2. Three Systems in Transition

Three systems determine how the transition resolves: human development, planetary stability, and technology governance. Conventionally treated as separate agendas, they do not behave separately. Each alters the trajectory of the other two, development failure compounds climate vulnerability; climate disruption destroys the productive capacity that development depends on; and technological governance determines whether the tools available to address both are broadly accessible or narrowly held. Technology often been seen as the lever of power acquisition, has a particularly prominent role to play. The failure of one raises the cost of resolving the second and narrows the window for the third. Managing the transition requires all three to move together, and the hypercrisis described in the preceding section is, in large part, the consequence of all three moving in the wrong direction at once.

1. Three Systems Determine the Transition

The world's challenges manifesting as a hypercrisis cross a wide range of domains: geopolitical fragmentation; conflicts, active or escalating, across multiple theatres; democratic backsliding; rising economic inequality and degrading social cohesion; the loss of biodiversity and the breach of six of the nine planetary boundaries that define the safe operating space for human civilisation;[42] food and water insecurity affecting billions; and the ungoverned diffusion of technologies whose governance frameworks lag years behind their capabilities. None of these challenges are minor or peripheral, and each carries a threat to systemic stability.

However, a subset of challenges determines whether the shift to the Systems Age is managed or chaotic. Three challenges stand apart in this regard:

1. Human Development. The world's ability to deliver human development determines stability in societies and between them.
2. Planetary Ecosystem. The ability to limit negative externalities on the climate, the environment and the ecosystem determine the conditions under which human societies and other species can function.
3. Technology. The functionality, use and distribution of technology determines the value and power of the other two.

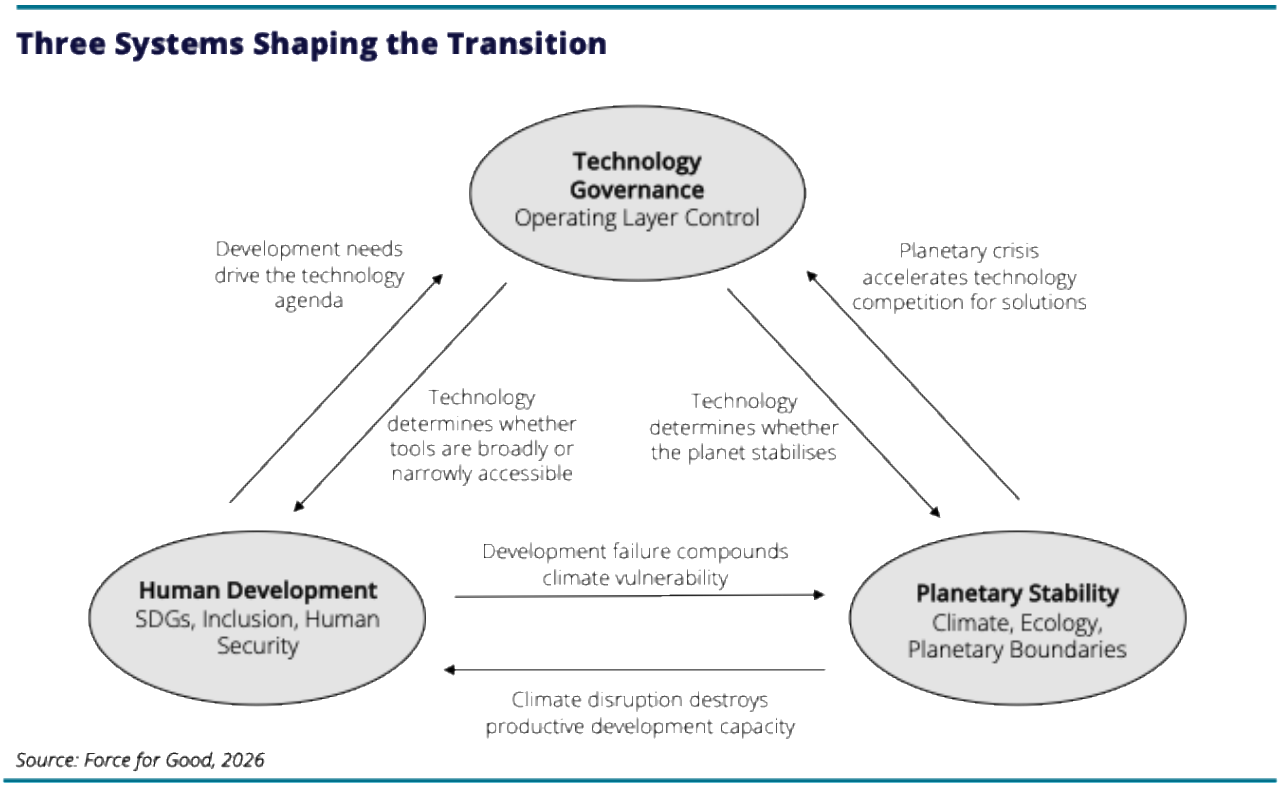
These three function as governing systems rather than merely as challenges among many, and are distinguished by a combination of three properties, which while not absolutes, are extreme.

