist political opinion, US institutions have defended themselves with fact-checking – producing unexpected consequences.

BY ANDREW SPANNAUS  
— CHAIRMAN – MILAN FOREIGN PRESS  
ASSOCIATION

The emergence and success of populist political forces in the United States and Europe in recent years has represented a challenge in particular for media and public institutions in Western societies. They have had to defend themselves from attacks claiming they are expressions of elitist centers of power, who seek only to promote their own interests while ignoring the needs of much of the population. A central element of the response to these accusations has been the attempt to refute anti-system narratives through what has

become known as fact-checking, i.e. seeking to use known, public facts to establish the truth of a matter, thus hoping to stem the growth of conflicting narratives and justify the refusal of mainstream figures and information outlets to take them seriously.

An unintended result of this approach has been to actually strengthen the cultural division of our societies, certifying the view that different portions of the population live in different realities, as many commentators like to tell us. Members of the media and politics are comforted by the certainty that they live in the real world, and have the facts to prove it; and they often view themselves as

The view has been certified that different portions of the population live in different realities

a bulwark against a society that has gone mad.

Yet there is a problem with this approach, and it is not based merely on a form of cultural relativism or “both sides-ism”, i.e. presenting different ideas as if they were equal despite evidence to the contrary. Rather, the issue arises when people believe that facts tell the

whole story, and use the absence of hard evidence to deny the possibility of a version they prefer not to contemplate; as the Greek philosophers would remind us, reality goes well beyond what we see with our eyes, needing to be discovered through investigation with our minds.

An uncomfortable example comes from the Covid-19 pandemic. For over a year there was an official line from governments and media companies that the virus was unquestionably of natural origin, having jumped from animals to humans; anyone suggesting that it came from a laboratory was seen as promoting a conspiracy theory that needed to be nipped in the bud. Under pressure from political institutions<sup>1</sup>, platforms such as Facebook and YouTube essentially banned any speculation regarding a lab leak, in the name of sticking to the facts and following the guidance of experts. In the spring of 2021, however, the line had begun to shift: both the WHO and US intelligence agencies ultimately changed their tune, publicly announcing that they could not rule out the possibility the virus had been the unintentional result of experiments at the Wuhan Institute of Virology, and that further investigation was needed.

We still do not have a definitive answer as to the origin of Covid-19, as there are insufficient facts on both sides, yet the confusion over the past three years illustrates the dilemma: sometimes we look for facts to confirm a preferred narrative, prematurely closing our minds to a reality that does not fit our own view.

<sup>1</sup><https://www.washingtonpost.com/technology/2023/09/08/5th-circuit-ruling-covid-content-moderation/>

The issue is particularly important as governments work to shape policy in the wake of the populist ferment of recent years. The initial impulse among public institutions to push back against the extreme rhetoric of figures such as Donald Trump, Viktor Orbán or Marine Le Pen was understandable; a failure to address the underlying causes behind the success of their narratives, on the other hand, was short-sighted and harmful.

A key element to acknowledge is that populists and nationalists are speaking to a reality that part of society feels as its own. Refuting specific claims or arguments with facts is certainly necessary, but risks being ineffective if we fail to address the overall narrative. The easy way out is to lament that people are not even willing to listen to the truth; what is needed, rather, is to establish a point of contact in order to begin a discussion based on a common reality. A number of examples regarding the political leaders cited above can be useful.

Donald Trump was widely derided for speaking of "American carnage" when referring to abandoned factories and rampant crime in his 2016 inauguration speech. A response based on fact-checking could be that unemployment was actually fairly low, and crime numbers were not at their peak. Yet that would fail to recognise the widespread discontent in the United States due to the deterioration of stability and prosperity for former manufacturing communities due to years of outsourcing in the name of economic globalisation; not to mention the now widely-acknowledged trend of "deaths of despair" from suicide, drug overdose, and alcoholism, which have grown disproportionately among white men without college degrees.

Viktor Orbán is a thorn in the side of the European Union, due in part to his harsh position against immigration. He makes no secret of his strongly conservative positions on this point – as well as his aversion to LGBTQ rights – to the point of openly accusing the EU of seeking to "use violence to turn Hungary into a country of migrants". His view is abhorrent to many, seen as an affront to basic human rights, but it is easy to see that fact-based arguments alone will do little to reduce the divide, while programmes to more effectively manage flows and integration of migrants into European society could begin to weaken support for his position.

## Populists are speaking to a reality that part of society feels as its own

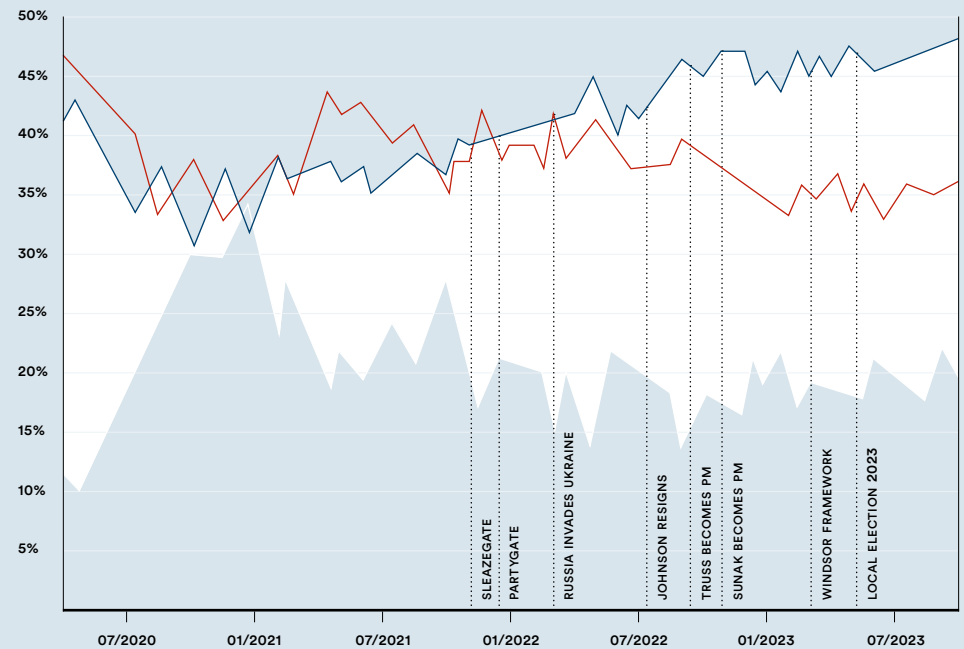
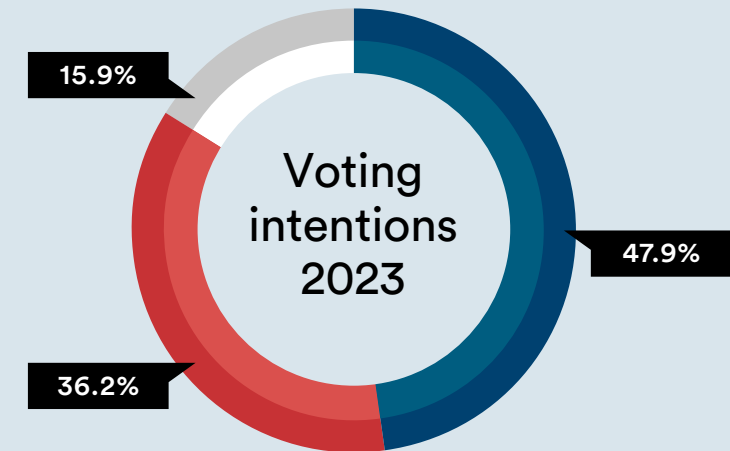
Marine Le Pen, unlike Trump and Orbán, has never been successful in becoming the president of her country. However, her criticisms of the structure and policies of the European Union are not to be underestimated. In her case, socially extreme positions, associated by the French population with the even harsher views espoused by her father, have kept political success at the highest level out of her reach. Her view, however, of a Europe in which economic policy is no longer managed by technocrats, but returns to national governments, has a powerful appeal given the ruinous

SOURCE: ELECTIONMAPS.UK, 2023

## Post-Brexit voting intentions

REJOIN  
STAY OUT  
DON'T KNOW

Only 36% of people interviewed think that voters made the right choice in 2016. In fact, with the gap exceeding one point for the first time, a re-run of the referendum would see victory for the Remain vote - or rather, for rejoining.



→

Former London Mayor Boris Johnson holds up a Cornish pastry during the launch of the Vote Leave bus campaign, in favour of Britain leaving the European Union, in Truro, Britain, May 11, 2016.

policies of austerity and weakening of effective state intervention on the part of the Brussels institutions since the entry into force of the Maastricht Treaty in 1993.

None of the points made in the three paragraphs above means we have to agree with the solutions proposed by the likes of Trump, Orbán, Le Pen, or other populist/nationalist politicians. Their responses to the problems described, and any concrete proposals they make, require a separate, rigorous debate where possible. But even a racist, inhumane

response from a politician does not necessarily mean that the underlying problem does not exist. The challenge is clear: to address the reality which acts as the substrate for an extreme position, without justifying what may be considered an unacceptable reaction.

There is good news as regards the response to the populist shock to Western societies in recent years. It is not always easy to see, because political and cultural divisions can seem even more worrisome today, particularly in the United States. Yet the problems



REUTERS / DARREN STAPLES

provoked by decades of policies which have weakened the economies of our nations, encouraging delocalisation in the search for (apparent) low costs, and allowing speculative finance to play a dominant role in allocating capital flows, are now being rolled back. The process was actually initiated by the devil himself – Donald Trump – whose tariffs and trade wars, however haphazard, have provoked a lasting policy shift throughout much of the West; not only the rethinking of international trade deals with the aim of improving salaries

**A racist, inhumane response does not mean that the underlying problem does not exist**

and working conditions, but also a series of protectionist measures which have been continued and even expanded by Joe Biden. There is a clear



acknowledgement of the need to ensure economic sovereignty in the face of a harmful loss of "resilience" through years of outsourcing and just-in-time policies, and of the challenge represented in particular by the quantitative and qualitative growth of China, which threatens the West's ability to maintain a leading position in the global economy.

The question of how to address the China challenge is a complex one, and the subject of continuous debate with broad implications for both economic wellbeing and strategic stability. Suffice it to note here that there has been a wholesale shift in both US and EU policy towards Beijing in recent years, with the imposition of tariffs and restrictions

## Ursula Von der Leyen's de-risking has taken the place of decoupling from the Chinese economy

aiming to limit China's technological progress by the United States, and the clear formulation by the European Union of a posture considering China a strategic rival and seeking to protect Europe from unfair trade practices.

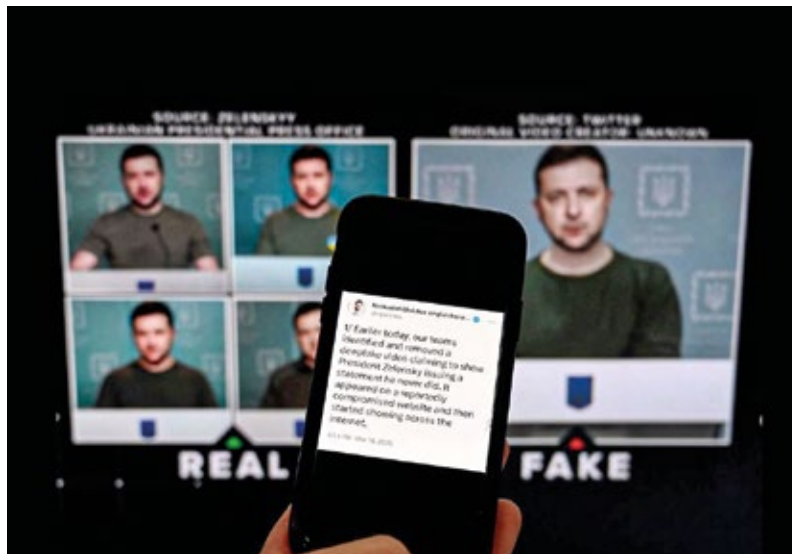
Ursula Von der Leyen's concept of "de-risking" has taken the place of

"decoupling", and in the United States conservatives still complain that Biden is selling out to Beijing, but the reality is that today's policy is a sharp departure from the paradigm of free trade and globalisation that reigned in the decades straddling the turn of the century. Of this there should be little doubt, in terms of both facts and narrative.

In line with this external change, there has been a visible and openly-admitted return to industrial policy on both sides of the Atlantic. The Biden administration has launched large-scale investments in crucial technological sectors for the future, promoting a return of manufacturing in areas that suffered most the effects of

globalisation. The European Union promises to support its businesses to maintain their competitiveness on global markets, and protect them against a model which produces a race to the bottom. This shift in direction indicates the potential for a more solid economy and governments that work better for their citizens.

The change has not gone unnoticed by the partisans of neoliberalism, worried about the return to greater state intervention. The Financial Times complains that Joe Biden is going too far in his zeal for an FDR-style transformation of the US economy, while grudgingly conceding the strong case for technological



GETTY / OLIVIER DOULIERY

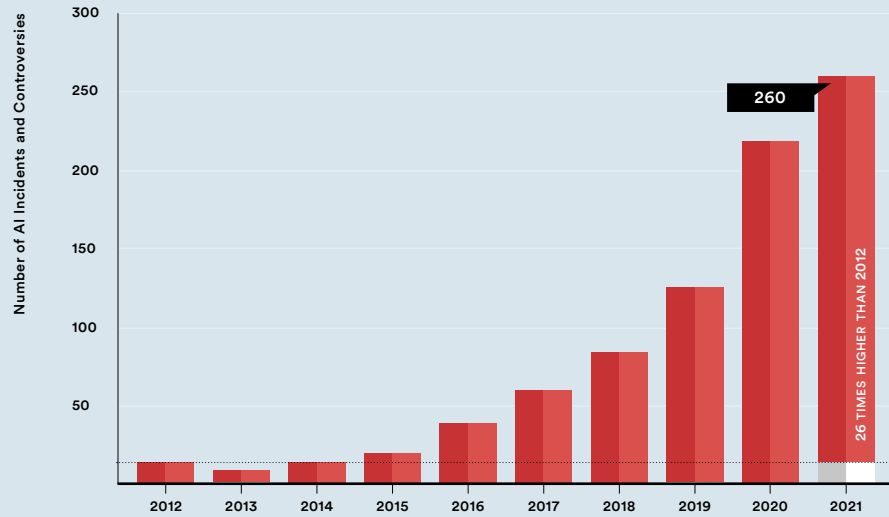
Deepfake is a technique for manipulating human images, using artificial intelligence to merge existing and original videos to create very realistic fake content - fake celebrity videos, fake news, hoaxes or scams.

←

This illustration photo taken on January 30, 2023 shows a phone screen displaying a statement from the head of security policy at META with a fake video of Ukrainian President Volodymyr Zelensky calling on his soldiers to lay down their weapons shown in the background, in Washington, DC. Chatbots spouting falsehoods, face-swapping apps generating fake porn and cloned voices defrauding companies of millions - governments are scrambling to regulate AI-powered deepfakes widely feared to be a misinformation super spreader.

## Number of AI Incidents and Controversies

The number of AI incidents and controversies has increased 26 times since 2012. This growth is evidence of both greater use of AI technologies and awareness of misuse possibilities.



self-sufficiency<sup>2</sup>; and hardline conservatives continue to harp about the danger of public debt, pointing to inflation as a justification for returning to the budget-cutting paradigm of the past.

