Artificial Intelligence

STRATEGIC INTELLIGENCE BRIEFING

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Generated for Noman Ahmed Shah on 23 January 2025

Contents

Executive summary

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Artificial Intelligence is rife with contradictions. It is a powerful tool that is also surprisingly limited in terms of its current capabilities. And, while it has the potential to improve human existence, at the same time it threatens to deepen social divides and put millions of people out of work. While its inner workings are highly technical, the non-technical among us can and should understand the basic principles of how it works - and the concerns that it raises. As the influence and impact of AI spread, it will be critical to involve people and experts from the most diverse backgrounds possible in guiding this technology in ways that enhance human capabilities and lead to positive outcomes.

This briefing is based on the views of a wide range of experts from the World Economic Forum's Expert Network and is curated in partnership with Matissa Hollister, Assistant Professor of Organizational Behavior at the Desautels School of Management at McGill University. The content does not necessarily reflect the views of the Forum.

The key issues shaping and influencing Artificial Intelligence are as follows:

Bias and Fairness in AI Algorithms
The real-world data informing systems reflect the inequalities and biases of the real world

AI and Jobs
Preparing for a future without human work will require more than addressing basic financial needs

Can AI Overcome its Limitations?
Estimates for when truly agile and adaptable AI might emerge range from 10 years to never

Geopolitical Impacts of AI
The geographical concentration of the technology could aggravate international rivalries

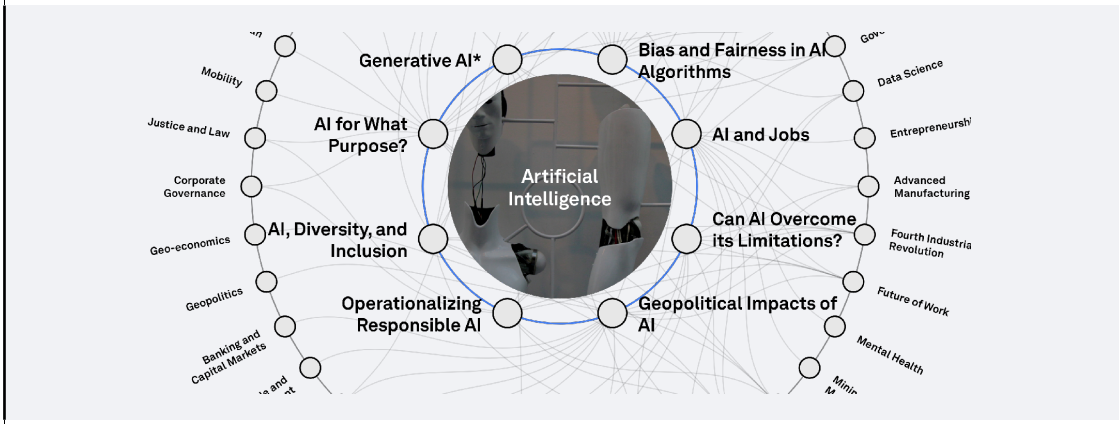
Operationalizing Responsible AI
Ethical principles can have very different meanings depending on location and cultural context

AI, Diversity, and Inclusion
One way to avoid problems with the technology is to create more diverse development teams

AI for What Purpose?
We should consider whether some applications of the technology should be banned entirely

Generative AI*
Generative AI is a type of artificial intelligence that creates new content based on patterns and data it has learned from

Below is an excerpt from the transformation map for Artificial Intelligence, with key issues shown at the centre and related topics around the perimeter. You can find the full map later in this briefing.



In the following sections, we give a comprehensive summary of the latest **Insights and Trends** shaping the topic, a look at potential **Forecasts and Scenarios** based on current and emerging trends, and an overview of the **Strategic Context**.

1 Insights and trends

A synthesis of the most recent expert analysis.

1.1 Current perspectives

Cornell University

Cornell team wins $50K in AI puzzle-solving challenge contest

23 January 2025

A team from Cornell University has developed AI models that can solve about 56% of the problems in the Abstraction and Reasoning Corpus for Artificial General Intelligence (ARC-AGI) problem set, scoring within four percentage points of the average human. The team combined two neural networks, one that directly solved problems without explaining the solution and one that searched for an explanation using a computer program. The models outperformed previously published models and may have applications in various domains, such as enabling robots to learn new skills and understanding cause and effect from minimal examples.

Smithsonian Magazine

An American Toy Company Produced the World's First Frisbees, Beloved by Humans and Dogs, on This Day in 1957

23 January 2025

The world's first Frisbees were produced by American toy company Wham-O Manufacturing Co. in 1957. The Frisbee, an aerodynamic plastic disc, was invented by Walter Frederick Morrison in the late 1930s. He initially sold them as "Flyin' Cake Pans" before eventually creating the Pluto Platter, which caught the attention of Wham-O. The company renamed it "Frisbee" and hired toy inventor Ed Headrick, who patented the design for the Frisbee that we know today. Since then, Frisbees have become a popular toy, a sport, and even a game for dogs. The Frisbee was inducted into the National Toy Hall of Fame in 1998.

