COPENHAGEN INSTITUTE FOR FUTURES STUDIES

Exploring the futures of technology

UNDERSTANDING THE LAYERS IN AN AI-MEDIATED WORLD

By Copenhagen Institute for Futures Studies

This report explores the accelerating landscape of emerging technologies and provides a foundation for developing a futures-informed mindset. It provides insights into key trends, critical uncertainties, and the interconnected dynamics of technological advancements, with a focus on AI's emerging role as a mediator in the future. Its aim is to help readers make sense of the challenges and opportunities that lie ahead in 2025 and beyond.

Introduction

The pace of technological advances in recent years has left most of us caught between wonder and whiplash. On the one hand, we're witnessing incredible breakthroughs and hearing about even more on the horizon – advances that would have seemed like science fiction not long ago. On the other hand, it can feel like we're on a rollercoaster, struggling to catch our breath as each new innovation ripples through society faster than the last.

This isn't just about changes in technology; it's about the transformation of society at large. We're seeing industries redefine themselves from the ground up. AI has moved from research labs and sandboxes into our daily lives, while new technologies are starting to bridge the gap between human cognition and digital systems in ways that challenge our traditional notions of human capability and experience. The impact extends further than just faster computers or better algorithms – it's fundamentally changing how we live, think, approach problems, work creatively, and structure our businesses, organisations, and societies. Tomorrow's technological opportunities may seem endless, but grasping their true potential requires us to look past what we take for granted in the present and remain open to questioning our own understanding of the world while working inside an AI-mediated framework.

The opportunities brought by emerging technologies come with challenges and responsibilities as well. While businesses that are struggling to become future-ready may want to focus on radical, future-driven innovation, values such as openness, equality, fairness, and progress for the common good also need to be considered. How should we strike a balance between these different yet equally critical priorities?

The rapid advances in AI highlight this dilemma well. As AI is becoming ever more integrated into nearly every field of business and technology, its impact and influence are felt everywhere. Whether it's making content 'liquid' and allowing it to flow between formats and platforms, helping us rethink supply chains, delivering breakthroughs in health (like Google DeepMind's

AlphaFold Protein Structure Database that won the Nobel Prize in 2024), or reshaping education and the information ecosystem in general, AI tools for planning, research, diagnostics, and decision-making have never been more advanced and impactful.

The need for organisational preparedness

Technology has always been a tool for staying competitive and expanding into new markets. Even in traditionally strong business areas, AI will become an increasingly important tool for staying relevant in 2025. The risk of missing out on radical innovations that will transform industries in the future is significant.

This shift demands new organisational approaches. Many businesses remain rooted in systems designed for a different era, making it difficult to keep up with a shifting technological landscape. The challenge goes beyond simply adopting new tools; it requires rethinking how organisations operate, innovate, and adapt to an AI-mediated world.

This transformation comes with an increasingly steep learning curve and with a risk of turning chaotic if not managed properly. Skills gaps are widening, and there's growing pressure to prepare both the current workforce and future generations for an AI-driven world. This requires more than technical training; it demands building confidence and resilience to navigate uncertainty. In doing this, a balance must be struck between maintaining what works in the current system and making room for new ways of thinking and operating. Within organisations, there are often pockets of innovation where individuals or teams are already experimenting with how possible futures could look like. These efforts need to be recognised, supported, and connected. At the same time, it's important to acknowledge that change isn't easy. Many people and systems are deeply tied to established practices, and letting go of these can be difficult and uncomfortable.

It's not about quick fixes or waiting for technology to mature anymore. It's about having the courage to foster a culture of experimentation, adaptability, and learning – and about dedicating the resources needed to support it. Organisations that embrace uncertainty, welcome radical change, and commit to evolving alongside a shifting world will be the ones best equipped to thrive in the future.

At the same time, the push to advance AI capabilities while preserving human creativity, autonomy, and judgement introduces additional challenges. Balancing these ambitions with the practical demands of building competitive business models is no small task – and as a business or organisation, much depends on the specific market you operate in.

