SCHWAB FOUNDATION
FOR SOCIAL ENTREPRENEURSHIP

WORLD
ECONOMIC
FORUM

In collaboration with
EY and Microsoft

AI for Impact: The Role of Artificial Intelligence in Social Innovation

WHITE PAPER

APRIL 2024

Images: World Economic Forum

Contents

Foreword

As AI evolves into a driving force for the economy, it is imperative to ensure that it is used for the benefit of people, planet and society.

Gillian Hinde
EY Global Corporate Responsibility Leader, EYGS, United Kingdom

Sabine Zink Bolonhini
SAS Brasil, Brazil; Schwab Foundation awardee 2022

Jean-Philippe Courtois
Executive Vice-President and President, National Transformation Partnerships, Microsoft, USA

In an era defined by rapid technological advance, the transformative potential of artificial intelligence (AI) stands as both a beacon of promise and a challenge. It has become increasingly evident that AI is not merely a tool for innovation but, when deployed responsibly and ethically, can be a force for **social innovation** – improving equity, shaping societies and redefining the global landscape.

At the 2024 Annual Meeting of the World Economic Forum in Davos, social innovators, the private sector and technology organizations came together to launch the AI for Social Innovation initiative, hosted by the Schwab Foundation's Global Alliance for Social Entrepreneurship. This initiative aims to ensure that AI improves lives and accelerates impact, and social innovators play a pivotal role here.

In this first report on the status quo of AI in the social innovation space, we lay the foundation for enabling social innovators around the world to use AI for impact. We map out the sector and highlight concrete examples at the forefront of driving the deployment of AI for social impact.

The pace at which AI technologies evolve is nothing short of astonishing. From machine learning algorithms to natural language processing systems, innovations in AI have permeated various facets of our lives, promising efficiency, optimization and new avenues for problem-solving. Chances are that by the time this work is released, the development of AI would have outpaced some of the information presented herein. However, within this wave of progress lies the digital divide. Disparities in access to technology between the Global North and South persist, amplifying existing inequalities and hindering the potential of AI to truly benefit all of humanity.

Addressing this digital divide requires targeted and intentional initiatives that prioritize accessibility, equity and inclusivity. Bridging this gap demands collaborative efforts from stakeholders across sectors, particularly social enterprises. These organizations operate at the intersection of profit and purpose, leveraging innovative approaches to tackle social and environmental challenges. By harnessing the power of AI, social enterprises have the potential to revolutionize the way we address pressing issues, from healthcare and education to environmental conservation and beyond. In this way, they are paving the way for a future where technological advancements are directly aligned with the United Nations Sustainable Development Goals (SDGs), creating a more equitable, sustainable and just world for all.

Yet, realizing the promise of AI for social impact hinges on more than just technological prowess. It requires helping social innovators recognize exactly **how** the technology can amplify their impact models and equipping social innovators with bespoke knowledge, skills and resources to leverage the technology effectively. Training programmes, capacity-building initiatives and knowledge-sharing platforms are essential. Moreover, ensuring dialogue between the private sector, technology organizations and social innovators is crucial for creating fit-for-purpose solutions that are scalable and sustainable, and can address the most pressing challenges facing our world today.

As social innovators and their allies navigate the complex landscape of AI for social impact, we hope that this report will serve as a guiding light, illuminating the strategies and best practices that are shaping the future of technology-driven social innovation. Together, we can harness the power of AI to build a more inclusive, equitable and sustainable world for generations to come.

Executive summary

A new dataset of 300 social innovators and 90 initiatives highlights key opportunities and challenges for AI in social innovation.

This landscape report draws on insights from an extensive dataset of 300 social innovators spanning over 50 countries as well as 90 initiatives forming the ecosystem of AI for social innovation. Its analysis uncovers a nearly equal representation of AI applications across high-income and lower-income regions, underscoring AI's universal potential to tackle diverse societal issues.

The report finds three primary impact areas where AI is making significant contributions: healthcare, with 25% of innovators using AI to advance access to health; environmental sustainability, with 20% of social innovators applying AI to tackle climate solutions; and economic empowerment, notably prevalent in lower-income countries where 80% of all initiatives aimed at enhancing livelihoods are based. But AI is also revolutionizing practices in other areas such as agriculture through predictive analytics and precision farming, addressing climate resilience and boosting productivity.

The report also highlights that while there is a strong AI-for-impact ecosystem in high-income countries, specifically the United States (US), low- and middle-income countries do not have support for social innovators or localized initiatives. Therefore, the journey of integrating AI into social innovation comes with certain hurdles. Beyond a nascent ecosystem, other challenges include data biases, ethical dilemmas, the technical complexity of AI systems, and the need for substantial resources for the effective implementation of AI solutions. Furthermore, a gender gap in the field is evident, with only 25% of AI-driven social innovations led by women as opposed to 50% of all social enterprises worldwide – reflecting broader tech industry shortcomings.

Despite these challenges, the benefits of AI in social innovation are profound. AI's capacity for automation is freeing up resources and enabling a focus on strategic, impact-driven work. Real-time data processing and advanced analytics are facilitating smarter, evidence-based decision-making, while personalization capabilities are enhancing the effectiveness of social interventions.

For technology leaders, investors and the private sector, this report serves as a compelling call to action to support the ethical development and deployment of AI. By prioritizing inclusive and responsible AI practices, fostering cross-sector collaborations, and addressing the existing challenges, AI's full potential can be unleashed to catalyse positive social change, ensuring sustainable and equitable progress for communities worldwide.

↓ **Image credit:** Dimagi, USA, Schwab Foundation awardee 2012

Introduction

AI's potential in social innovation is vast, but its success hinges on addressing challenges like data bias and privacy.

AI can revolutionize industries, enhance efficiency and solve complex problems. But it can also pose significant ethical, security and societal challenges. The impact potential of AI is vast, offering groundbreaking opportunities in healthcare, education, environmental protection and more. It can optimize processes, create entirely new solutions for access to solutions, personalize experiences and predict outcomes. However, these advancements come with risks such as job displacement, privacy invasions and the amplification of biases encoded in AI algorithms.

The ethical use of AI, data governance and the development of inclusive technologies are critical considerations to ensure that the benefits of AI are realized without exacerbating existing inequalities or creating new forms of exclusion.

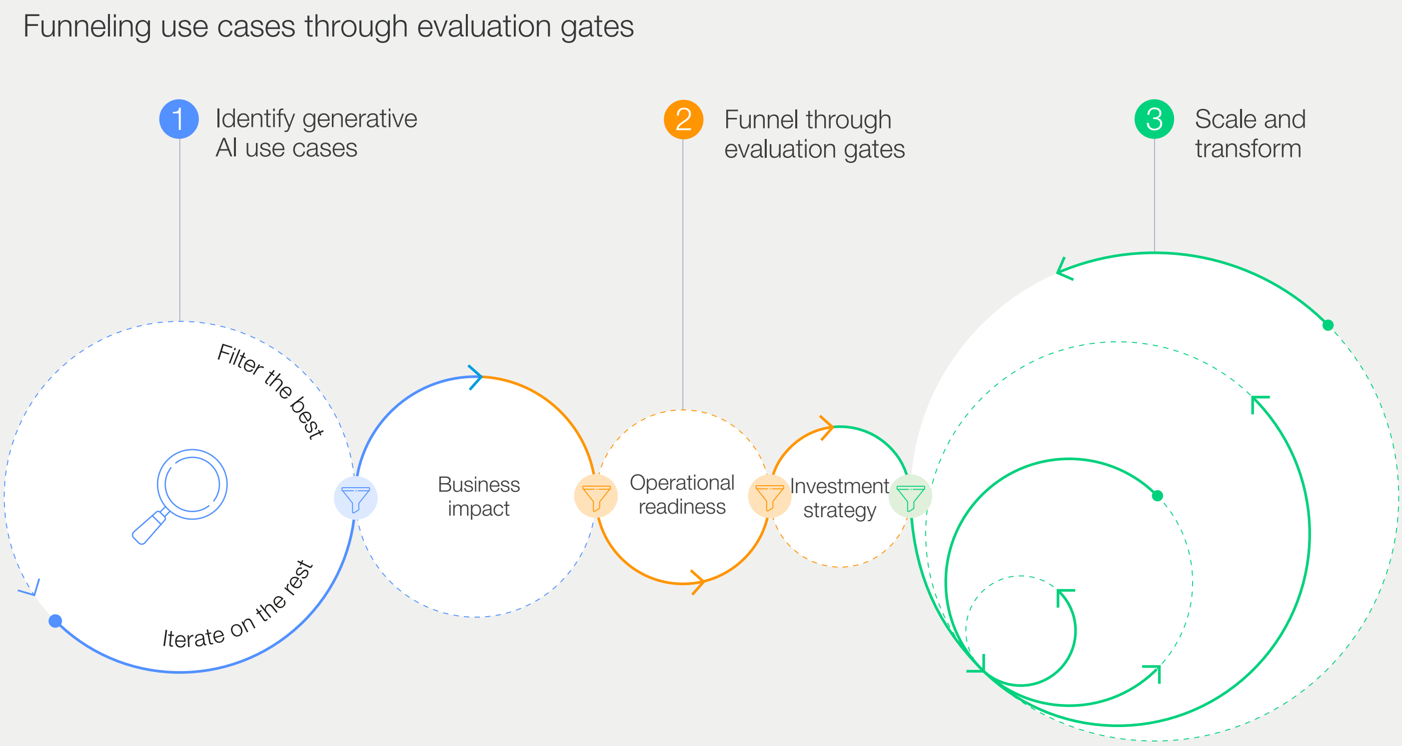
The World Economic Forum's AI Governance Alliance (AIGA) is a multistakeholder initiative at the forefront of helping businesses and policy-makers navigate operational, ethical and regulatory implications of AI. AIGA's approach spans four workstreams:

1. Responsible applications and transformation
2. Resilient governance and regulation
3. National AI ecosystems
4. Safe systems and technologies

AIGA engages with a variety of stakeholders, including C-suite executives, public sector officials, AI developers and civil society participants, to ensure that the development and deployment of AI technologies remains inclusive, sustainable and human-centred. It draws on the expertise of its members across industries, technology organizations, academia and civil society to shape guidelines and recommendations for the application of AI by businesses.

In January 2024, AIGA released an inaugural briefing paper series, including a framework to guide businesses in their adoption of AI. The paper, "Unlocking Value from Generative AI: Guidance for Responsible Transformation",[1] advocates for a structured approach towards the responsible implementation of AI.

FIGURE 1 **The AI Governance Alliance approach**



The paper highlighted use cases from industry leaders like IKEA and Google and showcases the transformative power of AI.

As business leaders navigate the AI landscape and the need to manage change inside large organizations, social innovators nimbly adopt creative AI solutions – often in resource-scarce environments.

In this complex landscape, social innovators, leveraging market-driven solutions to societal challenges, serve as a crucial conduit for harnessing AI's positive attributes while mitigating its risks and ensuring that technological advancements contribute to equitable and sustainable societal progress.

Social entrepreneurs and social innovators in the public and private space are central actors for delivering on the impact potential of this new technology. They are working with marginalized and vulnerable communities around the world, understanding their contexts and needs. Based on their unique positioning, they have a front-row seat to technology adoption and can provide important insights into the technology roadmap of AI.

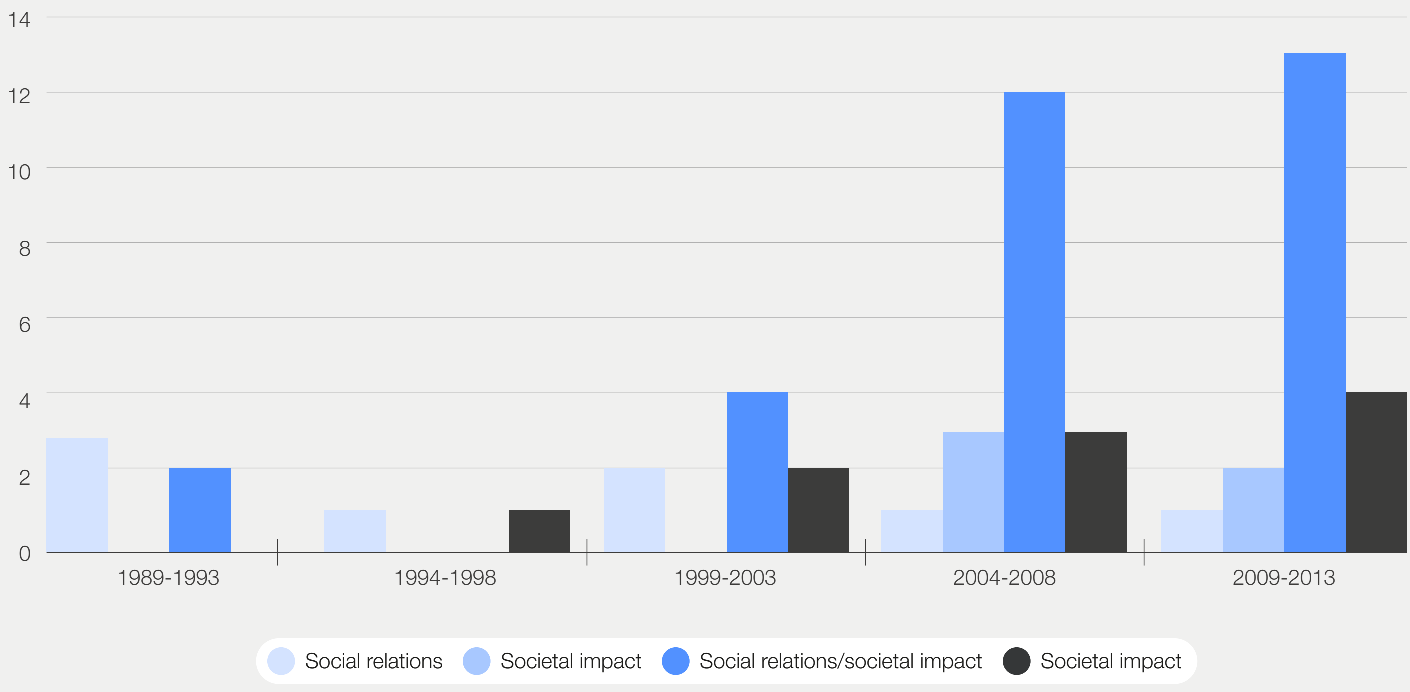
This report highlights the current landscape of AI in social innovation, its prevalence, opportunities and challenges. It is the first in a series of reports on the topic. Later editions will dive into frameworks for successful adoption, practitioner-led guidelines for responsible deployment and opportunities to positively influence the overall AI technology roadmap going forward.