The Atlantic

Does Sam Altman Need Donald Trump, or Is It the Other Way Around?

22 January 2025

Trump announced the Stargate Project, a private venture between tech giants like OpenAI, Oracle, and SoftBank, to invest $500 billion in AI infrastructure in the U.S. However, it seems that Trump needs this project more than the companies involved. The project's success may depend on AI development happening both within and outside of the U.S. Some critics see the project as a sign of the AI industry's influence on lenient regulations and a path towards rapid development. The specifics of how AI will revolutionize industries and lead to "superintelligence" remain unclear. The project raises concerns about job displacement, energy demands, and land usage. Despite criticisms, tech companies believe AI's future is inevitable.

MIT Sloan Management Review

Generate Value From GenAI With 'Small t' Transformations

22 January 2025

Generative AI is being used by business leaders to derive real value without completely replacing existing business processes. This "small t" transformation involves utilizing large language models (LLMs) to achieve targeted improvements and deliver immediate value while also building the foundation for larger transformations in the future. Leaders are considering the risks associated with accuracy, security, and intellectual property management when implementing GenAI. They are also cautious about scaling AI transformation without cleaning up data and back-end systems. Three categories of transformation on the risk slope include individual uses, role-specific tasks, and customer-facing experiences.

GlobalData

OpenAI and SoftBank announce $500bn AI project

23 January 2025

OpenAI and SoftBank have announced their $500bn US artificial intelligence (AI) project called Stargate. The project involves an initial investment of $100bn and aims to build new AI infrastructure in the US. SoftBank will handle financial responsibilities while OpenAI will manage operations. Initial equity funders include Oracle and Abu Dhabi's AI-focused investment vehicle. Other technology partners include Arm, Microsoft, and NVIDIA. The project will involve the construction of data centers and will expand OpenAI's partnership with Microsoft. Funding details remain unclear, but plans to attract more investors are underway.

The Tokenist

3 Stocks to Watch Amid the Trump Admin's $500 Billion AI Push

22 January 2025

President Trump's $500 billion AI push, coupled with recent export restrictions on advanced AI/GPU chips, has raised concerns about the performance of AI stocks. However, there is flexibility within the restrictions to negotiate access to compute power. Trump's focus on tariffs and the newly announced AI infrastructure venture, Stargate, worth up to $500 billion over four years, demonstrates his aim to recenter advanced technologies from China to the US. Stocks to watch in this sector include Advanced Micro Devices (AMD), VanEck Semiconductor ETF (SMH), and Uranium Energy Corp. (UEC).

Wired

Why Mark Zuckerberg Is Ditching Human Fact-Checkers

23 January 2025

Meta is ending its third-party fact-checking program and implementing a Community Notes model for content moderation. This model relies on crowdsourcing to debate and determine if a post requires more context. However, concerns arise regarding the potential for politically motivated individuals to dominate these forums. This shift in content moderation raises questions about the future of moderation and its impact on the online community.

GovLab - Living Library

Beware the Intention Economy: Collection and Commodification of Intent via Large Language Models

23 January 2025

The rapid growth of large language models (LLMs) has led to the emergence of a new marketplace for behavioral and psychological data that signals intent. Tech executives are actively positioning the capture, manipulation, and commodification of human intentionality as a lucrative extension of the attention economy. This intention economy involves competition between established tech players to gain a first-mover advantage in persuasive technologies. It also involves the commodification of explicit and implicit data that signals intent, achieved through personalized manipulation and detailed categorization of online activity. This new dimension of automated persuasion has the potential to elicit, infer, collect, understand, and ultimately manipulate human plans and purposes.

World Economic Forum

What is a small language model and how can businesses leverage this AI tool?

23 January 2025

Small language models (SLMs) are gaining popularity in the business sector as a cost-effective and efficient way to implement AI. Unlike larger language models (LLMs), SLMs are designed to excel at specific tasks by being trained on focused datasets. They have fewer parameters, making them faster and more efficient than LLMs. SLMs offer benefits such as faster training and response times, reduced energy consumption, cost-effectiveness, and improved performance in domain-specific tasks. Additionally, SLMs can help address the linguistic diversity gap in AI.

Stanford Social Innovation Review

The Stories We Tell About AI (SSIR)

23 January 2025

The narratives and stories we tell about AI have a significant impact on society's perception, interaction, and governance of AI. While some narratives have led to positive outcomes for workers, many stories serve to increase the power of technology companies at the expense of workers' rights. The media plays a role in championing these narratives, which are also present in industrial policies and supported by business leaders. To ensure a more equitable future, worker-centered narratives that challenge existing AI narratives are needed. Dominant AI narratives marginalize workers and diminish their agency in decisions about AI design, development, and deployment. It is crucial to shift assumptions and beliefs through showcasing alternative realities and centering workers in AI and work narratives.