- Universality. They bear directly on the security, welfare, and economic prospects of every nation and world populations.
- Tractability. The financing exists, the technologies are maturing, and the analytical frameworks are in place; the binding constraint is not knowledge or capability.
- Irreversibility. Climate thresholds cannot be reversed by later action; development failure compounds into poverty traps and debt cycles; and technological dependence, once embedded, is structurally self-reinforcing.

Every other crisis of the hypercrisis meets some but not all these criteria and therefore effectively falls into one of two categories. Some are structural: geopolitical fragmentation, democratic erosion, and great-power rivalry set the conditions under which the transition unfolds, but they are not themselves tractable through capital mobilisation or technology deployment. Others are symptomatic: conflict, inequality, and political instability are in substantial measure what occurs when the governing systems fail. The three systems are upstream of both.

The three systems differ sharply in stage of progression, and that difference is among the more consequential features of the present moment. Human development and planetary systems are both long-standing, and both are currently failing: development consistently misses its targets, and planetary systems are approaching the boundaries beyond which recovery does not occur on any policy-relevant timescale. The technological system is, by contrast, not failing, but re-forming, as separate systemic technologies continue to converge into a unified foundational layer through which economies are built, states are governed, and power is projected – its ongoing renewal through scientific and technological breakthroughs displaces older technologies, evidence of the system performing as designed. It carries the capacity to close the development gap and to make climate stabilisation achievable through system design rather than continuous economic sacrifice.

Figure 3: The Three Systems and Their Interactions



The two failing systems and the one re-forming system are also failing and forming for different reasons. Development and planetary systems are being degraded through withdrawal, as political will, financing, and institutional capability on which all three depend retreat from the endeavours that sustain them. The technological system, by contrast, is being actively shaped by policy and competition: the foundational layer now forming is being actively contested by the two superpowers with the capability to control it, its architecture determined by state-level strategic rivalry rather than by multilateral design. This section addresses the three systems in turn, then the mechanism of each, and closes on their interconnectedness.

i. Human Development Systems: Potential Not Unlocked

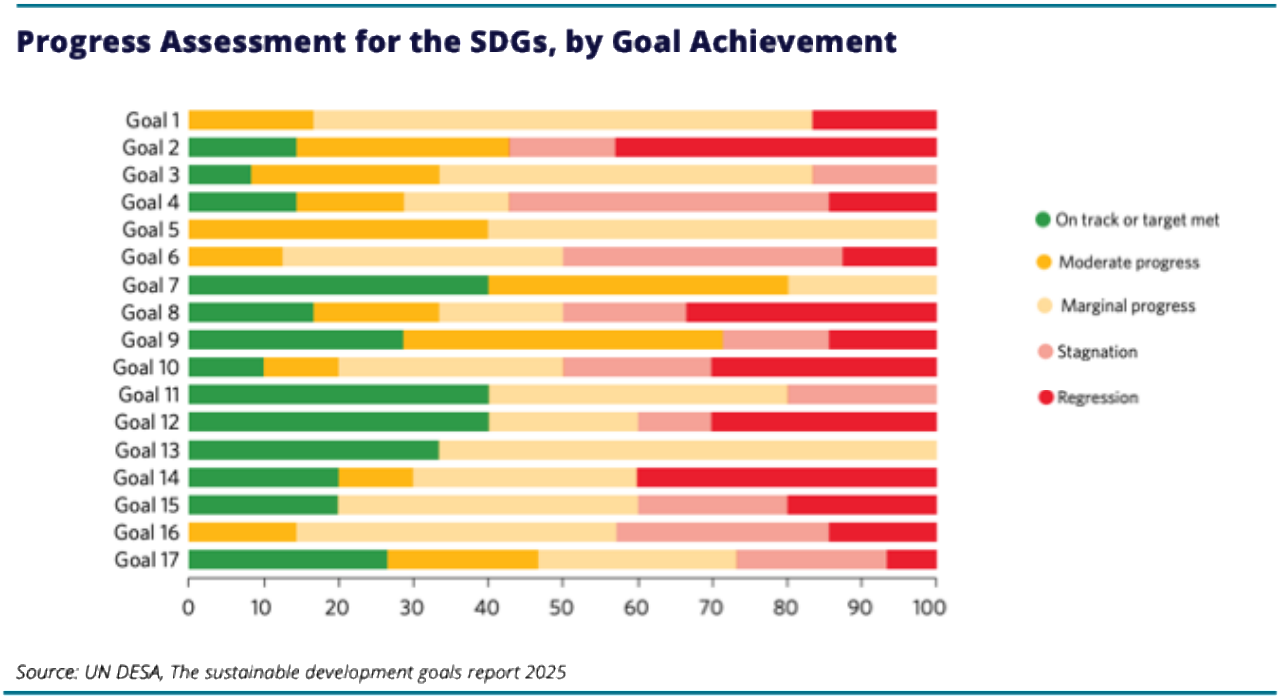
Development has come to mean aid. In its proper place, however it would be the development of human potential.

