

Capital as Force for Good

Solutions to Close the SDG Gap

The Force for Good Initiative

Capitalism for a Secure, Sustainable and Superior Future

In support of the UN Secretary General's strategy and roadmap for sustainable development

CAPITAL AS A FORCE FOR GOOD

THE SOLUTIONS TO THE SDG GAP

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CONTEXT: IN 2015, THE WORLD CHOSE PEACE, PROSPERITY, PEOPLE AND PLANET

"Halfway to the deadline for the 2030 Agenda, we are leaving more than half the world behind. The SDG Progress Report shows that just 12 percent of the Sustainable Development Goal targets are on track. Progress on 50 percent is weak and insufficient. Worst of all, we have stalled or gone into reverse on more than 30 percent of the SDGs.

Unless we act now, the 2030 Agenda will become an epitaph for a world that might have been. The COVID-19 pandemic and the triple crisis of climate, biodiversity and pollution are having a devastating impact, amplified by the Russian invasion of Ukraine...

The agreements reached in 2015 in New York, Addis and Paris stand for peace and prosperity, people and planet. That promise is now in peril. The litany of lost opportunities has many causes.

Chief among them is the fundamental inequality and injustice in international relations that runs from global institutions including the United Nations, through the international financial architecture, to private banks and credit ratings agencies. These institutions reflect the global reality of 78 years ago. They are out of date – and out of time...

The 2030 Agenda is an agenda of justice and equality, of inclusive, sustainable development, and human rights and dignity for all. It requires fundamental changes to the way the global economy is organized. The SDGs are the path to bridge both economic and geopolitical divides; to restore trust and rebuild solidarity. Let's be clear: no country can afford to see them fail. World leaders will gather here in September for the SDG Summit. This will be a moment of truth, and of reckoning. It must also be a moment of hope – when we unite to turn the tide and kickstart a new drive for SDG achievement.

Because SDG progress is not about lines on a graph. It is about healthy mothers and babies; children learning the skills to fulfil their potential; parents who can feed their families. It is about renewable energy and clean air. It is about a world in which everyone enjoys human rights and human dignity. The road ahead is steep. Today's report shows us just how steep.

But it is one we can and must travel – together – for the people we serve."

United Nations Secretary-General
25 April 2023

UN SG's Remarks to launch the Special Edition of the Sustainable Development Goals Progress Report

FOREWORD: MY LIFE

I am Ana.

I am a refugee in a foreign land, displaced by the Ukraine war.

I am from Kyiv, Ukraine, and originally from the Dnipro region. About half a year before the war, I took a mortgage and bought a house near Bucha. We were just a typical single-parent family living in a suburb of Kyiv, with two children and a dog. The children attended a local school, and I worked as a human resources manager in a large international European IT company.

Before the war hit us, we had planned the year like any regular year, with all the things we wanted to achieve. And then came the news, 'Russia assembles military personnel around Ukrainian border.' From October of 2021, the forces kept building up on the border, and I found myself waking up at 5am every morning to check the news to see if anything had happened while we slept.

Two weeks before the start of the war I bought a canister of gasoline and a paper map, assuming there would be fuel or electricity shortages, and moved my family to the city of Lviv (in Western Ukraine). When the fighting broke out people started flooding into the city. I had an apartment in the city center and within days we had taken in dozens of people into our house.

“A border is an imaginary line on a map; it’s the same land, the same planet, you take only one step and it’s a totally different life. Very close by rockets are raining down on someone else and that is called ‘their problem’.”

On the third day of the war, the air raid sirens started, and we had to start hiding in the basement. Our life changed and our reality changed. With sirens going on and off, you could not sleep, and were not functional to work. The children would start an online class for 15 minutes and then sirens would start, and we would go into shelter for two hours they couldn't study. I realized the children were

not going to learn anything, and their minds would be messed-up. I had a feeling in my gut that I had to take the children out of the country.

We drove at night, through the Carpathian Mountains, in a big line of cars. We moved very slowly, through many armed checkpoints, and eventually crossed into Hungary after 60-70 hours. There were no hotels, and a friend took us to his apartment so we could wash, could think, could relax, and make a plan. What surprised me in Budapest was that life was going on as normal, people were drinking coffee, people were going for lunch, students were studying at university. You realize that a border is an imaginary line on a map; it's the same land, the same planet, you take only one step and it's a totally different life. Very close by rockets are raining down on someone else and that is called 'their problem'. We needed a longer-term solution. The UK government had come up with a scheme for Ukraine which offered a visa for three years with the right to work and study, and that was it. We ended up in Northern UK, in a rural area, with sheep and fields, which is very different to cosmopolitan, Kyiv. We started living with a great host family, who have a gardener that lives next door. I think he was jealous of our free housing and social benefits and kept telling me that in the UK people have to struggle to get by while I've got it for free.

I'm a single mother, so I needed to find a job in the UK, hold my family together, and try to remember that I am 41 and need to make a life. I've struggled to find a job because in the village where we lived there is only a pub, there aren't any shops, there are no businesses, let alone IT

businesses. I did so many job searches, and an organization called RefuAid, helped a lot by passing my CV to people. I eventually found a job in the army because the UK is training a lot of Ukrainian soldiers and need a lot of interpreters. I'm overqualified for this job but I took it because I need to feed children and I'm working age. I cannot live off benefits and never have. I have two hands, two legs and can work. Why would I ask money from someone if I can just earn it?

For my children, aged 13 and 10, a very good private school opened their doors and took them in. They also gave us vouchers for clothes to pay for the school and sports uniforms. The children have wanted to see their father, but it has been too difficult for him to get a UK visa, so I've had to send the children to another European country so they could meet.

All these hardships, they're all logical and explainable in this situation, but I think the most difficult part is to accept the reality that people are dying, our neighbors are dying, people I grew up with are dying. I was throwing up for the first month after the war started, when I saw and read the news, and saw all the dead bodies, all the dead bodies on the streets and on the highway that I took to work, it was surreal, my body just couldn't understand it. Even now, the young Ukrainians I have trained – people I have got to know personally – are dying every day. I have such respect for the bravery of our soldiers, it is unspeakable. But it is the reality we are all facing. And it is very tragic.

“The most difficult part is to accept the reality that people are dying, our neighbors are dying, people I grew up with are dying. I ... all the dead bodies, all the dead bodies on the streets and on the highway that I took to work.”

I used to worry a lot about the uncertainty. I have no idea how long we can be in this country; what happens after the three years of the war? Or if the war ends with Ukraine losing lots of territories, is it safe to return? If after 10 years, Russia attacks again will I need to leave again and live my entire somewhere else? And one day I stopped worrying, and now just live day-to-day: the kids go to school, and if we must leave this country, we'll find another one. We are alive, there is air to breathe, there is food and water, our needs are simple, we live within our means, and we will be fine. Most importantly, I got my family out, and we are alive.

I just want the war to end, to have our land back, to be safe, and to go back home.

Refugee, Ukrainian, Single Mother of Two

ABOUT FORCE FOR GOOD

Force for Good's mission is to mobilize capital as a force for good at a time of profound and multi-dimensional change in the world. Force for Good engages key stakeholders, conducts research, publishes thought leadership and has an active outreach program to major global financial institutions as well as development banks, NGOs, and other stakeholders with the potential to act as a force for good in the world. It works with major institutions to accelerate their efforts to tackle increasingly complex and interrelated challenges such as inclusion, sustainable development, and climate change in the spirit of encouraging collaboration and spurring a race to the top in making an impact for good in the world.

The Advisory Council for Force for Good comprises:

Helen Alderson, Member of the Board of Trustees of the Overseas Development Institute; former member of the Directorate of the International Committee of the Red Cross; former CEO of the World Heart Federation.

Edward Braham, Chairman, M&G plc; non-executive member of the HM Treasury board; formerly the Senior Partner (Chair) of Freshfields Bruckhaus Deringer LLP.

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Sir Alan Parker, Chairman and founder, Brunswick Group; former Chair of Save the Children International; Chairman of HRH The Duke of Edinburgh's Commonwealth Study Conferences

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Ketan Patel, Chairman, Force for Good Initiative; CEO and Founder, Greater Pacific Capital; Formerly Managing Director, Goldman Sachs, Head of Strategic Group; Former Partner, KPMG

MESSAGE FROM THE ADVISORY COUNCIL

At the halfway point to the 2030 deadline for meeting the Sustainable Development Goals (SDGs), the world is failing to make sufficient progress on the goals. Despite having made significant progress in key areas such as poverty, education and women's rights, the world has stalled or is sliding backwards on many SDGs due to war, the pandemic and populism and the ensuing damage of these on politics, economies, and societies, coupled with sustained under-investment in the SDGs. The accentuated challenge now includes many more millions living in poverty, suffering from hunger, missing schooling and lacking access to basic amenities such as clean water and sanitation. And climate change remains a pressing issue, with many nations struggling to meet their environmental targets, further imperiling biodiversity, lives, and the health of the planet. The developing world has suffered the most from these changes and is set to be the most impacted by the devastations to come unless radical and deep changes are made.

The interconnectedness of the SDGs means that failures in one area ripple through to undermine others. And the collective failure to level up the world with the SDGs as a guide have resulted in levelling down, raising the risk of global instability and heightening human insecurity for all.

At the same time, scientific breakthroughs in multiple fields of technology - with AI shocking the world even as it begins to reveal a tiny fraction of its possibilities, quantum computing, nanotechnology, neuroscience, and fusion energy steadily making breakthroughs - the fossil fuel era and the world it built is set to be replaced with something very different, albeit the timing is unclear.

While many of these investments are being made by advanced economies who have also been leading in establishing a code of conduct with ESG, investing in alternative energies, and embracing new technologies, they are also the almost exclusive beneficiaries of the fossil fuel era, and many in these countries stand to lose the most from these changes. So, it is no surprise that people in advanced countries are voting for those who deny the existence of threats such as climate change, promise to stop the transition and preserve the old way of life. Given people in the advanced economies of the US and EU have 56% of the world's wealth and are the leading consumers of the planet's resources and make the highest emissions, if their people do not see the need to vote for change, capital will not be re-allocated, and the world will not achieve the SDGs by 2030. If China and India with nearly three billion people follow this path, the SDGs potentially may never be achieved.

Put simply, the SDGs can only be achieved by tackling the underlying causes of the problems. That requires a reallocation of the world's capital and acceptance of the need for poorer nations to do better, which only becomes possible if those who stand to lose the most buy into it and feel that the outcomes and transition are "just". This in turn requires us to share the same version of reality, winning back those sold on the falsehood that their status quo is sustainable. This is one of the most fundamental fights in advanced economies and is fundamental to delivering the improvements in the developing world that have to go hand-in-hand with delivering the SDGs.

This stark reality underscores the global community's responsibility to intensify its efforts to deliver a sustainable, secure, and superior future for all.

This report offers solutions, both in identifying solution areas (policy, public sector activities, private industry, technology, infrastructure, and financial services) and 15 existing initiatives that, if scaled, globally, can close the gap.

The 2030 goals are looking increasingly elusive, but we must not lose sight of the fact that they are essential to avoiding consequences that threaten everyone and everything on the planet. This report shows that the 2030 goals can essentially be achieved, and in significant cases exceeded. At this juncture, the aspiration needs to rise and we should focus on rapidly building the momentum needed, leveraging the efforts of all stakeholders, including the UN to spotlight issues, convene stakeholders and push them towards solutions. That way we can create a sustainable world, that is also a secure and superior one for all.

Ketan Patel
Chair of the Advisory Council, Force for Good
On behalf of the Advisory Council

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ABBREVIATIONS AND EXPLANATORY NOTES

| | |
|----------------|--|
| API | Application programming interface |
| AuM | Assets under management |
| Bn | billion |
| ESG | Environmental, Social and Governance |
| FDI | Foreign direct investments |
| GDP | Gross domestic product |
| GHG | Greenhouse gases |
| G7 | The Group of 7 countries |
| IEA | International Energy Association |
| IFRS | International Financial Reporting Standards |
| IPCC | Intergovernmental Panel on Climate Change |
| ISSB | International Sustainability Standards Board |
| IUCN | International Union for Conservation of Nature |
| M | million |
| MSME | Micro, small, and medium sized enterprises |
| Mtoe | Million tonnes of oil equivalent |
| ODA | Official development assistance |
| R&D | Research and development |
| SDG | United Nations Sustainable Development Goal |
| SSP | Shared Socio-economic Pathway |
| UK | United Kingdom |
| UN | United Nations |
| UN DESA | United Nations Department of Economic and Social Affairs |
| UNDP | United Nations Development Program |
| UNEP | United Nations Environmental Program |
| UNESCO | United Nations Educational, Scientific and Cultural Organization |
| UNCTAD | United Nations Conference on Trade and Development |
| UNOPs | United Nations Office of Partnerships |
| US | United States |
| US\$ | United States dollars |
| WHO | World Health Organization |

HIGHLIGHTS

1. This study finds that the world has the key solutions to essentially meet the SDGs by their 2030 target date, and if these solutions were comprehensively implemented and scaled globally, the world can achieve 156% of the SDG targets, which requires will and mobilization.
2. Policy implementation plays perhaps the most critical role, addressing nearly one third of the underlying SDG targets in the base case, with the public and private sectors, enabled by technology and financing, closing the remainder of the gap in almost equal measure.
3. This study identifies 15 existing initiatives that leverage these solution areas and can close 70% of the SDG gap if scaled and implemented globally, including the EU's sustainability regulations, the US's Inflation Reduction Act, India's digital financial solutions 'stack' enabling mass financial inclusion, innovative environmental financing, and the scaled development impact work of NGOs.
4. However, while meeting the goals is both technically and financially feasible, it requires a level of global alignment and political will that the world has not yet demonstrated, and current rates of progress imply that the goals won't be achieved by their 2030 deadline.
5. Unblocking progress on the SDGs, without collaboration between countries requires funding of US\$132-175 trillion and has a shortfall of US\$103-137 trillion, representing 40% of the world's gross financial assets of US\$440 trillion, or c.20% of the global GDP of US\$100 trillion annually through 2030.
6. This volume of capital is unlikely to be mobilized for the SDGs, and people are not ready to reduce their lifestyles to ones more sustainable for the environment, leading to outcomes that are damaging for the planet, politics, society, and people, and this points to a disruptive and conflict-laden transition ahead.
7. Developing countries represent nearly 85% of the global SDG gap, and among these, critically, India's rise based on inclusion for its 1.4 billion people will be a key determinant of whether the world achieves the SDGs, providing an opportunity for the world to collaborate on solutions that could be scaled and exported globally.
8. Individuals collectively own 60% of the world's capital, and their consumption drives 60% of global GDP, (the remainder being governments'), and as every individual across the world becomes connected through technology, they will collectively become the most powerful active stakeholders in the system of capitalism.
9. Financial institutions as service providers, manage 88% of the world's capital on behalf of these owners and do so from global financial hubs, which will increasingly reside in the major global power blocs of the US, EU, China and over time, India, and these four will set global terms of financing, and trade in goods and services for the world.
10. The new 'world system' is being defined by the rise of new geopolitical powers, advanced technologies such as AI, and the need for sustainability, and it will face fierce resistance making for a rough transition, but unless human progress is halted, it will ultimately destroy the current fossil fuel-based system and its advocates in favor of a more sustainable, secure, and superior future for all.

I. Executive Summary

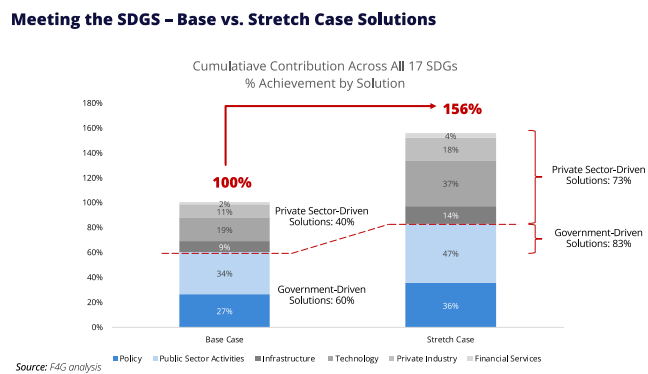


I. Solutions Unleashed by Government and Private Enterprise Can Close the Gap to the SDGs

This work identifies six solution areas, which if implemented by the public and private sectors, including policy, public sector activities, private industry, technology, infrastructure, and financial services can close the gap to the SDGs, and even exceed the 2030 targets set by the goals.

- A Base Case mix of solutions from these six areas can fully deliver the SDGs using the world's current financial and economic models. In a Stretch Case, leveraging regulatory, policy, technology, and financing can help unlock the full potential of solutions if deployed to maximum effect, exceeding the underlying targets by up to 56%, creating a far superior outcome for the world than that envisaged at the SDG's launch in 2015, when they were adopted by all nations.

Figure 1: Solution Areas to Address the SDGs



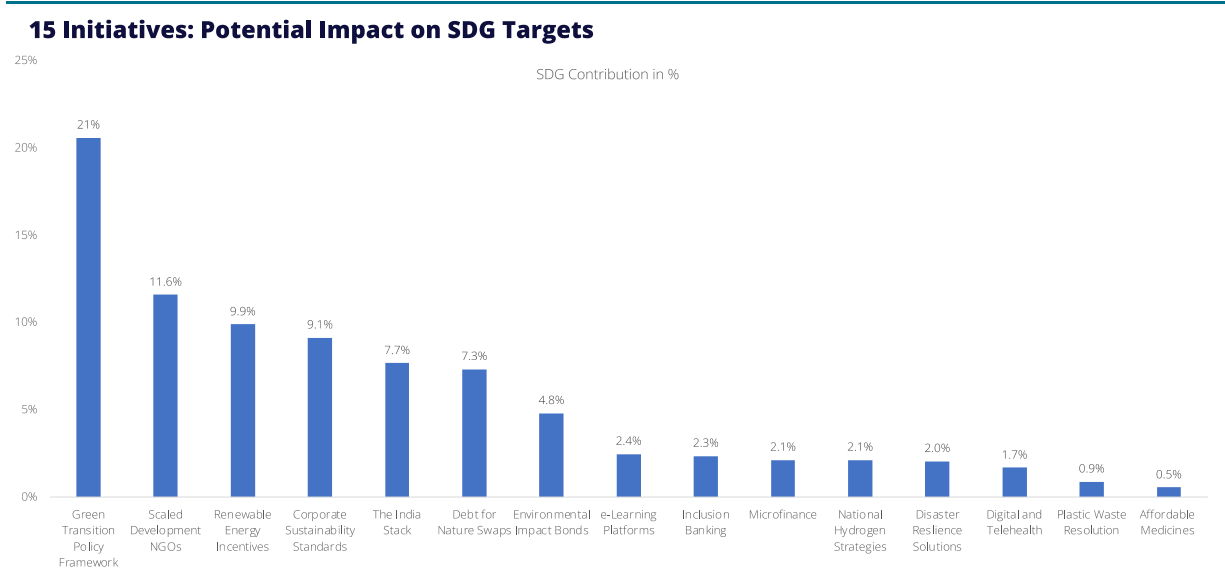
- A combination of policy, public sector activities and private sector activities can deliver the goals, in almost equal proportions; in the base case, government plays the major role and in the stretch case government and the private sector make equal contributions to the goals:
 - 33% - Public sector spending is the most important solution for the goals, achieving nearly a third of the SDGs, however it is noteworthy that governments have struggled to secure the funding needed for spending programs critical to meet the goals.
 - 27% - Policy interventions can achieve 27% of the goals in the form of regulations, laws, and incentives, with 15% of the goals' targets being purely policy driven, and majority of the remaining 85% requiring some level of policy support to be achieved.
 - 19% - Technology can address the SDGs directly and can further enable other activities making a total impact of c.40%, substituting digital for physical infrastructure, with 9% of the goals requiring additional physical infrastructure (stretching to 14%).
 - 11% - Private industry, the business activities of the (non-financial) private sector can have a significant impact on the goals based on companies adopting sustainable practices, investing in new opportunities, or working in partnership with governments (stretching to 18%)
 - 2% - While capital is a critical component to meeting the goals, funding 64% of the goals (and 73% in the stretch case), the direct provision of financial services contributes only 2% to the goals overall (stretching to 4%).
- Artificial intelligence (AI) will likely have a transformative impact on the SDGs in the years to come, with a potentially significant impact on all 17 goals. However, for many of the goals underlying targets AI can be a double-edged sword that can both inhibit and facilitate progress against the goals.

II. Scalable, Leverageable Initiatives Identified Solve c.70% of the Goals

Achieving the goals in practice will require the world to identify existing initiatives for each of the six solution areas that can be scaled globally, of which 15 initiatives from across the world have been highlighted in this report and have the potential to solve for c.70% of the SDGs if scaled globally.

- This report highlights 15 initiatives, pointing to the diversity of global sustainable development efforts and driven by a wide range of stakeholders, leveraging different solution sets to achieve specific goals.

Figure 2: Headline Contribution to the SDG Targets



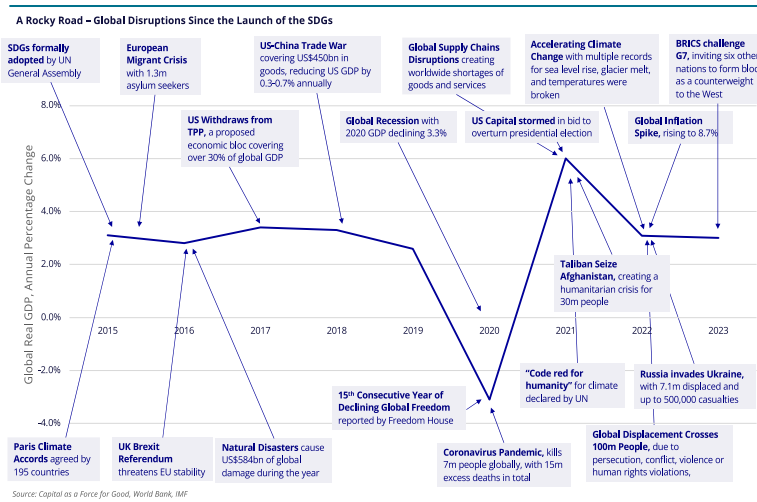
- Cumulatively, 70% of the goals can be addressed by these 15 initiatives, subject to feasibility and funding, while noting that the selected initiatives are not exhaustive.
- For the goals to be practically met, global stakeholders will need to work together to identify, assess, prioritize, fund, and execute the highest potential initiatives.

III. The Transition of World Systems is Creating Multiple Crises

A new world system is beginning to emerge defined by a shift to sustainability, artificial intelligence, and the rise of new geopolitical powers as a forerunner to mass inclusion of the all in the political, economic, and social arenas, enabled by technology. While one should expect fierce resistance to attempt to slow it down, progress will most likely not be stopped.

This transition leads to the destruction of the old fossil fuel-based world system and its order giving rise to a series of interrelated crises threatening geopolitical stability, economic prosperity, social order, the sanctity of national borders and the planetary ecosystem.

Figure 3: Global Events and Disruptions



The collapse of the prevailing world system is particularly driven by the end of many 'certainties' that defined the last era

1. The End of Fossil Fuels.
2. The End of Western Geopolitical Dominance.
3. The End of American Unipolar Leadership.
4. The End of Physical World Primacy.
5. The End of the Value of Labour.
6. End of Contained Populations.
7. End of Key Resources.
8. End of Income Equality.
9. End of Peace, Perpetual War.

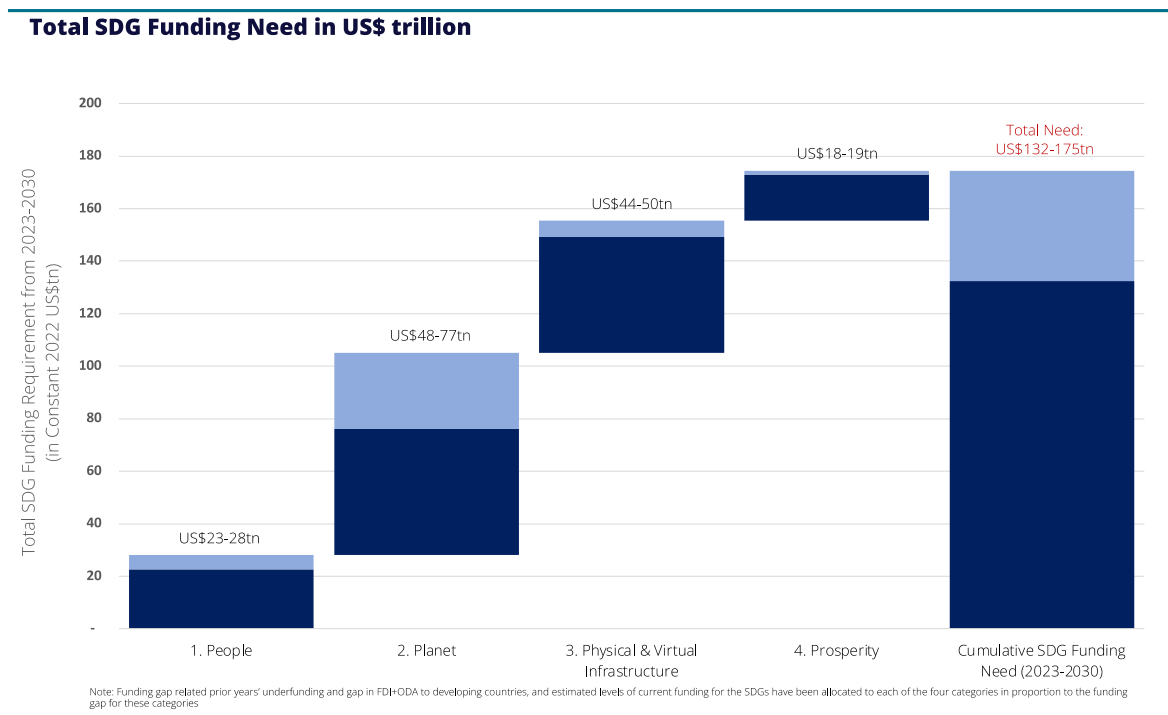
- The resulting disruptions are accentuated by multiple changes, politically with the emergence of a multipolar global order, technologically with the Digital Revolution and socio-economically and environmentally with the global sustainability transition.
- The transition to the future is already a difficult one as the timeline of global events and disruptions shows, and its risks could place the SDGs in doubt even with solutions and capital being available, for example an expansion of the Ukraine war into the EU and a more strident American populist model which deprioritizes global issues in favor of a narrow definition of American interests.
- This broader transition to the future is driving global shifts in the flow of capital, goods, people, and information that are reshaping societies, economics, politics at the local and global level.
- The functionally superior world emerging from this transition has the potential to be both secure and sustainable, generating unprecedented levels of global prosperity, but to be stable it requires the global platform on which it is built to be more sustainable, which points to the importance of the SDGs).

IV. Progress on Levelling up the World Has Stalled or Reversed

At the half-way mark, progress on the SDGs has stalled and, in some cases, reversed, putting the goals on a path to failure by 2030, and now requiring US\$132-175 trillion, with a shortfall of US\$103-137 trillion, given failures in development in both rich and developing countries.

- The latest UN assessments show that none of the 17 goals are set to be achieved by 2030, with only 12% of the underlying targets are on track, 50% are moderately or severely off track and nearly one third have either stalled or regressed below 2015 levels.
- The largest gaps are unsurprisingly in the poorest and largest countries. Among these India is rising the fastest, expected now to double its GDP by 2030 and be one of the top three economies by 2050 with US\$22 trillion in GDP, and its choices on whether to grow with the SDGs in mind or not, making it a pivotal nation for determining whether the world achieves the SDGs.
- The largest funding gaps are in funding planetary sustainability, representing 47% of this total. However, failing to tackle these issues will lead to civic dissatisfaction, reflected through populism that casts climate change, sustainability and ESG as the enemy, sustainably minded politicians losing elections and civil unrest.

Figure 4: Total SDG Funding Requirement



V. All the Money in the World is Not Available

The US\$132-175 trillion total funding need for the SDGs represents c.40% of the world's gross liquid assets and exceeds the current year's economic output.

- Funding the SDGs will require accessing c.40% of the US\$440 trillion in global financial wealth (gross liquid assets). On an annual basis, the funding need for the SDGs represents c.20% of the global economic output (GDP) of US\$100 trillion
- Accessing these funds requires mobilizing the capital owners, capital managers, the corporations financing their activities, the hubs that host and regulate the financial institutions that manage capital flows, and the trading blocs that set the terms of the transfer of goods and services across the world.
 - 57% of the world's gross liquid capital is owned by individuals (US\$254 trillion), and their consumption drives nearly 60% of the total value of global GDP, although this consumption is (unevenly) spread across the global population.
 - 41% of global financial wealth is owned by governments (US\$186 trillion), nominally spread across 195 countries, but highly concentrated in advanced industrialized countries.
 - 88% of the world's gross liquid assets (US\$315 trillion) are administered by the finance industry, across its roles as asset owners, asset gatherers and allocators and as direct investors, however it does not own this money.¹

- US\$196 trillion in total assets are directly controlled by corporations (other than financial ones), making liquid and illiquid investments based on their business needs.
 - This capital is managed by and flows through a few major financial hubs across the world, today New York, London and Tokyo being the most significant, but this is expected to change with New York being joined by China exercising more control over its flows and India rising and managing its own flows.
 - The terms of the world's US\$32 trillion of trade is decided by three trading power blocs today, the US, the EU, and China, over time adding India to the group.
- Fully funding the SDGs will also require the world to reallocate existing investments, mobilize new capital and reprioritize spending across geographies, and asset classes, which cannot happen without the stakeholders that own, manage, host and trade capital agreeing to do so. c.90% of current sustainable investment capital does not reach the developing countries where it is needed most, being invested locally in advanced industrialized economies.
 - While it appears at first glance that the world has enough money, it is unlikely to release 40% of its capital stock or 20% annually to fund the SDGs, even if that were the correct long-term answer.

In Conclusion

This report shows that the world is not on track to meet the 2030 targets for the SDGs, but that there are ways to deliver to close and in places even materially exceed the SDG goals. Delivery requires focusing on the right solutions and re-aligning capital and human effort. There is sufficient capital, and further capital is accumulating faster than global population growth.

The world is already on the brink of a new era and a new civilization. However, making such a future a reality will require bold investments across information technology, energy, material sciences, engineering, and life sciences, to transform and create whole new industries. It follows that measured progress is the way forward, recognizing that retrenchment would accelerate many of the negative trends that are gathering force across the world.

Inevitably, the world is split between those that see and vote for the future and those that vote for the past, and until the balance tips substantially in favor of progress, the transition will be dangerous and exact a steep price from people and planet. Force for Good supports and works for a transition for all that links the world together with the transfer of ideas, solutions, and capital to create a sustainable, secure, and superior future for all.

II. Introduction: Discontinuities, Disruptions, and the Transition to the Future



A superior future based on scientific and technological breakthroughs lies within sight. However, a series of increasingly out of control and accelerating security and sustainability challenges stand in the way, posing an existential threat for the world. Current efforts to solicit responses commensurate with the level of threat facing the world have failed to mobilize global populations and other powerful agents of change. Hence, the world still lacks alignment on the actual large-scale solutions, backed by finance, and commensurate with the rising level of danger which if implemented would create a secure, sustainable, and superior future for all.