To understand the impact potential of AI in social innovation, it is important to contextualize how technology, in its various forms, has been a key driver and enabler for social innovation in the past. Social innovation operates at the intersection of business, social relations, societal impact and technological innovation. The role of technology in social innovation has evolved over time. Some of the earliest mentions of social innovation in the 1890s explain the influence of social innovation on technology adoption – especially how increasingly networked societies have managed to accelerate the adoption of technological innovation.

More recent studies, however, show a reversing trend where technology plays a larger role in driving social innovation itself. Figure 2 summarizes a 2016 Cambridge study that classified social innovation literature from 1989 until 2013, tracing the evolution of the concept of social innovation over time. It shows a strong rise in the role of technology as a foundation for social innovation at the turn of the millennium.

Leveraging market-driven solutions to societal challenges, social innovators serve as a crucial conduit for harnessing AI's positive attributes while mitigating its risks and ensuring that technological advancements contribute to equitable and sustainable societal progress. Social entrepreneurs and social innovators in the public and private space are central actors for delivering on the impact potential of this new technology. They are working with marginalized and vulnerable communities around the world, understanding their contexts and needs. Based on their unique positioning, they have a front-row seat to technology adoption and can provide important insights into the technology roadmap of AI.

FIGURE 2 | **Social innovation-related publications by theme**

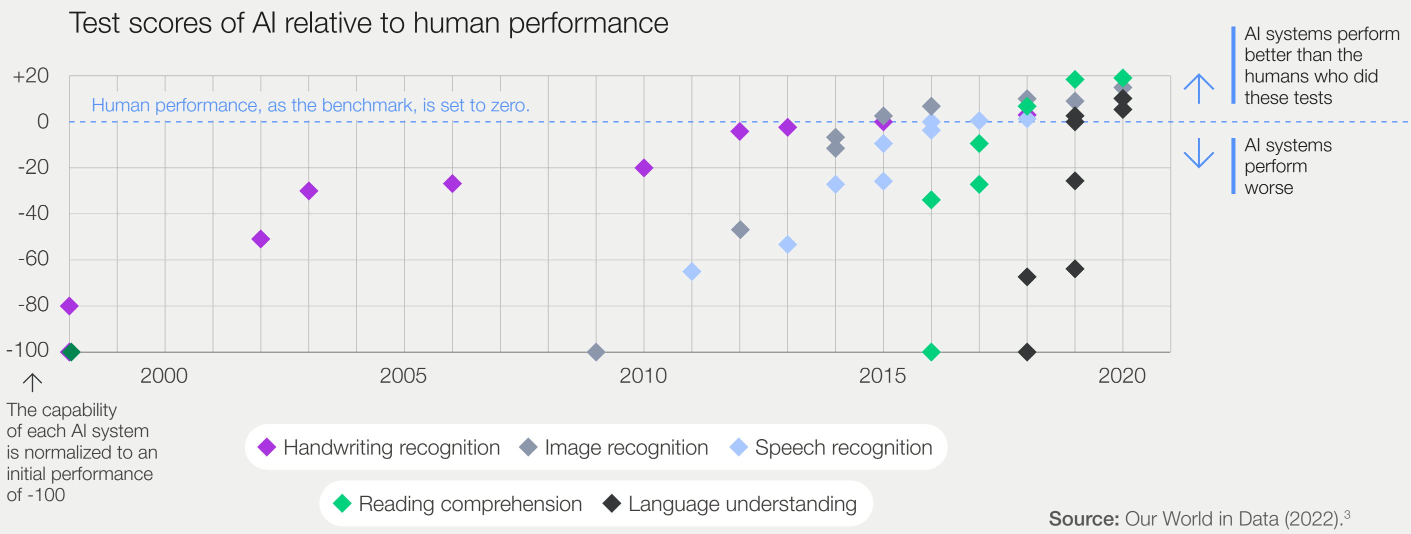


Source: Journal of Social Policy (2016).[2]

Mobile phones, for example, have been incredibly transformative in driving social change especially in low- and middle-income countries (LMICs). Mobile money goes back to 2007 with the introduction of innovators like M-PESA, which provided the unbanked an opportunity to save money and complete financial transactions, triggering a range of economic ripple effects across many regions. Similarly, critical weather, soil fertility or market data is now shared via short messaging service (SMS) with rural farmers, enabling them to improve productivity and bargain for better product pricing.

In this context, the impact opportunity of AI as a groundbreaking technology has understandably garnered much attention. As one of the world's top emerging technologies, AI has witnessed rapid growth and global attention over the years. As seen in the study below, one of the key reasons for its acceleration over the past 20 years has been the rapid developments in AI capabilities. These were made possible by the changing AI ecosystem of parallel technologies.

FIGURE 3 | **Accelerated development of AI capabilities as they meet and surpass human abilities and performance**



Source: Our World in Data (2022).[3]

↑ Image credit: Youth for Technology Foundation (YTF), USA, Schwab Foundation awardee 2013

big data, for example, with the sheer volume, velocity and variety of data accessible to organizations, required greater and more efficient means of processing. Consequently, the invention of graphical processing units (GPUs) and cloud computing enabled AI systems to process such big data, and now dedicated processors for AI applications have drastically increased data processing rates. The evolution of these technologies can further be attributed to the connected globe, which has enabled open-sourced software to spread from developer to developer, reducing redundant testing and inventing, and allowing companies to collaborate on best practices.

As AI capabilities and performance have quickly moved beyond human abilities, a feedback cycle has been invoked. Organizations that realize accelerating returns on investment are motivated to invest more resources into research and development, contributing to the current AI boom.

These AI advancements can play a pivotal role in social innovation, with benefits across the value chain for social innovators. For example, AI's automating capabilities can streamline cumbersome and repetitive tasks, revealing value-add time for employees, such as image recognition capabilities for diagnostic services that reduce the time required to analyse images for patterns and trends.

The ability of AI to process big data at speed has allowed for real-time responsiveness and smarter decision-making, optimizing use-cases for route logistics, migration patterns and urgent warning systems. As companies and social innovators continue to realize these benefits, and as AI becomes more accessible, it can be increasingly leveraged for positive impact when applied responsibly.

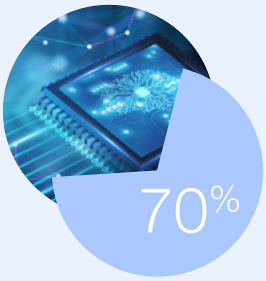
While AI can support the scaling of social innovation solutions, the interconnectedness of societies also directly influences the adoption of new technologies such as AI. Information sharing, open-source code and big data have contributed to the rise of AI in the first place. Unquestionably, the transformative power of AI, harnessed appropriately, inclusively and responsibly, has the potential to redefine the approach to tackling the world's most prevalent and critical social challenges.

This report explores the potential of AI as a tool and a catalyst for accelerating social innovation. It highlights how AI can be applied, the challenges social innovators face when leveraging the technology, and the opportunities for multistakeholder action to strengthen the ecosystem for technology adoption.

Key highlights and insights

Nearly 300 late-stage social innovators in over 50 countries apply AI across impact domains including healthcare and environment.

Prevalence



70%

of social innovators have deployed a form of **machine learning (ML)**.

15%

of innovators are deploying a form of **natural language processing (NLP)**.

10%

of innovators are deploying a form of **predictive analytics**.

Impact areas

1/4 — 1 in 4 social innovators are deploying AI in a capacity that seeks to advance Sustainable Development Goal 3: Good Health and Well-being.

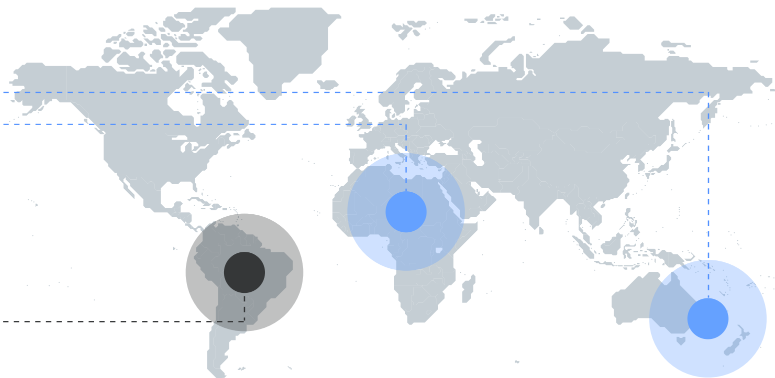
1/5 — 1 in 5 social innovators are seeking to address climate change or environmental sustainability; this includes those working towards Goal 13: Climate Action; Goal 14: Life below Water; and Goal 15: Life on Land.

1/7 — 1 in 7 social innovators are designing AI solutions for accelerating economic empowerment.

Geographical distribution

Social innovators in Africa and Oceania use **ML** proportionately less, with approximately 50% of African innovators and 40% of innovators in Oceania, compared to the global average of 70%.

Remarkably, 1 in 6 social innovators in **Latin America** use AI to address educational challenges.

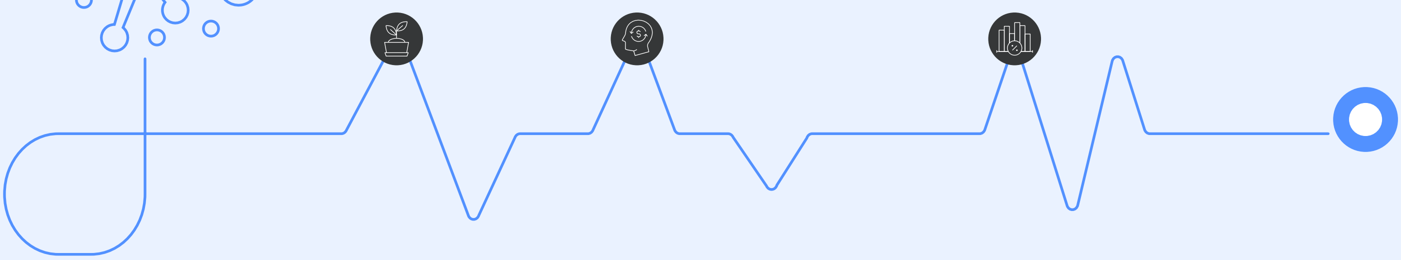


Regional specificities

66% of innovators using AI in the **environmental domain** are based in high-income countries.

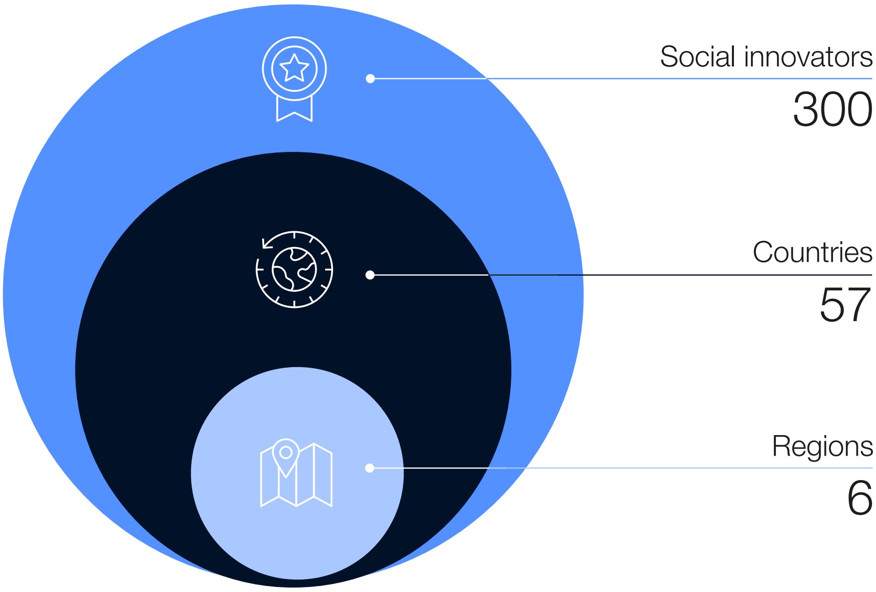
Nearly 80% of social innovators addressing **economic empowerment** through AI are located in low or middle-income countries.

Low- or middle-income (49%) and high-income countries (51%) are **evenly represented** across the dataset of 300 social innovators deploying AI.



Methodology

This report compiles a global dataset of AI solutions in social innovation and analyses key enablers and barriers for adoption.



This landscape report provides an overview of how social innovators are adopting AI in various forms across the world. It is based on a dataset that was built to analyse how 300 social innovators from more than 50 countries are leveraging AI to innovate and accelerate their social impact.

The analysis considered an array of attributes, exploring insights across the following areas:

- **Geographical** – Analysing social innovators at a regional and country level.
- **Social impact domains** – Consolidated categories of social impact that provide a high-level view of how AI is being deployed to address societal challenges. Adapted from previous literature, these domains also support a consolidated view of the United Nations (UN) Sustainable Development Goals (SDGs) such as analysing environmental innovations, which include Goal 13: Climate Change; Goal 14: Life below Water; and Goal 15: Life on Land.
- **Sustainable Development Goals** – Analysing the alignment of social innovators with the UN SDGs.

From a technological perspective, the analysis sought to provide deeper insights into each innovator's deployment of AI by analysing:

- **AI capabilities** – Capturing which AI capabilities are being adopted (e.g. ML, image recognition or predictive analytics).
- **AI deployment stages** – Identifying how mature each organization is in its deployment of AI and thus its life cycle stage of deployment. Looking into AI deployment stages provides opportunities to enable the inclusion of both mature and early-stage social innovators in deployment strategies.[4]
- **AI implementation insights** – Capturing how social innovators are implementing AI within their business to expand their impact potential and bottom lines.[5] This includes, for example, developing new AI products and adding AI to core products/services. Building on the work of MovingWorlds in 2023,[6] this report leverages a matrix to analyse how social innovators are adopting AI by:

1. Creating new products or services using AI.
2. Adding AI into existing products or services.
3. Using AI to deliver impact not previously scalable.
4. Using AI to improve internal operations and processes.

