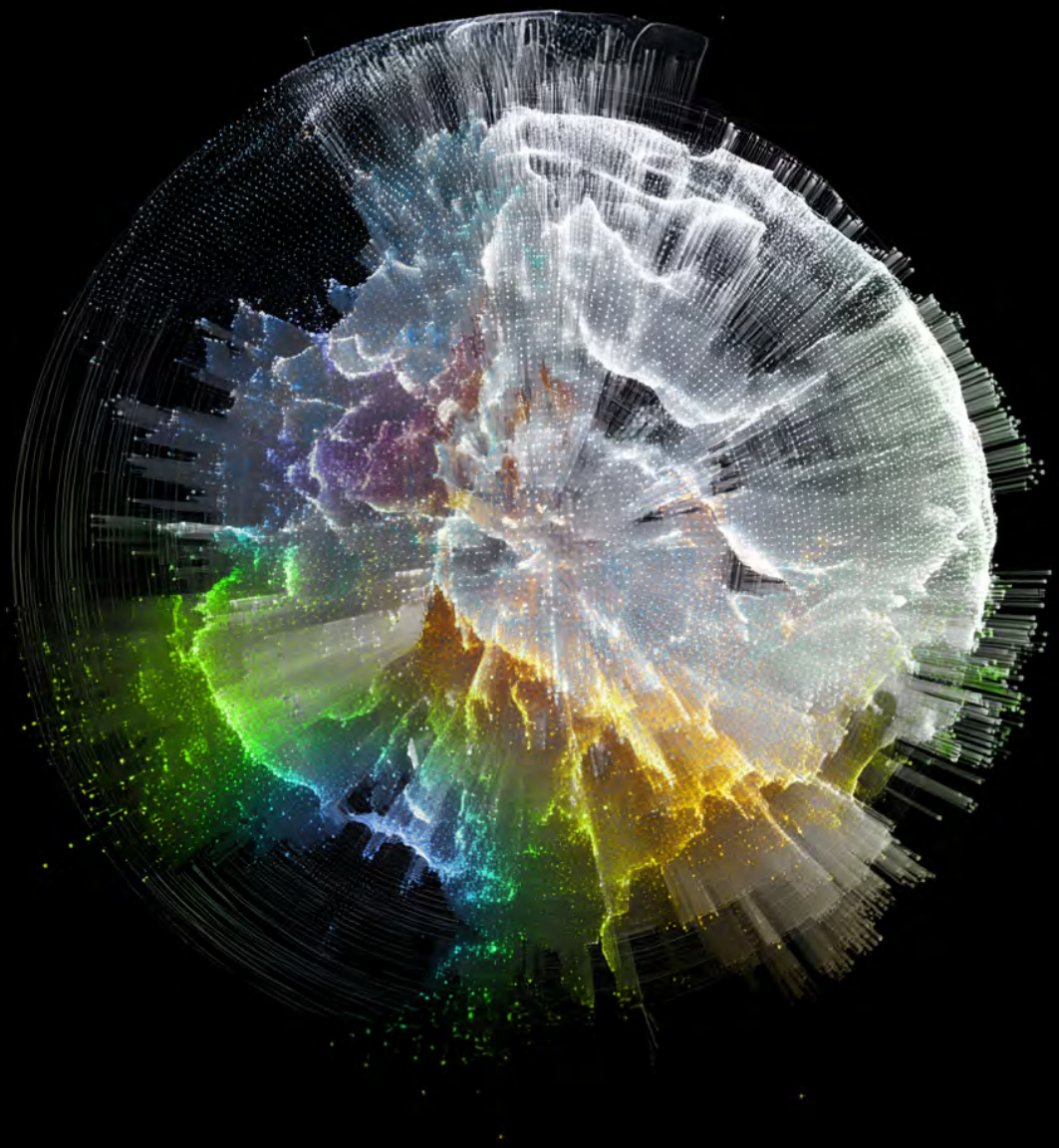
مؤسسة دبي للمستقبل
DUBAI FUTURE FOUNDATION

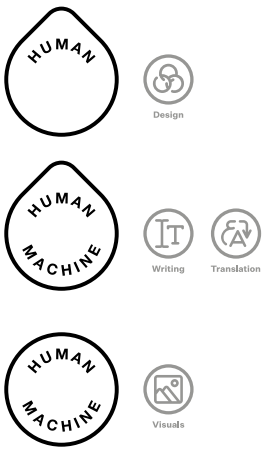


FUTURE OPPORTUNITIES REPORT

THE GLOBAL 50

SPECIAL EDITION

GLOBAL SOLUTIONS AND SHARED FUTURES



* See the HMC icons in each contribution for specific disclosures.

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FOREWORD

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Our society is grappling with profound questions about the future amid growing uncertainty.[1]

Official development assistance from Organisation for Economic Co-operation and Development (OECD) donor countries fell by up to 17% in 2025,[2] while total global debt has now reached 235% of GDP, the second highest level after the Covid-19 pandemic peak of 258%.[3] UNCTAD's 'fear index', a calculated measure representing the volatility of the US stock market – which makes up nearly 49% of global stock market value[4] – reached its third-highest level this century, trailing behind only the peaks of the Covid-19 pandemic and the 2008 financial crisis.[5] Meanwhile, global economic growth forecasts for 2025 have varied between the World Bank (2.7%),[6] the International Monetary Fund (3.2%), [7] and the OECD (3.2%).[8] Partly because of timing, the US tariff hikes – the largest since the 1930s[9] – have played a part in the discrepancies between these forecasts.

Beyond the economy, as the security and resilience of technology supply chains come under scrutiny,[10] air cargo is increasingly viewed as a means to strengthen supply chain resilience,[11] albeit at higher financial and environmental costs.[12] Following on from 2024, which was the warmest year on record, 2025 is expected to rank among the top three warmest years recorded.[13,14] Meanwhile, progress towards achieving the Sustainable Development Goals has slowed,[15] with increasing calls for new models of governance for emerging technologies.[16]

Yet, the same interconnections that fuel this uncertainty are also creating new opportunities for shared progress.

Trade between Global South nations is increasing and projected to grow at 3.8% annually, compared to 2.2% growth in trade among Global North economies.[17] New trade corridors are expanding between regions – including Asia and Latin America, China and India, and the Middle East and Africa.[18] Meanwhile, space technologies are unlocking opportunities for global internet connectivity, and, with new entrants, the space economy is poised for continued growth.[19] In parallel, emerging technologies, including artificial intelligence, are helping us to tackle complex problems and are independently managing entire workflows,[20] potentially allowing humanity to achieve in a decade what once took a century of biological progress.[21]

History shows that uncertainty can often inspire new pathways towards positive futures. During the Covid-19 pandemic, Indonesia delivered remote health services to 300 million people within months, while the United Kingdom set up clinical trials for 12,000 patients in just two weeks.[22] Past crises, from the 2008 financial crisis to major natural disasters,[23] have also spurred social cooperation and collective resilience, bringing communities together.[24]

In this special edition of The Global 50 report, Global Solutions and Shared Futures, we demonstrate that many promising opportunities are inherently global in nature. As we look towards 2026, we are reminded that despite current uncertainties, our future remains deeply interconnected, and our shared progress depends on our ability to collaborate across borders, sectors, and systems.

CONTENTS

INTRODUCTION

Uncertainty is not new. It is something we face, and have faced, every day in our own lives, in the lives of those around us, and in the world at large. Yet, in 2025, uncertainty feels unprecedented:[25]

- Tariffs keep shifting;[26]
- Media landscapes are changing, mostly driven by misinformation and disinformation generated by artificial intelligence (AI);[27]
- Wars and flashpoints have unclear outcomes and trajectories;[28]
- The future of jobs keeps changing as AI transforms existing labour markets and impacts youth entering the workforce;[29]
- Inflation persists despite policy interventions;[30] and
- Social media platforms spread information faster and to all generations of society before it is checked for authenticity and truth.[31]

With all of this comes an overall lack of clarity of what comes next, and that is, by definition, uncertainty.

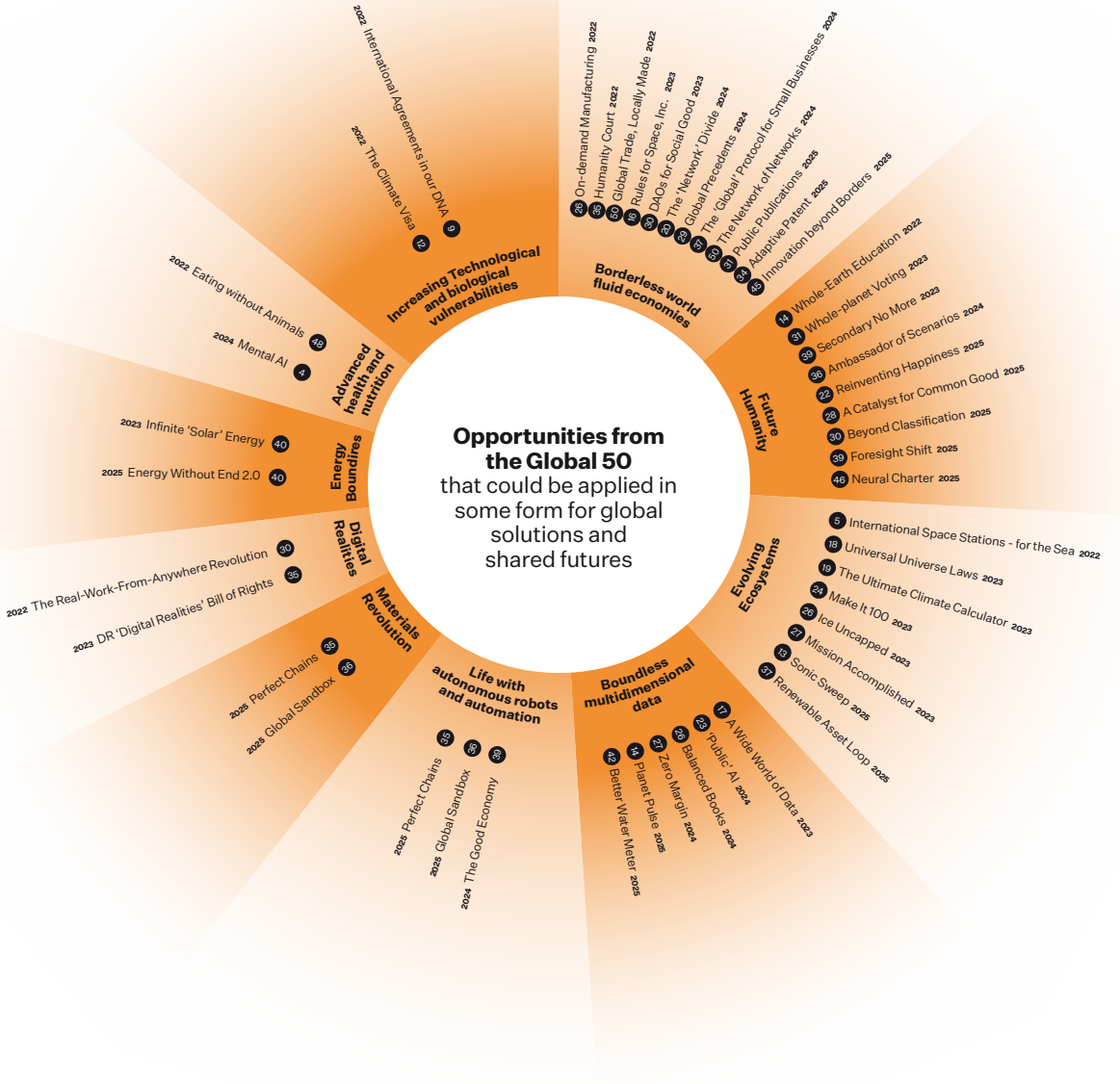
The word 'uncertainty' is often used interchangeably with other terms, yet it is distinct. Unlike risk, which is measurable, with known outcomes, uncertainty cannot be assigned probabilities, and possible outcomes are not fully known.[32] Uncertainty sometimes takes the form of knowing something will happen but not when, such as a breakthrough technology.[33] It can also appear when facing decisions that affect us but are beyond our control or ability to confidently predict.