The evolving geopolitics of tech

The geopolitical race for tech sovereignty influences the direction of innovation and defines the environment in which businesses operate. While some regions, like the EU, prioritise ethical frameworks and data privacy, others push for dominance through aggressive investments in critical technologies. This creates a "battle of narratives," where contrasting visions of the future

compete on the global stage. For example, the development of AI governance frameworks in the US, EU, and China is three distinct and competing narratives that reflect the broader ideological divides about individual rights and state control within these regions.

Narratives shape how we perceive the world, influencing beliefs, setting priorities, and defining realities. Narratives are powerful mental models used by governments, corporations, and institutions to shape public opinion and frame critical issues like climate change or AI regulation. Controlling the narrative has become essential for impact and shaping the future of how the technologies are being integrated.

The global competition in critical technologies – influenced by the competing narratives that drive divergent paths of development – underscores the need to anticipate disruptive scenarios. For instance, China's deliberate long-term investment in quantum computing, artificial intelligence, hypersonic capabilities, and other areas of high-tech innovation has positioned it as a dominant force in 37 of 44 tracked critical technologies.[1] The EU is not dominant in any of them. While the EU forges ahead in its efforts to ensure user-centric regulation, China's burgeoning technological supremacy risks undermining Western democracies' influence in global standard-setting as well as their efforts to secure supply chains.

Simultaneously, the rising dominance of private entities in sectors like space technology presents both exciting opportunities and significant vulnerabilities – perspectives that shift depending on who is looking. From the private side, companies like SpaceX, with thousands of operational satellites in orbit, are driving innovation and offering transformative possibilities in communication, navigation, and security. However, this growing reliance on non-state actors also raises concerns about overdependence on private enterprises, potentially introducing risks that rival traditional geopolitical challenges.

Other crucial questions to consider are whether technological advancements will lead to a widening of global inequalities and whether it will help reinforce authoritarian control. There are also perspectives to consider that relate to the risk that unchecked resource competition will trigger geopolitical conflicts.

Questions such as these may be uncomfortable, but they demand honest reflection. As emerging technologies reshape society, their unchecked development risks magnifying the undesirable inequalities and issues we already face today. Ensuring future governance systems, in both the private and public sectors, that can address these power balances will be vital in order to shape our preferred future in an AI-mediated world.

Source: ASPI's Critical Technology Tracker

The AI-mediated framework

In this report, we aim to shift the focus from the hype surrounding emerging technologies to the lens through which we can view their integration into a broader framework. In 2025 we see a move towards a world that is increasingly AI-mediated.

Being AI-mediated means that AI acts as an intermediary in a process, interaction, or decision. The AI analyses data, automates tasks, or provides recommendations, shaping outcomes or experiences. In the AI-mediated framework, the human takes centre stage, whether as a consumer, a co-worker, or an individual – making it more critical than ever to understand the individual needs, behaviours, and context.

The AI-mediated framework refers to a system where AI acts as an intermediary that facilitates, connects, or influences interactions, processes, and systems. In this context, AI is positioned as a key enabler, bridging gaps between different components – whether they are digital tools, physical environments, or human activities. This framework is made to highlight the role of AI in shaping relationships between individuals, technologies, and societal infrastructures, often focusing on its ability to personalise, optimise, and streamline these interactions. It is meant as a conceptual model to navigate how AI integrates into and impacts various layers of our technological and social ecosystems.

Imagine a world where you no longer need to navigate complex processes or systems to find what you need. Instead, AI provides personalised, seamless interactions tailored to an individual's preferences and needs, whether it's discovering products, accessing services and information at the workstation, or co-creating hyper-personalised experiences. These systems anticipate needs, adapt to the time and context of the user, and simplify decision-making. AI-mediated systems that simplify decision-making, adapt dynamically, and create a future where engagement feels effortless and deeply aligned with individual and collective priorities. AI will act as filters, cutting through the noise to deliver clarity and (personal) relevance.