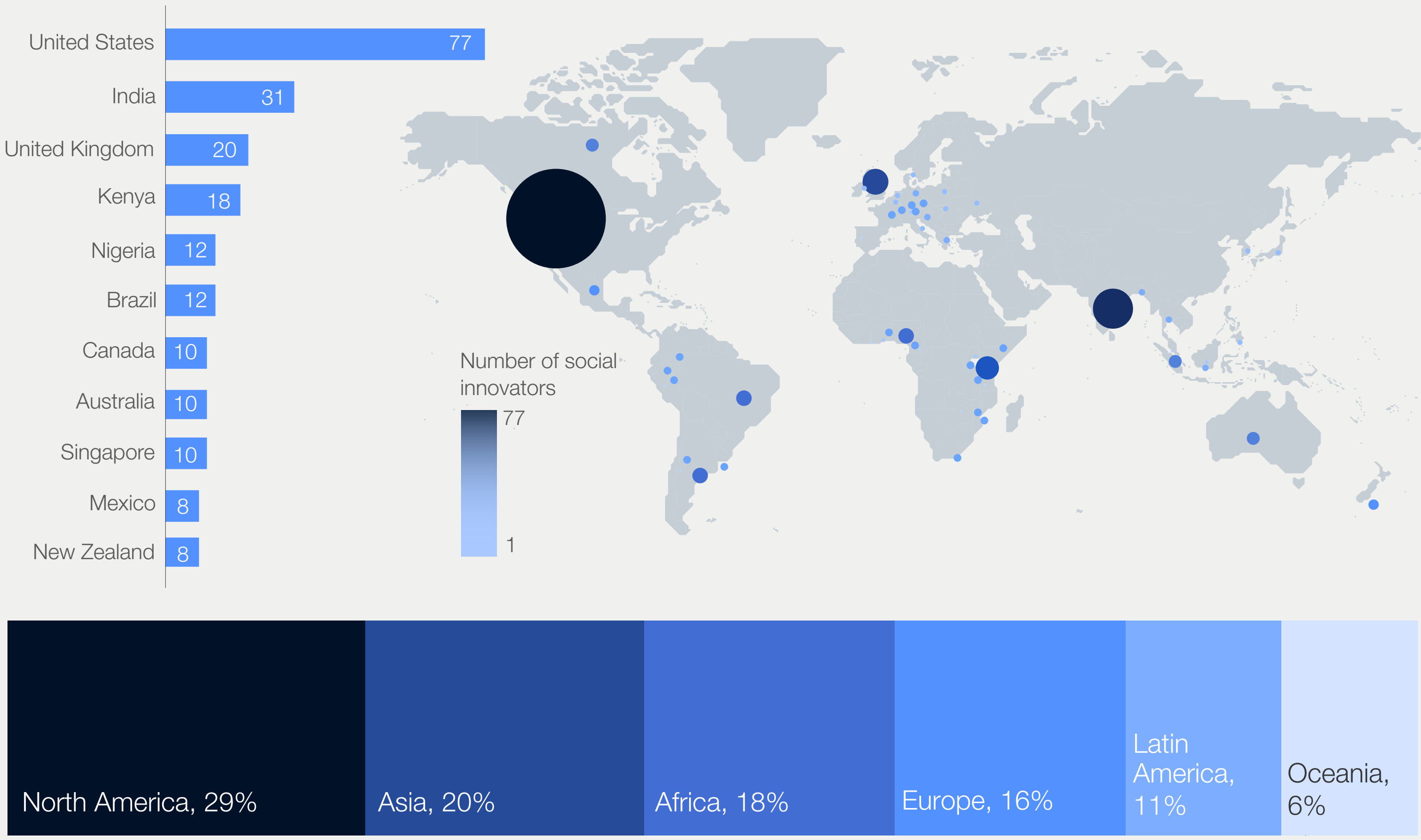
Key findings

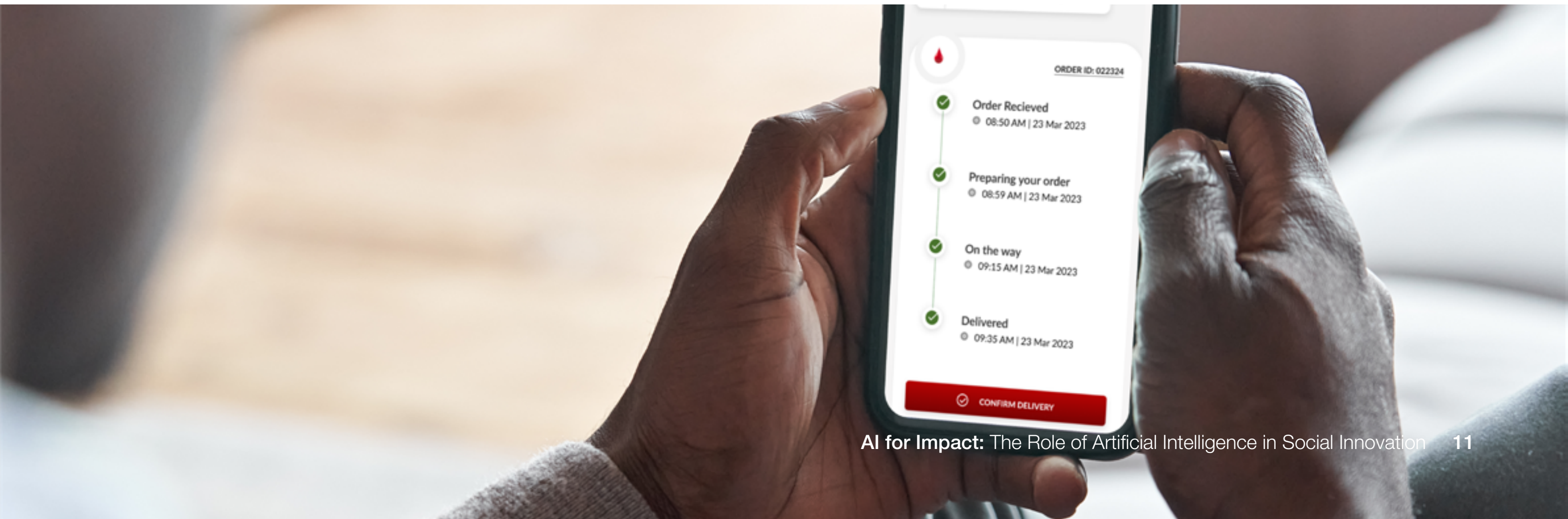
Social innovators apply AI across the globe in a diverse range of impact areas – from healthcare to peace and justice.

Social innovators in the non-representative sample underlying this report are spread across all geographies, with an equal distribution across high-income and low-/middle-income countries. The US, India and the United Kingdom have the highest prevalence of social innovators deploying AI, followed by Kenya, Brazil and Nigeria.

Healthcare is by far the most prevalent impact domain that social innovators are addressing with AI. Corresponding to this, **1 in 4** social innovators are deploying AI to advance SDG 3, **Good Health and Well-being**. This is apparent across all geographies as innovators seek to adopt AI to address multiple challenges within the area of healthcare.

FIGURE 4 **Geographical summary of the social innovators dataset**





CASE STUDY 1

Dimagi, USA: Deploying chatbots for evidence-based healthcare

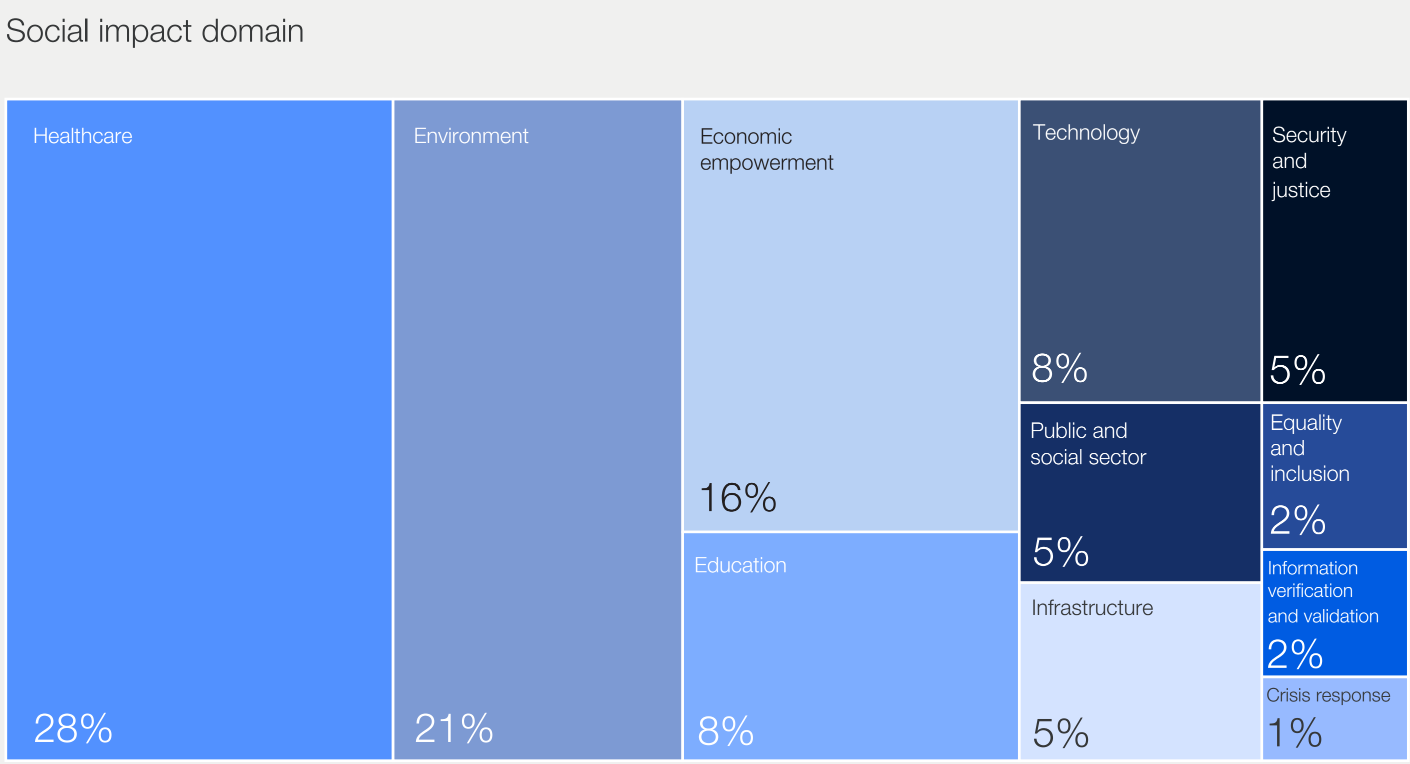
Dimagi's Open Chat Studio, an innovative platform, is democratizing the use of generative AI by enabling the creation, testing and deployment of chatbots powered by large language models (LLMs). Awarded the Grand Challenges prize in 2023, Dimagi is developing a chatbot coach for frontline workers in Malawi, aiming to improve LLMs' proficiency in local languages such as Malawian Chichewa. By employing bilingual prompts and simplifying communication to primary-school level, Dimagi enhanced the chatbot's effectiveness and proved its adaptability to local linguistic nuances.

Supported by the Bill and Melinda Gates Foundation and the National Institutes of Health, among others, Dimagi's projects are pioneering the evidence-based application of AI chatbots in critical areas such as reproductive health and substance abuse treatment. These efforts are geared towards evaluating the impact of generative AI chatbots in both high- and low-income settings, establishing a foundation for their broader application in improving health outcomes and addressing other significant challenges.

Dimagi is a 2012 Schwab Foundation awardee.

Beyond healthcare, approximately **one in five social innovators are seeking to address climate change or environmental sustainability**. The focus on economic empowerment, the third most prevalent impact domain, is specifically pronounced in LMICs, where nearly 80% of social innovators are addressing this issue. The following chapters outline some of the most prevalent patterns in this space and highlight opportunities for further investment.

FIGURE 5 **Social innovators and impact domains**



When analysing the type of AI capabilities that social innovators have developed, the dataset shows that **over 70% of social innovators have deployed some type of ML capability**, the majority in isolation but approximately 20% of the time in combination with NLP, computer vision or predictive analytics. Interestingly, sentiment analysis, recommendation systems and deep learning are almost entirely neglected by or irrelevant for social innovators so far.