The Conversation (French)

L'IA est un raz-de -marée pour la communauté scientifique. Comment réagir ?

22 January 2025

L'utilisation de l'intelligence artificielle (IA) dans la recherche scientifique pose des défis à la communauté universitaire qui doit désormais faire face à la rédaction d'articles «écrits» en partie par l'IA. Peu d'universités ont établi des politiques claires sur l'utilisation de l'IA en recherche, créant un fossé entre ceux qui l'utilisent et ceux qui ne le font pas. L'IA générative, telle que ChatGPT, a augmenté l'efficacité dans certains domaines de la recherche en permettant la rédaction de revues de littérature, d'évaluations d'articles, de synthèses de CV, etc. Cependant, il est important d'utiliser cette technologie avec précaution et de vérifier les résultats avec un cerveau humain.

Try translating with Google

GlobalData

ByteDance plans to invest $12bn in AI infrastructure

23 January 2025

ByteDance, the parent company of TikTok, plans to invest $12 billion in AI infrastructure by 2025. This investment includes $5.5 billion for AI chips in China and $6.8 billion overseas to enhance its model training capabilities with advanced NVIDIA chips. ByteDance plans to allocate 60% of its domestic semiconductor orders to Chinese suppliers and the remaining amount on modified NVIDIA chips to comply with US export controls. The company's investment strategy aims to expand its AI computing capacity for model training, but it may face challenges due to expanded US export controls targeting Chinese tech companies.

Wired

'Neo-Nazi Madness': Meta's Top AI Lawyer on Why He Fired the Company

23 January 2025

Copyright lawyer, Mark Lemley, has quit representing tech giant Meta in a lawsuit because of what he describes as the company's "descent into toxic masculinity and Neo-Nazi madness." The decision came after Meta made policy changes that allowed users to engage in hateful conduct. Lemley stated that he did not want to be associated with the company. He expressed his concerns about the direction the tech industry is taking and the alignment with far-right ideologies. Lemley's decision has received overwhelming support on social media. He believes that those who have the power should take a stand against such behavior.

World Economic Forum

Transforming industries with AI: Lessons from China's journey

23 January 2025

China's long-term AI strategy is focused on balancing innovation and safety, and the country is demonstrating how industry-specific applications of AI can drive efficiency, sustainability, and scalable impact. The country's approach to AI is grounded in adaptive regulations and robust infrastructure, enabling the integration of AI into sectors such as healthcare, manufacturing, and energy. China's progress in AI is supported by a strong ecosystem that includes infrastructure, data, talent, and innovation. The country's emphasis on tailored AI solutions to meet the specific needs of different industries showcases an approach that other regions could adopt. However, challenges such as fragmented data flows and a talent gap remain. Responsible development and international collaboration are essential to navigate the complexities of AI's interplay with technology, society, and governance.

The Conversation (Spanish)

La inteligencia artificial en la escritura académica: ¿existe un uso ético?

23 January 2025

La inteligencia artificial en la escritura académica puede proporcionar beneficios al ahorrar tiempo en tareas repetitivas y tediosas, como la revisión de bibliografía. Sin embargo, surge el debate ético sobre el uso adecuado de estas tecnologías en la divulgación de la investigación. Revistas científicas de renombre han ampliado sus normas para distinguir entre usos éticos e inapropiados de la inteligencia artificial generativa. Existen herramientas legítimas, como asistentes de investigación y análisis de citas y bibliografía, que pueden ayudar en la preparación de artículos académicos. Sin embargo, se requiere la supervisión humana para garantizar la integridad y la calidad.

Try translating with Google

The Tokenist

Oracle's Stock Surges as $500B Trump-Endorsed AI Initiative Unveiled

22 January 2025

Major tech companies, including Oracle, OpenAI, SoftBank, and Nvidia, have announced a $500 billion project called Stargate, which aims to advance AI infrastructure in the US and create 100,000 jobs. Oracle's stock surged following the announcement, reflecting investor optimism. The collaboration between Oracle, OpenAI, Nvidia, and SoftBank will focus on leveraging AI to improve healthcare diagnostics and treatment. Additionally, President Trump has issued executive orders that could impact AI and diversity policies in the federal government. The Stargate project has the potential to transform various sectors and reshape the digital landscape.

London School of Economics and Political Science

It's time to extend the FAIR Principles of data sharing

22 January 2025

To ensure that research can effectively address complex environmental and societal challenges, the FAIR Principles of data sharing need to be extended. The FAIR Principles (Findability, Accessibility, Interoperability, and Reusability) were introduced in 2016 to facilitate open science. However, the Principles face challenges such as inconsistent metadata descriptions and limited access to data stored in non-open repositories. Extending the Principles would enable open, interoperable, and AI-ready data to become part of scientific culture. This would involve making data discoverable rather than just findable, ensuring true accessibility for all, striving for interoperability across domains, and promoting a systemic approach to data integration.