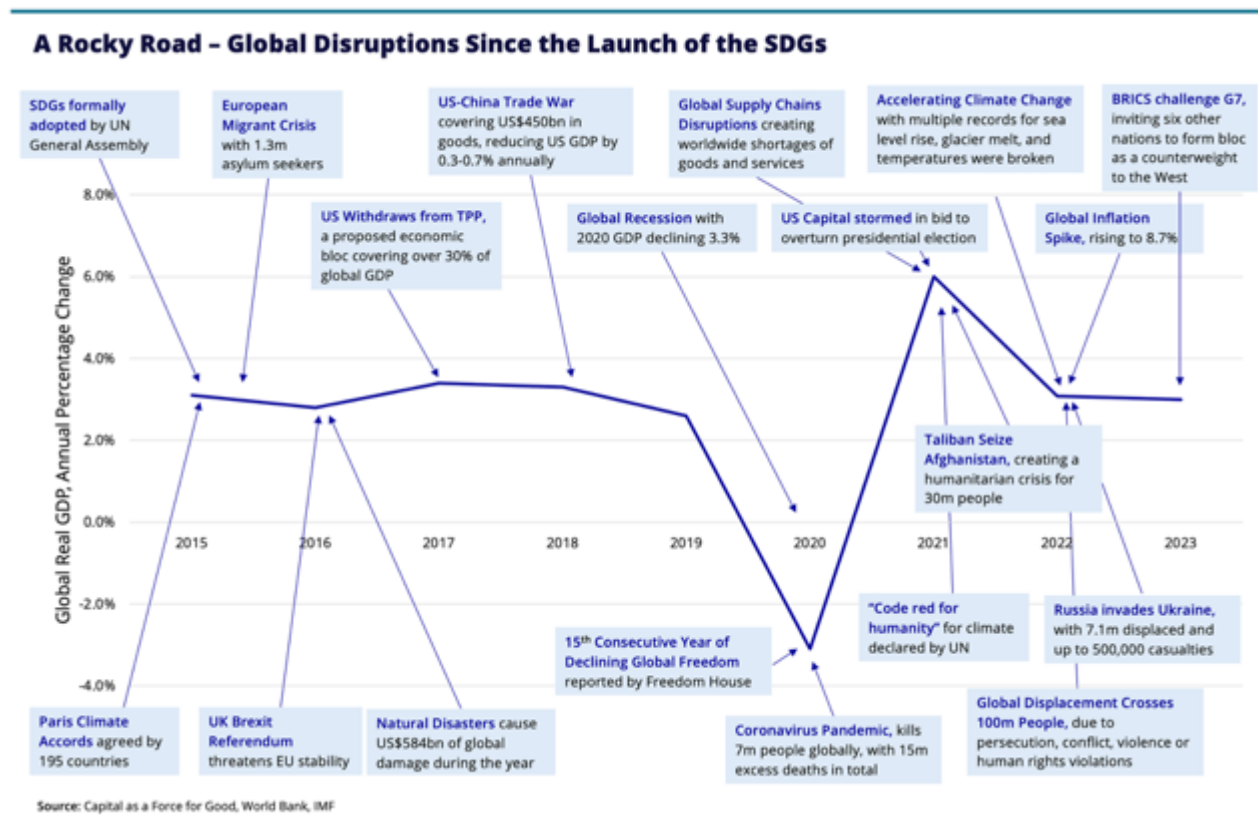
1. A World in Transition

A series of interrelated crises are disrupting global progress against security and sustainability, threatening the peaceful transition to a superior future as the world system that underpinned the fossil fuel era ends.

The third decade of the 21st century has been perhaps the most disruptive period ever experienced by the majority of people alive in the world today. The past four years have delivered a global pandemic, the worst recession since World War II, the breakdown of global supply chains, record levels of inflation around the world sparking an unprecedented cost of living crisis, an

economic malaise that has impoverished not just poor countries but many in rich countries too, an ongoing civil struggle over America's last democratic elections, a war in Europe that tests Western security and political alliances, as well as triggering an energy supply crisis with global repercussions, and a series of natural disasters. To this are added the ongoing erosion of social cohesion and societal polarization across the world, increasing geo-economic confrontation, large scale environmental degradation and the resulting large scale involuntary migration both within and across countries.

Figure 5: Global Events and Disruptions



The human cost, both financial and social, of these developments has been staggering, leading to millions of deaths, a destruction of livelihoods, rising poverty and worsening health outcomes, rising mistrust and civil strife, and trillions of dollars of economic losses. Slow and steady progress on key development indicators, particularly eradicating poverty and hunger, and improving health and education, have been reversed. Indeed, some of these events have the power to disrupt the world to a point where the transition is far longer. Two of these include the expansion of the war in Ukraine across European boundaries, and the diminution of democracy in favor of a more populist model in America which eschews global cooperation and human rights unless they directly serve American interests.

These disruptions risk throwing the world into turmoil at a time when coordination is most needed to address global challenges. The term 'polycrisis' has been used to describe these overlapping crises which together are greater than the sum of their parts and collectively threaten the world's ability to cope with them.

The threat posed to the world by this confluence of crises evokes the image of Japanese artist Hokusai's woodblock print of a great wave, a primordial surge that threatens to sweep away and end the key features that have defined the current world system, which will no doubt be resisted and fought over:

1. **The End of Fossil Fuels.** Fossil fuels' two centuries long position as the world's primary energy source is coming to an end, a period during which the global population has grown eight-fold, its economy nearly one hundred-fold (and its CO2 emissions nearly one thousand-fold).
2. **The End of Western Dominance.** Similarly, the West's 200-year period of global economic and political domination is waning, and the world's economic center of gravity is shifting eastward to Asia, with different styles of capitalism, politics and societal orders emerging.
3. **The End of American Unipolar Leadership.** The unipolar world inherited by America following the collapse of the Soviet Union in 1990 is ceding way to a geopolitical order that is multi-polar with an increasing number of power blocs.
4. **The End of Physical World Primacy.** Digital technology is becoming increasingly integrated across industries, governments, institutions, and societies, transforming each in turn and spurred by AI is set to blur the lines between the physical, digital, and biological worlds.
5. **The End of the Value of Labor.** The basis of global economic value creation continues to shift from value from the production of goods, which generated hundreds of trillions of dollars since the Industrial Revolution, to the predominant unit of value creation being intellectual property, creativity, and services, propelled by AI as a destroyer and creator of value.
6. **End of Contained Populations.** The global population is set to increase by c.40% to 10 billion between 2000 and 2050 and is set to age on average by 11 years, with 70% of the global population projected to live in cities, with up to 1.2 billion migrants by 2050.²
7. **End of Key Resources.** Having mined deeper and deeper and closer and closer to home, with greater consequences, with mines now covering an estimated to 100,000 km² of the earth's surface (an area the size of South Korea) at some point the harvesting of the planet's natural resources will need to be replaced by alternative renewable resources.³
8. **End of Income Equality.** While income inequality between countries has generally been declining since the end of the Cold War, inequality *within* most countries is continuing to rise, with the within-country inequality now representing 68% of total income inequality, up from 52% in 2020. ⁴
9. **End of the Western Security Order, Perpetual War.** Perpetual war is increasingly seen as a feature of our world. Global peacefulness has decreased for the ninth consecutive year, with a sharp increase in external conflicts, driven by political, economic, or social factors, a

The basis of everything that defined our times have or re reaching an end and it is unclear what will emerge, leaving the world at risk of chaos on multiple fronts

state that populations are having to accept and adapt to, until a new paradigm that can underwrite global peace can emerge.⁵

10. End of the Current Way of Life, Climate Disaster. Humankind's cumulative ecological footprint risks pushing ecosystems around the world to a breaking point, driving rising temperatures, sea level rises, threatening biodiversity, increasing flood, drought, and wildfire risk, and driving water scarcity, with over 10,000 heat and rainfall records set globally in 2023 year to date.⁶

The resulting wars, revolutions, market crashes, economic and political turmoil, supply chain challenges and resource shortages, as well as social upheaval may seem like discrete and event driven issues but are actually interrelated and part of a world system that is in transition.

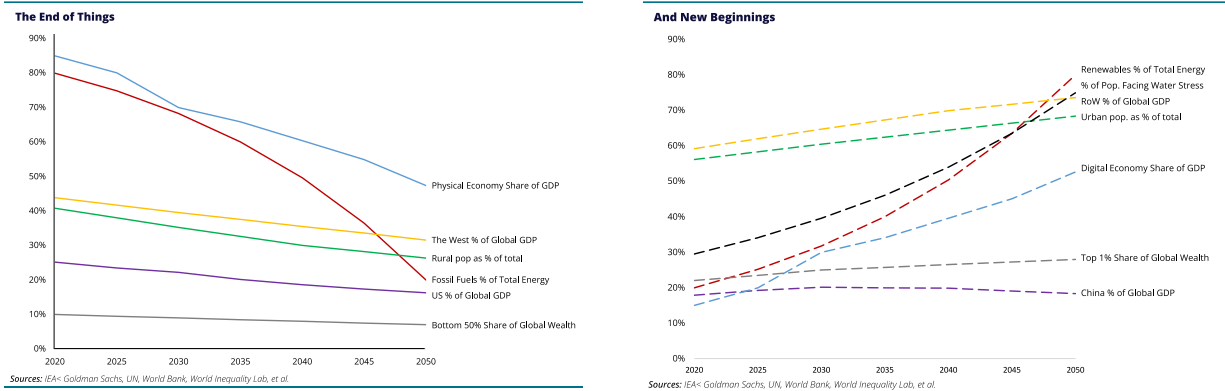
This system is in a transition away from the current model which fueled the Industrial Revolution and created the modern world but has now become a limiting factor for humanity's aspirations to create a better planet and ultimately to break free of its bounds. There are three major longer-term shifts that coincide and are related to the transition with interrelated socio-economic and political implications for the world system:

- 1. Digital – The Next Phase of the Shift to the Information Age.** Just like agriculture and industry fundamentally transformed global civilization in their time, the continuing breakthroughs of the Digital Revolution promise to further transform our world and even our reality in the coming decades.
- 2. Sustainability – The Long-term Sustainability Transition.** Following centuries of industrial-led growth, the current world system is increasingly pushing against planetary boundaries, creating the need for the world to move to a more sustainable model of development in a long and potentially painful process of transition.
- 3. Geopolitics – Emergence of a Multi-polar World.** The current economic and political rebalancing towards Asia underway is creating a more multi-polar world, undoing the historical anomalies of American geopolitical dominance during the 20th century, and more broadly the West's dominance over the past 250 years.

The world system is in a transition away from the current model which fuelled the Industrial Revolution and created the modern world, as it has now become a limiting factor for humanity's aspirations to create a better planet and to ultimately break free of its bounds

Each of these three long term transitions will likely take decades to fully play out, and while the end-states of each one can be envisaged, the path the world will take to these states cannot, leaving the world in flux.

Figure 6: The End of Things...and New Beginnings



Managing these complex multi-dimensional transitions will be difficult, particularly given that their endpoints lie beyond the life-expectancy of many of today's leaders. In the absence of a roadmap that helps the world navigate these transitions, the path ahead threatens to be a rocky one, characterized by frequent and varied disruptions not unlike what the world has experienced in the past years since the SDGs were introduced.

2. Important Shifts in Global Flows

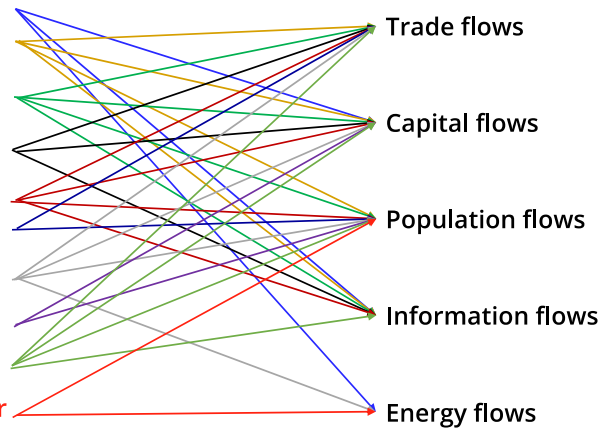
The transition to the future is driving global shifts in the flow of capital, goods, people, and information that are reshaping societies, economics, politics at the local and global level, ushering in a new world system.

The world today is more integrated and interdependent than at any time in its history, connected by global flows of goods and services, people, capital, and information in the form of data, ideas, and values. These flows underpin the current world-system comprised of a globalized capitalist economy and a liberal international geopolitical order. As in any complex system, none of these flows are perfectly stable over time, each has a cycle of its own and interacts with others, just as the moon acts on oceans, and trade acts on employment.

The fundamental forces at work in the world are reshaping the long-term nature, direction, and magnitude of some of the world's most important global flows, with critical implications for global geopolitical and economic order.

Figure 7: The Reshaping of Global Flows

1. The End of Fossil Fuels
2. The End of Western Exclusivity
3. The End of American Unipolar Power
4. The End of Physical World Primacy
5. The End of the Value of Labor
6. End of Contained Populations
7. End of Key Resources
8. End of Financial Exclusivity
9. End of Peace, Perpetual War
10. End of Current Way of Life, Climate Disaster



The interaction between fundamental forces and global flows is a complex and multi-layered one, making accurate long-term forecasting a near impossible task, but the level of impact will clearly have fundamental consequences for the world.

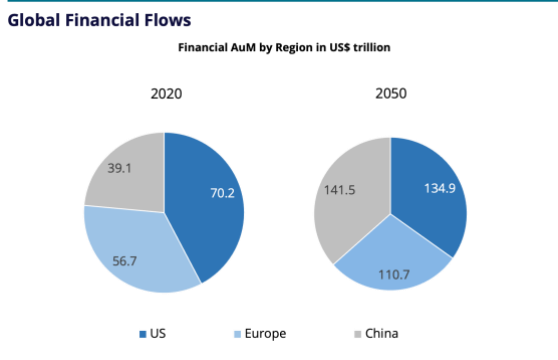
Focusing on five major flows, we see that they are expected to rise in quantum and nature, which individually would test or break the current system even if it were stable, but together and given the change in the nature of the flow, call for a large-scale rethink of the world system:

1. Geopolitics and Demographics Reshaping Global Trade Flows.



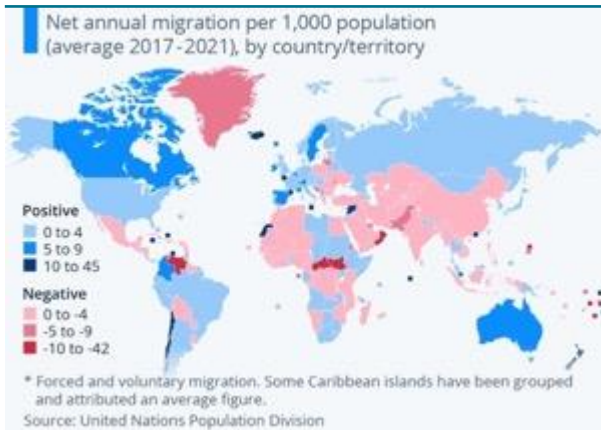
- **Scale of Shift. 4x.** Global trade of US\$25 trillion in 2020 to rise to US\$100 trillion by 2050.⁷
- **Drivers of Shift.** US-China decoupling and the rise of the Global South reshaping global trade axes.
- **Long-term Implications.** Shifting economic and political ties and weakening of the Western-led global trade order.

2. Global Capital Flows Aligning with Macro-economic Growth and Geopolitical Power



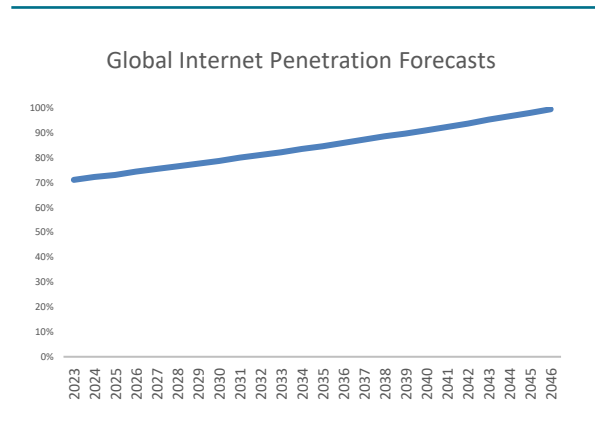
- **Scale of Shift. 2.3x.** Global financial assets under management to increase from c.US\$190 trillion to c.US\$432 trillion capital.⁸
- **Drivers of Shift.** Regional changes in macro-economic growth and Asia's rising geopolitical influence.
- **Long-term Implications.** Challenges to US financial market leadership and the primacy of the US Dollar as the global reserve currency.

3. Global Population Flows Driven by Demographics, Development and Environment



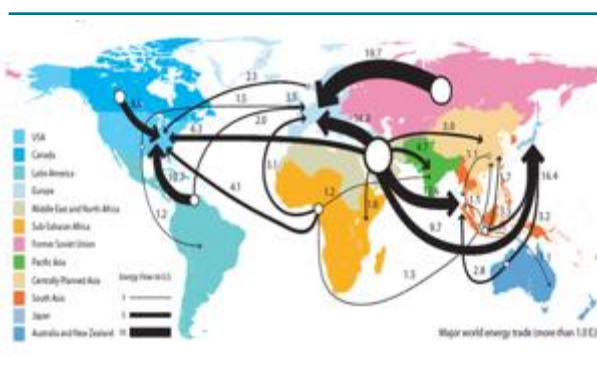
- **Scale of Shift. 4x.** Annual migration flows increasing from 281million today to up to 1.2 billion by 2050.
- **Drivers of Shift.** Urbanization flows within countries, cross border migration driven by income disparities and climate refugees.
- **Long-term Implications.** Risk of populist backlashes, anti-immigration legislation, budget strains and social unrest.

4. Global Information Flows Driven by Universal Connectivity and Digital Technology



- **Scale of Shift. 1.7x.** Digitally connected people increasing from 5.7 billion today to c.9.5 billion by 2045,⁹ essentially everyone.
- **Drivers of Shift.** Continued global economic development, investments in digital infrastructure and availability of low-cost hardware solutions.
- **Long-term Implications.** Increasing demands on national leaders by citizens, with failure leading to potential social unrest and division.

5. Global Energy Flows Reshaped by Renewables and Demand Growth



- **Scale of Shift. 1.5x.** c.400 quadrillion Btu in 2021 to c.600 quadrillion Btu by 2050¹⁰.
- **Drivers of Shift.** Global energy transition from fossil fuels to renewables, with demand increases driven by industrialization of the Global South.
- **Long-term Implications.** Asia-Pacific emerging as the largest producer of global energy, leading to geopolitical shifts away from the Middle East.

The cumulative impact of these changing flows is set to reshape the world in the coming decades, with large scale shifts in wealth, resources, and people across geographies and within countries driving the fragmentation of current international and national governance, economies and society and ultimately driving the transformation of the world system.

3. Diverging Scenarios for the Transition

The world system needs to transition to one that can not only cope with the level of change implied in the global flows, but create a more sustainable, secure, and superior world.

The collapse of the prevailing world system is particularly driven by the 'end of things' that defined the last era and the pressure imposed on it by the rise in multiple global flows. The potential paths the world might take as a result of such endings, and particularly by the global socioeconomic changes these paths will deliver, have been explored in the IPCC Sixth Assessment Report on climate change, in the form of five Shared Socioeconomic Pathways (SSPs). These SSPs describe alternative pathways for the future based on potential global social, demographics and economic developments through the end of the century, showing how often-competing demands of economic growth, security, social justice, and environmental protection, among others, lead to diverging outcomes for the world.

The five scenarios in summary are as follows:

SSP1: Sustainability, Taking the Green Road; Shift to a Global Sustainable Path, calls for a sustainable, prosperous low carbon future to create a global society that is more just, inclusive and altruistic than it has been at any point in time in recorded history, shifting away from materialism and consumerism for not just the richer nations, but also the over 6.6bn people currently living in middle- and low-income countries.

SSP2: Middle of the Road; Playing Out the Historic (Mediocre) Trendline, continues the trend line that is currently derailing the world and, importantly, does not account for real-world shocks that arise periodically – the last three years included a global pandemic, recession, and a war in Europe – and therefore risks pushing the world onto a development trajectory that is more closely described by the next scenario, SSP3.

SSP3: Regional Rivalry – A Rocky Road; Nationalism and Security Rivalry, involves regional rivalry, requires making massive cuts to global living standards which are not politically feasible across large parts of the world, and delivers the lowest economic growth of all the scenarios despite the second highest level of emissions.

SSP4: Inequality – A Road Divided; Disunited, Unequal Progress Across World, warns of the danger of National Populists, describing a world divided where richer nations invest domestically in manufacturing employment, knowledge-intensive sectors and both high and low carbon energies, keeping as many local stakeholders as possible onboard, in the futile hope that they can be sheltered from global consequences of disasters, inevitably leading to the more fractious previous scenario, SSP3.

The world today appears to be on the equivalent of a muddled path that plays the middle road between competing demands, providing an unsustainable way ahead that is susceptible to event risk knocking the world onto a path of regional and national rivalry

SSP5: Going for Growth – Fossil-fueled Development – Taking the Highway, Unfettered Global Growth, is a high risk gamble on outpacing the world's challenges, with timely breakthrough innovations and massive capital deployment saving the world, in a bid to create one of the best outlooks for humankind in the 21st Century based on continued scaled exploitation of fossil fuels bearing the risk that the world ends up in the worst-case climate scenario.

The world has already made choices that appear to have placed it on the muddled middle path of SSP2, which this scenario analysis demonstrates places the world in a mediocre position, providing an unsustainable way ahead that is susceptible to event risk knocking the world onto a path of regional and national rivalry (SSP3). This, in turn, would create sharp divisions between the global north and south as well as within nations, and this looks much like where the world has already arrived at. It is unclear whether there is sufficient alignment among, and more critically prioritization of issues and solutions by world leaders today to make different choices.

4. SDGs Critical to All Scenarios

The SDGs are critical since they provide a global baseline of development for sustainable growth and avoid the negative trends and outcomes that are otherwise going to be increasingly apparent.

The SDGs, agreed by all 193 UN member states, are a shared blueprint to achieve peace and prosperity for people and the planet, underwriting the human security needed globally as a baseline for continued sustainable and equitable growth. However, achievability of the goals

Many environmentalists would prefer to drive the world to sustainability through sacrifices and this erroneously assumes that the world's citizens are willing to make them. Utilizing fossil fuels to go all out for growth and innovation on the other hand risks accelerating toward catastrophic climate impacts with no timely solution

depends significantly on which pathway the world progresses along. The world's current trajectory is failing to meet the goals, while scenarios that emphasize division and the primacy of national interests, such as SSP3 and SSP4, are likely to have a negative impact on the SDGs.

Many environmentalists would prefer is to drive the world to sustainability through sacrifice, SSP1, and this erroneously assumes that the world's citizens are ready to do so. Indeed, although citizens in rich western states, particularly in the EU, appear to understand the benefits that come from these sacrifices, there is little to

indicate that they would be willing to accept measures that negatively impact their living standards for a sustained period. It is estimated that to reverse fossil fuel consumption, society and living standards in the West would need to be rebased to that of 1970.¹¹

The only other scenario in which the climate transition can be effectively managed is SSP5, which goes all out for growth and innovation, and utilizes fossil fuels aggressively to do so. This scenario

bears the risk that the innovations do not materialize in time, while the world accelerates towards catastrophic climate impacts with no timely solution.

Achieving the SDGs is a challenge that remains currently unsolved. The translation of the SDGs from the agreement of nations into real world action plans has vexed policymakers, economists, industry, and finance for the last seven years. And in the face of the painful global transition underway and the resulting collapse of the world order in which the SDGs were formulated, achieving the goals by 2030 is in jeopardy without an overarching game plan that all can sign up to. This report looks for the answers to this important question.

In summary

- The world is facing a series of interrelated crises threatening geopolitical stability, economic prosperity, social order, the sanctity of national borders and the planetary ecosystem.
- These crises are a part of a series of longer-term transitions that ultimately lead to the destruction of the old fossil fuel-based world system, unless the opponents of progress manage to halt human progress.
- The world's disruptions have accentuated these transitions, politically with the emergence of a multipolar global order, technologically with the Digital Revolution and socio-economically and environmentally with the shift to global sustainability.
- This broader transition to the future is driving global shifts in the flow of capital, goods, people, and information that are reshaping societies, economics, and politics at the local and global level.
- The functionally superior world emerging from this transition has the potential to be both secure and sustainable, generating unprecedented levels of global prosperity, but that requires the global platform on which it is built to be more equitable, which points to the importance of the UN SDGs.

III. Achieving the SDGs: Current Gaps, Funding and Trajectories



Despite the SDGs representing only a baseline of sustainable development for the world – essentially a levelling up agenda for the Global South and the poor within richer countries to ensure that the benefits of future growth can be shared more equitably – the world is far off track in achieving their goals. Inaction, underinvestment, and the impacts of environmental, economic and security shocks on an insufficiently resilient world are pushing the goals further out of reach. Given these shocks, current levels of spending on sustainable development have not made a dent on the total funding need of US\$177 trillion, while the time to achieving the goals is running out.

1. The Global Plan for a Sustainable Future is Failing

Progress against the global goals has stalled, and in some cases has been reversed in recent years. This is putting the SDGs on a path to failure by 2030.

The adoption of the SDGs in 2015 by all 193 UN member states was a high-water mark for the world in terms of multilateralism and international coordination. By providing a comprehensive blueprint for peace and prosperity for people and the planet, the goals set out a shared transformational vision to shift the world onto a sustainable and resilient path. They were also supremely ambitious, seeking to build on the achievements of the more narrowly defined Millennium Development Goals and complete what these did not achieve in their own 15-year runway.

Critical Challenges Impeding Progress

At the mid-point toward the goals' 2030 target date, however, the outlook is bleak. At the current rate of progress, none of the 17 goals is on track to be achieved globally by 2030. Initially, there was slow but steady improvements across several goals, particularly related to poverty and health. However, meaningful progress has stalled since the outbreak of the pandemic, with interrelated economic, political and security crises having followed. The resulting challenges to progressing the SDGs have been myriad:

- I. **Geopolitical Rivalry and War has Destroyed Collaboration and Alignment.** Increasing divisions are inhibiting the coordination required to solve global scale development challenges. In addition to increasing US-Chinese competition over international economic influence, Russia's war with Ukraine has exposed further geopolitical fault lines – with five of the ten most populous countries in the world not joining the US and its partners in formally condemning Russia.¹²
- II. **Sustainable Development has been Politicized in 'Post-Truth' Narratives in Advanced Economies.** Critical support for the goals is increasingly fragile across many advanced economies. Climate action has become a partisan issue in the US, and the UK is reducing its foreign aid budget by up to 24% in response to both political and economic pressures.¹³ In this context, further instability in advanced economies risks undermining continued support of the goals.
- III. **Global Economic Slowdown is Driving Tradeoffs Impacting the Just Transition.** The global economic slowdown underway has redistributed advanced economies' political and financial capital towards domestic challenges, and away from global sustainable development. Despite having re-committed to the US\$100 billion annual target in climate finance for developing countries as recently as 2021, industrialized nations have yet to reach this goal. This is also a challenge in the Global North, where a just transition requires protecting those negatively impacted by the transition away from fossil fuels.
- IV. **Domestic 'Left Out' Populations are Growing.** Within individual countries, progress against the SDGs is often unevenly distributed across multiple dimensions, including gender, ethnicity, socio-education, socioeconomic status, regions, and urban-rural divides, to name a few. For example, mid-life 'deaths of despair' (from suicide, alcohol, or drugs) have more than doubled among working class white Americans over the past 20 years, while declining for every other ethnicity.¹⁴ However, the plight of such minority groups is often hidden in statistical averages that create blind spots for social engagement, policy makers and the deployment of capital.
- V. **Risk, Returns and Governance Requirements are Leaving Many Countries 'Uninvestable' for the Private Sector.** A significant portion of the world's sustainable development requirements are in regions and countries that rank among the world's most fragile,¹⁵

Meaningful progress has stalled since the outbreak of the pandemic, with interrelated recession, war and geopolitical rivalry taking leadership attention away from progressing the SDGs

most corrupt,¹⁶ and the most restrictive to foreign investment¹⁷. This makes them highly challenging for international private actors to engage with, with approximately half of the world's bottom 20 performers on the SDGs ranking also ranking among the bottom 20 in terms of global ESG rankings.¹⁸ Political risks, governance challenges, and physical security risks in these regions, in addition to economic challenges, inhibit the flow of goods, services capital, and expertise from advanced industrialized economies.

- VI. **Scaled SDG Financing is at Odds with Responsibilities of Financial Institutions.** The essential objective of capitalism is the generation of profit, not the solving of problems. Much of the funding required for sustainable development cannot generate returns at the level that investors require from private capital.
- VII. **During the Pandemic, Advanced Economies Mostly Abandoned the Global South.** While the coronavirus pandemic seems a distant memory to many people in advanced industrialized countries, its effect can still be felt across large parts of the Global South. The ensuing economic crisis has led to private financing shortfalls of US\$700 billion in these regions, as advanced economies prioritized domestic emergency response public spending.¹⁹
- VIII. **The Living Standards of the West are Consuming the Planet.** Advanced industrialized countries are consuming resources at unsustainable rates to maintain Western standards of living for their people. The US is consuming resources at five times the global sustainable rate, while the EU and Japan are consuming at closer to three times this rate. Today, the world can sustainably support global living standards similar to those experienced by the average person in India.
- IX. **Critical Scientific Breakthroughs Have Not Been Made.** While the SDGs were designed to be achieved with the technology available at the time, the world has since failed to make breakthroughs in areas of significant R&D investment. These include energy breakthroughs – with 80% of the world's energy needs still met by fossil fuels²⁰ - and innovations in material science with 50% of buildings globally still constructed with steel and cement, technologies over 2,000 years old.²¹.
- X. **Overfocus on Finance Instead of Solutions and Markets.** A substantial effort by multilateral organizations has called for financial institutions to use their balance sheets and investment assets to finance the world's problems. However, finance responds primarily to profitable solutions, marketable to clients. The focus needs to shift toward major corporations and entrepreneurs deploying products and solutions that can profitably achieve the SDGs.

Advanced industrialized countries are consuming resources at unsustainable rates to maintain Western standards of living for their people. The US is consuming resources at five times the global sustainable rate, while the EU and Japan are consuming at closer to three times this rate

These issues are real and remain unsolved, leading to the clock counting down inexorably towards 2030. The UN's own preliminary assessment is that none of the 17 SDG is currently on track, as highlighted in the figure below.

Figure 8: 2023 SDG Progress Overview

2023 SDG Progress Trends



Source: 2023 SDG Index

Further, the analysis shows that of roughly 140 /169 underlying targets for which data is available show only about 12% are on track. In addition, over half are moderately or severely off track, and nearly one third have either seen no movement or regressed below 2015 levels.

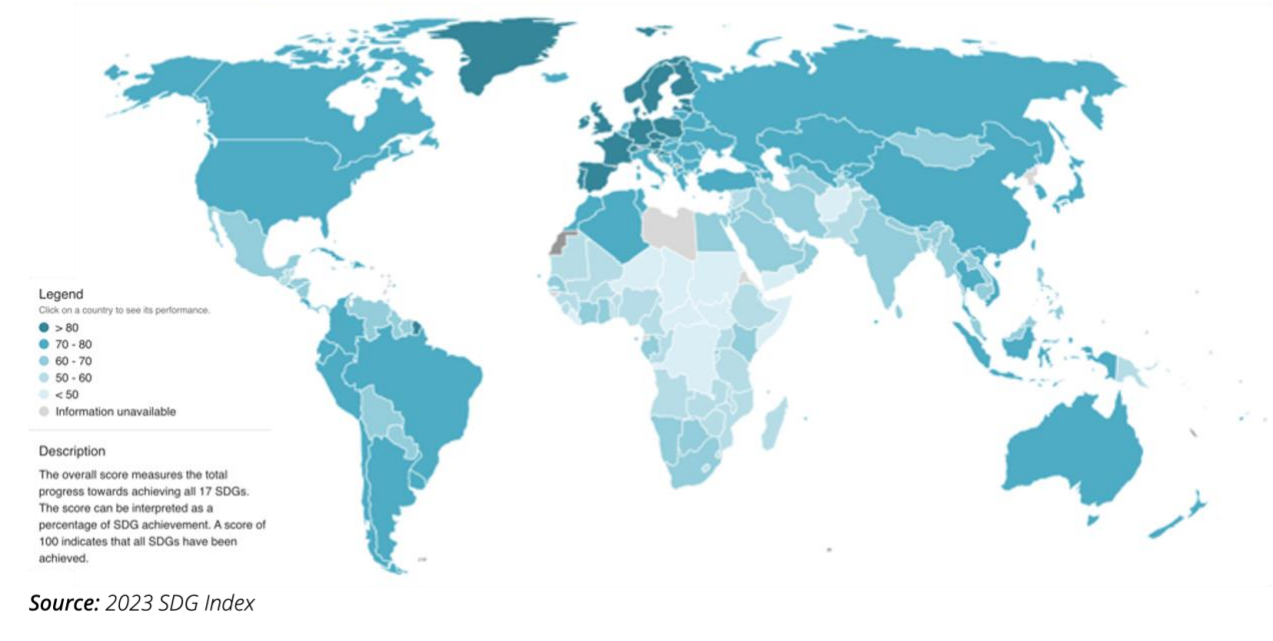
In many cases, the gaps are vast. Based on current trajectories, over half a billion people will still be living in extreme poverty in 2030, and almost 400 million children or young people will either be out of school entirely or leave it unable to read and write, against SDG targets of zero for each of these. Closing the gender gap in line with the SDGs is projected to take 286 years at current rates of progress, rather than the seven years remaining to 2030.

