Digoshen Recommends

STRATEGIC INTELLIGENCE BRIEFING

Generated for Team Digoshen on 11 August 2025

Contents

Executive summary

Digoshen Recommends Intelligence Map - insights and perspectives curated by Digoshen via World Economic Forum Strategic insights and contextual intelligence.

The key issues shaping and influencing Digoshen Recommends are as follows:

Cyber Risk Governance
The number of corporate boards with a dedicated cybersecurity committee is expected to increase sharply by 2025

AI-Enhanced Counselling
Providing support even during a shortage of available mental health professionals

Generative AI Goes Mainstream
AI models that generate text and media are transforming creativity while raising new challenges

AI and the Future of Work
How exactly will artificial intelligence impact jobs?

Understanding Climate Risks
Extreme weather, rising sea levels, and food and water scarcity are becoming a reality

Social Innovation
Profit is not the only source of inspiration for innovators

Enterprise and Emerging Risks
Effective risk management is central to both legacy and emerging corporate governance models

Digital and Sustainable Transformation of Industries
The pandemic has accelerated both digital immersion and a digital transformation gap

Speed of Change
As the velocity and magnitude of global disruptions intensify, traditional strategic foresight horizons may undergo a fundamental compression

New Ways to Make, Do and Buy
Virtual and augmented reality are helping to improve quality in innovative new ways

Using Sustainability to Measure Success
Sustainability performance is not captured in quarterly earnings reports

Stakeholder Engagement and Cultivating Trust
Building trust is an interactive endeavour based on honest dialogue and genuine efforts to address issues

Values, Ethics, and Integrity
Good faith efforts to do no harm and reduce negative externalities are necessary

Technology Innovation
The promise of emerging technologies is matched by a need to manage related uncertainty

The Digital Enterprise
Becoming 'digital at the core' can potentially create more sustainable value

Below is an excerpt from the transformation map for Digoshen Recommends, 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

The Conversation

Today's humanoid robots look remarkable, but there's a design flaw holding them back

08 August 2025

Today's humanoid robots face significant limitations due to their rigid body designs, characterized by a limited number of joints that hinder their movement and efficiency. This "brain-first" approach requires substantial energy to maintain balance and perform simple tasks, resulting in robots consuming more power than humans. Major robotics companies, primarily focused on software advancements, are hesitant to shift towards redesigning bodies for greater physical intelligence. Research into mechanical intelligence (MI) seeks to emulate nature's efficient designs, suggesting that future advancements must prioritize the physical structure alongside AI developments to enhance robot capabilities.

LSE Business Review

The risks of deepfakes are evolving beyond disinformation

07 August 2025

Deepfakes pose significant risks, extending beyond disinformation to include financial fraud and geopolitical manipulation. Recent incidents, such as scammers in Hong Kong impersonating executives via real-time deepfakes, highlight the urgent need for comprehensive countermeasures. Researchers and companies are developing detection tools, including digital watermarking and cryptographic metadata, alongside public education efforts to combat these threats. Despite challenges like public distrust in fact-checking, a hybrid approach combining technology and education is essential for developing resilience against deepfakes.

Eco-Business

Moving 'green' Belt and Road from words to action

08 August 2025

China's Guidelines for Ecological and Environmental Protection in Foreign Investment markedly elevate corporate environmental responsibilities abroad, mandating transparency and community engagement. However, they lack enforcement mechanisms, accountability, and clear incentives, leading to superficial compliance among Chinese companies. Despite international ESG pressures, companies often rely on weak local regulations, risking environmental negligence. The guidelines symbolize China's commitment to responsible investment but require stronger oversight and operational tools to be effective. Enhancing transparency through mandatory ESG reporting could reinforce compliance and bolster China's reputation in promoting sustainable overseas investments.

GovLab - Living Library

From open data to AI-ready data: Building the foundations for responsible AI in development

08 August 2025

AI, particularly large language models (LLMs), is revolutionizing data interaction, allowing users from all backgrounds to pose complex queries in natural language. For AI systems to function effectively, the underlying data must be evaluated, validated, structured, and governed, ensuring it is "AI-ready." This concept builds on existing standards like the Fundamental Principles of Official Statistics and the FAIR principles, promoting continuous openness and reusability of development data. By ensuring data readiness, decision-making can improve, fostering better policies and innovation within the

global development community.

World Economic Forum
How to build India's just transition ecosystem and finance an inclusive future
08 August 2025

India's pathway to achieving net-zero emissions by 2070 necessitates a green transition that is low-carbon, inclusive, and equitable, particularly affecting regions reliant on coal and carbon-intensive industries. Financing this "just transition" requires aligning policies and capital flows with socioeconomic needs, promoting social equity alongside decarbonization efforts. Key measures include skill development and support for affected communities, with an emphasis on integrating diverse financial instruments like sovereign green bonds and concessional loans. Effective implementation hinges on enhanced institutional coordination, targeted training, and robust regulatory frameworks to foster a sustainable and inclusive economic future.

Project Syndicate
A New Economic Logic for Sustainability
08 August 2025

Sustainability initiatives often fail to achieve transformative change due to a misalignment with current economic frameworks that prioritize short-term profits over ecological and social well-being. A new model, termed "aligned capitalism," is proposed, where ecological impacts are integrated into market pricing and corporate governance structures support sustainability practices. This approach could enable companies focused on circularity and resource efficiency to thrive, while transitioning sustainability from a cost to a profit center. Stakeholders across the political economy need to collaborate, fostering a narrative that links corporate actions to broader societal goals and advocating for necessary regulatory reforms.