By any standard, there is still a long way to go to claim any measure of victory over the socioeconomic problems which represent the ground on which populist movements have built their appeal. It will take time, smarts and political courage to reconstitute a lasting economic basis for the progress of the lower and middle class across the West, and

thus restore the credibility of the institutions which are seen as responsible for the previous decline. There is also abundant room for criticism of US and EU foreign and military policy, while the international financial system requires structural reform to reduce the predominance of financial over productive interests.

Over-the-top criticism by extremist movements will certainly not disappear; on some cultural issues in particular, debate and division is likely to remain heated for years to come. The clash

between a so-called globalist world view and that of "regular people" who espouse a return to more traditional values, has been internalised by many citizens, and will continue to represent a source of tension. The hope for improvement comes from the possibility to generate irrefutable progress which can be felt by all of society, thus creating a shared reality and reducing the fertile ground into which today's exacerbated conflict has sunk its roots.

### Andrew Spannaus

Spannaus is an American journalist and political analyst, known for having anticipated the populist revolt in the United States and Europe with his books "Why Trump Wins" (2016) and "The Revolt of the Voters" (2017). He is the founder of the newsletter Transatlantico.info, collaborates with Aspenia, and provides political commentary on American politics for Rai News 24, RSI (Swiss Broadcasting Corporation), and Radio24. In March 2002, he was elected to his second term as Chairman of the Milan Foreign Press Association, a position he also held from 2018 to 2020. He is a lecturer in the Master's programme in International Economics and Politics at ASERI, Catholic University of Milan.



<sup>2</sup> <https://www.ft.com/content/1cf982bd-e40c-46bf-8c51-ea348edf1557?ref=biztoc.com>

# The Solid Reality of the Human Factor

The digital revolution helps us respond ever better to our customers' needs. But the future of insurance cannot ignore the closeness that only direct relationships can offer.

BY PHILIPPE DONNET  
— GENERALI GROUP CEO



*Though artificial intelligences exist, artificial emotions never will. This is something I firmly believe, and it comes to mind whenever I reflect on the impact that new technologies are having on our lives and on all human activities, including insurance.*

*As in many other sectors, the continuing development of such things as Intelligent Automation, robotics, the Internet of Things and Blockchain offers the insurance business a number of new possibilities and tools that are contributing to innovation in an increasingly significant way.*

*In parallel with this phenomenon, in recent years some of the main global hi-tech companies have been showing increasing interest in our industry. This has translated on one hand into investments and collaboration agreements signed with traditional insurers and linked to specific areas and markets, and on the other into ambitious projects aimed at creating insurance companies from scratch. And although it has not yet generated the overwhelming impact on the sector that many had predicted, this appetite from Big Tech remains strong, fuelled also by a series of statistics that highlight the growing willingness of consumers to buy insurance products offered by these companies.*

*Penetration of the insurance world by new technologies therefore seems unstoppable, with inevitable periods of acceleration and slowdown. The first six months of this year, for example, saw venture capital investments in insurtech companies fall by 50% compared to the first half of 2022.*

*It is therefore essential to manage this process with a long-term view, not only by investing in the technologies themselves*

*but also and above all in people, while developing new skills and capabilities that will build a workforce fully in step with all future transformations.*

*In fact, the insurance business has always been firmly based on relationships and the human factor, as it will continue to be. Customer needs and demands cannot be relegated to a purely digital dimension, but new technologies have the potential to generate significant impacts on the entire value chain, which means that we must rethink habits and behaviours that have become set over time.*

*The most obvious example of this is the relationship between the insurance*

**Though artificial intelligences exist, artificial emotions never will**

*company and the customer. While someone who buys almost any other type of good or service usually and immediately receives something tangible in exchange, a policy holder pays to obtain a service which in a sense becomes real only when the insured adverse event occurs. This anomaly means that direct contacts with the company tend to be limited and usually do not occur until actually needed. In the past this did not have a negative effect and customer loyalty rates remained quite high, but things are changing.*

*With more companies active in the market, more products categories on offer and more ways of finding information and buying insurance, there have been gradual changes also in consumer behaviour, expectations regarding the services on offer, and perceptions of value received. Consequently, every insurer now has to guarantee existing and potential customers an increasingly personalised relationship and an offer built on individual needs, embracing a broader consulting-like approach that goes beyond purely financial considerations to deliver assistance, prevention and services. At Generali, we have named this change of perspective “Lifetime Partner Ambition” to underline our strong desire to be alongside customers at every stage of their lives.*

*This process obviously requires time and the daily commitment of all our people. New technologies mean that we have access to a vast and continuous flow of data, allowing us to know our customers better, study their behaviour and anticipate their needs. But such greater knowledge of our customers must be accompanied by more frequent direct contact and closer dialogue with them, and this is where our network of agents, now comprising 161,000 people in the 50 countries in which our Group operates, will continue to play a fundamental role.*

*In fact, they remain the first point of contact with our company for existing and potential customers, many of whom turn to them every day. The Covid-19 pandemic contributed to re-establishing the absolute centrality of this in the entire system. In a period of profound uncertainties and great stress for each of us, our customers felt it essential to rediscover closeness with our agents and be able to*

*count on them not only for reliable information and advice, but also for the emotional support that totally automated relationships cannot offer and never will.*

*Therefore, even in a context in which new technologies seem to occupy ever more spaces and roles that were entirely managed until recently by people, we continue to look upon the evolution of this relationship with confidence, convinced that ingenuity, empathy and human ability to adapt will always remain essential.*



# Insurtech, the Future of the Insurance Industry

A view of a drone above city traffic, Hualien, Taiwan.

Technology and innovation are helping large companies, including insurance companies, to explore new options not available with traditional methods.

GROUP CHIEF  
TRANSFORMATION OFFICER, GENERALI

Technological innovation in the world of insurance is revolutionising cost reduction, efficiency and fine-tuning of the offer, with a growing focus on the needs of the individual customer. This revolution, termed "Insurtech", from "insurance" and "technology", is redefining the way in which policies are conceived, managed and offered to the general public. The insurance industry is undergoing profound change in areas including risk assessment, claims management and customer communi-

A revolution  
termed "Insurtech",  
from "insurance"  
and "technology"

cation, driven by the introduction and diffusion of innovative technologies such as artificial intelligence (AI) and the Internet of Things (IoT), allied to ever-increasing uptake of digital techniques. In this new scenario, data is becoming a key strategic asset for insurance companies, who are now able to employ AI and machine learning techniques to collect, analyse and use larger volumes of data more accurately than ever before. This allows us to make better forecasts and manage risks more effectively, and is also creating new opportunities for the development of innovative products and services that improve interaction with customers.

## THE STATE OF THE ART

Insurtech is growing rapidly, with numerous innovations transforming the insurance industry. The global Insurtech market was valued at \$5.45 billion in 2022 and is expected to expand at a compound annual growth rate of 52.7 percent from 2023 to 2030 according to analysis by Grand View Research that shows how insurance companies are increasingly investing in digital technologies.

AI, in particular, is making a significant impact on all insurance activity, from offer and provision to claims management and on to transformation of the customer experience, while machine learning algorithms are being used to personalise insurance policy offers. In the field of risk management, AI helps insurance companies to analyse huge volumes of data, make more accurate predictions and manage risks more efficiently, a trend that is transforming underwriting from a process based on rules and intuition to a data-driven science.

Claims management is another promising area; on one hand, machine learning algorithms can analyse complaints more quickly and effectively than humans, identifying any anomalies or fraud and speeding up the compensation process for customers; and on the other, AI can be used to predict and prevent claims, helping to reduce costs and improve customer satisfaction. Nor should we overlook the contribution of virtual assistants. AI chatbots, for example, are transforming interaction between insurance companies and their customers, offering immediate, accurate and

personalised answers to any question or problem. Mobile apps are also making insurance more accessible and convenient, enabling customers to purchase policies, make claims or receive assistance wherever they are, thereby saving time and reducing the complexity of the insurance process, and consequently improving overall customer experience.

Despite all these innovations, however, there is much to do. Insurtech is evolving rapidly, with new ideas and technologies constantly emerging. Current trends indicate that we can expect Insurtech to help in improving, and more importantly increasing, the impact and reach of the insurance industry, allowing insurance companies to play an important role in mitigating the major risks that society will have to face world-wide. These include climate change, natural disasters and extreme weather events, biodiversity loss, ecosystem collapse, large-scale migration, natural resource crises, erosion of social cohesion and social polarisation, and cybersecurity threats.

**REGULATORY SANDBOX: INCUBATORS FOR INNOVATION**

Innovation is evolving much faster than it is being regulated, particularly in the case of Insurtech. The authorities are trying to keep pace with the rapid changes caused by Insurtech and seeking to balance consumer protection with the promotion of innovation and competition while ensuring that new technologies do not compromise data privacy, security or market fairness. Many authorities are therefore adopting an approach based on the so-called

Regulatory Sandbox, a controlled environment with simplified rules and low costs for testing innovative products or services on a small scale for a limited period. This tool for facilitating innovation in areas subject to complex regulation, such as Fintech and Insurtech, encourages investors to finance innovative projects and enables start-ups to test innovations in a controlled environment before launching them on the market. Therefore, not only does such an approach protect consumers from potential threats, but it also encourages innovation.

**Insurtech will help to increase the impact and reach of the insurance industry**

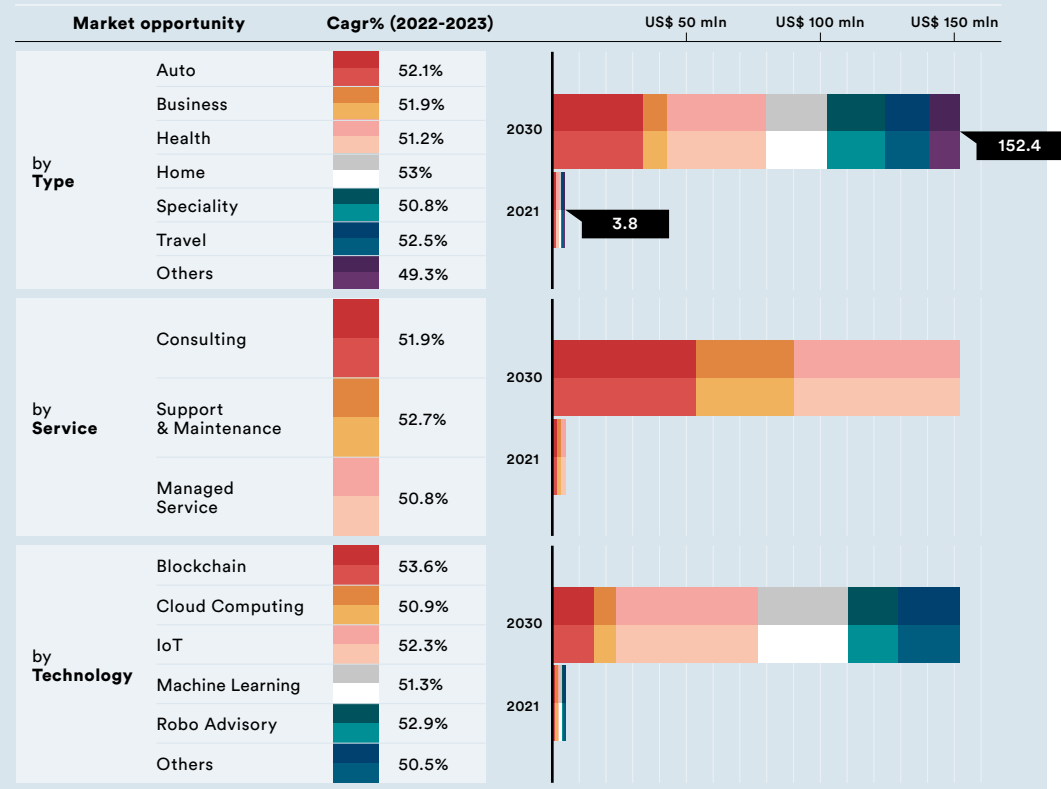
**GENERALI AND INSURTECH**

Generali provides an excellent example of how a large insurance company can evolve and thrive in the Insurtech landscape. We have employed a proactive strategy for adopting Insurtech, which includes developing strategic partnerships, investing in innovative start-ups and implementing AI-based solutions.

Over the last two years in particular, Generali has activated a series of collaborations for applying cutting-edge

SOURCE: AIAAIC REPOSITORY, 2023

**Segmentation Analysis**



technologies such as image recognition, machine learning and IoT to develop parametric solutions and improve risk models, as in the partnership with Descartes Underwriting, an Insurtech company specialising in climate risk modelling and data-driven risk transfer. Our collaboration with Ticinum Aerospace is dedicated to improving the property risk underwriting process, and with Akur8 to improving the transparency of pricing models for our Commercial business.

It is essential that we invest directly in start-ups in order to co-create solutions

and value, as with Remedee Labs, a start-up that offers a non-invasive device for the management of chronic pain and is part of a joint venture project launched by Generali along with Sanofi, Capgemini and Orange to create an ecosystem dedicated to digital health. Another example is the collaboration with Zoundream, creators of a device that uses Artificial Intelligence to translate the cries of babies aged up to 6 months, letting parents know whether, for instance, hunger, drowsiness, digestion problems or stomach ache may be

the problem. Finally, Generali Italia has acquired an interest in YOLO, collaborating with it to design and create platforms for marketing digital insurance products. Such initiatives help us to make better business decisions and offer customers more personalised products and services, so adding to the value offered by the Company.

Innovation is one of the pillars of the current Generali Group strategy, with €1.1 billion directed to it in the three-year period 2022-2024. We have also launched an Innovation Fund that channels financial backing to the most deserving initiatives and is enjoying great success in the Group. Furthermore,

Generali pays great attention to spreading a culture of innovation among all its employees and managers, promoting a large number of internal training events and making dedicated tools and methodologies available so that innovation is made easier for everyone. In fact, the Generali innovation motto is "Innovation for everyone, everywhere". This commitment also includes specific programmes launched by the Group to promote digital literacy among employees, in the belief that a better understanding of digital technologies can lead to more informed decisions, better interaction with customers, and the ability to seize market opportunities.

SOURCE: GENERALI, 2023

## What are the innovative technologies used in Insurtech?

→ Big Data and data analytics	allow insurers to meet customers' needs by developing predictive models that increasingly reflect customers' lifestyles.
→ Machine learning and AI	essential for obtaining more accurate results more quickly.
→ The Internet of Things, or IoT	involves the use of internet-connected devices, from GPS systems mounted on vehicles to wearable gadgets that make it possible to optimise data collection and offer increasingly personalised policies.
→ Drones	can be used to make increasingly accurate surveys even in hazardous environments.
→ Blockchain	used to improve data security and to permit safe and efficient data collection.