FIGURE 6 **Social innovators and Sustainable Development Goals**

How social innovators' work aligns with SDGs

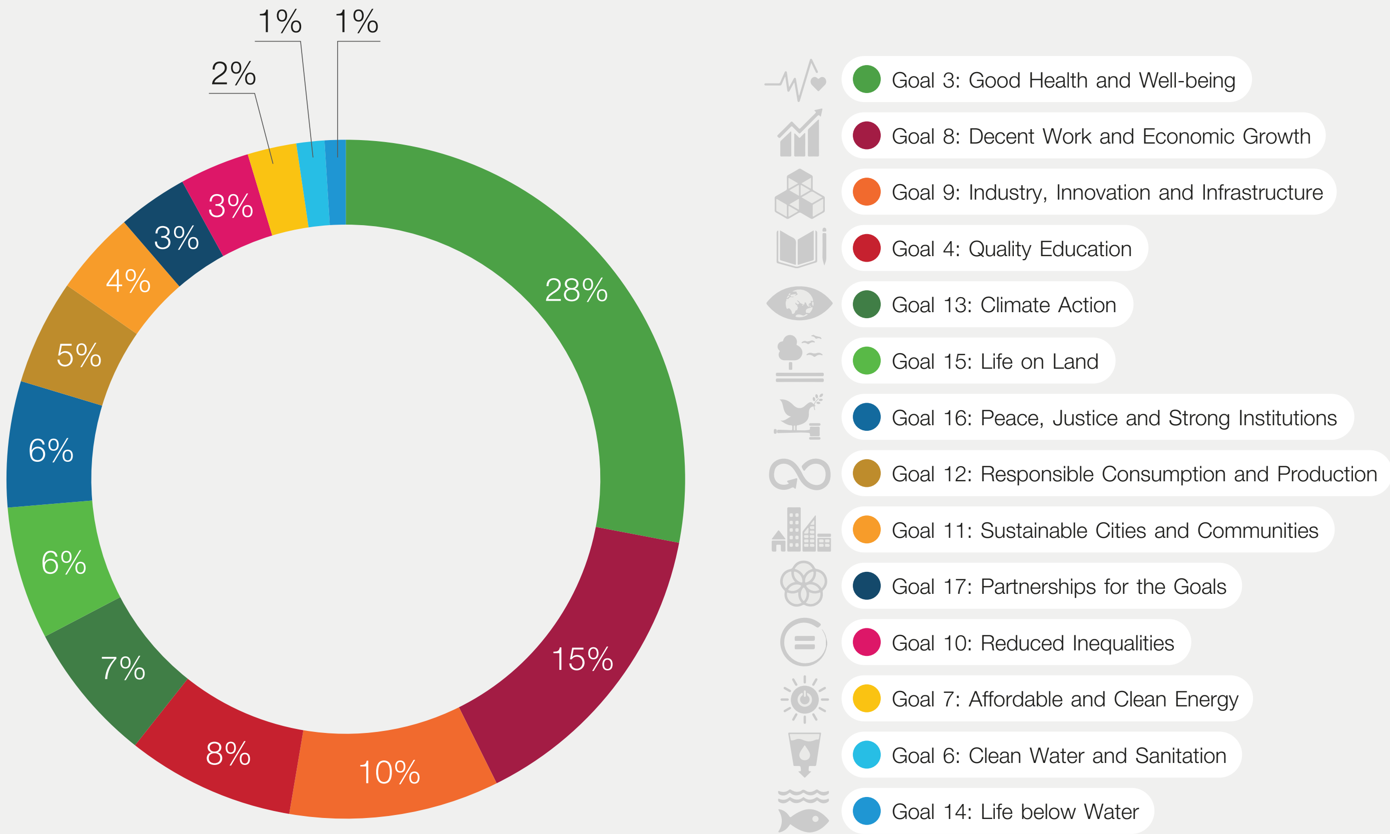


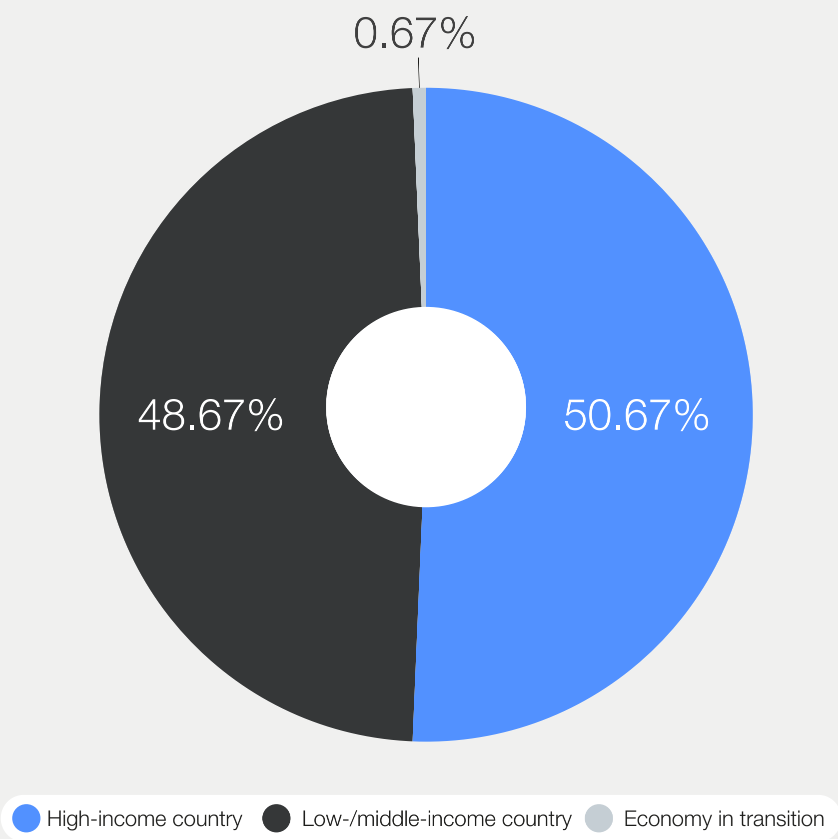
Image credit:
Dimagi, USA, Schwab Foundation awardee 2012

1 Geography of AI in social innovation

Social innovators apply AI in all geographies and economic contexts, with the focus varying by impact areas relevant to their regions.

Social innovators are embracing AI across different regions, each with its unique focus and leading countries. The data set in this research is nearly balanced between high-income countries and LMICs. However, the application of AI in addressing global challenges shows distinct patterns based on the economic status of the country concerned.

FIGURE 7 **AI social innovators' economic classification based on geographical location**



In terms of social impact domains, healthcare, environment and economic empowerment dominate, making up 65% of the focus areas for social innovators. Healthcare sees a relatively balanced distribution of innovators across high-income countries and LMICs. However, nearly **80% of social innovators deploying AI for economic empowerment are based in LMICs**. This stark contrast highlights a direct correlation between the economic priorities of a region and the focus of AI-driven social innovation within that region. For instance, a 2021 IPSOS report in collaboration with the World Economic Forum found that 70% of the countries prioritizing "decent economic growth" were LMICs, mirroring the trend observed in AI applications for social innovation.[7]

FIGURE 8 | Social innovators' economic context in each social impact domain

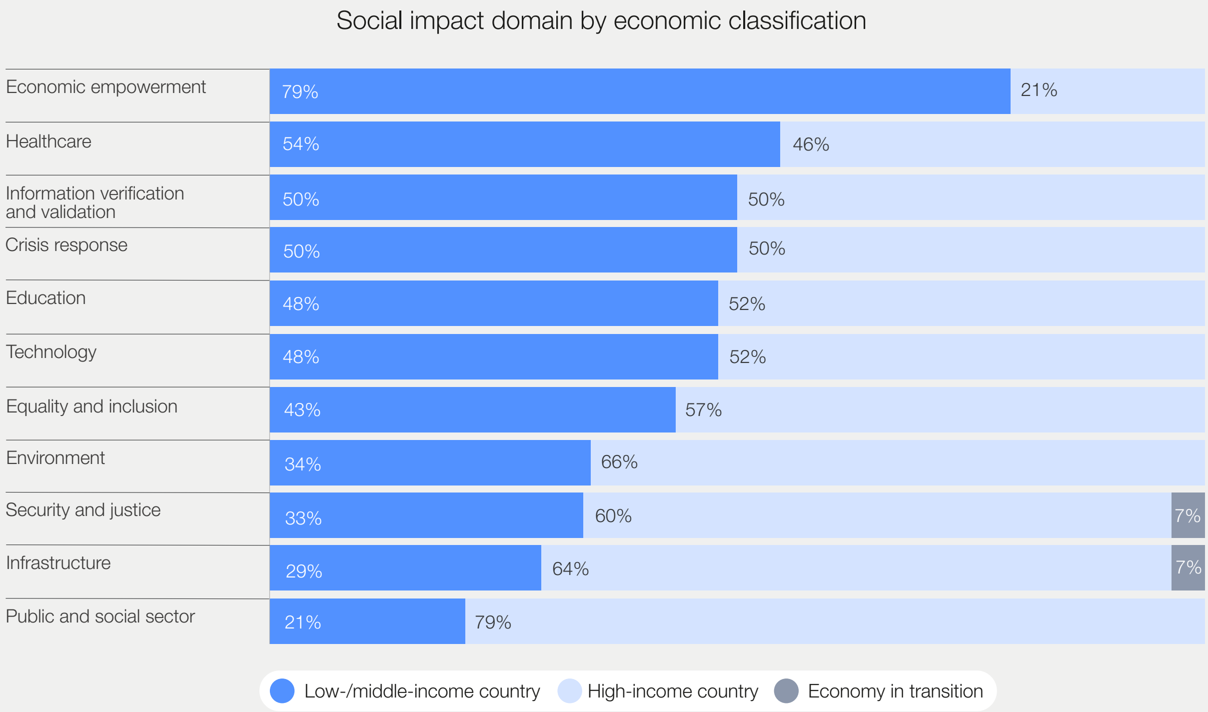
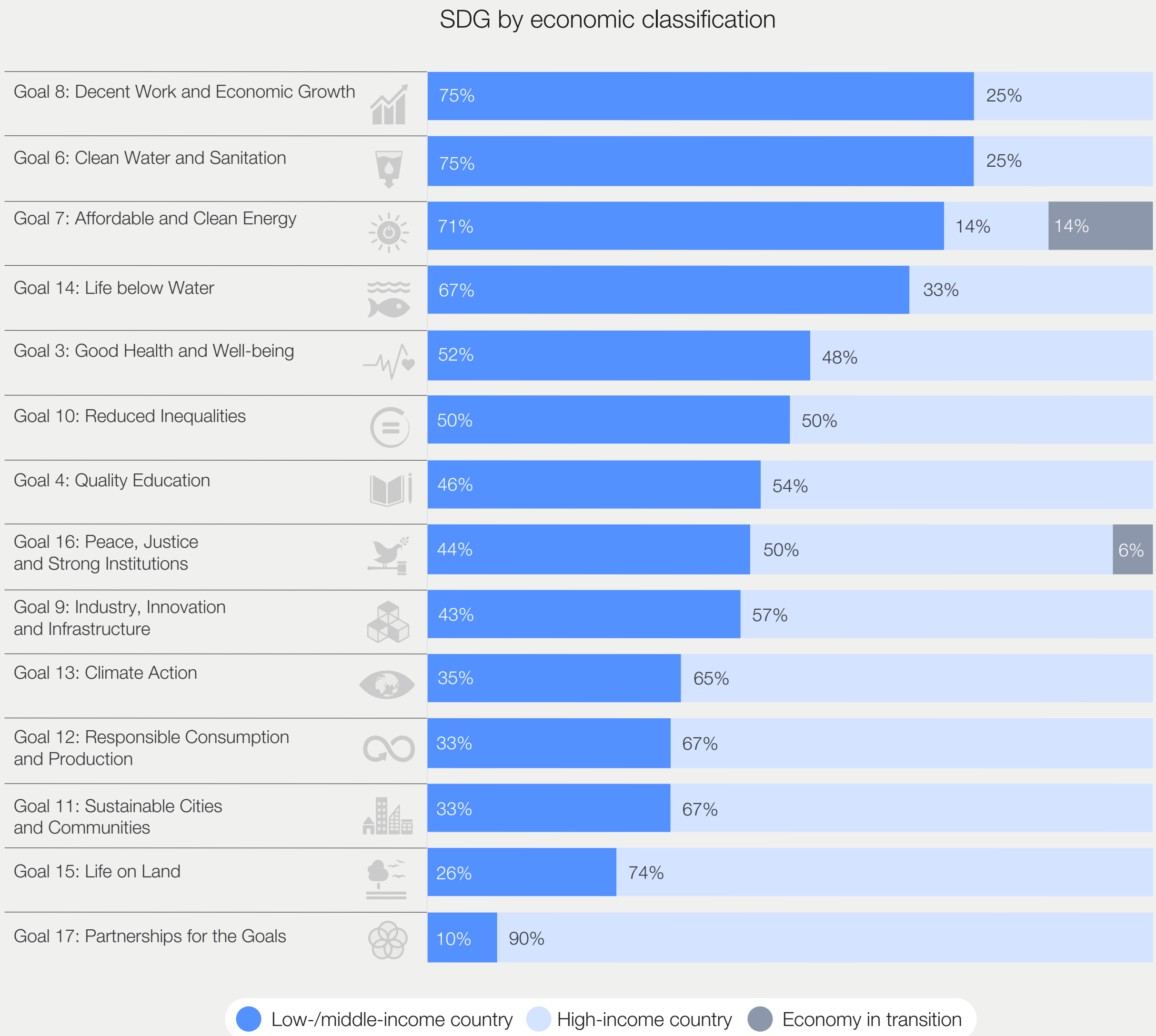


FIGURE 9 | Social innovators' economic context within each SDG



Approximately 30% of innovators within the economic empowerment domain are deploying solutions such as crop monitoring systems, precision farming techniques and predictive analysis models. Challenges such as data access and public-private data sharing remain significant, especially in sectors such as agricultural technology ("AgTech").

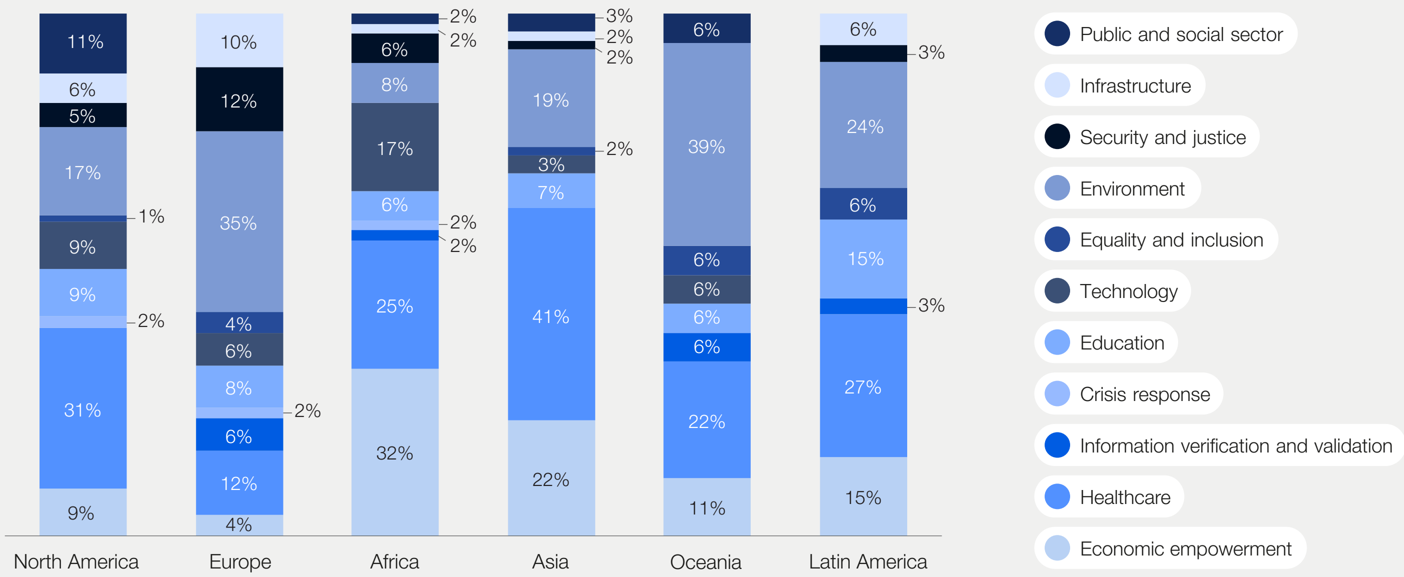
Prospera Technologies exemplifies the innovative use of AI in agriculture, offering real-time insights to farmers through ML analysis of multisensory field data, thereby increasing crop yield and reducing waste. This business-to-business (B2B) approach to addressing the "hunger value chain" contrasts with business-to-consumer (B2C) solutions that aim to improve food accessibility for communities, showcasing the diverse applications of AI in tackling hunger and promoting economic empowerment.