Country-Level View Highlights Significant Differences in Closing the Gap

The annual UN SDG Index is an assessment of each country's overall performance on the 17 SDGs, giving equal weight to each Goal, with the score signifying a country's position between the worst possible outcome (score of 0) and the goal being met (score of 100). The map below provides a global snapshot of SDG progress and illustrates well the ongoing discrepancies in development between regions.

Figure 9: SDG Gap by Country 2023

2023 SDG Progress By Country



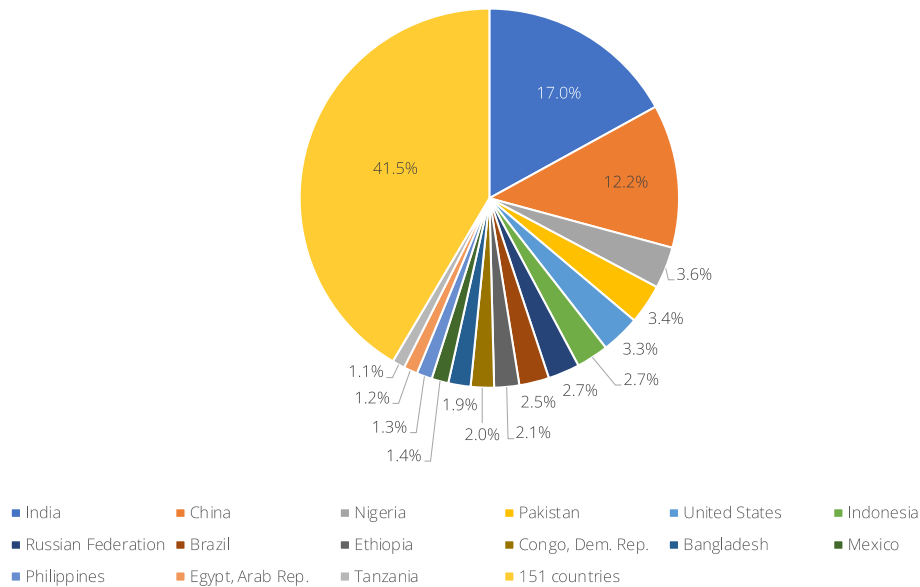
A cursory glance at the map highlights that scoring is not linear, and that an SDG Index of 50, achieved by places like Chad and Somalia, is not the halfway mark of meeting the goals. And the actual gap to meeting the goals faced by even the highest ranked countries in Europe is in many cases still a significant one. This fact only serves to exacerbate the discrepancy between the most and least developed countries in the world of course.

Key Countries Critical to Closing the Global Gap, India's Choices Become Strategic for World

However, this country-level view does little to indicate the size of the global gap in absolute terms, and therefore the level of resources that will need to be mobilized to close it. For example, Senegal and its neighbor Gambia achieve similar scores against SDG Target 4.6 (Universal Literacy), with c.75% literacy rates, but the former will need to educate more than six times the number of students as the latter to achieve the target given its larger population. Comparing the size of the SDG across countries gap (volume rather than percentage) reveals the enormity of the mobilization required in large poorer countries, in particular.

Figure 10: Size of SDG Delivery Gap by Country

SDG Gap by Country



Source: 2023 SDG Index, F4G

Unsurprisingly, the countries with the largest SDG gaps are also the world’s biggest and most populous countries, with the top 12 countries by SDG gap representing 11 of the 12 most

India is widely expected to enter a high growth phase that China has passed, wherein its GDP is expected to double by c.2030, and continue to rise to US\$30-50 trillion by 2050 ... This means India and its choices on how to grow become critical to achieving the SDGs for the world at large

populous and six of the 12 largest by landmass. These countries are the natural location for the deployment of scaled initiatives and solutions to address the SDGs. Among these countries, India and China stand out as the largest potential target regions for addressing the goals. Put differently, achieving the full spectrum of SDGs is very much dependent on India and China achieving the SDGs. India is widely expected to enter a high growth phase that China has passed, wherein its GDP is expected to double by c.2030, triple by the mid 2030s, and scale to US\$30-50 trillion by 2050 – putting

it on track to outgrow and catch up with the US and China, with a workforce bigger than both. This means India and its choices on how to grow become critical to achieving the SDGs for the world.

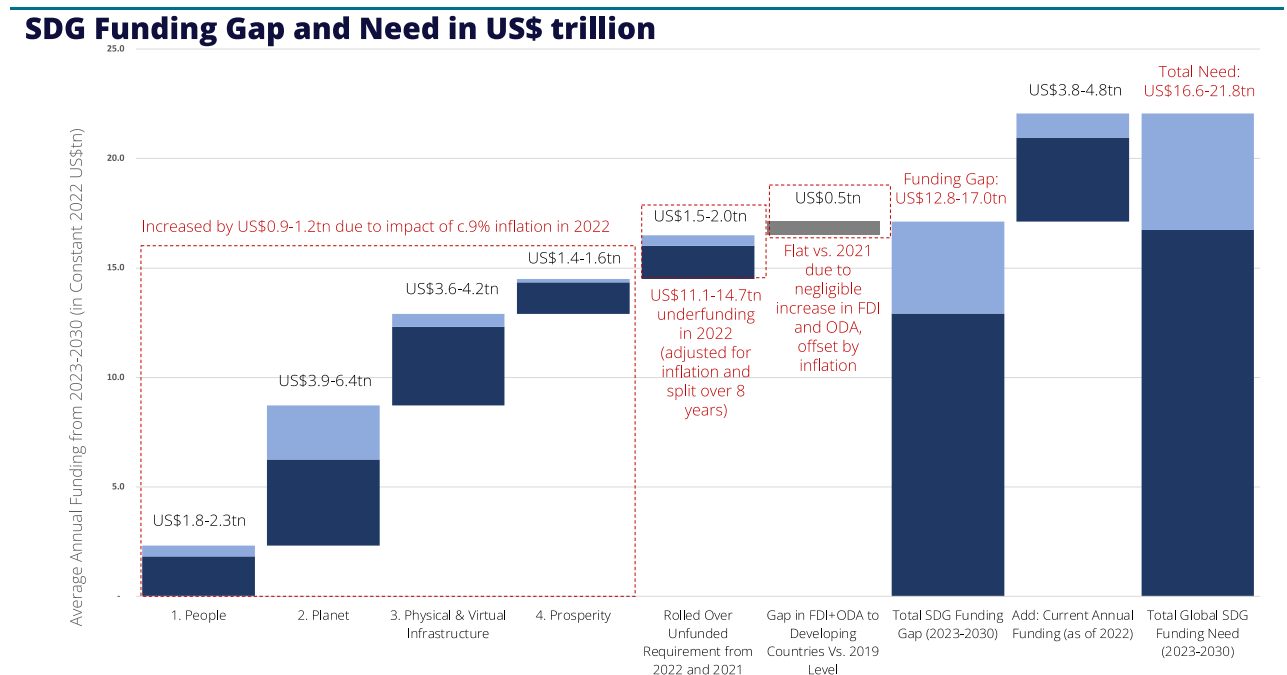
2. The SDG Funding Gap Risks Becoming Unbridgeable

Given the setbacks created by global environmental, economic and security shocks, the world's current level of spending on sustainable development is failing to impact the total SDG funding need, which remains unchanged from last year at up to US\$175 trillion, with one year less now available to achieve the goals.

The cumulative impact of the ten barriers to funding the SDGs listed above is significant. While the SDGs are, of course, about more than money, at their core, the SDGs represent an investment agenda, albeit for both non-financial and financial returns.

This study has once again re-examined the cost and the gap to delivering the SDGs, while considering major events over the past year. The world has spent US\$4-5 trillion on the SDGs last year, but given the macro-economic, environmental and security disruptions facing the world, this spending has not made a dent on the SDGs. With the total cost of the goals still up to US\$175 trillion, we are running to stand still, but with one year less to achieve the goals. The cumulative funding gap has also remained constant against last year, at US\$103-137 trillion through 2030.¹

Figure 11: Annual SDG Funding Need and Gap in US\$ trillion



¹ This gap is based on bottom-up estimates for spending requirements for the goals and does not factor in potential synergies that can be achieved by concurrently addressing interrelated goals.

The increase in the SDG funding gap and total need over the last year is primarily due to the following factors:

- I. **High Inflation.** Inflation globally increased to 8.7% in 2022 (vs. 4.7% in 2021), with c.7% inflation in advanced economies and c.10% inflation across emerging markets, on average²², driven by the war in Ukraine, an increase in food and energy prices, and continued supply chain bottlenecks. Inflation erodes the value of increases in SDG funding and compounds the overall requirement across all categories and increased the annual SDG funding gap by US\$1.0-1.4 trillion in 2022.
- II. **Chronic Underfunding.** Total funding for the SDGs is estimated to have increased by only 5.4-5.9% to US\$3.8-4.9 trillion in 2022, given the sharp slowdown in GDP growth globally in 2022 vs. 2021 when the world was recovering from the pandemic-induced lockdowns²³. This means that c.US\$11-15 trillion of the total SDG funding need in 2022 was not funded, which compounds on top of the 2021 underfunding, and gets further compounded by inflation. With each year of severe underfunding for the SDGs, the overall funding gap for the remaining years is quickly compounding to an unachievable quantum.
- III. **Foreign Investment and Aid to Developing Countries Still Well Below Pre-Pandemic Levels.** Foreign direct investment (FDI) and official development assistance (ODA) to developing countries declined by c.US\$0.7 trillion in 2020 due to the pandemic as countries turned their resources inward²⁴. While there was a partial recovery in 2021 with US\$0.2 trillion increase in FDI and ODA to developing countries, momentum reversed in 2022 with FDI and ODA to developing countries increasing by only US\$63 billion or 6% vs. 2021²⁵. As a result, after accounting for inflation, overall FDI and ODA to developing countries remains c.US\$0.6 trillion below pre-pandemic (2019) levels.

As a result of chronic underfunding, inflation and reduced FDI and ODA, the annual SDG funding

While wealth is necessary for achieving progress against the SDGs, after a point, progress requires an even greater level of commitment to solving the next range of challenges to make SDG progress and level up a country

gap has ballooned since 2021, increasing c.55-70% over just two years, from US\$8.4-10.1 trillion to currently US\$12.8 -17.0 trillion. The total funding gap through 2030, at US\$103-137 trillion, represents an almost insurmountable amount of money for the world to mobilize, particularly given the incremental trillions of dollars being spent globally on security, resilience, and recovery, given the disruptions that

have shaken the world. In essence, the cost of levelling up the world, and avoiding the dire consequences of failure, have been rising at a rate that may well mean that it is too late to succeed without radical measures and a different approach.

Figure 12: Summary of Other Recent SDG Funding Estimates

The UN has recently issued two updated estimates for the cost of the SDGs in developing economies, one focusing on the total funding gap in these regions, and one focusing on the per capita total spending need to meet the SDGs.

Developing Country SDG Funding Need. A study published by UNCTAD in 2023 looked at the total funding required (rather than just the gap) of meet the goals in developing countries, calculating a per capita annual cost of US\$1,839 in developing countries to achieve key SDG indicators.²⁶ While this study was developed using data from only 20 of the 152 developing countries in the world, applying this cost to the 6.8 billion people living in developing countries globally implies an annual cost of US\$12.5 trillion.

This figure broadly aligns with the lower end of the estimate in this report, whose US\$17-22 trillion total annual funding need includes [US\$3-4 trillion] of developed country spending that was outside of UNCTAD's calculations.

SDG Funding Gap Estimates. The World Investment Report 2023 (also published by UNCTAD) has estimated an SDG funding gap of US\$30 trillion, or US\$4 trillion annually.²⁷ UNCTAD's estimate is based primarily on capital expenditure for infrastructure projects required for nine of the SDGs (2,3,4,6,7,9,13,14, and 15). Accordingly, it

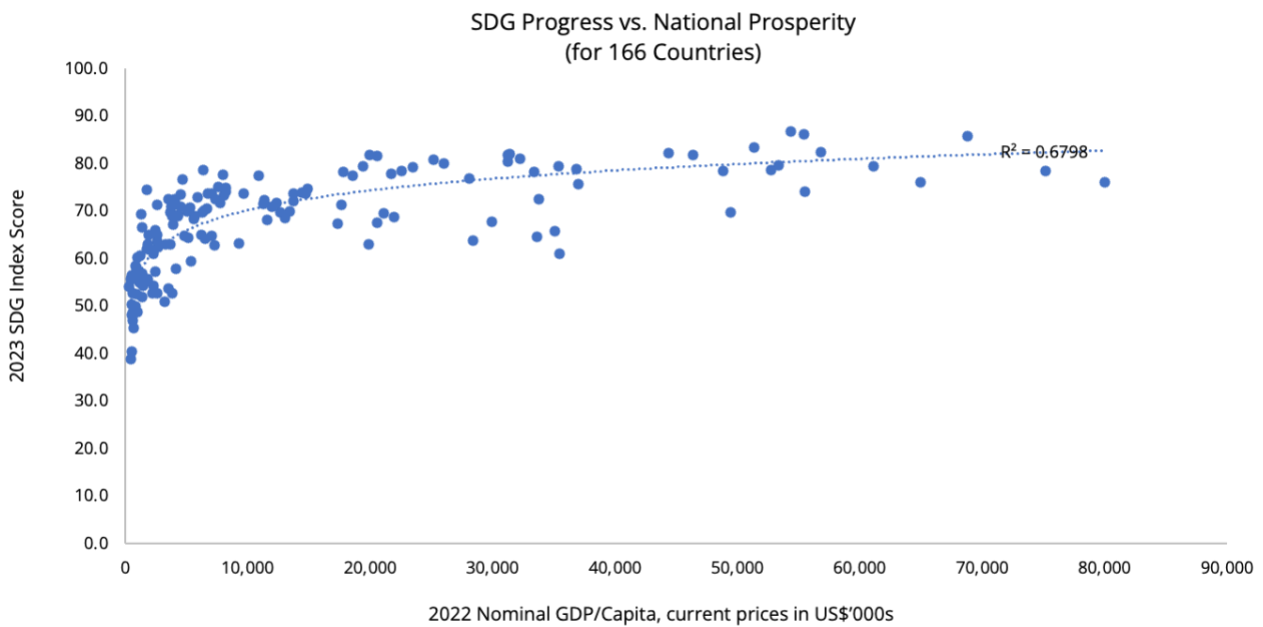
excludes the operational expenditure component of these goals, which UNCTAD states will be substantial, particularly in areas such as health and education. Further, being focused capital expenditure, the UNTAD calculation excludes estimates for delivering prosperity (linked to SDGs 1, 5, 8 and 10) that are also within the scope of this study, amounting to over a trillion of annual spending required for financial inclusion and social security.

The calculation in this report included both capital and operational expenditure for the goals as well as considering financial inclusion and social security spending requirements. As result, the funding gap calculated by the World Investment Report estimate is significantly lower than the US\$103-137 trillion calculated in this study.

In addition to nearly US\$137 trillion in capital, solving the SDGs requires a level of commitment to solving the root causes of inequities that even the richest countries do not seem able to muster. The progress of countries against the SDGs appears to rise with national prosperity (measured by GDP per capita) up to a global average GDP per capita of c.US\$13,000. Many countries with GDPs above this level have failed to make further progress in meeting the SDGs. For example, the United States, has made similar progress against the SDGs as countries such as Thailand and Bosnia & Herzegovina, despite being nearly ten times as wealthy. The chart below illustrates that while wealth is necessary for achieving progress against the SDGs, after a point, progress requires an even greater level of commitment to solving the next range of challenges to make SDG progress and level up a country.

Figure 13: Richer Countries Failing to Make SDG Progress²⁸

National Prosperity and SDG Progress



Sources: 2023 SDG Index, World Bank

3. The Consequences of Failure

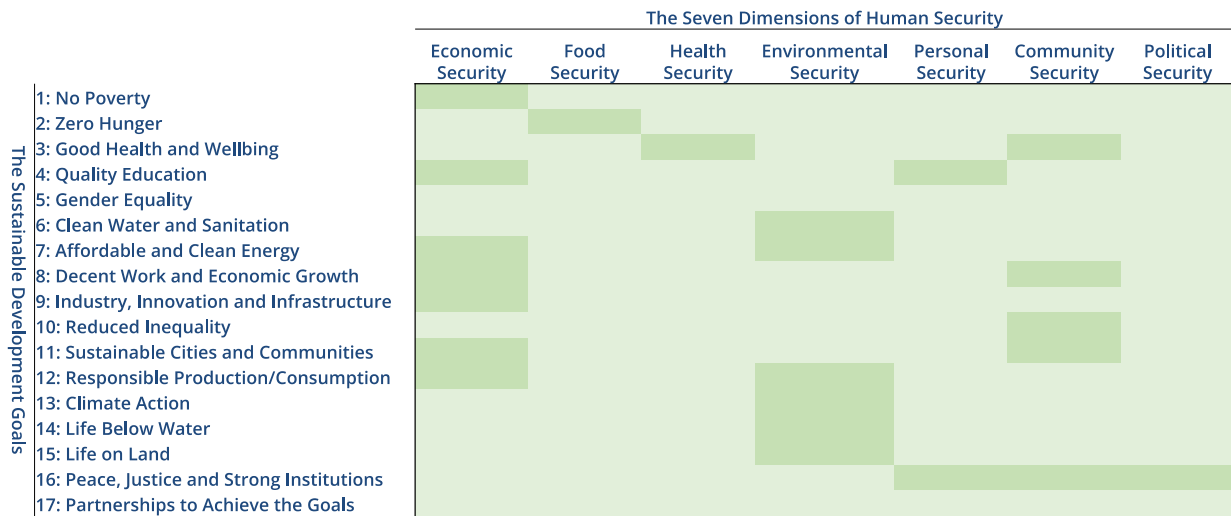
The UN, World Bank, IPCC, aid agencies, NGOs, various governments, and many others have warned of the consequences of failure to the planet, species, human suffering, societal stability, and global peace,

The world's failure to fully achieve the Millennium Development Goals²⁹ led to the United Nations becoming even more ambitious for the world and formulating the much more comprehensive and ambitious SDGs. This action was driven in part by optimism regarding what the world might achieve when working together, and in part by necessity, given the consequence of failing to level up the world.

Failing to achieve the goals has significant environmental, economic, and social consequences. Most of all, however, it has consequences for whether people flourish across the world. Given how closely the 17 SDGs are intertwined with multi-dimensional human security, their failure is primarily a security risk for the world.

Figure 14: Interrelated Nature of Global Security and Sustainability Goals

Security and Sustainable Development



Source: Capital as a Force for Good Initiative

The UN and international agencies have repeatedly warned the world of these risks, pointing to the cascading social, political, environmental and security consequences this would likely lead to.

Partial List of the Consequences of Failure



Climate Catastrophe. Based on current decarbonization trajectories, the world is projected to face a 0.75-meter rise in sea levels, an 8-12x increase in regional heatwaves, an up to 187% increase in regional wildfires, and a 30% increase in the global population at risk of flooding. *UN IPCC*



Global Water Crisis. "We now face the prospects of a 40% shortfall in freshwater supply by 2030, with severe shortages in water-constrained regions." *Global Commission on the Economics of Water (OECD)*



Mass Migration and Refugees. "1.2 billion people at risk of displacement ... living in countries where societal resilience is unlikely to be able to withstand the impact of their ecological threats between now and 2050." *Institute for Economics and Peace*



Global Species Extinction. "An average of around 25 per cent of species in assessed animal and plant groups are threatened [by human action] suggesting that around 1 million species already face extinction." *UNESCO and IPBES*



Education Gaps. "...Only 1 in 6 countries will meet Sustainable Development Goal 4 and achieve universal access to quality education by 2030. There will still be an estimated 84 million children and young people out of school by the end of the decade." *UNESCO*



Unbridgeable Gender Gaps. "At the current rate of progress...it will take up to 286 years to close gaps in legal protection and remove discriminatory laws, [and] 140 years for women to be represented equally in positions of power and leadership in the workplace..." *UN DESA and UN Women*



Ongoing and Persistent Poverty. "Given current trends, 574 million people—nearly 7 percent of the world's population—will still be living in [poverty] on less than US\$2.15 a day in 2030."

The World Bank



Economic Opportunity Cost. "Achieving SDG 5 (gender equality) alone could unlock up to US\$28 trillion for global GDP [over seven years]" or c.US\$3 trillion annually, mostly in developing countries *OECD and UNDP*



Political Impact. "Failure to redouble global efforts to achieve the Sustainable Development Goals may fuel greater political instability, upend economies and lead to irreversible damage to the natural environment." *UN*

The UN – in what it has called the "Decade of Action" – has emphasized the need for more capital to be dedicated to the SDGs, understandable given the widening funding gap. The SDGs clearly cannot be met without significant further investments. But it is equally clear that capital is not being directed in the areas required to close the gap. Indeed, the call for money is perhaps not the most important call to make first, given financing is not typically allocated based on need, but

on profitability, and mostly serving clients' demands. Achieving the SDGs therefore requires a call on owners of solutions to lead in finding opportunities to address the gaps, and secondly, owners of capital to fund these. In turn, financiers will be able to make different choices on the returns, risk and impacts they make with their investments, as well as the appropriate time frame required if the owners are willing to accept that. Of great importance is that an important factor in the reallocation of capital is the pricing of assets, for example on nature – which is particularly undervalued if not omitted in the investment decision – evidenced by the large costs of correcting for the negative externalities that we are now facing.³⁰

In summary

- None of the goals are set to be achieved by 2030 based on current trajectories, with over half the underlying targets off track and one third of targets deteriorating rather than improving according to the UN.
- The largest absolute gaps are unsurprisingly in the poorest and largest countries, and among these, India accounts for 17% of the total global SDG gap, and its rise with 1.4 billion people makes it a pivotal nation for determining whether the world achieves the goals.
- The total cost of meeting the SDGs has reached US\$132-175 trillion, of which US\$103-137 trillion remains unfunded.
- The failure of the world to achieve the SDGs will likely result in it levelling down, with cascading social, political, and environmental risks negatively impacting global security and sustainability.

IV. Stakeholders, Capital, and Resources



The cost of meeting the SDGs, at US\$136-176 trillion is rising faster than the world's current ability to generate wealth. However, with US\$440 trillion in gross liquid assets and over US\$100 trillion in global economic output, the SDGs fundamentally remain fundable. But while the world's wealth may today be more concentrated than at almost any point in human history, it is still spread across a disparate set of stakeholders and countless individual owners with a wide range of priorities, goals, and existing obligations. Mobilizing capital for the SDGs will require not just aligning the incentives of capital owners with sustainable development goals at scale, but also aligning the interests of all the stakeholders that play a role in how and where money flows across the world. This implies a role not just for the financial system, but for all the stakeholders in the system of global consumer capitalism that defines the world today.

1. Mapping All the Money in the World

While the growth of global wealth stalled in the past year, both the stock and annual flow of global capital continue to remain larger than the SDG funding need.

Mapping the trillions of dollars that define the major flows and stock of capital provides important insights to determine whether the necessary funds can be mobilized for the SDGs.

Mapping the world's capital highlights a number of critical stakeholders, including capital owners the generators of capital, financial hubs that host the capital markets, and the trading blocs and nations that set the terms of trade across the world and determine capital flows.

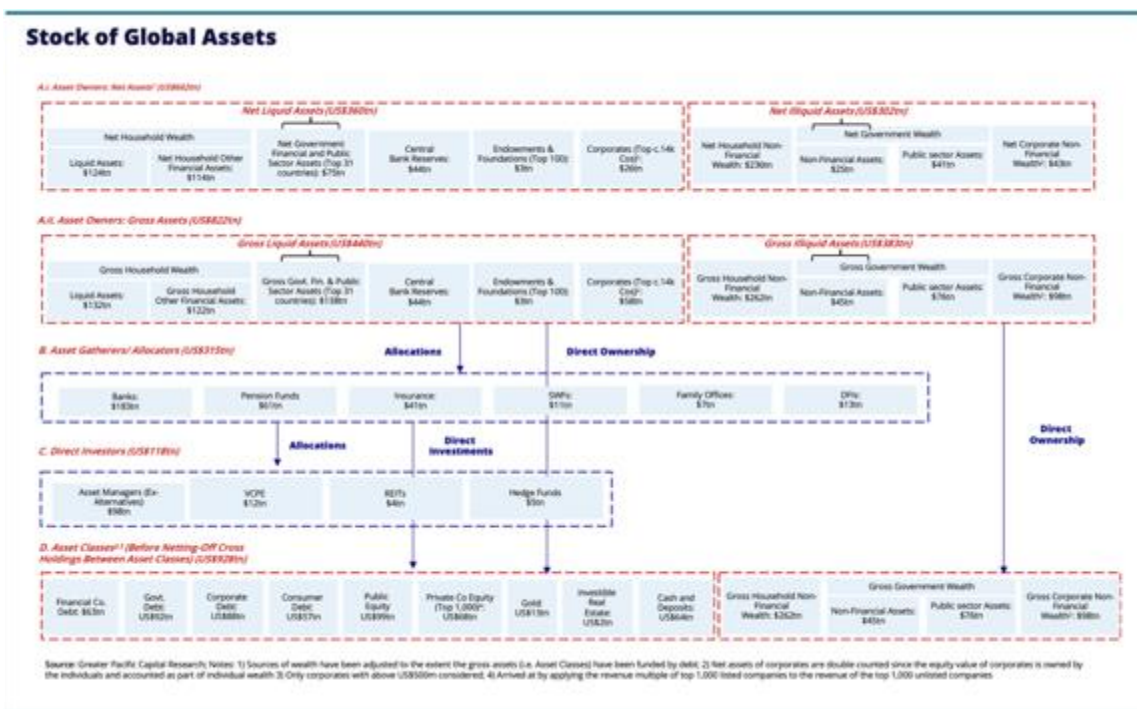
1. Capital owners and managers – The stock of global assets

Following more than a decade of rising global wealth, the growth of both gross global liquid (i.e., financial) and illiquid assets stalled at US\$440 trillion and US\$822 trillion respectively in 2022, declining 1% and 2% against the previous year.

The world's US\$440 trillion of financial (liquid) wealth is owned by households (owning 58%) and governments (42%), and 88% of this is managed by financial institutions. Corporations receive investments from these owners, directly and indirectly, and generate cash from their business activities to hold the equivalent of 13% of this capital on their balance sheets.

The figure below outlines the global stock of financial and non-financial assets as of year-end 2022.

Figure 15: The Stock of Global Assets 2022



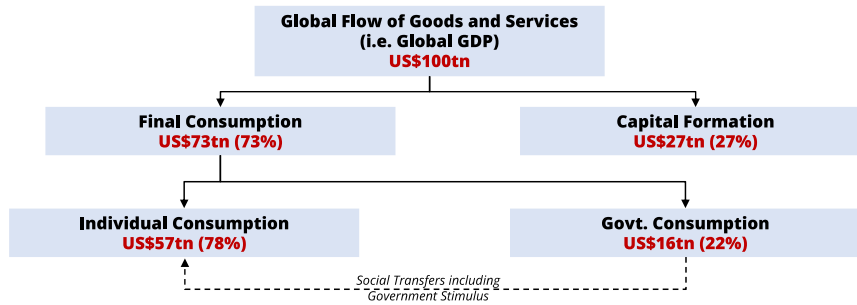
Generators of wealth – Creating economic output. Global economic output generating new capital crossed US\$100 trillion for the first time against a backdrop of global economic growth nearly halving to 3.2% GDP growth in 2022 compared to 2021. This is the weakest global growth profile in over two decades excepting the Global Financial Crisis of 2007-2008 and the acute phase of the coronavirus pandemic in 2020-2021.

Consumption of goods and services represents 73% of the value generated, and 27% is from investment. Households represent 78% of the total consumption (57% of the total US\$100 trillion).

Figure 16: Global Economic Output 2022

Agent of Change: Individuals

c.US\$100tn Global Flow of Goods and Services

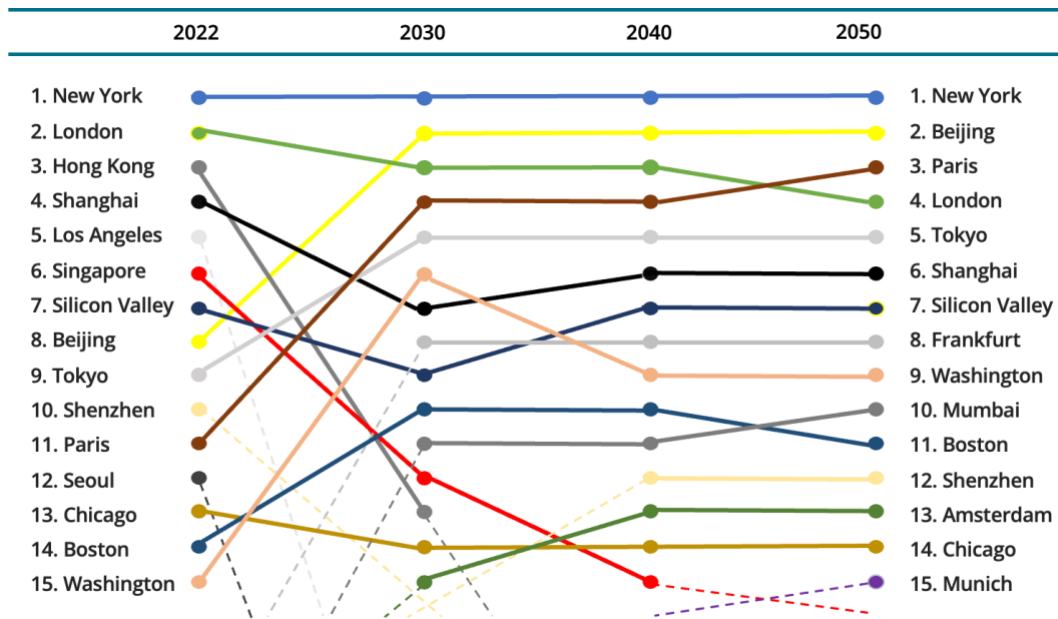


Source: Greater Pacific Capital Research; Notes: 1) Individual consumptions is the consumption by households and non-profit institutions serving households (NPISH)

2. Capital markets and financial hubs control investment flows

Today, global markets located in a few key financial hubs, New York, London, Tokyo and very few others, have concentrated much of the world's financial activity in the form of banking, asset management, insurance, and capital markets, and have therefore served as nerve centers for the global economy – in some cases since the beginning of the 20th Century. These flows are set to change as geopolitical and geo-economic power shifts across the world over the coming decades as the US, EU and China exercise their power, as India rises, and China consolidates control over its capital. As a result, many of today's hubs are set to become peripheral centers that support primary hubs. These primary hubs will regulate, innovate, and compete for capital to retain their powerful positions in the flow of global capital.

Figure 17: The Top 15 Global Financial Hubs 2022-2050



Source: FAG research

3. Powerful economic blocs control trading flows

The world's trade stood at US\$32 trillion, up from US\$29 trillion in 2021.³¹ Today, three powerful trading blocs control the trading landscape – the US, EU, and China – with the ability to decide the terms of trade for the rest of the world. Over the coming decades, this group is widely expected to grow to four, with India's current economic growth rate positioning it to achieve middle income status around 2040.³² These blocs decide many factors including regulation, specification, pricing, volumes, and other key metrics such as the sustainability and impact, of the products and services that they trade.

