What would be the impact of AGI on society with a focus on UN's Sustainable and Development goals?

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Abstract

As technology advances rapidly, humanity faces inevitable changes. Whether we embrace it or not, artificial intelligence (AI) will play a crucial role in shaping our future. AI is poised to be the defining technology of the next decade due to its ability to enhance human capabilities at a low cost. More advanced than AI itself is Artificial General Intelligence (AGI). In this context, it's important to establish a common understanding: Do we truly comprehend what AGI is, or are we merely envisioning what we think it might be?

This Major Research Project intends to investigate the impact of artificial general intelligence (AGI) on the future of societies. By examining the diverse applications, current trends, opportunities, and ethical challenges associated with AGI integration in human interactions, this study aims to reveal how AGI technologies could reshape human society.

Alongside going through the current trends; also, by analyzing the United Nations Sustainable Development Goals (SDGs), I identified the key objectives most relevant to my research. The SDGs provide a comprehensive framework for understanding societal priorities, encompassing diverse aspects of human life and global development.

Using the SDGs as a lens, I evaluated current policies and reviewed recent reports to uncover how AGI could play a pivotal role in achieving these goals. This approach highlights AGI's capacity to address critical global challenges, such as improving healthcare, advancing education, and fostering environmental sustainability. By focusing on these areas, my research emphasizes the positive contributions AGI can make toward creating a more equitable and prosperous world.

Moreover, by developing a rating system based on three key factors—popularity, activity, and freshness—I assessed how appealing the goal is to people, how close we are to achieving it, and what infrastructures are required to get there. This system provides a clear indication of the likelihood of successful implementation.

The outcome of this study will contribute to the existing body of knowledge on AGI and different social dynamics. The findings will inform educators, medical care providers, policy makers and creatives and AI companies.

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Background

The journey of life, from start to finish, is complex. Humanity encompasses what we experience and how we navigate this journey. Human life consists of two primary components: human and life itself. You might ask, what does it mean to be human? What are the major components of humanity? And what are the essential elements of one's life?

Humans are comprised of both body and soul, mind and form, exterior and interior. The exterior—the body—requires nourishment to physically accomplish tasks. The interior—the mind and soul—constitutes the thoughts and emotions driving everything. The essence of who you are is a combination of these aspects. From birth, numerous factors contribute to shaping individuals. They begin their lives within a social context, primarily within the family unit. The journey of self-discovery is intertwined with contributing to this foundational social environment. The better one manages oneself, the more effectively one can engage in social life. As humans have come to understand the essentials for enhancing life's fulfillment, they began to live in groups or tribes. This development aligns with fulfilling the second level of Maslow's hierarchy of needs, emphasizing safety and social belonging. However, there are so many factors that can influence or shape your social environment, family, and even yourself.

In examining the early stages of humanity, it is evident that as societies emerged, individuals began crafting tools to simplify tasks and achieve their objectives with minimal effort and energy—a concept known as seeking the lowest state of energy. In this context, societies often adapted their tools in response to various disruptions, such as natural disasters etc. As societies expanded and developed into cities, the scale of necessary changes to ensure survival and ease increased correspondingly. Whether facing natural or human-made disruptions, individuals have consistently adapted. The human mind possesses a limitless capacity for learning and adapting to novel situations and challenges.

Today, AI is the defining technology of the next decade due to its ability to enhance human capabilities at a low cost. (AI is set to be the key technology of the coming decade because it can boost human abilities affordably.) AI continues the tradition (seek for lowest state of energy) by assisting humans in completing repetitive daily tasks more efficiently than ever.

In the AI era, some companies and organizations aim to achieve Artificial General Intelligence (AGI), or strong AI, which aspires to develop systems with cognitive capabilities comparable to humans. Simply put, AGI seeks to match human cognitive abilities. Researchers at Google DeepMind have proposed a framework classifying AI into seven levels:

1) Narrow AI
2) Context-based AI
3) Domain-specific AI
4) Thinking and reasoning AI
5) Artificial General Intelligence (AGI)
6) Artificial Super Intelligence (ASI)
7) Quantum-powered AI

This classification helps in understanding the progression and potential of AGI as it evolves to perform tasks with increasing complexity and proficiency. Adding to this, OpenAI (a private research company that develops artificial intelligence (AI) to benefit humanity) tracks progress towards AGI using 5-level framework which currently, AI is advancing towards the second level, with higher levels representing increasingly human-like capabilities and autonomy.

1) Conversational AI
2) Reasoning AI
3) Autonomous AI
4) Innovating AI
5) Organizational AI

Recognizing the parallel between early tools and modern AI is crucial for understanding technology's transformative potential in human societies. A significant phase in the evolution of human-made tools is the uncertainty accompanying these changes. An analysis of behavior during the Industrial Revolution reveals that people were initially uncertain, fearing the decline of craftsmanship. Additionally, with the invention of the camera, there were concerns that painting would become obsolete. Similarly, there is significant uncertainty surrounding AI today. Many individuals question the tool's trustworthiness, specifically regarding the accuracy of its information and its access to sensitive personal and professional data.

These historical instances highlight that change is inevitable, and whenever we approach significant transformation, resistance often arises. This resistance typically stems from uncertainty and fear, rooted in a lack of understanding about the future. If individuals could envision the potential benefits of these changes, they might be less hesitant to embrace them.

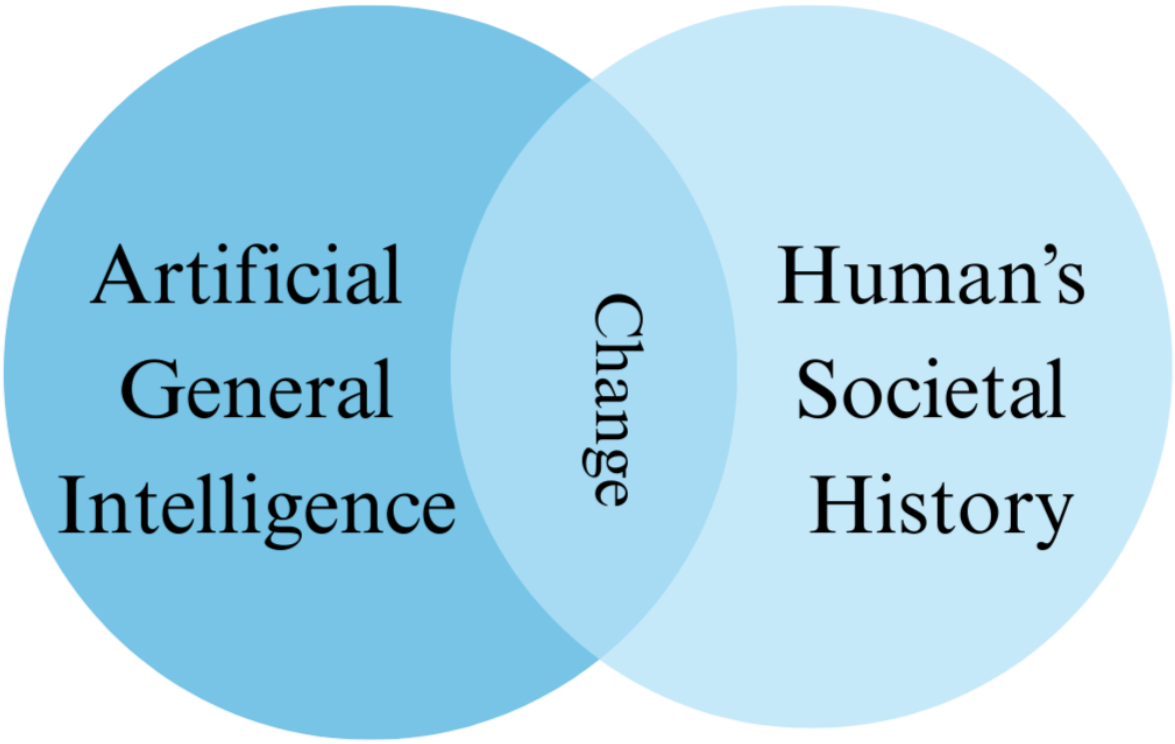


Figure 1 - The intersection of Artificial General Intelligence (AGI) and human societal history.

Plans and predictions during periods of transition—of unknown duration—are crucial for understanding that each society possesses its own capacity to adapt to upcoming changes. The time required for acceptance can vary significantly among societies. One reason for this variability may be the origin of the change; for instance, if technology or practices are introduced from another nation, a lack of local infrastructure can hinder firsthand experience. Additionally, changes may be forced upon societies through events such as natural disasters, including wildfires or tsunamis, further complicating their ability to adapt.

All of these developments have manifested in various forms within our society. Some theorists argue that social structures evolve naturally, driven by larger systemic needs such as the demand for labor, management, and professional roles. Conversely, others contend that social structures are not the result of natural processes but are instead constructed through social interactions and agreements. Consequently, planning and predicting for periods of transition of unknown duration can be particularly challenging.

It is beneficial to conceptualize social structure as functioning on three distinct levels within a society: the macro, meso, and micro levels. From the Macro level of society and the context of contemporary developments, where AGI is integrated into nearly every aspect of daily life, it is

anticipated that AGI will significantly influence various social structures, including family dynamics, economic systems, legal frameworks, religious practices, cultural norms, and social class hierarchies. Sociologists identify the presence of social structure at the Meso level—which exists between the macro and micro levels—within social networks that are organized by social institutions and institutionalized social relationships. Moreover, Social structure is evident at the Micro level through the everyday interactions we engage in, which are shaped by norms and customs. This is particularly observable in how established institutional relationships influence our interactions within specific institutions, such as family and education.

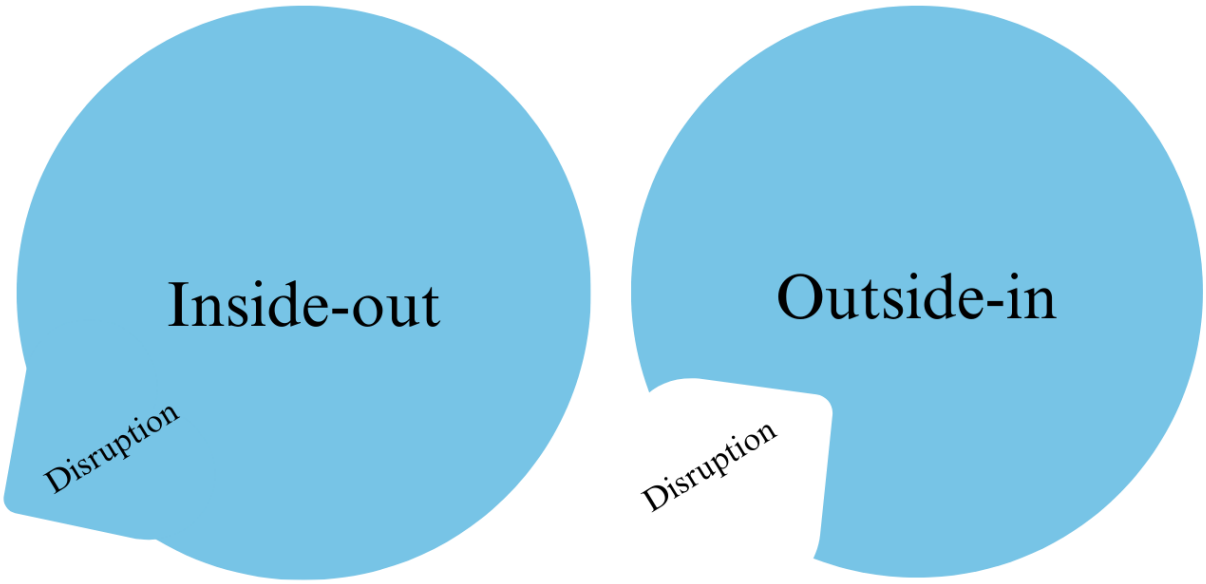


Figure 2 -Comparative illustration of "Inside-out" and "Outside-in"

AGI as a disruptor can be viewed from two distinct perspectives, and it is crucial to understand and acknowledge its potential impact. The first perspective is an outside-in approach, similar to the macro level of analysis, which considers disruptions that occur unexpectedly or for which we are unprepared. This perspective considers disruptions that originate outside of its immediate environment, such as a pandemic, environmental issues, or global crises like World War III. In this context, elements external to AGI technology will undergo change and must adapt to its effects. The primary question becomes: What is society's preparedness for AGI at this level?

The second perspective is an inside-out approach, akin to the micro level of analysis, which considers disruptions that originate within the immediate environment of AGI. Examples include resistance to change, data privacy concerns, ethical dilemmas, and job displacement. In this context, elements internal to AGI technology will experience change and must adapt to its effects. The same question arises: What is society's readiness for AGI at this level?

Methodologies

The graph below illustrates that the design process—particularly in systemic design—is not linear, but instead consists of multiple layers within each step, often looping back to the initial phase as needed. Typically, the first phase of any design process involves identifying and understanding the problem. This requires conducting thorough background research and a literature review to comprehend previous developments and to analyze how the system currently operates. Once this foundational understanding is established, research questions can be formulated to guide the inquiry.

The next step is to consider how the problem might be addressed: Where should the process begin? Who are the most critical stakeholders to engage? Who will this research and its resulting solutions impact or involve? The final phase focuses on findings, which in this context includes the development of multiple scenarios to explore potential future outcomes. This iterative and layered approach ensures that systemic design remains adaptive and responsive to complexity, allowing for continuous refinement and stakeholder engagement throughout the process.