Dismissing current anxieties about the future is unhelpful as the perceived speed, interconnectedness, and visibility of uncertainty are undeniable. Yet, **humans have always navigated unknown futures** and our interdependencies make navigating uncertainty a possibility and a shared responsibility across individuals, communities, organisations, and governments.

This special edition of The Global 50 goes beyond today's dominant narrative that depicts unprecedented uncertainty and fragmentation.[34] Instead, it focuses on opportunities that are inherently global, addressing challenges and solutions that cross borders, impact communities worldwide, or can be adapted and scaled across contexts.

For this special edition, the Dubai Future Foundation invited experts, researchers, and innovators from the United Arab Emirates and the rest of the world to provide commentary on opportunities from the perspective of global solutions and shared futures. Each contribution provides some background on why the opportunity is global and why it matters, the essential enablers or core dependencies, and the likely timescale for the opportunity to materialise.

The opportunities featured in this special edition come from a relevant subset of 48 opportunities from across all editions of The Global 50 report that directly align with the theme of Global Solutions and Shared Futures. Although only 14 opportunities are featured, all 200 opportunities from the 2022, 2023, 2024 and 2025 The Global 50 reports can be applied in some form for global solutions and shared futures.



We thank all contributors to this special edition. Their inputs provide a new perspective on the opportunities and how we may achieve positive outcomes to the 'what-if' questions. They illustrate how efforts to collectively imagine, design, and execute the future through global collaboration and cross-sectoral dialogue remain essential, especially because of pressures towards fragmentation.

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What if we adopted Space Development Goals (SpDGs)?

UNIVERSAL UNIVERSE LAWS

OPPORTUNITY #18 2023

A set of universal goals acts as a call to action to protect space and ensure that all who want to access it can do so without unduly increasing debris or space pollution, and safeguarding space for generations to come.

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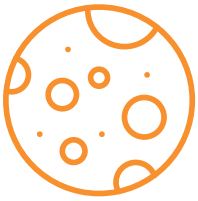
Space Development Goals (SpDGs), as a novel collaborative framework, could ensure responsible development and sustainability, and extend healthy competition on Earth to competition in space. The case for SpDGs is most evident in lunar exploration, where humanity risks repeating the competitive space dynamic of the 1960s.[35] This could reduce the sustainability of, and, as a result, the future success of, lunar exploration.

By mid-century, activity on the Moon could be flourishing. In addition to the general expansion of the space industry,[36] two major coalitions are leading the way on lunar exploration: the Artemis programme, led by the United States,[37] and the Chinese–Russian International Lunar Research Station (ILRS).[38] While the Artemis programme involves the 59 signatory countries to the Artemis Accords,[39] the ILRS has 17 official state members,[40] and there are many overlaps between the programmes.

Both programmes aim to:

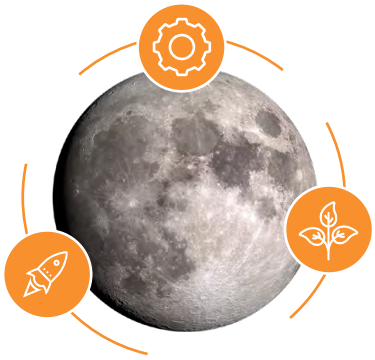
- return humans to the Moon and build infrastructure for science and commerce;
- place international coalitions of robotic and crewed research facilities on the moon's surface, and conduct space science experiments, lunar-based astronomy, and lunar exploration to learn about the moon's composition and past, and to harness its resources;[41, 42] and
- land, and establish bases, at the Moon's south pole,[43, 44] where temperature variations are less severe than at the lunar equator[45] and where there are sites of scientific interest, such as crater rims, where solar arrays can bring near-continual power,[46] and permanently shadowed regions at crater bottoms, which offer water ice deposits.[47]



By mid-century, activity on the Moon could be **FLOURISHING.**

This overlap of plans – for example at the lunar south pole, or more specifically the Shackleton Crater, which is 21 km across and over 4 km deep[48] – is both an opportunity and a call for coordination. While the number of signatory countries involved in both programmes,[a] navigating overlapping goals means channelling the synergies of international cooperation to ensure a peaceful and prosperous future for humanity in space.

[a] At the time of publication, only two countries have signed with both, Senegal and Thailand.



Humanity has a chance to
MAKE THE MOON A PLATFORM
for sustainable development, global partnership, and technological and scientific progress.

ESSENTIAL ENABLERS

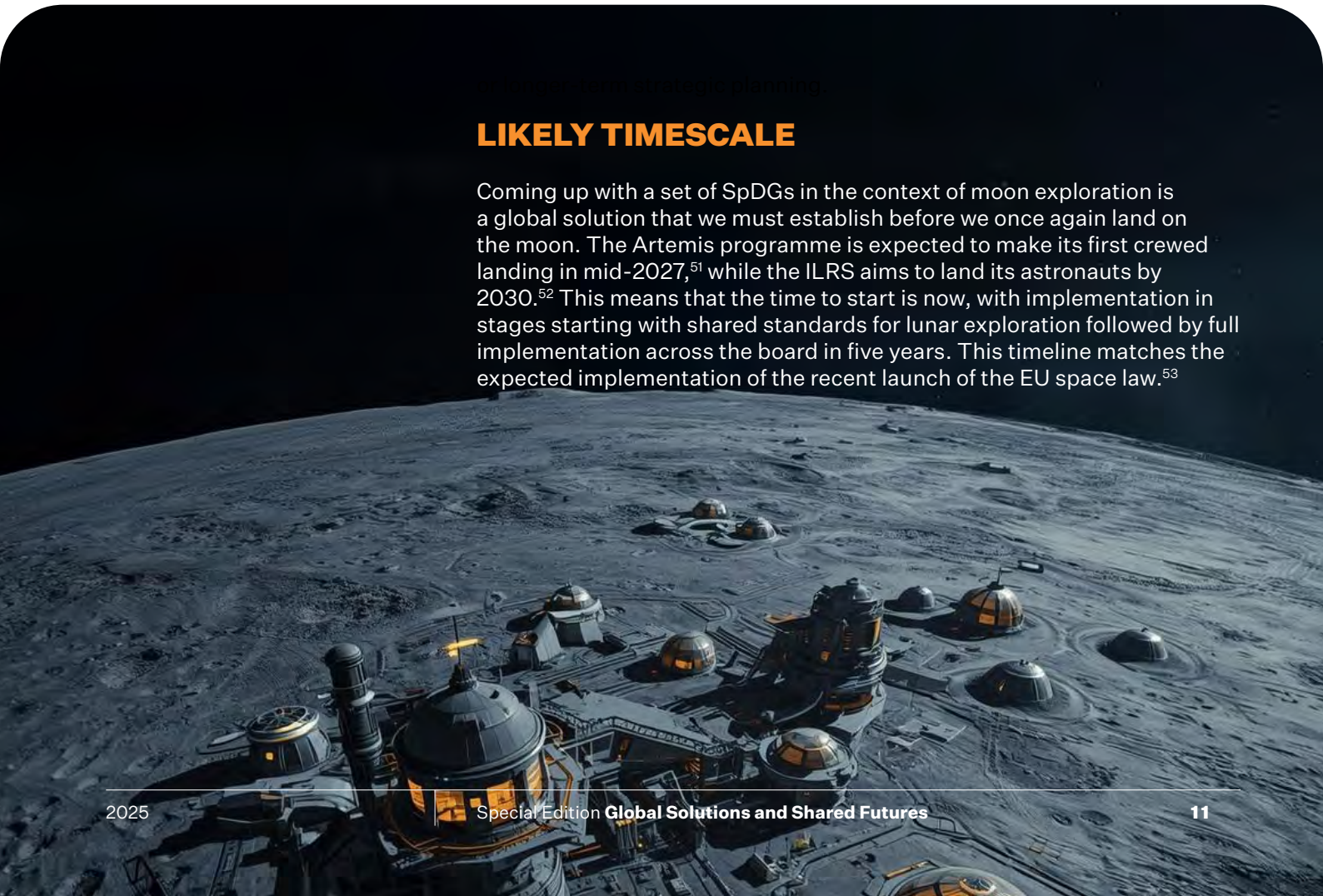
As a first enabler, we must resist the narrative of a 'moon race'. Competition may be inevitable, but shared interests in coordinated and implementable safety zones, environmental stewardship, and data exchanges offer pathways for transparency, jointly developed standards, and thoughtful and rational long-term normative precedent-setting.

Some near-term opportunities for transparency, coordination, and collaboration include shared standards for lunar radio-frequency use and standard lunar time and gravity models.[49] Coordination on these issues would be driven not by mere altruism but by the desire to ensure one's own mission's success. Opportunities for coordination and thoughtful precedent-setting must be investigated and pursued. Existing treaties developed at the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS)[50] could provide a framework for advancing these efforts.

Humanity has a chance to make the Moon a platform for sustainable development, global partnership, and technological and scientific progress. The question is whether we will act with short-term ambition

LIKELY TIMESCALE

Coming up with a set of SpDGs in the context of moon exploration is a global solution that we must establish before we once again land on the moon. The Artemis programme is expected to make its first crewed landing in mid-2027,[51] while the ILRS aims to land its astronauts by 2030.[52] This means that the time to start is now, with implementation in stages starting with shared standards for lunar exploration followed by full implementation across the board in five years. This timeline matches the expected implementation of the recent launch of the EU space law.[53]



What if long-term uncertainty became the greatest investment opportunity?

A CATALYST FOR COMMON GOOD

OPPORTUNITY #28 2025

A global equity fund tackles humanity's greatest long-term challenges by combining decentralised governance for transparency with multilateral development bank capital to scale up breakthrough innovations for climate, energy, food, and water security.

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Two hundred and fifty years ago, Richard Ketley, the landlord of the Golden Cross Inn in Birmingham, UK, founded Ketley's Building Society,[54] the first mutual financial institution in the world. Members of the society paid monthly subscriptions into a central pool of funds, which was then used to build houses for members. These houses were then used as collateral to attract more funds, which were used to build more houses. Building societies can now be found in several countries around the world and the largest building society in the United Kingdom, Nationwide, has assets of £368 billion and 12 million members.[55]

There are also many other types of mutual financial institutions, including credit unions, which were first established in Germany to serve small business communities in the second half of the 19th century.[56] Building Societies and Credit Unions have an overall purpose to serve society and a particular underserved community or group within it. While they make profits, this is a means to an end rather than an end in itself, with profits accumulated over time adding to capital reserves. They are owned by members who benefit from their services, and the lending and saving services they provide are priced competitively.