Figure 18: The Four Geopolitical Power Blocs to 2050

The US, EU, China and over time India, are power blocs that effectively determine the world's direction based on their current economic, demographic, security, and political characteristics:

- **90% of the global market** capitalization lies within their major stock exchanges
- **71% of global defense spending**, is made by these four, with the cumulative budgets of the five largest spenders outside of the four blocs representing less than 15% of global spend
- **64% of global GDP**, representing the blocs' share of global output
- **57% of global trade**, with US\$2.7 trillion of trade between the blocs
- **45% of the world's population**, with India and China the world's most and second most populous countries
- **38% of the world's arable land**, and 24% of total agricultural land falls within these blocs

4. Implications for Funding Secure Sustainability

Stepping back, the breakdown of the world's money offers several key insights for the funding of global security and sustainable development:

- The total cost of the SDGs to 2030 is approaching 40% of the current global financial wealth of the world (gross liquid assets) of US\$440 trillion.
- The finance industry, across its roles as asset owners, asset gatherers, allocators and as direct investors, administers 88% of the world's gross financial assets, or US\$315 trillion, however it does not own this money.³³
- Individuals own 57% of the world's gross liquid capital, and their consumption drives nearly 60% of the total value of global GDP and is (unevenly) spread over 5.2 billion consumers.
- Governments own 41% of government wealth, nominally spread across 195 countries, with the vast majority of wealth held by the richest countries.
- US\$196 trillion in total assets are directly controlled by corporations (other than financial ones), who make both liquid and illiquid investments based on the strategic priorities of their respective businesses.
- This capital is managed by, and flows from, a few major financial hubs across the world today, New York, London and Tokyo being the most significant. But this is expected to

change, with China exercising more control over its flows and India rising seeing two of the current three fall in position as a result.

- The terms of the world's US\$32 trillion of trade is decided by three trading power blocs today, the US, the EU, and China, over time adding India to the group.

Funding the SDGs will therefore require mobilizing the global stakeholders who own the capital, those that manage it, the corporations that receive it as financing for their activities, the hubs that host and regulate the international and domestic financial institutions that manage the flows, and the trading blocs that set the terms of the transfer of goods and services across the world.

2. Mobilizing Capital at Scale

Funding the SDGs requires stakeholders to reallocate existing investments, mobilize new capital and reprioritize spending across geographies, asset classes to fund energy, health, security, education, infrastructure, and other development priorities.

1. Funding Considerations

The total funding of US\$132 to 175 trillion required to achieve the SDGs represents up to 22% of the world's total wealth (US\$822 trillion), or up to 40% of the world's gross financial assets (US\$440 trillion).

- The global stock of capital needs to be redeployed to meet the SDGs. However, this capital is already deployed according to the wishes of its owners, individuals, and governments.
- Only a small fraction of the world's illiquid assets can likely be redeployed for sustainable development, particularly over the remaining seven-year timeframe, given that a significant portion (c.65%) of the world's illiquid wealth is held in the form of residential real estate.³⁴
- Much of the world's global financial wealth is required to pay for pensions and social security, finance infrastructure and existing public liabilities, and fund the lifestyles of the more than 3.5 billion people with sufficient discretionary spending power to be considered middle class.³⁵

On an annual basis, the total funding need of US\$17-22 trillion for the SDGs represents up to c.20% of global economic output (GDP).

- Taking money from the annual flow of capital requires consumption in particular to be redirected to products and services that benefit the SDGs.
- The total funding need surpasses the amounts spent globally on virtually anything, be it defense (2% of GDP),³⁶ education (5% of GDP),³⁷ energy or healthcare (both c.10% of GDP).³⁸

- However, a portion of SDG funding can be met by reallocating existing rather than incremental new spending. For example, the US\$10 trillion of global consumer energy spending in 2022 includes US\$4 trillion of net income for the oil and gas industry, 40% of which would be sufficient to close the US\$1.6 trillion annual funding gap for SDG7 Clean Energy and SDG13 Climate Action.³⁹
- Similar calculations can likely be made for areas such as healthcare, security, and infrastructure spending, among others, with the potential to reduce the incremental financing to be mobilized for the goals.

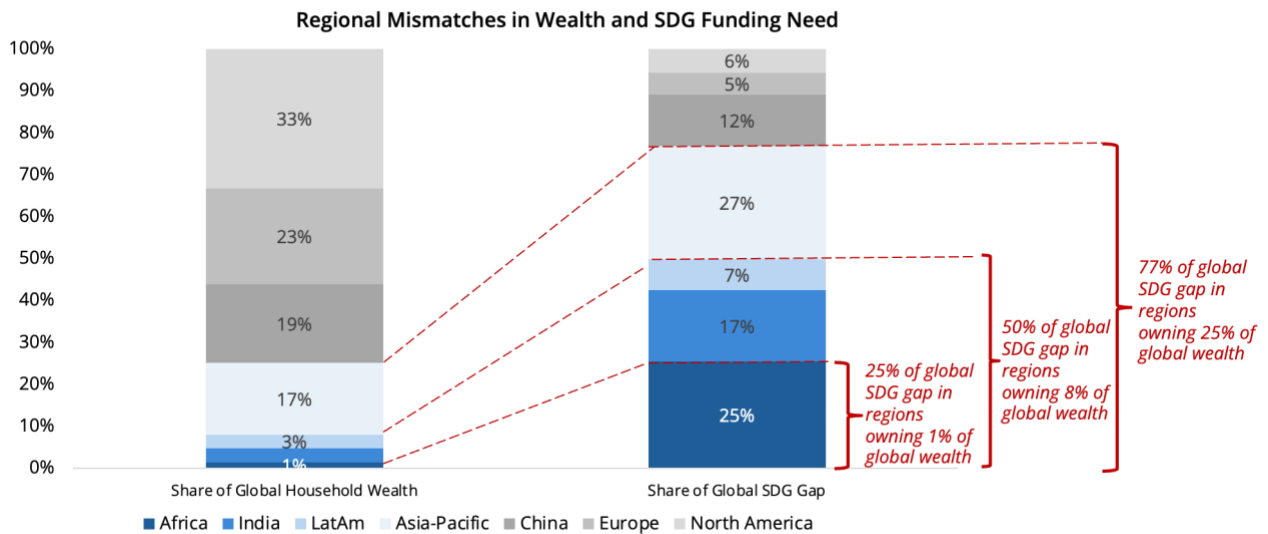
2. Geographic Considerations

Mobilizing capital for the SDGs implies globally unprecedented cross border flows, which were they to happen would have wide-ranging implications for the world's financial systems.

- The countries and regions with the largest development gaps and funding needs are precisely those with the least amount of capital resources. China today remains an exception, and while India's growth is generating significant domestic investment capacity, foreign capital currently has an important role to play in its development.
- Africa represents 25% of the global SDG gap yet owns only 1% of the world's household wealth. India is marginally better placed, with 17% of the global SDG gap and 3% of wealth, and Latin America and Asia-Pacific also have shortfalls.
- The vast majority of global assets are held and invested domestically, in rich nations. Global foreign direct investment in 2022 represented less than 5% of total investment activity, at US\$1.3 trillion,⁴⁰ and only 3% and 4% of this was invested in Africa and India, respectively.
- A similar imbalance holds true for economic activity, with developing and least developed countries generating 42% of global GDP but having 87% of the total SDG delivery gap.⁴¹
- As a result of these imbalances, between 66-75% of all SDG investment remains in developed economies, e.g., only 16% of the US\$1.6 trillion global clean energy investment in 2022 was allocated to developing countries.⁴²

Figure 19: Global Wealth Distribution vs. SDG Gap

Global Distribution of Household Wealth vs. SDG Gaps



Sources: UBS Global Wealth Report, 2023 SDG Index, F4G research

3. Asset Class Considerations

Mobilizing the world’s stock of capital for the SDGs requires a significant reallocation of funds not just across regions but also across asset classes.

- One third of the world’s liquid wealth of US\$440 trillion is currently held in asset classes not, or only marginally, suited to advancing the SDGs. US\$80 trillion of assets are held in cash, deposits, and gold, and can only impact the SDGs through direct spending rather than investment, making their utility a matter of charity or philanthropy. US\$100 trillion in public equities also have only a limited impact on sustainable development, given that more than 99% of them are held in existing stock, rather than providing funding directly to companies.^{43 44}
- A significant portion of the world’s US\$300 trillion of debt would need to be re-issued to deliver SDG impact, having funded governments and corporations with no or only minimal presences in regions where SDG investment is required.
- US\$12 trillion of capital managed by the global private equity industry,⁴⁵ is allocated to specific investing strategies, industries, regions, and other requirements, which would need to be renegotiated between managers and investors for capital to flow to the SDGs.

Mobilizing capital for the SDGs therefore requires both the profitable redeployment of significant existing financial wealth from rich nations to poorer ones, which in turn requires addressing multiple challenges, including a lack of attractive investment opportunities, mandate restrictions, and country specific environmental, social and governance risks.

3. Mobilizing Global Stakeholders

The System of Capitalism and its Stakeholders

The conundrum facing the world is that the huge stock of US\$440 trillion of financial wealth and US\$100 trillion of annual economic activity is likely to prove near impossible to deploy for the SDGs and security for all without the alignment of the world's major stakeholders. Creating this alignment requires understanding the levers of the system in which this capital is generated and allocated.

Figure 20: Stakeholders in Capitalism



- Households consume and aspire to further increase their consumption of almost everything.
- Corporations produce the products and services being demanded.
- The finance industry facilitates the investment required to create these products as well as the commerce to deliver them to consumers.
- Governments, and the states that they run, succeed, or fail based on their ability to keep the system running smoothly.
- Other stakeholders like the media, academia, and the scientific community also have their incentives aligned with increasing consumption and play their own parts accordingly.
- Further, all of the world's major institutions, its supply chains, financial networks, transnational organizations, and others have been designed to keep the system running as smoothly as possible.

The key elements of the modern system of consumer capitalism are as follows:

1. **No one player decides for the whole.** There is no world government or transnational organization that can command resources, financial or otherwise, by fiat. The world's total wealth, estimated at US\$822 trillion, while more concentrated than at any time in the past century, is still held by countless individuals and organizations, both public and private, all of whom interact with one another as stakeholders in a complex system.
2. **System is designed for profit generation.** While this system's political and social dimensions vary across local contexts, its core mandate is to protect capital and produce profits appropriate for different levels of risk appetite, and it has been effective at generating US\$100 trillion of economic output in the last year alone.
3. **Multi-stakeholder power-sharing and Interdependence feature.** Given their pre-eminence as both allocators of capital and generators of economic value, the key stakeholders in the global economy today are households, governments, the finance industry, and the rest of the corporate sector, with households and governments being the owners of the world's US\$440 trillion of gross liquid capital.

4. **Markets are the means of engagement.** Markets are the primary mechanism through which the system's stakeholders engage with one another for commercial transactions with global equity capital markets of c.US\$100 trillion, debt capital markets of US\$130 trillion and annual global trade markets of US\$32 trillion, have proven to be an effective method of resource allocation over the long-term, however the matching of supply and demand is ultimately based on the actions and choices of the market participants.
5. **Value is determined by the choices of participants in the market.** Funding the goals and closing the gap of up to US\$137 trillion, would require the world's stakeholders to place value, individually and collectively, on the benefits that the SDGs bring, in a manner that accurately prices the estimated c.\$25 trillion in annual externalities not currently captured financially, externalities that are leading to the misallocation of resources.
6. **Behaviors are deeply entrenched.** States pursue geopolitics, the private sector pursues profits, and households pursue increasing consumption. Even the global fallout of the polycrises unfolding appears to have been insufficient for much of the world to reconsider its priorities, despite the best efforts of the UN and a growing number of activist organizations around the world trying to raise awareness of the underlying issues, build alignment between stakeholders and mobilize resources for action. This implies that stakeholders' priorities may well require a radical jolt to engender change, with a potentially heavy cost for the world.

The Challenge of Multi-Stakeholder Managed Change

High pain threshold, denial of science. The trap the world is stuck in is a trap whereby avoiding a radical jolt and the associated negative impacts requires managed change which seems unlikely without a radical jolt and some dire consequences. One lesson from the Covid-19 pandemic is that even 15 million excess global deaths in two years are not enough to align everyone around the need for action, with 11% of the US population believing that individual freedom outweighs the common good in all circumstances.⁴⁶ And while 99% of climate science papers posit that climate change is anthropogenic, only 57% of Americans believe that global warming has human causes.⁴⁷

Power bloc rivalry. As stated above, no single stakeholder or organization today is powerful enough to manage and mandate the level of change required to address the challenges. Any managed change therefore will need to be a multi-stakeholder effort, driven by a concentrated set of the most powerful global stakeholders. There are three such potential stakeholders in the world today, with a fourth one emerging: the United States, the EU, China, and increasingly India too. Collectively these four blocs account for approximately two thirds of the world's GDP, capital markets and defense spending, and approximately half of global trade and world population. However, three of these blocs increasingly see the other, China, as a major threat to their security.

Lack of trust leads to lack of leveraging strengths of power blocs. Each of the four blocs has individual assets and strengths on which to draw on of course: for example, the United States has the

Even 15 million excess global deaths in two years are not enough to align everyone around the need for action, with 11% of the US population believing that individual freedom outweighs the common good in all circumstances. And while 99% of climate science papers posit that climate change is anthropogenic, only 57% of Americans believe that global warming has human causes

world's largest economy and financial markets, influencing capital flows, the EU is the world's largest trading bloc, influencing the rules and standards of trade, China is the world's largest manufacturer and the top trading partner of more than 120 countries, particularly in the Global South, providing it with significant bilateral influence, and India is the most populous country in the world, and one of the fastest growing ones too, making it a growing consumer and strong destination for sustainable development investments. However, bringing each of these strengths requires mutual respect and acceptance of the value of each player, which seems

to have declined in the last decade, with for example 71% of surveyed global populations seeing China negatively on contributing to global peace and security.⁴⁸

Sustainability pursued individually as a domestic issue for each bloc, rather than together as a global endeavor. There are many levers that these four blocs would need to draw upon to realign the world's current system of capitalism towards sustainability, including influencing the values and priorities of the stakeholders, providing external incentives (both positive and negative) that shape their choices, redistributing resources and changing public spending budgets, among others. However, to date there has been little meaningful collaboration between these blocs on the question of sustainability. While there are global organizations governing everything from trade (the WTO), through financial stability (the IMF) to intellectual property (the WIPO), there is no global environmental authority, or one focused on climate change.

The future will be determined by the United States, China, the EU, and increasingly India. Collectively these four blocs account for two thirds of the world's GDP, capital markets, and defense spending, and approximately half the world's trade and population

Political costs and national priorities can weigh against doing the right thing internationally. Any commitment to international action by the power blocs needs to be weighed against domestic (and often electoral) priorities, and its cost carefully considered. Proposed actions like taking leadership in climate action or funding sustainable development in the Global South have political, financial and economic implications at home, which disproportionately impact the weakest and most fragile members of society, increasing pressure on the blocs to manage a just transition not just internationally, but domestically as well.

Alignment on the role of a mix of international regulation and markets, competing and collaborating. At one extreme, the EU leads the world in terms of sustainability regulation and legislation, whose Sustainable Finance Framework has led to the introduction of far-ranging regulation covering due

diligence, reporting, taxonomy, and disclosure requirements for the 50,000 companies active in the bloc, thereby shaping investor and corporate behavior within and beyond its borders. At the other, the US, by comparison, has traditionally taken a free market approach to sustainability, with sustainable finance driven by market participants seeking business opportunities. More recently the US has deployed a powerful package of positive incentives to drive sustainable investment, committing to deploying US\$783 billion in climate spending through the Inflation Reduction Act,⁴⁹ which is projected to unlock a total of US\$3 trillion of climate investment in the coming years. While this caused concern in the EU that they would lose out to the US, the current US administration's policies has accordingly begun to align the US and EU approaches to sustainability on a mix of markets and incentives.

These features of the current state of the world order make it very challenging for the world's leading countries to mobilize the capital and resources required to meet the SDGs and to do everything needed to achieve them.

In summary

- The US\$132-175 trillion total funding need for the SDGs represents c.40% of the world's gross liquid assets. On an annual basis, the total funding need for the SDGs represents c.20% of the global economic output (GDP) of US\$100 trillion.
- Accessing these funds requires mobilizing not just capital owners and allocators but also private sector corporations and their investment decisions, the hubs through which global capital flows, and the trading blocs that set the terms of the transfer of goods and services across the world.
- The global financial sector administers 88% of the world's gross liquid assets, although its discretion to allocate this capital varies significantly. Individuals and governments own and ultimately allocate (along with the private sector corporations) the world's financial wealth.
- Funding the SDGs would require the world to reallocate existing investments, mobilize new capital and reprioritize spending across geographies, and asset classes, which cannot happen without these stakeholders agreeing to do so, an agreement for which global stakeholders are not currently aligned.

V. Finance Industry Leaders Increasing Sustainability Impact



The global finance industry is continuing to step up its efforts to establish a common ground for sustainable finance and private sector sustainability engagement. However, its efforts have faced severe attacks in some markets which have led to delays in pursuing goals, retrenchment, and some loss of leadership in the mission to drive sustainability. Among industry leaders the Active Participants in the Force for Good Initiative are engaging broadly across ESG sustainable finance, and stakeholder engagement, to raise the bar for the wider industry.

1. An Expanding Common Ground

Since its inception in 2020, the 'Capital as a Force for Good' report has analyzed finance industry's leaders' positioning across three elements as indicative of acting as a 'force for good', namely ESG, sustainability and stakeholder engagement, to map the common ground across the sector. The following analysis provides a snapshot benchmarking 125 leading global financial institutions across major global regions and industry subsectors, with assets totaling US\$190 trillion, examining how the finance industry is playing its role in allocating capital as a force for good in support of the SDGs and broader sustainability related goals. The list of companies underlying this analysis can be found in Appendix 2ii.

The Common Ground

Between Finance Industry Leaders

125 global financial institutions across classes

US\$193 trillion of total owned and managed assets



Mindful Conduct – ESG

The adoption and integration of ESG considerations into business processes to minimize any potential harm

| ESG Practices of Finance Industry Leaders | % of Firms | % of AUM |
|--|------------|----------|
| Have an ESG policy in place | 99% | 100% |
| Report on ESG and sustainability to shareholders | 99% | 100% |
| Track and report ESG and sustainability KPIs & metrics | 97% | 98% |
| Have a publicly-disclosed ESG exclusion criteria | 97% | 98% |
| Are a member of at least one international framework to track and report GHG emissions (TCFD, CDP, SASB) | 95% | 98% |
| Are a member of the UN-PRI or UN Global Compact | 90% | 96% |



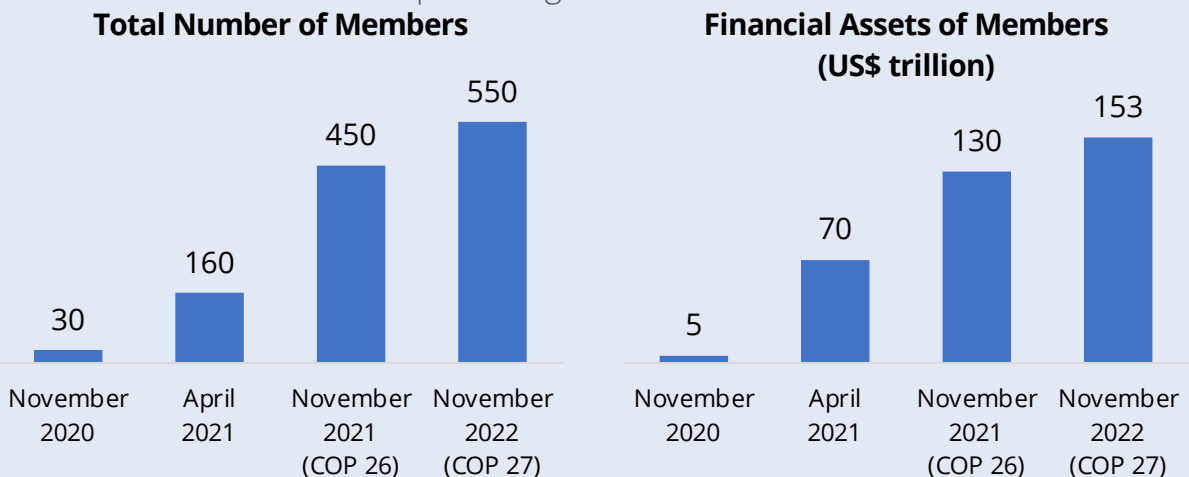
Caring for the Planet – Sustainability

Driving sustainable development through the core business by channeling capital towards the SDGs



94% of finance industry leaders have explicitly committed to achieving Net Zero emissions by 2050

Overall Membership of Glasgow Financial Alliance for Net Zero



Source: Glasgow Financial Alliance for Net Zero, Progress Report



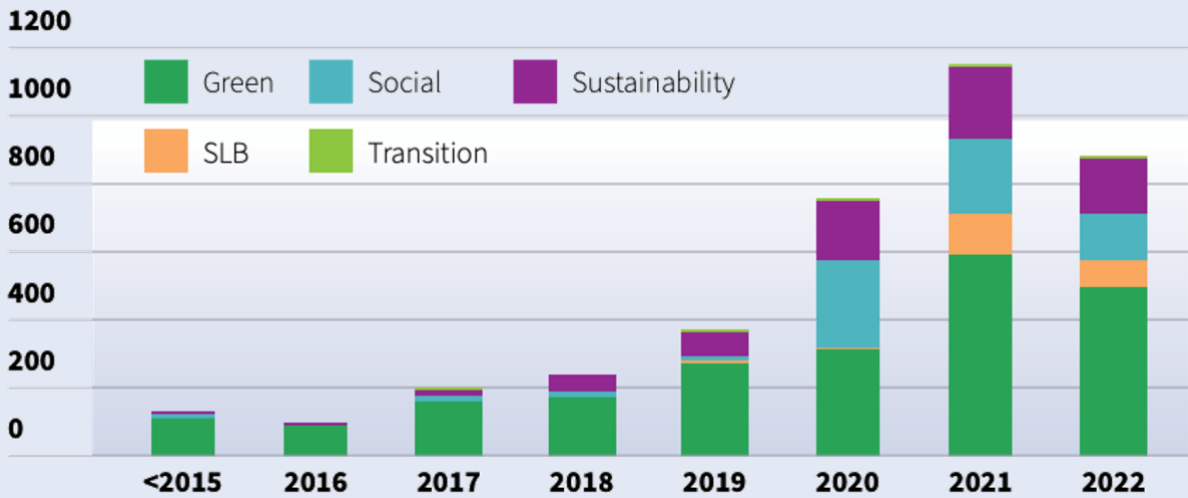
Caring for the Planet – Sustainability (continued)

Driving sustainable development through the core business by channeling capital towards the SDGs



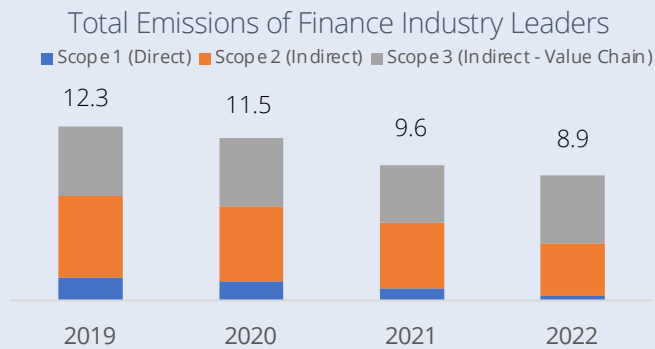
88% of finance industry leaders publicly disclosed their sustainability-linked financing in 2022

Total Annual Sustainable Debt Issuance (US\$ billion): 2013-2022



Source: Climate Bonds Initiative, Sustainable Debt: Global State of the Market 2022

95% of finance industry leaders track and report their GHG emissions



28% reduction since 2019



Compassion for All – Stakeholder Engagement

Engaging various stakeholders including employees, customers, communities, governments, civil society, and others

44% of aggregate employee base is comprised of women

33% of board of directors are comprised of women

Stakeholder Initiatives by Industry Leaders

| Stakeholder Initiatives by Industry Leaders | % of Firms | % of AUM |
|--|------------|----------|
| Have publicly-committed to working in the interests of multiple stakeholders | 97% | 98% |
| Have implemented programs and initiatives to engage employees | 96% | 97% |
| Have implemented programs and initiatives to engage local communities | 94% | 95% |

Highlights

- **Comprehensive ESG policies Becoming Universal.** The adoption of comprehensive ESG policies that govern investing and capital deployment activities have become near universal in nature, importantly also including the setting of ESG performance targets that are both measured and reported against, with alignment on definitions increasing.
- **Increasing Commitments to 2050 Net Zero Across the Finance Industry.** 94% of industry leaders have committed to achieving Net Zero emissions across their operations and investment portfolio by 2050, an increase of 10% against the previous year, recognizing that more aggressive targets are required to meet the Paris goals.
- **GHG Emissions Reporting Reaching Approaching 100%.** The percentage of finance industry leaders reporting on their operational and increasingly on portfolio level emissions has increased from 86% last year to currently 95%, with leaders continuing to reduce their overall emissions footprint as a result.
- **86% of Industry Leaders** measure and report their direct and indirect emissions in line with globally expected standards, making it the market standard for large financial institutions, although the industry has to go much further to significantly decarbonized their portfolios to date.
- **Sustainable Finance Activity Impacted by Macro.** Issuances of sustainable debt, the largest category of sustainable finance, dropped 24% in 2022, mirroring the broader drop in debt capital markets driven by increased macro-economic uncertainty and rising interest rates during the year, with sustainable issuances in 2023 expected to recover.
- **Stakeholder Engagement Continuing to Rise.** The percentage of industry leaders committed to working in the interests of multiple stakeholders already crossed 95% in 2021, engagement of employees rose to 97% from 91% the year before, and communities hit 95% up from 84% the previous year, but companies need to follow up with impactful measurable initiatives that actively engage specific stakeholders.

The picture emerging from the 125 companies analyzed is of an increasingly solid common ground of policies and priorities that, having previously been adopted by a significant majority of companies, are now becoming near universal, shifting what has previously been a market standard to a de-facto requirement expected by customers, employees, and other stakeholders. However, for this engagement to translate into increased capital mobilized for sustainable development, will require addressing a series of challenges facing sustainable finance, including:

1. **Addressing Macro-Volatility.** Sustainable investment strategies will need to demonstrate their ability to generate superior returns across macro-economic cycles and in times of volatility, with many strategies having struggled to outperform in the past year given high energy prices and increased interest rates.
2. **Rising Political Risk of ESG.** The topic of ESG has become 'weaponized' in the US, the world's largest financial market, where Republican states have withdrawn billions in public

funds from asset managers embracing ESG, while pressure from state insurance commissioners has led six of the eight founding members of the Net Zero Insurance Alliance to quit the group, calling into question its continued viability.

3. **Increasing Regulation.** At the same time, the level of regulation of sustainable finance and corporate sustainability in general, continues to rise, particularly in the EU, creating a higher standard and a far greater chance of achieving the goals but also creating additional cost and complexity for companies looking to raise and deploy funds aligned with sustainable development.
4. **Lack of Common Standards.** The lack of standardized and recognized metrics for sustainable activities for the finance industry has resulted in the use of a wide range of frameworks, with no single system having a clear majority. This has a negative impact on effective ESG disclosures, creating risks for participants and damaging credibility as well as inhibiting the execution of sustainable investing strategies.
5. **Lack of Data Availability.** Further, many companies, particularly in developing markets with the greatest sustainable development need, lack access to the data required to diligence, underwrite, and monitor sustainable and impact investments, further inhibiting the deployment of capital.
6. **Mismatch Between Development Needs and ESG Requirements.** Further, many sustainable investing strategies penalize the Global South for its higher ESG risks, with c.60% of developing countries' sovereign credit ratings now negatively affected and imposing increasing their cost of capital and reducing their ability secure funds, bearing in mind that ESG labels risks that pre-date the term 'ESG' itself.
7. **Lack of Attractive Investment Opportunities.** Finally, much of the world's sustainable development needs are still not suitable for private sector investors, failing to generate appropriate levels of risk-adjusted returns to meet the mandates of global investment managers.

2. Active Participants Increasing Sustainability Engagement

Of the 125 companies analyzed, 29 companies (listed in Appendix 2ii) are 'Active Participants' that have actively engaged with the Force for Good Initiative, variously providing additional information, engaging directly with the project team, and participating in multi-stakeholder forums organized by Force for Good. These Active Participants collectively represent c.US\$69 trillion in total owned or managed assets, representing more than a third of the total dataset's assets. A summary of the ESG, sustainability, and stakeholder engagement metrics of this sub-set of companies further points to the ubiquity of the emerging standards in the industry.

The Common Ground

Between Force for Good Active Participants

29 leading global financial institutions across classes

US\$69 trillion of total owned and managed assets



Mindful Conduct – ESG

The adoption and integration of ESG considerations into business processes to minimize any potential harm

| ESG Practices of Finance Industry Leaders | % of Firms | % of AUM |
|--|------------|----------|
| Have an ESG policy in place | 100% | 100% |
| Report on ESG and sustainability to shareholders | 100% | 100% |
| Track and report ESG and sustainability KPIs & metrics | 100% | 100% |
| Have a publicly-disclosed ESG exclusion criteria | 100% | 100% |
| Are a member of at least one international framework to track and report GHG emissions (TCFD, CDP, SASB) | 100% | 100% |
| Are a member of the UN-PRI or UN Global Compact | 93% | 99% |



Caring for the Planet – Sustainability

Driving sustainable development through the core business by channeling capital towards the SDGs



100% of finance industry leaders have explicitly committed to achieving Net Zero emissions by 2050



Compassion for All – Stakeholder Engagement

Engaging various stakeholders including employees, customers, communities, governments, civil society, and others

42% of aggregate employee base is comprised of women

33% of board of directors are comprised of women

| Stakeholder Initiatives by Industry Leaders | % of Firms | % of AUM |
|--|------------|----------|
| Have publicly-committed to working in the interests of multiple stakeholders | 100% | 100% |
| Have implemented programs and initiatives to engage employees | 100% | 100% |
| Have implemented programs and initiatives to engage local communities | 100% | 100% |

With virtually all these industry leaders having adopted what is emerging as the standard package of sustainability practices and policies outlined above, much of the companies' own attention has shifted to the execution of specific initiatives and programs across the ESG, sustainability and stakeholder engagement. Active Participants are currently pursuing a diverse number of high impact projects across these areas, setting ambitious targets for their own organizations, and setting the bar for the rest for the finance industry to rise to.

The 2022 Capital as a Force for Good Report identified strategies emerging from Active Participants' initiatives and engagement at the time. In the past year, many Active Participants have further stepped up their efforts, increased the scope and scale of existing initiatives, launched new ones, and even shifted their strategic focus towards greater sustainable finance. The common thread of these strategies is their emphasis on generating and capitalizing on business opportunities associated with the SDGs, alongside a deep organizational commitment to sustainability in general. Five evident strategies are:

- I. **Breaking New Ground, and Ploughing It.** Leading global financial institutions have been making trillion-dollar commitments toward financing sustainability in general and the SDGs in particular, breaking new ground in terms of scale for private sector sustainability engagement. These companies are now executing and deploying increasing sums of capital against these commitments. Examples include:
 - JP Morgan Chase, which has achieved US\$482 billion of its US\$2.5 trillion sustainable finance 2030 target.
 - Goldman Sachs, which has dedicated US\$475 billion to ESG projects, against a goal of putting US\$750 billion toward sustainable finance by 2030.
 - Citigroup, which has achieved US\$350 billion of its US\$1 trillion 2030 sustainable finance target.
 - HSBC, which has committed US\$1 trillion to helping its clients transition to net zero.
 - Wells Fargo, which has mobilized US\$129 billion of its US\$500 billion in sustainable finance 2030.

- II. **"Natural Impact" Financial Institutions.** Some financial institutions operate scaled businesses in financial products that naturally drive impact, like insuring against climate risks or affordable housing. Many of these institutions are further scaling their efforts to deepen their impact or widening it through increasing their focus on related ESG topics. Examples include:
 - HDFC Bank, which has issued the world's largest social loan, at US\$1.1 billion, to fund affordable housing in India.
 - Bank of America, whose Community Development Bank has provided US\$7.9 billion in affordable housing and other community finance in the past year.
 - Japan Post Holdings, which manages 24,000 post offices across the country and is helping to drive its transition to renewable energy.

- Liberty Mutual whose insurance provides security to families and businesses, is extending its impact through proactive community engagement, including with partnerships to address youth homelessness.