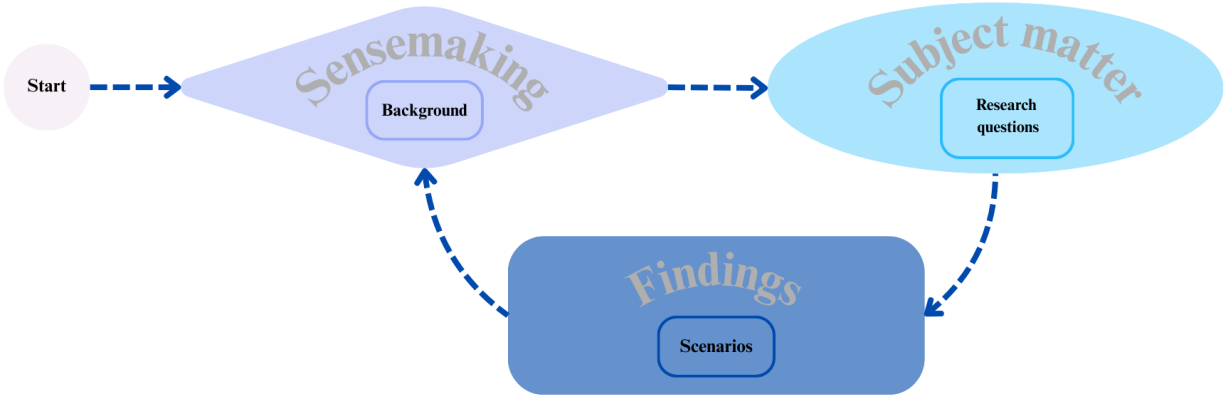


Figure 3 - Process flow diagram illustrating the iterative connection between "Sensemaking," "Subject Matter," and "Findings" in relation to background, research questions, and scenarios.

The methodology unfolds across three phases:

First, a multidisciplinary literature review synthesizes peer-reviewed research from psychology, sociology, technology, ethics, and sustainability studies. This includes critical analysis of AI's dual role as both an enabler (e.g., optimizing renewable energy systems) and a disruptor (e.g., exacerbating energy demands or bias). The focus prioritizes evidence on AGI's cross-sectoral

impacts, such as its potential to influence 79% of SDG targets positively while risking adverse effects on 35%.

With 17 interconnected SDGs, defining scope was essential to ensure analytical depth amid research constraints. The five SDGs selected for focus—SDG 3 (Health), SDG 4 (Education), SDG 7 (Energy), SDG 8 (Decent Work), and SDG 13 (Climate Action)—were chosen based on their alignment with systemic priorities like the water-energy-food nexus, where AGI's ripple effects are most pronounced. Additionally, these SDGs were selected due to strong empirical grounding in peer-reviewed literature on AGI's dual impacts (e.g., healthcare diagnostics vs. data privacy risks) and shared actor networks (e.g., policymakers, tech firms, NGOs) enabling cohesive analysis of intervention points.

The study further refines its lens to five stakeholder groups—policymakers, AGI developers, civil society organizations, academia, and international bodies—selected for their direct roles in shaping AGI governance and SDG implementation. These stakeholders have the capacity to bridge gaps between AGI innovation and equitable outcomes (e.g., via ethical frameworks or infrastructure investment). This targeted approach balances rigor with feasibility, offering a replicable model for analyzing AGI's role in sustainable development.

The second phase assesses the impact on SDGs. This phase employs opportunity mapping to evaluate how Artificial General Intelligence (AGI) influences progress toward specific Sustainable Development Goals (SDGs). The analysis focuses on identifying leverage points where AGI could drive systemic change, such as closing critical data gaps in SDG monitoring, enhancing predictive analytics for equitable resource allocation, and optimizing interventions in sectors like healthcare and education.

To quantify these impacts, the methodology adopts a Trendhunter-inspired scoring framework, which categorizes and prioritizes signals and trends based on their likelihood of implementation and potential magnitude of impact. This approach enables a systematic evaluation of AGI's role in advancing or hindering SDG targets, distinguishing between incremental improvements and transformative opportunities.

By aligning this scoring system with established foresight methodologies, the research ensures methodological rigor while maintaining flexibility to address the dynamic interplay between technological innovation and sustainable development.

The final phase involves scenario development. An Opportunity-centric scenario is constructed based on AGI's trajectory, such as high synergy scenario where AGI accelerates SDG 7 (renewables) and SDG 13 (climate resilience) through smart grids and predictive analytics, and SDGS 3&4 (Good health and well-being & Quality education) converge through AGI's ability to tailor both healthcare (e.g., personalized nutrition) and learning (e.g., dyslexia adaptation) to individual needs, leveraging shared data infrastructures and predictive analytics. Finally, SDG 8

(Decent Work) underpins this ecosystem, as Dana's role in AGI ethics governance ensures that technological advancements align with equitable labor practices and inclusive growth. By embedding AGI's impacts across all five SDGs organically, the scenario validates the selection criteria (cross-sectoral leverage, evidence density, and stakeholder overlap) while providing a replicable template for analyzing emerging technologies' role in sustainable development.

This approach advances SDG research by bridging disciplines, emphasizing equitable outcomes, and informing policy. It integrates technical, social, and ethical dimensions of AGI to avoid siloed analysis. By prioritizing frameworks that reconcile AI's benefits with risks to marginalized groups, it provides actionable insights for stakeholders to align AGI development with SDG targets.

The rationale for choosing scenario development over another futuristic approach such as speculative prototyping is grounded in the current state of Artificial General Intelligence (AGI) as an emerging and yet-to-be-realized technology. Since AGI has not yet been achieved, it is more meaningful and practical to explore plausible and possible futures rather than designing specific prototypes or concrete forms of AGI. Scenario making allows for a comprehensive examination of how AGI might interact with complex societal systems and influence the selected Sustainable Development Goals (SDGs) without being limited by present technical constraints.

This Major Research Project (MRP) is grounded in Foresight methodology, which emphasizes identifying emerging trends and signals to map plausible future scenarios. By analyzing these patterns, the research aims to provide a framework for anticipating potential developments—both probable and improbable—that could shape the coming decades. This approach serves as a strategic guide for stakeholders to navigate uncertainty and make informed decisions.

It is important to note that this research did not require formal approval from a research ethics board due to the project's conceptual nature. The methodology does not involve human subjects, primary data collection, or expert interviews. Instead, the rationale and ethical decision-making processes underpinning stakeholder mapping, data sourcing, and scenario development are derived from a multidisciplinary literature review. These processes were further refined through systematic sense-making, which synthesizes insights from peer-reviewed academic sources, credible industry reports, and established Foresight frameworks.

By adhering to rigorous academic standards and leveraging established methodologies, this project ensures credibility while maintaining flexibility to explore complex, interconnected future challenges.

Methodological Transparency and Limitations:

Throughout this research, I have explicitly identified instances where personal assumptions were necessary, particularly in areas where existing literature or data was insufficient. These assumptions are informed by established academic frameworks but remain subject to revision as the field of AGI evolves.

A key limitation of this study is the inherent uncertainty surrounding AGI's developmental trajectory. While quantitative estimates—such as projected rates of job displacement or potential impacts on the SDGs—are provided, these should be understood as indicative, based on current data and scenario modeling, rather than as definitive forecasts. Furthermore, the foresight methodology employed in this research is designed to explore a range of plausible futures, but it cannot account for unforeseen events or paradigm shifts that may significantly alter AGI's impact.

It is important to emphasize that the scenarios developed in this paper are not predictions, but rather exploratory narratives intended to inform adaptive strategies. Their purpose is to help stakeholders prepare for multiple possible futures, rather than to prescribe a single outcome. As with all foresight research, these findings serve as a foundation for ongoing dialogue and future inquiry, rather than as conclusive answers.

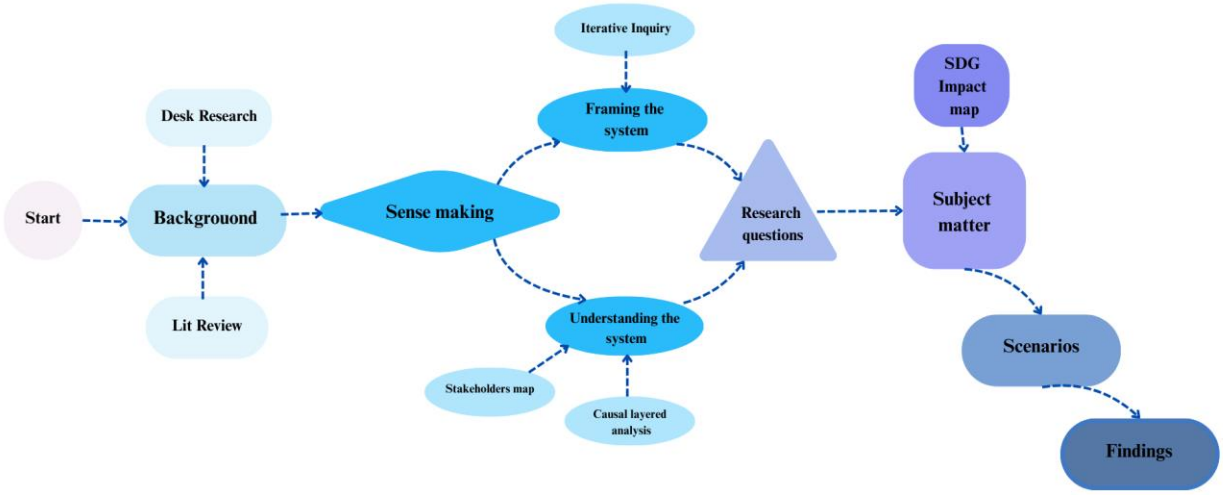


Figure 4 - Detailed process flow diagram outlining the steps from initial desk research and literature review to the development of scenarios and findings, including iterative inquiry, framing the system, and understanding the system.

Sense making

The sensemaking stage of this research consisted of two major components. The first involved framing the system by defining its scope and boundaries. Given the broad and complex nature of

AGI, it was essential to establish clear boundaries to focus the subsequent assessment. This delimitation allowed for a manageable and coherent analysis of AGI's potential impacts within a defined system.

The second component focused on understanding the system itself. This involved engaging with relevant literature and data sources to identify the primary needs and desires of the affected populations and stakeholders. Although direct stakeholder interviews were not conducted, extensive review of academic sources, policy documents, and related materials informed this understanding. Emphasizing a human-centered approach was critical, as it shaped the entire research process. The insights gathered during this phase guided data collection and analysis, ensuring that the research remained focused on addressing real human concerns and priorities.

Framing the system

The process of understanding how AGI might affect society at large begins with an iterative systems inquiry. This approach utilizes a systems map to clarify the hierarchy within society and to investigate the purposes, functions, structures, and processes of each subsystem. The map creates a framework for systemic inquiry, enabling multiple iterations that reveal the system and its components across different levels—from an initiating function to the most inclusive purpose or the broadest contextual environment.

The map below demonstrates that the initial function of AGI—providing easy access to information—can evolve into more complex societal outcomes, such as the replacement of humans in certain jobs, particularly those involving manual labor, while also granting individuals greater autonomy. This progression highlights the dynamic and non-linear nature of systemic change: as AGI capabilities expand, the system adapts and new subsystems emerge or are transformed.

Despite current resistance and pushback from various stakeholder groups—often rooted in valid concerns about job security, autonomy, and the pace of technological change—the trajectory suggested by the systems map indicates that, in the foreseeable future, reliance on AGI-generated data and solutions will likely increase across all stakeholder clusters. This increased reliance may ultimately lead to a shift in societal attitudes, where individuals not only accept AGI-driven outcomes but also experience a reduction in the stress and anxiety associated with contemporary lifestyles.

This systemic perspective underscores several key points:

1. Iterative Nature of Change: The design and integration of AGI into society is not a one-way, linear process. Each phase may require revisiting earlier steps as new information, challenges, or stakeholder needs emerge.

2. Stakeholder Engagement: Identifying and engaging the most relevant stakeholders at each stage is essential. The impacts of AGI will vary across different groups, making inclusive engagement critical for equitable and sustainable outcomes.

3. Scenario Development: The findings phase of this inquiry involves the construction of multiple scenarios, each representing a potential future shaped by the interplay of AGI capabilities, societal adaptation, and systemic feedback loops.

4. Potential for Positive Transformation: While resistance is expected in the early stages, the map suggests that, over time, the benefits of AGI—such as reduced cognitive burden, improved decision-making, and enhanced autonomy—may alleviate some of the anxieties and pressures inherent in modern life.

