

V. Capitalism's Key Stakeholders to Drive Secure Sustainability



Beyond the coordination and allocation of funding by the finance industry, meeting the SDGs will require the participation of a broad set of global stakeholders, each with specific roles to play. Achieving the 2030 targets will require science and research to develop innovation to help achieve the goals and to disrupt the status quo too. It will require entrepreneurs and corporations to adopt, scale and deploy these innovations, and governments to incentivize engagement, funding, and innovation and disincentivize the things that hold the world back. The tech sector will need to enable stakeholders with digital technologies, and individuals around the world will need to support these efforts as consumers, investors, voters, and citizens.

1. Capitalism is bigger than financiers

The finance industry's position in the context of the system of capitalism is a powerful one. While the finance industry is the primary facilitator of virtually all the world's capital, private sector financial institutions are only one set of several stakeholders in the world's economic system. While this system of global capitalism has made the finance industry one of the most powerful stakeholders, it also constrains its ability to act independently, creating

obligations to the ultimate asset owners to generate returns, as well as to abide by regulation, respect the growing power of ESG rules, and adhere to constraints based on their scope of specific business areas.

Critically, capitalism is a multi-stakeholder system that is broader and more important than just the financial institutions that are custodians of much of its capital. Each stakeholder is complicit in its functioning and for the system to deliver different results, each stakeholder would need to change their behavior.

The stakeholders are of two types: firstly, those that have a meaningful direct stake in the global flow of capital and secondly, those that deliver innovations that can change the functioning of the system. In addition to financial institutions, the former includes households, governments, and private sector (non-financial) corporations. The roles that these stakeholders will need to play for the SDGs to be met include those of consumers and producers, asset allocators and investors, and regulators and enablers.

In a world increasingly defined by the need for progress, the delivery of innovation is critical

Capitalism is a multi-stakeholder system in which each stakeholder is complicit in its functioning. For the system to deliver different results, each stakeholder would need to change their behavior

to capitalism. Tech companies, and science and research institutions are two of the most significant providers of the scientific and technological breakthroughs required to meet the near-term global sustainability goals, manage the sustainability transition, and enable all stakeholders to position for an increasingly digital world. Their

innovations, often brought to life by start-ups and their entrepreneurs, can also change the way the system works, for example by providing global access to information and capital, or by revolutionizing factor inputs like energy and the consumption of natural resources.

Each of these stakeholders will need to play their role as a force for good for the world to avoid the disasters that are expected from climate change, pollution, and the collapse in biodiversity, raise the world to the levels targeted in the SDGs, and realize a more sustainable future in the digital age.

2. Corporations and enterprises

Corporations and enterprises of all sizes and structures (including mutuals and cooperatives) are the organizing entities around which most of the world's societies organize their economic activities. While SMEs number in the millions and collectively represent 95% of job creation and generate c.US\$47 trillion, 50% of GDP globally, the 2000 largest corporations alone also generate nearly \$50 trillion in annual revenues and tend to

be far more powerful in terms of their reach and ability to drive global change at scale. How corporations operate, where they do business, what they buy and from whom, and what products and services they offer therefore has a critical impact on sustainability and the SDGs. The current sustainability footprint of businesses varies widely by industry sector, of course, with five of the largest sectors - oil & gas, retail, automotive, construction, consumer goods (including food) - having among the biggest impacts.

Corporations and Enterprises Their Role in Capitalism, Indicators of their Footprint and Impact

80% of water usage due to consumer goods (Source: Columbia Climate School)
66% of tropical forest loss due to consumer goods (Source: Columbia Climate School)
60% of greenhouse gas (GHG) emissions from consumer goods (including food) (Source: Columbia Climate School)
40% of global plastic usage through retail sector packaging (Source: OECD)
40% of drinking water pollution produced by the construction sector (Source: International Journal of Emerging Technologies in Engineering Research)
36% of global energy consumption used by construction sector (Source: UNEP)
35% of worldwide CO ₂ and methane emissions since 1965 produced by the oil and gas sector (Source: Climate Accountability Institute)
25% of global GHG emissions produced through the retail supply chain (Source: Boston Consulting Group)
23% of air pollution produced by the construction sector (Source: International Journal of Emerging Technologies in Engineering Research)
C.10% of global CO ₂ emissions produced by the automotive sector's passenger cars (Sources: IEA, International Council on Clean Transportation)
5-10% of global food and consumer product market classified as ethical/sustainable (Source: Nielsen, ResearchAndMarkets.com)
US\$234 trillion in balance sheet capital (2000 largest corporations) (Source: Forbes)
US\$47 trillion in global corporate revenues (2000 largest corporations) (Source: Forbes)
US\$5 trillion in profits (2000 largest corporations) (Source: Forbes)