Eco-Business
'Pricing for delay': Think tank head says Asia's financial markets are diverging from science-aligned climate action
06 August 2025

Asia's financial markets face challenges in aligning with science-based climate action due to unclear government policies on transition finance. Christina Ng, managing director of the Energy Shift Institute, emphasizes that current frameworks allow companies to raise funds without committing to phasing out fossil fuels. While Japan's Green Transformation strategy aims for a significant investment in transition bonds, concerns exist about their use for non-green projects. Ng calls for

clearer criteria and accountability in transition financing, as diverging financial practices hinder efforts to meet the Paris Agreement goal of limiting global warming to 1.5°C.

GovLab - Living Library
Illinois bans AI from providing mental health services
05 August 2025

Illinois has enacted the Wellness and Oversight for Psychological Resources Act, which prohibits artificial intelligence from providing mental health services to safeguard residents from potentially dangerous advice. The law permits AI to assist in administrative tasks but not in direct patient care. Violations can result in fines of $10,000, enforced by the Illinois Department of Financial and Professional Regulation. This legislative action follows concerns regarding AI's lack of empathy and oversight, particularly in sensitive healthcare areas.

World Economic Forum
Why we must harness technological convergence for a greener AI energy future
08 August 2025

The energy demands of AI technology are escalating, raising sustainability concerns. To address this issue, harnessing technological convergence can transform AI from an energy burden into a greener solution. Advances in AI can optimize smart grid management, enhancing the reliability of energy distribution and integrating renewable sources effectively. Additionally, AI accelerates breakthroughs in materials science for clean energy applications and supports carbon capture initiatives through real-time monitoring. By merging AI with innovative industrial technologies, the energy consumption associated with AI can be minimized, ensuring its growth is sustainable and beneficial for the planet.

Wharton School of the University of Pennsylvania - Knowledge@Wharton
How Regulatory Enforcement and Transparency Could Bring Environmental Gains
04 August 2025

Commodity trading firms show a notable response to environmental regulations, particularly in Brazil's soybean industry where regulations aim to curb deforestation. Research by Sandra Schafhäutle indicates that rather than relocating operations to evade regulation, firms reduce exposure to deforestation and CO_2 emissions through improved sourcing practices aided by enforcement and transparency. The study reveals that external pressures and sustainability commitments drive trading firms in both regulated and unregulated areas to enhance their sourcing, thereby promoting local sustainability. Global supply chain participants like these firms are essential for effective

environmental outcomes, particularly in combatting climate change.

GovLab - Living Library
Strategies for Integrating AI into State and Local Government Decision Making
05 August 2025

State and local governments are increasingly exploring the integration of artificial intelligence (AI) to enhance public services and governance, aiming to improve efficiency, responsiveness, and decision-making. However, this adoption poses challenges, including concerns about privacy, bias, transparency, public trust, and long-term oversight. The report offers guidance for those involved in the implementation and management of AI in government, advocating for structured, evidence-informed strategies that align with community values and institutional goals.

World Economic Forum
Natural disasters have cost us $162 billion this year. Insurance covered most of it.
08 August 2025

Natural disasters resulted in global economic losses of $162 billion in the first half of 2025, with insured losses totaling $100 billion, primarily in the US. The US recorded its costliest first half on record, accounting for $126 billion, driven largely by wildfires and severe storms. The proportion of uninsured losses dropped to a record low of 38%, highlighting improvements in the US insurance market. However, significant protection gaps remain in low-income countries. Experts emphasize the necessity for enhanced insurance measures and risk mitigation strategies globally, particularly in regions vulnerable to climate change impacts.

Eco-Business
CDP sees 'greater than ever' uptake of disclosures despite ESG backlash and greenhushing
06 August 2025

The CDP, the largest voluntary environmental disclosure platform, reports a nearly 50% increase in companies beginning sustainability reporting this year, despite the ESG backlash. Significant uptake has been noted in Asia Pacific and North America, especially regarding disclosures on water and forests. Over half of the disclosures are from Asia, indicating a stronger engagement than last year. Additionally, the CDP is undergoing a strategic restructure to streamline its operations and reduce reporting burdens for its 23,000 reporting companies. Despite some regulatory rollbacks, demand for environmental data remains strong, particularly in the U.S. compared to Europe.

World Economic Forum
UK to ban ransom payments to cyber criminals, and other cybersecurity news
07 August 2025

The UK government plans to prohibit public sector organizations from paying ransoms to cyber criminals to deter ransomware attacks and protect critical services. Compliance will be enforced through audits and penalties, while private firms must notify authorities of ransom payment intentions. Meanwhile, a cyberattack on Saint Paul, USA, prompted a state of emergency declaration and the involvement of the Minnesota National Guard for recovery efforts. Additional cybersecurity developments include pro-Ukrainian hackers targeting Russia's Aeroflot, heightened corporate security measures in the US, and ongoing investigations into a pro-Russian hacking group in Europe.

GovLab - Living Library
AI and Democratic Publics
05 August 2025

AI has the potential to improve or replace existing democratic institutions, yet current scholarship often operates under flawed assumptions about democracy. The prevailing paradigm emphasizes deliberation and sortition but fails to account for the complexity of enduring democratic publics and their influence on collective behavior. The authors argue for a shift in focus, suggesting that research should explore how AI might reshape these publics and impact democratic stability. This approach could lead to a more comprehensive understanding of the relationship between AI and democracy.