Building societies, or mutual financial institutions, can be found in several countries around the world and the largest building society in the **United Kingdom, Nationwide,** has assets of **£368 BILLION** and **12 MILLION MEMBERS.**

The international community faces a significant financing gap for global challenges. For example, approximately $9.2 trillion per year to 2050 (from 2021) is needed for the transition to net zero,[57] which is an estimated calculated shortfall of more than $230 trillion if the data are extended to 2050. In response, the international community needs to draw from historical experience and create a new kind of 'global mutual' financial institution to finance global challenges. Such institutions would aim to make a positive risk-adjusted return, not at the level required to attract private capital but rather at a sufficient level to deliver the public purpose determined by the long-term needs of millions of individual members spanning both high-income and low- and middle-income countries. Their priorities would go beyond the short-term focus of major shareholders or donor governments, as is often the case with multilateral development banks and international development funds.

A new model that turns long-term uncertainties into investment opportunities can be driven by the principles of mutual financial institutions with a long-term public purpose. The mechanism is managed based on the needs of its members, mobilised where and when needed, and able to withstand economic pressures.

ESSENTIAL ENABLERS

Three key steps will be needed to bring to fruition the idea of a global mutual financial institution that can meet the long-term needs of global societies. First, a group of philanthropic organisations, ideally supported on a pro bono basis by one or more of the most successful existing national mutuals, would need to establish a design group to refine the concept of a global mutual, define key requirements, and set out an implementation road map. Second, a coalition of willing governments from both high-income and low- and middle-income countries would need to establish a new international legal framework for global mutuals, setting out key features, including their governance arrangements and how they would be regulated. Third, philanthropic foundations and government donors would need to provide enough seed capital to establish two or three pilot global mutuals in key jurisdictions around the world. This seed capital would be a donation to the institution and its future members and would not provide shareholder rights. Global mutuals would draw on the long history and experience of mutual financial institutions, but as entirely new institutions they would also tackle humanity's greatest long-term challenges irrespective of where they are.

Another essential enabler lies in legal provisions that would ensure the sustainability of this new institution. One central provision would be to ban the transformation of mutuals established under the framework into shareholder-owned companies or state institutions. Other provisions would protect the central mission of an institution and the independence of its board members. Individual countries would then need to implement this framework through national laws.

Global mutuals would draw on the **long history and experience of mutual financial institutions** while also tackling humanity's greatest long-term challenges.

LIKELY TIMESCALE

A global mutual movement will take time to get started, and a lot will depend on the success or failure of the pilot institutions. A realistic timeframe for the legal establishment and pilot of this idea is five years. But, unlike existing sources of international finance, it is fully conceivable that the movement as a whole could achieve the combination of enormous scale and low pricing necessary to address a substantial part of the shortfall in finance for global challenges. Moreover, the movement could have a transformative and positive impact on today's entire system of international finance. Specifically, it could benefit from innovations in financial technology in developing an international footprint, particularly the ability to channel funds (with acceptable risk) from willing countries with surplus savings to countries where investments to tackle global challenges are needed most.

What if new economic classifications unlocked progress?

BEYOND CLASSIFICATIONS

OPPORTUNITY #30 2025

Dynamic metrics replace traditional country development and income classifications, driving greater global cooperation, more effective trade flows, and innovation aligned with shared global goals and challenges and enabling progress beyond financial aid.

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The international system of financial aid and development has become increasingly complex[58] and this trend will continue.[59] Solving global problems requires not merely the participation of countries classified as relatively 'poor' but also the recognition that traditional country classifications based on simple metrics, such as gross domestic product (GDP) or GDP per capita, do not capture countries' individual strengths and weaknesses, particularly regarding specific issues that are, and may be, the basis of aid.[60]

The international system of financial aid and development has become increasingly **COMPLEX.**

Classifying the world using overly simplified binaries – such as developed/developing, rich/poor, or powerful/powerless – may be convenient; however, its downsides are also increasingly visible and profound. More than ever, it is time to revise and introduce systems that better reflect the 'real' world and can leverage positive change. Inaction risks increasing global governance distortions, waste, and inefficiencies. With current fragmentation in how the World Bank, International Monetary Fund, and United Nations classify the same countries, creating inconsistent frameworks for international cooperation,[61] we need a global solution redefining economic classifications to unlock progress.

ESSENTIAL ENABLERS

The first step is to acknowledge that it is impossible to eliminate classifications altogether. Classifications provide mental shortcuts. In a world with nearly 200 countries, it is natural to want to cluster those that share (apparent) similarities. However, while classification is a useful tool for grasping the world's complexity, it both has and creates blind spots. No single number or formula can 'fix' this problem. There is no 'neutral' or 'objective' technocratic approach to classification.

While there is little dispute that the current scenario is not ideal, change is not simple. Replacing existing rules and structures is challenging – those who benefit from the status quo tend to resist change and seek to maintain their advantages. There is also a tendency to default to familiar frameworks and worldviews. However, this does not mean that we should hold back from efforts to find better classification arrangements, especially if the focus is on increasing the opportunities for the world's most vulnerable.

Looking ahead, the goal should be to (re)design classifications that are tailored to the specific issue at hand. Countries are multifaceted in their capacities, needs, and levels of expertise in addressing challenging global issues. Therefore, the focus should be on developing context-dependent assessments. For this to work, a fundamental human barrier must be overcome – the notion that only those with wealth or status are capable of providing the best answers. Unfortunately, a legacy of assuming that higher income serves as a proxy for superior knowledge remains. The misuse of country classification based on wealth has contributed to this (mis)perception.

LIKELY TIMESCALE

Global problems require global solutions. Successful solutions require collaboration among partners that can see beyond simple labels. While a likely timescale is hard to identify, as an example we can see that it took six years to create a risk classification for countries based on actual deforestation data for the implementation of the European Union Deforestation Regulation.[62] Considering that this opportunity would need to include coordinated development globally, the likely timescale is around a decade.

It is impossible to eliminate classifications altogether.

CLASSIFICATIONS PROVIDE MENTAL SHORTCUTS.

What if the world agreed to a genetic charter?

INTERNATIONAL AGREEMENTS IN OUR DNA

OPPORTUNITY #09 2022

A global agreement on gene editing ensures access to advances while safeguarding against discrimination and abuse.

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Gene therapy offers new hope to families affected by genetic diseases, which can cause serious health problems and emotional distress. Most of these conditions currently have no cure.[63] Even when treatments are available, they often involve lifelong medications or strict diets identified through genetic tests,[64] as is the case with case with phenylketonuria disease or citrullinemia, for example.[65] Unfortunately, many patients still experience serious complications or even death, especially if they struggle to follow their treatment plan. Gene therapy provides a potential cure by fixing the underlying genetic problem. It works by replacing or repairing the faulty gene rather than just treating the symptoms.[66]

More than
20
gene therapies have been approved for medical use.

In recent years, more than 20 gene therapies have been approved for medical use, and hundreds of clinical trials are currently ongoing for a wide range of conditions, including monogenic diseases, cancers, blood disorders, infections, inflammatory diseases, heart conditions, and neurological disorders. For example, Spinraza and Zolgensma have shown strong results in treating spinal muscular atrophy, a severe condition affecting muscle strength.[67] Many patients have (re)gained motor skills, which was previously thought impossible. Zynteglo is another gene therapy, used to treat transfusion-dependent beta-thalassemia and allowing some patients to stop needing regular blood transfusions.[68] The FDA also aproved Lenmeldy for children with metachromatic leukodystrophy, a rare and severe disorder that causes loss of motor and cognitive functions and often leads to early death.[69] Another development is CAR T-cell therapy, a type of gene-based immunotherapy that has successfully treated certain cancers that do not respond to other treatments.[70] However, gene therapy still faces big challenges. One of the biggest is the cost which make them inaccessible for many families and health systems; other issues relate to unequal access, complex supply chains, and the need for shared safety data.[71]

We expect **GENE THERAPIES** to become available for more conditions.

We need to make them more **AFFORDABLE, IMPROVE DELIVERY METHODS, AND ENSURE FAIR ACCESS FOR ALL.**

ESSENTIAL ENABLERS

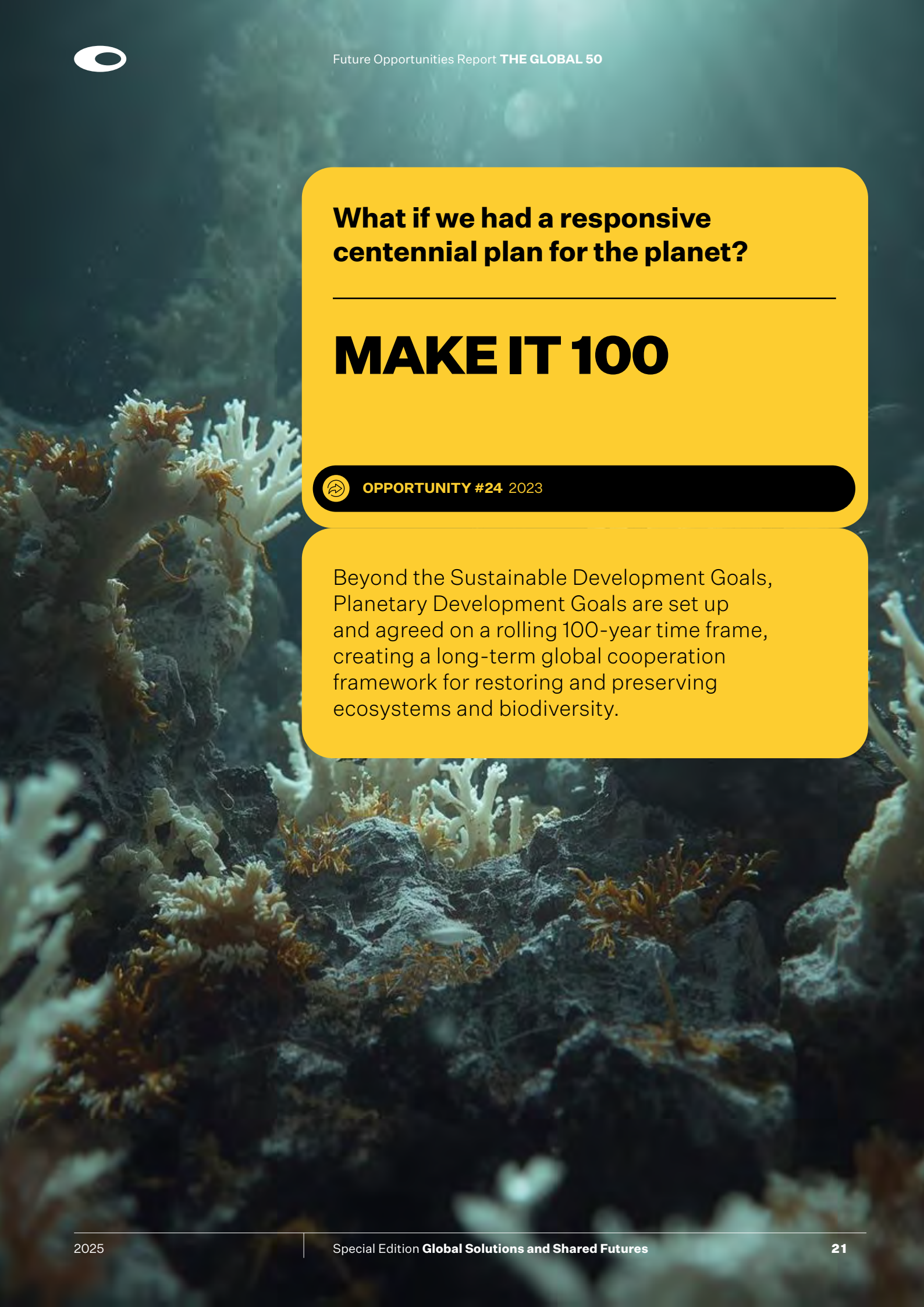
In the future, we expect gene therapies to become available for more conditions, especially inherited blood diseases and metabolic disorders. But, for these treatments to help more patients, we need to make them more affordable, improve delivery methods, and ensure fair access for all. To achieve this, governments, researchers, healthcare providers, patient societies, and industry must work together. This includes building local manufacturing capabilities, improving approval processes, and forming public–private partnerships.