While the SDGs represent a potential major opportunity for businesses, unlocking their value is not easy and that is why business solutions and capital have not funded them well.

For corporations and other commercial enterprises to play their role in changing the system of capitalism to a more sustainable high impact one, they would need to overcome

a series of constraints, adopt new business policies and strategies, and transform their position in their industries and their impact in the world in multiple ways, including, with examples:

1. **Adopt meaningful sustainability goals at the corporate level.** Only 25% of the world's largest 500 companies having committed to net zero carbon emissions to date.ⁱ
2. **Embed the SDGs into their mission and metrics of their lines of business, products, and services.** Social or environmental targets are embedded in less than 40% of global long-term corporate strategies
3. **Drive near term growth of renewable energy by decarbonizing industrial energy use.** The industry sector accounted for 38% (156 EJ) of total global final energy use in 2020ⁱⁱ
4. **Resolve their mandates to reflect impact and values (SDGs and ESG) responsibilities.** Currently, only c.25% of U.S. companies include some form of environmental or social metric as part of their executive incentive plan ESG performance measures.ⁱⁱⁱ
5. **Address judicial and regulatory constraints that prevent their impact for good.** The U.S. Supreme Court has issued a ruling in June 2022 limiting the Environmental Protection Agency's powers to restrict carbon emissions from power plants.
6. **Address negative political impacts in each of their locations.** "The ESG movement has helped drive energy prices to a record high, enabled Putin and harmed American. And this collusive behavior is almost certainly illegal" *US Senator Tom Cotton, June 2022*^{iv}
7. **Enter markets and launch initiatives leveraging their assets where they can make the biggest impact for good.** Total annual climate finance flows in Africa for 2020, domestic and international, were US\$30 billion, about 12% of the amount needed.^v
8. **Determine how they will achieve this while meeting profitability obligations, recutting their deals with shareholders where necessary.** Environmental and social (E&S) shareholder proposals voted at U.S. companies attracted 27% shareholder support on average during 2021, down from 36% the previous year.^{vi}
9. **Account for the full impact of positive and negative externalities.** Air pollution costs an estimated \$2.9 trillion annually, which are not accounted in for polluters' costs.^{vii}

3. Individuals

When acting collectively, the individual is perhaps the most powerful stakeholder in consumer driven capitalism as a collective and therefore the one that can make or break the SDGs. A significant portion of the world's nearly eight billion people simultaneously act as consumers, investors, influencers, voters, and agents for direct action. While the individual has perhaps the greatest impact on SDG12 Responsible Production and

Consumption, their direct actions and behaviors also impact SDG4 Good Health and Wellbeing, SDG5 Gender Equality, SDG6 Clean Water and Sanitation, and SDG10 Reducing Inequalities, while also having an indirect impact on all SDGs as voters and investors.

The Individual

Their Role in Capitalism, Indicators of their Footprint and Impact

74% have fallen victim to fake news (Source: IPSOS, Centre for International Governance Innovation)

73% of the world's consumption comes from individuals in free democracies (Source: World Bank Freedom House 2022 Freedom in the World Survey))

60% (or US\$275 trillion) of global liquid financial wealth is held by households (Source: Force for Good Research)

60% of global greenhouse gases are tied to consumption of end user consumer goods (Source: Columbia Climate School)

57% of GDP is household consumption, accounted for by individuals (Source: World Bank)

49.7%^{viii} to 74%^{ix} of adults globally having some awareness of the SDGs (Source: Global Survey on Sustainability and the SDGs, World Economic Forum)

41% of the capital of asset managers is provided by retail investors (Source: BCG, 2021 Global Asset Management Report)