Development belongs at the centre of any analysis, not only for humanitarian reasons; it is structural. From a security perspective, a state without the functioning infrastructure for health, education, water, and energy cannot absorb shocks, it becomes a source of shocks. Climate events, technological displacement, supply chain disruptions pass through such a society into instability, migration, and conflict, then propagate outward. Development failures are also self-reinforcing. Inequality entrenches, debt service crowds out investment in capabilities that would reduce dependence, and each year of shortfall raises the cost of the next. This is the mechanism by which development failures compound rather than persisting at a stable level.

The Sustainable Development Goals – 17 goals and 169, adopted in 2015 as the first global commitment to apply to all nations, not just the poorest – are a decade on, and the shortfall is comprehensive. Of the targets with sufficient data, only 35% show adequate progress, 18% on track and 17% making moderate progress. None of the seventeen is on track to be met by 2030. The pattern is one of divergence, not uniform failure: sub-Saharan Africa and conflict-affected regions have stalled or reversed across multiple goals, while global averages mask real progress elsewhere. At current rates, the 2030 deadline will pass with the agenda substantially incomplete and the most vulnerable populations further from the goal than when it was adopted.[43]

That shortfall should not obscure what has been achieved. Since 2015 the global maternal mortality ratio has fallen from 228 to 197 deaths per 100,000 live births, under-five mortality has fallen by 16%, 92% of the world's population had electricity by 2023, and more than half now benefits from some form of social protection.[44] The agenda has moved the world; it has not moved it far enough, fast enough, or evenly enough.

Figure 4: SDG Progress Tracker



Source: UN DESA, The sustainable development goals report 2025

The consequences are measurable. 847 million people, nearly one in ten globally, currently live in extreme poverty, and on current projections approximately 760 million will still do so in 2030.[45] 273 million children and young people are out of school, rising for the seventh consecutive year.[46] 2.3 billion people experienced moderate or severe food insecurity in 2024.[47]. Development aid fell by 23% in 2025, the largest annual contraction on record, bringing ODA to levels last seen when the SDG agenda was first adopted.[48]

Shortfalls in development and its funding is routinely understood as a shortage of money, an understanding that does not withstand scrutiny. Global liquid wealth in the financial system exceeds US$500 trillion, and total global assets have crossedUS$750 trillion. Capital exists in quantities that dwarf the requirement. What does not exist at scale is a demand side into which that capital can move: needs have not been structured into assets with the risk, legal, regulatory, and liquidity characteristics that institutional capital requires, and financial mandates remain calibrated to the risk-return profile of advanced economies. Blended finance from multilateral development banks covered barely 0.1% of the gap in 2024, which is evidence for an absent transmission mechanism rather than for constrained supply. The shortfall is therefore a market architecture failure rather than a resource failure, and the distinction determines what kind of remedy is required.

> What is missing is a demand side in which global capital can move, needs have not been structured into assets that institutional capital can buy

ii. Planetary Systems: Approaching Irreversibility

Climate change sits formally within the SDG framework as SDG 13 but warrants treatment as a distinct global governing system for three reasons. First, planetary systems are asymmetric in time: ice sheets, forests, soils, coral reefs, and ecosystems, take centuries or millennia to develop, yet can be degraded in years, with recovery, if at all, falling outside any timescales relevant to policy, or human lifetimes. Second, the system constrains all the others: rising temperatures, sea-level rise, and extreme weather degrade food security, water, health, and infrastructure, and productivity simultaneously, making climate a boundary condition for the rest of the development agenda rather than one goal among seventeen. Third, it is cumulative and global – emissions accumulate regardless of origin, creating exposure that ignores borders and generations. The 1992 UN Framework Convention on Climate Change, operationalised via the Paris Agreement's five-year national commitments, reviewed annually at COP, and provides the global management architecture.