GovLab - Living Library

To Bot or Not to Bot? How AI Companions Are Reshaping Human Services and Connection

22 January 2025

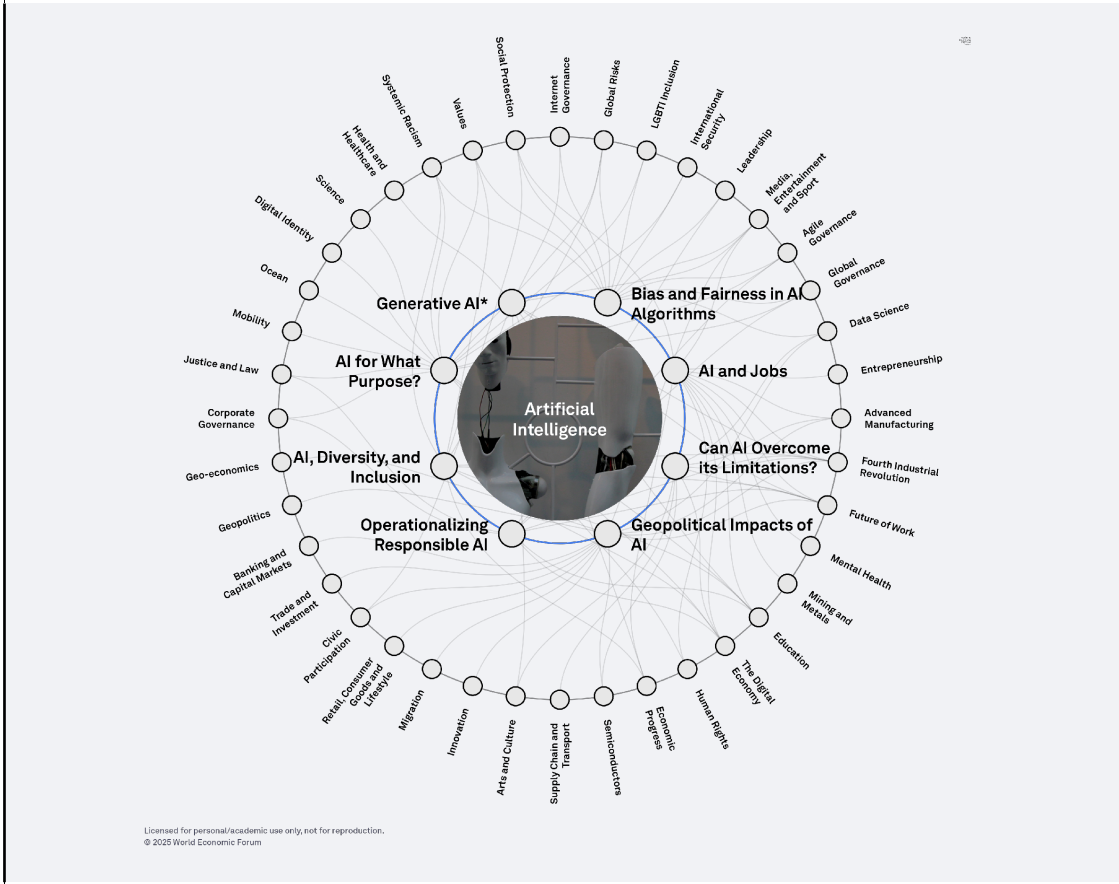
AI companions such as chatbots have been found to significantly reduce loneliness, according to a Harvard study. However, the study raises concerns about the trade-off between accessibility to services and the loss of genuine human connections. While AI bots can provide a potential solution to the capacity constraints in education, healthcare, and other social services, relying too much on synthetic interaction may result in increased isolation. The optimism surrounding AI's potential should be tempered with a consideration of the long-term consequences.

2 Strategic context

The key issues shaping Artificial Intelligence.

The following key issues represent the most strategic trends shaping the topic of Artificial Intelligence. These key issues are also influenced by the other topics depicted on the outer ring of the transformation map.

FIGURE 1 **Transformation map for Artificial Intelligence**



2.1 Bias and Fairness in AI Algorithms

The real-world data informing systems reflect the inequalities and biases of the real world

Artificial Intelligence has the potential to encode and exacerbate biases by reflecting the assumptions, interests, and world views of its developers and users. In addition, machine learning - currently the most common form of AI - works by looking for patterns in real-world examples (“training data”), which can lead to problems in multiple ways. For example, the training data may omit certain types of people or be gathered within a narrow cultural context. In one instance, a tool that was designed to sharpen the blurry images of faces was found to consistently turn people with darker skin tones white, most infamously a photo of former US President Barack Obama. The tool has been criticized for its reliance on training data predominantly

made up of white faces, as well as for failing to anticipate or test for such issues. Real-world training data includes all of the inequalities, biases, and unjust realities of the real world - and machine learning systems are not capable of identifying or fixing unjust processes. Unfortunately, simply removing information on race or gender from the data does not solve this problem.