35% of global GHG emissions are made by free democracies, and further 18% from partial democracies, and are subject to voter influence (Source: World Bank, Freedom House 2022 Freedom in the World Survey)

23% of world's population live below US\$3.20 a day, where their choices might be driven by price more than any other consideration (Source: World Bank)

For individuals to play their role in changing capitalism, they would need to change their role as consumers, investors, and as voters, which are three of the highest impact and most powerful roles in the system, this entails (with examples), among other things the need to:

- 1. Make conscious choices about personal actions and behaviors supporting sustainability.** 80% of respondents across 17 advanced economies confirmed that they would be willing to make changes to the way they live or work to reduce the effects of climate change.^x
- 2. Support brands, products, and services aligned with the SDGs and to deselect those that are against their ESG values.** 65% of consumers want to buy purpose-driven brands that advocate sustainability.^{xi}
- 3. Invest in businesses and sectors that support their ESG values.** 75% of investors have stated they are interested in sustainable investing.^{xii}

4. Invest in businesses that make a positive SDG impact or support themes that matter as an investor (e.g., EM, financial inclusion, etc.). Over half of investors surveyed stated environmental impact as an important investment objective.^{xiii}
5. Vote for politicians and political parties that support and plan to make an impact consistent with one's ESG values, SDG commitments, big global issue themes. Green parties currently form parts of governments in six of the OECD's 38 member states^{xiv}
6. Buy from products and services from countries that meet one's priorities and values related to ESG, SDG and global issues. The anti-apartheid movement in South Africa was kicked off by a consumer boycott movement.^{xv}

4. Governments and the public sector

Governments and the public sector have perhaps the most powerful top-down role to play in meeting the SDGs. While the role of individual governments will of course vary by capacity and inclination, it generally will need to provide the frameworks through policies, laws, regulations, and procurement aligning their country's stakeholders and enabling coordination between them, provide the incentives and penalties that encourage stakeholders to act accordingly, and it will need to step in as the funder of development goals and activities that are not appropriate for the private sector investment in full or in partnership, taking risk and losses as appropriate, with backstop arrangements to kick-start an area to solve issues.

Governments and the Public Sector

Their Role in Capitalism, Indicators of their Footprint and Impact

83% of global emissions covered by national net zero commitments (by 136 countries)
(Source: Net Zero Tracker)

c.50% of top 10 GHG emitting countries, responsible for over 45% of global emissions
have not pledged to achieve net zero by 2050 (Source: Net Zero Tracker)

34% of the world's total capital and 38% of gross liquid assets held by governments
(Source: Force for Good Research)

0.33% of OECD's 30 Development Assistance Committee (DAC) members' gross national
incomes spent on foreign aid, less half the target level of 0.7%. (Source: OECD)

US\$179 billion in Official Development Assistance (ODA) by the OECD's DAC members
in 2021 (Source: OECD)

For governments and the public sector to play their role in creating a more sustainable form of capitalism, they would need to set policy, laws and regulation, taxes and incentive structures, finance and prioritize the key activities at home that lead to a more sustainable country and collaborate with countries around the world through multilateralism to make change at a global level through the many agreements they are party to, including trade, aid, sanctions.

The key actions, with examples, include:

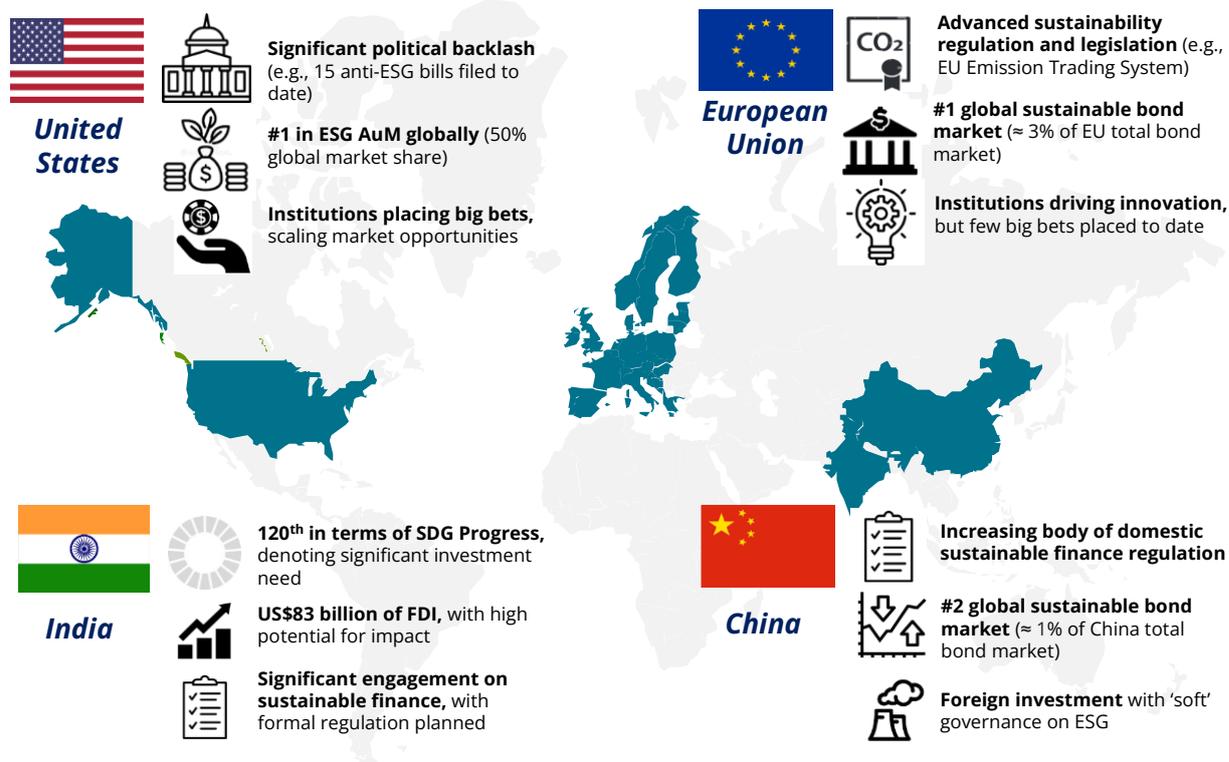
- 1. Advocate sustainability goals and priorities, building a national consensus including local governments, the private sector and civil society.** "We have a government that has brought together bitter enemies into a constructive relationship ... transforming society in its totality to ensure a better life for all." Nelson Mandela^{xvi}
- 2. Identify priority sustainability needs and initiatives for local execution.** "NITI Aayog (public policy think tank of the Government of India) has mapped the SDGs and targets with ministries, thereby charting responsibilities of initiatives and monitoring progress clearly... bringing together the government...and business for brainstorming on the best possible ways to move forward." Amitabh Kant, Chief executive Officer, National Institution for Transforming India government of India.^{xvii}
- 3. Coordinate execution and implementation plans of various stakeholders.** "UN DESA provides substantive support and capacity building on stakeholder engagement for the 2030 Agenda ... to strengthen the multi-stakeholder dimension of national development planning and DG mainstreaming."^{xviii}
- 4. Implement policy frameworks to facilitate execution and incentivize stakeholders for action.** "The Asia Development Bank examined the types of instruments that can be used to reduce energy intensity...finding the use of incentivizing policies (subsidies, tax reductions, voluntary agreements, ETs and cooperative schemes); market-based instruments (MBIs) (white certificates and tendering schemes); and EE finance (special credit lines and risk-sharing facilities) provided lessons for others."^{xix}
- 5. Assist execution through direct action and funding where required.** PPPs are a widely used tool by governments but extracting value from them requires an instrument for financing key economic infrastructure projects, it is necessary that countries have in place the institutional capacity to create, manage, and evaluate them.^{xx}
- 6. Develop key metrics and indicators to track progress and monitor performance against goals to facilitate corrective actions where needed.** "The SDGs ... is more than a set of statistics; it is an agenda, a way to identify people or places that need the most help to make life better... it is radical, ambitious, inclusive, and sustainable. The Authority aims to make sure everyone counts, and is counted, and no one is forgotten."^{xxi}