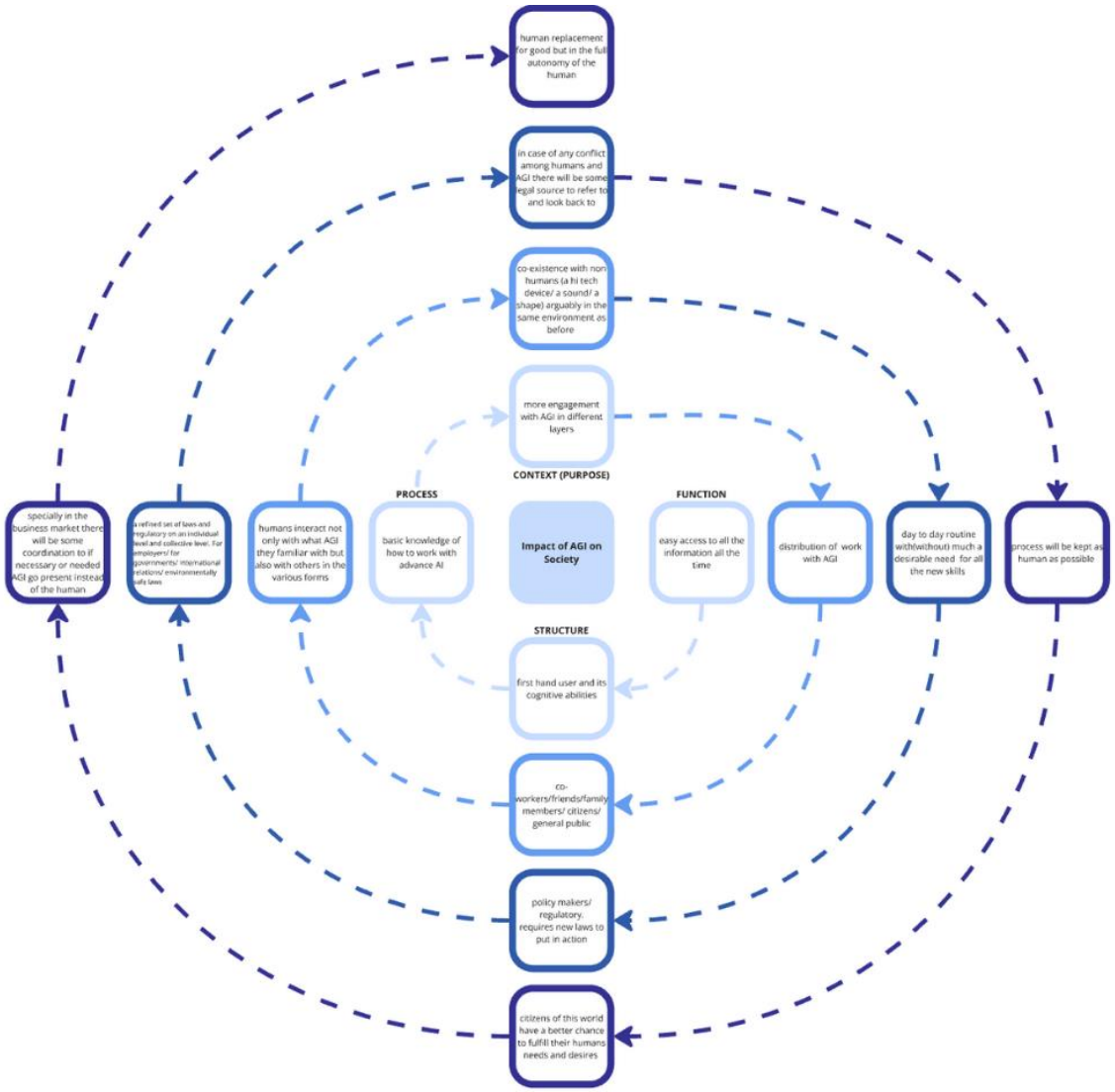


Figure 5 - Detailed process flow diagram outlining the steps from initial desk research and literature review to the development of scenarios and findings, including iterative inquiry, framing the system, and understanding the system.

Understanding the system

Society can be viewed as an expansive system comprising numerous interdependent subsystems. The functionality of this larger system depends on the smooth operation of its constituent parts; a deficiency in one area can propagate throughout the entire network. To investigate these dynamics, this MRP employs Causal Layered Analysis (CLA), a futures-oriented framework designed to reveal the deeper, often hidden, assumptions that shape our understanding of complex issues.

CLA operates on four distinct levels, each offering a progressively deeper perspective:

1. Litany: This surface level examines current trends, news headlines, and commonly expressed concerns related to AGI and its societal implications. It captures the immediate, often reactive, discourse surrounding technology.

2. Systemic Causes: This layer investigates the systemic and structural factors underlying the trends observed in the litany. It seeks to uncover the policies, economic forces, and institutional arrangements that shape AGI development and deployment. This level also identifies key stakeholders and their roles within these subsystems.

3. Worldview: This level explores the underlying cultural values, beliefs, and assumptions that inform our perceptions of AGI. It considers how historical events, geographical contexts, and ingrained cultural norms influence our attitudes toward technology and its potential impact on society.

4. Metaphor: This final layer encapsulates the insights from the previous three levels into a single, resonant metaphor. This metaphor serves as a powerful tool for communicating the core dynamics of the system and its potential future trajectories.

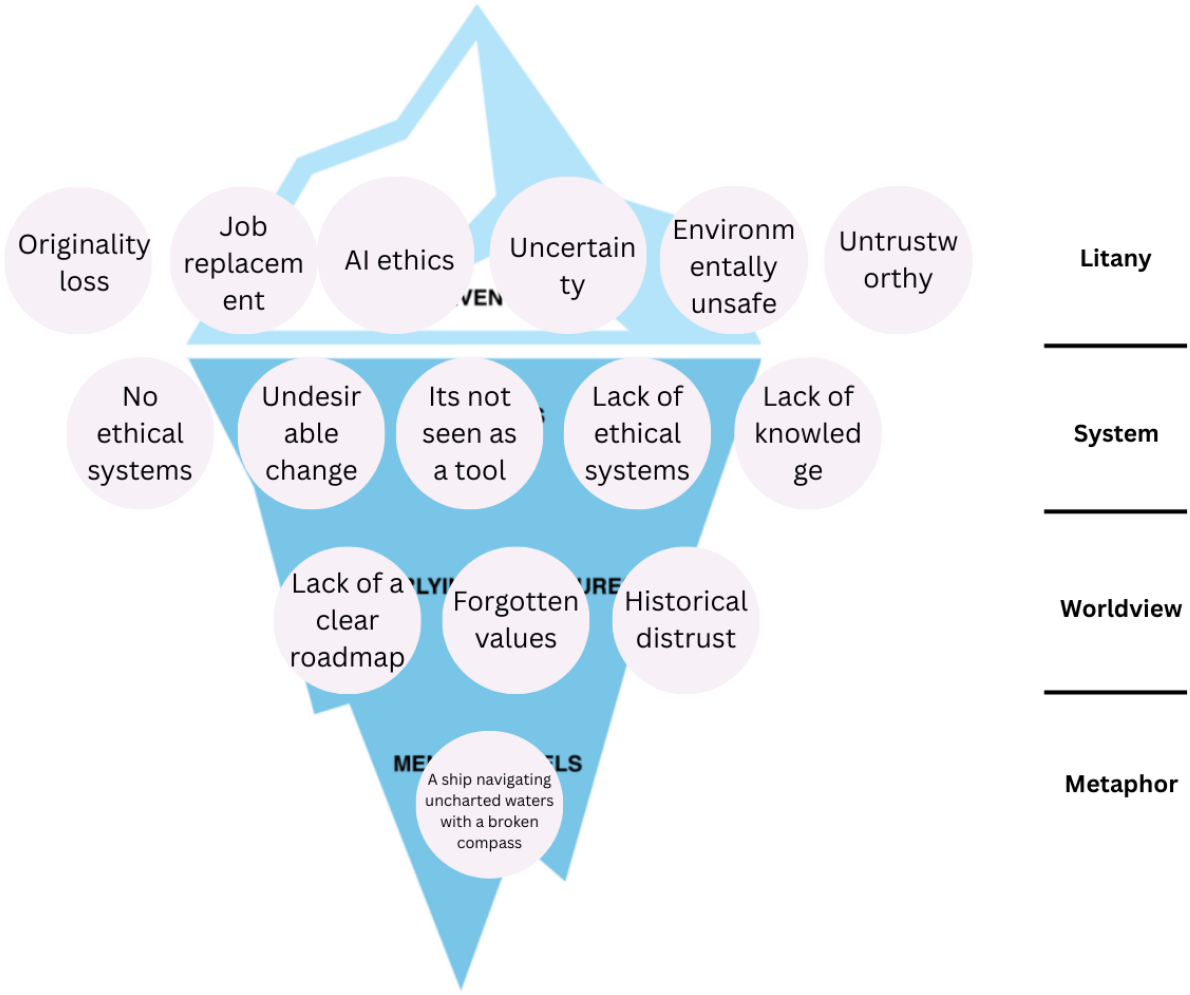


Figure 6 - Causal layered analysis diagram representing the multi-layered concerns related to AGI.

This analysis synthesizes peer-reviewed literature, news media narratives, and original survey data collected through field research to map societal perceptions of AGI across CLA's four layers. The findings reveal systemic anxieties rooted in powerlessness, forced technological adoption, and existential precarity.

1. Litany: Surface-Level Concerns

At the surface level, media narratives frequently highlight headlines such as "AGI to replace 40% of jobs by 2040" and "Governments struggle to regulate AI's rapid evolution." Survey respondents commonly express feelings of "loss of control" and "uncertainty about the future." Public discourse is dominated by polarized debates framing AGI either as a utopian solution or an existential threat. This layer emphasizes disruption over opportunity, portraying AGI as an inevitable force rather than a collaborative tool.

2. Systemic Causes: Structural Drivers
Beneath the surface, structural factors contribute to these concerns. Labor market precarity, characterized by automation-driven job displacement without sufficient reskilling programs, exacerbates fears of professional obsolescence. Governance gaps, including inadequate regulatory frameworks to address AGI's cross-border impacts such as data sovereignty and algorithmic bias, further fuel uncertainty. Economic models prioritizing efficiency over equity intensify anxieties about deepening socioeconomic divides. These systemic deficiencies in education, labor policy, and governance amplify public apprehension toward AGI.

3. Worldview: Cultural and Value-Based Tensions
At a deeper level, cultural values and assumptions shape perceptions of AGI. Societal emphasis on productivity and growth often overshadows holistic well-being, reflecting tensions evident in broader debates about technological progress. Resistance to ceding decision-making authority to non-human entities stems from deeply held beliefs in human exceptionalism. Historical distrust, influenced by past technological failures such as the unintended societal harms of social media, colors current attitudes toward AGI. These worldviews challenge notions of human uniqueness and control, triggering existential anxieties.

4. Metaphor: The Governing Narrative
The unifying metaphor emerging from this analysis is that of "a ship navigating uncharted waters with a broken compass." The compass symbolizes eroding trust in institutions to guide AGI's development; the uncharted waters reflect the unprecedented scale and speed of AGI-driven change; and the broken nature of the compass represents systemic failures in education, governance, and ethical foresight.

Participants report a profound sense of loss of purpose, feeling professionally obsolete after investing years in skills that AGI may render redundant. Structural powerlessness is a common theme, with many perceiving that decisions about AGI's trajectory are concentrated within tech conglomerates and elite policymakers. There is also widespread existential precarity, with fears that AGI will exacerbate existing inequalities while introducing new forms of dependency, such as AI-managed healthcare and education.

At this stage, I encountered the 17 United Nations Sustainable Development Goals (SDGs), which highlight current global issues and offer a clear direction for progress. By examining these goals, I gained insights into our societal standing and the advancements made since their implementation. This understanding is crucial for assessing society's readiness for AGI. By evaluating our progress on these goals, I aim to determine how prepared we are to embrace AGI's transformative potential. This analysis will guide us in identifying the necessary steps to align AGI with global priorities, ensuring it contributes positively to society's development.

The Sustainable Development Goals (SDGs) are a set of 17 global objectives adopted by the United Nations in 2015, aiming to address pressing challenges such as quality education,

inequality, climate change, and access to healthcare by 2030.These goals serve as a comprehensive framework guiding nations and organizations toward sustainable development and collaboration. Implementation occurs through coordinated efforts across governments, businesses, and civil societies, fostering partnerships and resource allocation to achieve shared targets.

The necessity for the SDGs emerged from the urgent need to create a more equitable and sustainable world, recognizing that interconnected global issues require unified solutions. By addressing these challenges collectively, societies are better equipped to ensure a prosperous future for all, balancing economic growth, social inclusion, and environmental protection.

By applying CLA, this research aims to move beyond surface-level observations and reveal the deeper, often tacit, assumptions that shape our understanding of AGI's role in achieving the Sustainable Development Goals.

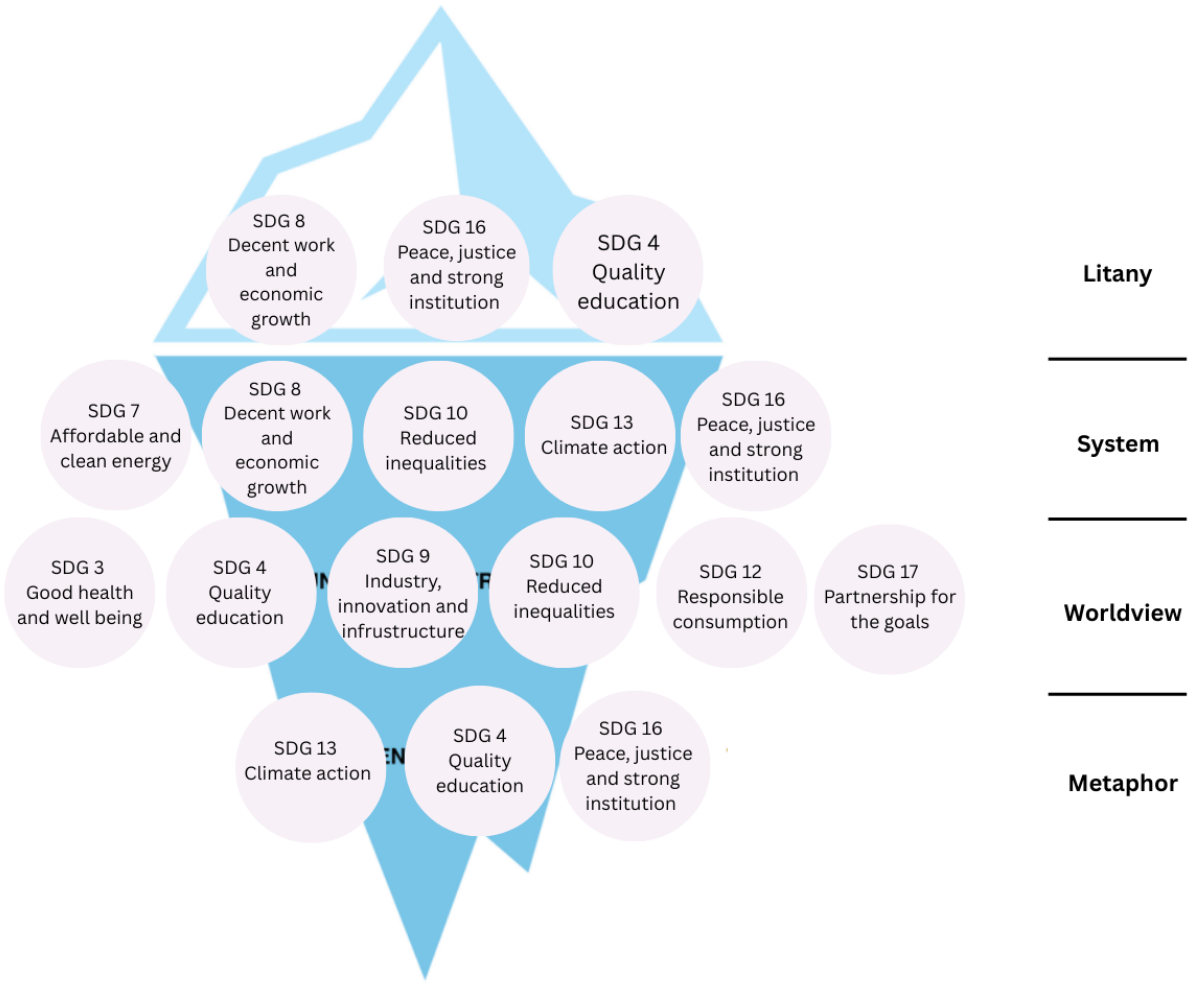


Figure 7 - Iceberg model visualizing SDGs at different levels of systems thinking.