III. Addressing the 'Hard to Do' Sustainability Objectives. Some of the initiatives of financial institutions are focused on impact targets which are hard to execute against, either because of technical limitations or the because of a lack of viable private sector funding pathways. These institutions are developing new models that leverage innovation to create strong business cases for challenging sustainability objectives. Examples include:

- Credit Suisse's multiple-debt-for-nature swaps, which unlock scaled funding for conservation activities in developing countries.
- Morgan Stanley' plastic waste resolution, which has facilitated the prevention. removal, and reduction of 13 million metric tons of plastic waste from entering the environment and landfills, against a 50-ton target.
- Fidelity's Sustainable Biodiversity Fund, funding companies across the value chain in facilitating solutions with the potential to reduce biodiversity loss.

IV. Converting Assets to Sustainability at Scale. Some finance industry leaders, are looking to transition existing investment portfolios towards sustainability through various strategies, including through active stewardship, adopting responsible investing processes, and integrating ESG and impact disclosures into its reporting, thereby aligning significant investor capital towards sustainability at scale. Examples include:

- Wellington Management, which has aligned over US\$400 billion of AuM, or a third of its total with 2050 net zero emissions goals.
- Schrodgers, which has dedicated US\$300 billion in AuM to sustainable and impact strategies.
- Nordea, which has dedicated 70% of its more than US\$250 billion in AuM to responsible investment solutions.
- OMERs, which is transitioning its global infrastructure portfolio to net zero and has over U\$18 billion in green assets.
- Nomura, which has achieved a 79% sustainable investment ration across its US\$500 billion in AuM.
- State Street, which has elevated climate risk management, diversity, equity and inclusion as its stewardship priorities for its US\$3.6 trillion in AuM.
- First Abu Dhabi Bank, half of whose bond issuances in 2022 were for green bonds.
- Lloyds Banking Group, which is greening its mortgage and car loan portfolio with over c.US\$15 billion in green debt disbursed in 2022.
- Great West Lifeco, which is transitioning its investment and operations to 2050 net zero.

V. Leveraging the Platform to Create Impact. Finally, there are many examples of leaders scaling up their ambitions and SDG financing by launching new sustainable investment strategies, funds and products, building expertise in sustainability and deploying capital at scale for impact and profits. Examples include:

- Bridgewater Associates, which has launched a new multi-asset strategy aligned with the Sustainable Development Goals.
- Blackrock, which launched over 50 new global sustainable ETFs and index mutual funds in 2022.
- GIC Singapore, which has launched multiple sustainable investing strategies across public, private, and fixed income markets.
- Investec, whose Global Sustainable Equity fund targets a 100% net positive SDG impact for investments.
- Putnam, one of the largest active managers of dedicated sustainable retail equity assets with multiple funds in place.

The leaders of the industry have faced concerted attacks on ESG, sustainability and climate change in some countries from some groups, and this has had an impact on individual organizations as well as industry groupings. However, industry leaders have regrouped and pursued a range of strategies to further their commitments, some more directly and aggressively than others. Each of these strategies continues to evolve with industry leaders calibrating for their contexts and some showing the way.

VI. Meeting the SDGs

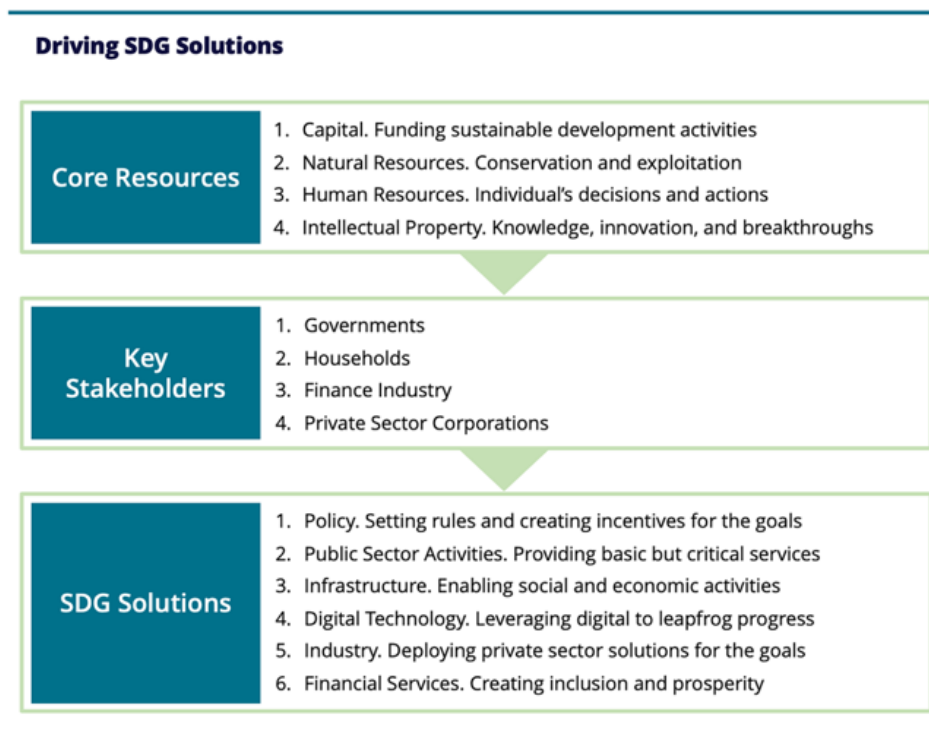


For all the challenges the world is currently facing in achieving the goals, the SDGs were fundamentally designed to be achieved. Leaving aside for a moment the goal's escalating price tag, achieving the goals requires the public and private sector to work together, leveraging only a handful of building blocks to solve for the 169 targets underlying the SDGs. These building blocks (or solution areas) when deployed together can not only essentially achieve, but potentially significantly exceed the goals, delivering a secure, sustainable, and superior future for the world by 2030. In practice however, achieving the SDGs will require complex coordination between major global stakeholders.

1. The Solution Areas for Delivering the Goals

Despite the complexity of the SDGs being well understood, there is a temptation to reduce the problem of meeting them to being a purely financial one, where all that is required to meet the goals is the mobilization of additional capital. And with the majority of the world's capital allocated or intermediated by private sector financial institutions, there has been a corresponding temptation to turn to the finance industry for solutions, as witnessed by the repeated calls on the global financial sector to mobilize more funding as the answer to meeting the goals. The reality is that capital is but one of several critical resources that need to be leveraged, the finance industry is but one of several stakeholders that need to act, and any case does not own the capital it manages, and financial services is but one of the solutions that need to be deployed for the world to deliver on the goals. Achieving the SDGs will require the world to draw upon and include all of these elements.

Figure 21: Resources, Stakeholders and Solution Areas to Achieve the SDGs



Core Resources to be Leveraged

The key stakeholders as outlined above are individuals, governments, the finance industry, and private sector corporations. Each of these stakeholders has (to varying degrees) a series of core resources at their disposal that they will need to leverage effectively for the SDGs to be met.

These include:

1. **Capital.** Financial resources funding the sustainable development (investing and operating) activities of all stakeholders.
2. **Natural Resources.** Land, raw materials, and natural resources, both in the context of exploitation and conservation.
3. **Human Resources.** The choices and actions of individuals, acting as consumers, professionals, voters, and as members of society.
4. **Intellectual Property.** Knowledge, ideas, and innovation, as well as the technological breakthroughs that they deliver.

To these core resources can be added a fifth factor, namely the 'installed base' of global civilization, its infrastructure, manufacturing capacity, logistics networks, but also its institutions, rules of conduct, standards, and norms. However, this installed base has many functions for the world and the SDGs. Some of it is indeed an asset that needs to be leveraged to meet the goals, other parts of it are liabilities that need to be managed or wound down, and yet others require transformation to have an impact on the goals.

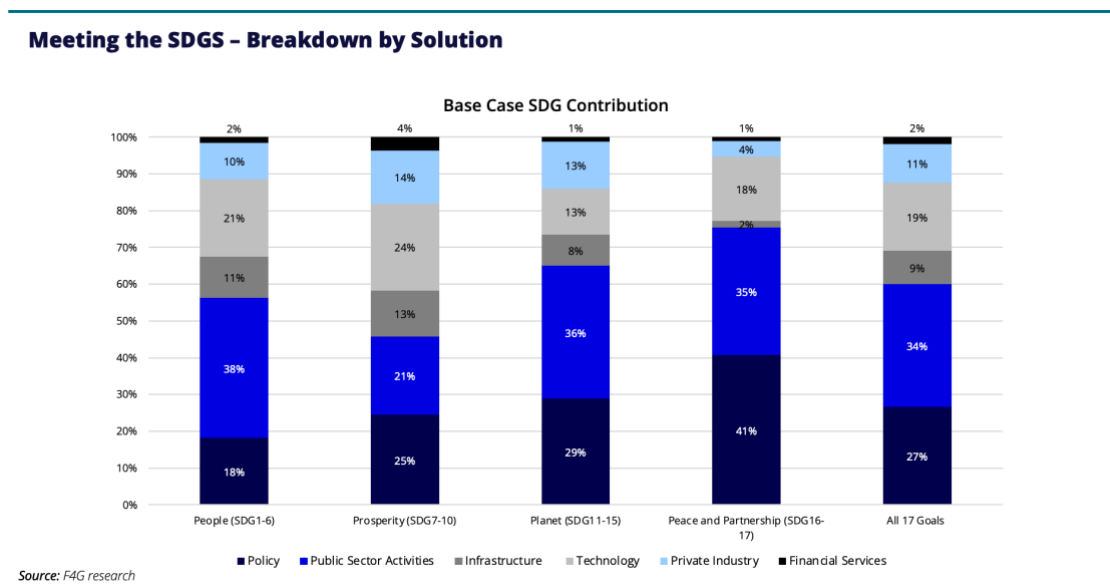
The Solution Areas that Deliver the Goals

Achieving the goals will require addressing their underlying 169 targets. A detailed examination of the targets gives rise to six distinct solution areas that need to be leveraged for the targets to be met, with each target addressed by a different mix of these solution areas. The solution areas comprise policy, technology, public sector activities, infrastructure, private industry, and financial services. Analyzing each SDG target, its underlying indicator(s) and the research and where possible, some of the experts, on the specific solutions to determine their potential contributions to a given goal, has resulted in a target-by-target estimate, with percentage contributions from each solution area to breakdown how the target could be achieved. The results from this work are as follows:

1. **Policy** provides solutions for 27% (Base) to 36% (Stretch Case) of the goals.
2. **Public Sector Activities** can solve nearly 34% (Base) to 47% (Stretch Case) of the goals.
3. **Technology** solves for 19% (Base) to 37% (Stretch Case) of the goals.
4. **Infrastructure** solves for 9% (Base) to 14% (Stretch Case) of the goals.
5. **Private Industry** solves for 11% (Base) to 18% (Stretch Case) of the goals.
6. **Financial Services** directly solves for 2% (Base) to 4% (Stretch Case) of the goals, while the finance industry indirectly funds for up to 73% of the solutions for the goals in the stretch case.

Both policy and public sector activities are executed solely by governments, while technology, financial services, and infrastructure (along with private industry solutions) are predominantly led by the private sector. The degree to which each goal depends on a given solution area varies of course, as do the roles of stakeholders involved in each solution. Please see the Report Objectives, Research Process and Methodologies for further details.

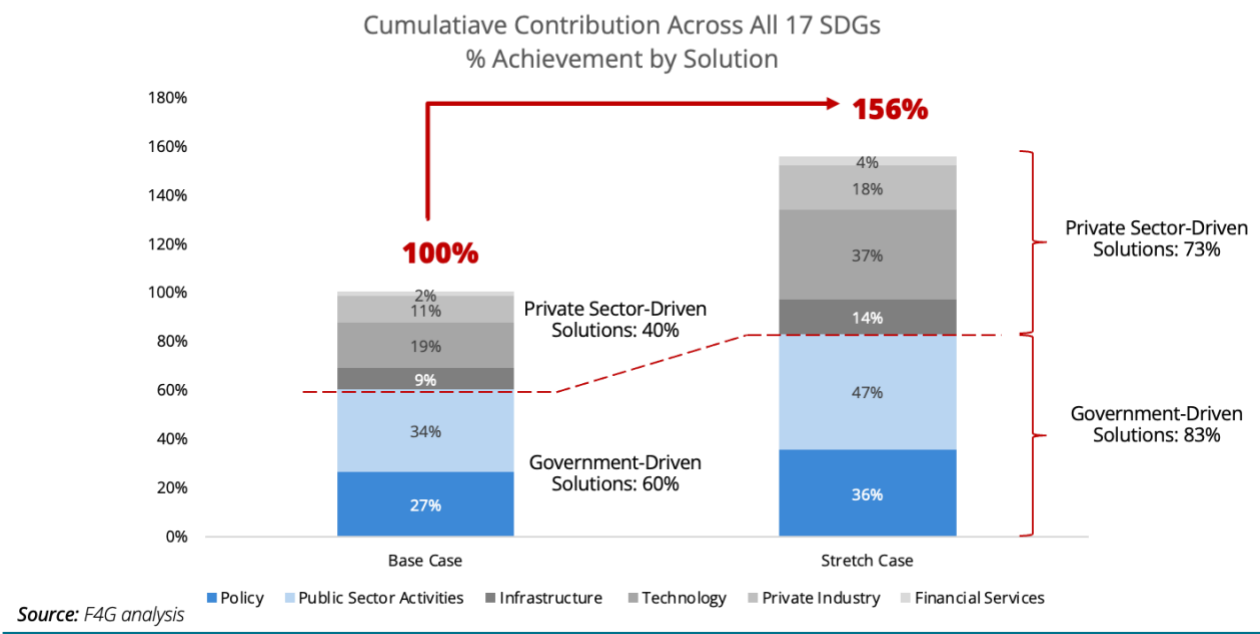
Figure 22: Meeting the SDGs –Breakdown by Solution Area (Base Case)



The analysis indicates that each solution area has a contribution to make to the SDGs and together the Base Case outcome from these solutions is to essentially deliver the SDGs, using the world's current economic and financing practices.

Figure 23: Exceeding the SDGs with Maximum Application of Solutions

Meeting the SDGS – Base vs. Stretch Case Solutions

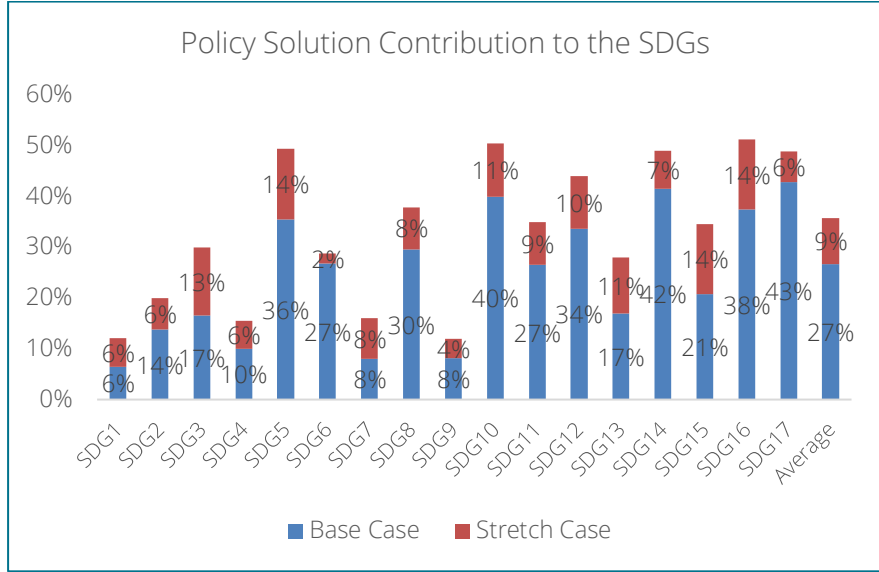


This analysis also shows that if each solution area were to deliver to its maximum, the world can exceed the targets set by the SDGs by more than 50%, creating a better, more sustainable, and secure world than originally targeted for by 2030. However, unlocking the maximum potential of each solution area as this Stretch Case implies, will require changing current regulatory policy, technology, and financing practices in a way that if well implemented may well be transformative for the world, leveraging best practices from around the world at scale.

While both cases indicate that the SDGs can be met in theory, neither implies that they will actually be met in practice. The solution areas demonstrate that the world has the capabilities and resources to meet the goals, however their achievement is a function of political will and global alignment that the world today continues to lack.

Each of the six solution areas and their contributions to the SDGs is described in summary below.

i. Policy – Setting Rules and Creating Incentives to Meet the Goals



Key Contributions to the Goals.

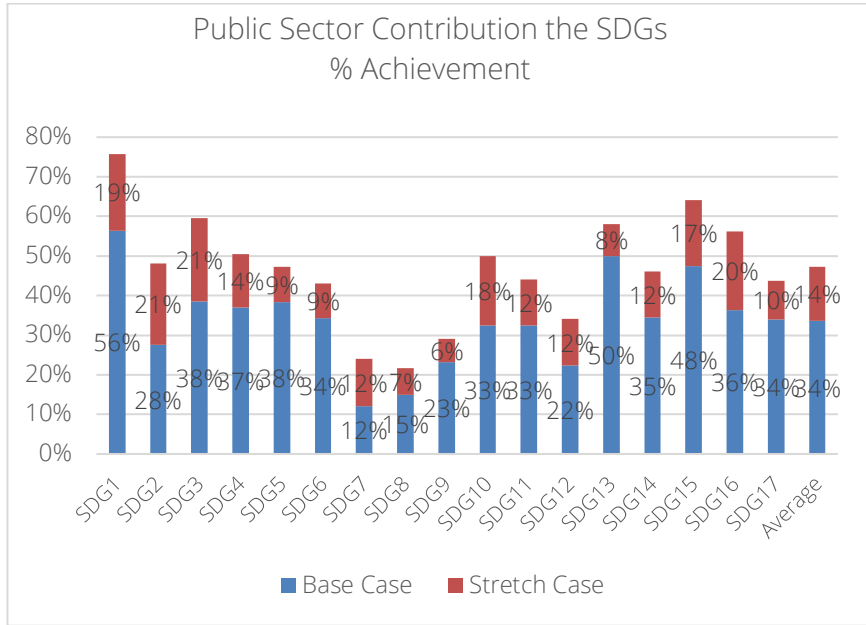
c.27% of the goals can be met by policy measures, making it the second most important solution set, and can have a direct impact on nearly 85% of the SDG targets. While a small number (15%) of the underlying SDG targets are purely policy related, nearly 70% of targets require some policy element to be met, be it in the form of legislation, regulation, or the creation of other incentives, such as taxes, can spur other stakeholders to action. Best in class policy regimes, particularly with strong enabling and incentive elements can stretch policy’s contribution to the goals to 36%.

Key Solutions.

- Policy solutions contribute to 134 of the 169 targets across all 17 goals, broken down as follows (with overlap):
 - 53% of solutions enable public services
 - 34% of solutions involve legislation
 - 26% of solutions include regulation
 - 19% provide incentives for action
- Policy has multiple impacts on SDGs and the highest impacts on:
 - SDG16 (Peace, Justice and Strong Institutions): 52%
 - SDG10 (Reduced Inequalities): up to 51%
 - SDG5 (Gender Equality): up to 50%
 - SDG17 (Partnership for the Goals): up to 49%

Note: a given target may require multiple types of policy intervention, including e.g., both enabling regulations as well as incentives for private sector actors.

ii. Public Sector Activities – Providing Basic but Critical Services



Key Contributions to the Goals.

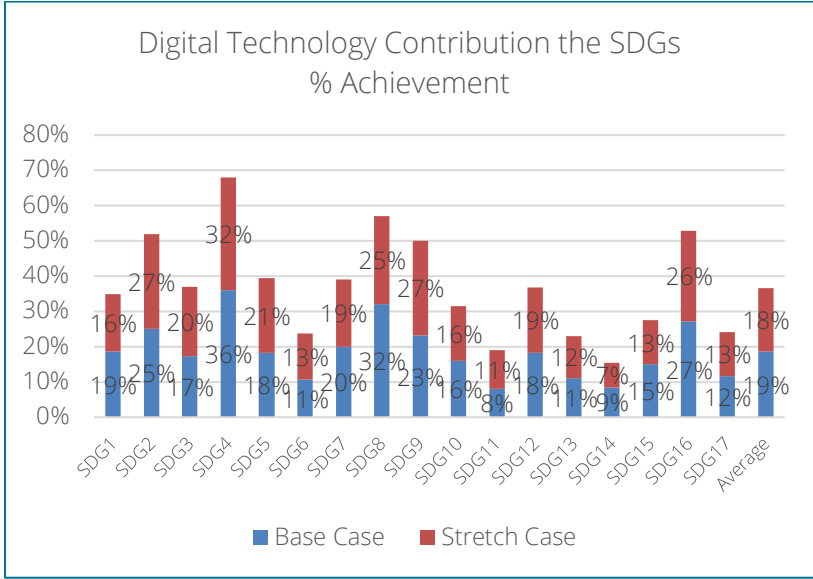
33% of the SDGs can be achieved by the public sector accounts, giving it the potential to be the single largest contributor to the goals. Public sector activities play a key role in meeting the goals, given that many of these are focused on providing basic services like education and healthcare, social care, and emergency services, as well as services like telecommunications, transport, energy, and utilities in countries where these are nationalized. Public sector activity also includes direct funding as well as enforcement activities supporting legislation and regulations. The delivery of superior service levels can drive additional progress against SDG targets, with public sector activities contributing up to 47% of the goals in the stretch case.

Key Solutions.

- Public sector solutions contribute to 126 out of 169 targets across 17 goals, broken down as follows (with overlap):
 - 52% of solutions involve delivering infrastructure and systems
 - 28% of solutions involve public service provision
 - 22% of solutions include direct public financing
 - 19% of solutions consist of enforcement actions
- Public sector activities with the biggest impacts on:
 - SDG1 (No Poverty): up to 75%
 - SDG15 (Life on Land): up to 55%
 - SDG3 (Good Health): up to 59%
 - SDG13 (Climate Action): up to 58%
 - SDG16 (Peace Justice and Strong Institutions): up to 56%
 - SDG4 (Quality Education): up to 50%

Note: a given target may require multiple types of public sector solutions, including e.g., both direct public financing and enforcement actions.

iii. Technology – Leveraging Tech to Leapfrog to Progress



Key Contributions to the Goals.

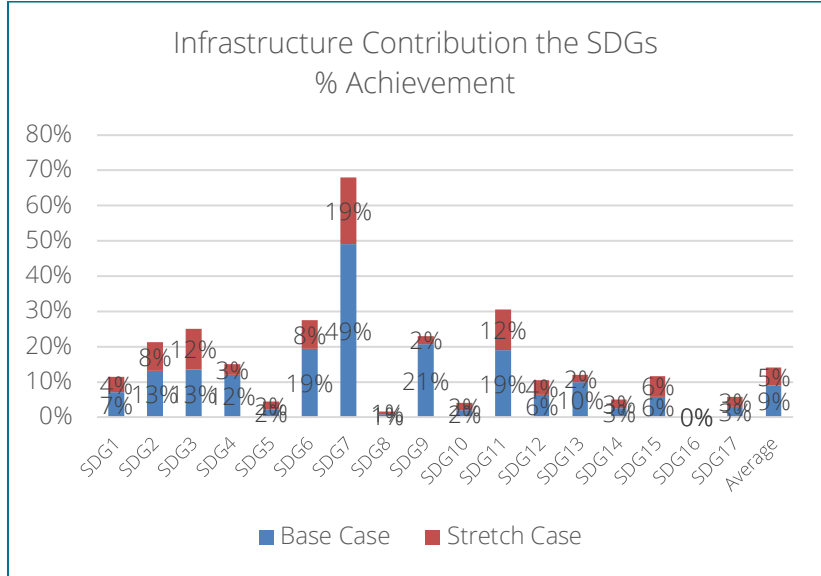
19% of the SDGs can be addressed through the delivery and use of (digital) technology, which contributes to all 17 SDGs. Technology delivering critical information processing, automation, communication, and knowledge sharing, as well as specialist technologies, enabling nearly all of the 169 targets associated with the SDGs. The base case of technology's potential contribution to the goals, delivering universal and affordable broadband connectivity, can be almost doubled to 37% through the scaled deployment of best-in-class innovations for each goal.

Key Solutions.

- Technology solutions contribute to 144 of the 169 targets, impacting all 17 goals
- The highest impact technologies for deployment include:
 - Digital financial services (Target 8.10)
 - Edtech and virtual skilling (Targets 4.1, 4.3, 4.4)
 - E-government (Targets 16.5, 16.6, 16.9, 16.10)
 - Data information systems (Targets 2c, 3d, 17.8, and many others)
- The SDGs most impacted by technology Include:
 - SDG4 (Quality Education): up to 68%
 - SDG8 (Decent Work): up to 58%
 - SDG16 (Peace Justice and Strong Institutions): up to 53%
 - SDG2 (Zero Hunger): up to 52%

Note: a given target may require multiple types of infrastructure solutions, including e.g., both increasing resilience and public services infrastructure.

iv. Infrastructure – Enabling Economic and Social Activities



Key Contributions to the Goals.

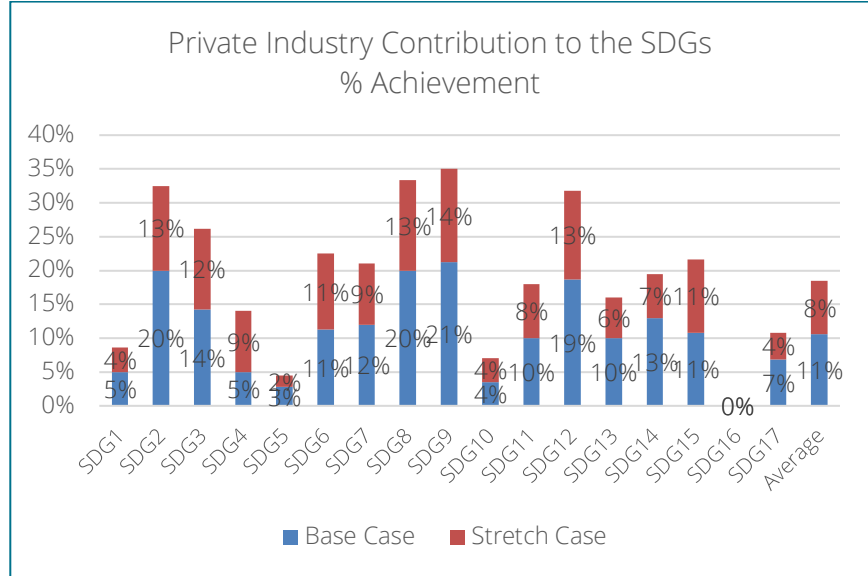
9% of the goals can be met with the deployment and enhancement of infrastructure, which plays a critical role across virtually all the core services delivered by governments, from healthcare to education to sanitation and others. It also enables participation in the workforce, the production of goods and services, and the distribution of products to markets and is therefore critical to economic development and prosperity. By leveraging smart infrastructure and innovation in material sciences, infrastructure can increase its contribution to the SDGs to 14%.

Key Solutions.

- Infrastructure solutions contribute to 60 out of 169 targets, impacting 16 goals, delivered as follows (with overlap):
 - 52% of solutions creating the built-up environment
 - 31% of solutions providing public services infrastructure
 - 30% of solutions driving resilience and protection
- Infrastructure has the highest SDGs impacts on:
 - SDG7 (Affordable and Clean Energy): up to 68%
 - SDG11 (Sustainable Cities): up to 31%
 - SDG6 (Clean Water and Sanitation): up to 27%
 - SDG3 (Good Health): up to 25%

Note: a given target may require multiple types of infrastructure solutions, including e.g., both increasing resilience and public services infrastructure.

v. Private Industry – Deploying Enterprise Solutions for the Goals



Key Contributions to the Goals.

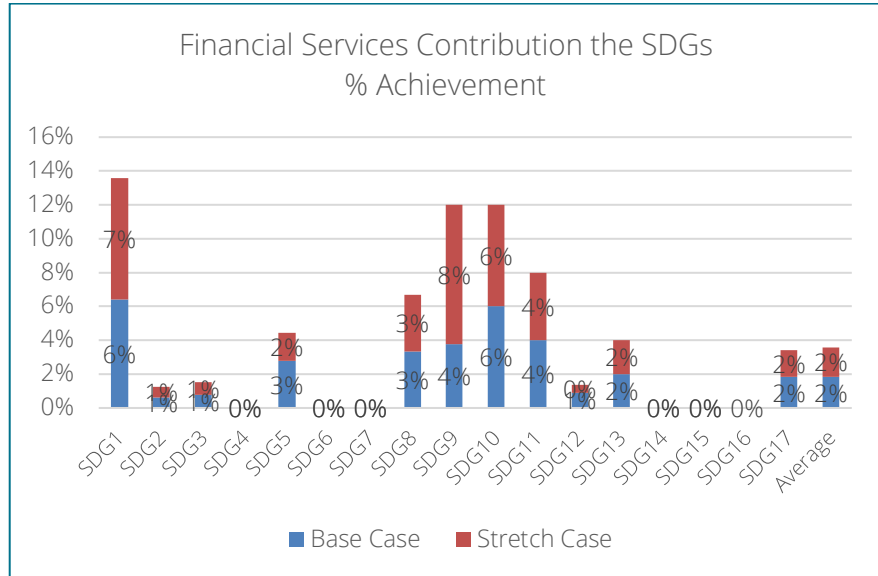
11% of the SDGs can be met by private industry, defined as the business and organizational activities of commercial (non-financial) businesses, including the provision of products and services in markets where they are most needed, creating jobs, economic growth alongside the direct benefits that their products and services deliver, as well as investments and actions that positively impact private actors’ environmental and social footprints. By scaling its efforts and investments the private sector can increase its contributions to the SDGs to 19%.

Key Solutions.

- Private industry solutions contribute to 72 out of 169 targets, impacting 16 goals, consisting of (with overlap):
 - 41% of solutions are focused on organizational change
 - 35% of solutions involving new investment opportunities
 - 27% of solutions complementing public services
- The SDGs most impacted by private industry include:
 - SDG9 (Industry, Infrastructure, and Innovation): up to 35%
 - SDG2 (Zero Hunger): up to 33%
 - SDG8 (Decent Work and Economic Growth): up to 33%
 - SDG12 (Sustainable Production and Consumption) up to 32%

Note: a given target may require multiple types of private industry solutions, requiring e.g., both organizational changes as well as new investments by the private sector

vi. Financial Services – Creating Inclusion and Prosperity



Key Contributions to the Goals.

2% of the goals address by Financial Services, defined as banking, insurance and payment services provided to businesses and households for direct impact on the goals, rather than funding others to deliver impact. The deployment of additional capital and more sophisticated financial products can take this SDG contribution to 4%. While this is the smallest solution contribution wise it still represents an investment opportunity of more than US\$5 trillion.

Indirectly, the broader finance industry is an essential contributor to all of the SDGs not fully addressed by policy, funding the underlying solutions.

Key Solutions.

- Financial services solutions contribute to 18 of the 169 targets, impacting 11 goals, including through (with overlap):
 - 50% driving financial inclusion
 - 50% of solutions creating prosperity
 - 22% of solutions protecting capital
- The SDGs most impacted by financial services include:
 - SDG1 (No Poverty): up to 13%
 - SDG9 (Industry, Infrastructure, and Innovation): up to 12%
 - SDG10 (Reducing Inequalities): up to 12%

Note: a given target may require multiple types of financial services solutions, requiring e.g., both capital protection and the creation of prosperity to be met.

What might be the next steps to this work? One approach would be to repeat the process to arrive at a more refined view of the impact of each solution area. This would entail a number of key tasks. Firstly, recognizing that this work is detailed but indicative and involves a combination of analysis, research and consultation, and is certainly not exhaustive, each target can bear further scrutiny, and in some cases, one might find that the world has changed, and the targets may need to be adapted accordingly. Secondly, this exercise can be enhanced by utilizing multidisciplinary taskforces to repeat the process to modify the impact of each solution areas. Thirdly, the interconnected nature of the goals and therefore the potential synergies between solutions can

be considered to determine how to implement. An alternative approach is to accept the solution areas and their potential estimated impact as laid out above offer tangible and credible pathways to meeting the goals. They demonstrate that the SDGs can be substantially met and if there is the will, can be exceeded by applying existing solutions across SDGs, in appropriate combinations, working across disciplines. This approach would lead one to searching for specific solutions for each target using this work as a guide (modifying it as one progresses). Taking the latter approach in brief, the next chapter of this report identifies the types of initiatives that can make a difference in closing the SDG gap.