Despite a decade of effort and a 2050 net-zero target, emissions continue to rise. Energy-related CO_2 emissions reached a record 38.4 Gt in 2025,[49] atmospheric concentration stands 52% above pre-industrial levels, and the 2025 Global Carbon Budget assessment concluded that at current emission rates the remaining carbon budget for limiting warming to 1.5°C will be exhausted before 2030.[50] Breaching that threshold is now inevitable, expected around 2030, with current policies placing the world on a 2.7 to 3.0°C trajectory by 2100.[51]

At that level of warming, the IPCC projects fivefold increases in extreme heat events; sea-level rise of 0.6 to 1.1 metres affecting over 800 million people; near-total coral mortality, crop yield declines of 10 to 25%; and the displacement of up to 630 million climate migrants by the end of the century. Against this, clean energy investment stands at around US$2 trillion annually, against the US$4.5 trillion a year that a net-zero pathway requires.[52] The same structural observation applies as in development: the shortfall is not one of available capital but of assets structured to receive it.

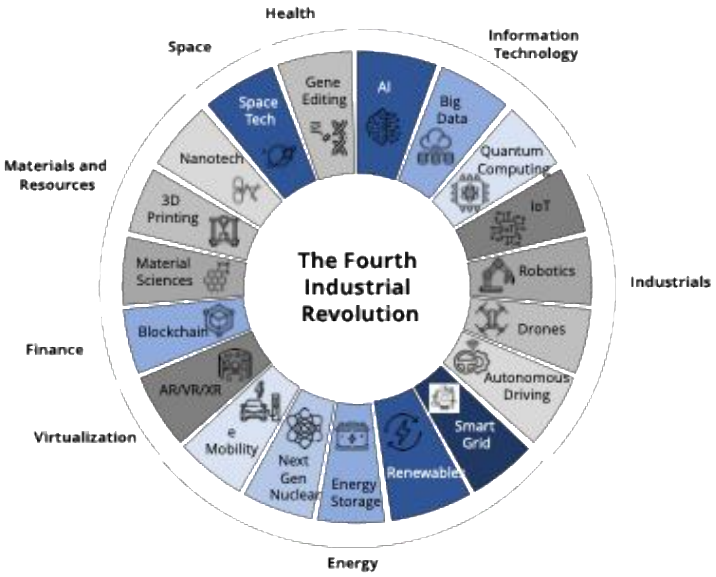
iii. Technology Governance Systems: Re-formation Rather Than Deficit

The technological system is in the process of growth with a number of breakthrough technologies replacing older generation ones, becoming the layer that may have the greatest influence on how the other two operate and whether they progress their objectives.

Nineteen core digital technologies now constitute the foundational infrastructure of the emerging Systems Age.[53] Bound together by digital intelligence as connective tissue, they reshaping how wealth is generated, how industries operate, how societies are governed, and how the natural world is managed. They span computation and intelligence, physical automation, energy systems, interfaces and distributed ledgers, materials and fabrication, and biology and space. Together they are projected to generate more than US$61 trillion in annual economic value by 2030. [54]

Figure 5: 19 Core Technologies

The 19 Core Technologies of the Information Age



Source: Force for Good, 2025

The nineteen core technologies span a spectrum that can transform life. Computation and intelligence – AI automating cognition, big data powering AI-driven decisions, and quantum computing enabling exponential gains in optimisation and simulation. Physical automation – robotics, drones, and autonomous vehicles bringing digital intelligence to manufacturing, logistics, and mobility. Energy systems – smart grids, storage, and fusion enabling renewable integration at scale, with electric mobility linking energy, data, and transport. Interfaces and distributed ledgers – extended reality merging digital and physical environments, and blockchain enabling trust and value transfer without central authorities. Materials and fabrication – advanced materials, 3D printing, and nanotechnology decentralising production and engineering matter at atomic scale.

Biology and space – gene editing transforming medicine and agriculture, and space technology underpinning global connectivity and climate monitoring.

Six of the nineteen are systemic – artificial intelligence, quantum technologies, gene editing, fusion energy, nanotechnology, and extended reality – with the potential to reorganise entire economic, institutional, and social systems, and spawn successive waves of complementary innovation. The remaining thirteen play critical but more bounded enabling or application roles.

What is set to make the six systemic technologies fundamental to creating a new era is that they are converging: the output of one field can become a direct input to another, so a constraint in one is resolved by another, allowing for superior performance.