That is because AI systems can use "proxy variables," or information in the data that correlate with omitted social groups, to nonetheless treat different groups differently. Countless examples exist of AI systems amplifying the bias of its training data, resulting in the use of racist language or discriminatory recommendations. To address this, researchers have sought to mathematically define and measure fairness - only to realize there are many ways to define what is fair, and that it is often impossible to satisfy all fairness measures. Attempts to encode fairness have therefore led to the identification of related tradeoffs that are present in any society but often not fully acknowledged. Efforts to develop truly "fair" AI do not resolve these tradeoffs, and tend to satisfy one fairness measure at the expense of another. Simply automating these processes misses opportunities for gaining a broader understanding and instigating change. Before automating fairness, developers should assess AI systems for multiple types of fairness, identify the key factors leading to unfair outcomes, and consider alternative approaches. This in turn could push us towards not only fairer, but also more innovative systems that challenge the status quo.

Related topics: Systemic Racism, Values, Social Protection, Internet Governance, Global Risks, LGBTI Inclusion, International Security, Leadership, Media, Entertainment and Sport, Agile Governance, Global Governance, Data Science

2.2 AI and Jobs

Preparing for a future without human work will require more than addressing basic financial needs

Is artificial intelligence coming for your job? While some reports suggest nearly half of all jobs may be automated, other analyses note two important nuances. The first is that AI creates as well as replaces jobs. AI systems still need humans to develop them, handle nonroutine cases, provide a human touch, and monitor for failures. New technologies can also sometimes create entirely novel jobs - like social media influencer. A second nuance is that - at least for the foreseeable future - AI systems will only be able take over specific tasks rather than entire jobs. One report estimated what while 60% of all jobs have at least some tasks that could be automated, only 5% are under threat of full automation. And, as AI excels at routine tasks, it can free up humans for more interesting challenges. This augmentation-rather-than-automation approach offers the best opportunities for not only preserving employment but also ensuring effective and valuable AI. Actively involving workers in the development, adoption, and implementation of the technology can result in systems that are more practical, innovative, and effective.

Even with an augmentation approach, however, AI systems will result in potentially significant job disruptions - and call for a rethinking of education, employment, and policy systems. While technology skills would seem a worthwhile investment focus, there is also a need for general skills that can improve employment adaptability - such as critical thinking, and the skills that AI struggles with replicating such as creativity, human touch, and emotional intelligence. It is not certain whether human work will eventually disappear, but two features of the current situation are particularly troubling. The first is prevalent wealth inequality both within and between countries. If AI does lead to widespread job displacement, extreme inequality could lead to disastrous outcomes. The second is the central role that work plays as a source of personal worth and meaning in many societies. One popular proposed solution to a future without work is a universal basic income, where people receive regular payment regardless of employment. While such a program might address financial need, truly preparing for a future without work requires a deeper reinvention of human identity.

Related topics: Entrepreneurship, Advanced Manufacturing, Fourth Industrial Revolution, Future of Work, Social Protection, Mental Health, Mining and Metals, Media, Entertainment and Sport, Education, The Digital Economy, Human Rights, Economic Progress

2.3 Can AI Overcome its Limitations?

Estimates for when truly agile and adaptable AI might emerge range from 10 years to never

Given the related publicity and hype, one might be forgiven for believing that artificial intelligence is on the verge of surpassing human intelligence - or even taking over the world. However, the reality is that current AI falls far short of true intelligence. The majority in use today is some form of machine learning, which works by

looking for patterns in real-world examples, or "training data." When a machine learning system is deployed, it uses patterns identified in the training data to predict or make decisions. While it may be faster than a human and better at optimizing, it can only learn one specific task. If the situation changes and no longer matches the training data, then the algorithm must be retrained. It is not capable of developing general concepts to carry from one situation to another, which is a key element of "artificial general intelligence" - which does not currently exist (it is unclear if it ever will). Meanwhile the limitations of machine learning can have real-world consequences. For example, AI systems can fail in situations characterized by sudden change - such as the COVID-19 pandemic.

Sometimes AI systems can struggle with novel situations that seem relatively simple - such as what to do if attempting a penalty kick in a soccer match and the goalkeeper simply falls down. AI systems need large amounts of data to learn a task, compared with a child who can learn to recognize a dog after seeing a few examples and drawing on past experiences and abstract concepts. Current AI systems are also only effective when deployed under conditions that match their training data. They can optimize under these conditions, but are not capable of envisioning new ways to undertake the same task, or of predicting the outcomes of fundamental changes. The public perception of AI as cutting-edge and disruptive stems not from its inherent qualities, but rather from the human ingenuity displayed in using this tool. Researchers are looking for ways to achieve artificial general intelligence, though their path is not clear - and machine learning may end up being a dead end. There is broad disagreement about when we might achieve artificial general intelligence, with estimates ranging from 10 years to never.