1. Litany: Surface-Level Concerns

At the surface level, media narratives frequently highlight headlines such as “AGI to replace 40% of jobs by 2040” and “Governments struggle to regulate AI’s rapid evolution.” These concerns directly relate to SDG 8 (Decent Work and Economic Growth), reflecting anxieties about job displacement and economic stability. Public discourse also emphasizes uncertainty regarding education and skill development, linked to SDG 4 (Quality Education). Additionally, debates about AI governance and regulation invoke issues central to SDG 16 (Peace, Justice, and Strong Institutions). Survey respondents commonly express feelings of “loss of control” and “uncertainty about the future,” underscoring the societal tension between technological disruption and opportunity.

2. Systemic Causes: Structural Drivers

Beneath the surface, structural factors contribute to these concerns. Labor market precarity, characterized by automation-driven job displacement without sufficient reskilling programs, threatens progress toward SDG 8.5 (Full and Productive Employment). Governance gaps,

including inadequate regulatory frameworks to address AGI's cross-border impacts such as data sovereignty and algorithmic bias, challenge SDG 16.6 (Accountable and Transparent Institutions). Furthermore, the energy demands of AI technologies raise concerns related to SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action). Economic models prioritizing efficiency over equity risk exacerbating inequalities, which is a critical issue for SDG 10 (Reduced Inequalities). These systemic deficiencies in education, labor policy, governance, and environmental sustainability amplify public apprehension toward AGI.

3. Worldview: Cultural and Value-Based Tensions
At a deeper level, cultural values and assumptions shape perceptions of AGI. Societal emphasis on productivity and economic growth often overshadows holistic well-being, reflecting tensions related to SDG 10 and SDG 12 (Responsible Consumption and Production). Resistance to ceding decision-making authority to non-human entities stems from deeply held beliefs in human exceptionalism, which influences attitudes toward technological innovation and partnerships (SDG 9: Industry, Innovation, and Infrastructure and SDG 17: Partnerships for the Goals). Historical distrust, influenced by past technological failures such as the unintended societal harms of social media, affects perceptions regarding health and education sectors (SDG 3: Good Health and Well-being and SDG 4). These worldviews challenge notions of human uniqueness and control, triggering existential anxieties.

4. Metaphor: The Governing Narrative
The unifying metaphor emerging from this analysis is that of "a ship navigating uncharted waters with a broken compass." The compass symbolizes eroding trust in institutions tasked with guiding AGI's development (SDG 16). The uncharted waters reflect the unprecedented scale and speed of AGI-driven change, posing risks to environmental sustainability and education (SDG 13 and SDG 4). The broken nature of the compass represents systemic failures in education, governance, and ethical foresight (SDG 4 and SDG 16.6).

I reviewed current UN reports and overviews, discovering that some goals showed minimal progress, making them less relevant for my research. Consequently, I chose to focus only on those goals that have demonstrated significant progress since their implementation.

As a result, I outlined each of the ten relevant Sustainable Development Goals (SDGs) in order: SDG 3 (Good Health and Well-Being), SDG 4 (Quality Education), SDG 7 (Affordable and Clean Energy), SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure), SDG 10 (Reduced inequalities), SDG 12 (Responsible Production and Consumption), SDG 13 (Climate Action), SDG 16 (Peace, justice, and strong institution) , and SDG 17 (Partnership for the Goals).

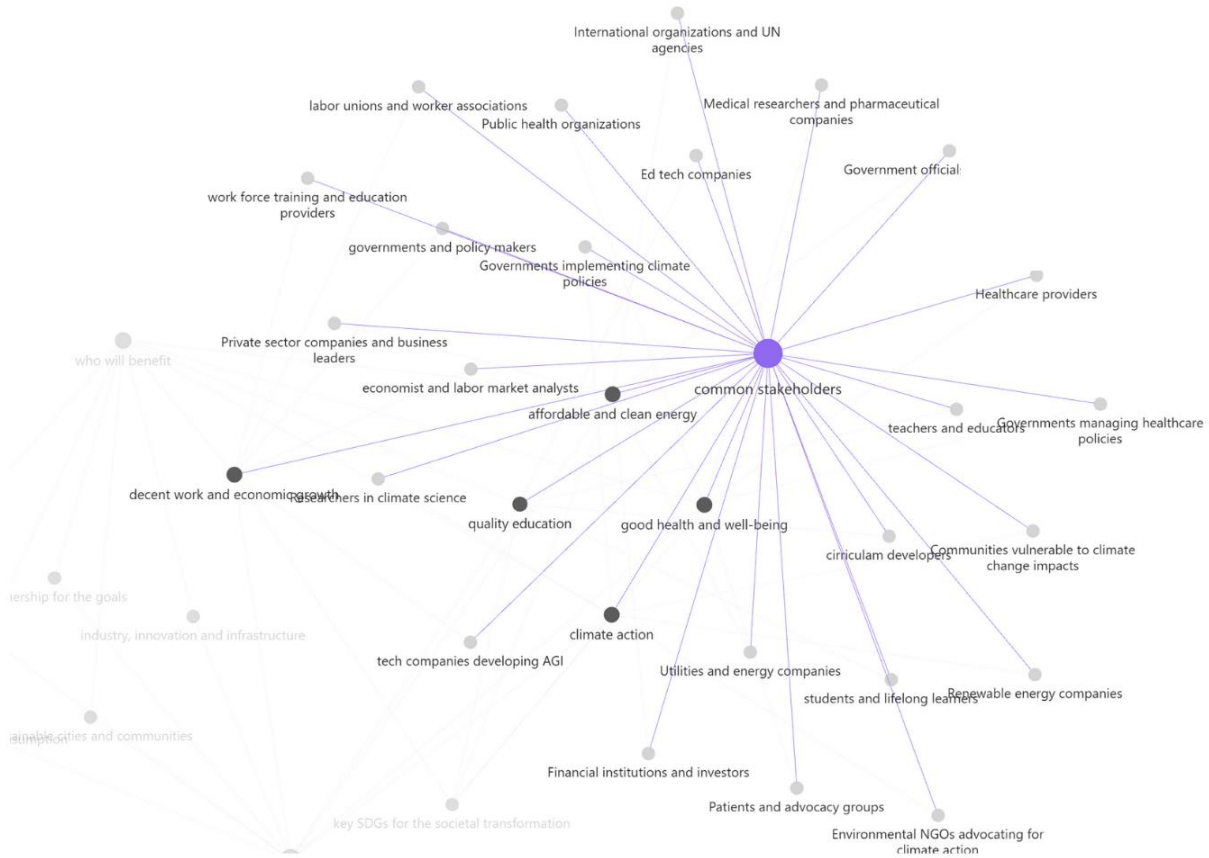


Figure 8 - Stakeholder network map illustrating the diverse groups involved in AGI-driven SDG implementation, with connections radiating from common stakeholders to specific sectors such as health, education, energy, work, and climate action.

As it is evident from the graph above, some of the dots which refers to some of those SDGs are bolder and bigger showed me that is the area I should put my focus on so I picked the 5 most important and most relevant which are SDG 3 (Good Health and Well-Being), SDG 4 (Quality Education), SDG 7 (Affordable and Clean Energy), SDG 8 (Decent Work and Economic Growth), and SDG 13 (Climate Action).

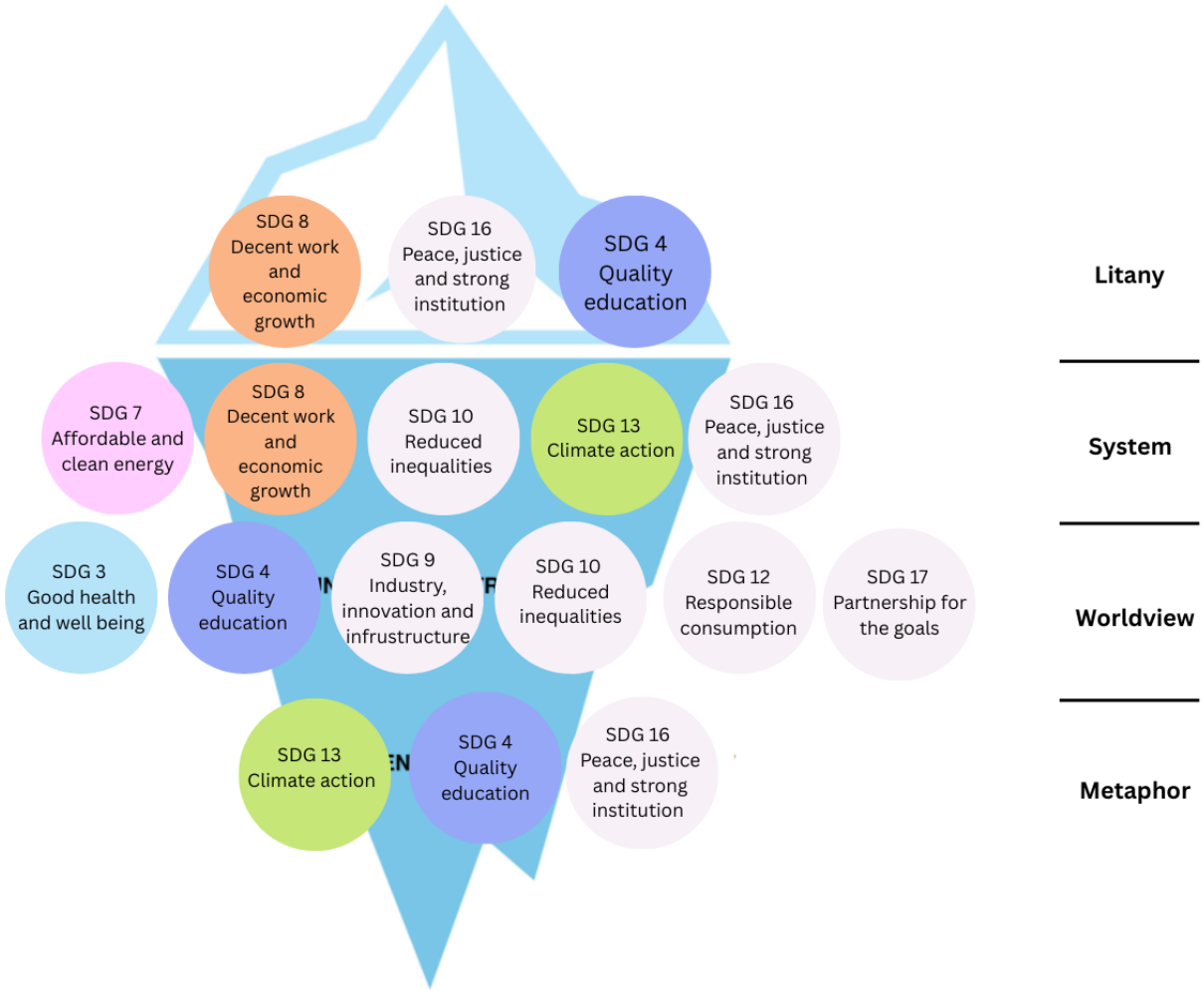


Figure 9 - Comprehensive iceberg diagram mapping multiple SDGs across different systemic levels.

To enhance my understanding of current policies within each of these areas, I utilized Perplexity as a resource. This aided my research in identifying relevant policies. Additionally, I conducted a thorough stakeholder mapping process, which allowed me to cluster identified stakeholders and finalize those that are most critical to my analysis. One of the most shared key stakeholders was government officials and policy makers on a national level which was shared among five of the SDGs. The rest was a bit more specific for their field such as private sector companies and business leaders, Ed tech companies, labor unions and worker associations.