(2) Strategic context

The key issues shaping Digoshen Recommends.

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

FIGURE 1

Transformation map for Digoshen Recommends

Created by Team Digoshen, Licensed for professional use.
© 2025 World Economic Forum

2.1 Cyber Risk Governance

The number of corporate boards with a dedicated cybersecurity committee is expected to increase sharply by 2025

Governance relies on risk-based decision making as a fundamental means to both drive the efficient use of resources, and to improve confidence in an organization's ability to achieve strategic objectives. All organizations rely on their employees' ability to navigate a world of growing uncertainty, and to dodge threats to their ability to achieve its collective goals. Unfortunately, complex organizations can easily be overwhelmed; each risk demands a distinct analysis and potential investment of additional resources, to respond in ways that adequately reduce exposure. A good governance structure will provide a framework

that enables the right managers to make the right decisions, which will help prioritize and allocate resources as needed. All risks don't necessarily require analytic rigour or subsequent investment - immediate hazards like icy sidewalks or commonplace cyber incidents like phishing emails can be addressed at lower management levels. That is not the case for strategic risks like global pandemics or advanced, persistent cyber threats that have the potential to disrupt or damage an organization indefinitely. A structure that effectively prioritizes and adjudicates risks to the right organizational level is required.

Responsibility for risks is typically apportioned in accordance with an organization's willingness to accept them, also called "risk appetite." A risk-appetite statement can be used to direct employees and clarify who has the necessary level of authority to decide how to respond to any given situation. The National Institute of Standards and Technology Special Publication 800-37 addresses the divvying up of risk with a three-tier structure including the organization, the mission, and the system. Meanwhile the ISO 27000 series of standards provides recommendations for the use of policy and organizational structure to reduce risk, and the COSO framework connects governance to culture by highlighting the importance of board oversight, culture requirements, core values, and human resource development. Vigorous, board-level engagement in risk governance is essential for success. Thankfully, boards are increasingly recognizing the importance of cyber risk governance; a study published by Ernst and Young in 2020 found that 81% of board members categorize cybersecurity as "highly relevant," and Gartner researchers predict that 40% of all boards will have a dedicated cybersecurity committee by the year 2025 (currently, just 10% of boards have one).

Related topics: Future of Work, Fourth Industrial Revolution, Agile Governance, Corporate Governance, The Digital Economy, Internet Governance, Leadership, Illicit Economy, Global Risks

2.2 | AI-Enhanced Counselling

Providing support even during a shortage of available mental health professionals

Artificial intelligence-enhanced personal counselling can take the form of chatbots, virtual assistants, or mobile apps - and can provide services ranging from screening, to intervention, to ongoing support. A key advantage of AI-enhanced personal counselling is its ability to quickly analyse large amounts of data about a client's medical and mental health history, symptoms, and behaviours - and to generate personalized interventions based on that information. Large language models, particularly those that are clinically specialized, enable the creation of therapist avatars that can maintain relatively sophisticated discussions with millions of users simultaneously. That can be particularly helpful in situations where there is a shortage of available mental health professionals. By providing anonymous, non-judgmental support, AI-enhanced counselling may particularly appeal to people who might not otherwise seek out such services. To treat patients safely and effectively, however, the underlying AI must be thoroughly trained to accurately identify mental health issues and provide appropriate support. With robust guardrails and regulations in place, AI-enhanced counselling can help address a growing mental health crisis, particularly in traditionally underserved areas and among traditionally wary populations.

Related topics: Mental Health, Artificial Intelligence, The Digital Economy, Data Science, Global Health, Values, Fourth Industrial Revolution

2.3 | Generative AI Goes Mainstream

AI models that generate text and media are transforming creativity while raising new challenges

Generative AI refers to algorithms that can create novel content – from writing human-like text to producing images, music or even software code – based on their training data. While AI has steadily advanced for years, generative AI exploded into public awareness in 2022-2023 through user-friendly tools. Notably, OpenAI's chatbot ChatGPT reached 100 million users just two months after its launch, a record adoption rate. Everyday people and businesses alike are experimenting with applications such as AI assistants that draft emails and reports, art generators and coding aids. These models' ability to have conversations or produce creative work on demand has generated both excitement and debate about their role in society.

The economic and social impact of generative AI is potentially massive. A September 2024 white paper by the World Economic Forum estimated that generative AI technologies could add trillions of dollars to the global economy in coming years. Productivity gains are expected as AI handles routine drafting, data analysis and customer service inquiries, allowing workers to focus on higher-value tasks. Entire industries, from media and marketing to law and software development, are being reshaped by generative AI's capabilities. New

services are emerging that use these models to personalize education, accelerate scientific research and assist creative design. Yet the rise of generative AI also presents new challenges. These systems sometimes produce incorrect or fabricated information ("AI hallucinations"), raising reliability concerns. They can also reflect biases present in training data or create harmful content if misused. Questions of copyright and intellectual property have arisen as AI models remix existing data to generate outputs. In response, policymakers and AI developers are seeking guardrails – from better model transparency to content labelling – to ensure generative AI is used responsibly. Even as generative AI opens exciting opportunities for innovation and efficiency, it demands careful oversight to manage its risks.