7. **Set the rules of engagement through standards, rules, and regulations.** “The EU provides for a detailed set of policies for the SDGs at the Goal level, with SDG targets specifically addressed by each EU policy activity and include Legal acts (Directives, Decisions, Regulations, Recommendations, Declarations, Resolutions) and Preparatory documents (Communications, Staff Working Documents).”^{xxii}
8. **Introduce incentives and penalties to change behaviors.** “The EU Corporate Sustainability Due Diligence and Reporting Directive will impose sanctions on companies for failure to comply, and civil liability for violations of certain due diligence obligations which lead to adverse human rights or environmental impacts.”^{xxiii}
9. **Inject capital into procurement, sustainability and development programs and initiatives to kick start and create new markets.** “PMJDY is a scheme of the India government to drive Financial Inclusion envisaging universal access to banking facilities ... and importantly, the plan channels all government benefits from central, state and local government levels to the beneficiaries accounts reaching over 400 million Indians”^{xxiv}
10. **Collaborate with other countries and transnational organizations to create the proper enabling environment by taxing pollution, remove subsidies for harmful activities, develop inclusive indicators, and agree on standards.** “The ‘Global Goals for Local Impact’ initiative captured data from every household in Lanet Umoja, Kenya on all aspects relating to the SDGs, including security, food, agriculture, livelihoods, education, health, energy, water, and sanitation to share the solutions across the community to local improvements to be implemented.”^{xxv}

Much of the world has little to no implementation of sustainability laws, standards, and practices. The “white space” dwarfs the developed space, and includes almost all of Africa, Latin America, and Asia, it stretches into China too and Russia. The penetration of ESG practices, sustainability finance and stakeholder engagement is low to absent and many of these regions have therefore not developed their market as attractive for sustainable development investments.

Figure 1: Global Sustainability Engagement Across Four Power Blocs

Global Sustainability Engagement Across Four Power Blocs



5. Information technology sector

Having kicked off the Digital Revolution in the second half of the 20th Century, information technology is becoming increasingly integrated into all areas of the economy and society, making the tech sector a critical driver of innovation, functionality, and efficiency, but also of disruption, whose contributions will be critical to meeting the SDGs.

As one of the world's five largest industries by revenue, the information technology sector and its leaders have an important role in the sustainability transition as businesses. However, its true potential as a driver of change stems from information technology's role as an enabler for others. Much like the finance industry's potential as a force for good rests on its ability to allocate capital, the tech industry's potential rests on its ability to deploy technology in a targeted and innovative fashion in pursuit of the SDGs. Information technology's impact providing platforms for individuals and entrepreneurs to collaborate and deploy innovations has been significant.

Information Technology Sector
Their Role in Capitalism, Indicators of their Footprint and Impact

63% of the world's population, or five billion people are digitally connected, among these over 90% use some form of social media (Source: ITU, Kepios)

64% of these use fintech for internet and mobile payments (Source: World Bank Global Findex Database)

43% of these use e-commerce to buy and sell goods (Source: Shopify)

c.13% use edtech for online training and learning (Source: Force for Good Research)^{xxvi}

2-3% of global GHG emissions, c. 60% of which comes from the downstream use of products by customers) (Source: S&P Global Trucost data)

US\$5 trillion in annual sector revenues (Source: IDC)

c.55 million people across the world's employees in the tech sector (Source: Statista)

c.20 million instances of hate speech detected on Facebook every calendar quarter (Source: Facebook)

4GW of green power contracted by tech industry in 2021, almost 30% of all corporate renewable energy purchase agreements (Source: Renewable Energy Buyers Alliance)

For the IT sector to play its role in changing the system of capitalism to a more sustainable high impact one, it would need to follow a code of conduct, if not values, in its ESG policies that reflects its scale to develop, deploy and fund solutions to the world's major issues encapsulated in the SDGs and to work across the globe on major issues where technology is a solution to a non-technology rich area. More importantly, it would need to accelerate the transition from the current industrial to the information era, including, with examples:

1. **In common with other corporations and enterprises, the industry will need to adopt ESG and the SDG in their products and services, across businesses, supply and value chains, ecosystems, resolving the necessary conflicts with shareholders, regulators, and other stakeholders, and accounting for both positive and negative externalities.**
2. **Critically, lead in addressing the digital divide across the world.** Less than half the population (47%) of developing countries is online, and an even lower percentage of women^{xxvii}
3. **Use existing platforms, particularly social media platforms, as tools to educate the public. on critical social, economic, political, and environmental issues and allow entrepreneurs to roll out solutions in niche areas.** Major social media platforms collectively reach over 4 billion users^{xxviii}
4. **Leverage the sector's assets into new markets and launch initiatives where they can make the biggest impact for good.** The internet economy has the potential to add US\$180 billion to Africa's GDP by 2025^{xxix}

5. **Take leadership of the transition the information era, working with transnational institutions and leaders from other stakeholder groups to produce and help drive the blueprint for execution.** The UN's High-Level Panel on Digital Cooperation, consisting of tech industry leaders and policy makers, has engaged over 100 countries with proposals to together to optimize the use of digital technologies.^{xxx}
6. **Facilitate and support the adoption of e-government systems, increasing accountability and transparency across the world and raising standards of governance.** 170 of 193 countries already use the internet to deliver government services.^{xxxi}

6. Science and research

Technological innovation has been central to nearly all progress human history from tools, and fire, to the first, second, third, and now the fourth industrial revolutions. The world today uses technologies that were unimaginable only 20 years ago alongside technologies that were widespread 2,000 years ago.

While corporations are tasked to meet the SDGs using only currently existing technologies, science and research are tasked with making the scientific and technological breakthroughs across several critical areas to enable the future to be realized. While many global challenges like digital exclusion and armed conflicts are challenges of policy and execution, others will not be solved without further innovation. The statistics below highlight the world's science and technology gap that remains to be addressed.

Science and Research

Their Role in Capitalism, Indicators of their Footprint and Impact

91% of 71.3m global passenger cars sold in 2021 still using internal combustion engines (Sources: Forbes, IEA)

Over 80% of the global primary energy mix is still derived from fossil fuels (Source: BP Statistical Review of World Energy 2022)

50% of buildings globally use concrete and steel, 2,000-year-old technologies, that together produce 16% of global GHG emissions, (Source: Nature)

50% increase in global atmospheric CO₂ since the Industrial Revolution (Sources: National Oceanic and Atmospheric Administration, World Economic Forum)

53 years after the first moon landing humankind remains a planetary species (a period nearly as long as that between the first ever flight and the moon landing)

10% of the world's population still lacks access to safe water (Source: Water.org)

9% of the global population suffering from food insecurity, particularly in places where traditional agriculture is not feasible (Source: UN FAO)

5 million STEM (science, technology, engineering, and math) graduates annually and, US\$2.3 trillion in global R&D spend (Sources; UNCTAD, World Bank, IMF)

0 smart cities globally working with zero net emissions

For the past 400 years scientific innovation has progressed in a series of paradigm shifts that have led to radical breakthroughs and change, interspersed with a series of incremental innovations that have improved on existing technologies. Meeting the SDGs will require both incremental and radical breakthroughs across several areas of science and this is what defines the role of scientists in changing the system of capitalism, with examples:

- 1. Adopt a code for the participation of scientists and science based on ESG values.** Laboratories consume around ten times as much energy as a typical commercial office and four times more water.^{xxxii}
- 2. Agree priority areas for the application of science to the least served SDGs.** Overall funding of the SDGs remains imbalanced, with five SDGs together receiving less than 18% of total private sector funding for the goals in 2021.^{xxxiii}
- 3. Replacing the major polluting resources.** Concrete and steel, used in building every second structure globally, together produce 16% of global GHG emissions.^{xxxiv}
- 4. Achieve the energy breakthroughs required to hit Net Zero by 2050.** Almost half the CO₂ reductions the world needs to make to hit Net Zero can only be met with further innovation in areas like energy storage, hydrogen, and carbon capture.^{xxxv}

5. **Maximize health-spans with medical breakthroughs.** There is a sixty-fold difference between the childhood mortality rates between the world's best and worst performing countries, and a 33-year gap in life expectancies.
6. **Provide nutritious and affordable food with agricultural breakthroughs.** There are currently 345 million people in 82 countries suffering from acute food insecurity^{xxxvi}
7. **Deliver universal learning with digital breakthroughs.** Only nine out of 46 countries in Sub-Saharan Africa delivered online education via the internet during the COVID-19 pandemic.^{xxxvii}
8. **Manage global warming with breakthrough climate technologies.** The US National Academies of Sciences, Engineering, and Medicine have recommended setting up a US\$100-200 million solar geoengineering research program.^{xxxviii}
9. **Develop breakthroughs that alleviate water as a bottleneck for industry, agriculture, and life in general.** Four billion people globally experience water scarcity for at least one month every year^{xxxix}