## A LOOK AT THE FUTURE

Insurtech represents a chance to redefine and improve the insurance industry by making insurance more effective and efficient, and focused on customers' needs. The future therefore seems likely to present many opportunities and challenges, with increasingly widespread use of AI and IoT devices, while the growing importance of digital literacy is certain to continue shaping the industry in the coming years. Insurance companies that are able to adapt to these trends and exploit them to improve their products and services are more likely to thrive in an ev-

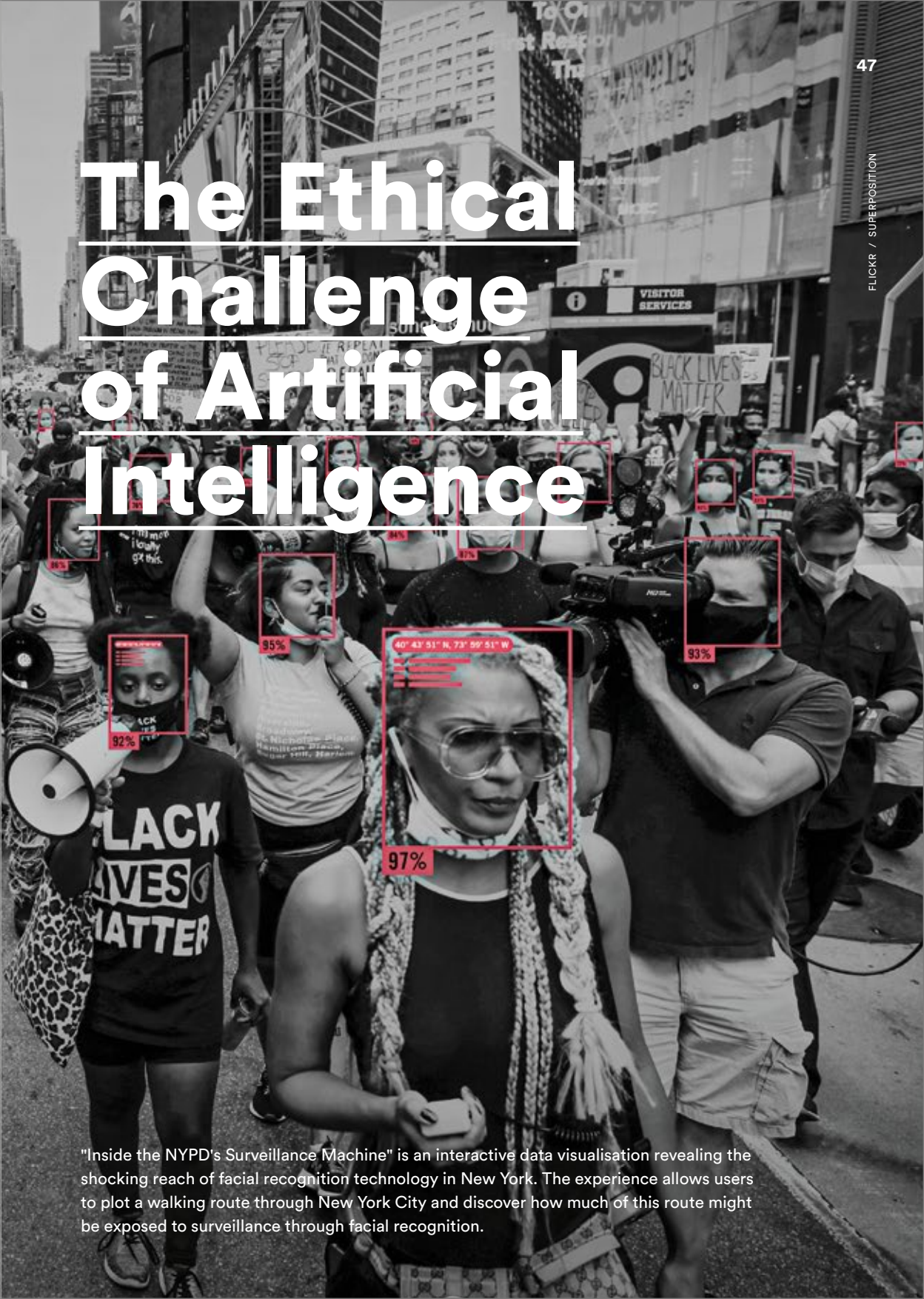
Innovation is a Generali pillar, with €1.1 billion dedicated to it in the three-year period 2022-2024

er-changing environment. There will be many challenges, but those who manage to face them successfully will derive enormous benefit.





# The Ethical Challenge of Artificial Intelligence



"Inside the NYPD's Surveillance Machine" is an interactive data visualisation revealing the shocking reach of facial recognition technology in New York. The experience allows users to plot a walking route through New York City and discover how much of this route might be exposed to surveillance through facial recognition.

Technologies allow us to continuously improve our lives, but must be examined carefully, fully understood and regulated very meticulously.

BY GIUSEPPE CORASANITI  
— PROFESSOR OF PHILOSOPHY OF DIGITAL  
LAW, UNIVERSITAS MERCATORUM - ROME

“The power of [our] intelligence stems from our vast diversity, not from any single, perfect principle”, stated Marvin Minsky, one of the pioneers of artificial intelligence, in his 1988 essay *The Society of Mind*. In practice, diversity and the ability to grasp complexity are what give intelligence its true significance. The power of intelligence - any intelligence - lies not in a single principle or a perfect algorithm, but in the ability to understand and address a wide range of situations and problems in a flexible and adaptable manner. Intelligence is therefore not a

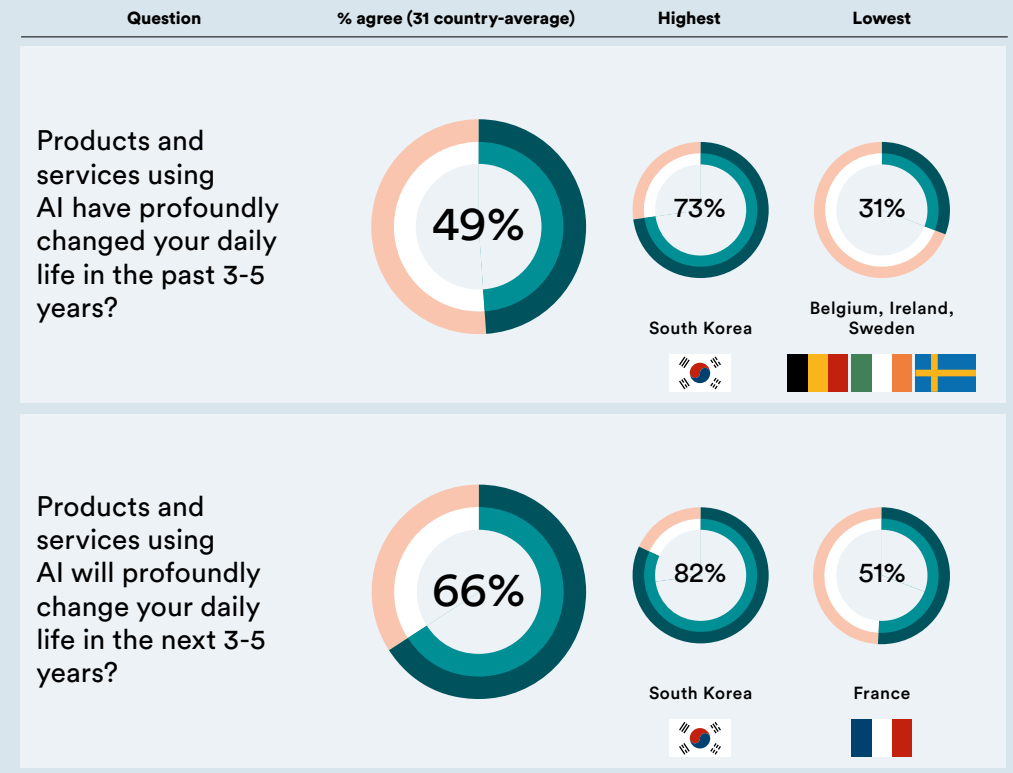
rigid or exclusive quality but a complex network of cognitive abilities, such as reasoning, learning, memory, and creativity. It shows itself differently in different individuals and can thus be used and developed in various contexts. Furthermore, diversity is often a source of innovation and adaptation as well as of cultural enrichment.

Minsky seems to suggest that the search for a unique solution or a perfect rule may be limiting, whereas the ability to deal with the world’s complexity in a flexible and creative manner is what makes

SOURCE: IPSOS, 2023

## AI impact on daily life

AGREE  
DISAGREE



intelligence truly powerful. His statement prompts reflection on human action in relation to digital intelligent systems; as a consequence, reflecting on the ability to overcome difficulties and obstacles becomes more interesting, when tackling artificial intelligence, than just using indiscriminately AI across all sectors.

It is clear that the topic of artificial intelligence (or artificial intelligences, depending on the contents and functions of AI applications) raises a number of highly controversial issues at international level.

Some fear not keeping up with innovation, while others fear for their future prospects

All sectors, including politics, the economy, services, commercial distribution, education, communications, public administration, justice and weapons

manufacturing, demonstrate constant awareness and concern. There are two main anxieties: the fear of not keeping up with innovation and concern about future prospects.

Science fiction films of the 1950s and the emergence of AI, the latter now much cheaper and faster due to more powerful computers and interaction with online resources, initially led to fear of robots. It then became clear that they simplified the lives of workers, such as the car assembly line personnel, whose jobs might carry a risk of occupational disease or injury. In the same way, artificial intelligence is sure to play an extraordinary role in diagnosis and the organisation of care in healthcare

## Pope Francis foresees protection coming from "algor-ethics" - guarantee criteria already embedded in technology in the development stage

facilities, where logistics or a disinclination to share data of common interest often cause problems.

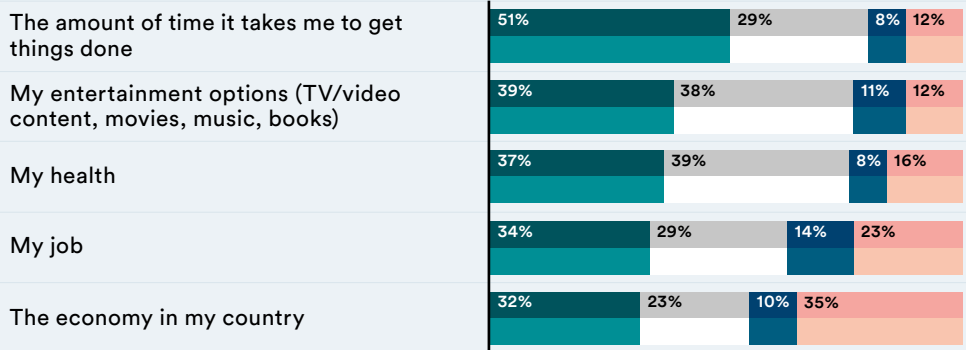
SOURCE: IPSOS, 2023

### Views on the use of AI



Question

Do you think the increased use of artificial intelligence will make the following better, worse or stay the same in the next 3-5 years?



Technologies allow us to constantly improve our lives, but they must be monitored, understood and regulated with great care and sensitivity through civil and democratic measures that only the United Nations can provide at a global level. All countries are moving to define more or less stringent rules, and above all prescribing governance that in essence subjects every automatic innovation based on the logical sharing of data to "political" checks, the traditional means of subjecting the technique to rigid rules that sometimes risk acting as a brake. This is particularly true in a universal context of fierce competition and rapid obsolescence of available technological resources.

After consulting the main companies (all American) involved in AI research, the US President, Joe Biden, recently stated that: "Artificial intelligence promises an enormous promise of both risk to our society and our economy and our national security, but also incredible opportunities". In the American context of extensive public/private cooperation, the predominant artificial intelligence platforms will be able to support science in a number of significant challenges, especially in healthcare. In fact, the President observed that more technological changes are expected in the next 10 years than were seen in the last 50, and that artificial intelligence will be able to transform the lives of people throughout the world.

Pope Francis has also spoken on the topic, underlining how the digital age can change the very perception of space, time and the body, while "homologation is establishing itself as the prevailing criterion of aggregation" and "recognising and appreciating difference is becoming ever harder". Existential and economic repercussions are a threat, with users reduced to

the role of "consumers" who are subservient to private interests concentrated in the hands of a few, with a direct effect on democratic processes and civil society in which individuals or groups find favour or face prejudice.

The risks of marginalisation are linked to the possession of information that can lead to discrimination against disadvantaged individuals or social groups who may lack adequate information and guarantees of defence. In this regard, Pope Francis foresees protection coming from "algor-ethics", in which criteria for guaranteed security and non-discrimination are pre-defined for technology in the design and development stage, accompanied by identification of important objectives of common interest, such as dignity of the person, justice, subsidiarity and solidarity. The concept of digital algorithm ethics, or algor-ethics, thus refers to the study and practice of moral principles that guide the development and use of algorithms in artificial intelligence applications.

Algorithms are sequences of instructions that allow machines to process data consistently, recognising and making use of specific information patterns that recur in the data, and to then carry out "conscious" actions automatically and efficiently. "Algor-ethics", therefore, would become a bridge between humans and global digital automatic systems, capable of "ensuring that principles are firmly embedded in digital technologies, through an effective transdisciplinary dialogue".

However, there are numerous technical difficulties in defining digital ethics for algorithms given their intrinsic complexity and the diverse contexts and situations in which they operate. The main problems arise around the transparency of algorithms, which often operate in a way that is



unclear to users, regulators and even expert programmers. This also makes it difficult to assess their actual functioning, their true purposes, the critical issues that may emerge long after their introduction, and the potential consequences, all of which implies a need for tools of explanation, documentation and verification.

All algorithms can influence important decisions that concern people's rights and interests, such as access to credit, health, education or justice – as well as life or even survival. This poses the problem of establishing in advance who is responsible for

errors, damages or violations associated with the data collected or the methods used to collect it, and of defining adequate appeal, reparation and sanction mechanisms, plus possible forms of timely mediation through dialogue between potentially interested parties. Every algorithm, like every calculation, can reproduce or amplify the inequalities and discrimination already present in civil society or produced by the selection or processing of data. This implies a need for the definition of transparent criteria of justice, inclusion and diversity in



← ↑

The Dali Museum in St Petersburg, Florida has used a controversial artificial intelligence technique to "bring the master of surrealism back to life". The art museum worked with San Francisco advertising agency Goodby Silverstein & Partners on the Dalí Lives video installation, which looks like it stars the real Salvador Dalí but is actually what is known as a "deepfake".

algorithm design and in the selection and analysis of data, in order to prevent or remedy bias caused by a mechanical or simplified approach, and the consequent distortions. The European Regulation on Artificial Intelligence (AI) is an initial proposal for legislation that aims to establish a harmonised legal framework for the development, introduction and use of AI in the European Union. The first essential in every sector is to protect the EU's fundamental values and rights, such as human dignity, non-discrimination, individual privacy and data protection, on

**The technical difficulties in defining digital ethics arise from the complexity of algorithms and the diversity of contexts**

the model of the already existing GDPR (General Data Protection Regulation, in

force since 2016). An ethical approach to AI is critical in the design, development and use of data and algorithms, to maximise sustainable value creation and minimise risks to individuals and society.

In his *Ethics*, Baruch Spinoza stated that “we know with certainty that nothing is good or bad except what helps us to understand, or what may prevent us from understanding.” We must therefore acknowledge that nothing can really be assessed negatively or positively without first evaluating it in terms of its impact on human understanding. In Spinoza’s view, every cognitive element either helps us to better understand the world or does not hinder or influence full understanding,

## The first essential in every sector is to protect the EU’s fundamental values and rights

while every prejudice eventually leads us away from full understanding or in directions that distance us from knowledge.

From a modern rationalist perspective, knowledge and understanding are central and co-existing values, and everything should be judged by how it contributes to their achievement and enhancement. However, this raises questions about how to determine and develop objective criteria for evaluating whether something is good or bad, useful or useless, and positive or negative. Knowledge, morality and evaluation of actions and things are a starting

point for a wider modern philosophical discussion on the nature of ethics and value in the use of technologies, and in their non-use, or incorrect or hasty use.

When we use digital devices, social media, or apps, we can use Spinoza’s perspective to determine whether what we are doing is helping or hindering us as we try to understand the world better. In every digital context, we have - and will increasingly have - access to a vast amount of information. In the future development of intelligent technologies we therefore need to consider whether digital products and services can be effective in understanding users’ needs and promoting their well-being or whether - even if in the longer term or from a previously overlooked standpoint - they might have possible negative effects on understanding or on society as a whole.