One of the largest challenges that gene therapy faces is the cost, with some treatments, such as Zolgensma, costing over $2.1 million per dose,[72] making them inaccessible for many families and health systems. There are also technical challenges. Researchers are working to make gene therapies safer, more precise, and easier to deliver to the right cells in the body. Early clinical trials between 2010 and 2020 showed that some patients experienced strong immune reactions, so safety remains a top priority.[73] What is needed is a combination of technological advances that reduce the cost of gene therapy with innovative financial strategies – including pricing reforms and policy changes such as subscription models[74] – and significant global coordination.

Gene therapy and gene editing are reshaping modern medicine. With continued scientific progress and a shared global commitment to fairness, these technologies may finally deliver the cures and hope that so many families have been waiting for.

LIKELY TIMESCALE

Establishing a global genetic charter would require coordinated action across many levels – individual, organisational, regional, and global. While specific timelines are difficult to identify, the level of coordination needed would necessitate significant international commitment over decades.



What if we had a responsive centennial plan for the planet?

MAKE IT 100

OPPORTUNITY #24 2023

Beyond the Sustainable Development Goals, Planetary Development Goals are set up and agreed on a rolling 100-year time frame, creating a long-term global cooperation framework for restoring and preserving ecosystems and biodiversity.

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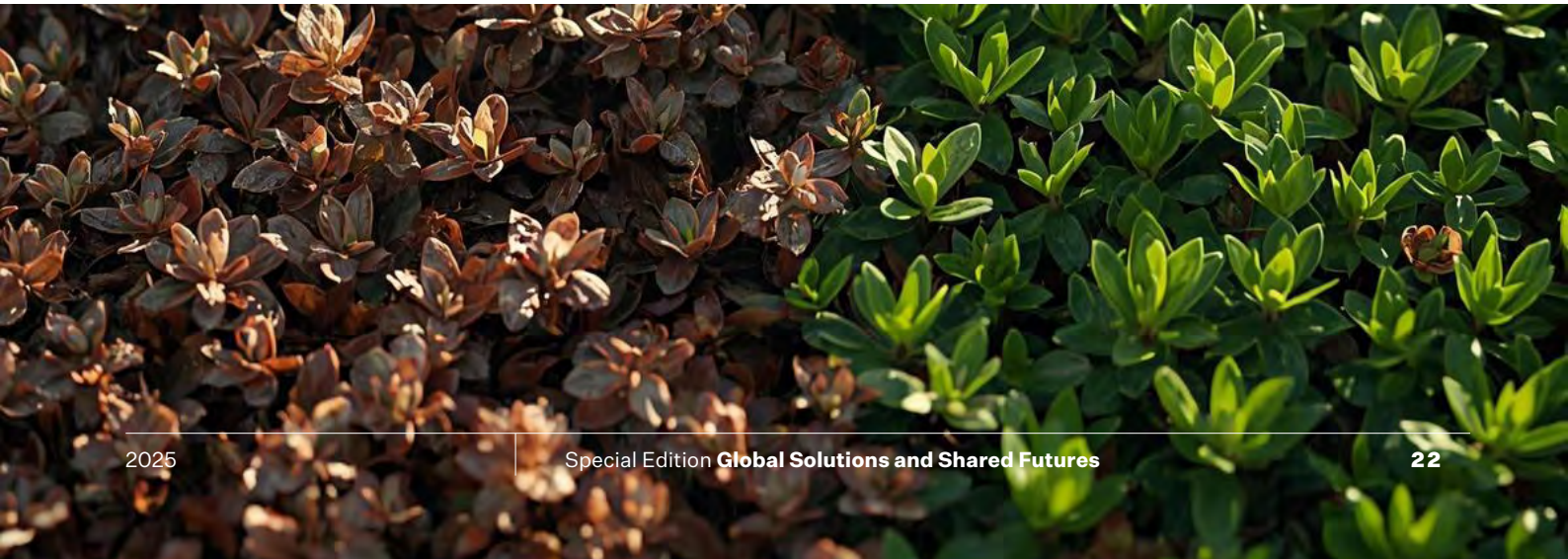
A centennial plan for the planet is an urgent necessity. The accelerating environmental, economic, and social disruptions facing our world demand a fundamental shift in how we plan for the long term. Make It 100 challenges all of us to move beyond short-termism and embed deep, future-oriented thinking into our systems, institutions, and policies. It is a bold opportunity that helps to redefine what legacy means, extending beyond years and decades to reach across generations. This opportunity holds immense global significance. Complex challenges – climate change, biodiversity loss, water scarcity, and resource depletion – are interconnected, requiring collective responsibility and sustained actions within and across borders.[75]

Climate change, biodiversity loss, water scarcity, and resource depletion are **INTERCONNECTED.**

A 100-year global road map will enable humanity to commit to regenerative, resilient systems that outlast the current political and economic cycles. In the UAE, we have already demonstrated the strength of long-term vision through national strategies that relate to or include the environment, such as Net Zero 2050[76] and Abu Dhabi Environmental Centennial 2071.[77] These frameworks offer strong foundations for aligning national ambitions with a broader planetary vision.

Make It 100 can serve as a guiding moral and operational compass for the planet. It offers the chance to embed resilience into infrastructure and policy as well as into our collective consciousness. From cities to corporations, governments to grassroots organisations, every stakeholder has a role to play. Embracing a century-scale mindset will prepare us for the challenges ahead and define our legacy as a generation that chose courage, wisdom, and unity to safeguard the future of our planet.



The 2020s must serve as the decade of **VISIONING, CONSULTATION AND FOUNDATIONAL ALIGNMENT.**

ESSENTIAL ENABLERS

Multilateral cooperation, a robust global data ecosystem, and cross-sectoral planning are enablers required to help bring such a centennial vision to life. However, the most critical enabler will be intergenerational governance. We need to empower today's youth to be co-authors of the future.

While the Emirates Environmental Group has long championed this approach through its environmental education and grassroots programmes, nurturing environmental consciousness and leadership among the younger generation, these models must be scaled up and embedded within institutional systems globally. Challenges are inevitable, especially given institutional inertia, geopolitical complexities, and the temptation to prioritise short-term economic gains over long-term sustainability. But we are not starting from zero. Global efforts such as the Montreal Protocol, the Paris Agreement, and the United Nations Sustainable Development Goals demonstrate that transformational cooperation is possible when purpose is unified and science is respected.

LIKELY TIMESCALE

The timescale for this opportunity is now. The 2020s must serve as the decade of visioning, consultation, and foundational alignment. The 2030s and 2040s should focus on large-scale implementation, guided by measurable targets and accountability frameworks. By 2050, the first quarter of the centennial road map should already yield substantial and measurable progress – reduced emissions, restored ecosystems, and new standards of equity and circularity.

What if advanced machine intelligence enhanced global justice?

GLOBAL PRECEDENTS

OPPORTUNITY #29 2024

Global working groups, using advanced machine intelligence, review the relevance and extract insights from existing global legal precedents [b] in anticipation of future scenarios in areas of transformative change such as climate, well-being, and digital realities, enhancing global collaboration and adaptability and reducing legal uncertainty in an increasingly global and borderless world.

[b] In applicable jurisdictions

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Increasing public access to justice is a global priority that artificial intelligence (AI) can help to address. Citizens with low incomes who cannot afford to hire a lawyer still need legal answers and advice on matters involving landlord and tenant law, family law, taxation, and countless other areas. With the advent of large language models (LLMs) and generative AI, citizens can obtain relevant legal information and advice without having to hire a lawyer or, if doing their own research, arriving at a paywall. Although this provides an enormous opportunity for public access to justice, a lingering question remains: to what extent can citizens rely on this legal information and advice? This is where this opportunity plays an important role: as a global working group could help to inform such legal information and advice because, by nature, generative AI is borderless.

Based on a large number of parameters and trained on a large amount of data, LLMs are statistical models that predict the likelihood of word sequences from a corpus of documents.[78] These may include legal documents such as statutes, regulations, contracts, and case precedents. Using the contexts in which words appear in these documents, LLMs acquire a great deal of information about what words mean.[79] This means that LLMs can follow instructions (or prompts) written in natural language. They can provide explanations in natural language too, and their explanations look surprisingly human-like. For example, given a question like ‘For what kinds of expenses can my landlord take my security deposit?’, ChatGPT generates a list of what landlords generally may deduct (e.g. unpaid rent or repairs for damage beyond normal wear and tear) or not (e.g. pre-existing damage). Enabling ordinary citizens to obtain answers to legal questions is beneficial to society as legal services become more efficient and more accessible at the same time.[80]

Citizens with low incomes who cannot afford to hire a lawyer still need **LEGAL ANSWERS AND ADVICE.**

However, when users prompt LLMs with more specific legal problems, it is much less clear whether the LLMs have access to, or understand, the information that legal professionals would need to analyse such problems. Legal rules, procedures, and precedents differ across local (municipal), regional (state), and international borders, and in any given jurisdiction they change over time. Legislatures may amend or annul provisions of existing laws or adopt new ones. Courts may overturn even settled precedents. The challenge for users of AI, whether ordinary citizens, experts, or students, is how to assess the extent to which they can reasonably rely on an LLM’s legal advice and explanations.

Within the
NEXT 3 YEARS
open-source, publicly accessible legal AI systems will generate legal explanations for many in the general public.