Social innovation in the environmental sector in LMICs also demonstrates a pronounced preference for AI, with **66% of environment-focused social innovators based in LMICs**. This is particularly evident in efforts addressing SDG 15: Life on Land and SDG 13: Climate Change, where the majority of innovators are located in LMICs. This distribution reflects the higher risk of climate impact on these regions, underscored by a World Economic Forum study in 2022 which found Southeast Asia to be 10 times more exposed to climate risks compared to Europe.[8]

In addition to economic context, Figure 10 outlines social impact domains by geographical region. The following paragraphs provide further country-level insights into the deployment of AI for social innovation.

FIGURE 10

Impact domains that social innovators are addressing across regions



BOX 1

Public sector perspective: Policies for AI in Southeast Asia

The rise of AI in Southeast Asia offers significant potential for social innovation and economic growth but is hampered by regulatory uncertainties and challenges in data sharing. The region's policy landscape lacks the clarity needed for businesses and social enterprises to fully leverage AI, with existing policies not providing sufficient guidance. Initiatives like Thailand's AI for Social Good, in partnership with entities including the UN Economic and Social Commission for Asia and the Pacific (ESCAP), Google.org and International Telecommunication Union (ITU), highlight the importance of informed policy-making. These programmes aim to use AI to tackle societal issues.

The reluctance to share data, compounded by inadequate data privacy regulations, impedes collaborative efforts essential for AI-driven solutions. Addressing these issues requires a focus on transparency, collaboration and capacity-building, with an emphasis on open regulatory processes and stakeholder dialogue to foster trust for data sharing.

India and Indonesia's experiences offer lessons in enhancing AI adoption. India's success in building digital infrastructure and facilitating data access through public-private partnerships underscores the positive effects of forward-thinking policies. Meanwhile, Indonesia's growing start-up ecosystem, especially in agriculture, points to the possibilities of AI innovation, albeit with ongoing challenges in data governance and collaboration. These examples stress the need for nuanced policy approaches to catalyse AI's potential in the region.

South Asia stands out, especially India, which has become a beacon for AI in social innovation, largely due to its rapid technological adoption and strong government support. India ranks 5th globally for private AI investment and newly funded AI companies.[9] Government initiatives such as Bhashini are enhancing AI adoption,[10] benefiting social enterprises like Haqdarshak, which credits the initiative as crucial for providing tools and resources to deploy their AI model. Concretely, the government has provided APIs to receive multiple local language translations, making it simpler for Haqdarshak to enable rural Indians to access government welfare. Overall, the country has seen remarkable growth in AI, with a significant increase in AI-related publications and GitHub projects, and a high AI skills penetration rate, including the highest among women.[11]

Southeast Asia is also making strides, with Singapore, Indonesia and the Philippines making up 25% of the region's social innovators in AI. Singapore, in particular, is a hub of innovation, thanks to its AI governance framework and high ranking on the global innovation index.[12] Start-ups like Funding Societies and Biorithm exemplify the region's strength in combining technology and social impact.

North America, particularly the US and Canada, is a powerhouse of AI innovation, hosting a large portion of the social innovators in this dataset. The region's advanced infrastructure and investment in AI have fostered a conducive environment for social innovators like BlueDot, which uses AI to predict disease spread. The region also leads in AI market value ($24.9 billion in 2022) and healthcare applications, supported by strong government policies.[13]

Africa is emerging, with leaders like South Africa, Nigeria and Kenya. Egypt and Kenya have developed national AI strategies.[14] In other countries like Cameroon, individual social innovators like Mboalab are using AI to address healthcare challenges, such as developing low-cost diagnostic tools for malaria. The continent is also seeing AI applications in economic empowerment and various ML capabilities.

Oceania shows promise with countries like Australia and New Zealand taking on leadership positions in AI readiness and applications,[15] despite the region's overall under-representation in social innovation. Interestingly, the region has the most pronounced group of social innovators working on environmental protection – such as Exci, which is leveraging satellite imagery and AI as an early warning system against wildfires.

Europe similarly focuses predominantly on sustainability, with a significant portion of its innovators tackling environmental challenges. Initiatives like the European Green Deal and strong innovation ecosystems support social innovators in adopting AI for environmental action, as seen with Belgium-based BeeOdiversity and its AI-based pollution monitoring, leveraging bees as "natural drones". Europe's quickly evolving regulatory landscape provides opportunities and challenges for social innovators. Stringent data protection rules and a strong "AI Act" may stifle innovation but may also foster public trust in the technology, which is particularly important in the social innovation context.

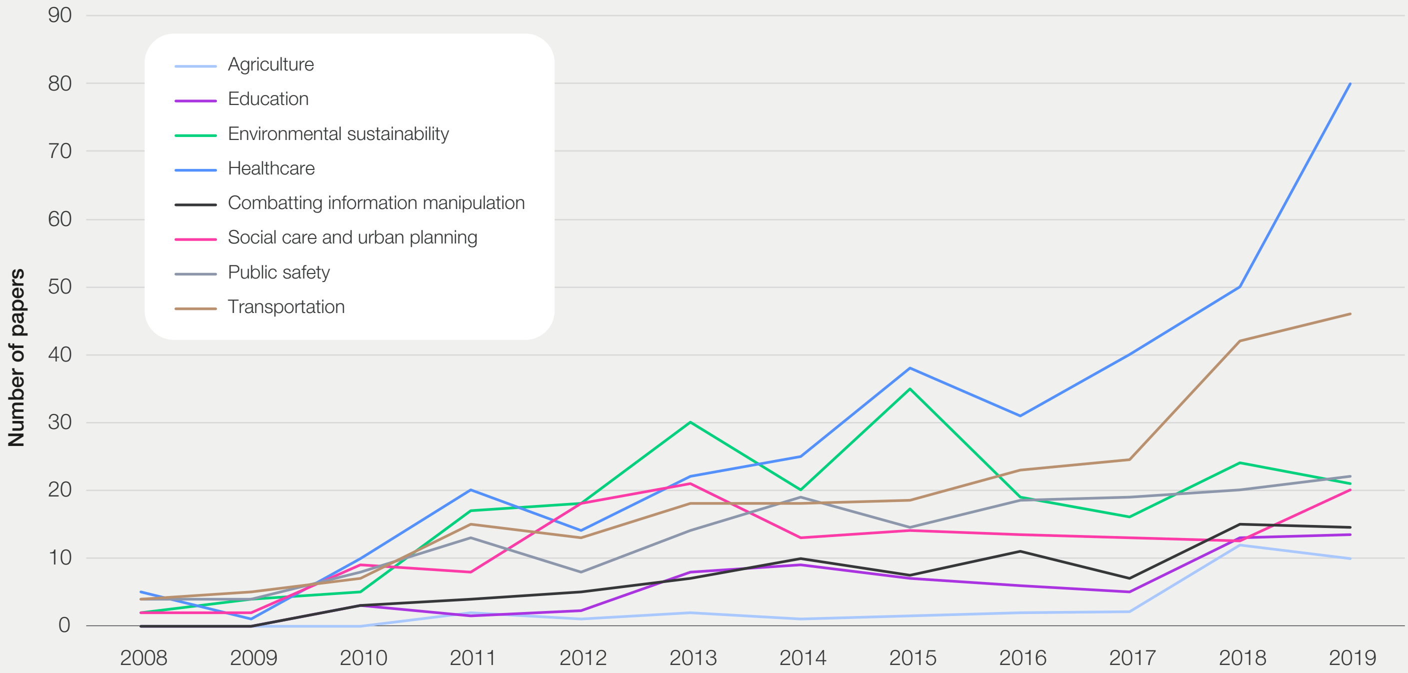
Latin America, with Brazil at the forefront, is addressing education through platforms like Recode and Geekie, and healthcare challenges through companies like SAS Brasil and Prosperia. It also leverages AI for environmental protection and climate action through organizations such as MapBiomas. Brazil explicitly supports social innovation through its recently adopted presidential decree ENIMPACTO, which established the National Impact Economy Strategy and the Impact Economy Committee during the ongoing year of its G20 presidency. Brazil ranks 32nd globally on Oxford's AI Government Readiness index and has a positive attitude towards AI.[16] Beyond Brazil, Mexico is currently developing its national AI strategy, and the first Latin American AI Index was introduced in 2023 by the Economic Commission for Latin America and the Caribbean (ECLAC), collecting information on AI in the region including enabling factors, research and development efforts, and governance approaches.[17]

2 AI across impact domains

Social innovators predominantly apply AI in healthcare and climate action.

More than 25% of the social innovators in this dataset are aligned to Goal 3: Good Health and Well-being. One reason is that AI in the healthcare space has received the most research, resources and investment. Over the past decade, the number of publications relating to AI for good in the healthcare sector has increased significantly.[18] The accelerated rate of related publications drastically outpaces any other area, as shown in Figure 11 below.

FIGURE 11 **How AI-for-social good application domains have evolved**



Source: Cornell University.[19]

Analysis showed that **57%** of social innovators addressing **Good Health and Well-being** are **adding AI into core services**. They are leveraging AI capabilities such as ML and NLP to enhance how their current products are offered and to strengthen the quality, scale, speed or efficiency of their solutions.

Xolani Health,[20] a Nigeria-based healthcare organization is revolutionizing radiology in Africa. The company has developed a platform called DICOM-X, a web application for medical imaging, designed to connect hospitals with a global community of radiologists. DICOM-X uses AI to create a heat map or to highlight areas of interest. It leverages "image segmentation deep learning" models to assist radiologists and doctors by automating the analysis, thereby reducing diagnostic time and potential human error, at a price of 25 cents per scan.[21]

Nearly **24%** of social innovators accelerating **Good Health and Well-being** are **developing new products and services** using AI. Koko, for example, offers free mental health support to over 4 million young people who encounter harmful content online. The organization leverages NLP to analyse user messages and identify patterns that may indicate a need for support. It also uses ML algorithms to analyse user data and provide personalized recommendations for mental health resources. Koko's detection system identifies 20-40% more concerning keywords than traditional filters – by identifying more messages by young users, it reaches more beneficiaries.[22]

Approximately **one in five** social innovators are seeking to address **climate change or environmental sustainability**. This includes the majority of innovators accelerating Goal 15: Life on Land; Goal 14: Life below Water; or Goal 13: Climate Action. Nearly 63% of innovators within the environmental social impact domain are aligned to one of these SDGs. The remaining 37% are focused on SDGs on sustainable cities, responsible consumption, and affordable and clean energy.

To a large extent, innovators are using various AI capabilities such as ML and predictive analytics to increase productivity and efficiency (e.g. conducting data analysis at higher speed and larger scale).

For instance, Moja Global uses AI to process large amounts of data derived from satellite images, offering valuable insights on biomass, which are used to calculate carbon emissions.[23] Ocean Clean Up leverages AI technology and data processing to optimize clean-up operations by predicting plastic debris movements and aggregations, enabling efficient removal.[24] Qrious in New Zealand has partnered with the country's government to advance efforts to protect the country's national bird, the kiwi. Qrious's AI model has removed the need for thousands of hours of analysis originally required to review audio recordings of the birds, and can identify kiwis in images with 80% accuracy. Having thus saved significant time and money, the Department of Conservation has announced that it is exploring similar solutions for other conservation efforts.

Innovators are also leading the way to the creation of sustainable cities and communities. They are adopting AI technologies to reduce urban energy usage, increase efficiency of movement, improve effectiveness of infrastructure management and enhance the sustainability of global cities and communities. Not all of them focus on social impact per se – Sustainia, for instance, is using AI to analyse data and identify areas where sustainability practices within cities can be improved, ultimately improving lives for everyone in the city. In one application, Sustainia uses AI to help cities reduce their carbon footprints by optimizing traffic flow and reducing energy consumption.

CASE STUDY 2

LifeBank, Nigeria: AI decision-making for improved healthcare in underserved regions

LifeBank, a healthcare supply chain company in Nigeria, showcases the transformative potential of AI in improving healthcare delivery in underserved regions. While often seen as a logistics firm, LifeBank positions itself as a technology powerhouse, using innovative solutions to bridge healthcare supply chain gaps, especially in last-mile delivery. The company's technology stack, developed in-house, manages operations from supply chains to payment processing, employing blockchain to ensure transparency in blood supply chains. Collaborations with giants like Johnson & Johnson and Merck affirm the effectiveness of these solutions.

AI is central to LifeBank's strategy, with tools like "Eric", which can predict oxygen demand using clinical and weather data, and proved vital during the COVID-19 crisis. Partnerships with entities such as Causal Foundry further AI's use in predictive analytics for healthcare product demand, enhancing inventory management.

LifeBank's innovation extends to last-mile delivery, merging advanced technologies with accessible platforms such as Unstructured Supplementary Service Data (USSD) and SMS to cater to grassroots healthcare needs. "OneBox", an AI-driven tool, forecasts demand among primary healthcare centres to allow LifeBank to prevent stock-outs. It exemplifies the organization's commitment to solving healthcare challenges at the community level, underscoring the power of technology to make a significant impact in regions most in need.

However, LifeBank faces challenges such as infrastructural limits, regulatory barriers and skill gaps. It has struck strategic partnerships and initiated capacity-building efforts to overcome these, notably with IBM and government bodies.