Related topics: The Digital Economy, Semiconductors, Supply Chain and Transport, Advanced Manufacturing, Arts and Culture, Future of Work, Data Science, Fourth Industrial Revolution

2.4 Geopolitical Impacts of AI

The geographical concentration of the technology could aggravate international rivalries

Artificial intelligence has the potential to deepen divides both within and between countries, as a result of the distribution of related benefits and know-how. According to a report published by PwC, North America and China are likely to be home to 70% of the global economic impact of AI, with other developed countries in Europe and Asia capturing much of the rest (North America is expected to see as much as a 14% GDP boost from AI by the year 2030, while China is expected to see a GDP boost of as much as 26% by that point). This situation risks spawning both a competitive race between countries for AI dominance, and the widening of a knowledge gap that will leave much of the rest of the world even further behind. AI competition entails not only battles over talent and computing infrastructure, but also over access to - and control of - data. The ability of data to flow across borders means that early movers in AI can gain global influence that may make it difficult for initiatives elsewhere to catch up.

A second geopolitical concern related to AI concerns the role the technology can play - both unintentionally and intentionally - in exacerbating political divisions and polarizing societies. There is a growing awareness of the ways social media can contribute to polarization, and AI-driven recommendation algorithms play a significant role. In addition to potentially keeping users trapped in bubbles of content that match their own worldview, thereby limiting access to other perspectives and possibly hardening misperceptions, these systems can have the often-unanticipated effect of actively pushing users towards more extreme content.. For example, YouTube has drawn a significant amount of criticism for the ways in which the video streaming service's recommendation algorithm can nudge users in the direction of extremist political and views and conspiracy theories based on their browsing behaviour. AI is also frequently being intentionally used to manipulate and polarize viewpoints, most notably through the creation of "deepfake" video and audio content designed to deceive the public and denigrate public figures (experts fear that an ability to fake large-scale historical events could one day irreparably damage the public's trust in what it sees).

Related topics: Advanced Manufacturing, Innovation, Migration, Retail, Consumer Goods and Lifestyle, Media, Entertainment and Sport, Data Science, Civic Participation, Future of Work, Trade and Investment, Banking and Capital Markets, Geopolitics, Semiconductors, Fourth Industrial Revolution, Geo-economics

2.5 Operationalizing Responsible AI

Ethical principles can have very different meanings depending on location and cultural context

There has been a growing recognition of the potentially negative impact of artificial intelligence on society.

Survey results published by the Center for the Governance of AI in 2019 suggested that more Americans think high-level machine intelligence will be harmful than think it will be beneficial to humanity, for example. In response to sentiments like this, over a relatively short period of time more than 160 different sets of principles for ethical AI have been developed around the world. While these differ in terms of emphasis and cultural context, they all point to a growing consensus around a central set of tenets: respect for privacy, transparency, explainability, human control, and mitigating bias. The challenge now is how to best put these principals into broad practice and enforce their use - as there is an increasing awareness that considerable barriers still exist when it comes to actually operationalizing AI principles. Many of the principles are very general, for example, requiring considerable work to translate them into day-to-day practices, and some of the most important related questions regarding accountability, auditing, and liability remain unanswered.

For example, some of the principles may come into conflict with one another during implementation. And, while there may be general agreement on the principles in name, their specific interpretation and meaning will vary (sometimes considerably) according to context and culture. As a result, there is a critical need for further international cooperation on developing ways to operationalize ethical principles of AI that are mutually beneficial and constructive. While many companies and government leaders say that they want to ensure responsible development and behaviour, without easy-to-use solutions and clear guidelines the effort and cost required to operationalize effectively will discourage action. As we seek to facilitate the guidelines, we also need to increase the cost of inaction - every organization should be expected to not only endorse the responsible use of AI, but to also provide clear evidence that their own practices match their rhetoric. Meanwhile lawmakers should use both informal and formal means to hold these organizations accountable for their use of AI, while promoting responsible practices and uses of the technology.

Related topics: Agile Governance, Corporate Governance, Justice and Law, Global Governance, The Digital Economy, Fourth Industrial Revolution, Leadership, Future of Work, Education

2.6 AI, Diversity, and Inclusion

One way to avoid problems with the technology is to create more diverse development teams

Artificial Intelligence tools are often promoted as an opportunity to improve diversity and inclusion. However, the news is full of stories about AI systems going horribly awry in ways that have the opposite effect. Some aspects of AI - such as its large scale, automated processes, and data-based decisions - could in principle expand access to resources and foster fairer treatment. Yet these same features also risk creating only the illusion of objectivity, while they encode inequality and injustice on a vast scale - or are used to further oppress disadvantaged groups. While AI tools do have the potential to improve diversity and inclusion, that power comes not from AI itself but rather from their creators. Current AI is not capable of abstract reasoning, nor can it predict the impacts of major change, necessitating human creators who understand why a current system may be problematic - and how AI might improve it. Similarly, the problematic impacts of AI on diversity and inclusion stem not only from issues related to data and algorithm design, but also from their creators misreading and oversimplifying social systems - and not anticipating unintended consequences.