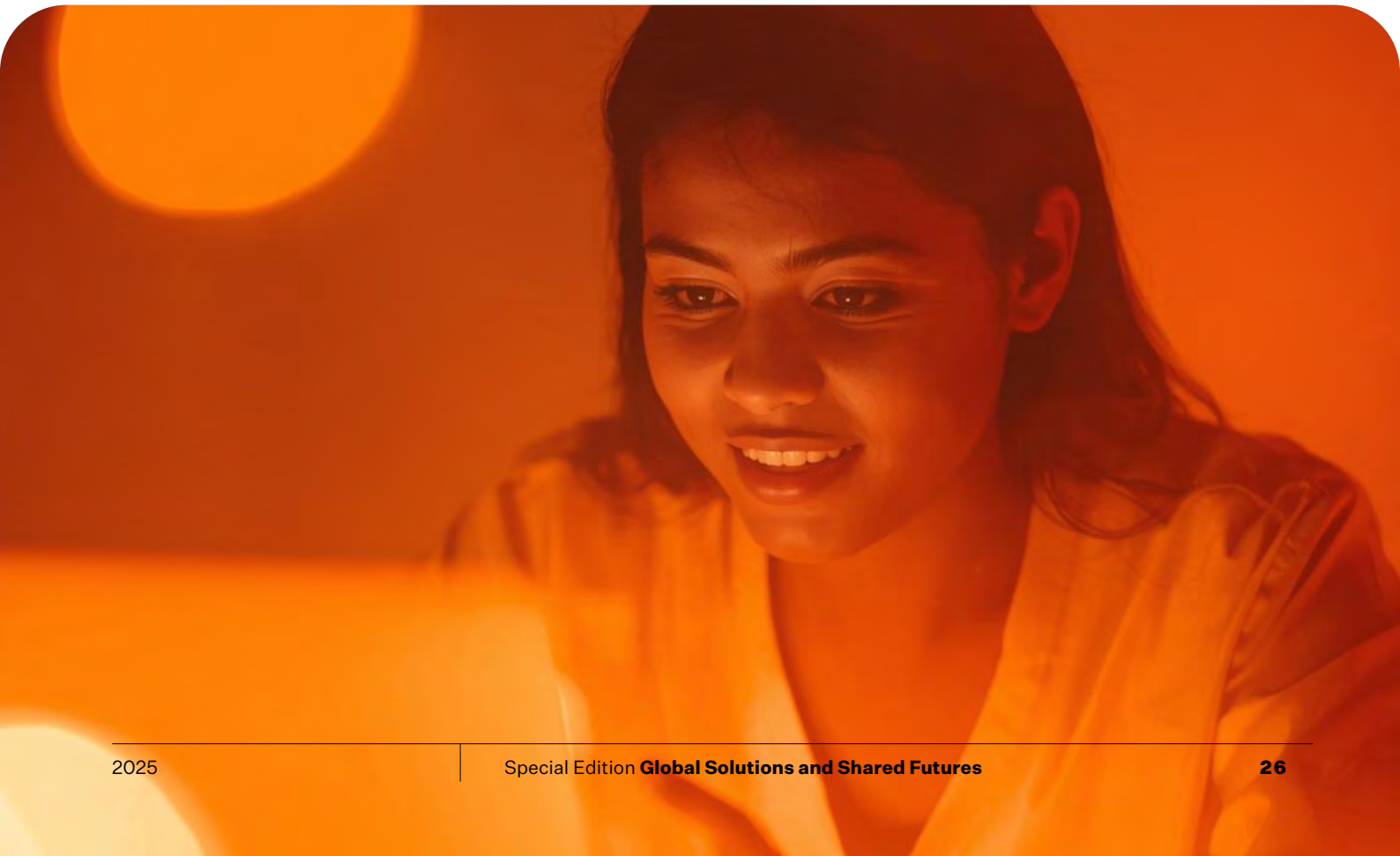
ESSENTIAL ENABLERS

Researchers in AI and law are helping to address these limitations by developing multi-agent systems with which LLMs can critique their own answers and explanations. Within the next three years, open-source, publicly accessible legal AI systems will generate legal explanations for many in the general public. LLM-based agents will check which legal rules apply given the jurisdiction and timing of the events in question. An agent will reason whether the LLM has enough information to answer a legal question or whether it had better abstain. Agents will find and cite relevant precedents, checking whether the cases really exist, whether they stand for the propositions for which they were cited, and that they have not been overturned by a subsequent court.

Other agents will tailor case summaries to the perceived user's role, whether a layperson or a legal professional, and to the problem a user seeks to solve. By enabling LLMs to be more cautious in their giving of legal advice, researchers will make them more reliable tools for increasing access to justice.

LIKELY TIMESCALE

The timescale for designing agentic AI is immediate as we have all the tools necessary and it is already being done.[81] Testing their robustness and reliability for use in court will take at least a decade as key safeguards still need to be put in place, including more comprehensive regulatory frameworks that take them into account, new liability structures, and professional oversight.[82]



What if we achieved zero emissions?

MISSION ACCOMPLISHED

OPPORTUNITY #27 2023

OPPORTUNITY #27 2023

Technological breakthroughs and unprecedented global collaboration bring greenhouse gas emissions to zero,[c] restoring ecosystems and creating new ones.

[c] Or close to zero

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Reaching zero emissions would contribute to **stabilising climate systems, preserving ecosystems, and limiting biodiversity loss.**

There are no boundaries to climate change. From extreme heatwaves to rising sea levels, its impacts cascade across geographies and generations. Reaching zero emissions would contribute to stabilising climate systems, preserving ecosystems, and limiting biodiversity loss. This goal is a catalyst for innovation in clean energy, urban planning, circular manufacturing, and nature-based solutions, opening new markets and fostering inclusive economic growth and technological progress.

Achieving zero greenhouse gas emissions would be a significant environmental milestone. This future scenario, long considered aspirational, is increasingly seeming possible through the acceleration of innovation in climate and energy technologies, data-driven solutions, and systemic collaboration spanning diverse borders and sectors. The challenge is whether or not there is a will and a commitment to such efforts in comparison to other competing priorities, such as poverty, education, water access, and sustainable sources of energy.[83]

An essential enabler in the delivery of a zero-emissions vision is **ENERGY TRANSFORMATION,** with renewable energy systems as the backbone.

ESSENTIAL ENABLERS

An essential enabler in the delivery of the zero-emissions vision is energy transformation, with renewable energy systems as the backbone. However, their effective deployment at scale depends on sophisticated planning tools and technologies that can adapt to local and global conditions.[84] Tied to that, high-resolution climate and weather data are playing a central role in this transformation. They enable governments and energy providers to identify optimal locations for renewable installations, assess seasonal variability, and anticipate future demand patterns. When paired with artificial intelligence (AI), these datasets unlock even greater potential.

Large-scale renewable energy projects are increasingly benefiting from both climate-informed planning and AI applications. For example, major solar installations rely on comprehensive solar resource assessments and long-term meteorological data to optimise site selection and system design. AI is being used operationally to enhance performance (e.g. in predictive maintenance, solar output forecasting, and robotic cleaning), helping to reduce costs and improve system reliability.[85]

Yet, significant challenges remain. Realising the full potential of these tools requires strong institutional capacity, transparent data governance, and cross-sectoral coordination. Building trust in digital technologies and ensuring equitable access – particularly in emerging economies – are essential.

LIKELY TIMESCALE

The pathway to zero emissions will be phased and context dependent. Transitional tipping points – such as affordable green hydrogen or breakthroughs in carbon capture – could catalyse accelerated timelines. Achieving zero industrial and transport emissions at scale is challenging but, if taken seriously, could be achieved in as little as three decades. However, given the existence of varying net-zero commitment timelines and context differences, immediate and bold actions must start now to set this trajectory.

The movement to zero emissions is a critical factor in global resilience. Climate-resilient development pathways hinge on drastically reducing emissions while adapting to unavoidable change. Simultaneously, this vision cannot be realised in silos. Technology transfers and knowledge exchange must be done across borders, and cross-sectoral coalitions – from urban design to finance – are essential.

Ultimately, achieving zero emissions is a mission that must be co-created. It offers humanity the chance to forge a resilient, regenerative future, in which climate stability and energy sustainability form the foundation for health, prosperity, and peace for generations to come.

What if we had a global trade licence for small businesses and start-ups?

THE 'GLOBAL' PROTOCOL FOR SMALL BUSINESSES

OPPORTUNITY #37 2024

An international treaty facilitates a global trade licence for small businesses and start-ups in multiple countries.

CONTRIBUTOR
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Acting President
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UAE

A global trade licence could be **A PILLAR OF FUTURE ECONOMIC RESILIENCE.**

In a world increasingly shaped by connectivity and innovation, the idea of a global trade licence for small businesses and start-ups presents a compelling opportunity. In principle, such a licence would democratise market access, removing barriers to entry and allowing the most innovative, agile, and consumer-focused companies to scale beyond borders. Global consumers would benefit from more diverse, competitive offerings, while entrepreneurs could pursue growth without being constrained by fragmented regulations and non-tariff barriers to trade.

A global trade licence could be a pillar of future economic resilience for small businesses through diversified revenue streams and access to global supply chains, reducing vulnerability to local shocks. Cross-border collaboration could drive innovation and knowledge sharing, with small businesses serving as a distribution hubs or research and development partners across regions. This interconnectedness would enable both commercial success and a more inclusive and collaborative global economy.

The convergence of AI, blockchain, and fintech innovations makes a standardised global licence increasingly plausible. The international political landscape, however, creates uncertainty, with recent surges in trade protectionism, although new alliances present opportunities. Forward-looking jurisdictions such as the UAE, with its support for cryptocurrency and digital trade ecosystems, are setting global precedents, and regional licences in the Gulf Cooperation Council, the Middle East, or Asia might be a more realistic first step.

While promising, this opportunity presents challenges that vary by sector and context. From a sector perspective, safety-regulated industries (e.g. food products, pharmaceuticals, and children's toys) could pose difficulties as comparable standards vary between countries; a regulatory sandbox would be a preceding step. Markets are also not equal. Small enterprises from countries with robust infrastructure, good access to funding, and favourable regulatory environments would enjoy significant advantages. Meanwhile, entrepreneurs in less developed markets – where educational resources, financial systems, and business frameworks lag – could struggle to compete. Ironically, the current international barriers, while limiting, do offer a measure of protection to these underperforming firms. A global licence might remove this buffer, potentially widening the development gap.

ESSENTIAL ENABLERS

Essential enablers for a global licence include international standardisation across legal, financial, and operational domains; regional education and support centres that help entering businesses to gain contextual market knowledge; and digital tools that facilitate transparent, secure, and seamless cross-border operations. Blockchain technologies, in particular, could play a pivotal role, enabling global certifications, traceability, smart contracts, and decentralised financing. AI agents could facilitate services in multiple languages and adopt cultural differences on an individual basis.

Long-standing trade barriers, logistic complexities, and protectionist policies could hinder implementation, especially for smaller firms, which may hesitate to enter unfamiliar markets because of cultural, legal, or operational uncertainties. Furthermore, governments would face the difficult task of balancing the need to support domestic start-ups while embracing global competition. Crafting a framework that preserves local entrepreneurship while incentivising healthy international rivalry will be key.

LIKELY TIMESCALE

Despite efforts through chambers of commerce, incubators, and trade partnerships, a truly global trade licence remains aspirational, although the technological infrastructure is rapidly evolving to support such a future. Following the introduction of agreements such as Chile, New Zealand, and Singapore's Digital Economic Partnership Agreement (DEPA),[86] a global trade licence could emerge through a phased approach over 10 to 15 years. However, recent trends towards trade protectionism and supply chain reshoring suggest the global economy may be moving towards more fragmentation rather than integration.[87]

What if frugal innovation from marginalised economies redefined global development?

INNOVATION BEYOND BORDERS

OPPORTUNITY #45 2025

OPPORTUNITY #45 2025

Local innovation hubs connected to global networks scale innovations from economically marginalised communities worldwide, enabling local ingenuity to inspire worldwide sustainable development.