Our daily lives and our way of being free people can help guide more informed choices in the use of technology and the development of digital solutions that aim to improve understanding and well-being in political, economic and social relations. And this is a perspective that transcends the national dimension to become an increasingly qualifying objective of the systematic and cooperative action of supranational bodies, such as the United Nations.

### Giuseppe Corasaniti

Professor of Philosophy of Digital Law at the Universitas Mercatorum in Rome, law degree course, and lecturer in Artificial Intelligence, Machine Learning and Jurisprudence on the LUISS Guido Carli law degree course.

Magistrate from 1984 to 2020. UNODC (United Nations Office on Drugs and Crime) expert and long-standing Italian contact for the International Convention on Cybercrime. He was Head of Department at the Communications Guarantee Authority and at the Ministry of Justice. He taught for almost 40 years in the official Legal Information Technology courses at LUISS Guido Carli in Rome and at numerous Italian universities. He is the author of several essays on information technology and law, including: “Tecnologie intelligenti, rischi e regole” (Mondadori 2023), “Data science e diritto, certezze digitali e benefici del dubbio” (Giappichelli 2022), “Il diritto nella società digitale” (Milano Franco Angeli 2018), “Diritto e deontologia dell’informazione” (Cedam 2006), “Diritti nella rete. Valori umani, regole, interazione tecnologica globale” (Milano Franco Angeli 2006), “Esperienza giuridica e sicurezza informatica” (Milano Giuffrè 2003).





# Augmented Unreality



Inauguration of 'Via Mistica', the exhibition by the American video artist Bill Viola, who presented sixteen works at four locations in the historic central area of Cuenca, Spain. October 2018.

Existing somewhere between reality and representation, art has been defined as a "lie that brings us closer to the truth". Not a lie, but a means of interpreting what exists and offering a different view of reality, in which technology can play a part.

#### THE EDITORIAL OFFICE

"Who would dare to pretend that the image of a pipe is a pipe? Who could smoke the pipe in my painting? No-one. So it's not a pipe." René Magritte himself explained the meaning of one of his most famous works, "La Trahison des Images" or "Ceci n'est pas une pipe", to underline the dichotomy between an object and its representation. There was no indissoluble link, such as classical painting demanded, between image and reality.

Since 1929, when the controversial pipe was painted, the art world has seen a growing variety of techniques and media

CONTRASTO / REDUX / NANO CALVO



The art world has seen a growing variety of techniques and media that have influenced reflection on reality

example, this is true of the visual enchantments of the Argentine artist Leandro Erlich, who uses installations, sculptures, videos, sounds and photographs to create alternative realities that are more than plausible but clearly fictitious - alternatives to what we understand as "real". Nothing is what it seems and everything is illusion.

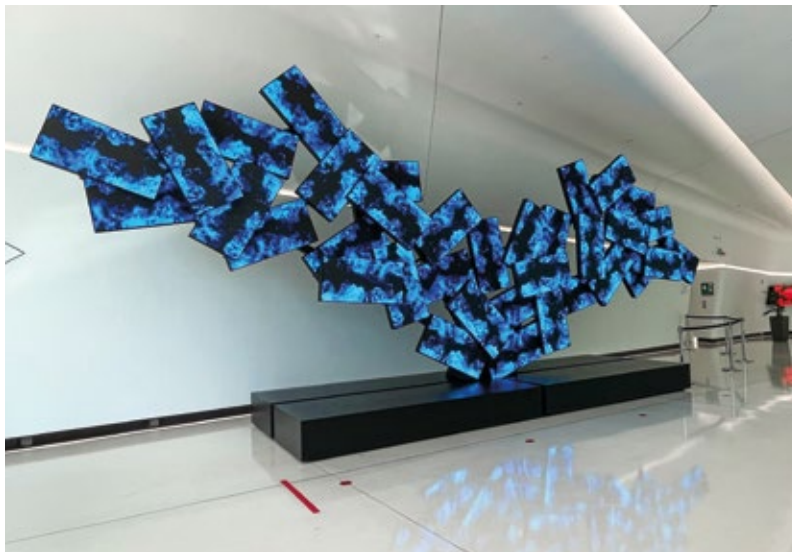
that have guided and in some way also influenced reflection on reality and the way it is perceived. To take a recent



The Swimming Pool, by artist Leandro Erlich, permanently exhibited at 21st Century Museum of Contemporary Art, Kanazawa, Japan.



"I mari del mondo - Omaggio a Zaha Hadid" (The seas of the world – Tribute to Zaha Hadid), Fabrizio Plessi's first monumental-scale video sculpture, temporarily exhibited at the entrance of the Generali Tower in Milan, in 2022.



## SCREEN-BASED ART

Technological development has allowed artists to experiment with a growing number of forms and tools of expression to explore creative possibilities and offer various, sometimes alternative, visions of reality. This happened in the nineteenth century with photography and in the following century with cinema. It is unsurprising that this process continues with computers and artificial intelligence.

Video art, designed for the screen, is part of this process, using video as a creative tool to tell stories and record reality, and also to investigate the potential of new means of expression. Fascinating experiments have been conducted by Nam June Paik of Korea, the first person to transform the television into an object of art, for example by distorting the signal with a magnet to produce modified images and sounds. Another example was set by Wolf Vostell of Germany, who placed televisions, showing distorted images, in ramshackle settings and often destroyed them during performances that themselves constituted the works of art.

Video art also includes the works of the American Bill Viola, internationally considered the undisputed master of this art form. Working with electronic music, experimental films and the potential of performance art, Viola constantly performs research on people and their relationship with the environment, often through slow-motion images projected in historical and evocative settings, with spectators invited to immerse themselves in live artworks. Or again, the works of the Swiss video artist Pipilotti Rist, the *nom*

*de plume* of Elisabeth Charlotte Rist, who uses video to study popular culture and the role of women in society. Synthetic images and virtual spaces are now the frontiers of computer art and text-to-image systems

Technological development has allowed artists to experiment with creative possibilities and offer different visions of reality

that generate original images from textual descriptions. Such tools allow the user to interact with art works and modify them, both as a viewer and a creator.

All things considered, we are heading rapidly towards a world in which digital is unequivocally superimposed on physical reality. It is a trend that affects both the artist and the interaction between the work and the viewer, who increasingly becomes an active part of the work itself, transforming the traditional experience of art gallery visits. Once again, everything seems set to change the way we interpret reality and interact with the world around us.



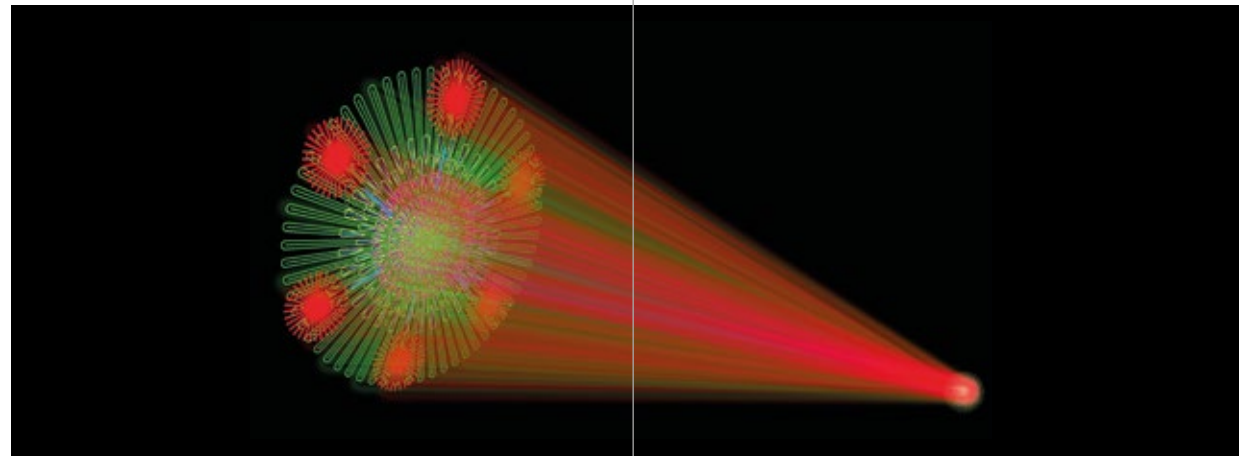
## THE HUNGRIEST EYE. THE SPECTATOR'S GAZE AND THE TECHNOLOGY THAT REVEALS EVERYONE'S UNIQUENESS

The relationship between art and spectator, projection into reality, the analysis and sharing of experience as a hallmark of contemporary art. In the home of The Human Safety Net at the Procuratie Vecchie IN Venice's St. Mark's Square, there is an installation that embodies this spirit and reveals everyone's uniqueness through the language of art. To do so it uses unique and ephemeral

An installation that reveals everyone's uniqueness through the language of art

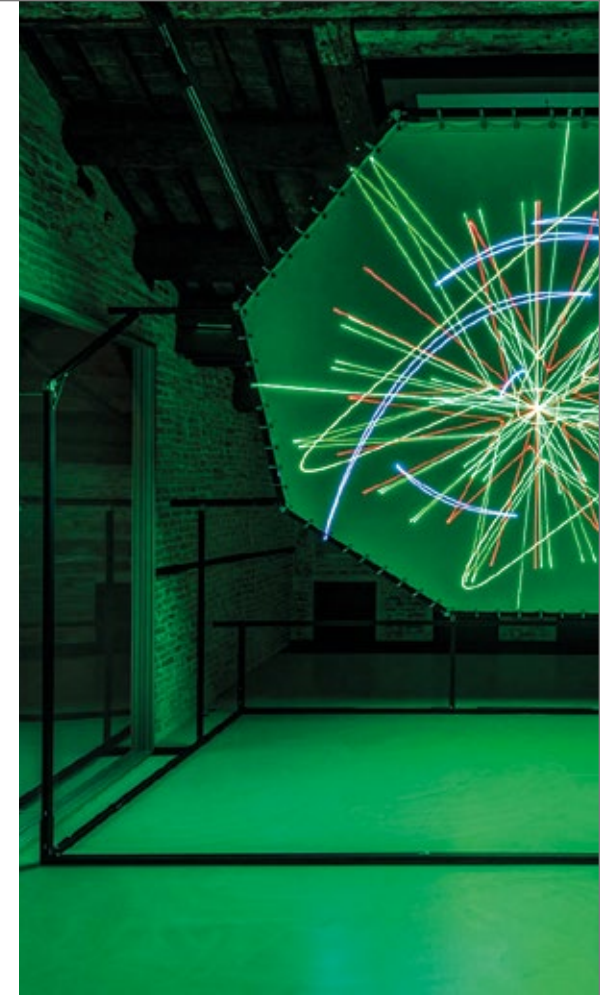
forms that combine with others in surprising ways. It is "The Hungriest Eye. The Blossoming of Potential" by the artist Arthur Duff, welcoming visitors to the Art Studio, the space where art dialogues with society, curated by art historian and critic Luca Massimo Barbero.

Inauguration of "The Hungriest Eye" in April 2023 marked the first year of The Human Safety Net at the Procuratie Vecchie. This building of exceptional historical and monumental importance, restored thanks to a project by David Chipperfield Architects Milan, welcomed over 60,000 visitors and hosted over 100 events in its first year of opening. Duff's installation integrates and completes the journey of the permanent exhibition "A World of Potential", an interactive and immersive experience that helps people to understand and connect with their potential, and to explore the strengths and discover the best qualities of themselves and others. It also features stories



about the beneficiaries, operators and volunteers of Generali's The Human Safety Net Foundation. The work allows visitors to see their strengths transformed into artistic representation by means of a laser system that creates unique shapes in a kaleidoscope of lights. Its inspiration comes from nineteenth-century Japanese woodcuts depicting fireworks, emblematic of an ideal of ephemeral and transitory beauty designed to amaze and surprise the eye of the beholder - the "hungry" eye (hence the title of the work) that aims to channel a perceptive stimulus and participate in processing the experience.

An experience that is both individual and collective, because new light compositions are created as new visitors arrive. Everyone is thus unconsciously led to join others in an experiment with interactive dynamics, the sharing of a space and an experience, and the freedom to express oneself in interaction.



Visitors can repeat the experience several times and witness the formation of an ever-changing image. Every experience exists in a different way, and this is expressed by the infinite variety of forms that unfold before the "hungry eye": reflections and plays of light in art that is performed rather than viewed, in an expression of individual potential and personal uniqueness.

→

"The Hungriest Eye. The Blossoming of Potential", a piece by Arthur Duff, which will be on display for visitors until 10 March 2024 inside the Art Studio, within the Home of The Human Safety Net at the Procuratie Vecchie in Venice's St. Mark's Square.

# Between the Eye and the Mind

TEXT  
THE EDITORIAL OFFICE

IMAGES  
BY CONTRASTO

CURATED  
BY CRISTIANA GIORDANO

Reality can be imagined, constructed and even reconstructed. It can also be represented by difference or contrast with what is not real, as in an opaque mirror or a curved universe. If this kind of representation is of a photographic kind, it causes an alienating feeling in the eye and mind of the observer, making the representation seem ambiguous and much less reassuring.

The reportage in this issue of the Bollettino is a journey through pseudo-realities captured by the lens, but who can deny that someone, at some definite time and place, took a photograph of something? And does the photograph portray reality or not? For example, the Sphinx, the pyramids and the Venetian gondolas are

certainly not real, but the perceptive experience of the tourists who visit them may be. And while the box-like, crowded Lilliputian city is not, of course, a real city, its relative dimensions are plausible and only the passing Gullivers in the background provide us with any sense of certainty.

Finally, looking at the little robot - Pinocchio observed with amazement and curiosity by what appears to be his creator, can we consider it real? He is definitely not a living being (possibly a thinking one?) but then, neither was the real Pinocchio, except at the end of his very human story.



↑ The 2016 Consumer Electronics Show, held in Las Vegas, Nevada, January 2016.



At the Ursula Wiegand Day Care Centre run by the Caritas Social Centre in Erlenbach am Main, Pepper - the humanoid robot designed to analyse expressions and tones of voice - supports nursing staff in routine tasks, helps to manage extensive documentation and contributes to the definition of job offers. The anthropomorphic Pepper is already used as a companion and personal robot in healthcare and education, and as a receptionist in offices and shops. Pepper was developed by the French company Aldebaran Robotics SAS and the Japanese telecommunications and media group SoftBank Mobile Corp.

↑ Erlenbach am Main, Bavaria, Germany: Nursing assistant Ute Voigt, 55, warmly welcomes the day's guests wearing her red T-shirt.

← Erlenbach am Main, Bavaria, Germany: Pepper entertaining elderly people by playing games with them.

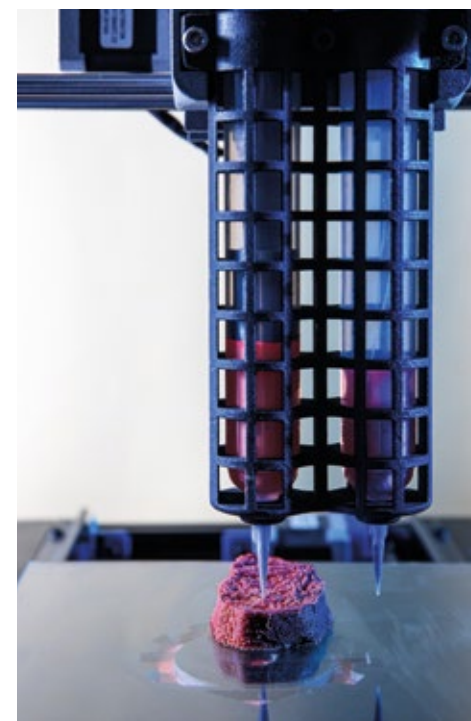


← ↑ Horst, The Netherlands, 10/07/20 | People visiting the Mind Mystery theme park in Horst. Optical illusions are central. Because of Covid19, visitors are only allowed to enter in limited numbers and must keep sufficient distance.