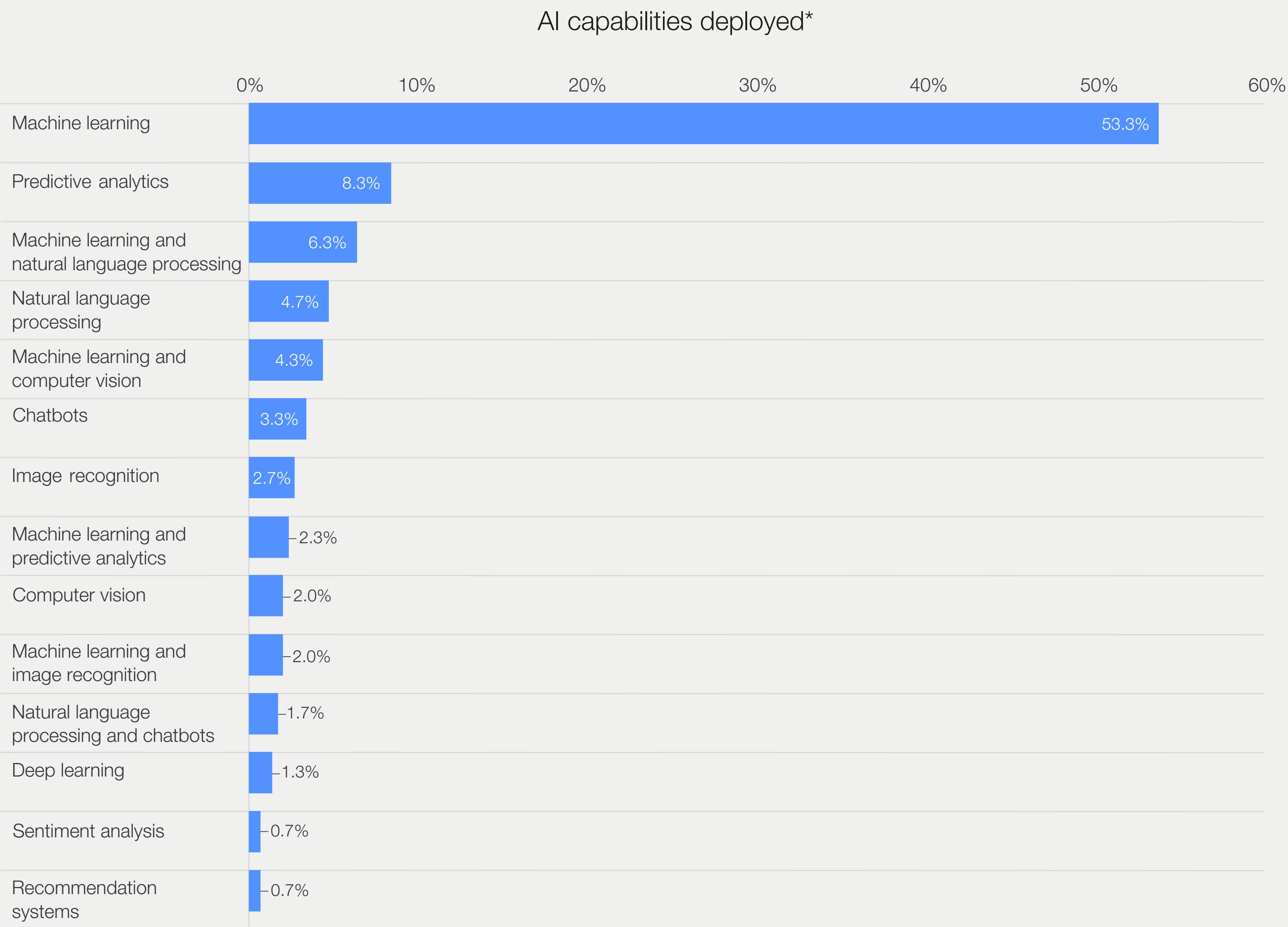
LifeBank is a 2024 Schwab Foundation awardee.

3 Most leveraged AI capabilities

Machine learning and natural language processing are among the AI capabilities most deployed in social innovation.

While ML is the most deployed AI capability, nearly 15% of social innovators are deploying some form of NLP. This includes the adoption and deployment of generative AI, as displayed by the most prominent examples such as OpenAI as well as Benevolent AI. The most prevalent **combination of AI capabilities** is the joint application of ML and NLP. It allows organizations to analyse vast amounts of data, identify patterns and make recommendations at high efficiency and thus low cost. Figure 12 outlines the distribution of capabilities and lists combined usage of capabilities separately (e.g. ML vs. ML in combination with NLP).

FIGURE 12 **AI capability deployment by social innovators (%)**



* Only capabilities deployed in more than 0.5% of cases are listed here

One example of combined application of capabilities is Agami, a non-profit established in India in 2018 for the purpose of advancing innovation in the field of law and justice. Bridging the inequality divide in the justice system, Agami develops AI public goods with the help and collaboration of lawyers and technologists from across India. They have curated tools such as "Rhetorical Roles", which is trained through NLP to process the vast amount of data and information presented in court judgements, and "Legal NER", which provides AI capabilities for recognizing "named entities" within legal documents (such as court name, statute name, provision, precedent and respondent). As legal costs remain a significant driver for inequality in the justice system, Agami's investment in open-source AI programmes can help lower legal fees and democratize legal services.

Another example of the adoption of NLP and generative AI is the social enterprise Dimagi, mentioned earlier in this report. It has developed a coach for frontline workers in Malawi powered by an LLM. Given the predominance of Western languages in training generative AI models, Dimagi's project bolsters LLM proficiency in local languages, specifically Malawian Chichewa. Through iterative user testing on Open Chat Studio, Dimagi has devised simple yet effective strategies to enhance LLM performance. Notably, this includes prompt instructions in both English and Chichewa, and specifying that the model, in this case ChatGPT-4, should communicate at a primary school level. These recommendations have led to better performance in Chichewa, as compared to prompts that are only in English or that do not specify a desired level of complexity.

Overall, approximately **10% of social innovators are deploying predictive analytics**, which is most prevalent in the healthcare, economic empowerment and education domains. These innovators are using the power of predictive capabilities across areas such as predicting crop yields, monitoring water systems, supporting health diagnosis, reducing energy poverty and much more.

Broadreach is a global health organization that leverages AI and predictive analytics to improve access to healthcare in LMICs. Broadreach's Vantage platform[25] uses ML to analyse health data, predict disease outbreaks, manage patient care, and allocate resources in the most efficient way. Through its innovative use of AI, Broadreach is helping to achieve SDG 3: Good Health and Well-being, by making quality healthcare more accessible and affordable for those who need it the most. Through the Vantage platform, Broadreach can identify at-risk patients and intervene earlier, reducing the demand on healthcare services. Additionally, by accurately predicting disease outbreaks, the organization can prevent at-scale outbreaks altogether by taking the appropriate preventive measures. Broadreach's use of predictive analytics can serve as a model for other health organizations, illustrating the potential of AI to revolutionize healthcare and advance global health equity.

CASE STUDY 3

High Resolves, Australia: Overcoming connectivity challenges for AI

High Resolves is pioneering the use of AI to democratize education, overcoming traditional barriers such as infrastructure and connectivity, particularly in underserved regions such as Mongolia, the Philippines, Pakistan, Australia and Africa. By utilizing AI, High Resolves is enhancing educational and social outcomes, showcasing the potential of technology to create inclusive learning opportunities.

A notable initiative in Mexico utilized AI-driven learning via SMS to reach 1,200 villagers, employing basic mobile phones without internet access. This approach personalized education based on individual student interests, illustrating AI's capability to transcend connectivity limitations and engage marginalized communities effectively.

In collaboration with tech companies such as Google, High Resolves is repurposing technology for educational use, transforming corporate laptops into "Chromebooks" equipped with AI learning platforms. This initiative has extended internet access and educational resources to schools in the Philippines and Pakistan, broadening the horizons for countless students.

High Resolves also empowers students and teachers to become AI creators, developing solutions for local challenges such as aiding fishers or supporting small businesses. This grassroots approach not only solves community-specific issues but also fosters AI literacy and instils a sense of agency, contributing to skill development and confidence across diverse communities.

High Resolves is a 2019 Schwab Foundation awardee.

4 The role of gender in AI for social innovation

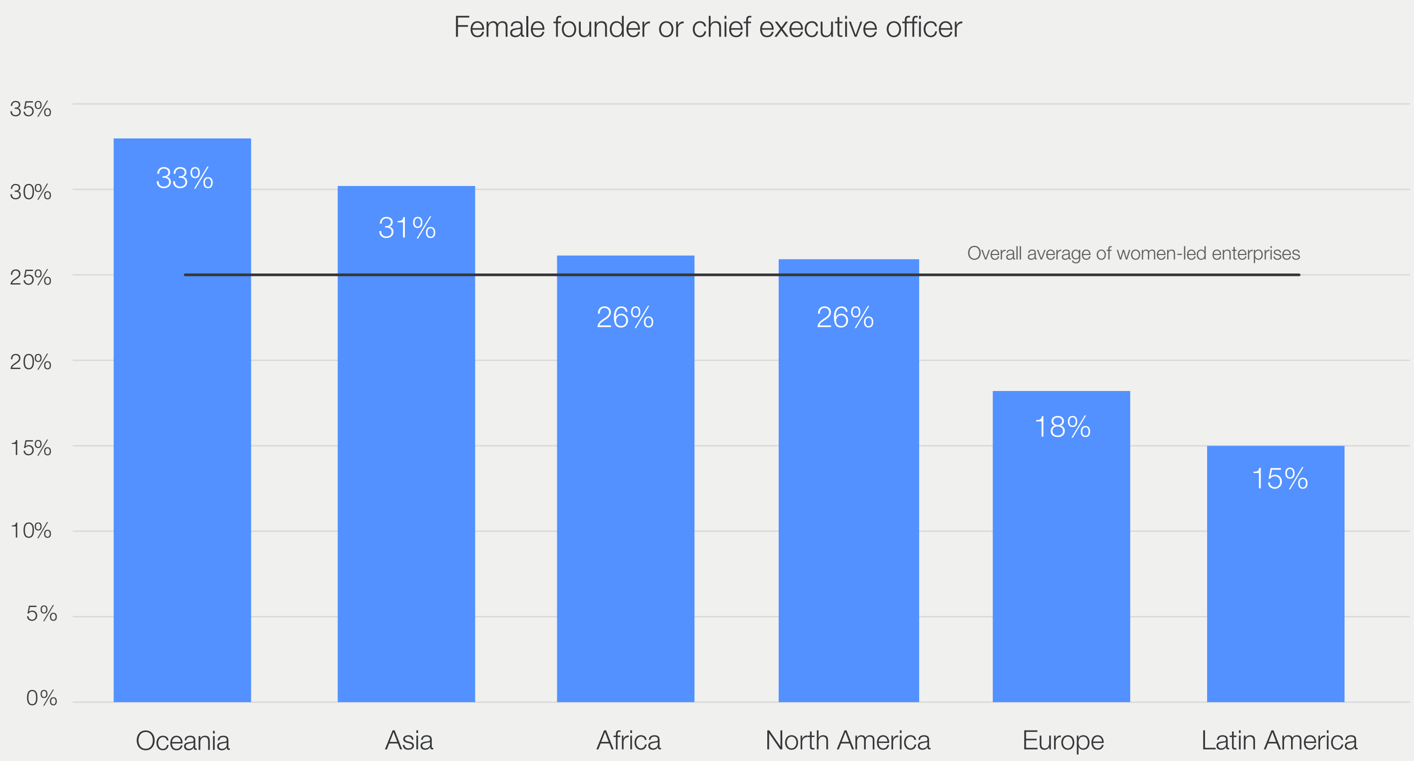
Women are under-represented in AI for social innovation compared to the global social enterprise space.

The State of the Social Enterprise Sector 2013-2023, published by the Schwab Foundation's Global Alliance for Social Entrepreneurship, revealed that 50% of all social enterprises globally are women-led – compared to a fifth in conventional businesses.[26]

In the sample size of the present analysis, only **25%** are women-led – a stark contrast to the overall make-up of social enterprises worldwide. It does, however, match the trends of gender in AI overall: only 22% of AI professionals globally are women, who make up less than 14% of all AI paper authors.[27]

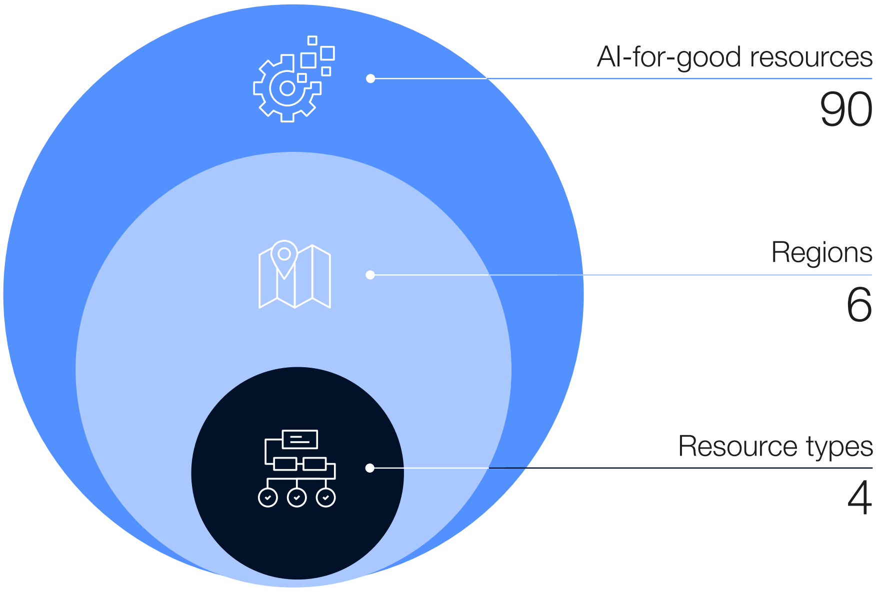
Female leadership is particularly pronounced in Oceania and Asia. Africa and North America are slightly above the global average. Interestingly, Europe's share of women-led social innovators deploying AI is significantly lower than the global average, trailed only by Latin America. When it comes to impact domains, women-led social innovators who are deploying AI are over-represented in crisis response (75%) and far above global average in education (40%) and healthcare (30%). They remain under-represented in areas such as security and justice (7%). Overall, AI and the technology sector remain difficult to access for women, given an inherent gender bias leading to a spiral of deterring factors.[28]

FIGURE 13 **Women in leadership by region**



5 The AI ecosystem for social innovation

A range of resources empower social innovators with AI, bringing impactful solutions to life. However, localized solutions are few.