- Artificial intelligence supplies the cognitive layer, interpreting complexity and coordinating optimisation across domains.
- Quantum technologies extend the frontier of computation, sensing, and secure communication into problem spaces closed to classical systems.
- Gene editing renders biology programmable, translating digital insight into living systems that can be designed and scaled.
- Fusion supplies the energetic foundation by removing energy as a constraint on computation, experimentation, and industrial transformation.
- Nanotechnology structures matter at the smallest scales, embedding sensing and responsiveness into physical material.
- Extended reality provides the human interface to systems whose complexity exceeds unaided cognition.

As convergence deepens, the discovery, testing, and deployment of innovation collapses into one continuous process, producing a higher-order system that generates new categories of solution rather than incremental gains, and progressively relaxing constraints like energy scarcity, cost, and cognitive capacity.

This is why the tech system occupies a different position from the other two: it is not simply a domain requiring management, but the medium through which development and climate are managed, and, ungoverned, the layer whose exclusion and disinformation intensify both. Both are true simultaneously, which dominates depends on whether the system is governed or left to default. Development can bypass industrialisation as infrastructure becomes digitally deliverable; climate stabilisation becomes achievable through system design rather than through sustained economic sacrifice.

The tech system is the medium through which the other systems are managed, and without governance, it can accentuate the crisis in the others

The gains from these technologies can be expected to be transformative. This report forecasts the potential economic gains in section 4.

Gains concentrate by default, and the usual fix may come too late. In past transitions like railways, early gains went to infrastructure owners and only spread after decades of political contest,

antitrust action, and labour law. This transition is moving faster, the world is in the power concentration phase, and correction seems far away for now.

No governance regime exists for these technologies, despite risk comparable to nuclear weapons. No equivalent exists here. One gap is urgent: AI, autonomous weapons, and engineered pathogens pose risks no existing framework was built for. Three more compound it – proliferation past traditional chokepoints, no shared standards, and benefits concentrating in those who already hold power.

What governance exists is not binding. There's no binding treaty and no US–China agreement – only one binding national law exists worldwide (the EU's). The two countries setting the pace of these technologies remain entirely unconstrained. The gap between the pace of development and the reach of governance is widening, not closing.

Whether this becomes history's greatest levelling, or its greatest concentration of power depends entirely on a governance architecture that does not yet exist.

iv. The Coupling Between the Three

The three systems interact continuously, and their interactions are what make managing outcomes difficult. Underdevelopment generates the instability that military expenditure attempts to contain, consuming fiscal capacity that would otherwise be available to the other two systems. Planetary degradation drives resource competition, displacement, and food insecurity, which deepen the development deficit and intensify the conflict that consumes the same fiscal capacity. Technological exclusion entrenches the inequality that drives political fragmentation, weakening the domestic coalitions on which action in either of the other systems depends.

The technological system is one whose trajectory, if altered, can directly alter the other two. The same technologies now converging are those capable of closing the development gap and of decarbonising energy systems. The question is what is preventing this positive relationship being fully implemented? Two mechanisms, both inherited from the fracturing of the world order described in the preceding section, are the answer: development and planetary systems are losing capacity through withdrawal, while the technological system is being shaped through contestation. The sections that follow address each.

Whether this technology enabled moment becomes history's greatest levelling or its greatest concentration of power depends entirely on a governance architecture that does not yet exist

As a result, the gap between the pace of technological development and the reach of governance is widening, not closing. While more than 80 countries have proposed more than a thousand AI-related policy initiatives, as of today the EU's AI Act is the only comprehensive binding regulation in force.[55] Japan's AI Promotion Act, passed in 2025, is explicitly non-binding.[56] The United States, arguably world's leading AI power, dismantled its own federal safety framework in January 2025. [57] The result is that the technologies most in need of governance are being develop in the absence

of binding rules, international oversight, or agreed limits on their use, shaped almost entirely by the logic of an arms race which by design is ungovernable.

2. Withdrawal: Development and Climate Systems

The interdependence of the three systems is clear. The mechanisms that most effectively degrade the functioning of each of the systems is the loss of political will, financing, and institutional support for the protection, progression and inclusive participation. This has affected development and climate systems while investment in the third accelerates at scale.

i. The Breakdown of Alignment

For a brief period, it appeared that the world had assembled the ingredients needed to act simultaneously at scale on its development and climate obligations: great-power engagement, unprecedented capital commitment, and solutions of sufficient maturity to deploy. That confidence crystallised at COP26 in Glasgow's in 2021, where a coalition of states and US$130 trillion in institutional capital aligned behind the net-zero agenda while the 2030 Agenda retained the formal support of all UN member states.