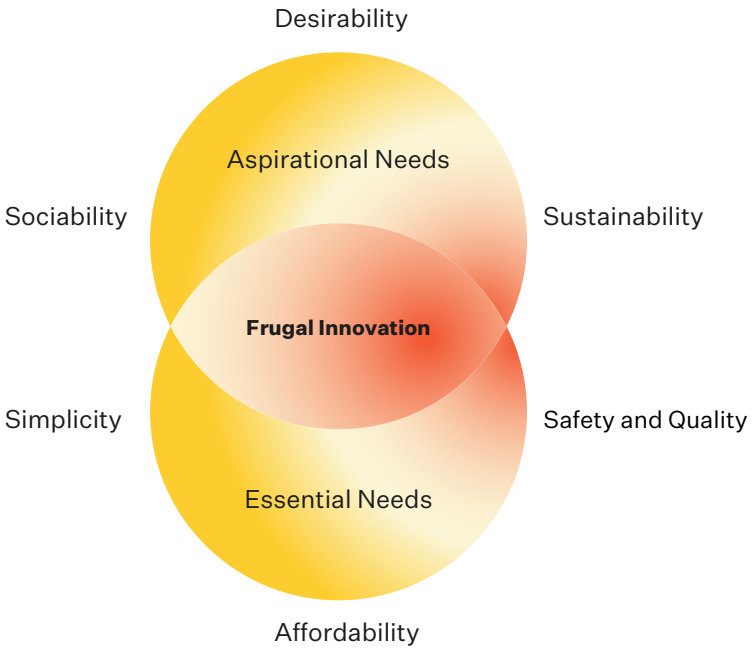
CONTRIBUTOR
NAVI RADJOU
Author of The Frugal Economy
India

Frugal innovation **ORIGINATED IN RESOURCE-CONSTRAINED, LOWER-INCOME NATIONS** where resourceful entrepreneurs know how to 'do better with less'

Frugal innovation is a disruptive new approach to developing vital products and services faster, better, and more cost effectively for people who require access to essential services. While it is scaling in middle-income countries, and increasingly adopted in high-income countries, frugal innovation originated, and is widely practised, in resource-constrained, lower-income nations, where resourceful entrepreneurs know how to 'do better with less' – in other words, create greater socio-economic value with limited means.

For instance, the Indian non-profit organisation Embrace Global has developed a frugal infant warmer, an easy-to-use medical device that operates without stable electricity and that has already helped over a million babies worldwide.[88] Likewise, SELCO, a social enterprise established in 1995, has installed off-grid solar energy solutions for households in the remotest rural villages in India, making renewable energy accessible to remote communities that were previously excluded from public energy systems.[89, 90]

The frugal solutions offered by Embrace Global and SELCO embody six core attributes that respond to the essential and aspirational needs of citizens in the Global South: desirability, sustainability, safety and quality, affordability, simplicity and sociability.[91]



Beyond the Global South, frugal innovation represents a worldwide opportunity as it could address major socio-ecological challenges that the Global North is grappling with, such as the affordability crisis and the climate crisis. Today, 60% of citizens in the United States do not have $1,000 in savings to pay for a sudden emergency expense.[92] Meanwhile, the south-east region of England will face severe water stress by 2030 because of climate change, endangering local economies.[93]

Governments in high-income countries in Europe and Asia are faced with an additional dilemma: how to deliver more social services, such as healthcare, to a rapidly ageing population while public revenue is rapidly declining.[94] As Nesta, a leading British think tank, pointed out in a landmark report, there is an urgent need for advanced economies to learn from the Global South and adopt their frugal innovation mindset and practices to effectively address the dual social and ecological urgency at home.[95]

ESSENTIAL ENABLERS

To accelerate the adoption of frugal innovation globally, especially in the Global North, we must heed the call of António Guterres, Secretary-General of the United Nations: 'everything, everywhere, all at once'.[96] We must empower innovators and leverage essential enablers in multiple sectors and disciplines all at once. For instance, Western multinationals can emulate Renault[97] and Siemens,[98] which first developed frugal solutions, respectively in mobility and healthcare in emerging markets such as India and China to then deploy them in Europe and the United States. Academic institutions can follow the lead of Imperial College London (United Kingdom),[99] Santa Clara University,[100] and Cornell University (both United States),[101] which teach and/or lead initiatives on frugal innovation to next-generation engineers and managers. Governments can learn from Nido, the innovation agency of the Belgian government, which trains civil servants in frugal innovation so that they can deliver better public services, such as healthcare and education, using fewer resources.[102]

LIKELY TIMESCALE

There is an urgent need to embrace frugal innovation worldwide. Humanity has now crossed seven of the nine planetary boundaries that make Earth habitable.[103] Oxfam warns that, globally, inequality is at an all-time high and rising.[104] Frugal innovation offers a pathway for high-income countries to empower emerging economies and enable them to grow sustainably.

While this can start immediately with a coalition of committed governments, academic institutions, and businesses, it may take five to ten years to pilot and scale these projects within formal collaboration models and legal frameworks.

What if living meaningful lives became the new well-being?

REINVENTING HAPPINESS

OPPORTUNITY #22 2025

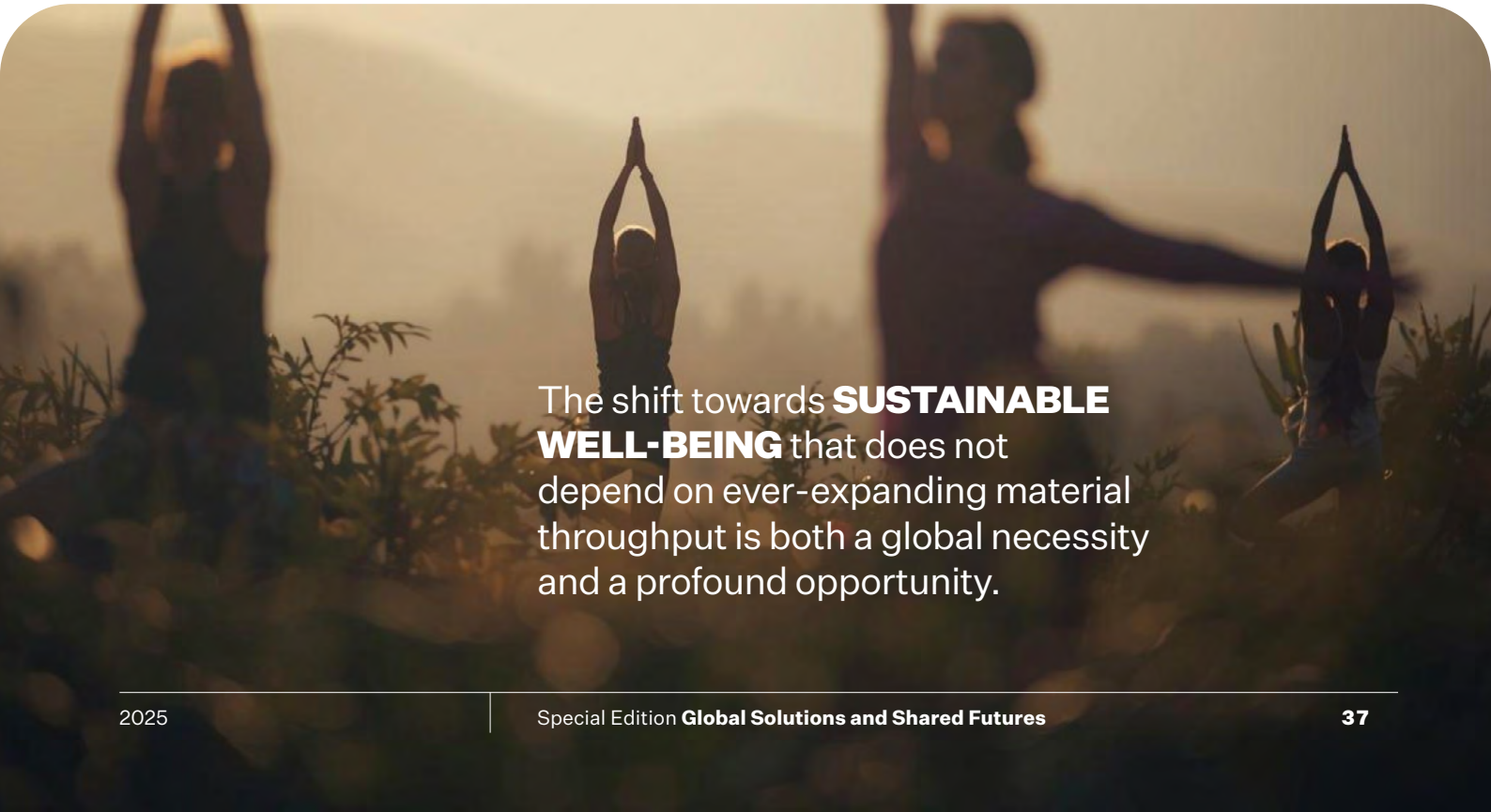
As the world shifts towards a possible future of self-sufficient communities, eudaemonic well-being – emphasising personal growth, meaningful relationships, and collective purpose – shapes policies and institutional frameworks around a more fulfilling concept of human development.

CONTRIBUTOR
RUFUS POLLOCK
Co-Founder
Life Itself
UK

Imagine a world where human development is measured not in output, but in something else; where the aim of society is not more consumption, but more consciousness; not merely economic growth, but the cultivation of deeper well-being – both individual and collective.

This is not a utopian ideal. The shift towards sustainable well-being – well-being that does not depend on ever-expanding material throughput[105] – is both a global necessity and a profound opportunity. As material conditions improve across much of the world, it becomes increasingly clear that further gains in life satisfaction and collective flourishing will come not from more outer development but from inner development – the cultivation of emotional maturity, meaning, connection, and wisdom.

Reinventing happiness is not simply about new metrics or policy tweaks. Although we have talked for decades about moving 'beyond GDP' (gross domestic product), in practice such a move implies profound changes in worldview and social organisation. It challenges the very operating system of modern societies and therefore requires a cultural and even spiritual transformation. We must shift our understanding of purpose from what we produce to who we become.



ESSENTIAL ENABLERS

This is no quick fix. It is a decades-long, indeed intergenerational, transition. But we have been here before. The original Renaissance was one such moment in history – a sweeping shift in perspective, culture, and possibility. So too were earlier civilisational transformations across cultures and continents. 'Second Renaissance' is not just a metaphor; it is a name for this moment in time and the choice it offers us.

What makes this shift not just desirable but urgent is the convergence of planetary challenges – from ecological collapse to social fragmentation – that cannot be solved with the tools that created them. By prioritising inner development, we build the foundations for outer change. In this sense, the opportunity to reinvent happiness is also a key strategy for building resilience and enabling authentic global collaboration. It is only when we shift from seeing others as threats or competitors and begin to experience our interconnectedness that true collective action becomes possible.