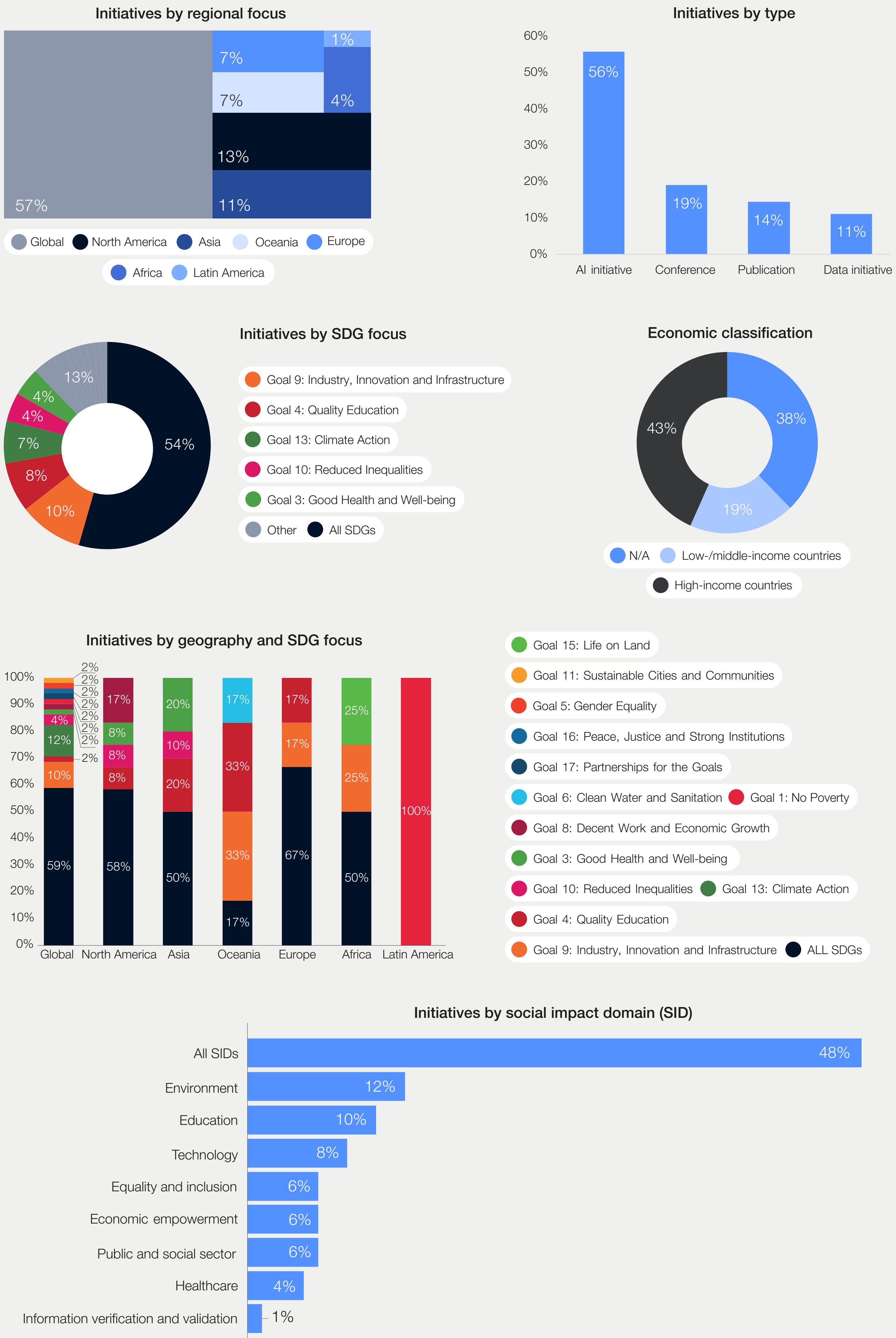


The rapid advancement of AI in social innovation is heavily dependent on the accessibility of knowledge, data, research and resources. This chapter presents an overview of 90 global resources available to social innovators, categorized into AI initiatives, data initiatives, conferences and publications, aiming to accelerate AI adoption in social innovation.

A significant portion of these resources (57%) has a global focus, indicating a highly interconnected global network for AI in social innovation. Nearly 43% of AI initiatives are in high-income countries, with 35% headquartered in the US, highlighting a resource divide. A noticeable demand exists for more localized resources, tailored by geography, focus areas and economic classifications. Most initiatives are SDG-agnostic (54%).

↓ **Image credit:** Dimagi, USA, Schwab Foundation awardee 2012

FIGURE 14 | Overview of initiatives in AI for social innovation



At a high level, the resources have been categorized in the following way:

1. **AI initiative** – A combination of partners, networks, educational initiatives, open-source platforms, data and research available for social innovators shaping their journey to adopting AI.

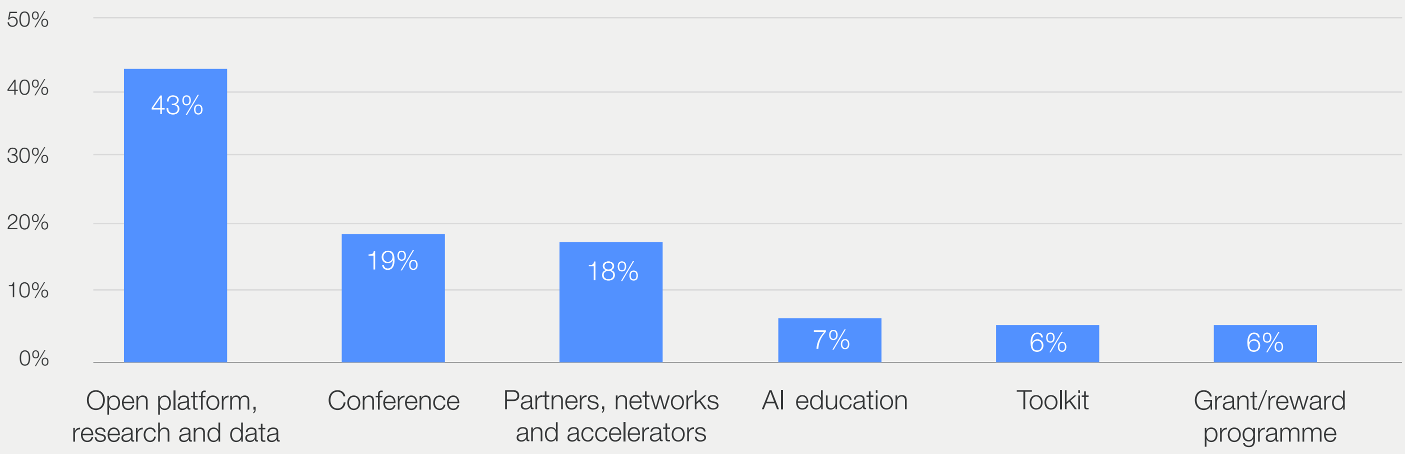
2. **Data initiative** – Initiatives that maintain a data-centric mission but promote and provide support for the adoption of AI for social good.

3. **Conference** – Set of globally located conferences centred around promoting, facilitating and advancing the adoption of AI for social impact.

4. **Publication** – This list of publications is not exhaustive, rather publications were included as highly relevant and insightful on account of their unique insights and expertise in advancing the adoption of AI for social innovation.

AI initiatives offer diverse support, from partnerships and accelerators like the AI for Good Foundation, Microsoft's AI for Good and IBM Science for Social Good to open-source platforms like Sunbird AI.

FIGURE 15 **AI initiatives by type**



While this report can only highlight a few select initiatives, the reader can access a full, digital list of initiatives on the websites of the Schwab Foundation and Global Alliance for Social Entrepreneurship website.

- Microsoft's Entrepreneurship for Positive Impact Initiative: Supports impact entrepreneurs solving global social and environmental challenges by developing curated programmes and providing access to technology and expert mentors.

- Google.org's AI for Social Innovation Fund: Empowers social entrepreneurs in Europe by financing innovators and supporting the social innovation ecosystem to deploy AI for impact.

- AI for Good initiative: Identifies practical applications of AI to advance the UN SDGs and scale solutions for global impact. The initiative is organized by International Telecommunication Union (ITU) in partnership with 40 UN agencies.

- AI for Good Foundation: Focuses on policy advocacy and collaboration between AI developers and social issues groups, offering grants and educational programmes.

- IBM Science for Social Good: Collaborates with social enterprises using IBM's technology and expertise to address societal issues.

- Accel AI Institute: Aims to reduce AI entry barriers and increase diversity in tech through education and accelerator programmes.

– Social Cops: Partners with various stakeholders to support data-driven decision-making using ML and AI.

– Flying Labs: Utilizes drones and data technologies to address local challenges, offering technology training and intelligent analysis.

– Microsoft's AI for Good Lab: A collaborative research hub dedicated to using big data and Microsoft's cloud technology to solve global challenges.

– Sunbird AI: Develops open-source AI systems for community benefit, including translation and noise-pollution mapping.

– OS-Climate: Builds an open-source data and software platform to boost capital flows into climate change mitigation.

– Data Science Nigeria: Builds an AI knowledge ecosystem in Nigeria, offering AI training and focusing on societal challenges.

– Global Index on Responsible AI: Measures how countries tackle AI challenges, providing a benchmark for ethical implementation.

– IWill CARE Project: Develops an AI-based cognitive behavioural therapy model to bridge the mental health treatment gap in India.

– Deep Learning Indaba: Strengthens African participation and contribution to AI and ML development and increases diversity in AI by hosting the largest AI convention on the continent.

The diverse range of resources highlighted in this chapter underscores the global effort to harness AI for social good. By leveraging these resources, social innovators are navigating the complexities of AI adoption, ensuring their initiatives are both impactful and sustainable.

Image credit: Schwab Foundation, Brazil Learning Journey 2024

6 Barriers for adopting AI for social innovation

Bridging AI's trust gap and fostering collaboration are essential for its successful application in social innovation.

Adopting AI in social innovation faces numerous challenges, each requiring attention to ensure successful implementation and positive societal impact.

1 **Trust gap and systemic bias:** Trust in AI is essential for its acceptance. Yet, biases in AI systems can deepen existing inequalities, leading to mistrust. One example featured by the group of social innovators contributing to this report outlines how a diagnostic tool for skin cancer excludes skin spots on hands based on available medical data. However, macules on hands are one of the first indicators of skin cancer among black people. This is a startling example that illustrates how AI can perpetuate and even amplify biases.

2 **Technical complexity and skills gap:** The sophistication of AI demands expertise beyond many social enterprises' capabilities. The Association of Pacific Rim Universities highlights the comprehensive training and skilling needs in its "AI for Social Good" report.[29] Organizations like Africa TeenGeeks and the Youth for Technology Foundation are addressing this by providing AI education and training to under-represented groups, aiming to bridge the skills gap and foster diversity in tech.

3 **Resource intensity:** AI's high resource demands pose challenges, especially for social innovators with limited budgets. High-performance computing and data storage requirements can make AI projects unsustainable for those without substantial financial backing. Beyond the financial implications, the environmental footprint of AI due to its energy demand may offset some of the positive impact that social innovators are generating. According to a recent study, creating a single image through generative AI uses as much energy as a full phone charge.[30]

4 **Data quality:** Effective AI relies on quality data. Challenges arise when data is scarce, biased or of poor quality, leading to inaccurate AI models. According to a study, data access is "one of the most listed challenges for social good projects".[31] Initiatives like Open Chat Studio by Dimagi aim to create equitable and trustworthy digital solutions, emphasizing the need for high-quality, unbiased data.

5 **Balancing social and business objectives:** Social innovators can find a tension between revenue growth and impact, especially when leveraging communities' assets (such as data). Principles like profit caps, revenue participation and profit redistribution can alleviate some of these challenges and reconcile impact and economic objectives.

6 **Regulatory and ethical considerations:** Ensuring AI's ethical use and regulatory compliance is challenging but essential. Considerations include "privacy and surveillance, bias or discrimination, and the role of human judgement".[32] A negative example is the correctional offender management profiling system, COMPAS. It has been criticized for racial bias in recidivism risk assessments. It highlights the importance of ethical considerations and societal value alignment in AI development.

7 **Access to AI technology:** Limited access to AI technologies, especially in developing countries, hinders innovation and the adoption of AI. This does not just include access to AI solutions themselves, but also the necessary hardware, training and knowledge for assessing and implementing these systems, which leads to high "total ownership costs" and infrastructural challenges. BRCK, an African tech company, has been struggling with connectivity and electricity supply issues in rolling out its solution to Kenyan schools, farms and transportation hubs.[33]

8 **Collaboration between stakeholders:** Successful AI initiatives require collaboration across various stakeholders, including innovators, governments and the communities served. AI researchers at DeepMind have highlighted the need for aligning interests among stakeholders.

CASE STUDY 4

RECODE, Brazil: A social innovation-led partnership for impactful AI

For nearly three decades, Recode has been a trailblazer in digital empowerment across Latin America, having established over 1,050 digital empowerment centres in 12 countries and trained 1.8 million individuals. With a focus on the Amazon region and equipping low-income individuals as full-stack developers, Recode is deeply committed to inclusive digital education. Their recent initiative in Brazil aims to democratize generative AI education, drawing insights from community engagement in Rio de Janeiro's favelas to develop a curriculum that equips vulnerable youths with AI skills.

Strategic partnerships with companies like Microsoft, Accenture and Brazil's stock exchange B3 highlight how Recode is mobilizing resources and engaging key players. Their educational approach combines practical exercises with theoretical knowledge, addressing real-world challenges and promoting a culture of continuous learning. This blend of online and in-person training ensures scalability and accessibility, fostering sustainable, community-driven education initiatives to make generative AI education accessible on a larger scale.

RECODE is a 2001 Schwab Foundation awardee.

↑ **Image credit:**
Youth for Technology Foundation (YTF), USA, Schwab Foundation awardee 2013

7

Benefits of AI in social innovation

From automating tasks to offering real-time insights, social innovators are leveraging AI to scale their impact.

The adoption of AI in social innovation is reaping numerous benefits, significantly enhancing the capabilities of organizations to fulfil their missions more effectively and efficiently. But beyond that, it also offers opportunities to entirely rethink how social innovators are delivering on their impact missions. Key advantages include improved efficiency and productivity, data-driven decision-making, real-time responsiveness, personalization, broader access to information, fostering of innovation, and expansion of the scale and reach of social initiatives.

1 **Efficiency and productivity:** AI's automation capabilities are freeing up valuable time for social innovators, allowing them to focus on strategic tasks. Suki.ai, a digital assistant for doctors, automates administrative tasks with voice commands, significantly reducing the time spent on paperwork so doctors can concentrate more on patient care. Education for Employment is exploring avenues to speed up and improve its matchmaking process between youths and companies in the Middle East and North Africa.

2 **Data-driven decision-making:** AI analytics are providing deep insights from large data sets, aiding in more informed decision-making. MapBiomas, for example, is leveraging AI to analyse satellite imagery of the Amazon to identify burn scars. The data thus generated provides a full mapping of the Amazon for the protection of biodiversity in the region.