The alignment broke under a sequence of geopolitical shocks that struck both tracks at once. Russia's invasion of Ukraine in 2022 triggered a rapid militarisation of European fiscal space, with EU defence budgets rising 63% over four years to an estimated €381 billion in 2025,[58] while the scramble to replace Russian gas pushed decarbonisation down the political agenda. The resulting global energy crisis and inflation deepened cost-of-living pressures, shifting domestic politics across both industrialised countries and the Global South toward short-term relief. The acceleration of great-power rivalry then made the calculus of global versus domestic spending decisively unfavourable to both development and climate. The political conditions that had made the moment of convergence possible, namely great-power engagement, shared multilateral commitment, and the assumption that global cooperation served every state's long-term interest, dissolved together.

ii. Breakdown of Political and Financial Commitments

On development, global overseas development aid fell 23% in 2025, the largest annual contraction on record, returning aid flows to where they stood a decade earlier.[59] On climate, current global carbon commitments, even if fully implemented, place the world on a 2.7 to 3.0°C trajectory rather than the 1.5°C goal, and implementation lags even those limited commitments.

Private-sector capital followed the policy signal. The Glasgow coalition unravelled. The resulting retreat is comprehensive in nature, encompassing both political will and the financial capacity that it unlocks.

At the level of political will, the most consequential single reorientation is that of the United States under its current administration, with effects that run through both systems simultaneously. The US withdrew from the Paris Agreement for the second time in January 2025,[60] stepped back from the 2030 Agenda and the Conference on Financing for Development,[61] and dismantled USAID in a move estimated to result in approximately 14 million otherwise avoidable deaths by 2030,[62] and withdrew from a total of 66 international organisations, including 31 UN agencies.[63] Domestically, more than 20 US state legislatures passing over 100 anti-ESG bills between 2022 and 2025,[64] turning voluntary climate commitments by private sector financial institutions into a legal and political and legal exposure.

The systemic effect is not reduced ambition but active opposition. When the largest contributor treats participation as optional, the calculation changes for every remaining participant.

The 2025 United States National Security Strategy has accelerated the reordering of the world's development and climate investment priorities

Fiscal capacity has contracted in parallel and traceably. The commitment of major NATO states to raise defence spending to 5% of GDP extracts capacity that was, or might have been, available to the two systems. Clean energy investment levels currently stand at less than half the level needed to meet 2030 transition targets.[65]

The constraints on financial capacity are much greater in the Global South. As of 2025, 49% of countries eligible for IMF concessional financing were in or at high risk of debt distress:[66] climate vulnerable countries have paid approximately US$212 billion in interest premiums on borrowing over the past 20 years;[67] and trade policy uncertainty driven by tariffs and security concerns reached historic highs in 2025, curtailing investment particularly in already fragile economies. Fiscal space is therefore being compressed simultaneously from the debt side, the cost-of-capital side, and the trade side.

iii. Breakdown of Institutional Capacity

Political will and financial capacity can recover. Institutional capability, once lost, is far harder to reconstituted on the same timescale, which makes this the layer at which withdrawal becomes effectively irreversible. USAID managed over 6,000 active programmes across more than 100 countries at the point of its dismantlement. The UNFCCC negotiating process has been structurally weakened by repeated US withdrawal.

The withdrawal from development and the retreat from climate stem from a single failure, the treatment of national security as separate from the ecological, economic, and social systems on which it depends

The development bank system is, in net terms, standing still. The World Bank's flagship IDA-21 replenishment mobilised roughly US$33 billion annually,[68] almost exactly the sum that China, once the world's largest bilateral development lender, now receives from developing countries each year as Belt and Road loans mature and repayments exceed new disbursements.[69] The two largest

development finance systems in the world are effectively cancelling each other out in terms of net financing.

Taken together, the withdrawal from development and the retreat from climate are not two separate policy failures but one failure expressed twice: a treatment of national security as separable from the security of the ecological, economic, and social systems on which national security depends.

3. The Contest: Technology Governance as Strategic Ground

Advanced technology has become the primary arena of great-power rivalry over the technologies underpinning the Systems Age. The contest is over control, not just leadership; supply chains, deployment platforms, interoperability standards are used to lock-in dependencies.