Related topics: Fourth Industrial Revolution, Arts and Culture, Internet Governance, Civic Participation, Economic Progress, Future of Work

2.4 | AI and the Future of Work

How exactly will artificial intelligence impact jobs?

There has been a great deal of speculation and debate about the impact of artificial intelligence on the future of work - particularly in terms of the toll it will take on available jobs. Some argue it will eliminate a significant number, and will predominantly impact low-skilled workers in ways that exacerbate existing inequality. Others believe AI could create new job opportunities, by adding nuances to existing work and making it more creative. Generative AI is particularly likely to transform the workplace; its ability to create new and seemingly original content can automate tasks ranging from editorial processes to the design of scientific experiments and software coding. Companies can potentially ease the impacts of AI integration in the workplace by developing programs to support employees during a transition period - such as retraining. To increase worker trust in AI systems, diverse teams of developers and data scientists must try to create systems using fair and unbiased training data. And policy-makers at multiple levels must set ethical, fair standards for the use of AI in the workplace.

Related topics: Agile Governance, Science, Future of Work, Corporate Governance, Justice and Law, Economic Progress, Youth Perspectives, Taxes

2.5 | Understanding Climate Risks

Extreme weather, rising sea levels, and food and water scarcity are becoming a reality

All ten of the hottest years on record have occurred since 2005. The global average temperature is now about 1°C above the pre-industrial average, and increasing at a rate of about 0.2°C per decade. This warming is largely the result of human activity. Carbon dioxide released by burning fossil fuels, and through agricultural activity like farming, has raised the pre-industrial concentration of carbon dioxide in the atmosphere by about one-third to more than 400 parts per million - which has in turn intensified the trapping of heat. Global warming is causing sea levels to rise and is changing precipitation patterns, with increased rainfall in some regions and more extreme drought in others. The world experienced a staggering number of climate-related disasters in 2020 - causing damage from hurricanes, wildfires, droughts, and floods that resulted in financial losses totalling more than $200 billion, according to the German reinsurer Munich Re. The US National Climate Assessment issued in late 2018 projected yearly related losses of $300 billion in the US alone by the end of this century.

The Paris Agreement on climate change aims to limit global average temperature rise to well below 2°C above pre-industrial levels. However, a 2018 report published by the Intergovernmental Panel on Climate Change vividly illustrated the need to limit warming to no more than 1.5°C; many ocean ecosystems, including the majority of the world's warm water coral reefs, are likely to disappear if warming exceeds this level. The average global rise in sea level - which is projected to be about half a metre by 2100, if warming reaches 2°C - could be reduced by 20% by hitting the 1.5°C target, thereby protecting an estimated 10 million vulnerable people. A slower temperature rise would also help affected regions better adapt to climate change. In order to meet the 1.5°C target, however, countries must go well beyond their initial Paris Agreement pledges and commit to net-zero emissions by the year 2050. Achieving this will require far-reaching changes to many aspects of modern society as we know it, but would also help create a more sustainable, equitable world.

Related topics: Food Security, Ocean, Air Pollution, Future of the Environment, Climate Indicators, Fresh Water, Global Governance, Sustainable Development, Global Risks, Antarctica, Forests, Peace and Resilience, Corporate Governance, Arts and Culture

2.6 | Social Innovation

Profit is not the only source of inspiration for innovators

Examples of social innovation are all around us; they include everything from kindergartens and hospices to Wikipedia, Kahn Academy, and microfinance (small loans made to entrepreneurs in the developing world who do not have access to traditional financing). Social innovation is often defined as innovation that aims to tackle both social problems and the means used to address those problems. This can take the form of new products, services, initiatives, business models, or simply novel approaches to accessing public goods - often achieved by creatively re-combining already-existing elements. The field has developed rapidly in recent years, according to a 2022 report published by the Academy of Management, as new sources of funding, public policies, academic research, and networks emerge. The everyday work of social innovation typically happens within social enterprises (organizations working to solve social problems using market-based approaches), charities, non-governmental organizations, social movements, or patient groups. Universities, large companies, and governments also play roles, particularly in terms of validating ideas; results have included the construction of public playgrounds and the commercialization of community-developed, open-source software.

One notable development in the realm of social innovation is the deployment of pay-as-you-go (PAYG) technology. This enables companies to cater to people living in relative poverty, by accepting small individual payments for key services. As with prepaid phone services, customers can buy small and therefore more affordable amounts of credit. Solar energy companies like Angaza and affordable water organizations like eWater Services use PAYG technology to reach customers that might otherwise be denied such services. However, a lack of immediate commercial incentives can make it difficult to raise the capital needed to support such social innovation. As a result, organizations continue to experiment with frugal innovation - to make potentially scarce resources stretch further. One example of this is the M-Pesa mobile phone-based payment and micro-financing service, which has been deployed in countries in Africa, Asia, and Europe to facilitate banking services without requiring access to an actual bank. Due to their limited funding, social enterprises often adopt hybrid for-profit and non-profit legal structures - enabling organizations like Sanergy in Africa to supplement revenue with philanthropic donations.