In this reality, interacting without some form of AI mediation will become increasingly rare. As the AI-mediated ecosystems expand, not everyone will embrace them unconditionally. Counter-movements are already forming, driven by concerns over data privacy, the decline of critical thinking, and an over-reliance on algorithmic curation. Some worry this might create a kind of "mental obesity," where we lose the ability to think deeply or independently. For these groups, opting out of AI-mediated interactions primarily represents a deliberate choice to preserve human agency and maintain deeper, unfiltered, and unmediated connections.

Despite these emerging counter-narratives, as seen historically, the majority are likely to prioritise convenience and personal relevance over moral considerations of the possible long-term impacts on humankind. The ease of hyper-personalised experiences, tailored recommendations, and seamless interactions often outweighs concerns about data sharing or the subtle trade-offs in autonomy.

This interconnectedness highlights the need to not view AI in isolation, but as part of a larger, evolving ecosystem mediating both the present and our possible futures.

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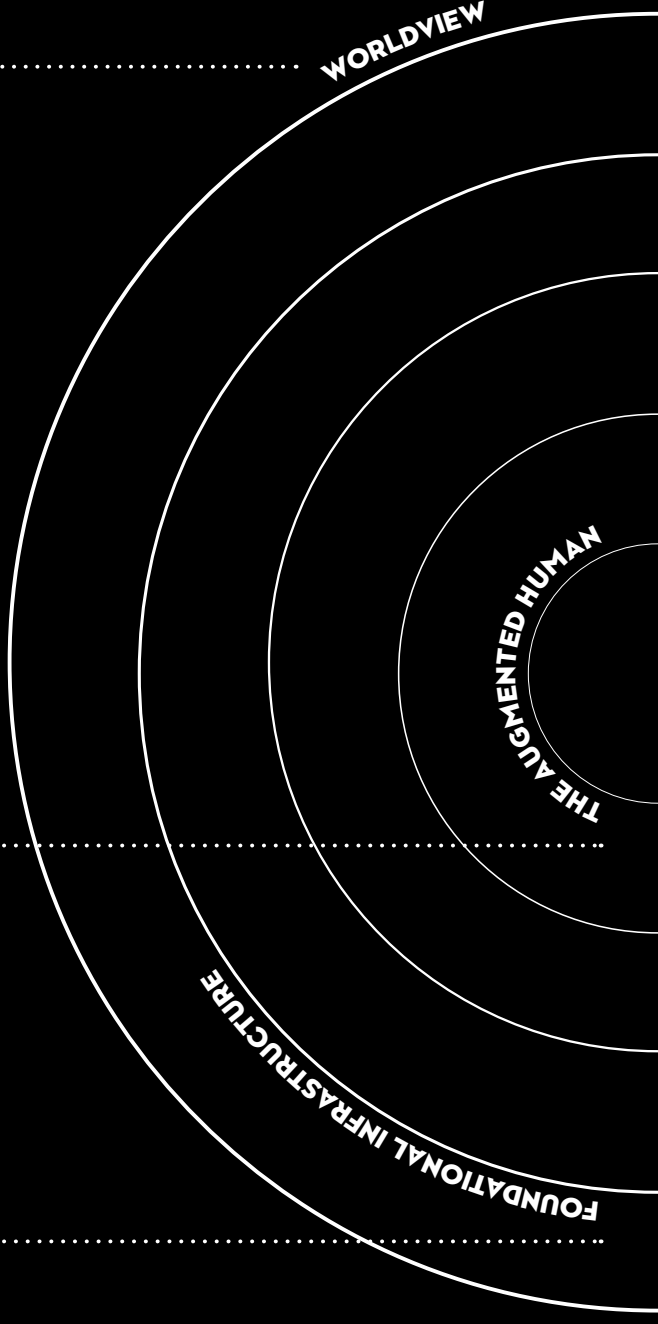
The AI-mediated framework