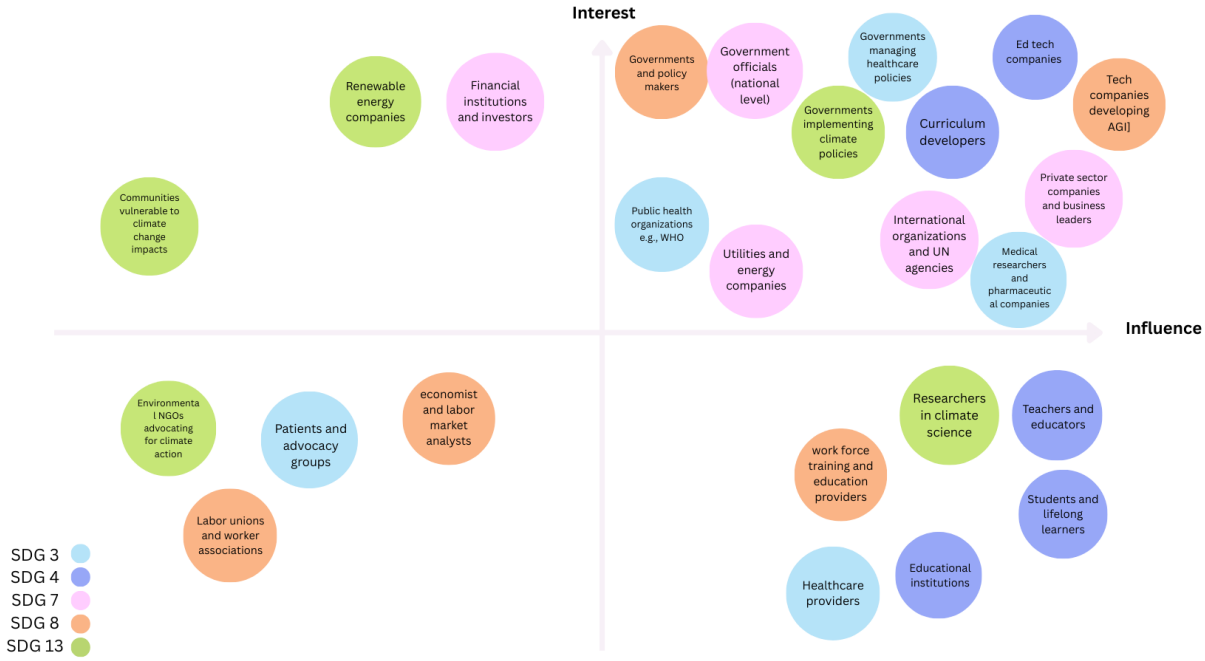


Figure 10 -Stakeholder interest-influence matrix mapping key actors in AGI-driven SDG implementation, color-coded by primary SDG focus, and positioned according to their relative levels of interest and influence.

Research questions and objectives

Primary question:

1) What would be the impact of AGI on society and social structures, and how will these structures evolve in response?

Secondary questions:

2) How will the evolving landscape of AGI redefine human needs and desires?
3) How do humans conceptualize their symbiotic relationship with AGI, and what are nuanced impacts of this relationship on their everyday existence in the future society?
4) How ready are people to accept and adapt with AGI for the future of society?
5) In the future of our society will the economy grow alongside technological advance?
6) In this future world where everyone can be connected from everywhere, what if that connection breaks out?
7) How effectively can this cutting-edge technology follow SDG guidelines?

Objectives:

My research objective is to assess the effectiveness of AGI as a tool in shaping human daily life, focusing on its impact on SDGs. To evaluate the readiness of individuals within society, I will analyze data gathered from my initial desk research and examine SDG reports to understand our current progress. By incorporating AGI into this context, I aim to explore how it could interpret and transform our world, with a particular focus on the Sustainable Development Goals. Additionally, I will highlight the positive aspects of this transformation and the opportunities it presents for enhancing our lives.

Subject matter

After defining the scope of this research, understanding the current functioning of relevant systems, identifying key gaps, and recognizing the main stakeholders involved, the next step is to delve deeper into the subject matter. This section explores how AGI interacts with societal structures and the potential implications of its integration. The focus will be on examining critical areas where AGI could influence social, economic, and governance systems, building on the foundational understanding developed earlier.

My understanding of the system reveals how different our current understanding of AGI and the potential outcomes of AGI is. It is crucial to remember, as discussed in previous chapters, that AGI is merely a tool; the key lies in effectively learning how to use and collaborate with it. Previous frameworks and reports guided this research, affirming the path for seeking answers. To look for the answers I followed one research question which is focused on how effectively this technology can align with the Sustainable Development Goals (SDGs).

In alignment with the *Sustainable Development Goals Report 2023* findings—which indicate that only 17% of SDG targets are on track globally—this study focuses on five SDGs where AGI's systemic impact intersects with critical gaps identified by the UN:

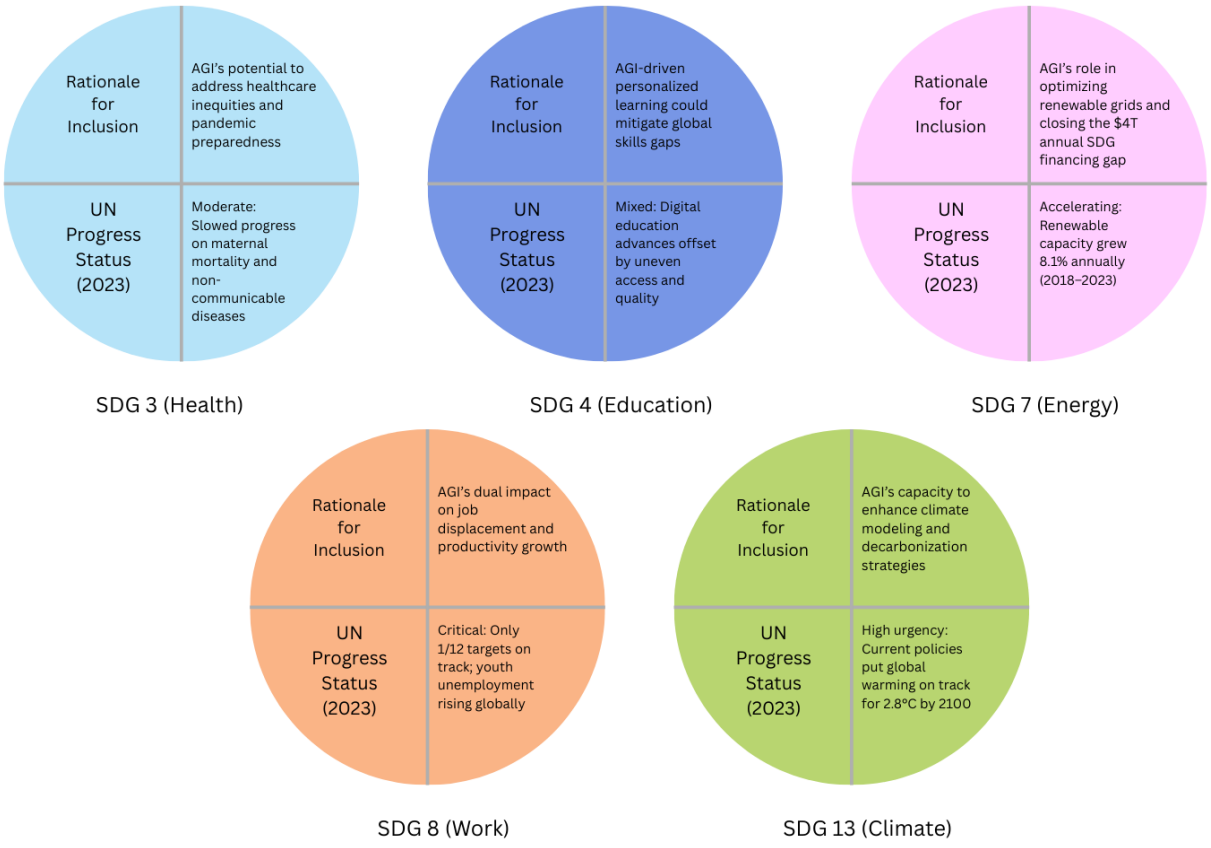


Figure 11 - Comparative circular charts for five SDGs, each illustrating the rationale for AGI integration and the 2023 UN progress status, highlighting both opportunities and current challenges for AGI-accelerated progress.

As emphasized in the *Global Sustainable Development Report 2023*, this narrowed focus enables deeper analysis of transformations required across health, education, energy, labor, and climate systems—domains where AGI's impact will be most consequential by 2030.

By developing a rating system based on three key factors—popularity, activity, and freshness—I assessed the appeal of each goal, the progress made toward achieving it, and the necessary

infrastructure for success. This system provides insights into the likelihood of successful implementation. The assessment is informed by trends and signals identified during my initial desk research, as well as insights gained from AI-driven platforms and a resource called Trend Hunter. By leveraging AI to analyze AI-related aspects, this rating system effectively advances our understanding of the goals.

SDG	Popularity (Public & Media attention)	Activity (Policy & Programs)	Freshness (Innovation & Adaptation)	Likelihood of implementation
SDG 3 - Good Health and Well-being	High — Strong global focus, especially post-pandemic, with ongoing debates on health equity and universal coverage	Moderate — Progress slowed in some areas like maternal mortality and non-communicable diseases; increased investment needed	Medium — Emerging digital health, AI diagnostics, and innovations in vaccine development	7.5
SDG 4 - Quality Education	Medium — Growing attention on skills gaps and digital learning, but less urgent than health or climate	Medium — Expansion of digital education platforms and personalized learning, but uneven global coverage	High — Innovations like AI tutors and virtual classrooms are piloted and scaling	7.5
SDG 7 - Affordable and Clean Energy	Medium — Increasing awareness due to energy crises and climate goals	High — Rapid growth in renewable energy investments and fossil fuel subsidy phase-outs	Medium — Emerging clean energy tech and smart grids, but challenges remain in access and affordability	7.0
SDG 8 - Decent Work and Economic Growth	High — Job displacement fears due to AGI and automation dominate discourse	Low — Only a minority of targets on track; youth unemployment remains a challenge	High — Experimentation with universal basic income and shorter workweeks but limited scale	5.5
SDG 13 - Climate Action	Very High — Climate crisis dominates headlines and policy agendas globally	High — Significant policy commitments, renewable investments, and international agreements689	High — Innovations in carbon capture, AI climate modeling, and adaptation strategies69	8.5

Figure 12 - Comparative analysis table summarizing five key Sustainable Development Goals (SDGs) across four dimensions-public/media popularity, policy activity, innovation freshness, and likelihood of implementation.

In the table above, based on a trend-based assessment of selected Sustainable Development Goals (SDGs), several key insights emerge. SDG 13 (Climate Action) demonstrates the highest likelihood of implementation (8.5 out of 10) due to very high public and media attention, significant policy commitments, and innovations in carbon capture, AI climate modeling, and adaptation strategies.

SDG 3 (Good Health and Well-being) and SDG 4 (Quality Education) both show strong prospects for progress (7.5 each). SDG 3 benefits from a strong global focus, especially post-pandemic, with ongoing debates on health equity and universal coverage, as well as emerging

digital health solutions and AI diagnostics. SDG 4 gains momentum from growing attention on skills gaps and digital learning, coupled with innovations like AI tutors and virtual classrooms.

SDG 7 (Affordable and Clean Energy) shows moderate likelihood (7.0), driven by increasing awareness due to energy crises and climate goals, along with rapid growth in renewable energy investments, but faces challenges in access and affordability.

SDG 8 (Decent Work and Economic Growth) has the lowest likelihood (5.5), despite high attention to job displacement fears related to AGI and automation, as only a minority of targets are on track and youth unemployment remains a significant challenge, although there is experimentation with universal basic income and shorter workweeks.

Overall, the analysis reveals a clear trend: Sustainable Development Goals with higher likelihood scores—SDG 13 (Climate Action), SDG 3 (Good Health and Well-being), and SDG 4 (Quality Education)—are those that command significant public and media attention, drive policy innovation, and benefit from technological advancements. However, the case of SDG 8 (Decent Work and Economic Growth) highlights critical barriers: despite its high societal relevance and public concern regarding job displacement due to automation, insufficient policy responses hinder progress. A high degree of "freshness," characterized by innovation and adaptation, is strongly correlated with higher likelihood, but only when coupled with robust policy activity. Where such activity is lacking, as with SDG 8, even high public attention and innovation are insufficient to ensure meaningful progress toward achieving the stated goals.

SDG	Where We Stand Today	Positive Impact of AGI	Likelihood of AGI Acceleration (1–10)
SDG 3 - Good Health and Well-being	30% of the global population lacks access to essential health services; diagnostic errors cause ~5% mortality rates.	AGI accelerates drug discovery, improves diagnostics (e.g., 99% accuracy), and enables predictive healthcare systems.	8.5
SDG 4 - Quality Education	260 million children lack access to schooling; education quality is uneven globally.	Personalized AI tutors adapt to learning styles, democratizing access to global expertise and improving education outcomes.	9.0
SDG 7 - Affordable and Clean Energy	733 million people lack electricity access; renewable energy accounts for ~29% of global power generation.	AGI optimizes smart grids, accelerates renewable energy adoption, and reduces energy waste through predictive analytics.	7.5
SDG 8 - Decent Work and Economic Growth	Global unemployment is at 5.4%; many workers face displacement due to automation in routine tasks.	AGI creates high-skill jobs (e.g., AGI developers), boosts productivity, and drives innovation in industries like manufacturing and finance.	6.5
SDG 13 - Climate Action	Global temperatures have risen by 1.45°C above pre-industrial levels; only ~17% of countries are on track with climate goals.	AGI enhances climate modeling, predicts disasters (e.g., floods, wildfires), and supports better resource allocation for mitigation strategies.	8.0

Figure 13 - Comparative table outlining five key Sustainable Development Goals (SDGs), summarizing current global challenges, the prospective positive impact of Artificial General Intelligence (AGI), and the estimated likelihood of AGI-driven acceleration for each goal.