Related topics: Entrepreneurship, Sustainable Development, Circular Economy, Civic Participation, Ageing and Longevity, Future of Work, Agile Governance, Parity and Inclusion, Vaccination, Social Innovation, Fourth Industrial Revolution, Cities and Urbanization

2.7 | Enterprise and Emerging Risks

Effective risk management is central to both legacy and emerging corporate governance models

Historically, risk identification and mitigation at companies has tended to focus on addressing direct threats to a company's market value. These include preventable, internal issues (such as those related to the health and safety of employees, or to their potential involvement in bribery or fraud), where the goal is typically to get as close as possible to eliminating them entirely. However, companies must also consider strategic, external risks - such as shifting competitive and social dynamics, which can both pose threats and create new opportunities. Companies tend to struggle with managing contemporary, complex, emerging risks. This is due not least to the fact that current dynamics like climate disruption, geopolitical fragmentation, social unrest, rising inequality, polarization, and political dysfunction can accelerate and reinforce one other (some have defined this as an era of "polycrisis"). Building resilience requires greater rigour when it comes to risk identification, monitoring, and remediation. Many companies now recognize that the societal and environmental impact of a business are at the root of that business's risk - and that the ways in which these risks emerge is unpredictable, non-linear, and intertwined.

The need to mitigate risk presents organizations with a range of cross-functional and inter-temporal challenges. Risks often first manifest within particular teams or regions that do not have any internal responsibility for managing the risk in question, and this has several implications. The first is that businesses need to exercise a more practical curiosity about the impacts that they are having on particular stakeholders and on the wider public, and they need to make good-faith efforts to reduce negative externalities while increasing positive ones. The second is that risk identification and mitigation efforts need to encompass and align with organizational efforts to identify material environmental, social, and governance (ESG) issues through a "double materiality" lens of ESG and financial matters - while clearly differentiating the risks and opportunities each present. The identification of material ESG issues should then become a constant,

dynamic exercise of considering the inside-out and outside-in risk and opportunity dimensions of corporate performance. The third is that a clearer understanding of risks can inform strategic capital allocation, and the establishment of ethical guardrails and principles.

Related topics: Climate Crisis, Corruption, Financial and Monetary Systems, Small and Medium-Sized Enterprises, Global Risks, Cybersecurity, Justice and Law, Illicit Economy, Civic Participation, International Security, Development Finance

2.8 Digital and Sustainable Transformation of Industries

The pandemic has accelerated both digital immersion and a digital transformation gap

COVID-19 catapulted organizations everywhere into the digital-first world. Greater access to connectivity and digital services had already been reshaping industries, business models, and supply chains; the pandemic accelerated these trends, requiring organizations of all types to rely more heavily on digital operations and business models to create new value and experiences. But while some organizations are making progress on their digital transformation goals, others have not. The pandemic widened this digital transformation gap; as some speed ahead, others struggle to survive, let alone thrive. Without a comprehensive government approach to digitally equipping an economy, including sustainable investment in connectivity infrastructure and services, inequalities widen. A complete and responsible digital transformation of industries requires careful consideration of digital infrastructure investments and related policies, to enable a transition across an entire economy - in ways that benefit society as a whole, and not just now but for years to come.

Governments have an opportunity to make step changes in terms of technological advancement across industries and in their own operations, through sound policy and investments in digital skills and infrastructure. Research shows that digital transformation could help reduce emissions in hard-to-abate sectors by as much as 20% by 2050. In addition, the World Bank estimates that the digital economy is equivalent to 15.5% of global GDP, having grown two-and-a-half times faster than global GDP over the past 15 years. Low productivity and scaled back growth, coupled with an inability to fully (and responsibly) benefit from technologies such as cloud computing, 5G, artificial intelligence, and high-performance computing will lead to a deteriorating quality of essential services - and block the transition to a more advanced economy. Interoperability will be vital for ensuring information exchange, and enabling collaboration.

Priorities for collaboration:

-Encourage a cross-sector, public-private dialogue on value creation to design new frameworks around sustainable investments in connectivity infrastructure and services.

-Stimulate growth through digitally enabled collaboration models that enable transformation of industries.

Related topics: Fourth Industrial Revolution, Innovation, Leadership, 3D Printing, Virtual and Augmented Reality, Corporate Governance, Economic Progress, Blockchain, The Digital Transformation of Business, Artificial Intelligence, Entrepreneurship

2.9 Speed of Change

As the velocity and magnitude of global disruptions intensify, traditional strategic foresight horizons may undergo a fundamental compression

In strategic foresight practice, the 10-year horizon has traditionally served as a foundational timeframe that offers sufficient distance to envision substantial change, while remaining within actionable planning parameters. However, a succession of global systemic shocks - the 2008 financial crisis, the COVID-19 pandemic, intensifying climate disasters, rapid geopolitical realignments, and the explosive emergence of generative AI - has created a widespread perception of accelerating change that challenges this conventional temporal framework. While scholars debate whether the actual pace of change has fundamentally accelerated, or whether we are experiencing a period of concentrated disruption, the psychological impact of these cascading global events has transformed how organizations approach future-planning. Simply put, it feels to many leaders that the future is happening faster. This acceleration phenomenon creates a paradox for strategic foresight practitioners. While long-term thinking remains vital for addressing systemic challenges

like climate change, organizations require more immediate guidance for navigating near-term disruptions. This has catalysed the emergence of "rapid foresight" methodologies, which compress traditional scenario planning into shorter cycles, enabled by real-time data analytics and AI-augmented modelling tools.