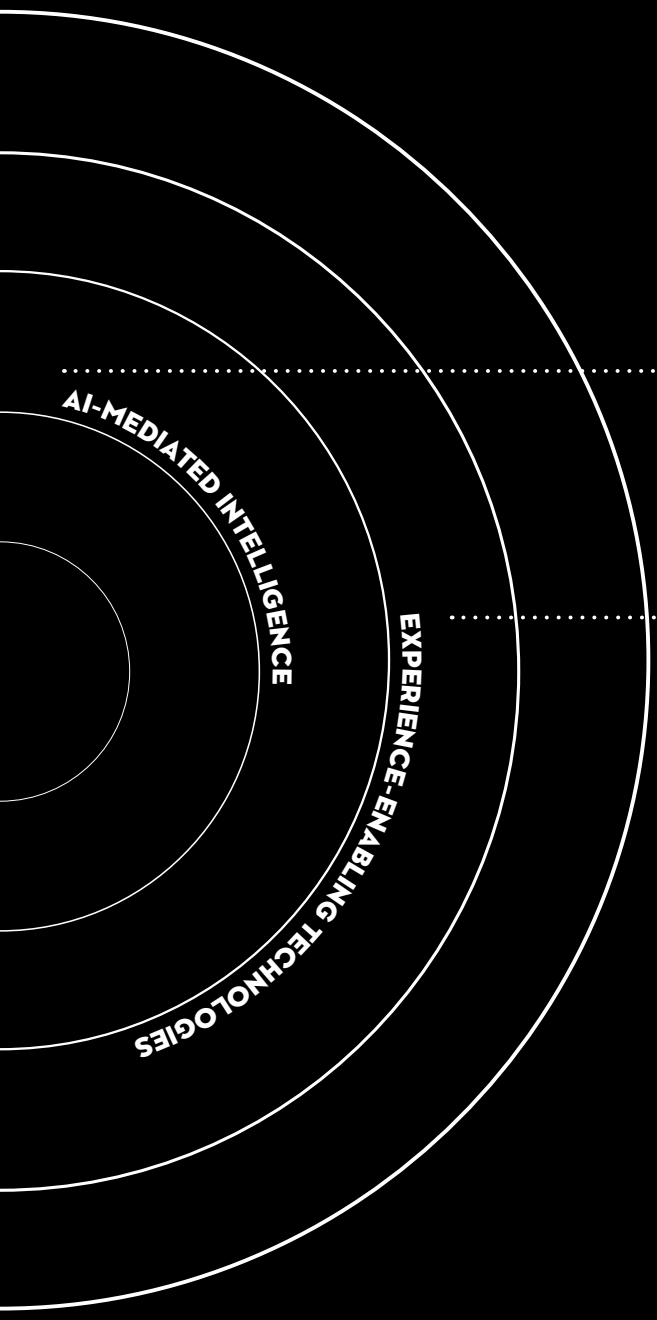
- Narratives, cultural norms and values, ethics, and governance.



- Liquid identity, multiple representations, participatory.

- Scalable systems enabling everything in the inner layers.

- Includes interoperable platforms, quantum computing, and digital economies.



- AI systems personalising and adapting interactions.
- **Key enablers:** Contextual data and Agentic AI.

- Tools bridging digital and physical worlds.
- **Examples:** Immersive interfaces (XR), smart ecosystems, Physical AI.

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The Copenhagen Institute for Futures Studies is an independent, non-profit think tank established in 1969. By building the capabilities necessary to address potential futures, we help create a society fit to meet the challenges and grasp the opportunities we face.

We do this by applying our unique approach to futures studies and foresight, combined with more than 50 years of global experience and contributions to the field, working with organisations across the public, private, academic, and civic sectors, as well as with the general public.

Our vision is a futures literate world where everyone has the right and mandate to engage with the future, participate, and visualise change, so they can create the best possible future for themselves, society, and the planet.

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