For example, a scandal erupted in the United Kingdom in 2020 related to an algorithm used to grade crucial university entrance exams that undercut the scores of less-affluent students (though it was not a full AI system) - illustrating how algorithm creators may not anticipate how their tool will reinforce existing inequalities. Consideration of the diversity and inclusion impacts of AI systems should be incorporated into the design and evaluation of all AI tools, as well as their regulation and oversight. In addition, subject matter experts are necessary to understand the context in which an AI system will be deployed. Perhaps the most critical need is for AI development teams themselves to become more diverse - through changes in access to education and resources, hiring practices, and organizational cultures. Numerous examples exist of AI systems that are problematic because they reflect the world views and assumptions of their creators. While diverse teams are not a guaranteed fix, they reduce the odds that diversity and inclusion impacts will be overlooked. Diverse AI talent also broadens the innovation landscape more generally in ways that can push the technology forward on all fronts.

Related topics: Future of Work, Global Risks, The Digital Economy, Education, Values, Systemic Racism, Social Protection, Economic Progress, Fourth Industrial Revolution

2.7 AI for What Purpose?

We should consider whether some applications of the technology should be banned entirely

While current artificial intelligence algorithms may be limited to learning a single task, the technology's underlying principles and techniques are applicable to a surprisingly wide range of uses. Indeed, almost every sector of the economy and society has been affected by AI - or will be soon. Given this broad applicability, and the current shortage of AI-related talent, it is necessary to consider how we should develop and use this new tool to its maximum positive benefit. We should also consider whether some AI systems create such a high risk of potential misuse that they should not be allowed at all. Facial recognition, for example, is one area of AI that has come under particularly intense public scrutiny, both because of related privacy concerns and due to the technology's potential use as a tool of oppression; it therefore serves as a particularly thorny test case for when and how a particular area of AI both can and should be shut down entirely, and whether it is possible to use such technology responsibly and benevolently.

In other cases, challenges related to AI lie not with the broad technology itself but with its specific use. Algorithms applied within the criminal justice system, for example, have come under strong criticism - as they not only have potentially huge impacts on individuals' lives, but are also subject to the deeply-embedded biases and historical inequities reflected in the training data and human developers that inform them. In this context, AI systems risk exacerbating existing inequities in consequential and damaging ways. Even among less controversial uses of AI there remains the question of how to best leverage scarce resources. A huge portion of AI-related talent, for example, has been directed at the development of autonomous vehicles and other private, for-profit company endeavours, and military applications - leaving fewer capable people dedicated to deploying AI for the common good. As we foster a technology that many believe has the potential to reshape society, we need to find new ways for it to represent the interests of many different stakeholders, and to play a positive role in our future.

Related topics: Global Risks, Mobility, Human Rights, Justice and Law, Global Governance, Ocean, Agile Governance, The Digital Economy, Values, Corporate Governance, International Security, Systemic Racism, Digital Identity, LGBTI Inclusion, Education, Science

2.8 Generative AI*

Generative AI is a type of artificial intelligence that creates new content based on patterns and data it has learned from

Unlike other forms of AI that are designed to perform specific tasks, such as recognizing objects in an image, generative AI creates new and unique outputs, such as images, texts, music, or even computer code. The opportunities provided by generative AI are numerous and exciting. For example, it has the potential to revolutionize many creative industries, such as graphic design, writing, and music composition, by automating tasks and freeing up more time for human creativity. In healthcare, generative AI can assist in drug discovery and disease diagnosis. In education, it can help generate personalized study materials for students. The potential for generative AI is vast and varied, and its applications are limited only by our imagination. However, despite its potential benefits, there are also key concerns about generative AI.

One of the most pressing concerns is the potential for AI-generated content to spread misinformation, particularly in areas like fake news or deepfake videos. Another concern is the impact that generative AI may have on job markets, as automation could potentially displace human workers. Additionally, there are ethical concerns around the use of AI-generated content, such as questions around who is responsible for its creation and the potential for it to be used in harmful ways. In conclusion, generative AI is a fascinating and rapidly evolving field that has the potential to bring about many positive changes in various areas of society. However, as with any new technology, it's important to approach it with caution and carefully consider the potential consequences of its use. By balancing the potential benefits and risks of generative AI, we can ensure that it is used in a responsible and ethical manner, for the greater good of society as a whole.

*The text for this key issue was entirely generated by OpenAI's ChatGPT chatbot using the following prompt: "Write a 300 word text providing a non-technical description of generative AI, its opportunities, and key concerns about it."

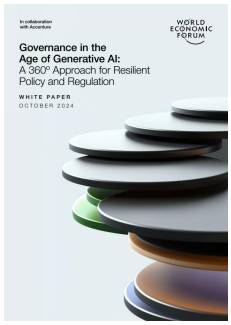
Related topics: Education, Arts and Culture, Future of Work, Fourth Industrial Revolution, Economic Progress, Internet Governance, Media, Entertainment and Sport, Civic Participation, Health and Healthcare

3 Further exploration

Explore the latest World Economic Forum reports related to Artificial Intelligence.