The implications of this are profound. Strategic foresight must evolve from periodic planning exercises to continuous sensing and adaptation processes. Organizations are shifting toward hybrid approaches that maintain long-range vision, while developing heightened capacity for detecting and responding to immediate signals of change. This new paradigm demands more agile foresight frameworks that can bridge both immediate disruptions, and longer-term transformations. Agile strategic foresight requires organizations to develop and continuously practice three essential capacities for future-readiness: Detecting changes on the horizon that may pose threats or opportunities; Responding by analysing the strategic implications of future changes; and Adapting to thrive in future-fast environments. Organizations can also adapt to faster futures by building different orders of readiness, at three different scales. Market Scale: How will the emerging future impact our portfolio of products, services, and experiences? Organizational Scale: How will the emerging future impact our organization? Systems Scale: How will the emerging future impact the larger systems we rely on? Organizations can build resilience for faster futures by deliberately stacking these different orders of preparedness, rather than limiting focus to any single dimension.

Authors: Rod Falcon and Jane McGonigal, IFTF

Related topics: Artificial Intelligence, Financial and Monetary Systems, Climate Crisis, Disinformation, Pandemic Preparedness and Response, International Security, Agile Governance, Global Risks, Fourth Industrial Revolution, Leadership

2.10 | New Ways to Make, Do and Buy

Virtual and augmented reality are helping to improve quality in innovative new ways

Virtual and augmented reality tools have been readily adopted by manufacturers aiming to improve efficiency, safety, and connectivity as they develop and repair their products. According to a report published by PwC in 2016, more than a third of US manufacturers surveyed were either already using virtual reality technology, or planned to do so in the next three years. In terms of product design, the technology facilitates remote collaboration, and many products can be "experienced" before they are actually made - potentially increasing product quality for consumers. In 2016, MIT Technology Review reported that commercial construction companies had begun using augmented reality technology to help them identify and avoid problems before starting work at a site; one senior manager at a firm in Rhode Island was able to use a Microsoft HoloLens head-mounted display unit in order to look at a mockup of a project and see that steel frames he planned to order would actually be too long to fit the design. His company then asked the supplier to cut the frames shorter in advance of delivery, enabling it to save thousands of dollars in unnecessary labour costs.

While virtual reality can help businesses visualize store layouts before they are built, augmented reality can fundamentally change the way retailers deliver their products to consumers. The functionality and quality of products can be assessed from anywhere, anytime. A Harvard Business Review article published in 2016 presented several possible use cases: virtually trying on clothing in the comfort of one's own home; testing out the look and fit of furniture at home; and potentially enabling people in different locations to go shopping together. The free augmented reality app KabaQ, released in 2017, can render compelling 3D models of food - which enable people to preview their meals on a tablet before ordering. AR may ultimately prove to be the easiest option for retailers seeking to bolster their services, given that the technology can be accessed on any smartphone. Virtual reality, on the other hand, still requires special equipment and so may be more suitable for other types of businesses - at least, for now. However, as the technology inevitably matures, virtual reality shopping will likely take off.

Related topics: Future of Construction, Fourth Industrial Revolution, The Metaverse, Corporate Governance, Future of Manufacturing, The Digital Economy

2.11 | Using Sustainability to Measure Success

Sustainability performance is not captured in quarterly earnings reports

At its root, ESG is about expanding our appreciation of a firm's performance and impact. While quarterly earnings reports might convey key figures, they leave much hidden related to both the causes and effects of

the firm's success. By widening our view, we may see that a mining firm's profits come at the expense of workers, communities, and the environment, for example - while another firm in the same industry may be investing in worker safety and environmental efforts in ways that aid long-term performance, but do not show up in a balance sheet. This wider view helps determine whether firms can be considered "sustainable," and so it is essential to enable broad access to it. While firms can constrain their own future success if they negatively impact the people, customer and community trust, or natural resources they depend upon, one key challenge relates to how broad the view of these impacts and risks should be. What should be in scope when assessing "non-financial performance" for technology firms, relative to automotive companies, mining interests, or financial firms? And, how long should our time horizon be when considering related risks and impacts?

There are no easy answers to these questions, and different countries and institutions define sustainability differently. ESG has become an umbrella concept for hundreds of issues, practices, and metrics used to hold firms accountable. One MIT study of ESG rating agencies found that 50% of the significant divergence in ratings was caused by differences in scope and definition. The World Economic Forum and its partners have sought to lessen these differences by developing the "Stakeholder Metrics Initiative," designed to make ESG metrics comparable across industries and regions; more than 150 companies have so far adopted them. Writing and publishing reports may increase transparency, but it does not change practices. And while buying and selling equities based on ESG information is increasingly common, the effects on firms (and society in general) are indirect at best. ESG information can only improve the world under certain conditions: when C-suite executives actually use it to guide decision making, when it attracts the best employees, customers, suppliers, and capital, when it influences regulatory action, or when it impacts shareholder voting - which can make non-financial information truly material.