↑ USA. Las Vegas. The Venetian Hotel. Gondoliers on the Grand Canal. 2000.

← USA. Las Vegas. The Luxor Hotel and Casino. 1994.



Not all meat comes from animals: vegetal “meat”, in fact, is made of flour derived from beans, cereals or other proteins. Consumers’ interest in these products has markedly increased in the past few years owing to greater concern for a healthy diet and environmental sustainability. It is now acknowledged that intensive animal farming will not lead to improved health, animal wellbeing and sustainability. Moreover, intensive agriculture is the main cause of greenhouse gas emissions: the effects of the methane it produces are 26 times worse than those of the CO<sub>2</sub> released by factories and cars, for example. The amount of land it uses is also a cause for concern, with 77% of the planet's arable land used for grazing or growing animal feed.

← Barcelona, Spain. 3D printed plant-based meat steak from Novameat.

↑ Barcelona, Spain. 3D food printer produced by Novameat.



↑ The brain of Harmony, the first sex robot created by Realbotix, at the company's virtual reality headquarters in San Marcos, California, October 18, 2017. While VR pornography may feel like something out of a science fiction movie, it already has a formidable, if underground, presence.

← Different heads in the lobby of Realbotix, in San Marcos, California, October 18, 2017. Realbotix introduced in May the first sex robot, one of the most buzzed-about inventions in the world of pornographic virtual reality.



↑ China / Shenzhen / Fake Holidays in China / 2008 / Photopoint in the theme-park "Minsk World". The Aircraft Carrier was built in the 70s by Russians. In the late 90s it was sold to the Chinese, who decided to bring the ship from Russia to China to restore it and make a theme park out of it. Now, it lies in the harbour of Shenzhen and attracts thousands of tourists.

← Japan / Kinugawa / Fake Holidays in Japan / 2009 / Theme Park "Tobu World Square". Miniature of Broadway in New York, USA.





Some researchers question whether A.I. can be truly intelligent without a body to interact with and learn from the physical world.

↑ Robin Johnson, a robot technician at Embodied, works on a Moxie unit at the company's lab in Pasadena, California, April 6, 2023.

← Units of Moxie, which has sensors that can take in visual cues and respond to body language, at Embodied's lab in Pasadena, California, April 6, 2023.



# contrasto

Contrasto is one of the world's leading photography agencies. It represents photographers through whom it forms close links with the world of media and culture, allowing it to play a leading role in fine-art photography.

[www.contrasto.it](http://www.contrasto.it)

← Austria / Vienna / The Fear Theories, 2016. The Fear Theory is a long-term project following a boy with sleep disorder, panic attacks and fears as he grew up.

# At the Frontiers of the Future

A real time reconstruction of time lapse photographs taken on board the International Space Station by NASA's Earth Science & Remote Sensing Unit. ORBIT – A Journey Around Earth in Real Time / Seán Doran (UK).

Innovation does not emerge when a technology is designed, but when those who adopt it recognise its value.

BY LUCA DE BIASE  
— INNOVATION EXPERT JOURNALIST

Only when it becomes part of the life of its users can technology change the course of events. This happens, if at all, in the future. The start of such a process opens up possibilities that did not exist before, and for a time we enter a dimension that lies on the border between real and unreal and deserves to be explored.

Because to understand these situations we need to think about the future in which those technologies might spark innovation. But the future is not real: it does not exist. There is no way to study the future empirically, that is, on the

basis of future facts, because those facts do not yet exist. The future is a narrative, a projection, the fruit of the imagination. But it is not a fiction. Because every present fact, and therefore every current technology, intersects with the most complex phenomena of contemporaneity, acquires meaning in its relationships with reality and, so to speak, contains its consequences. So that in some way - mathematical or literary - it is possible to describe it. In short: the future is unreal, but it is born of reality, and we need to learn to navigate this suspended dimension.

The research process starts with an attempt to understand whether the new

There is no way of studying the future on the basis of facts, because those facts do not yet exist

technology will be adopted. And then to foresee the possible consequences. The theory is clear: technologies in a networked world are valuable only when widely adopted. Metcalfe's law holds that value grows exponentially with the number of users. Therefore the only way to understand whether a new technology will have an impact is through analysis capable of anticipating the dynamics of its adoption. For instance - will technology to build a metaverse attract users? Will a Twitter competitor quickly do so? And if so, what will its impact be? Will

many people be interested in using generative artificial intelligence? And what will the consequences be? If we cannot answer these questions, new technologies will remain in that dimension between the real and the unreal that could transform into the quicksand of history.

There is a pressing need for improved ability to predict which technologies have the potential to produce innovation. It is needed by those who produce new technologies and hope they will be adopted; it would help those who introduce new technologies and create the conditions for their adoption; and it is indispensable for sceptics of these technologies who conceive others designed to be even more innovative. Satisfying the need for knowledge about the potential of new technologies requires a change of culture. It is not an easy task; once it is realised that a new technology may have an impact, we need to know whether it will be desirable or bring harmful side effects.

There are shortcuts, of course, and unfortunately they may pay off. Entire ideologies can be built to convince people to adopt something - an idea, an expectation, a hope, a mentality, a technology. Facts can be manipulated. The most powerful emotional impulses can be activated. The goal is always the same: to attract users and then make an impact by retaining them. Technology ideologues are not difficult to recognise: they care little about side effects. Indeed, they assume that unexpected consequences can be dealt with after results are achieved. "Move fast and break things", one of Mark Zuckerberg's mottos, made sense to him precisely because his ideology convinced him that connecting

many people with his Facebook platform was enough to improve the world. The problem of the quality of information was set aside. On the other hand, the business model required maximum collection of users' personal data, to be resold as a service to advertisers. In this context, everything was for the good with no thought given to side effects: misinformation, hate speech, teenage depression and confusion of the elderly.

But the "ideological" approach does not always work, even when backed by a very powerful figure. The metaverse of Mark Zuckerberg's ambitious interpretation has found few users, and so will have no consequences. Therefore, unless it changes direction, it is not an innovation. Threads, the version of Twitter built by Meta, attracted tens of millions of users in just a few days, but soon began to lose them. ChatGPT, on the other hand, gained 100 million users in two months and after eight months had lost relatively few. It continues to attract the attention of commentators and others who study its consequences. It is a safe bet that Artificial intelligence will have significant effects. And although the most creative artificial intelligence applications based on large language models are still in the exploratory phase, the first results are emerging - and being very carefully studied. Assuming that there is an impact, what will it be? Will it improve the quality of human life? This is the next stage in the exploration of that dimension suspended between real and unreal mentioned above. And it is about decoding the signals, strong or weak, that suggest solutions to the problem.

In the first phase, a technology's impact is likely to remain ambiguous.

Technology gains generic attention from an audience restricted to curious and committed innovators. The model of the "hype" curve, of the uncritical enthusiasm that leads a technology to create significant interest, theorised by the research company Gartner, is very appropriate for the current state of technology because lasting success begins by winning over a body of users who grasp the potential value of a technology before it really exists, that is, when it is still "unreal", precisely because

The ideological approach does not always work, even when backed by a very powerful figure. The metaverse has found few users

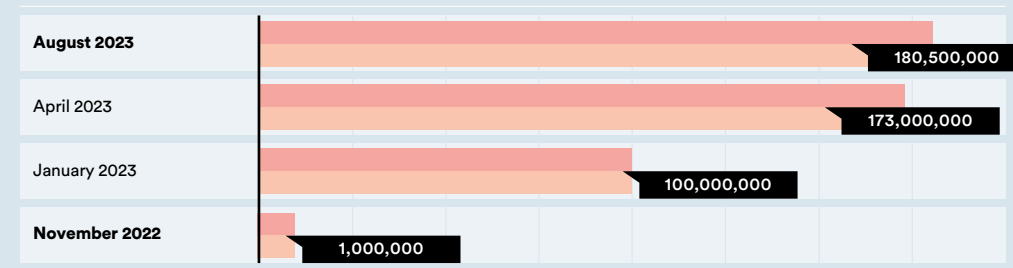
the real value will emerge only when it is widely adopted. This means that adoption is initially uncritical or very far-sighted. In today's world it is driven by a mix of proficient "early adopters", and by influencers of a particular kind who enthusiastically promote whatever they are paid to publicise. For adoption to reach a significant level, the wheat must be separated from the chaff. In the case of generative artificial intelligence, everything that resembles the use of technology as an oracle that can answer any question probably needs to be

SOURCE: REUTERS, 2023

## How long to reach one million users?

Rank	Online service	Launch	Time	Rank	Online service	Launch	Time
1°	Threads	2023	1 hour	6°	Facebook	2004	10 months
2°	<b>ChatGPT</b>	<b>2022</b>	<b>5 days</b>	7°	Foursquare	2009	13 months
3°	Instagram	2010	2.5 months	8°	Twitter	2006	2 years
4°	Spotify	2008	5 months	9°	Airbnb	2008	2.5 years
5°	Dropbox	2007	7 months	10°	Netflix	1997	6 years

## ChatGPT User Growth



stripped out. The connotation of "unreality" used in this sense was soon decoded, with general criticism of the misconceptions that the misinterpreted technology seemed to suggest. But when the uncritical curious gave way to professionals with access to cognitive equipment suitable for testing new forms of interaction with the machine, some important "realities" emerged: if the data on which the machine was focused was correct and controlled within a relatively limited disciplinary framework, the machine gave excellent results. It resembled a

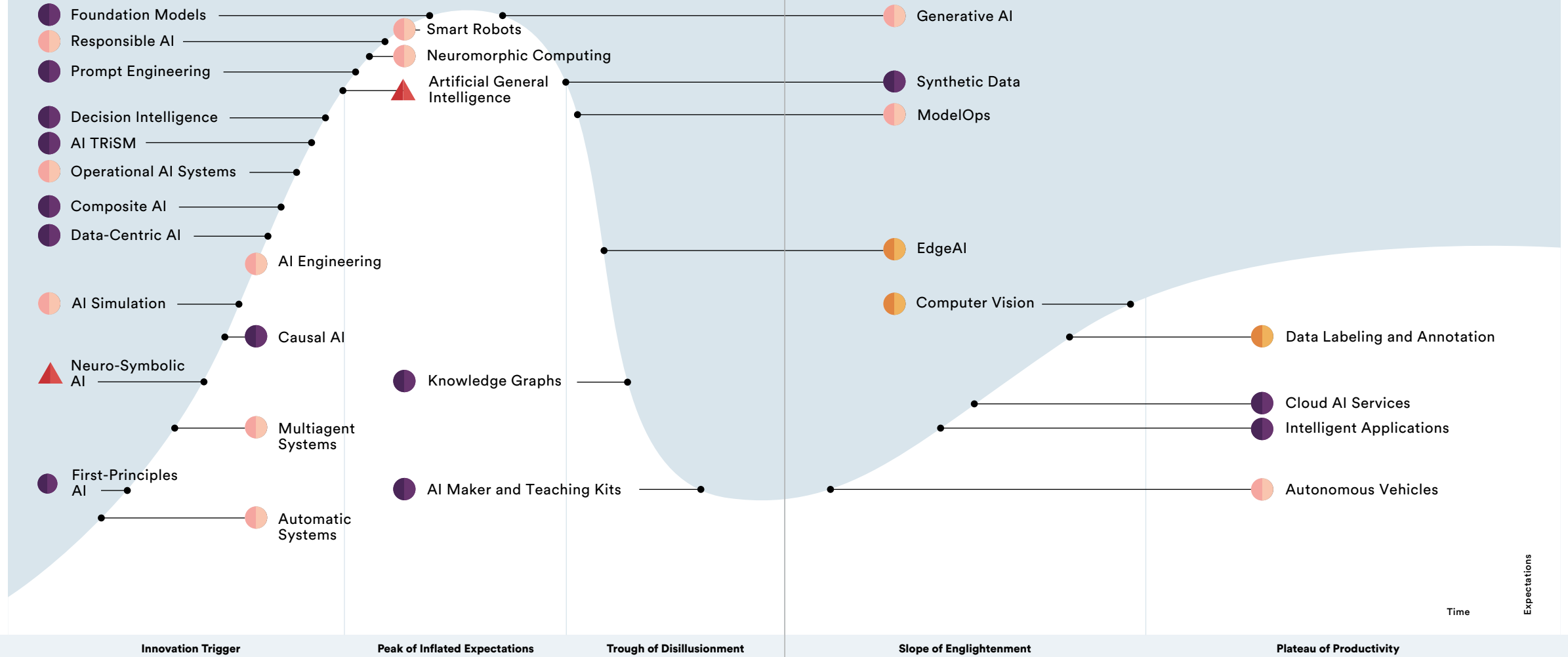
competent assistant, summarising documents, sorting and cataloguing them, and so on. In this way, a part of the space between the real and the unreal was eliminated, only to open the door to others.

Nor is Artificial Intelligence limited to generative intelligence. Image recognition, preventive maintenance, diagnostic support, the exploration of possible molecular combinations, the creation of digital twins of cities and individuals – these are all applications of a technology that appears to be on the verge of radically

# The cycle of enthusiasm for new technologies

PLATEAU WILL BE REACHED:

- LESS THAN 2 Y.
- 2 TO 5 Y.
- 5 TO 10 Y.
- MORE THAN 10 Y.



## 5 stages of the Gartner Hype Cycle:

### Innovation Trigger:

a new technology or concept is introduced and begins to attract attention.

### Peak of Inflated Expectations:

excitement and expectations are sky high. People have unrealistic expectations about technology.

### Trough of Disillusionment:

expectations plummet with the failure

of the technology to meet its initial promise.

### Slope of Enlightenment:

after initial disappointment, people begin to better understand technology and how it can be used in practical ways.

### Plateau of Productivity:

technology becomes an integral part of operations and everyday use, delivering tangible value.

changing many cognitive activities, accelerating and to some extent industrialising them. The next question is: how and to what extent will they act autonomously, managing sensors and algorithms in a way oriented towards obtaining results of strategic value to humans? Will the ideas behind the self-driving car diffuse to other activities, from call centre management to deciding on the granting of a mortgage? Unacceptably risky applications have been defined by the European institutions involved in draft-

**Applications deemed unacceptably risky are banned. Here the dimension suspended between real and unreal is resolved by law**

ing the AI Act. Some applications deemed as such are banned, and many others are subject to special regulations and limitations. Here the dimension suspended between real and unreal is resolved by law, which again opens the door to speculation: does the law slow down innovation or successfully guide it in the right direction?

Since predictions very rarely come true in fluid circumstances, we need to find a more realistic way of foreseeing which innovations will have multiple consequences, especially when there is a

need to understand the desirability of their effects on people and communities.