LIKELY TIMESCALE

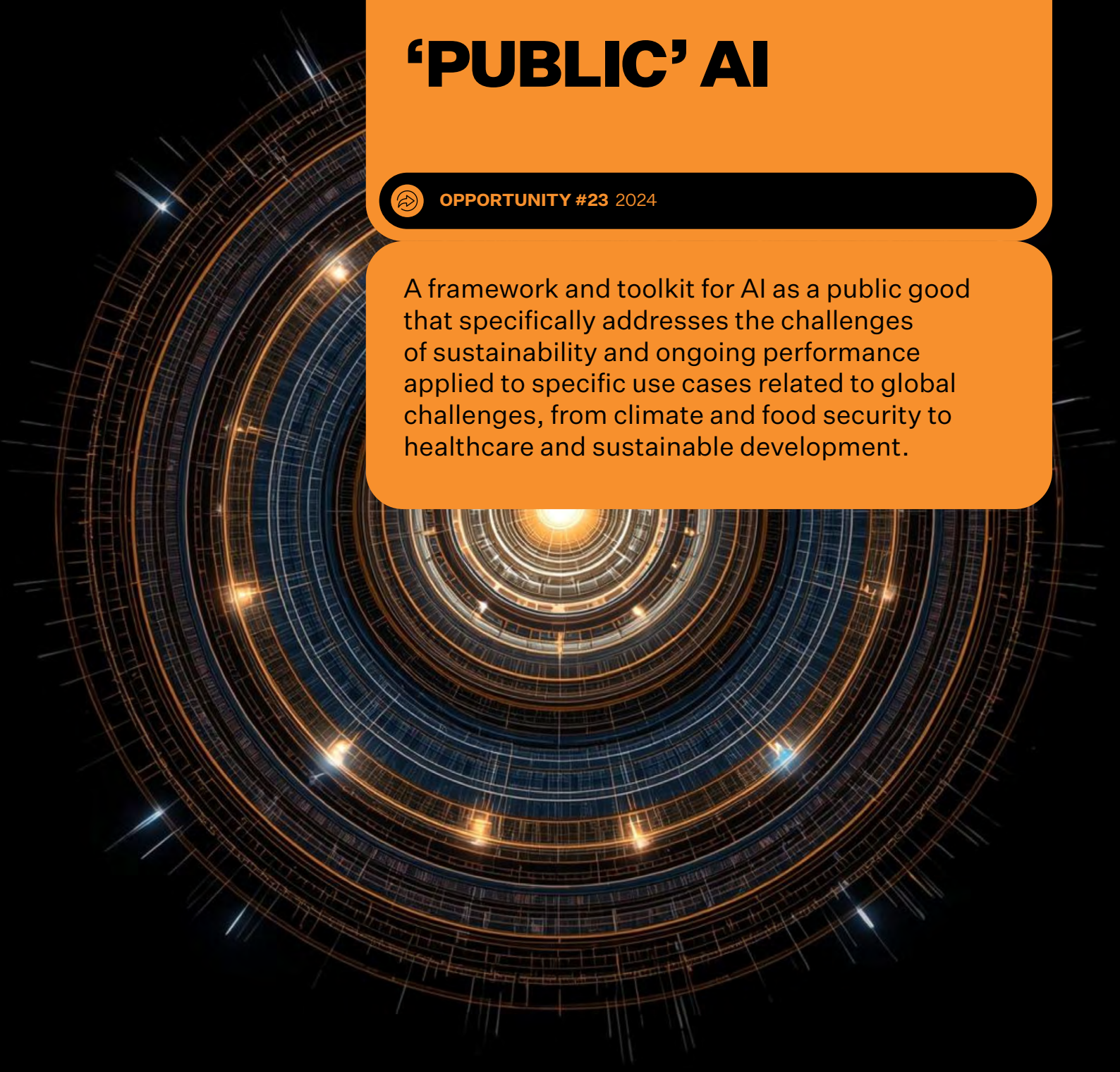
This type of transformation is intergenerational and requires multiple decades. This is the work of the Second Renaissance, and it is already underway.

What if (part) of artificial intelligence (AI) was a public good?

‘PUBLIC’ AI

OPPORTUNITY #23 2024

A framework and toolkit for AI as a public good that specifically addresses the challenges of sustainability and ongoing performance applied to specific use cases related to global challenges, from climate and food security to healthcare and sustainable development.



CONTRIBUTOR
SARA HOOKER
Co-Founder
Adaptation,
Former Vice-President of Research and Head of Cohere labs,
USA

Making AI available as a public good could be essential for ensuring global access and enabling distributed innovation. This would allow economic growth to occur at a global scale rather than concentrating it in a few technology hubs. For example, while AI is continually developing, with new breakthroughs every day, much of this progress remains concentrated in a few languages and regions, leaving billions without access.[106]

Bridging this gap is essential. Through international efforts, open-source frameworks and technical capacity are being built up in underserved regions. However, while many AI models – in particular large language models – are currently available worldwide, their performance across languages and cultural contexts is unequal. Efforts to ensure safety alignment are primarily focused on homogeneous, monolingual settings (predominantly English) or on datasets that are 'overfit to types of harm' common in Western-centric contexts (i.e. too narrow training that leads to an inability to generalise and identify other risks).

As governments and organisations seek to build their own models targeting specific use cases or populations, they face challenges obtaining nuanced cultural data in their own languages.[107] The majority of the current language models reflect the world through training on Anglocentric (predominantly North American) and Chinese texts and perspectives,[108] creating bias towards certain languages and cultural perspectives. To address this critical gap, Cohere Labs' Aya project, for example, has publicly released multilingual language models and datasets across languages,[109] building on earlier efforts such as BLOOM, which introduced multilingual capabilities across 46 languages.[110]

There is still a lot more to do, and governments and civil society are well positioned to lead the charge.

ESSENTIAL ENABLERS

Enabling accessible AI starts with data collection. Setting aside the inconsistent representation of different languages, vast amounts of valuable data across healthcare, education, transportation, demographics, and administrative records remain analogue or in fragmented digital formats. Systematic digitalisation efforts can create massive public datasets for AI training that better reflect local contexts and needs.

In addition to data collection, a critical frontier in making AI more accessible and sustainable is the fact that the growing global demand for digital products and services is increasing energy needs and associated climate impacts. AI technologies are contributing to this challenge because of the energy-intensive computing hardware required to train and deploy models. The large amount of computing power needed often results in access disparities, where many builders around the world lack access to cutting-edge AI capabilities.

Improving AI model efficiency can make AI more accessible and sustainable by reducing the amount of computing power that AI models require for training and real-world use, while maintaining or increasing their performance. Having said that, going bigger may not always be the right solution: by focusing on efficiency, we can have small models outperform far larger counterparts. By matching model size to task requirements and avoiding oversized solutions to simple problems, we can make AI more accessible and sustainable.[111]

Building a future of public AI can start now and may achieve significant progress within

5 YEARS

However, even with more efficient models, access barriers remain significant. Not all research institutions have their own compute clusters or the necessary expertise to run models, and many existing grants do not allow researchers to spend their funds on accessing proprietary models.[112] In an effort to help narrow this gap, Cohere Labs has launched its Catalyst Grants Program.[113] These grants provide academic researchers, developers, and innovators with subsidised access to the Cohere application programming interface to support their work. Cohere also makes its model available through WhatsApp, recognising that for millions worldwide, mobile phones are more accessible than computers for bridging the digital divide.

LIKELY TIMESCALE

Given how fast AI and related technological capabilities are advancing,[114] building a future of public AI can start now and may achieve significant progress within five years. Nevertheless, creating accessible AI is not just about technology; it is about ensuring equitable access to transformative tools within a reality that has many moving parts. Translating this speed into accessible AI will require multiple policy and investment decisions beyond technology alone.

What if we had a global, seamless internet?

THE NETWORK OF NETWORKS

OPPORTUNITY #50 2024

Advances in satellites and advanced machine intelligence enable seamless, global internet access, supporting the Internet of Things (IoT) and reducing network disruptions through intelligent transitions between cellular and satellite networks.

Image courtesy of **Space42, Thuraya-4 Communications Satellite**

CONTRIBUTOR
SULAIMAN AL ALI
Chief Commercial Officer
Space42
UAE

Advances in satellites and advanced machine intelligence enable seamless, global internet access, supporting the Internet of Things (IoT) and reducing network disruptions through intelligent transitions between cellular and satellite networks.

Connectivity is increasingly recognised as essential infrastructure, like roads, power, or healthcare.[115] From remote villages to cargo ships at sea and disaster zones, the world is moving towards a future where every community can access the same level of digital connectivity.

Despite decades of progress, the internet remains unevenly accessible.[116] Today, a family in a major city like Abu Dhabi, can stream 4K movies, order groceries, and video call friends without interruption. But in a remote area just a few hours away from the city, a schoolteacher struggles to maintain a stable internet connection with her students. This became apparent during the Covid-19 pandemic and persists today, with 2.63 billion people still offline,[117] widening economic and social disparities.

This divide persists because traditional infrastructure cannot scale to meet growing demands. Physical constraints, cost, and legacy technologies[118] restrict how much terrestrial systems can expand. However, as we look to the future, integrating satellite and terrestrial networks creates a pathway towards seamless worldwide connectivity.

Space extends reach in ways ground systems cannot. Satellites deliver global coverage, resilience, and real-time adaptability by design. Companies such as Space42[119] advance this capability through Direct-to-Device connectivity and non-geostationary satellite orbit systems that provide secure, low-latency, high-capacity communications.

Space is uniquely positioned to become the backbone of a **GLOBAL INTERNET.**

2.63 BILLION
people worldwide still remain offline.

ESSENTIAL ENABLERS

A unified global internet depends on two essential enablers: continuous technological advances and strong alignment between public and private sectors across countries.