The key findings from the analysis are:

- **Public sector activities are an essential ingredient for success.** Public sector activities, particularly public spending, is the single most important solution for the goals, potentially achieving between 34% to nearly half (47%) of the SDGs, reflecting the goals' focus on basis services that are most often in the remit of governments, with the caveat that increasing public funding is fraught with difficulties including political and economic ones.
- **Policy is a critical success factor to meeting the goals.** Policy is perhaps the most important and feasible solution for meeting the goals, contributing to 27-36% of SDG completion, perhaps unsurprisingly given the need to integrate the global 2030 Agenda into national planning instruments, policies, strategies, and financial frameworks for execution.
- **Digital technology is critical and supersedes physical infrastructure in terms of impact potential.** Digital technology can do much of the 'work' in meeting the SDGs that would otherwise have required massive physical infrastructure, given the ongoing blurring of the digital and physical worlds, and can solve at least 19% of the SDGs, and potentially help achieve 37% of the SDGs, with 9-14% of the SDGs solved by physical infrastructure.
- **Direct financial services opportunity marginal overall, but enabler of all other areas.** While capital is a critical component to meeting the goals, the provision of financial services by the private financial sector directly contributes only 2-4% to the goals, but overall the finance industry will need to fund all of the SDG targets that cannot be addressed by policy, which together account for at least 73% of the goals.
- **Governments are the most significant actors overall, at 60% of the SDGs.** Being the stakeholder delivering both policy and public sector activities, governments are accountable for achieving at least 60% of the goals' targets.
- **The private sector overall can solve for a further 40% of the SDGs.** There is significant opportunity for the private sector to contribute to the goals, with technology, private industry, infrastructure, and financial services solutions.
- **Maximizing solution impact can deliver 157% of the goals.** The public sector can exceed the goals and deliver 83% of the goals, and the private sector can deliver 73% of the goals, delivering a far superior outcome to that originally envisaged in 2015.

Meeting the SDGs is a complex challenge requiring combinations of solutions to be applied to each SDG, and this requires complex coordination between various stakeholders, in addition to

the funding for these. The good news is that these solution areas provide the framework for closing the SDGs gap and potentially exceeding it.

Importantly contributions made by each solution area in the Base Case assume the continuation of current economic, political, and financial models, and rely instead on the adoption of existing solutions at scale. Achieving the Stretch Case on the other hand will require the world to adopt different regulatory, policy, technology and financing approaches, leveraging global solutions for each at scale.

In both the Base and Stretch Cases the solution areas are assumed to rely on currently existing technologies, and do not factor in the potential impact of potential technological breakthroughs being made, which are difficult to quantify at this stage.

Technologies like machine learning, deep learning, and generative AI are rapidly evolving and driving machines' abilities to problem solve, reason, learn, perceive, and interact with the environment and increasingly exercise creativity, too. AI today has been estimated to impact 134 out of the 169, or c.80% of SDG targets, implying that AI's impact is almost as broad as that of digital technology as a whole.⁵⁰

Advances in AI are driving machines' abilities to problem solve, reason, learn, perceive, and interact with the environment and increasingly exercise creativity, too. AI today can help drive c.80% of SDG targets, implying a potential impact is almost as broad as that of digital technology as a whole

However, AI's potential impact can also be a double-edged sword, and it can either enable or inhibit the delivery of all 17 goals. AI has been found to not only potentially enable 79% of the targets, but also to potentially negatively impact 35% of targets, with the negative impacts occurring in targets where AI also has a potentially positive impact.⁵¹

Put another way, AI can do harm as well as good in nearly half of its SDG use cases, highlighting the importance of responsible AI development, governance, and deployment globally, not just for the 17 SDGs but for humankind's longer-term future, which has the potential to be fundamentally transformed by this technology over the course of the next generation, and beyond.

This work needs further efforts by multidisciplinary taskforces to repeat the process and pin down further the specific solutions for each SDG target, some of which are examined in the next chapter of this report.

2. Execution Considerations

Meeting the SDGs in practice requires a collaboration on a global scale, with major global stakeholders sharing and collaborating high impact solutions and best practices.

With only seven years remaining until the stated deadline, meeting the goals will require a

The Challenge of meeting the SDGs is like the Space Race ... only it is several orders of magnitude greater than the c.US\$200bn (in inflation adjusted dollars) program that put a man on the moon and involved primarily mobilizing one country in a race against another, rather than every nation separately and together against a set of complex interrelated global problems, and with no single entity having the mandate, power, and ability to perform such a role

massive global effort, mobilizing capital, resources, and stakeholders on a hitherto never seen before scale. America's efforts during the Space Race are exemplary of the scale of mobilization required, recognizing that the SDGs, with a US\$103-137 trillion funding gap, are a challenge that is several orders of magnitude greater than the c.US\$200bn (in inflation adjusted dollars) program that put a man on the moon and involved primarily mobilizing one country in a race against another, rather than every nation separately and together against a set of complex interrelated global problems. Also, unlike the Space Race, the race to meet the goals cannot be centrally managed, with no single

entity having the mandate, power, and ability to perform such a role.

While the creation of a highly coordinated shared action plan would be an ideal solution, such a blueprint appears to be implausible at this stage. The sheer scale of the goals, the divergence of incentives among global stakeholders and the diversity of local conditions seem to preclude the potential for a top down, centrally managed plan, despite the presence of underlying solutions required to meet the goals.

Any successful 'plan' for the goals will therefore need to be a decentralized one. Sharing and collaboration is of course still critical, and countries and stakeholders will need to opportunistically partner to share resources, capital, and best practices with each other, whether bilaterally or multilaterally. Global alignment would of course be an asset, with the world working towards common goals based on shared values, rather than a shared master plan. Central coordination, sharing of knowledge and expertise and monitoring and measurement can all help the chances of success.

The key principles for such decentralized global SDG collaboration include the following:

Figure 24: Key Principles for Global SDG Collaboration

Global Alignment

1. **Alignment of global stakeholders of sufficient critical mass is required** to achieve success.

Execution

2. **Existential risks need the highest priority**, clearly, and these are climate change and biodiversity.
3. **Addressing human or social risks is a pre-condition for success in addressing environmental risks**, no matter how extreme the latter is, and must be addressed or people suffering will thwart progress.
4. **Enabling solutions should be implemented first** and promptly to provide the platform to unlock multiple barriers and serve to support making an impact across multiple areas.
5. **Existing solutions need to be rolled out at scale** rather than waiting for radical breakthroughs.
6. **Successive waves of Impact are required, beginning with the easiest impact** and the most difficult is left for last rather than holding up the whole program for the perfect solution.
7. **Radical solutions in scale and substance are essential** in the second half of the 15-year SDG completion window, a 'Space Race' for the planet.

Mobilization

8. **Addressing mandates and conflicts of interests for boards** and executive management is essential if they are to align fiduciary and regulatory duties and stakeholder ones, particularly given the politicization of ESG.
9. **Making sufficient profits to meet the needs of owners of capital** is a requirement for funding to flow at the scale needed.
10. **Systemic changes that account better for impact, profit and loss are required** to be made to create a more complete and rational system of rewards for capital owners.

In summary

- Six solution areas - policy, public sector activities, private industry, technology, infrastructure, and financial services - can close the SDG gap and even exceed the 2030 targets set by the SDGs, subject to disciplined execution.
- A base mix of solutions from these six areas can essentially deliver the SDGs, and if deployed to their maximum can effectively exceed the underlying targets by c.56%.
- While governments account for the majority of the goals, the private sector has a critical role to play, contributing at least 40% of the solutions for the SDGs in the base case, and half in the stretch case. In practice, meeting the SDGs is a complex challenge requiring combinations of solutions to be applied to each goal, and this requires complex coordination between various stakeholders, in addition to the funding.
- Implementation requires, leadership will and operational skills to be applied to implement practical solutions for each solution area, which is the subject of the next chapter.

VII. High Impact Initiatives for Global Scaling



In the absence of a globally coordinated action plan for the goals, key stakeholders around the world are taking action and launching sustainable development initiatives of their own to tackle the critical issues that they face. Meeting the SDGs will require the world to leverage these existing and proven initiatives, scaling them for global deployment, with local adaptation as required. Taken collectively, these initiatives can amount to a bottom-up blueprint for the SDGs, although the goals timely achievement will require stakeholders to select and prioritize the highest impact projects for global execution.

1. Multiple Stakeholders are Launching High Impact Initiatives

Global Leaders are Seeking to Address Priority Areas for the World

Time is running out to meet the goals, and developing a global multistakeholder action plan will take time that the world does not have. The lack of cohesion between governments in an age of rivalry, and the lack of alignment between the rich global north and the poor global south, between rich and poor within countries, between the public and private sectors means that it is unlikely that a radical, which is what is needed, and actionable plan can be produced rapidly, if at all.

Therefore, the success of the SDGs will depend on the world identifying, scaling, and executing viable initiatives globally, at speed, without building and securing alignment on a comprehensive

global action plan. Luckily, many such initiatives exist and have been developed and implemented by innovative and entrepreneurial organizations, be they financial institutions, global corporates, NGOs, international organizations, or national governments.

The existence of such solutions makes the challenge for the world to meet the goals a potentially feasible one, focused on scaling and rolling out existing solutions globally.

15 Initiatives for Global Scaling

There are countless initiatives around the world that meet the criteria of making a high impact either directly on an SDG or indirectly via addressing an issue that solves for multiple SDGs (such as financial inclusion), and these are potential candidates for the world to scale in pursuit of the SDGs.

Based on a detailed examination of over 2,000 initiatives and sustainability related announcements sourced from Force for Good's own database of finance industry initiatives engagements with the private sector and interviews of leaders, detailed research, and public sources, 15 initiatives were selected as suitable for highlighting. The selected initiatives meet the screening criteria in having global scaling potential and high impact, and also range from systemic to point solutions, and encompass the breadth of solution areas relevant to the SDGs.

These 15 initiatives collectively have the potential to achieve approximately 70% the SDGs if scaled globally and fully funded.

The selected initiatives are driven by a wide range of stakeholders, have varied impact objectives on single or multiple SDGs or underlying themes, and employ a wide range of levers to deliver impact such as technology, policy, financial innovation. They have been selected from over 2000 publicly announced initiatives across stakeholders, countries, industries, markets, themes, and issues against specific criteria, namely:

- *Relevance*, the ability to directly address an SDG or indirectly address an SDG via addressing an issue.
- *Scalability*, being scalable, transferable across boundaries, and potentially replicable by others.
- *Materiality*, the current or potential scale of the initiative indicative of its potential in making a material quantifiable impact.
- *Timing*, sufficient execution is possible within the 2030 timeline.

The success of the SDGs will depend on the world identifying, scaling, and executing viable initiatives globally, at speed ... probably without building and securing alignment on a comprehensive global action plan – since that may be asking too much of the world at this stage. Luckily, many such initiatives exist and can be rolled-out across the world

While the initiatives chosen fit well with this criteria, and are important as a result in meeting the SDG goals, this is not an exclusive list.

A summary of the 15 selected initiatives illustrates the availability of excellent practical solutions to meeting the SDGs:

Figure 25: Selected Global Sustainable Development Initiatives

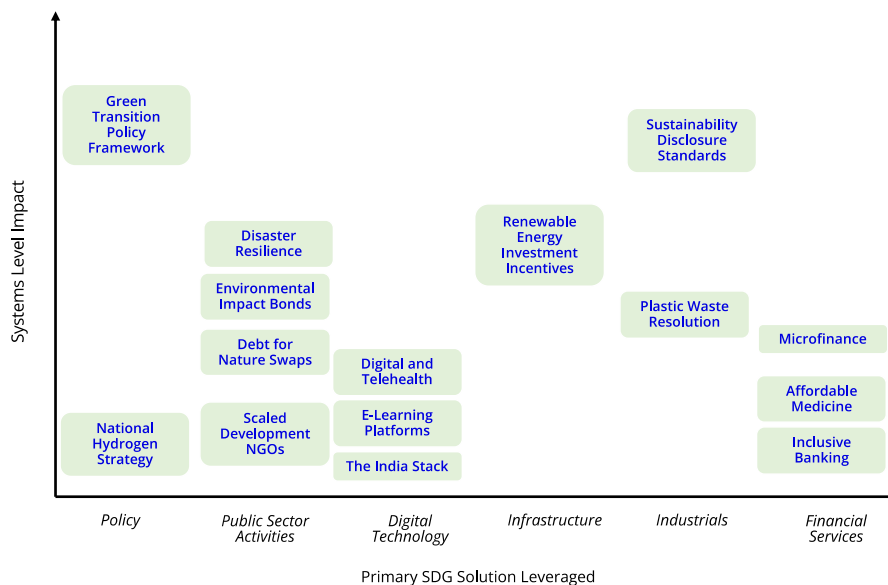
| Type | Description | Organization | Key SDGs Impacted |
|----------------------|--|---|---|
| Policy | Policy Framework for the Green Transition. The European Green Deal is an integrated blueprint of legislation, regulation, incentives and enabling policies to transform Europe's economy and societies for sustainability | European Union |  |
| | Renewables Energy Investment Incentives. The US Inflation Reduction Act is a landmark legislation for climate change, using incentives to unlock private investment and to make key clean technologies profitable, at scale | United States of America |  |
| | National Hydrogen Strategy. Ambitious industrial strategy adopted by Japan to develop a leading global hydrogen industry, to drive national decarbonization, transition to a stable energy supply and deliver economic growth. | Government of Japan |  |
| | Disclosure Standards. The IFRS Sustainability Disclosure Standards developed by the ISSB provide a global baseline of sustainability disclosures for the capital markets, and set the stage for pricing and accounting for externalities | International Sustainability Standard Board |  |
| Capital Mobilization | Environmental Impact Bonds. The World Bank's Rhino Bond is the world's first environmental impact bond represents a breakthrough in conservation finance, partnering donors with capital market investors to share risk and drive conservation outcomes. | Citigroup, The World Bank |  |
| | Disaster Resilience Solutions. Innovative risk transfer mechanism increasing the financial capacity of international disaster response efforts and building long term resilience | Lloyds |  |
| | Debt for Nature Swaps. Gabon's Blue Bond provides an innovative structure for refinancing developing country sovereign debt, with the potential to reduce indebtedness and the cost of debt, using savings to fund public spending on conservation activities. | DFC, Bank of America |  |
| Technology | The India Stack. A unique digital infrastructure for the delivery of mass financial inclusion for all, serving as a platform for broader social inclusion, a free to individual payment systems enabling peer-to-peer transaction, other digital services to people and businesses. | Government of India |  |
| | Digital and Telehealth. World's largest telehealth and virtual medicine platform including primary care, mental health, and chronic condition management, as well as mobile health. | Teladoc Health |  |
| | E-Learning Platforms. National digital learning platforms to overcome barriers to education and to improve overall learning outcomes. | National governments |  |

| Type | Description | Organization | Key SDGs Impacted |
|---------------------------|--|--|-------------------|
| Financial Services | Inclusion Banking. Major US banks have launched scaled initiatives to driven inclusion by focusing on underserved individuals, communities and MSMEs. | US Banking Leaders | |
| | Microfinance. Mobile and digital technologies are increasing microfinance's potential to financially include the three billion people and 200 million (MSMEs) that still lack access to basic savings and credit services. | Whole Industry | |
| Private Sector Initiative | Plastic Waste Resolution. Corporate initiative to prevent, reduce and remove 50 million metric tons of plastic waste leveraging capital markets, partnering with clients and research institutes, and organizational changes. | Morgan Stanley | |
| | Affordable Medicine. World's largest vaccine producer focused on delivering quality vaccines at affordable prices for the world, critical for our continued efforts to reduce global mortality and improve global health outcomes. | Serum Institute of India | |
| NGOs | Scaled Development NGOs. Major non-profit organizations addressing extreme poverty, using evidence-based, cost-effective, scalable interventions for basic challenges without commercial funding pathways in least developed countries. | Gates Foundation, BRAC, Care International | |

A key dimension is the degree to which solutions make an impact and this varies from point solutions to systems level impact. The figure maps the 15 selected initiatives across systems change impact and the SDG solutions leveraged.

Figure 26: Selected Initiatives: Systems Change Potential

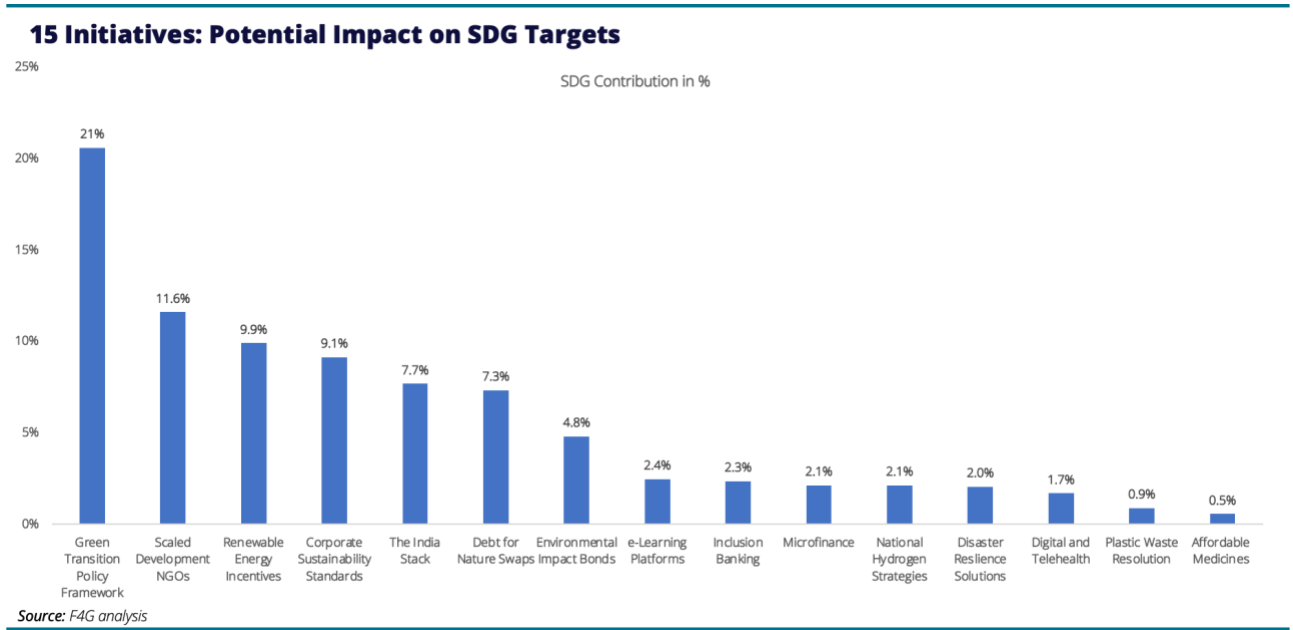
15 Initiatives for the Goals



Significant SDG Contribution Potential

The distinguishing feature of each highlighted initiative is its potential for scaling and therefore its potential to delivery significant impact against the SDGs. Assuming that each initiative was adopted globally as the benchmark for its respective objective, these 15 programs could make significant contributions to meeting the SDGs, individually contributing between 1% for a point solution to up to 20% for systemic solutions against the 2030 SDG targets.

Figure 27: Headline Contribution to the SDG Targets



The chart above captures the respective initiatives’ estimated the direct impact potential on 169 SDG targets but does not factor in questions of feasibility with regards to scaling these initiatives as global solutions for the goals in practice. [Given the interrelated nature of the goals generally, each initiative also has a significant indirect impact on the goals, which has not been calculated as part of this study.

The six initiatives with the highest direct impact potential include:

- **The European Green Deal**, being a comprehensive set of policies, laws, and regulations comprehensively covering topics like climate, energy, and transport has the greatest impact potential on the SDGs, collectively covers over 20% if fully adopted.
- **The US Inflation Reduction Act’s** sustainable development impact of (covering 12% of the goals) is primarily driven by the act’s investment incentives for sustainable technologies and infrastructure, pointing to the significant contribution that capital mobilization makes to the achievement of the goals.
- **Development NGOs** activities potentially solve up to 12% of the SDGs, focused on delivering basic human needs, particularly in the world’s least developed regions in the

absence of local government resources and business cases for private sector participation.

- **The ISSB's** sustainability reporting standards, have the potential to transform corporate behavior and organizations for greater sustainability, which could solve for 9% of the goals, and with further development to incorporate externalities could have a profound impact on investments and markets.
- **The India Stack, consisting of the underlying technology platform** and the ecosystem of public and private sector services that it enables, can digitally address c.8% of the SDGs.
- **Debt for Nature Swaps** using the structure of the Gabon Blue Bond can be used to target unlocking up to US\$7.5 trillion in public sector funding in developing economies, whose spending can achieve c.7% of the goals.

Stepping back, it is also important to remember that that the 15 initiatives above are illustrative in nature, designed to demonstrate the breadth of global engagement, the number of stakeholders

The cumulative impact of these 15 initiatives on the SDGs is potentially transformational, driving progress against 16 of the 17 goals, to solve for c.70% of the SDGs' targets, given sufficient scaling and global deployment

involved, and the nature of solutions being leveraged. These initiatives are clearly not exhaustive, and there are many more to be found across the world that achieve similar goals, potentially in the same places and using similar solutions.

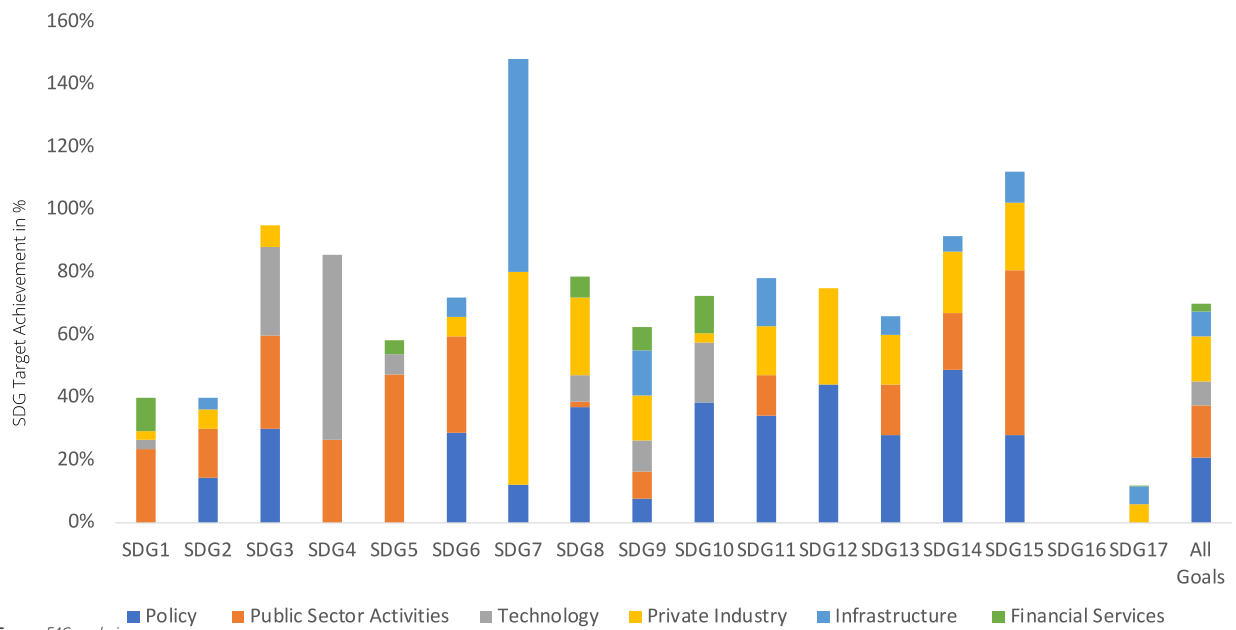
Further, there is a long list of initiatives that could have a fundamental impact on the SDGs subject to addressing existing constraints on for example,

political and governance issues (China's Belt and Road Initiative⁵²), timing (fusion technology⁵³) or technical and political feasibility (North African renewables exports via high-voltage submarine cables.⁵⁴ Further, the UN itself has identified a series of 'High Impact Initiatives' that it is seeking to champion for further scaling and impact.⁵⁵

Taken together, the potential impact of all 15 initiatives on the SDGs is transformational. If all 15 initiatives were scaled, fully funded, and deployed globally, they could cumulatively drive progress against 16 of the 17 goals, leveraging all six solutions (policy, public activities, private industry, technology, infrastructure and financial services) to solve for c.70% of the SDGs in total, (net of any overlap between the initiatives). The table below shows the cumulative potential impact on the goals.

Figure 28: Cumulative SDG Impact Potential – 15 Initiatives

15 Initiatives: Cumulative SDG Impact Potential



Source: F4G analysis

Key Observations:

- **With the political will in place, the world could meet or even significantly exceed clean and affordable energy targets (SDG7).** Given the right enabling policies and incentives, there is more than enough private enterprise, technology, and capital in the world to exceed SDG7 by nearly 50%.
- **If public sector activities can be funded alongside incentives, global environmental targets (SDG14, SDG15) can be met.** The world’s terrestrial and marine conservation goals can be substantially met (at 112% and 91%, respectively) through a mix of incentives and structures to fund public sector activities ‘on the ground’.
- **Technology can make a material difference across the board, but helps substantially achieve health (SDG3) and education (SDG4) goals.** Digital technology initiatives are critical for the world to meet its health and education targets in practice, with technology solutions accounting for a significant proportion of the total progress made against these goals.
- **Significant progress is possible to close the gap on prosperity related goals (SDG8-10).** The initiatives can solve for between 63-79% of the majority of prosperity related goals, utilizing a dynamic mix of underlying solutions, with technology, infrastructure, financial services, and private industry all playing important roles.
- **The remaining planet related goals (SDG11-13) can also potentially be addressed given sufficient will.** An estimated 66-78% can be solved if the world were prepared to globally embrace regulations on the scale of the European Green Deal, and fund investments on the relative scale of the US Inflation Reduction Act.

- **Real progress can be made on hunger (SDG2) and poverty (SDG1), but with more to solve.** The initiatives cumulatively can make a difference to c.40% of the SDGs focusing on hunger and poverty, indicative of the fact that there are no simple or one size fits all solutions to these fundamental challenges.
- **Certain national governance related targets (SDG16) remain an issue.** The 15 initiatives do not impact peace, justice, and strong institutions, reflecting the lack of scalable initiatives addressing what are ultimately domestic political issues.

Of course, for these 15 initiatives to address 70% of the SDGs, in practice they would be required to be deployable globally, in different countries which are at different stages of development and under a wide range of conditions.

A number of pre-conditions would need to be met. Firstly, every country would have the execution resources and capabilities required to implement the initiatives, be it the ability to efficiently formulate, implement or enforce policy solutions, or having access to the capital required to fund public sector activities.

Secondly, scaling these initiatives and deploying them globally will therefore require not only a significant degree of local adaptation, but also transfers of resources, best practices and of course capital to ensure that the initiatives can be successfully executed on the ground.

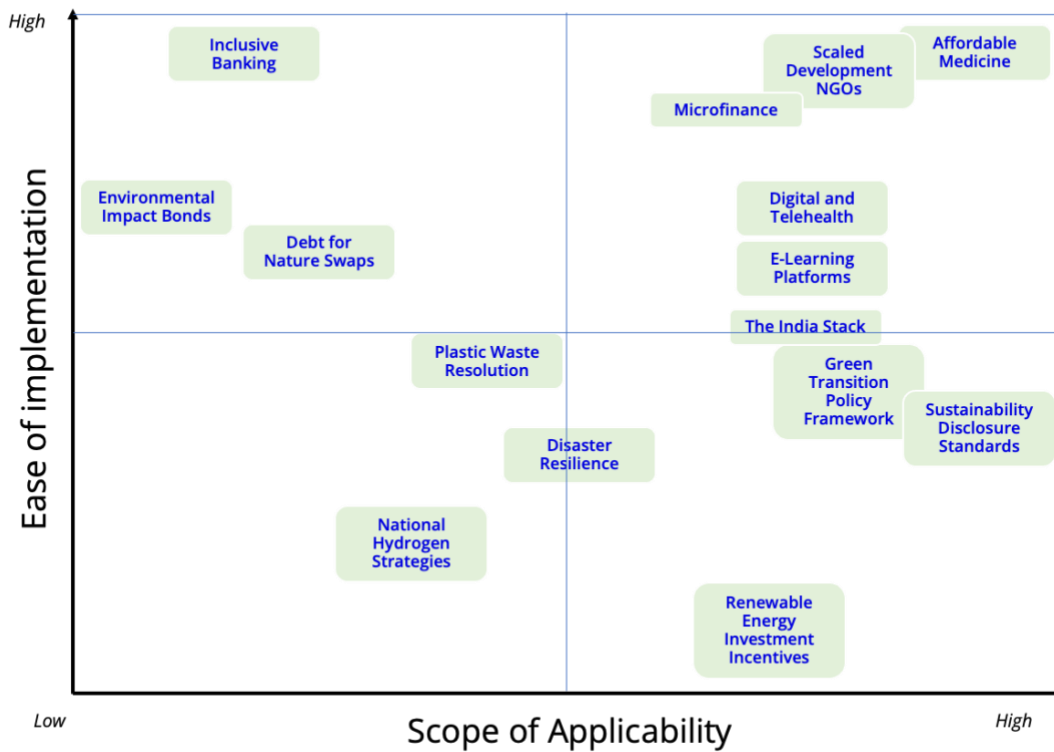
And finally, how well suited any given initiative is for global scaling is therefore a function of the breadth of its applicability on the one hand (i.e., how many countries and regions it is required in and how well it can be deployed there) and its ease of implementation on the other hand, (i.e., its complexity (or lack thereof), cost and execution risk.).

In addition, progress may be best served by sequencing certain the initiatives for a solution area before another, for example, leading with policy may make it easier to allow the private sector initiatives to succeed and the funding for that to follow.

The 15 initiatives highlighted in this report are distributed at varying points along the two dimensions of ease of implementation and global applicability, as shown below:

Figure 29: 15 Initiatives Feasibility for Global Scaling

15 Initiatives Global Scale Potential



Source: F4G analysis

Notes:

- Affordable Medicine has global use case, but requires highly competitive, low-cost structures or subsidies to deliver.
- Digital and Telehealth, as well as e-Learning Platforms have global applicability, and can leverage increasing global connectivity.
- Debt for Nature Swaps are applicable in developing countries with refinancable debt and conservation needs, but require additional financial technology and 'open' capital markets to execute.
- Disaster Resilience Solutions are best suited to vulnerable countries with limited existing financial resources and resilience capacity.
- Environmental Impact Bonds are straightforward to execute, but the important role played by multi-lateral development banks limits their applicability.
- Green Transition Policy Frameworks are needed by almost every country, but represent a significant legislative and regulatory effort to implement given their scope.
- Inclusion Banking is limited to the Global North but is straightforward to execute, largely being a matter of customer focus for financial institutions.
- The India Stack has equally global applicability, but its full implementation requires infrastructure and policy actions.
- Microfinance has an important role to play in the developing world, with well-established models for execution and scaling.
- National Hydrogen Strategies are suited to countries with advanced industries and infrastructure, and their high levels of technological complexity and investment make them challenging to execute.
- Plastic Waste Resolution is a global issue but one that requires infrastructure on the ground to address at scale with a diverse mix of solutions.
- Renewable Energy Incentives can drive investment globally, but required high levels of public spending that only the richest countries can afford.
- Scaled Development NGOs are already working globally, addressing the most basic needs in a given country.
- Sustainability Disclosure Standards, and the pricing of externalities is a global issue, but also requires global alignment to implement.

In practice therefore, meeting the SDGs by 2030 will require the world to adopt the right package of initiatives for the solution areas, meaning that ideally, global stakeholders would work together to identify, assess, prioritize, fund, and deploy the highest potential project from across the world. However, progress may demand an initiative led approach that is not pre-agreed in lengthy negotiations but is much more initiative-led. It is also important to note that given the challenges the developing countries may face in adopting high-tech and sophisticated initiatives, the most feasible initiatives for global scaling may well be those that leverage frugal innovation to reduce costs and complexity.