Trendy or propagandistic narratives rarely help. Based on the work of Stanford University adjunct professor Brian Jeffrey Fogg, models of persuasive technologies, i.e. those that persuade people to adopt them, have been under development for some time. Might it also be useful to identify solutions that create dependencies and those that liberate creative energies? Societies aware of the danger of introducing technologies in the absence of structured thinking about their consequences are building new design models. Alex Pentland of MIT and Stanford suggests moving from an era in which it was enough to design technical systems to one that requires us to find a method of designing sociotechnical systems. This will certainly include an ability to explore, in a balanced way, the dimension suspended between the unreal and the real in which the consequences are found.

Studying the future means exploring its many possible, plausible, probable and - why not? - preferable consequences. So the future is plural. As it approaches, the unreal and the real converge, as in the game of dots. But the emerging figure contributes to knowledge or destroys it only if the users' epistemology is solid enough to maintain a balance between real and unreal. In this regard Ernest Hemingway suggested that we should all cultivate a personal "nonsense detector" that would condense every experience of studies on possible futures, employing every discipline from mathematics to literature, to help us see the future more clearly in order to anticipate it rather than endure it.

#### Luca De Biase

Luca De Biase is Innovation editor at Il Sole 24 Ore and at Nova24, which he founded and led from 2005 to 2011 and then from 2013 onwards. His interests include technological innovation, land development, the rights and duties of internet use, innovative startups and the knowledge economy.

He is professor of Knowledge Management and Humanistic Informatics at the University of Pisa, of Journalistic Method for the Master's degree in Science Communication at SISSA in Trieste, and of Media Ecology for the Innovation Master's degree at Sant'Anna and Stanford University. From 2007 to 2012 he taught on the Master of Public Affairs course at Sciences Po, Paris. He is Director of the Imminent Centre for Research on the Economics of Language Services, and Director of the Media Ecology Research Network of Reimagine-Europe in Brussels.

The numerous international venues at which he has been invited to speak include the OECD in Paris, the StsForum in Kyoto, the Mit-MediaLab in Cambridge Massachusetts, the Italian Cultural Institutes in Brussels and Paris, the École des hautes études en sciences sociales, and Falling Walls in Berlin.

He is the author of "Il lavoro del futuro" (Codice, 2018) and "Eppur s'innova. Viaggio alla ricerca del modello Italiano" (Luiss University Press, 2022).





ChatGPT



ChatGPT logo is seen in this illustration taken September 28, 2023.

# Modern Times



# The impressive abilities of AI tools like Midjourney and ChatGPT raise a question that often arises in the face of new technologies: will these tools create or destroy jobs?

BY LIDIA BARATTA  
— JOURNALIST

If you ask ChatGPT “how will artificial intelligence affect employment in the future?”, the OpenAI chatbot outlines three issues on the horizon: automation, human-machine collaboration and the creation of new jobs. In a few seconds, artificial intelligence provides a complete answer that is difficult to distinguish from human reasoning. This is why the arrival of this generative artificial intelligence software has fuelled fears about the replacement of human work by machines, particularly among the most highly qualified professionals. Common questions of concern are: What will happen to screenwriters and journalists if AI can write meaningful text in a few seconds?

## What will happen to screenwriters and journalists if AI can write meaningful text?

And what will happen to graphics if even the least creative people are able to obtain aesthetically pleasing images with just a few clicks?

In reality, the first advances in artificial intelligence date back to the 1950s, but the launch of ChatGPT in November 2022 made it accessible to everyone, sparking excitement and suspicion. In just two months this form of AI, capable of creating content instead of simply recognising or classifying it, reached 100 million subscribers divided between catastrophists and optimists. The former believe that

artificial intelligence could represent a danger for humanity, even leading to the risk of extinction, while the latter argue that it represents an opportunity to work better and be more productive.

It is a pattern that repeats itself throughout human history. At the end of the 19th century, it was feared that the telephone would make people lazy and antisocial. In the 1950s, many thought that television would spell the end of radio, replacing books and even destroying family life. And there were similar concerns about cars, refrigerators, washing machines and lifts. Many of the technologies we take for granted today were initially opposed.

## WHERE ARTIFICIAL INTELLIGENCE IS FOUND

Until 2014, the most significant machine learning models, in which data was used to train artificial intelligence, were confined to universities. Since then algorithms have gradually emerged from academia, entering industrial production chains and working alongside real workers.

Monitoring of the “Artificial Intelligence Index Report 2023” by Stanford University has shown that 32 machine learning models were developed commercially in 2022 compared to only three produced by universities. In the same year, global corporate investment in artificial intelligence amounted to \$189.6 billion, a thirteen-fold increase in ten years.

The areas of interest attracting most investments in 2022 were medicine and healthcare (\$6.1 billion); cloud storage, and data management and processing

(\$5.9 billion); fintech (\$5.5 billion); cybersecurity and data protection (\$5.4 billion); and retail sales (\$4.2 billion).

According to the Artificial Intelligence Observatory of the Milan Polytechnic School of Management, the most significant share of the AI market (34%) is linked to solutions for analysing and extracting information from data (Intelligent Data Processing), especially for making forecasts in areas such as business planning, investment management and economic planning. Interpretation of written or spoken language, including chatbots and NLP (Natural Language Processing), is also a flourishing area (28%). Algorithms that suggest content to customers in line with individual preferences (Recommendation Systems) follow at 19%.

These were the main sectors to show global growth of demand for AI-related employment in 2021 and 2022. The three countries with the highest number of LinkedIn ads requiring AI skills are the United States, Canada and Spain. The greatest concentration of AI-related professional profiles occurs in Hong Kong. But other countries have higher rates of penetration of AI-related skills in the labour market, with India leading the way, followed by the United States and Germany. As Stanford underlines, these are important matters because the future of the coexistence of human work with AI will be based on skills.

### A COEXISTENCE WORTH BUILDING

The investment bank Goldman Sachs has predicted that 300 million jobs globally will be vulnerable to automation due to artificial intelligence, adding however that "integration" between algorithms and

humans will be much more common than "substitution". OpenAI, the company that created ChatGPT, claims that 2 in 10 workers will see at least half of their work changing radically, and McKinsey predicts that 12 million jobs will change between now and 2030.

There is a fundamental need to understand how artificial intelligence will integrate into the world of work. The study "Generative AI and Jobs: A global analysis of potential effects on job quantity and quality" by the International Labour Organization (ILO) explains that generative artificial intelligence is more likely to

**Goldman Sachs states that "integration" between algorithms and humans will be much more common than "substitution"**

create jobs than destroy them, automating some tasks and creating new professional opportunities. Changes will be seen above all in the nature of work, particularly with regard to intensity and autonomy. The study predicts that high-income and upper-middle-income countries will be most affected, since they have a higher proportion of the clerical and administrative positions that are particularly exposed to the impact of artificial intelligence. Since office jobs are an important source of female employment, the effects are also strongly linked to gender.

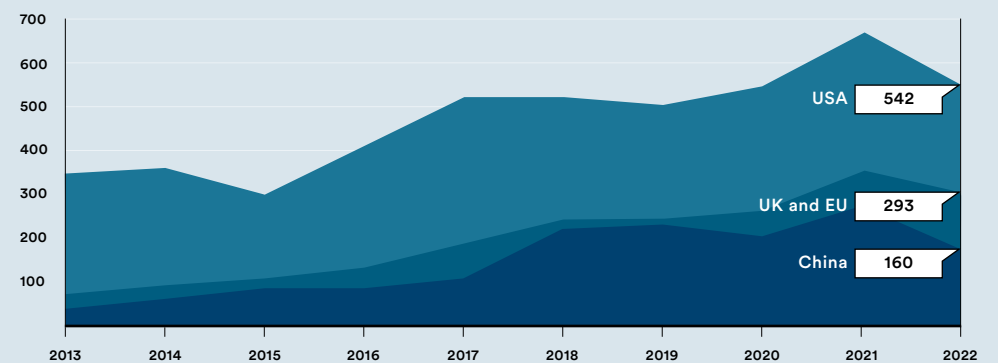
SOURCE: HAI — HUMAN-CENTERED ARTIFICIAL INTELLIGENCE, STANFORD UNIVERSITY, 2023

## Countries providing funding for AI companies

by Geographic Area, 2013–2022 (Sum)



by Geographic Area, 2013–2022 (Trend)





The study also documents notable differences linked to the economic structures of different countries. It seems that 5.5% of total employment in high-income countries is potentially vulnerable to technology-driven automation, while the risk of automation in low-income countries affects only around 0.4% of employment.

This is because these technologies are geared more to automating the work of the qualified and creative than the more repetitive tasks of less qualified workers. Some of the work of publishing companies

## Qualified and creative occupations are particularly exposed to automation

and law firms, for example, could be automated. Algorithms will not create scoops or perform journalistic investigations, nor make final decisions in criminal trials, but will be able to provide



French tourists Isabelle and Marc Rigaud use an automated translation window at the Seibu-Shinjuku station in Tokyo, Japan, July 26, 2023.

pre-processed basic information, quickly creating content from existing data. This is why a higher value may be attached to jobs that require critical and original thinking. The ILO explains that artificial intelligence could save time and enhance human contribution to work even more.

This is also supported by the new white paper “Jobs of Tomorrow: Large Language Models and Jobs” from the World Economic Forum. This suggests that LLMs, or Large Language Models, i.e. learning algorithms capable of recognising, summarising, translating and generating

content using large databases, could be beneficial where creativity and an ability to solve complex problems are required. These algorithms would help workers by reducing the time spent on routine tasks, thus increasing their productivity and focusing their working hours on tasks of higher added value.

The report, which examined more than 19,000 tasks in 867 different occupations, states that the jobs of bank counter staff, postal service workers, cashiers and data entry clerks are at greatest risk of extinction. But new roles will also be created,

among them artificial intelligence and machine learning developers, business intelligence analysts, interface designers, and AI ethics and governance specialists. Jobs in education and training, guidance and career consultancy will experience little change.

**WORKING WITH AI**

“Our surveys all tell us that we are witnessing integration between human work and machines, and that companies are recruiting staff with AI skills”, explains Giovanni Miragliotta, director of the Artificial Intelligence Observatory of the Milan Polytechnic Management School. “Companies are enhancing their offer by adopting artificial intelligence solutions that communicate with customers, such as chatbots, or even using them where people want to be relieved of boring jobs such as accounts reconciliation. In short, employees are being integrated, not replaced”.

Miragliotta suggests that artificial intelligence could also be a response to the needs of an ageing population. “Companies struggle to find employees”, he continues, “so there is huge demand for technologies to manage staff shortages and improve the productivity of older workers”. A “labour market that will incorporate these new machine capabilities” can be seen on the horizon, and workers seem to be aware of this. According to the Work Trend Index 2023 published by Microsoft, one of the companies investing most heavily in artificial intelligence, 70% of interviewees would like to delegate as many tasks as possible to AI in order to reduce their workload. In particular, workers turn to AI to search for information and quick answers (86%), summarise the content of

meetings and video calls that they are unable to join (80%), analyse data (79%), administer tasks (76%), perform creative work (73%) and plan daily commitments (70%). Everything will depend on how we manage this new collaboration between humans and AI. No blueprint yet exists, but the secret seems to lie in keeping up with the new skills needed to live with AI in order to avoid the creation of first and second class workers.

According to the Work Trend Index, 82% of managers say their employees need new skills to handle this new coexistence with AI. It is not just a question of technical software expertise. Above all, transversal skills will be needed: analytical judge-

**AI could also be a response to the needs of an ageing population**

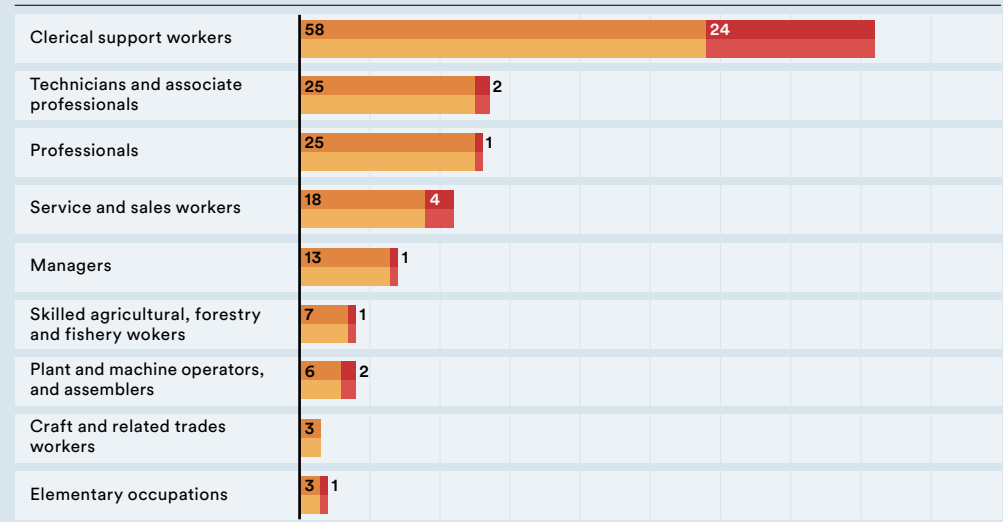
ment, flexibility, emotional intelligence, curiosity, and the ability to delegate work to AI and identify biases present in the algorithm.

“Artificial intelligence is now the ‘new black’ and companies know they must train their employees to ensure that they can work profitably”, explains Miragliotta. “We are seeing an increase in research doctorates and degree courses dedicated to AI or with AI as a course topic. But company employees, also, are increasingly undergoing continuous training to keep up with these new tools”.

**Jobs with GPT exposure**



% of medium and high GPT-exposure tasks, by occupational category (ISCO 1-digit)

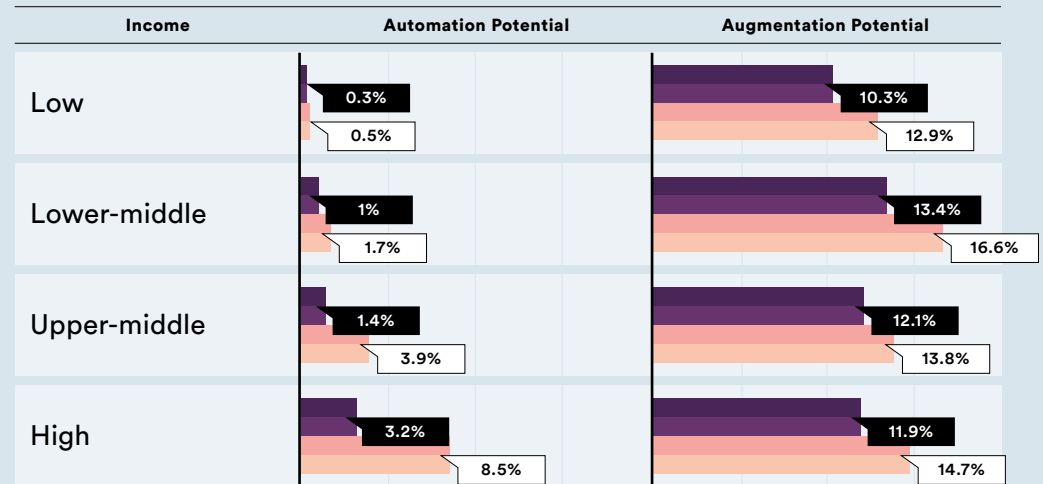


**Automation vs augmentation\***



In all groups of countries more professions are susceptible to AI augmentation than to automation. On the other hand, automation is increasingly common in professions as national income increases, but with a gender gap that varies by income level.

share of employment (%) within each sex's total employment



\*Enhancing human abilities through advanced technology.

According to the Artificial Intelligence Index Report 2023 from Stanford University, both non-academic professional courses and university courses are growing in number globally, and include master's degrees and doctorates, sometimes transversal in form, that involve the study of artificial intelligence.