Earlier, tech nationalism aimed to build and protect domestic capability;[70] today's version weaponises interdependence itself, targeting the points rivals cannot substitute or do without.[71] Where globalisation treated trade as mutual benefit and a check on conflict is now restructured as leverage over adversaries and allies alike.

i. The Contest for the Operating Layer of the Systems Age

Mastery of technology has always shaped the hierarchy of nations, and each prior civilisational transition produced new winners and losers as technology reordered the foundations of economic productivity and military capacity.[72,73]

Technology, historically, was an input that sorted nations by power position. Steam, steel, and electrification made certain states productive and militarily capable, and dominance followed from that. Technology was upstream of power.[74]

This time technology is the terrain, not an input to it. Industrial-era technologies became sectors within economies (a steel industry, a power sector). Digital technology is not becoming a sector; it's becoming the substrate every sector runs on.[75]

Control of it sets the rules for everyone else's participation. Winning a sector gives you market share. Controlling the operating layer gives you control over the terms under which other states, companies, and militaries operate.

Technology allows for cognitive capture through attention. Social media, increasingly powered by AI that allows for profiling individuals based on digital behaviour, allows for the capture of attention and its influence in shaping beliefs, with political, social and commercial implications.[76]

Figure 6: SDG Technology Control Layers Translation into Power-Projection

Tech layer	Power-projection equivalent	Function	Who controls it today
Operating layer	Command centre	Sets what's possible for every layer above	Not settled
Applications	Attention capture / soft power	Visible front; many replaceable players	Diffuse and contested
Storage and cloud	Logistics and force projection	Lets command reach scale and execute	US. Hyperscalers dominate globally
Components	Armaments / weapons platforms	The hardware force is built from	Split. US design, Taiwan fabrication
Equipment	Industrial base	Machinery that makes armaments possible	US/Netherlands. ASML holds the chokepoint
Materials	Strategic resources / territory	Raw endowment underneath everything	China. Dominates rare earth production

Technological hegemony is the route to great power. The US strategy states the goal as ensuring "US technology and US standards drive the world forward."[77] China's doctrine holds that China "must vigorously develop science and technology and strive to become the world's major scientific centre and innovation highland."[78]

Technology policy merges with every other policy lever. If power and technology are now one variable rather than two, then every policy lever, tariffs, alliances, military posture, is now also a technology-stack lever, and vice versa. That's what makes the six-layer contest total rather than sectoral.

ii. The Architecture of Weaponisation

What distinguishes the present from earlier periods of technology nationalism is method not intensity. Earlier periods sought to build domestic capability and protect it from foreign competition. The present period converts interdependence itself into an instrument, identifying chokepoints in global supply chains that counterparties cannot readily substitute, redirect, or do without, and using control of these for coercion, denial, and leverage. The logic is not competition for market share but the engineering of asymmetric dependency.

In the strategic competition between the United States and China, Washington leaned on its allies to cut China off from essential ingredients for AI development. The Dutch, home to ASML, the sole maker of the advanced chipmaking machines, were pressed to block the sale of those machines, and then to block the next-best ones too. Japan was persuaded to restrict 23 types of chipmaking

Interdependence is being weaponised: with chokepoints in global supply chains which counterparties cannot readily substitute, redirect, or do without, being used for coercion, denial, and leverage

equipment, and allies elsewhere were barred from re-exporting American technology.[79] The US withdrew the permissions that let South Korea's Samsung and SK Hynix re-equip their Chinese plants, which could now only be maintained but not upgraded. Nvidia's best chips were first entirely restricted for export to China, and subsequently allowed subject to a 25% revenue-share cut to the U.S. government. China in turn restricted rare earths exports to America. However, Chinese firms built comparable AI models anyway, and Beijing now turns the American chips away at customs, reserving the market for domestic suppliers.[80]

In this conception, technology is not a force for good but a tool of power projection:

- Ownership of a layer is a claim on everyone operating above it. Control of what others depend on converts directly into control over what they can do.
- Restricting access manufactures dependency deliberately. Dependence is not an unintended consequence of technological advantage – it is the product being cultivated.
- Withholding is the strategy, not a side effect. What is kept back is kept back precisely because it would erode the position holding it back creates.

For most states the result is not exclusion from the system but structural subordination within it, with access that is priced, rationed, and conditional. This is the old pattern of resource dependency, now running on a new substrate.

iii. The Rest of the World: Dependence is Strategic Vulnerability

For the rest of the world, the consequence of this dependency is stark. The technology contest is on current trends effectively being fought between only two countries, and the distance between them and everyone else continues to widen. The EU is materially ahead of the remaining competitors but lacks the scale of the two leaders; the UK, Japan, and South Korea lead in selected domains while lacking the broader ecosystem breadth to compete systematically; India commands exceptional human capital without a commercial ecosystem; and most states are priced out entirely.