Related topics: Air Pollution, Economic Progress, Corporate Governance, Gender Inequality, Future of the Environment, Small and Medium-Sized Enterprises, Future of Work, The Net Zero Transition

2.12 Stakeholder Engagement and Cultivating Trust

Building trust is an interactive endeavour based on honest dialogue and genuine efforts to address issues

Traditional notions of corporate governance are primarily defensive. They focus on protecting shareholder value, primarily through the proactive management of regulatory and reputational risk. Managing reputational risk tends to be a contained activity; it treats corporate messaging as an end in itself, which is divorced from a company's underlying conduct. But in the current atmosphere of heightened suspicion, rising expectations for greater transparency, and increased employee, shareholder, and public activism, companies can no longer simply rely on crafting attractive narratives about their achievements. Indeed, a backlash triggered by allegations of greenwashing and the gross exaggeration of corporate-responsibility efforts has emerged. As we progress into the mid-21st century, a more trusting and interactive relationship with stakeholders is at the centre of value creation - and is key to gaining a long-term social license to operate. While the definition of "trust" in an organization remains hotly debated, it might best be considered an expectation of ethical behaviour, based on a mutual confidence that one party will not exploit the other. This type of trust includes an anticipation of reliability, honesty, fairness, competence, respect, and transparency.

Crucially, this trust also relies on a corporation exercising practical curiosity about its impact on human beings - and making good faith efforts to reduce harm as value is increased. Arguably, this generally aligns with how most people believe a business should behave. Leading companies recognize that building trust is an interactive endeavour, based on transparent, honest dialogue, a corporate commitment to keeping one's word, and a genuine effort to understand and address impacts on stakeholders that are both local and global. The Business Roundtable's 2019 statement on the purpose of a corporation (focused on "stakeholder capitalism") demonstrated a new commitment among business leaders to balancing stakeholder interests for the greater benefit of society. In practice, though, corporations have been taking stands on social and political issues that are not always accompanied by meaningful action. A more robust approach necessitates thinking carefully about stakeholder conflicts and trade-offs, and determining where best to focus. Decisions grounded in actual impact are likely to be more beneficial than falsely suggesting an ability to address and resolve all stakeholder concerns - including those where a company has limited leverage.

Related topics: Future of the Environment, Artificial Intelligence, Leadership, Social Protection, Agile Governance, Gender Inequality, Systemic Racism, Civic Participation, Sustainability Reporting, Future of Work, Climate Crisis, Values

2.13 | Values, Ethics, and Integrity

Good faith efforts to do no harm and reduce negative externalities are necessary

Sound corporate governance is increasingly important for any company that wants to establish and execute a coherent integrity agenda - one that adequately encompasses its values, regulatory obligations, and voluntary commitments. Solid governance is the critical underlying bedrock for any strategic decision-making when it comes to executing environmental and social commitments. This means aligning rhetoric with action - and ensuring that leaders understand their responsibility for shaping employee behaviour and conduct, and for designing incentives and allocating power and resources in ways that effectively build a culture of integrity. These efforts require organizations to break down departmental divisions, and create more deliberate alignment and collaboration across critical functions, including environmental, social and governance (ESG) and sustainability, public affairs, risk, ethics, and compliance. Prevailing public concern about corporate hypocrisy and greenwashing is necessitating more carefully-planned and coordinated approaches to integrity commitments. Companies are being pressured as never before to take stands on social and environmental issues, but if that rhetoric is not accompanied by concrete, measurable action, allegations of duplicity and insincerity will only become more prominent.

One crucial imperative for companies is that they tie their integrity commitments directly to the ways in which they create value for stakeholders. This means making good-faith efforts to do no harm, and reduce negative "externalities" (another way of saying negative outcomes). The most visible evidence to date of efforts to tackle contemporary, multifaceted challenges has been the emergence of a designated senior leader at companies who is entrusted with the responsibility of overseeing the totality of integrity efforts and commitments. For other organizations, however, the aim may be not to appoint one, single individual to direct and lead integrity efforts, but to instead consciously drive broader alignment among departments including risk, compliance, governance, sustainability, investor relations, human resources, government affairs, and corporate affairs, in ways that have each setting both internal and external strategic organizational priorities. Integrity efforts need to be supported by strong oversight - to prevent systemic misconduct, and to sufficiently deter employees from breaking the law and thereby expose the organization to legal risk.

Related topics: Values, Economic Progress, Sustainable Development, Sustainability Reporting, Corruption, Leadership, Future of the Environment, Climate Crisis

2.14 | Technology Innovation

The promise of emerging technologies is matched by a need to manage related uncertainty

Emerging technologies like quantum computing, augmented reality, and gene editing tools present many opportunities. At the same time, they are the cause of immense uncertainty. Some particular sources of that uncertainty include the market applications a new technology will serve, the users who will adopt it, the related activities that will support its expansion; and the business models that will be deployed to commercialize it. A holistic approach can help managers unbundle specific sources of uncertainty and the potential interaction among them, according to an article published in Strategy Science in 2021. For example, quantum computing has made several exciting technological advances, yet it can still be difficult to predict how it will evolve and create genuine value. Several questions remain regarding the technology, including at what point it can consistently and reliably outperform existing high-performance computing solutions. While some early-stage approaches have utilized "quantum annealing" technology - which is an alternative method of quantum computing that is already becoming commercially available - the next generation of the technology, dubbed universal gate-based quantum computing, is not expected to become widely-scaled-up for several years.

In terms of specific applications, quantum computing can serve many industries. Possible use cases include finance (for trading and risk management) and logistics (scheduling and planning), and eventually pharmaceuticals (drug development), security (encryption), and more. Still, there may be uncertainty about how various actors will contribute to the technology's value proposition; quantum computing does not necessarily hold utility when used simply to solve current problems faster than existing solutions, so to realize its full potential reformulating old questions or raising new ones is needed (companies such as 1Qbit, which specializes in "recasting" questions and problems related to quantum computing, have grown in value). Cloud-based ventures, including those focused on data storage, will also be important for bringing quantum technology to commercial fruition. Ultimately, it will require a business model - though that is difficult to design when the technology is still rapidly evolving, and use cases are still not fully defined. It will likely be

several years before its true potential becomes clear. Meanwhile governments via initiatives like the Barcelona Supercomputing Center (and its spin-off Qilimanjaro) and companies like IBM have been shouldering substantial related upfront investments.