"The person we now know as an AI engineer has an essential role, but needs to work with others possessing a range of skills, from data entry to administration, and up to governance and management of ethical aspects", explains Miragliotta. "Many skills come into play. The AI engineer is central, but not enough. It

## AI is now the "new black" and companies know they must train their employees

would be like saying that a restaurant needs only a chef, but the chef relies on others to do the ordering, choose suppliers and manage the budget, and on those who set the tables and do the cleaning. The same goes for AI: it is not enough to develop software, you have to manage it".

This is an important matter, since improper use of artificial intelligence is rapidly increasing. According to the AIAAIC (AI, Algorithmic, and Automation Incidents and Controversies) database, which tracks incidents related to the unethical use of

artificial intelligence, the number of cases of abuse, false content and controversy has increased 26 times since 2012. In addition to fake news, there are dangers linked to the reiteration of ethnic and gender stereotypes. For example, there is scientific evidence showing that automated voice recognition systems are less accurate for African-American speakers than for white speakers. We will therefore need new experts who can recognise fake news and discriminatory biases perpetrated by AI.

The growth of controversies in the use of artificial intelligence is proof of the need for more training to improve coexistence, which also requires non-technical professional expertise to deal with governance and the ethical issues it raises.

The ILO study concludes with an appeal to politics: "The socioeconomic impacts of generative AI will largely depend on how its diffusion is managed, confirming the need to design policies that will be fundamental to managing transition and supporting orderly and fair transition".

### Lidia Baratta

Lidia Baratta. Journalist, 38 years old, of Calabrian origins. She studied communication in Bologna and Rome, before attending the Walter Tobagi School of Journalism in Milan. In between, she spent a short period studying in New York. Baratta has worked at Linkiesta since 2012, working on employment and economic affairs, editing the weekly newsletter, "Forzalavoro". She is among the presenters of the "Prima Pagina" radio programme on Italy's Radio Tre. She is part of the team of journalists behind Good Morning Italia, collaborates on various publishing initiatives with Feltrinelli, and is among the contributing authors of the investigative journalism comic strip magazine, "La Revue Dessinée Italia". In 2016, she won the Gaspare Barbiellini Amidei Journalism Prize. Her previous bylines include D di Repubblica, L'Espresso, La Stampa and Vice.



# Good Technology



Generali people create new Smart Automation solutions to support the **Haciendo Camino** NGO, one of The Human Safety Net's partners, which operates in Argentina where it works every day to improve the living conditions of local communities.

#### THE EDITORIAL OFFICE

Imagine the interior of a country with just over 46 million inhabitants in a land area of 2,791,810 km<sup>2</sup>, nine times the size of Italy, where population density is very much lower than in the major cities and travel is more complicated. Argentina, with its mountain ranges, rivers, lush vegetation, and temperate climate, stretches far and wide, although this does not necessarily mean better living conditions for those who live in the interior. According to some of the most recent data provided by INDEC (the National Institute of Statistics and Censuses of the Argentine



Republic) for the second half of 2021, "in Argentina one child in two lives in poverty, 57% of families do not have adequate medical check-ups. 43% of households do not have access to clean drinking water, and 59% of mothers have their first child in adolescence." This scenario reflects a problem of distribution, particularly of the resources that sustain communities.

The vastness of the Argentine plains hides a complex reality, with the country facing socio-economic challenges that mean local communities often fail to see

the benefits of progress and may even receive inadequate supplies of essential goods. People commonly face a harsh reality of injustice and inequality, but when human solidarity meets technology a glimmer of hope emerges amid the numerous difficulties, with the **Haciendo Camino** story a perfect example.

**In Argentina one child in two lives in poverty**

## CARING FOR VULNERABLE FAMILIES IN ARGENTINA

Haciendo Camino, a partner of The Human Safety Net Foundation created by Generali with the aim of unleashing the potential of people living in vulnerable circumstances, is an Argentinian non-profit organisation that supports families with young children, working in 12 isolated rural locations across the provinces of Santiago del Estero and Chaco. Its mission is to promote the development of children aged 0 to 6, offering healthcare to pregnant women, and economic and psychological support to families. Since its establishment in 2006, Haciendo Camino has worked with 3,360 young women and 13,600 families, identifying 22,793 cases of malnutrition in newborn babies. In these parts of Argentina its activities provide a vital help for rural communities that are too fragile to make their voices heard and too isolated to be noticed.

To monitor the status of each centre, Haciendo Camino and its volunteers collect data on stocks of food and essential supplies as well as on children's growth. This was previously a long and costly process, with data collection subject to delays and inaccuracies, and often took up time that could otherwise be dedicated to the families. However, data collection is crucial, especially for identifying early signs of malnutrition in children and allowing early action to be taken.

A number of experienced Smart Automation volunteers from Generali decided to accept the challenge of finding innovative digital solutions for

automating Haciendo Camino's data collection procedures. Hailing from different countries within the Group, these volunteers are part of the Smart Automation Community of Practice, a Generali internal network that shares knowledge and best practices on automation with the goal of creating more efficient and effective processes.

### AUTOMATION, BUT WITH A HUMAN TOUCH

Generali's experts initially identified a digital tool, UiPath, and then implemented software that provided

## A number of experienced Smart Automation volunteers from Generali decided to automate Haciendo Camino's data collection

rapid and automatic data collection and the generation of monthly reports on all the activities of the 12 Haciendo Camino centres. This collaborative effort made it easier to identify cases of child malnutrition and monitor the effectiveness of actions in the field, allowing more time and energy to be given to meeting the real needs of families. "Time spent on monthly reporting activities

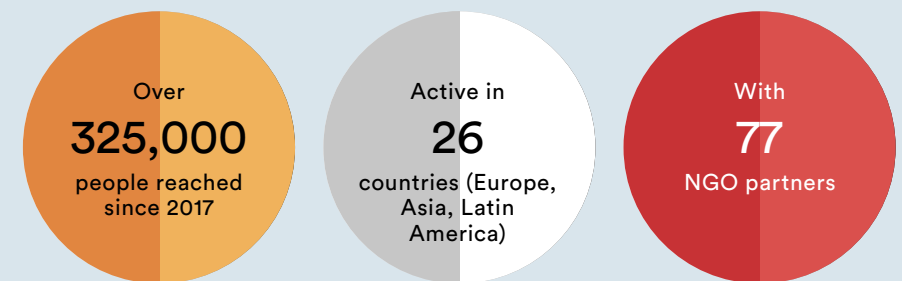
has now fallen by 20 hours, and is now available for providing direct support to families," said Nicolas Fiedotin, Head of International Cooperation and Alliances at Haciendo Camino.

Technology and automation have thus made it possible to improve the relationship between volunteers and beneficiaries, which had become increasingly difficult to maintain when tasks were performed manually with the risk of delays and inaccuracies. The collaboration between Generali people and Haciendo Camino operators demonstrates that technology does not necessarily lead to isolation but can be used to enhance human relationships, care and

trust. This is a fundamental aspect of all The Human Safety Net activities and collaborations in Europe, Asia, and South America, which are directed to provide support for vulnerable families and the integration of refugees through work, with clear awareness of the foundation's mission and its identity as a global movement of people helping people.

## The Human Safety Net

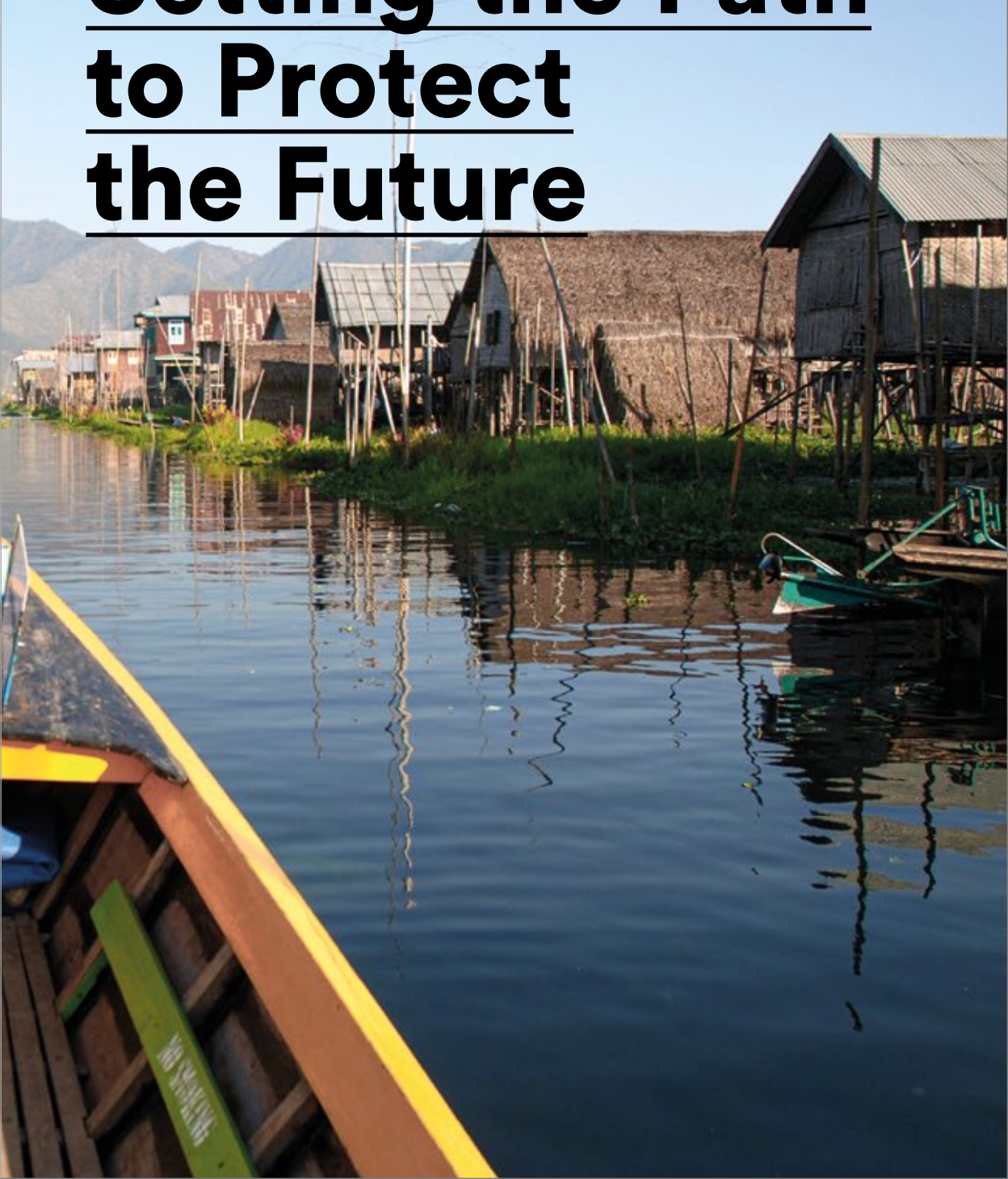
Created by Generali in 2017, the Foundation aims to unleash the potential of people living in vulnerable conditions, enabling them to improve the living conditions of their families and communities. Its programmes support vulnerable families with young children aged 6 or under and promote the integration of refugees through work and entrepreneurship.







# Setting the Path to Protect the Future



Conflict and climate disasters make our world increasingly more uncertain. By committing to investing, insuring, and innovating, the partnership between Generali and UNDP aims to improve the resilience of the most vulnerable communities. To tackle precariousness and increase certainty in an uncertain world.

THE EDITORIAL OFFICE

The world seems to be moving – ever more quickly – from crisis to crisis, such as the climate and biodiversity crises, inequalities and political polarisation, and technological upheavals. And this is happening at a speed and scale beyond what we have ever experienced.

When looking in particular to climate-induced hazards, estimates indicate that the value at stake could increase from about 2 percent of global GDP to more than 4 percent of global GDP in 2050. If left unchecked, over the next five decades climate change could cost the global economy 178 trillion dollars – or a 7.6 percent cut to global GDP in the year 2070 alone.

Over the next five decades climate change could cost 178 trillion dollars

The percentage of economic loss from natural disasters that is insured varies considerably on a regional basis, ranging from around 50 percent in North America and an average 25 percent in the EU to approximately 12 and 24 percent in Asia and Latin America, respectively. Focusing solely on the ASEAN region, less than 5 percent of micro, small, and medium sized enterprises have any form of insurance; in Malaysia, for instance, approximately 90 percent of small businesses have no coverage. Meanwhile, as underinsurance



Protect  
the  
Future

remains an issue, the cost of climate catastrophes is on the rise.

### A NEW INSURANCE AND PARTNERSHIPS PARADIGM

These external challenges are amplifying the protection gap of emerging economies. Vulnerable populations are disproportionately affected in terms of human lives, loss of productivity and employment, food and water scarcity, worsening health and wellbeing and, overall, lower living standards. Tackling this situation and underinsurance calls for a new paradigm based on

public-private partnerships between insurers, reinsurers, private investors, governments, and EU institutions to cover systemic risks and meet new protection needs, while also ensuring the safety of the most marginalised categories who would not otherwise be able to access coverage.

As an essential stabilising force in the face of uncertainty, guaranteeing protection or compensation in the case of shocks or threats emanating from planetary imbalances or insecurities, insurance can play a key role for the resilience and prosperity of economic and social systems. That is why closing the protection gap by accelerating access to insurance is of the utmost importance for vulnerable

communities and for businesses to grow securely. It is about offering a transformative path to human development, leveraging insurers' understanding of risk to help organisations and countries mitigate and adapt – thus protecting a greater share of the global economy and leading to stronger and more resilient societies.

As such, insurance can be considered the bedrock of prosperous societies and contribute to achieving the goal at the heart of the partnership Generali has established with the Insurance and Risk Finance Facility (IRFF) of UNDP, the United Nations' Development Programme.

### GENERALI'S PARTNERSHIP WITH UNDP

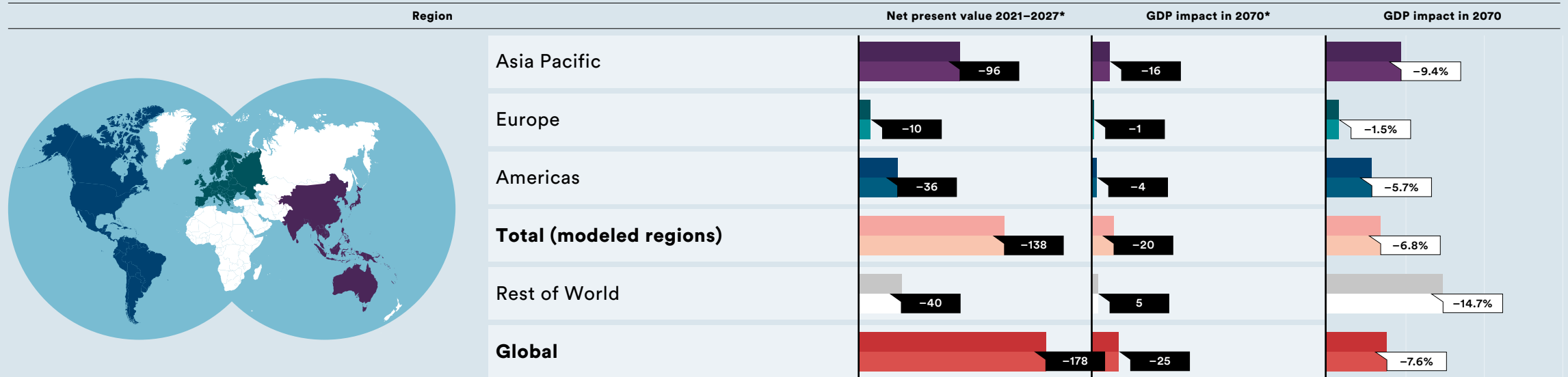
A goal that is summarised by the joint campaign "Protect the future", which underscores the urgency of acting in the present to shape a brighter future and prevent potential negative impacts: as millions of people in the world lack access to financial protection, leaving them at risk of any disaster, "Protect the future" means ensuring that everyone has access to inclusive insurance and financial resilience, for whatever hazards they face.