7. Conclusion: A shared responsibility to work together

Solving the world's challenges is clearly a multi-stakeholder responsibility that will require the coordination of governments, individuals, private corporations, and financiers. Effective collaboration between these parties will require a coordinating hand. The UN is the most trusted institutions in the world. However, its traditional approach has been to work with member states to build consensus on the biggest issues facing the world and to promote united action. In recognition of the need to build a consensus to forge the way ahead, the UN Secretary General has outlined in 'Our Common Agenda' the need for a truly global compact. Given the nature of the challenge of funding a secure sustainable transition to the future, and the pivotal role of multiple stakeholders, it will need to expand beyond national governments to become a true global compact of multiple stakeholders. This clearly might not be the UN of the post-world war industrial era, but a multi-stakeholder institution suited to the future age it seeks to realize.

In summary

- Meeting the SDGs will require the participation of a broad set of global stakeholders, each with specific roles to play.
- Science and research will need to develop breakthroughs innovations on energy and materials sciences that replace fossil fuels and natural resources with renewable and sustainable alternatives.

- Global corporations will need to universally embed sustainability in their strategies, enter markets where they can have the biggest impact and fully account for the externalities, both positive and negative, that they generate.
- National governments will need to prepare their countries for sustainable investments setting rules and standards that incentivize inward investment, advocating sustainability goals, prioritizing sustainability initiatives, and coordinating their execution and collaborate with other countries to achieve the SDGs.
- The tech sector will need to lead in driving the transition to the digital era, connecting the 33% of the global population not yet online, facilitating the adoption of e-government, and educating the global population using its platforms.
- Individuals who collectively account for 72% of global GHG emissions, need to make active choices buying products, supporting companies, investing in assets, and voting for leaders that make a positive impact on the SDGs.
- The UN has the potential to play a critical role in coordinating the efforts of these stakeholders. To do so it will need to expand beyond national governments to become a true global compact of multiple stakeholders as it has said it can.

i Source: Net Zero Tracker

ii Source: IEA

iii Source: Bloomberg Law, March 2022

iv Source: Twitter

v Source: Climate Policy Initiative

vi Source: BlackRock Investment Stewardship team

vii Source: WEF

viii Source: Global Survey on Sustainability and the SDGs, 2020

ix Source: World Economic Forum 2019

x Source: Pew Research Center's Spring 2021 Global Attitudes Survey

xi Source: Harvard Business Review

xii Source: Allianz Global Investors

xiii Source: Schroders Global Investor Study

xiv Source: Council on Foreign Relations

xv Source: Catalogue of the archive of the Anti-Apartheid Movement, 1956-98". Bodleian Library of Commonwealth and African Studies.

xvi Source: https://www.africa.upenn.edu/Govern_Political/Mandel_100.html

xvii Source:

xviii Source: UN DESA

xix Source: Asian Development Bank

xx Source: Public-private partnerships and the 2030 Agenda for Sustainable Development, Krishnan Sharma, Senior Economic Affairs Officer, Financing for Development Office of the United Nations

xxi Source: UK Office of National Statistics

xxii Source: EU

xxiii Source: EU Corporate Sustainability Due Diligence and Reporting Directive. Art 22

xxiv Source: Government of India

xxv Source: SDG Global Action Awards

xxvi Based on the active users of the 15 largest Edtech companies, assuming no overlap in users across apps

xxvii Source: WEF

xxviii Source: Kepios

xxix Source: International Finance Corporation

xxx Source: UN

xxxi Source: UN DESA

xxxii Source: ThermoFischer

xxxiii Source: Force for Good Analysis

xxxiv Source: Nature

xxxv Source: IEA

xxxvi Source: World Food Organisation

xxxvii Source: World Bank, Remote Learning During COVID-19

xxxviii Source: MIT Technology Review

xxxix Source: World Bank