Related topics: 3D Printing, Fourth Industrial Revolution, Blockchain, Digital Communications, Artificial Intelligence, Entrepreneurship, Semiconductors, Advanced Materials, Internet of Things, Biotechnology, Virtual and Augmented Reality

2.15 | The Digital Enterprise

Becoming 'digital at the core' can potentially create more sustainable value

Millennials and Gen Z account for nearly half the global workforce, and are updating expectations for employers everywhere. Remote working is important to many millennials (who are now as old as 40), for example, and COVID-19's social distancing requirements have accelerated what had been a gradual shift to both more remote working, and more digitally-enabled customer experiences. Companies will need to be able to accommodate this with digital solutions that maintain engagement, health, and well-being. In addition, as workforces become more distributed, and connected devices and data networks are increasingly used, ensuring security will become more challenging - necessitating the management of more significant vulnerabilities. Companies will generally need to be open and flexible, to proactively plan for cybersecurity risks, and to be willing to take responsibility for helping employees acquire new and necessary digital skills. Other reasons for aggressively pursuing a digital transformation predate the pandemic; according to the MIT Initiative on the Digital Economy, the "digerati," or firms that excel both in digital intensity and transformation management capabilities, have been shown to be 26% more profitable than their peers.

In response, an estimated 87% of CEOs expect to see a change in their operating models within three years, according to research cited by Deloitte in 2019. Technology and data can help support demand forecasting, inventory stocking, tracking, and delivery. Amazon, for example, has used a shipping model meant to predict buying behaviour in order to have products on hand locally before they are ordered. As COVID-19 disrupted supply chains with lockdowns and border closures, many organizations looked for ways to bolster resilience and transparency, and many manufacturers turned to selling products through channels like Amazon. Increasingly, companies everywhere will make greater use of technologies such as blockchain, cloud computing, artificial intelligence, and robotics as part of efforts to build resilience - and Unilever and United Kingdom-based supermarket chain Sainsbury's have already sought to use blockchain to increase the sustainability and transparency of their supply chains. While the pandemic has led to revenue losses in many industries, investing in digital solutions can be one means to help better manage costs during a difficult time.

Related topics: Innovation, Data Science, The Digital Economy, Internet of Things, Blockchain, Cybersecurity, Fourth Industrial Revolution, Entrepreneurship, Sustainable Development, Future of Work, Artificial Intelligence, Digital Communications

References

1. The Conversation, *"Today's humanoid robots look remarkable, but there's a design flaw holding them back"*: theconversation.com

2. LSE Business Review, *"The risks of deepfakes are evolving beyond disinformation"*: blogs.lse.ac.uk

3. Eco-Business, *"Moving 'green' Belt and Road from words to action"*: www.eco-business.com

4. GovLab - Living Library, *"From open data to AI-ready data: Building the foundations for responsible AI in development"*: thelivinglib.org

5. World Economic Forum, *"How to build India's just transition ecosystem and finance an inclusive future"*: www.weforum.org

6. Project Syndicate, *"A New Economic Logic for Sustainability"*: www.project-syndicate.org

7. Eco-Business, *"'Pricing for delay': Think tank head says Asia's financial markets are diverging from science-aligned climate action"*: www.eco-business.com

8. GovLab - Living Library, *"Illinois bans AI from providing mental health services"*: thelivinglib.org

9. World Economic Forum, *"Why we must harness technological convergence for a greener AI energy future"*: www.weforum.org

10. Wharton School of the University of Pennsylvania - Knowledge@Wharton, *"How Regulatory Enforcement and Transparency Could Bring Environmental Gains"*: knowledge.wharton.upenn.edu

11. GovLab - Living Library, *"Strategies for Integrating AI into State and Local Government Decision Making"*: thelivinglib.org

12. World Economic Forum, *"Natural disasters have cost us $162 billion this year. Insurance covered most of it."*: www.weforum.org

13. Eco-Business, *"CDP sees 'greater than ever' uptake of disclosures despite ESG backlash and greenhushing"*: www.eco-business.com

14. World Economic Forum, *"UK to ban ransom payments to cyber criminals, and other cybersecurity news"*: www.weforum.org

15. GovLab - Living Library, *"AI and Democratic Publics"*: thelivinglib.org

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 Digoshen Recommends, 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 Digoshen Recommends 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.

Continue online

Our suite of Strategic Intelligence tools are available to help you keep up to date across over 300 topics.

On the web

Visit Strategic Intelligence on your desktop or laptop. All modern browsers supported.

In the app stores

You can find our Strategic IQ app on the Apple App Store, Google Play Store or Huawei App Gallery.

You can also follow Strategic Intelligence on Twitter.

Contributors

World Economic Forum   Co-curator

Acknowledgements

Content Providers featured in this briefing

Eco-Business

GovLab - Living Library

LSE Business Review

Project Syndicate

The Conversation

Wharton School of the University of Pennsylvania -
Knowledge@Wharton

World Economic Forum