Blending Generali's insurance expertise with UNDP's long-term focus

SOURCE: DELOITTE, 2022

## The costs of climate change

\* USD trillion



on financing and development, the partnership will lead to designing insurance solutions to protect vulnerable families and small businesses, developing large-scale risk finance solutions with a focus on cost-effectiveness, and promoting thought leadership on human development and social innovation.

This unique partnership is now moving from ambition towards delivery: the upcoming months will see UNDP and Generali issue the first parametric insurance framework for alignment criteria to the overall SDG Agenda. Moreover, Generali and UNDP's IRFF are aligned with the goals of the InsuResilience Vision 2025, which includes: protecting 500 million vulnerable people against the impact of climate change and disasters; covering 150 million vulnerable people through parametric insurance solutions; and putting insurance innovation at the heart of the UN's Sustainable Development Goals and the 2030 Agenda. The partnership will also issue a loss prevention framework for small and medium-sized enterprises, to boost their resilience and sustainability both in Europe and Asia.

Generali and UNDP's collaboration is based on the belief that the challenges we meet can only be overcome through a strong partnership, vision and commitment to drive change for the better, leveraging the respective expertise in investment, insurance, and innovation to address and tackle the downward spiral of inequity and insecurity of today's world.



### INVEST, INSURE, INNOVATE

For even in an uncertain world, we can still turn the corner and transform the prevailing sense of uncertainty characterising the present into one of opportunity, and we can do so by focusing on the so-called “three I’s”: Invest, Insure, Innovate.

It means implementing policies that focus on investment, from renewable energy to preparedness for pandemics, and insurance - including social protection - to prepare our societies for the ups and downs of an uncertain world. While innovation in its many forms - technological, economic, cultural - can also build capacities to respond to whatever challenges come next.

In particular, insurance has a profound ability to change people's lives for the better and acts as the bedrock of

any successful economy, increasing certainty in an uncertain world - especially in the current global context defined by multidimensional crises that are taking on new dimensions and impacting the quality of people's lives and well-being.

With holdings of approximately 11 trillion euros and a strong track record in long-term investments, insurance companies can significantly contribute to the solidity and resilience of the economic, social and environmental systems. The one played by insurance is indeed a social role, which consists in managing and reducing uncertainty, protecting from risks and - in the case of Generali's commitment as a responsible

corporate citizen - committing to public-private partnerships and offering its expertise to public bodies to reach their objectives.

By understanding the consequences of our collective actions today, people can collectively build a more resilient and equitable world, safeguarding the planet and fostering progress for generations to come. Together, Generali and UNDP want to inspire a transformative mindset that prioritises responsible choices today, for building a better future.



Lucia Silva, Generali Group Chief Sustainability Officer, and Simone Bemporad, Group Chief Communications & Public Affairs Officer, speaking during the event held in Rome on 21 September 2023. Organised by Generali and UNDP, the event brought together representatives of the European Commission's Directorate-General for International Partnerships, the Malaysian Embassy in Italy and the Operational Committee for the Italian Presidency of the G7, to define actions to increase the resilience of small and medium-sized enterprises in the face of climate change.



# SMEs: the Network that Supports Our Time

The Expanso pavilion, used as the Slovenian pavilion at Expo Milano 2015, now stands on the shores of Lake Soboško Jezero and offers a 360-degree view of the entire Pomurje region. The complex was built by Lumar IG, the Slovenian "Sustainability Hero" in the SME EnterPRIZE project and the country's leading manufacturer of energy-efficient prefabricated buildings for residential and commercial solutions.

We live in times of unprecedented complexity. But amid climate change and an unstable macroeconomic scenario, small and medium-sized enterprises can show the way forward to a greener and more inclusive society. Generali supports SMEs in the sustainable transition with SME EnterPRIZE.

THE EDITORIAL OFFICE



European small and medium-sized enterprises are trying to be more sustainable and are asking for greater support from policymakers. They seek fiscal incentives to promote sustainable products and services, EU subsidies, and greater opportunities for training and acquisition of skills to help them play an active part in the green transition and overcome the obstacles that a constantly changing macroeconomic scenario poses to the adoption of sustainable business practices.

These are the findings of research conducted by SDA Bocconi School of Management in collaboration with Generali for SME EnterPRIZE, the Group's initiative that promotes the culture of sustainability among the continent's small and medium-sized enterprises. The third edition of SME EnterPRIZE involved over 7,600 companies this year, from 10 European countries. The project also aims to build awareness of EU institutions and programmes dedicated to economic recovery and support for SMEs, in line with Generali's commitment to ever closer collaboration between public and private sectors for a greener and more inclusive society.

The study, the full version of which is presented in the new edition of the White Paper "Fostering Sustainability in Small and Medium-sized Enterprises" available on the website [sme-enterprize.com](http://sme-enterprize.com), consulted entrepreneurs and managers of over 1,200 SMEs in 9 European countries in order to analyse the obstacles and development opportunities met by a sector of fundamental importance to the sustainable growth of our continent's economy. It is particularly relevant given the increasing frequency of extreme events linked to climate change and the



The use of geospatial data can help individuals and organisations alike to take timely actions to protect the planet. Such is the objective of Planetek Italia, Italian "Sustainability Hero" for the SME EnterPRIZE project, whose solutions find application in various fields: from environmental and land monitoring to open government and smart cities, defence and security solutions, engineering and construction, transport, utilities and energy, food resources, and on to satellite observation of the Earth and space exploration missions.

consequences of a macroeconomic scenario still dominated by the effects of the Ukraine conflict, the energy crisis and inflation. In this regard, 59% of the SMEs interviewed stated that higher energy prices had a negative impact on their approach to sustainability, inflation was cited in 58% of cases, and the conflict was mentioned by 47% of the companies in the sample.

**MORE SUSTAINABLE, MORE RESILIENT**

However, the picture is not totally gloomy, and demonstrates the importance

**SMEs that have adopted sustainability initiatives are more resilient to inflation**

of the sustainable transition: SMEs that have adopted sustainability initiatives obtain improvements in the main parameters of company performance and are also more resilient to external shocks. In fact, the survey found that NextGenerationEU funding has produced positive effects for 52% of companies that have already implemented a sustainability plan, while only 20% of SMEs that have not yet implemented a plan have obtained benefits from NextGenerationEU. Furthermore, companies with the most developed sustainability plans - which include

employee welfare initiatives, community engagement and environmental protection through the circular economy, energy efficiency, and decarbonisation - have proved to be more resilient in the face of inflation, rising energy prices and the war in Ukraine. Sustainability-oriented SMEs also create a better environmental impact (82%), benefit from greater customer satisfaction (75%) and a better reputation (64%).

**SUSTAINABILITY HEROES**

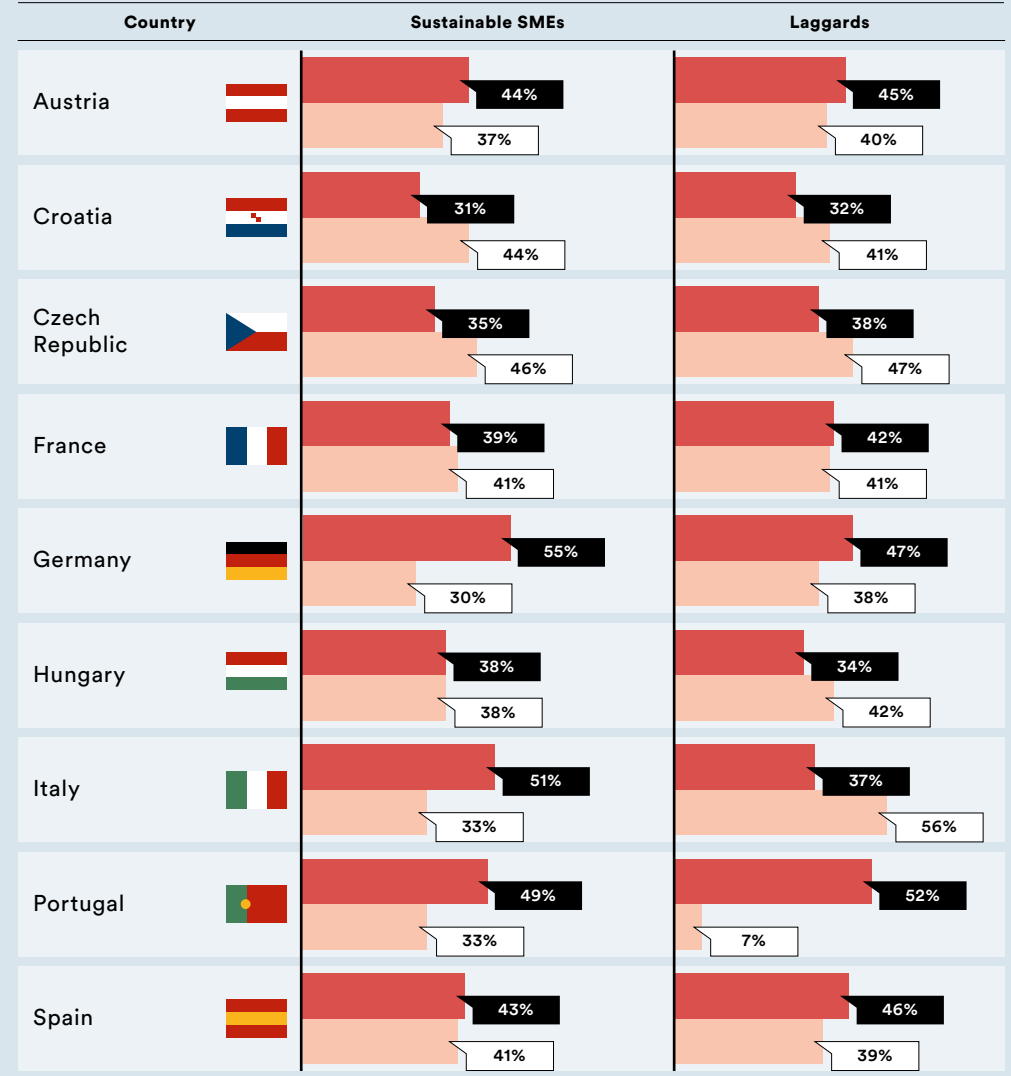
Despite the numerous challenges they face, European SMEs continue to be committed to the sustainable transition. Some have demonstrated an ability to combine sensitivity towards climate and environmental issues with social and welfare initiatives for employees and local communities through integrated models that place people at the centre. Among them are some of over 7,600 SMEs from the 10 European countries participating in SME EnterPRIZE for 2023, standing out as "Sustainability Heroes". In France, for example, La Conciergerie Solidaire promotes employability and social integration by offering concierge services to companies, neighbourhood communities and other meeting places, while Dorfplatz STAW of Austria offers co-working spaces and the chance to organise events, workshops, and cultural and social initiatives for the local community. Humana Nova, a Croatian social cooperative, offers employment opportunities to people with disabilities, involving them in the upcycling of clothing through repair and alteration, and the recovery of yarn from clothes that are no longer usable, to create new garments without resorting to virgin

SOURCE: SDA BOCCONI SUSTAINABILITY, 2023

**The strategic approach to the sustainability of SMEs in Europe**

2023  
2022

Compared to 2022, the number of SMEs that have adopted an ESG approach or are in the process of doing so has remained essentially stable or has increased. However, the number of SMEs who state that they are not interested in any ESG strategy ("Laggards") has doubled. SMEs in the different countries are proceeding at different rates in their sustainable transition, with greatest progress recorded in Germany, followed by Italy, Portugal, Austria, Spain and France.





Dorfplatz STAW, the Austrian "Sustainability Hero", is a social enterprise based on cooperative management that uses co-working spaces and opportunities to organise events, workshops and cultural and social initiatives for the local community. Its aims include improving land use, supporting producers and local artists, democratising access to culture and promoting sustainable social projects.



yarn. Another example of attention to communities and people, particularly the most vulnerable, is provided by the Spanish company Maximiliana, which has developed smartphones that are designed for use by elderly people and can be managed remotely by family members through a special app, allowing relatives to stay in touch and combat loneliness and isolation in the elderly.

However, the environment remains to the fore, with numerous small and medium-sized enterprises in every sector continuing to find new solutions aimed at



European SMEs continue to be committed to the sustainable transition

eliminating waste, making better use of resources and reducing energy consumption. Recycling remains one of the main strategies adopted by SMEs, for example



Biopékárna Zemanka, a bread and cake shop in the Czech Republic that uses residual raw materials from other food production, recyclable packaging and electricity from renewable sources. Sudár Birtok, a family-run business in Hungary, also operates in the food sector, specialising in the cultivation and processing of organic spices and herbs. In Germany, Pervormance International has designed a zero-emission cooling system suitable not only for buildings and vehicles, but also for clothing, to prevent overheating for athletes, for health needs, and for workplace safety. Portuguese company Miranda Bike contributes to sustainable mobility by supplying customised components for

## Despite current conditions of unprecedented complexity, being sustainable also means being more resilient

bicycle manufacturers, using renewable electricity and recycled materials. Even in the construction field the watchword is "zero impact", and this objective is

→

Many companies have started to adopt circular economy strategies also in the food sector. Biopékárna Zemanka, "Sustainability Hero" of the Czech Republic, is one of these: a bakery-pastry shop that uses residual raw materials from other food production, recyclable packaging, and electricity from renewable sources.

pursued in Slovenia by Lumar IG through its zero-consumption prefabricated buildings. Finally, the Italian company Planetek Italia offers solutions for the use of geospatial data while contributing to the sustainable development of the aerospace industry.

These are just some examples of the virtuous practices adopted by small and medium-sized European enterprises to meet today's environmental and social challenges. Despite current conditions of unprecedented complexity associated with climate change and an unstable macroeconomic scenario that is still feeling the effects of conflict, the energy crisis and inflation, small and

medium-sized enterprises demonstrate that being sustainable also means being more resilient, and through their commitment and spirit of innovation show us the way forward to a greener and more inclusive society.



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## Awards



2019



2017 / 2019



2018



2018



2017



2017



2016

2019

**1 DotCom Award:** Platinum Winner in "Website – Online Publication"

**3 Hermes Creative Awards:** Platinum Winner in "Publications, Magazine", "Design, Publication Overall" and "Design, Publication Interior"

2018

**1 Spark Award:** Gold Winner in "Communication"

**1 Davey Award:** Silver Winner in "Corporate Identity & Print Collateral"

2017

**3 Hermes Creative Awards:** Platinum Winner in "Magazine", Gold Winner in "Publication Interior" and "Employee Relations"

**1 Communicator Award:** Gold Winner in "Employee Publication"

**1 Mercury Excellence Award:** Gold Winner in "Public Relations"

2016

**5 MarCom Awards:** Platinum Winner in "Internal Magazine", "Internal", "Corporate", Magazine Cover" and "Magazine Interior"

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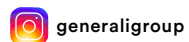
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## Environmental certifications