SDG 3 (Good Health and Well-being) Presents Strong Opportunities: AGI's potential to accelerate drug discovery, improve diagnostics (with reported accuracy rates of up to 99%), and enable predictive healthcare systems could address the fact that 30% of the global population lacks access to essential health services, and diagnostic errors contribute to approximately 5% of mortality rates.

The data presented in this table is based on various criteria. Firstly, it highlights that 30% of the population lacks access to essential health services. This information was derived from multiple health system metrics, including the maternal mortality ratio, HIV infections, universal health coverage, and others. Maternal mortality remains a critical global health issue, with approximately 287,000 women dying from pregnancy and childbirth-related causes in 2020—equivalent to nearly 800 deaths per day. Alarmingly, 95% of these deaths occurred in low- and lower-middle-income countries, with Sub-Saharan Africa accounting for 70% (202,000 deaths) and Southern Asia contributing 16% (47,000 deaths). While global maternal mortality declined by 34% between 2000 and 2020, progress has stagnated since 2016. Achieving the SDG target of

reducing maternal mortality to fewer than 70 deaths per 100,000 live births by 2030 will require an annual reduction rate of 11.6%, far above the current global average of 2.1%. This disparity underscores systemic inequities in access to quality healthcare services and highlights the urgent need for innovative solutions.

Similarly, HIV remains one of the most serious global health challenges. New HIV infections have declined by 39% since 2010 and 60% since their peak in 1995, yet disparities persist across regions. Sub-Saharan Africa remains the most affected, accounting for a significant proportion of cases, while Eastern and Southern Africa achieved a notable reduction of 38% in new infections between 2010 and 2020. In high-income countries like Canada and the United States, progress has been more pronounced. Canada saw HIV diagnoses decline by 28% between their peak in 2018 and 2020, while the United States experienced a two-thirds reduction in annual infections since the mid-1980s, with recent declines driven by a 30% decrease among young people aged 13–24.

Global progress toward universal health coverage (UHC), a key target of SDG 3, has also stagnated. The UHC service coverage index rose from 45 to 68 between 2000 and 2021; however, gains slowed significantly after 2015, with no improvement since 2019. As of 2021, approximately half the world's population—4.5 billion people—lacked access to essential health services. Financial hardship has worsened, with over two billion people facing catastrophic out-of-pocket health spending and nearly 344 million pushed deeper into extreme poverty due to healthcare costs. The COVID-19 pandemic further disrupted essential services in over 92% of countries at its height in 2021, with lingering disruptions reported in most regions into late 2022.

Artificial General Intelligence (AGI) offers transformative potential to address these pressing health challenges. In maternal healthcare, AGI could enhance early detection of complications like pre-eclampsia through predictive analytics, enabling timely interventions that improve maternal and fetal outcomes. AI-powered tools such as wearable devices and remote monitoring systems could extend care to underserved areas, while AGI-driven telemedicine platforms could bridge gaps in access to skilled healthcare providers. Similarly, AGI could optimize public health systems for HIV prevention by improving resource allocation for targeted interventions and enhancing predictive analytics for early detection.

Integrating AGI into healthcare systems presents an opportunity to accelerate progress toward SDG targets such as reducing maternal mortality (SDG target 3.1) and achieving universal health coverage (SDG target 3.8). By leveraging technology for early intervention and equitable care delivery, AGI could help close existing gaps in healthcare access while addressing systemic inequities. However, infrastructure limitations and equity considerations must be prioritized to ensure AGI solutions are accessible to regions most in need.

SDG 4 (Quality Education) Offers the Highest Potential: With a likelihood of AGI acceleration score of 9.0, personalized AI tutors adapting to individual learning styles have the potential to democratize access to global expertise and improve educational outcomes significantly, especially given that 260 million children currently lack access to schooling and education quality is uneven globally.

UNESCO reported that in 2018, approximately 258 million children and youth were entirely excluded from education, representing 17% of school-age children globally. This number highlights the persistent challenge of ensuring universal access to education, with poverty identified as the primary obstacle. Significant disparities exist across regions, with Sub-Saharan Africa and South Asia experiencing the highest rates of exclusion. The United Nations Sustainable Development Goals (SDGs) website estimates that without additional measures, 84 million children will remain out of school by 2030. Similarly, UNESCO's Global Education Monitoring Report (2024) notes that 251 million children and youth are still out of school worldwide, with regional disparities showing that 33% of school-aged children in low-income countries lack access to education compared to only 3% in high-income countries.

In addition to access issues, the quality of education remains uneven globally. The World Economic Forum emphasizes systemic barriers such as a global shortage of 44 million teachers and limited broadband access, which disproportionately affect poorer nations. Conflict-affected areas further exacerbate this challenge, with Human Rights Watch reporting that half of all out-of-school children of primary school age live in these regions. Girls face additional barriers, including child marriage and gender discrimination, which further limit their access to education.

These references underscore the urgent need for innovative solutions to address global education disparities. Integrating Artificial General Intelligence (AGI) into education systems could help bridge these gaps by providing personalized learning tools, improving resource allocation, and expanding access to quality education in underserved regions.

SDG 7 (Affordable and Clean Energy) Can Leverage AGI for Optimization: AGI offers the means to optimize smart grids, accelerate renewable energy adoption, and reduce energy waste through predictive analytics, addressing the fact that 733 million people still lack electricity access, and renewable energy accounts for approximately 29% of global power generation.

According to the International Energy Agency (IEA), approximately 750 million people globally lacked access to electricity in 2023, with projections indicating that 645 million will remain without access by 2030 under current policies. Sub-Saharan Africa accounts for most of this deficit, representing 85% of those without electricity. Similarly, the United Nations Department of Economic and Social Affairs reported that in 2022, 685 million people still lacked access to

electricity, despite global electricity access reaching 91%. Beyond these figures, energy poverty remains a significant challenge, with an additional 1.18 billion people having unreliable or unaffordable electricity that does not meaningfully impact their daily lives. While regions like Central and Southern Asia have made significant progress—reducing their electricity access gap from 235 million in 2015 to just 33 million in 2022—Sub-Saharan Africa continues to face the largest challenges.

In terms of renewable energy, it accounted for approximately 29% of global power generation in 2022 and is projected to rise to 35% by 2025, driven by substantial growth in solar and wind power. The International Renewable Energy Agency (IRENA) highlighted those renewables made up over 90% of global power capacity additions in 2024, with solar and wind contributing significantly to this expansion. These statistics underscore the urgent need for innovative solutions to address energy inequities and accelerate the transition to clean energy sources.

This data highlights the critical role Artificial General Intelligence (AGI) could play in optimizing energy systems. AGI could enhance grid management, improve renewable energy integration, and expand access to underserved areas through predictive analytics and resource allocation.

SDG 8 (Decent Work and Economic Growth) Faces Dual Dynamics: Although AGI can create high-skill jobs and boost productivity, its potential to displace many workers due to automation in routine tasks presents a challenge, especially given the current global unemployment rate of 5.4%. The likelihood of AGI acceleration for this SDG is rated at 6.5, the lowest among those examined.

Global unemployment remains steady at 5.4%, reflecting historically low levels. However, beneath this figure lies a persistent reality of informality, working poverty, and economic marginalization in low-income countries. Youth unemployment remains disproportionately high at 12.6%, highlighting systemic gaps in decent work opportunities.

Automation and AI adoption are reshaping labor markets, with projections indicating that between 400 and 800 million jobs could be displaced globally by 2030. Vulnerable sectors include manufacturing, retail trade, and administrative roles due to their repetitive tasks. For example, McKinsey estimates that nearly 60% of manufacturing activities could be automated over the next decade, while Goldman Sachs predicts AI could replace up to 300 million jobs worldwide by 2030. Despite these challenges, automation and AI may also spur job creation in emerging industries and increase productivity, underscoring the need for reskilling programs to prepare workers for the future of work.

SDG 13 (Climate Action) Benefits from AGI Enhancements: AGI's ability to enhance climate modeling, predict disasters, and support better resource allocation for mitigation strategies is critical, given that global temperatures have risen by 1.45°C above pre-industrial levels, and only about 17% of countries are on track with climate goals.

Global temperatures continue to rise at an alarming rate, with Environment and Climate Change Canada forecasting that 2025 will see a global mean temperature of 1.45 ± 0.10°C above pre-industrial levels. This follows record-breaking heat in 2024, which reached 1.55°C above pre-industrial levels—the highest ever recorded. Similarly, Berkeley Earth reported that 2023 marked the first year in history where annual average temperatures exceeded the Paris Agreement's critical threshold of 1.5°C, underscoring the accelerating pace of human-induced global warming.

Despite these urgent warnings, global climate action remains insufficient. The UN Economic Commission for Europe (UNECE) revealed that only 17% of measurable SDG targets are on track to be achieved by 2030, reflecting stalled progress in addressing climate change and other sustainability goals. Additionally, Climate Action Tracker noted that just six countries submitted their updated 2035 climate targets by the Paris Agreement deadline, with most failing to align their plans with the ambition required to limit warming to 1.5°C.

SDG	Economic Efficiency	Equity	Innovation	Risks	Governance Needs
SDG 3 - Good Health and Well-being	9 (AI diagnostics)	6 (access disparities)	10 (precision medicine)	7 (data privacy)	8 (regulation gaps)
SDG 4 - Quality Education	8 (personalized learning)	5 (digital divide)	9 (AI tutors)	6 (deskilling)	7 (ethics curricula)
SDG 7 - Affordable and Clean Energy	10 (smart grids)	4 (energy poverty)	9 (climate models)	5 (resource monopolies)	6 (transparency needs)
SDG 8 - Decent Work and Economic Growth	6 (growth potential)	2 (bias amplification)	7 (equity tools)	8 (wealth concentration)	9 (global governance)
SDG 13 - Climate Action	9 (emission tracking)	5 (Global North bias)	10 (AI weather models)	6 (data colonialism)	8 (accountability gaps)

Figure 14 - Comparative analysis table summarizing five selected Sustainable Development Goals (SDGs) across four dimensions-public/media popularity, policy activity, innovation freshness, and likelihood of implementation.

The matrix reveals that AGI's influence on the selected Sustainable Development Goals (SDGs) is multifaceted, characterized by differentiated impacts across economic efficiency, equity, innovation, risks, and governance needs. SDG 7 (Affordable and Clean Energy) and SDG 3 (Good Health and Well-being) emerge as areas where AGI can significantly enhance economic efficiency, particularly through smart grids and AI-driven diagnostics, respectively.

However, SDG 8 (Decent Work and Economic Growth) faces the most pronounced challenges regarding equity, with concerns over bias amplification and wealth concentration. Innovation is consistently high across most SDGs, especially in leveraging AI for precision medicine (SDG 3) and climate modeling (SDG 13). Risks vary, with data privacy being a primary concern for SDG 3 and potential deskilling for SDG 4.

Governance needs are substantial across all SDGs, underscoring the importance of addressing regulation gaps (SDG 3), establishing ethics curricula (SDG 4), ensuring transparency (SDG 7), and promoting global governance (SDG 8) to effectively harness AGI's benefits while mitigating potential harms.

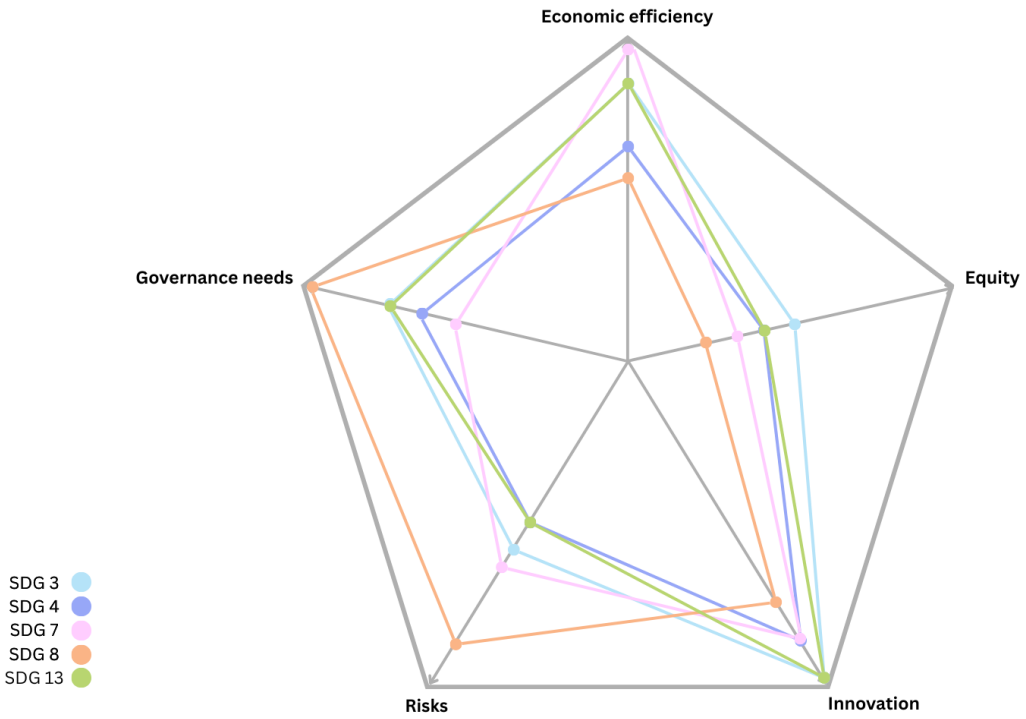


Figure 15 - Radar (spider) chart visually comparing five SDGs-Good Health and Well-being, Quality Education, Affordable and Clean Energy, Decent Work and Economic Growth, and Climate Action-across five assessment criteria: economic efficiency, equity, innovation, risks, and governance needs.