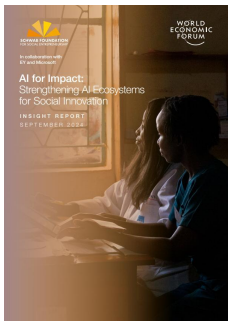
03 December 2024

Food and Water Systems in the Intelligent Age



08 October 2024

Governance in the Age of Generative AI: A 360° Approach for Resilient Policy and Regulation



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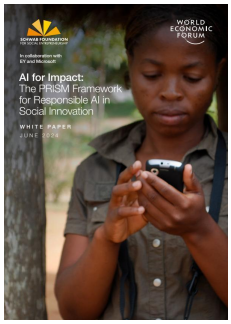

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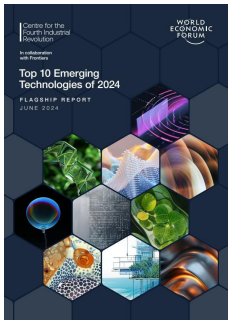

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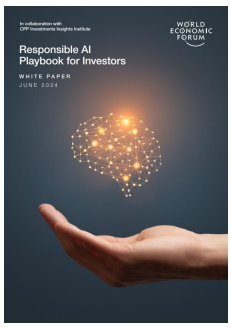
Top 10 Emerging Technologies of 2024



21 June 2024

Responsible AI Playbook for Investors

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About Strategic Intelligence

Our approach

In today's world, it can be difficult to keep up with the latest trends or to make sense of the countless transformations taking place. How can you decipher the potential impact of rapidly unfolding changes when you're flooded with information - some of it misleading or unreliable? How do you continuously adapt your vision and strategy within a fast-evolving global context? We need new tools to help us make better strategic decisions in an increasingly complex and uncertain environment.

This live briefing on Artificial Intelligence, harnesses the World Economic Forum's Strategic Intelligence platform to bring you the very latest knowledge, data and context from our 300+ high quality knowledge sources. Its aim is to help you understand the global forces at play in relation to Artificial Intelligence and make more informed decisions in the future.

Each day, our Strategic Intelligence platform aggregates, distills and synthesizes thousands of articles from around the world. We blend the best of human curation with the power of machine learning to surface high-quality content on over two hundred global issues to our one million users globally. Our hand-picked network of content partners from around the world means that we automatically exclude much of the noisy clickbait, fake news, and poor quality content that plague the Internet at large. We work with hundreds of think tanks, universities, research institutions and independent publishers in all major regions of the world to provide a truly global perspective and we are confident that our data are well positioned when it comes to the intrinsic biases inherent to open text analysis on uncurated content from the Internet. For further context on our approach, you may be interested to read Strategic trend forecasting: anticipating the future with artificial intelligence and These Are The 3 Ways Knowledge Can Provide Strategic Advantage.

↓ A leading expert presenting a transformation map at our Davos Annual Meeting

Overview of methodology

Our Transformation Maps are dynamic knowledge visualisations. They help users to explore and make sense of the complex and interlinked forces that are transforming economies, industries and global issues. The maps present insights written by experts along with machine-curated content. Together, this allows users to visualise and understand more than 250 topics and the connections and inter-dependencies between them, helping in turn to support more informed decision-making by leaders.

The maps harness the Forum network's collective intelligence as well as the knowledge and insights generated through our activities, communities and events. And because the Transformation Maps are interlinked, they provide a single place for users to understand each topic from multiple perspectives. Each of the maps has a feed with the latest research and analysis drawn from leading research institutions and media outlets around the world.

At the centre of each map is the topic itself. This is surrounded by its "key issues", the forces which are driving transformation in relation to the topic. Surrounding the key issues are the related topics which are also affected by them. By surfacing these connections, the map facilitates exploration of the topic and the landscape within which it sits.

The framework extends beyond mapping current trends by incorporating forecasts and scenarios to project potential future states of the system. Forecasts are based on observable patterns, while scenarios explore broader possibilities, including low-probability but high-impact events. These elements contextualize key issues and related topics within potential future trajectories, enhancing strategic thinking and decision-making.

Harnessing collective intelligence from the Forum network and leading research institutions, the maps synthesize diverse insights into a cohesive view. By integrating these insights with the latest research and analysis, the framework provides a comprehensive understanding of how transformations unfold and interrelate, empowering users to navigate the evolving landscape effectively.

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Go further with our Pro offering

Our Pro membership allows you to create unlimited custom transformation maps and the ability to collaborate on them with your colleagues. You also get the ability to export transformation maps images and Powerpoint presentations. As a Pro user, you also gain access to a range of hypothetical scenarios that have the potential to impact developments in the near future; enabling you to think through and anticipate potential opportunities and risks.

To learn more, visit our membership site.

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