2. Case Studies

Microfinance

Utilizing technology for financial inclusion and empowering underserved communities



Mobile and digital technologies are transforming the microfinance industry to financially include the three billion people and 200 million micro, small and medium enterprises (MSMEs) that still lack access to basic savings and credit services.

Key Highlights

- Microfinance is a US\$226.37 billion global industry delivering financial inclusion and is expected to grow to 3x in the next ten years
- The global microfinance industry has reached nearly 200 million people in developing countries
- Innovation is transforming the industry, led by mobile and digital technologies including:
 - Digital credit, loans that are requested, received and repaid on mobile phones
 - Data analytics for credit scoring reducing the cost of borrowing
 - Geo-tagging and AI improving portfolio and risk management
- Technological advancements in microfinance can act as a catalyst for the industry, increasing its reach and potential to drive global financial inclusion

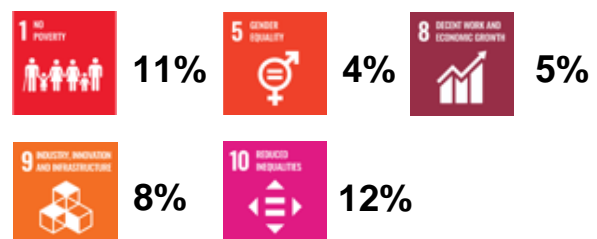
Microfinance: The Case for Scaling

3 billion people in developing countries do not have access to loans, insurance and money transfers (The World Bank)

40% of world's population still live in rural areas which can be brought under the ambit of microfinance (UN)

25% beneficiaries of microfinance credit across the globe are women (EY)

Potential Contributions to Key SDGs in %



SDG impact delivered through Financial Services solutions, providing financial inclusion and wealth creation as well as increasing financial resilience in developing countries.

Environmental Impact Bonds

The World Bank's 'Rhino Bond'



The world's first environmental impact bond represents a breakthrough in conservation finance, partnering donors with capital market investors to share risk and drive conservation outcomes.

Key Highlights

- Citi supported the World Bank to introduce a first of its kind outcome-based instrument for conservation funding of rhinoceros in Africa.
 - Instrument is a US\$150m five-year, principal protected note with investors receiving a success payment linked to the growth of the rhino population at maturity (in lieu of annual coupons).
 - Instead of coupon payments to investors, the issuer will finance rhino conservation efforts in two parks in Africa.
 - If successful, as measured by the rhino population growth rate, investors will receive a success payment at maturity, paid by the issuer with funds provided by a performance-based grant from a conservation donor, in addition to full principal redemption of the bond.
- Impact bonds and outcomes-based instruments can unlock capital markets to fund projects in regions or on issues that are otherwise challenging to private investment.

Environmental Impact Bonds: The Case for Scaling

42,100 species (28% of total) are threatened with extinction (IUCN)

~US\$60bn invested global conservation in 2022 (UNEP)

3x the current level of investment in nature-based solutions required by 2030 (UNEP)

3% of current funding from private sector (UNEP)

Potential Contributions to Key SDGs in %



18%



53%

SDG impact delivered through Public Sector Activity solutions by unlocking public financing for government conservation activities

Disclaimer: The information above does not reflect the views of Citi, which makes no representations or warranties of any kind, express or implied, about its completeness, accuracy, or reliability. SDG impact calculations have been prepared by the F4G Foundation.

Renewables Energy Investment Incentives

The US Inflation Reduction Act has created the most supportive regulatory environment in clean tech history



Landmark legislation for climate change, using tax and other incentives to unlock private investment and make a range of clean technologies profitable at large scale

Key Highlights

- The Inflation Reduction Act is the largest piece of federal legislation ever to address climate investing \$783 billion in energy security and climate change, including
 - \$663 billion embedded in the federal tax code as incentives
 - \$120bn of direct spending
- Climate funding with wide coverage including energy, manufacturing, retrofits and energy efficiency, transportation, land use and pollution reduction, and agriculture
- Potential blueprint for unlocking private sector finance for the energy and broader sustainability transition at scale globally

Renewable Incentives: The Case for Scaling

US\$2.9 trillion of cumulative investment unlocked for the transformation of the US energy sector (Goldman Sachs)

c.4x multiplier on public spending through effective use of incentives (Congressional Budget Office)

18% incremental reduction in greenhouse gas emissions from spending in act (EPA, White House)

Potential Contributions to Key SDGs in %



SDG impact delivered by Policy solutions (legislation and incentives) enabling Infrastructure and Private Industry solutions (in the form of investment activity and new business opportunities)

Policy Framework for the Green Transition

The European Green Deal (EGD) Policy Agenda Driving the Sustainability Transition



An integrated blueprint of legislation, regulation, incentives and enabling policies transforming Europe's economy and societies, with the potential to be replicated around the world

Key Highlights

Core Policy Areas Covered

- Climate action
- Clean, affordable and secure energy
- Industry for a clean and circular economy
- Energy and resource efficient construction
- Sustainable and smart mobility
- Healthy, environmentally-friendly food systems
- Ecosystems and biodiversity preservation and restoration
- A zero pollution, toxic-free environment

- Potential best-in-class package of policy blueprints to be implemented by countries around the world (with local adaptation as required)

Enabling Policies

- Green finance and investment and ensuring a just transition
- Green national budgets and sending the right price signals
- Mobilising research and fostering innovation
- Activating education and training

Green Policy Frameworks: The Case for Scaling

55% reduction in CO2 emissions by 2030 (European Commission)

35m buildings upgraded for sustainability across the region (European Commission)

100 cities across the union (c.12% of total) achieving climate neutrality (European Commission)

Potential Contributions to Key SDGs in %



SDG impact delivered through Policy solutions, with the EGD leveraging all policy tools including legislation, regulation, incentives and enabling actions.

Corporate Sustainability Standards

ISSB Creating a Global Standard to Account for Environmental and Social Impacts



The IFRS Sustainability Disclosure Standards developed by the ISSB provide a global baseline of sustainability disclosures for the capital markets, and set the stage for pricing and internalizing externalities

Key Highlights

- Recently launched IFRS S1 and IFRS S2 standards create a common language for corporate disclosure on the effect of climate-related risks and opportunities
- Creates global consistency in reporting of transparent information on sustainability related business impacts, including externalities
- Standards are an important step in companies moving to internalize externalities and change corporate behaviors
- Next steps required including integrating sustainability data into financial reporting, and the creation of transfer mechanisms (to reconcile revised accounting to cash)
 - Accounting for externalities can transform corporate behavior and align businesses with the SDGs

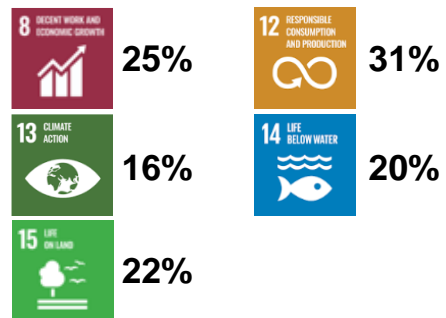
Sustainability Standards: The Case for Scaling

US\$25 trillion combined externalities for the energy and transport sectors worldwide (University of Sussex)

US\$21 trillion of projected external costs for GHG emissions and climate change in 2050 (BloombergNEF)

US\$20 trillion of annual externalities of global food production (UN Food Systems Summit 2021 Scientific Group)

Potential Contributions to Key SDGs in %



SDG impact delivered through Private Industry solutions, with standards impacting corporate behavior to drive organizational change and impact investing decisions.

The India Stack

Digital Infrastructure Providing Digital Identity and Payment Solutions for Financial Inclusion



A unique digital infrastructure for the delivery of mass financial inclusion for all, serving as a platform for broader social inclusion, a free to individual payment systems enabling peer-to-peer transaction, other digital services to people and businesses.

Key Highlights

- Aadhaar, a crucial component of India Stack, provides a digital identity to every citizen based on biometric and demographic data.. 67 Billion digital identity verifications have been done to date.
- The India stack has enabled payment solutions which has significantly contributed to financial inclusion and has enabled people to access banking services, make digital payments, and participate in the formal economy. A total of real-time mobile payments worth INR 14.05 trillion have been made
- Its government-led approach, emphasis on digital identity, and cross-sector applicability set it apart from traditional technology initiatives, making it a unique and transformative development in India's digital landscape.
- Transfer of India Stack technologies for adoption and integration into national banking systems to drive global financial inclusion

The India Stack: The Case for Scaling

450 million people in India financially included with digital bank accounts (Government of India)

1.4 billion adults globally without banks accounts (The World Bank)

2.6 billion adults not digitally financially included (The World Bank)

Potential Contributions to Key SDGs in %



SDG impact delivered through a mix of Technology, Financial Services and Public Sector Activity solutions, with the Stack enabling the delivering of private and public sector services.

Note: The India Stack was highlighted as one of six potential breakthrough initiatives in the 2022 Capital as a Force for Good report. Since the issuance of this report, India has offered this technology to the rest of the world, announced at the United Nations on 4th May 2023 in the ECOSOC Chamber. See [link](#) for video.

Debt for Nature Swaps

Reducing Developing Country Debt Burdens While Funding Nature Conservation



Innovative structure for refinancing developing country sovereign debt, with the potential to reduce indebtedness and the cost of debt, using savings to fund public spending on conservation activities

Key Highlights

- \$656 million "Galapagos Marine Bond," issued to support refinancing of existing Ecuador sovereign debt, underwritten by Credit Suisse
 - Existing sovereign debt of US\$1.6 billion repurchased at a 60% discount, reducing overall national debt burden
 - The deal is projected to generate US\$450 million for marine conservation in the Galapagos Islands,
 - The new bond funded a loan to Ecuador with 6.975% coupon rate vs. their international bond with market yields of 17-26% due to credit enhancements
 - Through this debt conversion, Ecuador will realize more than \$1.126 billion lifetime savings through reduced debt service costs
 - The US International Development Finance Corporation (DFC) is providing US\$656 political risk insurance for the new issue, alongside a \$85 million 'credit guarantee' from the Inter-American Development Bank
- Opportunity for developing countries to fund SDG-aligned spending without incurring additional indebtedness

Debt for Nature Swaps: The Case for Scaling

40% of emerging markets in debt crises (UN)

US\$30 trillion in total emerging market public debt (IIF)

c.28% of nominal debt burden available for funding future sustainable development (under the Galapagos Marine Bond structure)

c.US\$8.5 trillion in potential public spending to be unlocked to meet the SDGs, vs a current debt-for-nature market estimate of US\$800bn

Potential Contributions to Key SDGs

People-related Goals. e.g., via: Social Debt



Prosperity-related Goals. e.g., via: Sustainability-linked Debt



Planet-related Goals. e.g., via: Green Debt, Blue Debt



Enabling role in delivering the SDGs by unlocking capital for governments in developing countries to fund SDG aligned programs.

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Inclusion Banking

Closing gender and race inclusion gaps across financial services

Goldman Sachs
JP Morgan Chase
Bank of America
Citi



Major US banks have launched scaled initiatives to driven inclusion by focusing on underserved individuals and communities across all of their business lines

Key Highlights

- JP Morgan Chase has made a \$30 Billion Racial Equity Commitment to help close the racial wealth gap among Black, Hispanic and Latino communities.
 - Goldman Sachs One Million Black Women is a \$10B investment strategy designed to narrow opportunity gaps facing Black women across education, healthcare, housing and more
 - Citi's Action for Racial Equity includes more than \$1 billion in strategic initiatives to close the racial wealth gap and increase economic mobility in the United States.
 - Bank of America has a \$1 billion, four-year commitment of additional support to help local communities address economic and racial inequality
 - Initiatives include mortgages, homeownership, affordable rentals, small business loans, financial inclusion
- Coordinated targeting of disadvantaged customer segments by financial services companies with tailored products delivered at scale can reduce inequalities globally

Inclusion Banking: The Case for Scaling

17% global average gender pay gap leading to wealth inequalities for women, rising to 34% in some industrialized countries (Harvard Business Review, ILO)

8.5% share of global income of the 4 billion people at bottom half (World Inequality Report 2022)

2%, the bottom half's share of global wealth (World Inequality Report 2022)

Potential Contributions to Key SDGs in %



SDG impact delivered through Financial Services solutions, providing financial inclusion to reduce inequalities within countries.

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National Hydrogen Strategies

Leveraging Innovation for Carbon Neutrality and Economic Transformation



Major economies including Japan, China, and the EU have developed ambitious industrial strategies to create leading global hydrogen industries to drive national decarbonization, transition to a stable energy supply and deliver economic growth.

Key Highlights

- Japan's "Hydrogen Basic Strategy" aims to make the country a hydrogen-based society, developing the country's hydrogen industry, increasing supply, reducing cost, achieving global market share and attracting investment, in addition to a US\$107 billion commitment from the government.
 - China's plan to 2035 includes bringing 50,000 hydrogen fuel-cell vehicles on the road and increasing annual green hydrogen production from renewable feedstock to up to 200,000 tonnes per year by 2025, as well as the use of clean hydrogen in other sectors: energy storage, electricity generation and industry.
 - The EU's strategy is targeting green hydrogen to account for up to 20% of the energy supply in 2050, and has created a pipeline of more than 750 projects covering the full hydrogen value chain, from production, transmission, and distribution to consumption in the industrial and transport sectors, energy systems, and buildings, aiming to mobilize at least €372 billion in additional investment through 2027
- Opportunity for other countries to leverage these strategies (or parts thereof as a blueprint for their own energy transition, industrial decarbonization and sustainable economic growth

Hydrogen Strategies: The Case for Scaling

85 gigatons, CO2 emissions reduction potential of green hydrogen by 2050 (>2x global annual CO2 output) (Deloitte)

6x growth in global hydrogen energy production to 2050 (Deloitte)

US\$1.2 trillion in green hydrogen investment needed by 2030 to meet global climate targets (IEA)

Potential Contributions to Key SDGs in %



SDG impact delivered through Policy solutions, providing legislation, regulation, incentives and enabling policies for the energy transition.

Plastic Waste Resolution

Multi-dimensional Initiative to Solve Specific Environmental Issue at Scale

Morgan Stanley



Corporate initiative by Morgan Stanley to prevent, reduce and remove 50 million metric tons of plastic waste leveraging capital markets, partnering with clients and research institutes, and organizational changes.

Key Highlights

- Morgan Stanley has issued a Plastic Waste Resolution targeting the prevention, reduction or removal of 50m tonnes of plastic waste by 2030
- Initiative includes facilitating transaction in waste reduction for clients, partnerships with universities and non-profits, and organizational changes
- In the first two years of the initiative the bank already achieved 26% of the goal, positively impacting 13 million tonnes of plastic waste. Contributing projects include
 - US\$1 billion sustainability-linked bond issuance tied to plastic recycling
 - Arranging green loans tied to waste disposal
 - Underwriting IPOs in sustainable fashion
 - Leading the World Economic Forum's Global Plastic Action Partnership
 - Supporting research and technology tracking environmental plastic waste
- Potential blueprint for global corporations to adopt specific issues that they can deliver a significant impact through coordinated action of resources across the organization

Waste Reduction: The Case for Scaling

275 million tonnes of plastic waste generated annually (Science)

8 million tonnes of plastic waste enter the oceans globally (National Geographic)

80% of all marine debris found from surface waters to deep-sea sediments is plastic (IUCN)

Potential Contributions to Key SDGs



SDG impact delivered through Private Industry solutions, unlocking new business opportunities and driving organizational change

Disclaimer: The information above does not reflect the views of Morgan Stanley, which makes no representations or warranties of any kind, express or implied, about its completeness, accuracy, or reliability. SDG impact calculations have been prepared by the F4G Foundation.

Affordable Medicines

World's Largest Vaccine Manufacturer Driven by its Philanthropic Philosophy of Providing Affordable Vaccines

SERUM
INSTITUTE
OF INDIA



Serum Institute of India, the world's largest vaccine producer, is focused on reducing global mortality through the scaled development, manufacturing and distribution of lowest cost essential medicines

Key Highlights

- Affordable vaccines manufactured by SII are accredited by the WHO and used in 170+ countries in their national immunization programs, saving millions of lives throughout the world.
 - SII has a 50% global market share of vaccines by volume but is not among the top ten companies by revenue.
 - SII produced vaccines against measles, rubella and meningitis have averted more than 25 million deaths, with doses selling for less than US\$1 compared to more than US\$100 for similar shots produced by developed countries.
 - In the era of COVID-19, SII enabled the world's biggest domestic vaccination campaign targeting more than 1 billion people, to donate doses to other nations and to compete with China and Russia's efforts globally.
- The development of low-cost medicines targeting core health outcomes by the private sector can transform global wellbeing

Affordable Medicine: The Case for Scaling

50 million deaths can be prevented through global immunization (US CDC)

25 million children under the age of one do not receive basic vaccines through routine immunization, which is 6 million more than before the start of the Covid-19 pandemic (WHO)

c.100% of zero-dose children live in low- and middle-income countries (WHO)

Potential Contributions to Key SDGs



SDG impact delivered through Private Industry solutions, providing new investment and business opportunities for the private sector.

Disclaimer: The information above does not reflect the views of Serum institute of India,, which makes no representations or warranties of any kind, express or implied, about its completeness, accuracy, or reliability. SDG impact calculations have been prepared by the F4G Foundation.

Scaled Development NGOs

Providing Essential Services and Infrastructure

Bill & Melinda
Gates Foundation
Brac
Care
International



Three major non-profit organizations addressing extreme poverty, using evidence-based, cost-effective, scalable interventions for basic challenges without commercial funding pathways in least developed countries

Key Highlights

- Development NGOs focus on human development issues, centered around poverty and equity, reaching into health, education, food, water and hygiene and climate justice
- Scaled international organizations like The Bill and Melinda Gates Foundation and Care International operate in over 100 countries each across multiple programs
- Scaled regional NGOs like BRAC in Bangladesh are more focused geographically but cover a wide range of programs including housing, finance, and employment along basic human development.
- Multiple funding models used, including endowments (Gates Foundation) and donations and government funding (Care, BRAC)
 - Development NGOs are a key solution for funding and delivering basic services in the absence of local government resources or business cases for the private sector

Development NGOs: The Case for Scaling

US\$8.6 billion in development aid and charitable support deployed annually by three organizations (Foundation annual reports)

>120 million people impacted annually by development program (Foundation annual reports)

682 million people still living in extreme poverty around the world (UN)

Potential Contributions to Key SDGs



SDG impact delivered through Public Sector Activity solutions, with NGOs providing essential services and funding in lieu of or alongside governments in least developed and developing countries

Disclaimer: The information above does not reflect the views of BRAC, Care International, or the Bill & Melinda Gates Foundation, which make no representations or warranties of any kind, express or implied, about its completeness, accuracy, or reliability. SDG impact calculations have been prepared by the F4G Foundation.

Digital and TeleHealth

Delivering whole-person virtual healthcare

Teladoc



World's telehealth and virtual medicine platform including primary care, mental health, and chronic condition management, as well as mobile health

Key Highlights

- Leading global digital health company delivering virtual care platform connecting 80m patients and 30,000 healthcare providers.
 - Offers telehealth solutions to patients, physicians and hospitals, extending the virtual reach of healthcare providers and improving the quality of care.
 - Comprehensive solutions covering primary care, emergency care, chronic condition management and mental health.
 - Offers personalised care plans for patients with mobile device solutions, monitoring, and care provider integration
 - Delivers care in 130 countries and in more than 30 languages, partnering with local hospitals and healthcare systems
- Digital health tools can significantly close the gap in the provision of quality healthcare, overcoming geographic barriers, infrastructure challenges and issues with the local quality of care

Digital and Telehealth: The Case for Scaling

50 million virtual physician visits delivered annually by Teladoc, c.5% of total US market (Teladoc annual report)

10 million additional healthcare workers needed globally by 2030 with shortages in 132 countries (WHO)

c. 23% of women in Sub-Saharan Africa face barriers in accessing healthcare due to the distance of the nearest healthcare facility (NIH)

Potential Contributions to Key SDGs



28%

SDG impact delivered through Technology solutions, providing digital platforms for the delivery of public and private sector services

Disclaimer: The information above does not reflect the views of Teladoc, which makes no representations or warranties of any kind, express or implied, about its completeness, accuracy, or reliability. SDG impact calculations have been prepared by the F4G Foundation.

e-Learning Platforms Delivering Digital Education Outcomes Globally



National digital learning platforms used by governments around the world to overcome barriers to education and to improve overall learning outcomes

Key Highlights

- Digital learning platforms can close education gaps through remote and personalised learning, teaching digital literacy and supporting and training teachers
 - c.500 national digital learning platforms in the world today across 180 countries, but many lack best in class features including
 - On- and offline functionality
 - Enhanced accessibility
 - Mobile enablement
 - Interactivity
 - Learning management functions and online resources
 - UNICEF and UNESCO have launched the Gateways to Public Digital Learning program to strengthen national platforms, by identifying and sharing best practices, and setting norms and standards for platform development
- Fit for purpose e-learning platforms have a critical role to play in delivering inclusive, high-quality education globally, while also addressing the growing digital divide

E-Learning: The Case for Scaling

244 million children currently out of school (UN)

70% of children aged 10 in low- and middle-income countries unable to read and understand a simple text (UN)

69 million teachers are needed to reach universal basic education by 2030 (UN)

Potential Contributions to Key SDGs



59%

SDG impact delivered through Technology solutions, providing digital platforms for the delivery of public and private sector services

Disaster Resilience Solutions

Delivering financial solutions for natural catastrophes and climate risk

Teladoc



Ground-breaking risk transfer mechanism for the International Federation of Red Cross and Red Crescent Societies (IFRC)'s Disaster Response Emergency Fund (DREF) in collaboration with Aon, Lloyd's Disaster Risk Facility and the Centre for Disaster Prevention, ensuring swift and agile financial support when disaster occurs, enhancing global resilience

Key Highlights

- Mechanism that allows IFRC donors to fund disaster response through an insurance policy, stretching the value of contributions and transferring risk to the private sector
 - Use of reinsurance markets to lay off the risk of excessive natural hazards and ensure funds for response are available in a timely and reliable manner, even in periods of excessive or unanticipated demand
 - Mechanism has been tailor-made for DREF, with parametric insurance modelled on its actual historic performance and using publicly published data, supporting transparency and accountability of approach
- Risk transfer mechanism unlocks private sector funding for broader resilience in emerging markets, potentially at scale

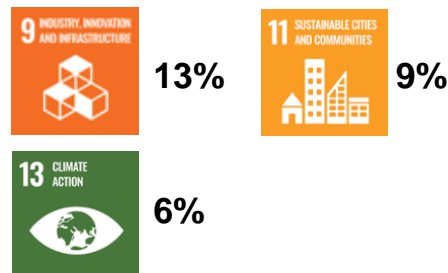
Disaster Resilience: The Case for Scaling

US\$223 billion in economic damage from natural hazards and disasters worldwide in 2022, costing 30,704 lives and affecting 185 million individuals (Reliefweb)

<5% of direct losses from natural disasters covered by insurance in low-income countries (DfiD)

5x increase in the number of natural disasters over the past 50-year period, driven by climate change, more extreme weather (WMO)

Potential Contributions to Key SDGs in %



SDG impact delivered through Public Sector Activities, increasing the financial capacity to respond to disasters and build resilience in developing countries.

Disclaimer: The information above does not reflect the views of LLOYD's, which makes no representations or warranties of any kind, express or implied, about its completeness, accuracy, or reliability. SDG impact calculations have been prepared by the F4G Foundation.

Technology Enabling the Future Beyond the Goals

While the SDGs are fundamentally achievable with today's technology (and indeed with the technology of 2015), breakthrough innovations can not only significantly accelerate progress against the goals, but they can also point to solutions that will result in the goals being materially exceeded, creating a superior position for the world in terms of security and sustainability.

Figure 30: Achieving a Superior Position for the World

| SDG | Advanced Technology Enabled Systemic Solutions | | |
|--|---|--|--|
|  1 NO POVERTY | Decentralized and democratized digital financial system |  10 REDUCED INEQUALITIES | Real time and transparent information and analytics to inform behaviors supporting equality |
|  2 ZERO HUNGER | Biotech and information-intensive agriculture delivering low-cost, environment-resilient food grains at low cost and scale |  11 SUSTAINABLE CITIES AND COMMUNITIES | Cities configured as nature-positive and human scale cities, with VR/AR worlds transforming use of physical urban environment. |
|  3 GOOD HEALTH AND WELL-BEING | Biomedical engineering delivering personalized wellness, resilience, longevity, and quality of life for all |  12 RESPONSIBLE CONSUMPTION AND PRODUCTION | Real time full impact data, measured against the SDGs, delivered to all in consumable form at point of activity and transaction driving responsible decisions |
|  4 QUALITY EDUCATION | Globally accessible and personalized, VR/AR-based education and skills development |  13 CLIMATE ACTION | Biosphere repair, safe and secure climate intervention to counteract climate crises (e.g., geo-engineering, biotech driven carbon capture) and achievement of net zero |
|  5 GENDER EQUALITY | Real time and transparent information and analytics to inform behaviors supporting gender equality |  14 LIFE BELOW WATER | Autonomous shipping, Scaled sea-waste removal, marine security, and enforcement drones |
|  6 CLEAN WATER AND SANITATION | Sustainable water extraction from the environment through continuous synthesis, at scale |  15 LIFE ON LAND | Nature positive activities and gene-based strategies for species preservation and restoration, Polar ice repair technologies |
|  7 AFFORDABLE AND CLEAN ENERGY | Breakthroughs delivering low cost, at unlimited scale, and universally deployable, affordable clean energy source for all |  16 PEACE, JUSTICE AND STRONG INSTITUTIONS | Blockchain enabling fully transparent and accountable government services |
|  8 DECENT WORK AND ECONOMIC GROWTH | Digital and AR/VR, with every individual a node in the network, enabling whole new modes of work, commerce, and globalization |  17 PARTNERSHIPS FOR THE GOALS | Mass digital collaborative partnership platforms for the SDGs for individuals, corporations, and member states |
|  9 INDUSTRY, INNOVATION AND INFRASTRUCTURE | Intelligent environments powering post-industrial, knowledge-based economies and infrastructures driven by IP and data | | |

In summary

- A wide range of global stakeholders are driving high impact sustainable development initiatives in pursuit of specific goals which have the potential to be scaled.
- The 15 initiatives showcased in this report highlight the diversity of their efforts and the potentially significant impact on the goals that each initiative has.
- Subject to feasibility and funding these 15 initiatives collectively have the potential to solve for c.70% of the goals, if they were deployed globally at scale.
- For the goals to be practically met, global stakeholders would ideally work together to identify, assess, prioritize, fund, and execute the highest potential initiatives, ultimately taking an initiative-led rather than a consensus-based approach.
- There is no shortage of potential solutions.

VIII. Conclusion



There is no consensus in the world today about how to reach a sustainable equilibrium for the planet and its people. One view posits that radical retrenchment of global consumption and production is required, another view holds that further growth and innovation hold the key to our salvation. This report has highlighted that the world already has the solutions, and many specific initiatives to solve the SDGs, without costly retrenchment or risky innovation. Further, technology, if properly utilized has the potential to accelerate the world to a far superior future than that envisaged by the SDGs.

The SDGs are Fundamentally Within Reach

Despite years of underinvestment and lack of progress made against the SDGs during the first half of their 15-year life, and despite the global economic, political, social and security challenges that continue to threaten to divert the world's attention and resources away from sustainable development, the achievement of the goals fundamentally remains in sight.

On some level this should come as no surprise. The SDGs were after all designed to be achievable, despite the breadth of their underlying targets and the practical trade-off that these would likely require, particularly between the economic growth required to meet the people related targets and the sustainability transition required to meet the planet related ones.

There is Sufficient Capital to Fund the SDGs, and is Projected to Grow Faster Than Population

Further the goals today remain fundable, if increasingly expensive. Despite nearly a decade of underfunding and the spiraling price tag, the world today has the wealth required to meet the goals, and the c.US\$900 trillion of economic output (GDP) that it is projected to generate from

now to 2030 should provide additional capital that can be deployed for the SDGs, with global economic growth of c.3% exceeding the less than 1% population growth over the same period, and so there should be sufficient excess capital to fund the SDGs.

Solutions Exist to Close the SDG Gap, and to Materially Exceed the Goals

From an execution perspective, the goals have always been feasible, having been conceived to be achieved through the deployment at scale of existing, rather than the development of new, technologies and solutions.

Solutions in the form of policy, public activity, private industry, technology, infrastructure, and financial services have the potential to not only essentially realize the 17 goals, but to significantly overdeliver, estimated at 156% of the goals. Importantly, there are potentially countless initiatives in the world targeting these solution areas to deliver material impact against the goals, which can be scaled and deployed globally.

These solutions include 15 identified in this report ranging from the EU's regulatory framework and policies, the US's injection of capital for sustainable innovation within its Inflation Reduction Act, India's mass financial inclusion technology and product suite, the example of the leaders of the finance industry in America promoting financial inclusion for those left behind within rich nations, innovative financing that turns sovereign debt to nature funding or promoting environmental impact, insuring to promote resilience to disasters, a range of technologies that enable healthcare, education and finance for the poor and the work of exemplary scaled NGOs that drive measurable improvements in development.

These facts are grounds for optimism, if not for celebration. However, at the current rates of mobilization of capital, resources and peoples, the world is unlikely to achieve the goals in the seven-odd years remaining to the 2030, Achieving the goals and the sustainable and secure world that they create will require political will, a level of global alignment on implementation and resourcefulness that the world has yet to demonstrate. deadline.

Delivering the SDGs is within our grasp ... there are potentially countless initiatives in the world targeting these solution areas to deliver material impact against the goals, which can be scaled and deployed globally

Measured Progress, Not Retrenchment, is the Only Option

The consequence of not using the SDGs to level up the world is likely to result in a levelling down of the world. Failing to address the world's development challenges and continued inequalities will create increasing strife and suffering in the Global South, while failing to address the world's environmental challenges will see the deterioration of our ecosystems, with extreme weather events becoming endemic features of climate change that will threaten the wellbeing of all. However, there is no consensus globally on how to best achieve the world's major challenges.

One school of thought believes that the goals can only be achieved by preservation and mitigation, based on a conscious decision to limit the use of fossil fuels, restricting the use of resources and humankind's footprint on the planet by reducing activity. Such a strategy would need to roll back the clock to 1970 when the world's global consumption of resources matched the planet's regenerative capabilities, implying a world that consumes c.40% less of nearly everything than it does today, and 80% less than the average American does.

The other school of thought assumes that growth and innovation can deliver technological breakthroughs that fundamentally alter current trajectories of ecosystem impacts and create a step change in human progress.

While such a view may seem optimistic, it reflects the reality of global progress since the Industrial Revolution, which has delivered an explosion of economic, and demographic growth for the world.

For the world to follow in the footsteps of this second view, it will need to deliver a series of breakthroughs that will pick up where the SDGs left off in terms of driving sustainable development for people, prosperity, and the planet through 2030 and beyond.

Progress will not go into reverse or wait for the world to catch up ... any political ideology offering that is unlikely to succeed for long ... so, progress must be defined as inclusive sustainable growth within and across countries

Advanced Technologies Bring Unprecedented Opportunities and Risks

In an interconnected, real-time news and opinion laden world, expectations are likely to exceed delivery. This creates tensions within societies leading to political and social unrest and drives migration, leading to cross-border tensions as well as unrest spreading as new peoples are absorbed by existing ones.

While technology can add help address and enable nearly c.20% to 40% of the SDGs, it can also help undermine the foundation of democracies that are a crucial ingredient in achieving the

We are now on the brink of technologies that can help solve for any problem, and create problems that we cannot solve ... which means the SDGs are solvable if we can keep bad faith actors at bay

SDGs. In the lead up to the 2016 US presidential elections, 87 million Facebook profiles were used to create 32 distinct personality types defined by fears that could be exacerbated through digital advertising campaigns in key swing states.⁵⁶ Now, the same social media platform has two billion daily uses and generative AI can produce infinitely detailed personality profiles for even more precise ads, to shape public opinion.

Every SDG can be undermined in the minds of populations using these methods or to make solving the issues the combined will. The battle is on to use technology to either subvert or enhance our chances of achieving the SDGs and creating human security for all.