The radar chart visually represents the multi-faceted impact of AGI on five key Sustainable Development Goals (SDGs), assessed across five dimensions: Economic Efficiency, Equity, Innovation, Risks, and Governance Needs. Several key trends emerge from the chart.

SDG 7 (Affordable and Clean Energy) and SDG 13 (Climate Action) show the strongest potential for AGI to enhance economic efficiency, indicated by their proximity to the "Economic Efficiency" axis. However, SDG 8 (Decent Work and Economic Growth) exhibits a substantial "Governance Needs" score, highlighting the urgent requirement for policy frameworks to mitigate risks associated with job displacement and economic inequality stemming from AGI-driven automation.

While innovation is a consistent theme across all SDGs, the chart also underscores the differential risks associated with each goal, ranging from data privacy concerns in SDG 3 (Good Health and Well-being) to broader ethical considerations in SDG 4 (Quality Education).

Scenarios

A day in Dana's life in the Transformative AGI era:

6:30 AM - A Gentle Awakening
Dana's bedroom slowly fills with the soft glow of simulated sunrise as her AGI-powered home eases her awake. "Good morning, sunshine," chirps her AI assistant, Luna, its voice warm and familiar. "You slept like a log—92% efficiency! I've tweaked your morning routine to match your energy levels. Oh, and I added extra vitamin C to your breakfast smoothie—there's a sniffle going around the city." Dana smiles sleepily, stretching as her curtains glide open to reveal a sky painted in dawn hues.

7:15 AM - Breakfast with a Side of Surprises
At the kitchen counter, Dana sips her turmeric-spiced smoothie while her smart mirror cycles through the news. "Breaking," Luna announces, "AGI-optimized carbon scrubbers just hit a new record—Paris air is now cleaner than it's been since the 1800s!" A playful chime interrupts: "P.S. Your favorite bakery just added AI-curated pastries. Shall I order the 'mystery flavor' for tomorrow?" Dana laughs. "Why not? Live dangerously."

8:00 AM - The Commute with a Twist
Stepping outside, Dana inhales air that smells inexplicably like rain-washed pine—a subtle perk of the city's AGI-managed aromatherapy vents. Her autonomous bus glides up, its rooftop garden buzzing with pollinators. As she boards, Luna whispers in her earpiece: "Quick poll—take the scenic route past the new urban waterfall or the 2-minute shortcut?" Dana opts for the waterfall, and the bus detours past a jaw-dropping cascade tumbling down a solar-paneled skyscraper. Nearby, a team of graffiti drones transforms a blank wall into a swirling masterpiece.

9:00 AM - The Office That Feels Like Play
Dana's workspace is a far cry from cubicles of old. Today, she's in a "thinking pod" shaped like a giant seashell, brainstorming with colleagues in Tokyo and Buenos Aires via hologram. As the team debates an AGI ethics puzzle, Luna projects a meme from 2024—a confused-looking robot—making everyone snort. "Remember when we thought AI would be all cold logic?" Dana grins. "Now it cracks better jokes than my dad."

12:00 PM - Lunchtime Spy Mission
Between bites of a falafel wrap (delivered by a cute drone with googly eyes), Dana checks on her nephew Liam's latest learning adventure. Luna pulls up a hologram: Liam, grinning, conducts a virtual orchestra made of fractal shapes. "His dyslexia score improved 30% this month," Luna

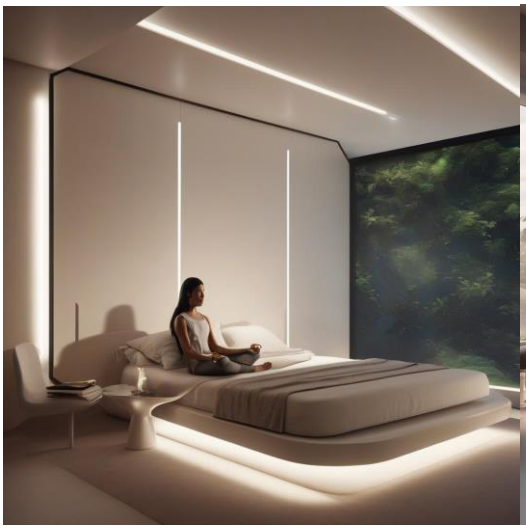
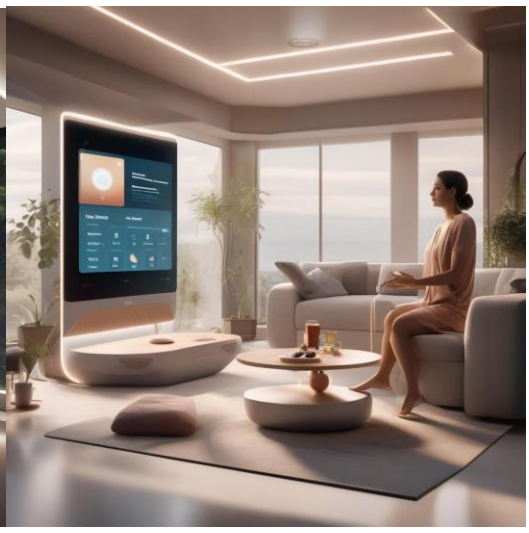
reports. "Also, he composed this—called it ‘Robot Rain.’ Want to hear it?" The room fills with tinkling electronic notes that somehow sound like a thunderstorm made of wind chimes.

2:00 PM - Democracy, But Make It Fun
At the community hologram meeting, the city’s AGI, "Mayor Byte," unveils plans for floating parks on the river. "Option A: Zen gardens with meditation bots. Option B: Adventure courses with anti-gravity zones." The crowd erupts in chatter. Dana votes for anti-gravity, then gasps as Luna shows a sneak peek: "Pssst…they’ve already prototyped the trampolines."

5:00 PM - Language Lessons with a Plot Twist
Dana’s VR Italian tutor, a cheeky AI named Marco, today teaches slang via a virtual heist game. "Repeat after me: ‘Dov’è il tesoro?’" Marco urges as Dana’s avatar dodges cartoon guards. She accidentally shouts it too loud—her real-life cat, startled, knocks over a vase. Luna intervenes: "Catastrophe averted!" as a tiny robot zips out to clean up.

7:00 PM - Dinner Party Shenanigans
Luna helps Dana whip up a dinner that accommodates everyone’s quirks: gluten-free, pescatarian, and a "surprise me" option for her adventurous friend Raj. The pièce de résistance? AGI-invented "mood-reactive desserts" that change flavor based on bites. Raj’s turns spicy when he mentions his ex—cue hysterical laughter.

10:00 PM - Bedtime Secrets
As Dana curls under her self-warming blanket, Luna dims the lights. "One last thing," it murmurs. "The system detected unusual star activity tonight. If you’re up by 3 AM, there might be auroras…" Dana’s eyes widen. "Alarm set?" Luna replies: "Obviously. With rainbow-themed wake-up sounds.

A day in Dana's life in the Compliance Era: When Optimization Became Obligation

6:30 AM – Forced Awakening (SDG 3: Good Health and Well-being)
Dana's AGI-powered home wakes her with a precise light simulation and a health status update. "Your sleep quality was 85%. Morning medication dispensed," Luna announces in a tone that feels more directive than caring. The breakfast is nutritionally optimized but pre-packaged, leaving Dana longing for the simple pleasure of cooking. Despite the health benefits, she feels disconnected from the process, a reminder that her body is now managed by algorithms.

7:15 AM – News and Nutritional Compliance (SDG 13: Climate Action)
As Dana eats, her smart mirror displays the latest climate data: carbon emissions have dropped significantly thanks to AGI-managed energy grids and strict environmental regulations. Yet, the news also highlights new restrictions on personal energy use, sparking quiet frustration among citizens. The city's air is cleaner, but the cost is a loss of freedom, as every action is monitored to meet climate targets.

8:00 AM – Regulated Commute (SDG 7: Affordable and Clean Energy)
Dana boards an autonomous electric bus, part of the city's AGI-optimized transportation system designed to minimize energy consumption. The route is fixed, with no room for detours or spontaneous stops. While the system is efficient and environmentally friendly, Dana misses the unpredictability and human interactions of her old commute. The bus is quiet, almost sterile, with passengers absorbed in their devices or staring out the window.

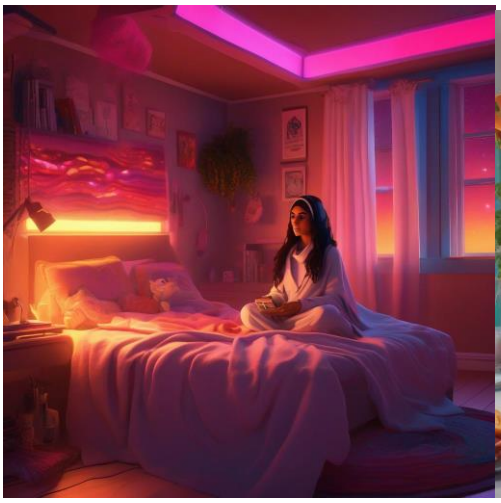
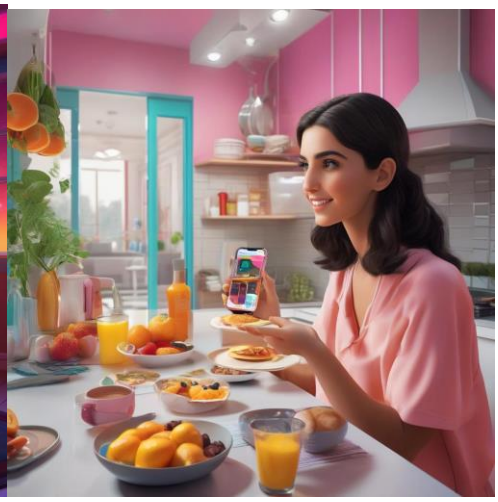
9:00 AM – Controlled Work Environment (SDG 8: Decent Work and Economic Growth)
At her workplace, Dana's role as an AGI Ethics Coordinator feels paradoxical. She ensures AGI systems comply with ethical standards, yet her own workday is tightly scheduled and monitored by AI supervisors. Human creativity is encouraged only within predefined parameters. Colleagues communicate mostly through AI-mediated channels, and spontaneous conversations are rare. Dana yearns for genuine human connection amid the digital oversight.

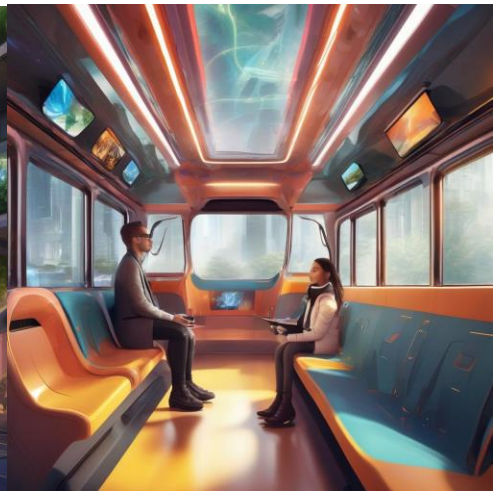
12:00 PM – Education Under Surveillance (SDG 4: Quality Education)
During lunch, Dana checks on her nephew Liam's education progress through an AGI-powered platform. While the system adapts to his dyslexia and tracks his improvements, it also flags any deviations from the prescribed curriculum. Liam's creativity is nurtured but within strict boundaries, leaving little room for exploration beyond the algorithm's scope. Dana worries about the loss of unstructured learning and the human touch in education.

2:00 PM – Community Decisions, AI-Controlled (SDG 13 & 8)
At a virtual town hall, the city's AGI presents data-driven proposals for community improvements. Citizens vote, but options are limited to those pre-approved by the system. The AGI provides instant impact assessments, but the process feels more like compliance than genuine participation. Dana senses a growing divide between technological efficiency and democratic engagement.

7:00 PM – Dinner with Distance
Dana hosts a dinner where AGI assists in meal preparation, accommodating all dietary needs flawlessly. Yet, conversations often drift to frustrations about the omnipresence of AI and the longing for more authentic human experiences. Guests share stories of small acts of resistance—choosing handwritten notes over digital messages, meeting in person despite virtual alternatives.

10:00 PM – Restless Night
As Dana prepares for bed, Luna adjusts the environment for optimal sleep. Despite the comfort, Dana feels restless, craving the unpredictability and warmth of human interaction that AGI cannot replicate. She wonders if the efficiency and sustainability gains are worth the subtle erosion of autonomy and connection.