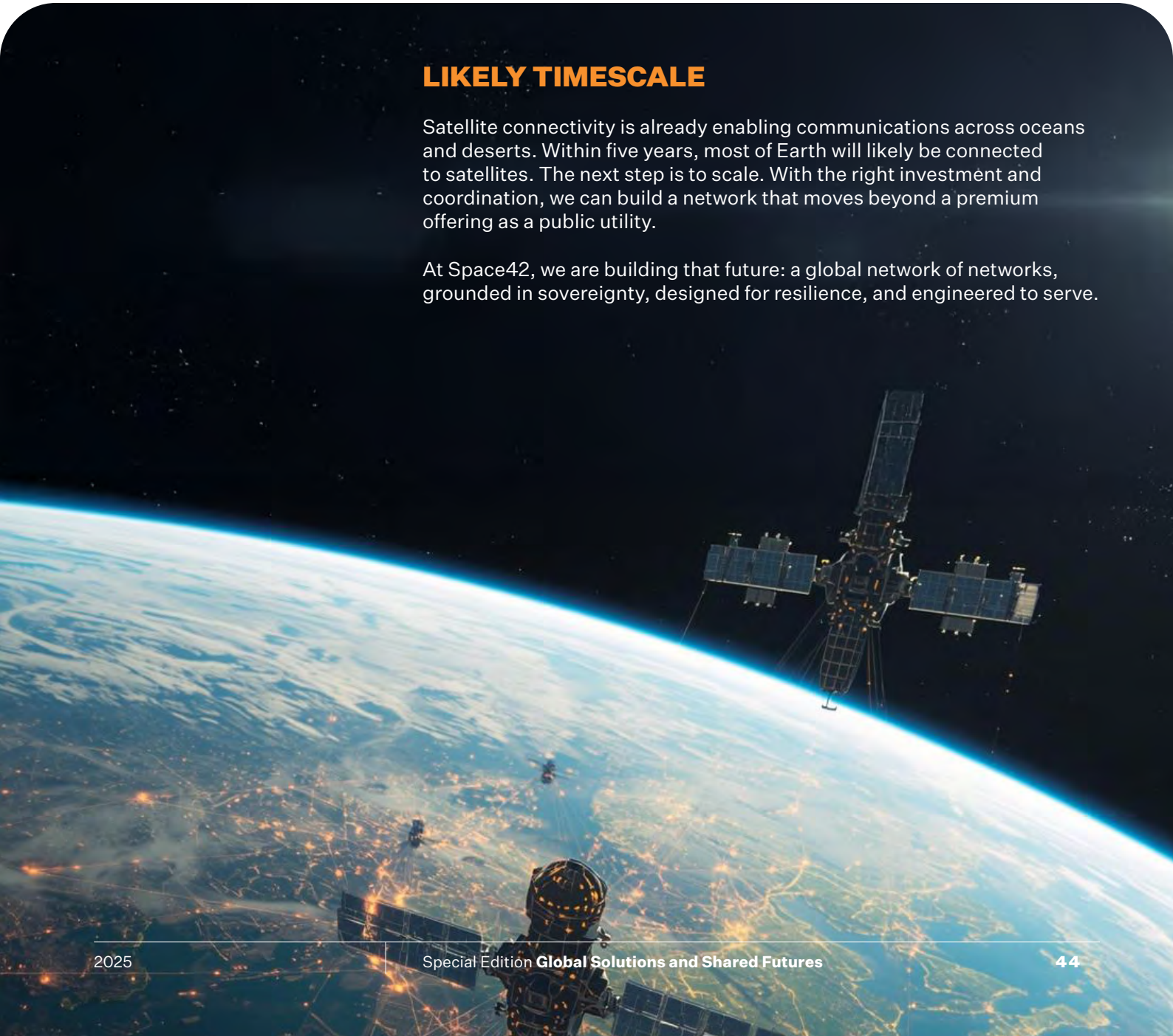
New satellites operate as intelligent nodes, combining Earth observation and satellite communications with artificial intelligence to support disaster response, logistics, and smart infrastructure.

Alignment between governments and industry ensures these systems scale globally. Shared approaches to spectrum access, data sovereignty, cybersecurity, and standards allow countries and companies to coordinate effectively and prevent fragmentation as networks expand.

LIKELY TIMESCALE

Satellite connectivity is already enabling communications across oceans and deserts. Within five years, most of Earth will likely be connected to satellites. The next step is to scale. With the right investment and coordination, we can build a network that moves beyond a premium offering as a public utility.

At Space42, we are building that future: a global network of networks, grounded in sovereignty, designed for resilience, and engineered to serve.



What if foresight was a form of diplomacy?

AMBASSADOR OF SCENARIOS

OPPORTUNITY #36 2024

Formal intergovernmental cooperation and mechanisms for scenario planning and foresight facilitate global cooperation to pre-emptively address global challenges by integrating futures and futures studies into global negotiation and diplomacy.

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From the UAE to Brazil, and the United Nations Futures Lab to the EU-wide Foresight Network, many public administrations already recognise the value of exploring different possible futures. However, the application of foresight to global negotiation and diplomacy remains in its early stages. This matters because diplomacy today operates under conditions it was never designed for – cascading polycrises, non-linear change, and challenges that defy national boundaries yet lack agreed global frameworks.[120]

Using foresight for negotiation and diplomacy is the next step. A harder step, perhaps; diplomats, after all, are appointed to further their national interests. But, in our interconnected world, those interests cannot be realised without accounting for shared risks and opportunities, nor when trade-offs involve longer time horizons or when actors cannot agree what future they are negotiating for.

This is where foresight comes in. The very process of imagining different futures, of thinking more freely about how global trends such as artificial intelligence (AI) advances or climate change may affect us in the longer term, can help to widen our gaze beyond immediate national objectives and create a disciplined space for exploring multiple futures before positions harden.

The speculative dimension to foresight – as well as its techniques, such as 'future personas', backcasting (working backwards from a preferred future), or examining how the weight of history slows progress – can disrupt short-term thinking and make us, even temporarily, more creative thinkers about the future.

The application of **FORESIGHT** to global negotiation and diplomacy remains in its early stages

As an example, for the United Nations Development Programme (UNDP)'s new Strategic Plan 2026–2029,[121] rather than presenting to member states a draft strategy anchored in current conditions, UNDP placed futures analysis at the centre. It drew on its own horizon-scanning platform, structuring discussions around alternative futures, helping to open minds to the variety of futures UNDP and the world might face, and eventually building consensus around the Strategic Plan itself.

ESSENTIAL ENABLERS

There are four enablers that can make foresight central to diplomacy:

- **Open minds:** Exploring possible futures can seem a shaky basis for policymaking compared with forecasting based on quantitative analysis or extrapolating from proven trends. Building foresight into diplomacy requires an open mind paired with methodological rigour.
- **Engagement:** We learned the hard way at UNDP that presenting ready-made scenarios to decision-makers does not always work. If negotiators have not been part of thinking through possible futures, those futures will not seem plausible or politically viable. This is even more important in diplomacy – getting different sides to look into the future together could help surface hidden assumptions and build common ground.
- **Incentive structures:** Diplomats face acute near-term pressures, such as the next summit or the domestic political calendar. Foresight requires protected time and permission to think beyond these horizons, plus institutional support, including dedicated units in foreign ministries, training in foresight literacy, and leadership that values long-term perspectives alongside immediate wins.
- **Artificial intelligence:** AI can quickly scan the horizon and synthesise the many perspectives on the future. But its ready-made scenarios can bypass the cognitive work that makes foresight valuable. AI should augment – by scanning for missed signals or revealing patterns – not replace that collaborative, imaginative work. The goal is not to efficiently produce future narratives but to transform how negotiators think about uncertainty.

LIKELY TIMESCALE

Existing multilateral forums could apply foresight today. New mechanisms are not necessary but new ways of thinking are. The enablers need time to mature and to prove how foresight can improve negotiation and collective action on solutions to complex challenges. This is an immediate opportunity with potential long-term benefits.

Existing multilateral forums could **APPLY FORESIGHT TODAY.**

What if comprehensive data was a public good?

A WIDE WORLD OF DATA

OPPORTUNITY #17 2023

Enabled by incentives for data-sharing, a secure platform is set up where entrepreneurs, researchers, and policy-makers can share and access vast aggregated and anonymised user datasets and related analysis, which aids global innovation, learning, and discovery.

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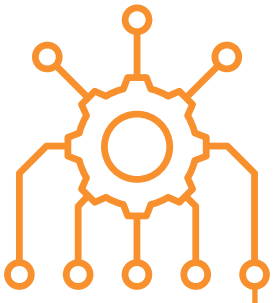
VILAS DHAR
President
Patrick J. McGovern Foundation
USA

We are surrounded by data: measured, mined, and monetised. It influences how we learn, work, travel, and govern and, in doing so, it defines who is seen, what is prioritised, and which futures become possible. Yet, as data becomes foundational to nearly every aspect of modern life, we have yet to answer the most basic questions: who controls it, who benefits from it, and by what rules is it used?

Data could be reimagined as a public good, resourced and governed to serve the collective interest. This shift offers the opportunity to reset how societies allocate resources, build trust, and define what progress looks like in a digital era.

Recent efforts offer a glimpse of what is achievable when data is designed for public benefit. In India, the Digital Public Goods Registry has begun cataloguing and maintaining reusable datasets for inclusive development initiatives.[122] In Chile, a government-backed open large language model designed for Latin American Spanish and regional linguistic contexts is expanding inclusion in artificial intelligence systems across the region.[123] And in the UAE, the launch of the Dubai Digital Authority in 2021 has expanded the city's original data law into a broader digital ecosystem, anchoring data governance within a smart-city architecture that emphasises interoperability and citizen-facing services within Dubai's wider digital strategy.[124] While these initiatives offer a glimpse of what is possible, they remain outliers in a landscape still governed by outdated rules and closed systems. Each of these experiments also surfaces important questions about accountability, participation, and the tradeoffs of centralised control, which any shared data infrastructure will need to confront directly.



As data becomes foundational to nearly every aspect of modern life, we have yet to answer the most basic questions: **WHO CONTROLS IT, WHO BENEFITS FROM IT, AND BY WHAT RULES IS IT USED?**

ESSENTIAL ENABLERS

Building data as infrastructure presents challenges that extend beyond technology into politics, institutions, and the willingness to govern with intention. A focused agenda could begin with three design imperatives and a long-term commitment:

- **Govern with purpose:** Establish rules that define how public-interest data is accessed, protected, and used while reflecting local context, upholding rights, and limiting extraction.
- **Design for inclusion:** Ensure datasets reflect the diversity of the populations they serve through investing in community-led data, addressing representational gaps, and embedding consent and control at every stage.
- **Reward shared contribution:** Open ecosystems thrive on trust. Incentives – such as data trusts, equitable licensing, and recognition of responsible sharing – can make collaboration sustainable and fair.

LIKELY TIMESCALE

Public-data projects often launch with ambition but fade into irrelevance, eroded by short-term thinking and institutional drift. The reliability of infrastructure rests entirely on the institutions that sustain it, and enduring systems require sustained investment, governance, and public legitimacy. This is a generational effort, and its success will depend on global alignment, shared standards, and a collective commitment to resilience.

A shared data infrastructure expands collective intelligence, democratises innovation, and gives communities the means to shape both digital systems and material realities. Inaction ensures a future where data deepens inequality, reinforces unaccountable power, and erodes trust.

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مؤسسة دبي للمستقبل
DUBAI FUTURE FOUNDATION

ABOUT THE DUBAI FUTURE FOUNDATION

The Dubai Future Foundation aims to realise the vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, for the future of Dubai and consolidate its global status as a leading city of the future. In partnership with its partners from government entities, international companies, start-ups and entrepreneurs in the UAE and around the world, the Dubai Future Foundation drives joint efforts to collectively imagine, design and execute the future of Dubai.

Under the supervision and with the support of His Highness Sheikh Hamdan bin Mohammed bin Rashid Al Maktoum, Crown Prince of Dubai, Chairman of the Executive Council of Dubai and Chairman of the Board of Trustees of the Dubai Future Foundation, the Dubai Future Foundation works on a three-pronged strategy: to imagine, design and execute the future. It does this through the development and launch of national and global programmes and initiatives, preparing plans and strategies for the future, issuing foresight reports and supporting innovative and qualitative projects. These contribute to positioning Dubai as a global capital for the development and adoption of the latest innovative solutions and practices to serve humanity.

The Dubai Future Foundation focuses on identifying the most prominent challenges facing cities, communities and sectors in the future and transforming them into promising growth opportunities by collecting and analysing data, studying global trends and keeping pace with, and preparing for, rapid changes. It also looks at future sectors, their integration and the reshaping of current industries.

The Dubai Future Foundation oversees many pioneering projects and initiatives, such as the Museum of the Future, Area 2071, UAE Centre for the Fourth Industrial Revolution, Dubai Future Accelerators, One Million Arab Coders, Dubai Future District, Dubai Future Solutions, Dubai Future Forum and Dubai Metaverse Assembly. Its many knowledge initiatives and future design centres contribute to building specialised local talents for future requirements and empowering them with the necessary skills to contribute to the sustainable development of Dubai.

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