Hence, using technology to both protect people from technology and to drive progress on all fronts, is not an option, it is a fundamental requirement for peace, prosperity, and freedom.

On the Brink of a New Era and a New Civilization

The painful transition to the next era, often called variously a digital or information or imaginal one, is in process today. It includes those that sell the past of the industrial era as one that can be preserved, the exclusivity or primacy of their nation and the denial of science, these are not. These leaders will appeal to many in a time of uncertainty and distress and are a natural if difficult part of the progress towards a society that breaks free from the past to create a superior future position.

However, given the world is set to make the breakthroughs that define a new world system, we can imagine the contours of that future:

- **Energy.** New energy sources that replace carbon, with fusion and its derivatives being the most likely near-term prospect for commercialization, while other fundamental alternatives are explored.
- **Technology.** The blurring of the boundaries between the physical, digital, and biological spheres creates new possibilities to address the world's major physical issues and new opportunities for everything affecting life.
- **Virtualization.** The metaverse creating a shift in the human paradigm itself through the widespread adoption of virtual, augmented, and mixed reality platforms, with global economic and social activity increasingly migrating to digital spaces.
- **Materials.** Breakthroughs in material sciences replace the need for the extraction of finite natural resources with sustainable and cost-effective synthetic alternatives.
- **Industry.** Increasing automation, material breakthroughs and abundant near-free energy allow for nearly limitless scaling that drives down the marginal costs of production towards zero.
- **Finance.** The adoption of a pervasive distributed form of capitalism that drives mass inclusion, while renewing and reinventing global trade without the need for centralized control or financial intermediaries.
- **People.** People empowered by technology with access to opportunities regardless of time, space, geography, demography, gender, race, or income levels.
- **Space.** The leveraging of space for access to new resources, exploration, and new territories to live in, will drive massive innovations of their own along the way.

Source: 'Technology as a Force for Good', Report 2023, copied with permission

Making such a future a reality will require bold investments across information technology, energy, material sciences, engineering, and life sciences, to transform and create whole new industries. To attempt to stop such a future is not only irrelevant it is futile.

A more secure, sustainable, and superior future for all requires rolling out existing solutions that drive inclusivity across the world to create a far more equitable and valuable platform built off the efforts of all. This provides the foundation on which major breakthroughs can build a far superior world to the one we inherited from the industrial age. A world in which each stakeholder is a force for good and human security for all is not an aspiration but a reality.

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2. Acknowledgements

i. Finance Companies Analyzed in this Report

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|----|---|----|--------------------------------------|-----|---------------------------------|
| 1 | ABN AMRO | 45 | DBS Group Holdings | 92 | PIMCO |
| 2 | Abu Dhabi Investment Authority | 46 | Deutsche Bank | 93 | Partners Group AG |
| 3 | Aegon NV | 47 | Edmond de Rothschild | 94 | Phoenix Group Holdings |
| 4 | AIA Group | 48 | EFG International | 95 | Principal Financial Group, Inc. |
| 5 | AIG | 49 | Fidelity Investments | 96 | Prudential Financial, Inc. |
| 6 | Allianz SE | 50 | First Abu Dhabi Bank | 97 | Prudential plc |
| 7 | Ameriprise Financial (Columbia Threadneedle) | 51 | Future Fund | 98 | Putnam Investments |
| | | 52 | GIC Singapore | 99 | Rabobank |
| | | 53 | Goldman Sachs Group | 100 | Resona Holdings |
| 8 | Amundi SA | 54 | Government Pension Fund Japan (GPIF) | 101 | Royal Bank of Canada |
| 9 | Anima Holdings | 55 | Great-West Lifeco | 102 | Schroders plc |
| 10 | Apollo Asset Management | 56 | Groupe BPCE | 103 | SEB AB |
| | | 57 | HDFC Limited | 104 | Société Générale |
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| | | 59 | HSBC | 106 | Standard Banking Group |
| 12 | Ares Management Corporation | 60 | ICICI Ltd | 107 | Standard Chartered |
| | | 61 | ING Group | 108 | Standard Life |
| 13 | Assicurazioni Generali | 62 | Intesa Sanpaolo | 109 | Aberdeen plc |
| 14 | Australian Super | 63 | Invesco | 110 | State Bank of India |
| 15 | Aviva plc | 64 | Investec Group | | State Street Global Advisors |
| 16 | AXA SA | 65 | Janus Henderson Group plc | 111 | Sumitomo Mitsui Trust Holdings |
| 17 | Banco Santander | | Japan Post Holdings | 112 | Sunlife Financial Inc |
| 18 | Bank of America | 66 | JPMorgan Chase | 113 | Swiss Life Holding AG |
| 19 | Bank of Montreal | 67 | Julius Bär Group AG | 114 | T Rowe Price |
| 20 | Bank of New York Mellon | 68 | KB Financial Group | 115 | Toronto Dominion Bank |
| 21 | Barclays | 69 | KKR | 116 | The Bank of Nova Scotia |
| 22 | BBVA | 70 | Korea Investment Corporation | 117 | TIAA (US) |
| 23 | Blackrock | 71 | Legal & General | 118 | UBS AG |
| 24 | Blackstone | | Liberty Mutual | 119 | UniCredit |
| 25 | BNP Paribas SA | 72 | Insurance Group | 120 | Vanguard |
| 26 | Bridgewater Associates | 73 | Lincoln Financial Group | 121 | Vontobel |
| 27 | Brighthouse Financial Group | 74 | Lloyds Banking Group | 122 | Wellington Management |
| 28 | Brightsphere Investment Group | 75 | Man Group | 123 | Wells Fargo & Company |
| | | 76 | Manulife Financial Corporation | 124 | Westpac Banking Corporation |
| 29 | Brookfield Asset Management | 77 | MetLife, Inc. | 125 | Zurich Insurance Group AG |
| 30 | California Public Employees (CalPERS) | 78 | Mitsubishi UFJ Financial Group, Inc | | |
| 31 | Canadian Imperial Bank of Commerce | 79 | Mizuho Financial Group, Inc | | |
| 32 | Capital Group | 80 | Morgan Stanley | | |
| 33 | Carlyle | 81 | NatWest Group plc | | |
| 34 | CDPQ | 82 | New York Life Insurance Company | | |
| 35 | Charles Schwab | 83 | Ninety-One Group | | |
| 36 | Citi | | Nippon Life | | |
| 37 | CNP Assurances | 84 | Nomura Holdings | | |
| 38 | Commerzbank | 85 | Nordea | | |
| 39 | Commonwealth Bank of Australia | 86 | Norges Bank Investment Management | | |
| 40 | Credit Agricole | 87 | Northern Trust Corp | | |
| 41 | Credit Mutuel | 88 | OMERS | | |
| 42 | Credit Suisse | 89 | PGGM | | |
| 43 | Dai-ichi Life Holdings | 90 | | | |
| 44 | Danske Bank | 91 | | | |

ii. Active Participants

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iii. Report Leadership and Execution

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This report was prepared by **Ketan Patel** and **Christian Hansmeyer**, with review, feedback, and insights from the Advisory Council.

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Christian Hansmeyer, Report lead, **Nandan Desai**, Analysis, and research team lead, **Aditya Ajit**, Analytics and research, **Ushma Shah**, Analytics and research, **Lesley Whittle**, Project administration

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REPORT OBJECTIVES, RESEARCH PROCESS AND METHODOLOGY

1. SDG Solution Areas Analysis

Research Objective: The SDG solution areas analysis illustrates how the 17 UN Sustainable Development Goals can be met by the coordinated actions of global stakeholders, using currently available resources, and leveraging established tools and solutions.

Research Process:

1. **Core information set.** The core document examined to establish the potential solutions to address the SDGs was at the level of the 169 SDG targets established in the indicators, namely the 2030 Agenda for Sustainable Development.
2. **Determination of potential solutions, initiatives and resources to address SDGs.** The analysis included a detailed review of the literature and research on each of the 17 SDGs, as well as discussions with subject matter experts, analysis of the existing landscape of efforts to meet the goals in order to identify and map the tools and resources and resources available to meet a given goal, as well as the key stakeholders involved in their achievement. Key stakeholders considered included governments, the private sector, households (both as individuals and collectively as civil society), and the finance industry (consisting of both public and private sector actors). The core resources available to stakeholders included:
 1. **Capital.** Financial resources funding the sustainable development (investing and operating) activities of all stakeholders.
 2. **Natural Resources.** Land, raw materials, and natural resources, both in the context of exploitation and conservation.
 3. **Human Resources.** The choices and actions of individuals, acting as consumers, professionals, voters, and as members of society.
 4. **Intellectual Property.** Knowledge, ideas, and innovation, as well as the technological breakthroughs that they deliver.
3. **Synthesis into six solutions.** The resulting list of potential solutions was categorized into six distinct overarching solution areas grouping together various subsets of initiatives tools and resources. These solution areas' applicability to a given goal varies from target to target. These six solutions included:

1. **Policy.** Public policy initiatives, consisting of legislation, regulation, national strategies, bilateral and multi-lateral treaties, enabling actions for public sector activities, and the provision of incentives to the private sector;
 2. **Public Sector Activities.** Government execution actions including the deployment and operation of public systems and organizational infrastructure, the provision of public services, public financing and direct transfers, and policy enforcement actions;
 3. **Technology.** Information and communications technology, including the provision of IT and telecom services information processing and data analytics, and the deployment of digital goods and services;
 4. **Infrastructure.** The basic physical structures and facilities needed for the operation of society, including public services infrastructure, the built-up environment, and the infrastructure designed for resilience and protection;
 5. **Financial Services.** The provision of financial services to households and micro- small- and medium-enterprises with direct impact on SDG targets, delivering financial inclusion, increasing prosperity, and financial resilience, and
 6. **Private Sector.** Solutions delivered by private sector business activities, including through organizational change, the development of new business opportunities, and partnerships with public sector.
4. **Base Case estimates for achieving SDG targets.** The analysis further considered each SDG target, its underlying indicator(s) and the literature on the specific solutions, to determine each solution's potential contribution to meeting the target, resulting in a percentage estimate. The base case percentage estimate of each solution's contribution to a specific target assumed that solutions would be based on well-established activities and models, leveraging currently available resources, with solutions scaled and transposed as required. The aggregate percentages of all the Base Case solutions for a given target add up to 100%, indicating that the mix of solutions determined have the potential to fully achieve the SDGs.
5. **Stretch Case estimates for the SDGs. A second estimate determined a 'Stretch Case' of solutions' contribution to the SDGs.** This stretch case percentage estimate of each solution's contribution to a specific target considered a wider set of tools and solution-sets. In addition to the activities and models considered in the Base Case estimates, the Stretch Case also considered [more targeted] solutions and initiatives that might require significant local adaptation to be scaled globally. The aggregate percentages of all the Stretch Case solutions for a given target can exceed 100%, indicating that if all solutions were executed to Stretch Case levels the target for achieving the SDGs could be exceeded, leading to an achievement above the original 100% target.

Process, Assumptions, Requirements and Limitations:

1. **Unweighted Targets.** The contribution of each solution to the SDGs in both the Base and Stretch Cases is determined by calculating its average contribution across all 169 SDG

targets. This average is not weighted to specific targets or goals (each of which contains between five and 19 targets).

2. **Technology Solution.** Technology contributes to 87% of the targets, making an at least c.5% contribution to their achievement reflecting technology's enabling role, providing critical information processing, automation, communication, and knowledge sharing for the dissemination of best practices and coordinated action. The Base Case estimate assumes the achievability of universal connectivity and the global deployment of existing mass-market IT solutions. The Stretch Case considers the potential impact of advanced digital technologies including Web 3.0, cloud ecosystems, and artificial intelligence, among others, deployed at scale.
3. **Policy Solutions.** Policy solutions based on laws and regulations are assumed to also require an element of accompanying public sector activity in the form of enforcement actions. Policy solutions based on incentives are assumed to require some level of private sector solutions as well (unless the underlying SDG target is specifically focused on providing incentives, rather than on delivering outcomes). The Base Case estimate focuses on the scaled deployment of enabling legislation and regulation for the SDGs. The Stretch Case estimate assumes a more supportive enabling environmental and greater use of incentives.
4. **Public Sector Activity Solutions.** The Base Case estimate focuses on the essential government services and activities needed to achieve the SDG's underlying targets. The Stretch Case estimate assumes the removal of significant capital constraints in least developed and developing countries. Significant enhancements to funding public sector activities has proven to be a barrier to success thus far, however the implementation of policy (encompassing laws, regulations and governance) makes the public sector activity funding more feasible and enhancing the base case activities makes the stretch case more feasible.
5. **Infrastructure Solutions.** Infrastructure solutions includes the physical element of IT, telecoms, and other digital infrastructure but does not consider the development or deployment of software or the dataflows the infrastructure carries. The Base Case estimate is based on the global scaling of existing mass infrastructure solutions and technologies. The Stretch Case estimate assumes the global adoption of 'state of the art' infrastructure technologies, including building information modelling, smart infrastructure, and advanced materials, among others.
6. **Financial Services Solutions.** Financial Services solutions are defined as opportunities where the delivery of financial service products to households and MSMEs *directly* contributes to a target's achievement. The Base Case estimate is based on the provision of basic financial services required to achieve a given target. The Stretch Case estimate assumes providing target populations with a full suite of financial solutions across banking, insurance, and asset/wealth management to enable broader prosperity.

7. **Private Sector Solutions.** The Base Case estimate is based on a 'business as usual' scenario in which private sector corporations continue to play their existing commercial roles and pursue opportunities in keeping with existing strategies and business models. The Stretch Case estimate assumes private sector corporations make long term investments, reposition their businesses for the future, incorporate new business models (as required) and expand their strategic focus.

Interdependencies, Outcomes, Scope and Limitations:

1. **First, Second and Third Order Outcomes.** Each target was evaluated in isolation, with only the first order impact of a given solution on that target considered. Second and third order impacts on other target, which are potentially substantial given the interdependency of the goals, have not been taken into account.
2. **Policy Affects Feasibility of Other Solution Areas.** The implementation of policy (encompassing laws, regulations, and governance) makes a country a stronger candidate for private sector participation.
3. **Relationship between Base and Stretch Cases.** Achieving the base case makes the stretch case more feasible by enhancing the attractiveness of countries.
4. **Order of Magnitude.** The analysis in this report can only be considered to provide an order of magnitude of the potential impact of solutions to each of the SDGs, at the level of the SDG targets, and serves to demonstrate that the SDGs can be feasibly achieved both technically and financially.

Multi-stakeholder Process Required. Translating the analysis into precise numbers requires the process to be conducted with multiple stakeholders with potential implementation roles, alongside subject-matter experts on the nature of the problem, including UN member states, for each of the 17 goals. Such an analysis would also determine (i) the integration of the various solutions required to meet a given target, (iii) the practical feasibility of scaling and transposing existing solutions globally, (iv) and the capital required to scale and deploy these solutions.

2. Calculating the increasing cost of the SDGs

A Simple Framework to Target, Fund, and Measure the SDGs, Recap

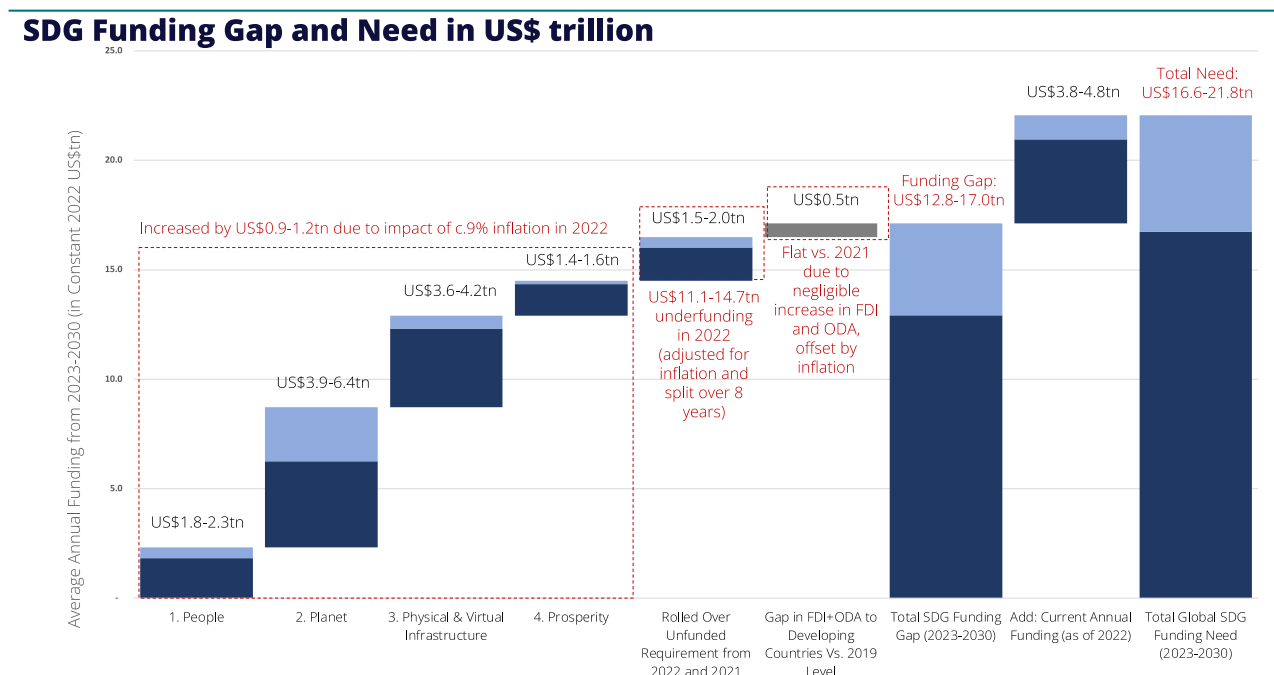
A similar simple and practical approach is required for all the SDGs. The 2021 Capital as a Force for Good report grouped the 17 SDGs into four interrelated, interconnected, and interconnected categories, with one important enabling category:

- I. **People.** Addressing basic human needs including access to quality education and healthcare, and ending world hunger;
- II. **Planet.** Saving the planet by addressing climate change, biodiversity loss, and addressing plastics;

- III. **Platforms** Enabling human activity by building the necessary infrastructure, and affordable housing;
- IV. **Prosperity**. Creating shared prosperity through financial inclusion for small businesses, women, and underserved populations, and providing social security, and
- V. **Peace and Partnership**. Delivering peace and partnerships to enable stakeholders to work together with the aim of meeting the SDGs.

Last year's analysis⁵⁸ estimated a gap of c.US\$11.3-14.9 trillion annually across the first four categories, largely in developing countries, and a total requirement of US\$15-19.6 trillion per annum to meet the SDGs by 2030. The build-up to this average annual funding gap and total requirement, as presented in last year's report, is summarized in the chart below:

Figure 31: Previous Year's Estimate of Total SDG Financing Cost and Gap



It is noteworthy that Peace and Partnership, are crucial to the SDGs overall success, and are not included in the financing estimates. While governments and policy makers often play the leading role in addressing peace and facilitating partnership, their success or failure (from a financier's perspective) results in financiers supporting or withholding investments in states that do not meet their criteria. This adverse impact on countries with low governance, which often have the most acute SDG funding needs, is set to grow as a side-effect of the adoption of ESG by financial institutions and businesses.

Revised Assessment of the Funding Need and the Gap

The 2023 funding gap has been revisited to reflect a number of factors.

- V. **High Inflation.** Inflation globally increased to 8.7% in 2022 (vs. 4.7% in 2021), with c.7% inflation in advanced economies and c.10% inflation across emerging markets, on average⁵⁹, driven by the war in Ukraine, an increase in food and energy prices, and continued supply chain bottlenecks. Inflation erodes the value of increases in SDG funding and compounds the overall requirement across all categories, and increased the annual SDG funding gap by US\$1.0-1.4 trillion in 2022.
- VI. **Chronic Underfunding.** Total funding for the SDGs is estimated to have increased by only 5.4-5.9% to US\$3.8-4.9 trillion in 2022, given the sharp slowdown in GDP growth globally in 2022 vs. 2021 when the world was recovering from the pandemic-induced lockdowns⁶⁰. This means that c.US\$11-15 trillion of the total SDG funding need in 2022 was not funded, which compounds on top of the 2021 underfunding, and gets further compounded by inflation. With each year of severe underfunding for the SDGs, the overall funding gap for the remaining years is quickly compounding to an unachievable quantum.
- VII. **Foreign Investment and Aid to Developing Countries Still Well Below Pre-Pandemic Levels.** Foreign direct investment (FDI) and official development assistance (ODA) to developing countries declined by c.US\$0.7 trillion in 2020 due to the pandemic as countries turned their resources inward⁶¹. While there was a partial recovery in 2021 with US\$0.2 trillion increase in FDI and ODA to developing countries, momentum reversed in 2022 with FDI and ODA to developing countries increasing by only US\$63 billion or 6% vs. 2021⁶². As a result, after accounting for inflation, overall FDI and ODA to developing countries remains c.US\$0.6 trillion below pre-pandemic (2019) levels.

Taking the above factors into account, the revised estimate suggests that the total annual funding required to meet the SDGs has increased to c.US\$16.6-21.8 trillion (in constant 2021 US dollars), a c. 10% increase vs. last year's estimate. The total funding gap at US\$103-137 trillion has stayed largely constant relative to last year's US\$102-135 trillion, with one year less for this gap to be closed. The key components of this increase are broken down in the table below.

Figure 32: Total SDG Funding Gap, 2023 Revised Estimate (vs. 2022 Estimate)

| Constant 2022 US\$ trillion, except where noted | Low | High | Notes |
|---|-------|-------|--|
| Last Year's Estimate of Annual SDG Funding Gap (2021 US\$) | 11.3 | 14.9 | 2022 Capital as a Force for Good Report |
| Add: Increase in Rolled Over Underfunded Requirement (from 2021 and 2022) | 0.6 | 0.9 | US\$11.2-14.8 trillion unfunded requirement from 2022 (added to 2021 unfunded requirement) |
| Add: Impact of Inflation (Adjustment from 2021 to 2022 Constant US\$) | 1.0 | 1.2 | Based on global consumer price inflation of 8.7% in 2022 |
| Less: Increase in FDI and ODA to Developing Countries in 2022 | (0.1) | (0.1) | c.US\$53 billion additional FDI and ODA for developing countries in 2022 vs. 2021 |
| Revised Estimate of Annual SDG Funding Gap | 12.8 | 17.0 | |
| % Increase in Last Year | 13% | 14% | |
| Add: Estimated Current SDG Funding Annually (as of 2021) | 3.8 | 4.8 | 2021 SDG funding estimate increased at the rate of nominal GDP growth |
| Revised Estimate of Total Annual SDG Funding Requirement | 16.6 | 21.8 | |
| % Increase in Last Year | 10% | 11% | |

Notes: The total supply of SDG funding is inherently difficult to estimate given the absence of any publicly available estimates which aggregate public investments by member states, investments by the private sector, and cross-border flows of development assistance and direct investment by developed countries in developing countries specifically against the SDGs. The analysis above assumes that the supply of financing for the SDGs increased at the rate of nominal GDP growth in 2022 (factoring in both the economic recovery and inflation) to reach US\$3.8-4.8 trillion in 2022. This appears to be a safe assumption considering the following factors:

After record stimulus levels in 2020 and 2021, developed and developing economies were fundamentally fiscally constrained in increasing public expenditure on the SDGs to the extent of the growth in their total output⁶³.

SDG achievement gaps still point to persistent gaps in developing countries, indicating that, even with the record levels of funding seen in 2021, this has been altogether insufficient⁶⁴.

While there was a 19% in new sustainable debt issuances in 2022 (from US\$1.1 trillion in 2021 to US\$0.9 trillion in 2022⁶⁵), funding for the SDGs is significantly broader and encompasses public spending and private investment. An analysis of the SDG financing initiatives of the 25 large financial institutions (which together accounted for c.80% of the total US\$3 trillion of sustainable financing by 125 finance industry leaders analyzed in the 2022 Capital as a Force for Good report), suggests that despite the slowdown in sustainable debt issuances, overall sustainable financing by the finance industry increased by c.4% in 2022, which is consistent with the 3.2-3.7% increase assumed in the analysis above⁶⁶.

Taken together, the total funding requirement to achieve the SDGs is estimated at US\$16.6-21.8 trillion annually between 2022 and 2030, or US\$132-175 trillion in total over eight years, only a quarter of which is currently being funded and mostly in developed nations.

Please refer to the 2021 Capital as a Force for Good report for further details about the methodology used to arrive at the original funding gap estimates.

DISCLAIMER, REFERENCES AND NOTES

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The terms country and economy as used in this report also refer, as appropriate, to territories or areas; the designations employed and the presentation of the material do not imply the expression of any opinion whatsoever on the part of Force for Good concerning the legal status of any country, territory, city, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. In addition, the designations of country groups are intended solely for statistical or analytical convenience and do not necessarily express a judgment about the stage of development reached by a particular country or area in the development process.

The following symbols have been used in the tables:

- A slash (/) between dates representing years, e.g., 2010/11, indicates a financial year.
- Use of a dash (-) between dates representing years, e.g., 2010–2011, signifies the full period involved, including the beginning and end years.
- Reference to "dollars" (\$) means United States dollars, unless otherwise indicated.

Annual rates of growth or change, unless otherwise stated, refer to annual compound rates. Details and percentages in tables do not necessarily add to totals because of rounding.

- ² Sources: United Nations, World Population Prospects (2022), UN DESA, IEP
- ³ Source: An Update on Global Mining Land Use (2022), Scientific Data (Springer Nature)
- ⁴ Source: World Inequality Report
- ⁵ Source: 2023 Global Peace Index
- ⁶ Source: National Oceanic and Atmospheric Administration
- ⁷ Source: UK Department for Business & Trade, Global Trade Outlook – Feb 2023
- ⁸ Source: CapitalIQ, GPC Research
- ⁹ Source: Cisco, Based on 2018-2023 historical growth rates
- ¹⁰ Source: US Energy Information Administration
- ¹¹ Source: 2022 Technology as a Force for Good Report, data taken from Earth Overshoot Day, National footprint and biocapacity accounts, 2022 edition.
- ¹² Source: United Nations General Assembly Resolution ES-11/4 UN World Population Prospects
- ¹³ Source: UK Parliament, House of Commons Library, 2019 and 2021 foreign aid budgets
- ¹⁴ Source: Case, Anne, Deaton, Angus "Mortality and Morbidity in the 21st Century" (2017), Brookings
- ¹⁵ Source: 2023 Fragile States Index
- ¹⁶ Source: 2022 Corruptions Perceptions Index
- ¹⁷ Source: OECD 2018 FDI Restrictiveness Index
- ¹⁸ Source: 2023 SDG Index, RobecoSAM Country Sustainability Ranking
- ¹⁹ Source: OECD, Global Outlook on Financing for Sustainable Development 2021
- ²⁰ Source: BP 2022 Statistical Energy Review
- ²¹ Source: Nature
- ²² Source: IMF World Economic Outlook Database, April 2023
- ²³ Nominal GDP growth in emerging markets slowed from 17% in 2021 to 7.4% in 2022, while developed economies slowed from 11% in 2021 to 1.7% in 2022, Source: IMF World Economic Outlook Database, April 2023
- ²⁴ Source: OECD, Global Outlook on Financing for Sustainable Development 2021
- ²⁵ Sources: FDI based on UNCTAD World Investment Report; ODA based on OECD estimates
- ²⁶ Source: <https://sdgpulse.unctad.org/sdg-costing/>
- ²⁷ Source: World Investment Report 2023
- ²⁸ Source: IMF, 2023 SDG Development Report. Countries with GDPs/Capita in excess of US\$80,000 (Luxembourg, Ireland, Norway, Switzerland, Singapore, Qatar) excluded for scaling purposes.
- ²⁹ Note: A series of eight goals running from 2000 to 2015 which focused on achieving the most basic of human development objectives, from halving extreme poverty rates to halting the spread of HIV/AIDS,
- ³⁰ Source: Economics of Ecosystems and Biodiversity (TEEB), UNDP
- ³¹ Source; UNCTAD Global Trade Update Dec 2022
- ³² Source: Greater Pacific Capital, Sign of the Times, May 2023
- ³³ The finance industry's total assets will include some double counting due to direct investors receiving funds both directly from asset owners and indirectly from asset allocators
- ³⁴ Source: Savills
- ³⁵ Source: Brookings 2021
- ³⁶ Source: SIPRI
- ³⁷ Source: UNESCO
- ³⁸ Source: WHO, IEA
- ³⁹ Source: IEA
- ⁴⁰ Source: UNCTAD's World Investment Report 2023
- ⁴¹ Source: Developing and Least Developed Country Definition as per IMF
- ⁴² Source: IEA
- ⁴³ Source: Dealogic
- ⁴⁴ Capital invested in the secondary market can provide potential indirect benefits to the SDGs: Companies sought after by investors enjoy rising share prices and decreasing costs of capital, making it cheaper for them to raise new funds that could be applied to sustainable investments.
- ⁴⁵ Source: McKinsey Global Private Markets Review 2023
- ⁴⁶ Source: Pew Research Center (2022) Partisan differences are common in the lessons Americans take away from COVID-19
- ⁴⁷ Sources: Yale Program on Climate Communication; Lynas, Mark; Houlton, Benjamin Z.; Perry, Simon (2021). "Greater than 99% consensus on human caused climate change in the peer-reviewed scientific literature". Environmental Research Letters.
- ⁴⁸ Source: Pew Research Center (2023) China's approach to foreign policy gets largely negative reviews in 24 countries
- ⁴⁹ Source: US Congressional Budget Office
- ⁵⁰ Source: The Role of Artificial Intelligence in Achieving the Sustainable Development Goals (2020), Ricardo Vinuesa; Hossein Azizpour; Iolanda Leite; et al. Nature Communications volume 11, Article number: 233

⁵¹ Source: IBID

⁵² Note: The 2021 special policy report "Green Belt and Road Initiative and the 2030 SDGs" by the China Council for International Cooperation on Environment and Development explores the environmental governance best practises of major DFIs for potential inclusion the BRI

⁵³ Source: Fusion technology is believed to be at least 10-20 years away from viability. Source: Scientific American

⁵⁴ See "Sunny side up: Maximising the European Green Deal's potential for North Africa and Europe" (2023) Policy Brief, European Council on Foreign Relations

⁵⁵ Source: UN DESA, SDG Summit 2023, retrieved: <https://sdgs.un.org/SDGSummitActions/HII>

⁵⁶ Source: BBC: Facebook scandal 'hit 87 million users', Published 4 April 2018

⁵⁷ See the 2022 Capital as a Force for Good report for details

⁵⁸ Last year's analysis was based on initial and revised estimates of funding the SDGs by UNCTAD, the IMF, and the OECD, along with estimated levels of total current funding. These estimates were then: (1) brought up to date by including revised estimates for meeting the Paris treaty objectives (from IEA and the Energy Transition Commission), and incorporating the implications of the coronavirus pandemic (based on an OECD estimate); (2) including estimates for certain components not included in the initial estimate, such as affordable housing, financial inclusion, and social security, and (3) factoring in inflation from the time the initial estimates were made to calculate the requirement in 2020 US dollars.

⁵⁹ Source: IMF World Economic Outlook Database, April 2023

⁶⁰ Nominal GDP growth in emerging markets slowed from 17% in 2021 to 7.4% in 2022, while developed economies slowed from 11% in 2021 to 1.7% in 2022, Source: IMF World Economic Outlook Database, April 2023

⁶¹ Source: OECD, Global Outlook on Financing for Sustainable Development 2021

⁶² Sources: FDI based on UNCTAD World Investment Report; ODA based on OECD estimates

⁶³ The combined GDP of all developing countries grew by 4.0% in 2022 in real terms and 7.4% in nominal terms, while developed economies grew by 2.7% and 1.7% in real and nominal terms, respectively (Source: IMF World Economic Outlook, April 2023); estimated developed and developing countries' funding in 2021 have been increased at the rate of nominal GDP growth in 2022 for developed and developing countries, respectively.

⁶⁴ Source: United Nations, Sustainable Development Goals Progress Chart 2022 Technical Note

⁶⁵ Source: Bloomberg

⁶⁶ Source: 2022 Capital as a Force for Good Report; 2023 Capital as a Force for Good Dataset

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