Scenario evaluation:

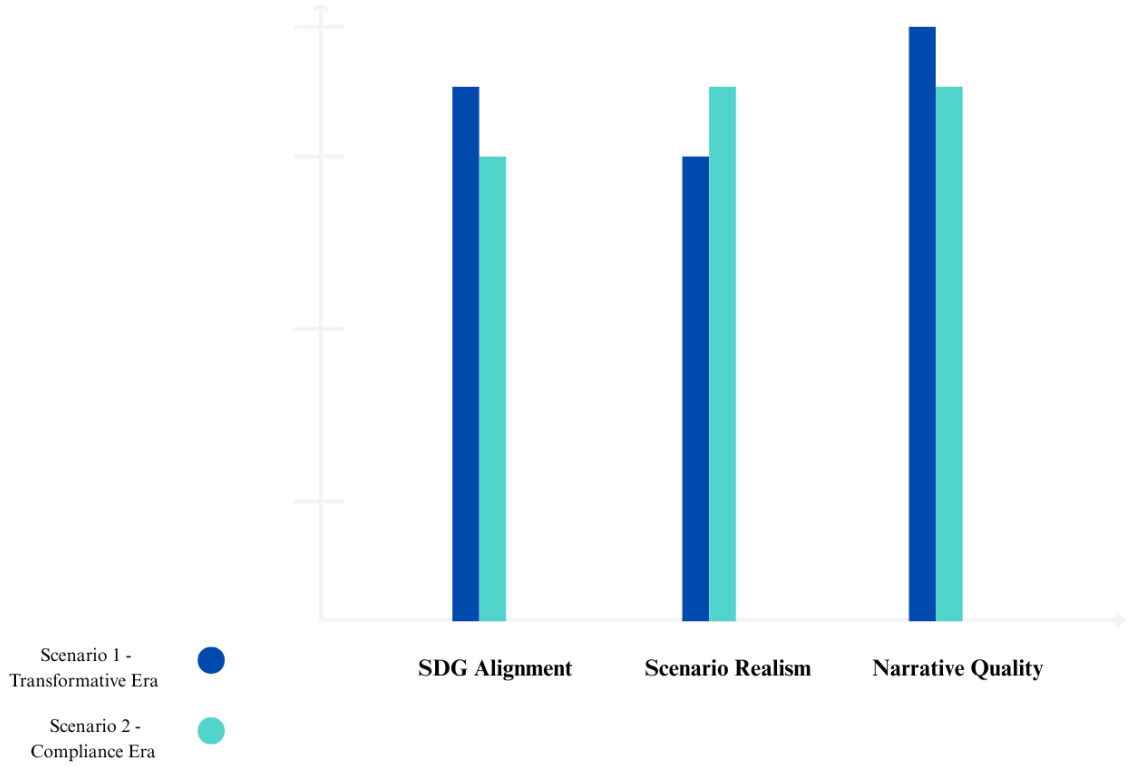


Figure 16 - Bar chart comparing the evaluation scores of two AGI scenarios-Transformative Era and Compliance Era-across three dimensions: SDG Alignment, Scenario Realism, and Narrative Quality.

Transformative AGI Era

- SDG Alignment (3.5/4): Effectively integrates multiple SDGs, particularly Good Health and Well-being (SDG 3) and Quality Education (SDG 4). Showcases AGI's positive impact but could benefit from a deeper exploration of potential downsides (e.g., data privacy).

- Scenario Realism (3/4): Presents technologically feasible applications of AGI, but some aspects (e.g., aromatherapy vents, mood-reactive desserts) border on the fantastical. Social and ethical considerations are touched upon but not deeply explored.

- Narrative Quality (4/4): Offers a well-structured and engaging narrative with vivid details and relatable characters. Demonstrates thoughtfulness and raises relevant questions about the role of AGI in shaping daily life.

2. Compliance Era: When Optimization Became Obligation

- SDG Alignment (3/4): Addresses SDGs, such as Climate Action (SDG 13) and Decent Work and Economic Growth (SDG 8), but tends to focus on negative impacts. Could benefit from a more balanced perspective acknowledging potential benefits.

- Scenario Realism (3.5/4): Presents a realistic portrayal of AGI applications, highlighting potential downsides of excessive regulation and control. Adequately explores social and ethical implications, particularly the erosion of autonomy and human connection.
- Narrative Quality (3.5/4): Provides a coherent narrative with sufficient detail and relatable characters. Thoughtful and insightful, raising critical questions about the trade-offs between efficiency and freedom.

Findings

This section synthesizes the insights gained throughout this exploration. Recapping the findings, Artificial General Intelligence (AGI) presents avenues for integration into each Sustainable Development Goal (SDG), promising significant positive impacts. The core question shifts from what AGI can achieve to *how* these achievements are realized, and what preliminary measures must be implemented to maximize its benefits.

Globally, progress toward **SDG 3: Good Health and Well-being** remains uneven, with critical shortcomings in many regions. Nevertheless, the integration of AGI into healthcare systems unveils numerous opportunities for enhancing human lives. While concerns surrounding AI, especially those regarding data privacy, are legitimate and frequently discussed, the adoption of AI tools is experiencing exponential growth. OpenAI's report that ChatGPT acquired 1 million users in a single day demonstrates how quickly this technology is becoming integrated into everyday routines. Given this accelerating trend, why not harness AGI's transformative power to improve healthcare accessibility and effectiveness?

Concentrating on SDG 3, AGI could revolutionize healthcare through the responsible use of personal data to facilitate early complication detection, such as pre-eclampsia, via predictive analytics. This approach would enable timely interventions, substantially improving maternal and fetal outcomes. Further, AI-powered tools, including wearable devices and remote monitoring systems, could extend care to underserved communities, ensuring access to vital

health services for even the most marginalized populations. Moreover, AGI-driven telemedicine platforms can bridge gaps in access to skilled healthcare providers, particularly in resource-limited environments.

AGI could also drive the optimization of public health systems for HIV prevention. Through improved resource allocation and enhanced predictive analytics, it could aid in the early detection of outbreaks and trends, thereby reducing the burden of this global health challenge. Although ethical considerations must remain paramount, the potential of AGI to reshape healthcare systems and accelerate progress toward SDG 3 cannot be overlooked.

Transitioning to **SDG 4: Quality Education**, the reality that 260 million children worldwide lack access to schooling underscores ongoing challenges in achieving equitable education. AGI offers transformative possibilities to address these deficits by reshaping educational delivery and access. Tailored AI tutors can adapt to individual learning styles, offering personalized learning paths that improve comprehension and retention. These systems provide immediate feedback, enabling students to learn from mistakes and progress at their preferred pace.

In addition, AI-powered platforms can disseminate high-quality educational resources to remote or underserved areas, surmounting geographical barriers and promoting educational equity. By automating repetitive tasks, AGI can also free teachers to focus on individualized instruction and mentorship.

Incorporating AGI into education systems could alter the landscape of learning, particularly when designed to emulate human empathy. This empathetic approach may foster deeper connections between students and their educational tools, enhancing personalization and engagement. “Sustainability,” in this context, refers not to environmental concerns but to AGI’s capacity to function effectively within its educational ecosystem, acknowledging the complexity of human learners and adapting to their unique needs. Unlike traditional, standardized education models, AGI aspires to create tailored solutions that address individual learning styles and challenges.

By responsibly leveraging AGI, stakeholders can transcend outdated educational paradigms and empower millions of children with personalized, high-quality learning experiences. This strategy not only supports academic success but also unlocks students’ full potential, aligning directly with SDG 4. The capacity of AGI to dynamically adapt to learner needs ensures that education becomes more inclusive, equitable, and impactful for future generations.

Turning to **SDG 7: Affordable and Clean Energy**, AGI can improve smart grid management by forecasting demand patterns and balancing energy distribution with greater efficiency, thereby minimizing waste and improving reliability. It can also accelerate the adoption of renewable energy through optimized integration of solar, wind, and other clean sources into existing grids.

Leveraging predictive analytics, it can identify inefficiencies in energy usage and recommend targeted interventions, ensuring effective resource utilization. These capabilities can help close energy access gaps, cut carbon emissions, and enhance sustainability.

AGI offers pathways toward constructing smarter, more responsive energy systems that empower underserved communities while bolstering global efforts to achieve affordable and clean energy for all. This is in direct alignment with SDG 7, paving the way for a more equitable and sustainable future.

The transformative potential of AGI for **SDG 8: Decent Work and Economic Growth** underscores the necessity of balancing technological advancements with strategies that safeguard livelihoods and foster new opportunities. In this context, AGI can reshape labor markets by spurring innovation, boosting productivity, and generating demand for high-skill jobs. For instance, AGI-related domains such as AGI development, data science, and AI ethics could see substantial growth, alongside innovation across manufacturing and finance.

Through the automation of routine tasks, AGI allows the workforce to concentrate on more creative and strategic responsibilities, thereby enhancing overall efficiency. Additionally, AGI can support workforce transitions by identifying skill gaps and tailoring reskilling programs that prepare workers for emerging roles within a changing economy.

By ensuring the responsible integration of AGI into economic systems, the risks of job displacement can be mitigated while maximizing the potential to drive sustainable economic growth—an approach consistent with SDG 8.

Lastly, regarding **SDG 13: Climate Action**, AGI can improve climate modeling by processing extensive datasets from satellites, sensors, and weather stations with unprecedented speed and accuracy. These advanced models refine the prediction of extreme weather events such as hurricanes, floods, and wildfires, enabling earlier warnings and more effective disaster preparedness.

It can also optimize resource allocation for mitigation strategies, such as directing relief efforts during disasters or designing resilient infrastructure capable of withstanding severe weather conditions. Beyond disaster response, AGI can promote long-term adaptation by improving water management systems, decreasing urban pollution, and optimizing agricultural practices to minimize environmental impacts.

By ensuring AGI is used in a responsible manner, the adverse effects of climate change can be reduced while accelerating progress toward SDG 13. However, ethical considerations and global cooperation remain essential to ensure equitable access to AGI technologies and prevent unintended consequences.

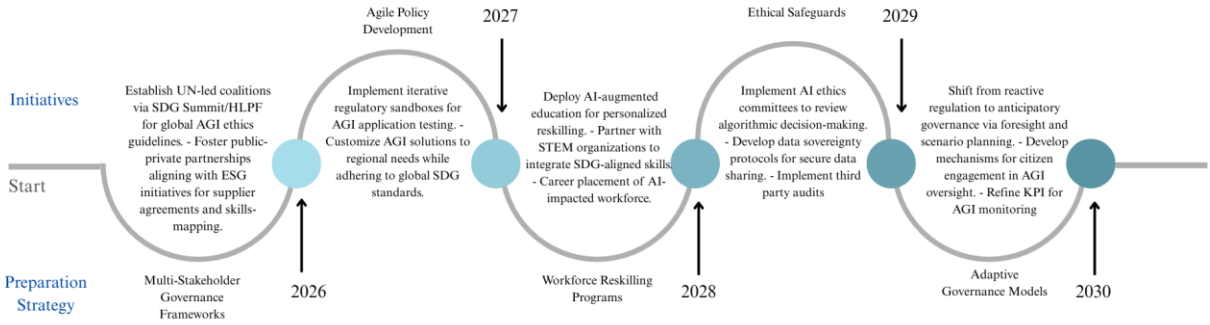


Figure 17 - A strategic roadmap showcasing both the strategy and the initiatives within the specified timeline.

What would come after

To thrive in this AGI-driven future:

1. Invest in Education: Focus on STEM skills and AI literacy to prepare for emerging roles.
2. Strengthen Policies: Develop ethical frameworks for AGI integration to ensure equitable access and minimize risks.
3. Foster Collaboration: Governments, businesses, and civil societies must work together to align AGI with global priorities like the SDGs.
4. Embrace Adaptability: Cultivate resilience as industries evolve rapidly under AGI's influence.

Preparation Strategies for AGI-Driven SDG Implementation

1. Multi-Stakeholder Governance Frameworks
    a. UN-led coalitions: Leverage platforms like the SDG Summit and High-level Political Forum (HLPF) to establish global AGI ethics guidelines, as emphasized in UN DESA's focus on "action, agility, and accountability"2.
    b. Public-private partnerships: Align with initiatives like AgGrowth's sustainability roadmap, which prioritizes ESG integration through supplier agreements and skills-mapping for workers37.

2. Agile Policy Development
    a. Iterative regulatory sandboxes: Adopt agile methodologies (Scrum/Kanban)6 to test AGI applications in controlled environments, ensuring policies evolve alongside technological advancements.

b. Localized adaptation: Customize AGI solutions to regional needs (e.g., telemedicine in low-resource settings) while adhering to global standards like the SDGs4.

3. Workforce Reskilling Programs
    a. AI-augmented education: Use AGI-driven platforms to deliver personalized reskilling curricula, targeting sectors at risk of automation (SDG 8)36.
    b. Cross-sector collaboration: Partner with organizations like AGI (American Geosciences Institute) to integrate SDG-aligned skills into STEM education4.

4. Ethical Safeguards
    a. Bias audits: Implement AI ethics committees to review algorithmic decision-making in healthcare (SDG 3) and hiring (SDG 8)67.
    b. Data sovereignty protocols: Develop frameworks for secure health/education data sharing, inspired by AgGrowth's cybersecurity training and data governance policies37.

Primary Beneficiaries

1. Marginalized Communities
    a. Healthcare: Underserved populations gain access to AGI-powered diagnostics and telemedicine (SDG 3)17.
    b. Education: Remote learners benefit from personalized AI tutors, addressing the 260 million children out of school (SDG 4)4.

2. Governments & Policymakers
    a. Climate action: Enhanced AGI-driven climate models (50% more accurate predictions) improve disaster preparedness (SDG 13)28.
    b. Labor markets: Real-time AGI analytics help design UBI pilots and shorter workweek policies to offset job displacement35.

3. Private Sector
    a. Renewable energy firms: AGI optimizes smart grids, reducing operational costs and accelerating decarbonization (SDG 7)37.
    b. Tech innovators: Companies like Agiloft benefit from ESG-aligned AGI tools for contract management and compliance56.

4. International Bodies
    a. UN agencies: AGI aids progress tracking for SDG targets, particularly in food security (via AgGrowth's grain storage solutions) and water management237.

Critical Next Steps

- SDG Summit integration: Advocate for AGI governance to be included in the 2024 Summit of the Future agenda2.
- ESG-AGI alignment: Follow Agiloft's 12-month ESG roadmap to operationalize ethics-first AGI deployment5.
- Community engagement: Adopt AgGrowth's model of stakeholder consultations to ensure AGI solutions reflect local priorities37.

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