3 **Real-time responsiveness:** AI enhances the ability to respond swiftly to dynamic situations, a crucial aspect in areas like conservation. The Connected Conservation Foundation in South Africa employs internet-of-things sensors and AI to create a "virtual fence", significantly reducing poaching – in some areas by 96% – by providing real-time alerts and insights into animal behaviour.

4 **Personalization:** AI's personalization capabilities ensure interventions are more relevant and effective. Applications range from improving individual education to providing expertise and advice to individual farmers. Apollo Agriculture uses AI to offer personalized farming advice to small-scale farmers in Kenya, optimizing their productivity and profitability by analysing specific data like weather patterns and soil conditions.

5 **Information and self-empowerment:** AI is democratizing access to crucial information, empowering individuals and communities. It also facilitates the co-creation of public services.[34] Haqdarshak utilizes an AI platform to connect citizens with government welfare schemes in India, simplifying the application process and ensuring people receive the benefits they are entitled to.

6 **Innovative access:** Beyond making solutions more efficient, AI is creating opportunities for novel ways to access essential goods and services, such as education and legal advice. Barefoot Law leverages AI to provide access to legal information and advice via mobile phones, web, radio and community outreach programmes to a wider audience in Uganda and across Africa.

7 **Expanding scale and reach:** AI's benefits collectively contribute to the scalability of social innovations, allowing organizations to reach broader audiences and make a more significant societal impact. By automating tasks, leveraging data for strategic decisions, responding in real time, personalizing interventions and facilitating access to information, AI is not only improving the efficiency of social innovations but also their effectiveness and reach.

To summarize, AI is a powerful tool, offering a multitude of benefits that can transform the landscape of social innovation. By harnessing these advantages, organizations can amplify their impact, driving positive change on a larger scale and paving the way for a future where social innovation is more dynamic, responsive and inclusive.

CASE STUDY 5

Education for Employment, Middle East and North Africa: Deploying AI for operational efficiency

The social enterprise Education for Employment (EFE) operates across the Middle East and North Africa and is leveraging generative AI to enhance its internal operations and workforce development strategies. By integrating AI into proposal development, EFE teams are achieving time savings of 10-20%, equating to 1-3 hours per project, by streamlining the creation of drafts and conducting research more efficiently. In communications, AI-powered tools are saving team members up to eight hours weekly by assisting with email drafting and content formatting, while social marketing teams use AI for narrative generation and graphic design, boosting online engagement.

Furthermore, AI is pivotal in data-driven decision-making within the organization, enabling the aggregation and analysis of large data sets for market research and job trend analysis. This approach aids in the proactive identification of market trends and job opportunities, offering a competitive advantage in strategic planning. Recognizing AI's transformative impact, EFE is incorporating AI literacy and ethics into its workforce development programmes, providing staff with the necessary skills to enhance their work processes and scale their impact, attesting to AI's potential to streamline operations and foster innovation in social enterprises.

Education for Employment is a 2017 Schwab Foundation awardee.

↑ **Image credit:** Education for Employment (EFE), Middle East & North Africa, Schwab Foundation awardee 2017

Conclusion

Technology leaders and investors must unite to drive AI's responsible use for scalable, inclusive social innovation worldwide.

The insights in this report highlight both the potential benefits of AI for social innovation and the challenges to its adoption. AI holds the promise of transforming various sectors by enhancing efficiency, solving complex issues and creating innovative solutions. However, it is crucial to navigate the ethical considerations, security concerns and societal impacts that accompany these technological advancements.

One of the key findings of this report is the widespread use of ML among social innovators, with a significant focus on improving healthcare, addressing environmental sustainability and fostering economic inclusion. The data reveals an equitable distribution of AI initiatives between high-income countries and lower-income regions, though the application of AI differs based on the economic context of each area.

Social innovators play a pivotal role in leveraging AI to drive positive change, especially in communities that are often overlooked. Their work is instrumental in ensuring that technological advances translate into equitable and sustainable progress for society at large.

Looking ahead, the continued collaboration between social innovators, policy-makers, technologists and communities will be vital in shaping an ecosystem where AI acts as a catalyst for social good. The World Economic Forum's AI Governance Alliance supports such efforts through its Building National AI Ecosystems workstream, which focuses on advancing access and inclusion in AI. That includes addressing regional and country-level gaps to deploy and scale AI technologies, with a focus on ecosystem enablers such as access to data, compute, connectivity, and education.

This report marks the beginning of an ongoing exploration into the integration of AI in social innovation. Future reports will delve into frameworks for successful adoption, guidelines for responsible deployment and strategies to positively influence the AI technology landscape. The series offers an opportunity for technology leaders, investors and private-sector partners to understand the potential of AI in social innovation – and to engage with a rich and growing ecosystem to strengthen their technology roadmaps by integrating lessons learned from frontline social innovators.

AI stands as a powerful ally in the quest for social innovation, with the capacity to scale solutions, personalize interventions and extend the reach of social initiatives. By embracing the advantages of AI and addressing the associated challenges, stakeholders can pave the way to a future where technology and social progress are intertwined, leading to a more just and sustainable world for all.

Contributors

Lead authors

EY

Yucca Reinecke
Manager Technology Consulting – Financial Services

Sreenivasa Sunku
Director, Global Client Technology

Schwab Foundation

Daniel Nowack
Head, Global Alliance for Social Entrepreneurship

Adedoyin Omidiran
Initiatives Lead, Global Alliance for Social Entrepreneurship

Acknowledgements

EY

Steven Deng
Consultant, EY Australia

Hunter Hanneman
Consultant, EY US

Jun Hao
Senior Associate, EY Singapore

Laura Turkington
EY Global Commercial and Innovation Leader, EYGS

David Weiss
Consultant, EY Canada

Emily Will
EY Global Impact Entrepreneurship Leader, EYGS

Microsoft

Emma Urrutibehety
Business Manager to Executive Vice President & President, National Transformation Partnerships

Anthony Virapin
Entrepreneurship for Positive Impact Leader

World Economic Forum

Connie Kuang
Lead, Metaverse Value Creation

Cathy Li
Head, AI, Data and Metaverse; Member of the Executive Committee

The authors thank the following members of the Schwab Foundation and the Global Alliance for Social Entrepreneurship, representatives of the Forum's network of Young Global Leaders, and ecosystem allies for their insights and invaluable contributions to this report:

Gerald Abila
Founder and Chief Executive Officer, BarefootLaw, Uganda

Rodrigo Baggio
President and Founder, Recode, Brazil

Mehrdad Baghai
Co-Founder and Chief Executive Officer, High Resolves, Australia

Andrew Baird
Chief Executive Officer, Education for Employment (EFE), USA

Sangu Delle
Chairman and Chief Executive Officer, CarePoint, Ghana

Aniket Doegar
Co-Founder and Chief Executive Officer, Haqdarshak Empowerment Solutions, India

Jim Fruchterman
Founder and Chief Executive Officer, Tech Matters, USA

Temi Giwa-Tubosun
Founder, LifeBank, Nigeria

Njideka U. Harry
Founder and Member of the Executive Board, Youth For Technology Foundation (YTF), USA

Mark Horoszowski
Chief Executive Officer and Co-Founder, MovingWorlds, USA

Jonathan Jackson
Founder and Chief Executive Officer, Dimagi, USA

Vukosi Marivate
Chair of Data Science; Associate Professor of Computer Science, University of Pretoria, South Africa

Marta Perez Cuso
Economic Affairs Officer, UN Economic and Social Commission for Asia and the Pacific, Thailand

Claudio Sassaki
Founder, Geekie and Entrepreneur-in-Residence, Stanford University, USA

Production

Bianca Gay-Fulconis
Designer, 1-Pact Edition

Tanya Korniichuk
Illustrator, 1-Pact Edition

Madhur Singh
Editor, World Economic Forum

Endnotes

1. World Economic Forum (18 January 2024), “Unlocking Value from Generative AI: Guidance for Responsible Transformation”: https://www.weforum.org/publications/ai-governance-alliance-briefing-paper-series/.
2. “How Social Innovation Came to Be: Tracing the Evolution of a Contested Concept”, Cambridge Core, Journal of Social Policy (2016): https://www.cambridge.org/core/journals/journal-of-social-policy/article/how-social-innovation-came-to-be-tracing-the-evolution-of-a-contested-concept/CC8DCF59DC5268FCC0DEEDF883DB9E09.
3. Ritchie, H., “The brief history of artificial intelligence: The world has changed fast – what might be next?”, Our World in Data (2022): https://ourworldindata.org/brief-history-of-ai; with data from Kiela et al. (2021), “Dynabench: Rethinking Benchmarking in NLP”: https://arxiv.org/abs/2104.14337v1.
4. “Understanding and managing the AI lifecycle”, General Services Administration - IT Modernization Centres of Excellence: https://coe.gsa.gov/coe/ai-guide-for-government/understanding-managing-ai-lifecycle/.
5. Horsoszowski, M., “How Social Enterprises are Using AI to Reach their Business & Impact Potential”, MovingWorlds (17 July 2023): https://blog.movingworlds.org/how-social-enterprises-are-using-ai/.
6. Ibid.
7. “UN Sustainable Development Goals: Public Opinion on Priorities and Stakeholders’ Commitment”, Ipsos: https://www.ipsos.com/sites/default/files/ct/news/documents/2021-05/April-May%202021%20-%20WEF%20-%20UN%20SDGs%20Report_0.pdf.
8. World Economic Forum, “The regions most at risk of GDP losses due to climate change” (29 April 2022): https://www.weforum.org/agenda/2022/04/climate-change-global-gdp-risk/.
9. “AI Index Report 2023”, Stanford Institute for Human-Centered Artificial Intelligence (2023): https://aiindex.stanford.edu/wp-content/uploads/2023/04/HAI_AI-Index-Report_2023.pdf.
10. Bordoloi, Pritam, “India’s Project Bhashini: Breaking the language barrier with AI”, Analytics India Magazine: https://analyticsindiamag.com/indias-project-bhashini-breaking-the-language-barrier-with-ai/.
11. “AI Index Report 2023”, Stanford Institute for Human-Centered Artificial Intelligence (2023): https://aiindex.stanford.edu/wp-content/uploads/2023/04/HAI_AI-Index-Report_2023.pdf.
12. World Economic Forum, “How Singapore is creating a global trustworthy AI solution” (9 January 2023): https://www.weforum.org/agenda/2023/01/how-singapore-is-demonstrating-trustworthy-ai-davos2023/.
13. “Infrastructure Market – Global Industry Analysis and Forecast”, Maximize Market Research: https://www.maximizemarketresearch.com/market-report/global-ai-infrastructure-market/32472/.
14. “Artificial Intelligence – Centre for Intellectual Property and Information Technology Law”, Strathmore University: https://cipit.strathmore.edu/artificial-intelligence/#1625830543653-9f9e3506-e2ba.
15. “AI Readiness Index 2023”, Salesforce: https://www.salesforce.com/content/dam/web/en_sg/www/documents/pdf/salesforce_ai_readiness_index_2023.pdf.
16. World Economic Forum, “Why the social economy is a top priority for Brazil” (10 November 2023): https://www.weforum.org/agenda/2023/11/social-economy-brazil/.
17. Indice Latam: https://indicelatam.cl/.
18. Shi, Z.R. et al. (2020), “Artificial Intelligence for Social Good: A Survey”: arXiv:2001.01818.
19. Ibid.
20. Xolani Health: https://www.xolanihealth.com/.
21. International Research Centre on Artificial Intelligence, “DICOM-X”: https://ircai.org/top100/entry/dicom-x/.
22. Koko, “Harnessing Digital Platforms to Support Your Mental health”: https://kokocares.org.
23. Moja Global: https://moja.global/.
24. The Ocean Cleanup: https://theoceancleanup.com/.
25. BroadReach Group Announces U.S. Launch of Vantage Health Technologies to Address Health Inequities and Improve Health Outcomes”, PR Newswire (16 November 2021): https://www.prnewswire.com/news-releases/broadreach-group-announces-us-launch-of-vantage-health-technologies-to-address-health-inequities-and-improve-health-outcomes-301423397.html.
26. World Economic Forum, Global Alliance for Social Entrepreneurship: https://initiatives.weforum.org/global-alliance-for-social-entrepreneurship/state-of-the-sector.
27. World Economic Forum (2018), “Global Gender Gap Report 2018”: https://www3.weforum.org/docs/WEF_GGGR_2018.pdf.

28. World Economic Forum, "In charts: the impact of gender and race in the tech industry" (13 April 2021): https://www.weforum.org/agenda/2021/04/gender-race-tech-industry/.
29. "Artificial Intelligence for Social Good", Association of Pacific Rim Universities: https://www.apru.org/resources_report/artificial-intelligence-for-social-good/.
30. Luccioni, A.S., Jernite, Y. and Strubell, E., "Power Hungry Processing: Watts Driving the Cost of AI Deployment?", arXiv (28 November 2023): https://arxiv.org/pdf/2311.16863.pdf.
31. Trier, C. and Sevier, L., "Designing a Partnership Framework in AI for Social Good" (2020): https://projects.iq.harvard.edu/sites/projects.iq.harvard.edu/files/crcs/files/ai4sg_2020_paper_33.pdf.
32. Naik, N. et al., "Legal and Ethical Consideration in Artificial Intelligence in Healthcare: Who Takes Responsibility?", Frontiers in Surgery: https://doi.org/10.3389/fsurg.2022.862322.
33. BRCK, "Connectivity challenges in a coronavirus lockdown" (17 April 2020), Medium: https://medium.com/brck/connectivity-challenges-in-a-coronavirus-lockdown-34d8c0bb5f24.
34. Dionisio, M. et al., "The role of digital social innovations to address SDGs: A systematic review Environmental Management and Sustainable Development" (23 February 2023), Springer: https://link.springer.com/article/10.1007/s10668-023-03038-x.

COMMITTED TO
IMPROVING THE STATE
OF THE WORLD

The World Economic Forum, committed to improving the state of the world, is the International Organization for Public-Private Cooperation.

The Forum engages the foremost political, business and other leaders of society to shape global, regional and industry agendas.

World Economic Forum
91–93 route de la Capite
CH-1223 Cologny/Geneva
Switzerland

Tel.: +41 (0) 22 869 1212
Fax: +41 (0) 22 786 2744
contact@weforum.org
www.weforum.org