The strategic consequence is dependence – on platforms, infrastructure, and standards set by actors whose primary motivation is competitive advantage, not broad benefit. In a transactional order, the technologically dependent become rule-takers charged for access: a structural vulnerability that echoes, in its basic logic, the colonial dependencies of an earlier age.

For most countries outside the contest, this subordination does not announce itself. It arrives as a dependency on a platform whose terms of service are written in another jurisdiction; as a diagnostic algorithm trained on data that does not reflect the local population; as a financial infrastructure whose clearing and settlement systems are owned by actors whose primary obligation runs elsewhere; as an education system mediated by content ranked and filtered by others' objectives. The terms of access are set elsewhere, revisable at any time, and not subject to appeal.

The vulnerability, however, runs in both directions. In platform economies, scale rather than capability determines who sets the rules. Taiwan fabricates close to 90% of the world's advanced logic chips but lacks the broader economic, political, or military weight to defend this position indefinitely. A chokepoint gives its holder leverage over everyone who depends on it but makes the holder a target in return. Capability without geopolitical weight is not sovereignty, it is exposure. Critically, the very technologies being rationed along geopolitical lines are the same ones capable of closing the development gap, decarbonising energy systems, and building the resilience adaptation requires, making the contest consequential for everyone outside it.

The weaponisation of tech access therefore does not merely disadvantage the countries that lack it, it narrows the window within which the transition can be managed rather than endured and each escalatory turn narrows it further.

A world in which the tools of the transition are themselves a theatre of war is one in which the transition's governing challenges, development, climate, and technology, compound

A world in which the tools of the transition are themselves a theatre of war is one in which the transition's governing challenges – development, climate, and technology – compound rather than resolve each other, and in which the case for collective action on all three becomes harder to make with every escalatory turn of the rivalry.

In Summary

- Three systems determine how the transition resolves. Human development, planetary stability, and technology governance are distinguished from the wider polycrisis by their scale, tractability, and irreversibility –– and by their role as the substantive content of what the transition must deliver. Each alters the trajectory of the other two.
- Development System – SDG progress has failed comprehensively. Only 35% of assessed targets are on track or making moderate progress; 18% have regressed below their 2015 baseline; none of the seventeen Goals is on course globally. Global ODA fell 23% in 2025, the largest annual drop on record.
- Planetary System – The climate trajectory is worsening, not stabilising. The three most recent years are the warmest in 176 years of records. Emissions set new records in both 2024 and 2025, the 1.5°C carbon budget is virtually exhausted, and the window for meaningful mitigation narrows with every year of inaction.
- Technology Governance System – Nineteen technologies form the infrastructure of the Systems Age. Nine commercially ready technologies are deploying now. Six systemic technologies, with AI as the keystone, restructure entire systems rather than improving performance within them. Together, they are both the engine of the transition, and the primary means of closing the development and climate gaps.
- Development and climate have dropped off the global agenda simultaneously. The withdrawal by the current administration of US leadership, and the reallocation of capital to security, have abandoned both obligations at once. The trade-off between security and either agenda is

false – underdevelopment and climate breach are sources of the very instability defence spending is meant to contain.

Technology has been weaponised as a tool of coercive leverage. Export controls, critical-mineral restrictions, standards wars, and access-tiering by geopolitical alignment have converted technological interdependence into a mutual arsenal. For most states the result is not exclusion but structural subordination.

3. The Beginnings of Abundance

The world's failure to address the critical challenges of the transition to the Systems Age is not a failure of means. The world holds a surplus in all four factors that any such effort requires: capital, proven solutions, deployable technology, and the people to absorb and use them. Each is at a scale without historical precedent. The binding constraint is not scarcity but architecture: the surpluses exist in different places, held by different actors, with no market mechanism connecting them to where the need is greatest. The SDGs, calibrated in 2015 against assumptions of scarcity that the intervening decade has dissolved, are the wrong frame for a world of such surplus. The SDGs are a floor, not a ceiling. Where the marginal cost of delivery is collapsing and four surpluses are compounding, the unit of ambition is not a percentage of a population but the whole of it. The challenge is how to unlock structural blockages that are preventing them from to address needs; an institutional architecture is required that converts latent demand into investable opportunity.

1. The Surplus We Already Have

i. Capital at Scale

The global stock of liquid assets managed in the financial system has reached levels without historical precedent, growing from US$329 trillion in 2021 to US$505 trillion in 2025 at an average annual rate of 11%, against total global wealth, liquid and illiquid combined, of approximately US$753 trillion (figures gross of liabilities; growth rates nominal, partly reflecting

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