INSTITUTIONAL ARCHITECTURE AND FUTURE GLOBAL GOVERNANCE

Fusing imagination and practicality

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WHAT IS TIAL

The Institutional Architecture Lab was formed in 2023 by Sir Geoff Mulgan, Jessica Seddon and Juha Leppänen in an effort to help the institutional design community coalesce, learn together, and grow. Each of us has been involved in various stages of creating new organisations and other institutions. Like many other people, we have witnessed first-hand the absence of a formal community along the way — or a place where we can learn from past experience. We are aware that there is a lot of great work happening around the world, but nowhere to recognise it.

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Introduction

This short piece summarises ways to think about the design of new institutions for global and transnational governance over the next decade, drawing on the work of TIAL. It argues that the world faces a growing number of glaring governance gaps — from the unregulated growth of AI and other transformative technologies to management of commons such as oceans, the atmosphere, or space, to accelerating decarbonisation, circularity, and other transitions. At the same time, there are many new tools that can help to bridge these gaps — for sensing, communication, knowledge synthesis, coordination and rapid mobilisation and re-allocation of resources. These can help with:

- steering technologies, managing risks and sharing the gains (AI, synthetic bio, etc.),
- managing interconnected commons (ocean, air, soil, space),
- accelerating large-scale, interconnected, system change/transition (energy, agriculture, circularity).

Much work is underway to accelerate this work – some within the UN system — the advocacy toward, and now the negotiation of, a legally binding treaty on plastics, for example,

or the calls to use the 21st replenishment of the International Development Association (IDA) funds as an opportunity to rebuild trust in multilateral development finance.

Others are pushing for radically new institutions for tasks ranging from anticipating and responding to climate risk to managing global wealth taxes or migration. In between, others are using bricolage — recombining parts of today's institutions for new tasks. The Loss and Damage Fund, for example, was set up as a Financial Intermediary Fund under the World Bank, and the recent UNEA resolution on global air quality governance proposes to build on regional and technical agreements.

Here we highlight institutional architecture principles and methods that can help both with repurposing existing institutions and designing new options. The principles include: a focus on **assembling intelligence**; '**mesh' structures** that link multiple tiers of governance; **hybrids** combining different sectors; **multiple accountabilities** instead of reliance on governmental accountability; seeking **political interest alignment**; exploring **new economic foundations in global public goods**; and using **upside-down thought** and action.

Finally, we comment on the relative absence of centres doing work of this kind; there is a lot more diagnosis than prescription and description rather than design. This results in an absence of plausible options even as the needs grow more acute alongside growing awareness of just how much our future thriving depends on new planetary institutions.

Why focus on global institutional architecture?

Planetary thinking became more common in the 19th century, laying the foundations for the surge of new global institutions that was seen from the 1940s to the 1980s. That surge, however, has come to a halt in recent decades. The result is a pattern of governance deficits in many fields including: climate change and its related environmental crises; financial flows and stability; technology governance (including AI and cybersecurity); clean air and oceans; migration and organised crime.

A good example is space. Many more countries have become active in the use and exploration of space and the commercial industry has grown rapidly. There is a treaty and a UN Office for Outer Space Affairs. The UN Committee on the Peaceful Uses of Outer Space now has 102 members committed to global coordination around space and the UN Conference on Disarmament's 65 member states consider ways to avoid space war. There are also the U.S. Artemis Accords and China's International Lunar Research Station and the EU is creating a new act and some tasks will probably go to the International Civil Aviation Authority. One company (Starlink) owns the majority of working satellites. Amidst the fragmentation, however, there is limited translation of in-principle goals (peaceful use of a global commons) to an institutional architecture that can take on even basic coordination tasks such as limiting debris or managing traffic in orbits.

There is a glaring absence of imaginative thinking about what kinds of institutions could shape allocation of space resources, leverage space infrastructure for global goals, or contain the possibilities of space war.

A similar pattern can be found in many other fields. Yet a new generation of institutions could also help maintain and amplify a growing recognition of a shared world. Surveys consistently show large majorities backing the UN and a minority, but growing, strongly identifying as global citizens. A survey conducted for UNICEF found that 39% of young people identified more with being part of the world than their own nation or region,

compared with 22% of the 40+ group. With each additional year of age, people were on average about 1% less likely to identify as a global citizen.

The current landscape

There is a huge range of global governance institutions, dating back to the ITU in the 1860s (which drew on models developed to handle trade on the Rhine and Danube and then postal traffic), or the International Meteorological Organization (IMO) in 1873, which became the WMO in 1951. Since then, global governance has expanded to encompass many institutions in the UN system (UNDP, UNEP, UNICEF, WHO, etc.), the Bretton Woods Institutions (IMF, WB, GATT — later the WTO), and the trio of environmental framework conventions (UNFCC, CBD, UNCCD) that emerged from the 1992 "Earth Summit" in Rio.

Driven by the need for post-World War II reconstruction and Cold War dynamics, the number of formal multilateral groupings proliferated rapidly between 1945 and the mid-1990s. For the most part, and in matters other than defence, these were global. In keeping with the general emphasis on "world" organisations, for much of the 20th century it was often assumed that a global government would look like national governments: there would be a single governing assembly; perhaps a single army; perhaps a single money; and a single permanent civil service.

In retrospect it's now clear that the period when intergovernmental cooperation allowed the creation of formal global bodies was an aberration. Other broad patterns have since become evident:

One is the growth of **regional or less-than-global coalitions** that are typically centred around states, but often include non-state actors as relevant partners. China, for example, has set up competing bodies such as the Asian Infrastructure Investment Bank (AIIB), Global Development Initiative, and the Belt and Road Initiative (BRI). The United States was among the initial promoters of the Climate and Clean Air Coalition along with Canada, Ghana, Mexico, Sweden and Bangladesh and the UN Environment Programme, which has since expanded to 88 state and 96

non-state partners. The U.S. also initiated the Global Coalition against Daesh, the Open Government Partnership (OGP), and the Indo-Pacific Economic Framework. India has promoted the International Solar Alliance, CEPI, Coalition for Disaster Resilient Infrastructure (CDRI), and the Global Biofuels Alliance (GBA). Other examples include the G7, G20, BRICs, and Russia's current efforts to convene a new group of allies.

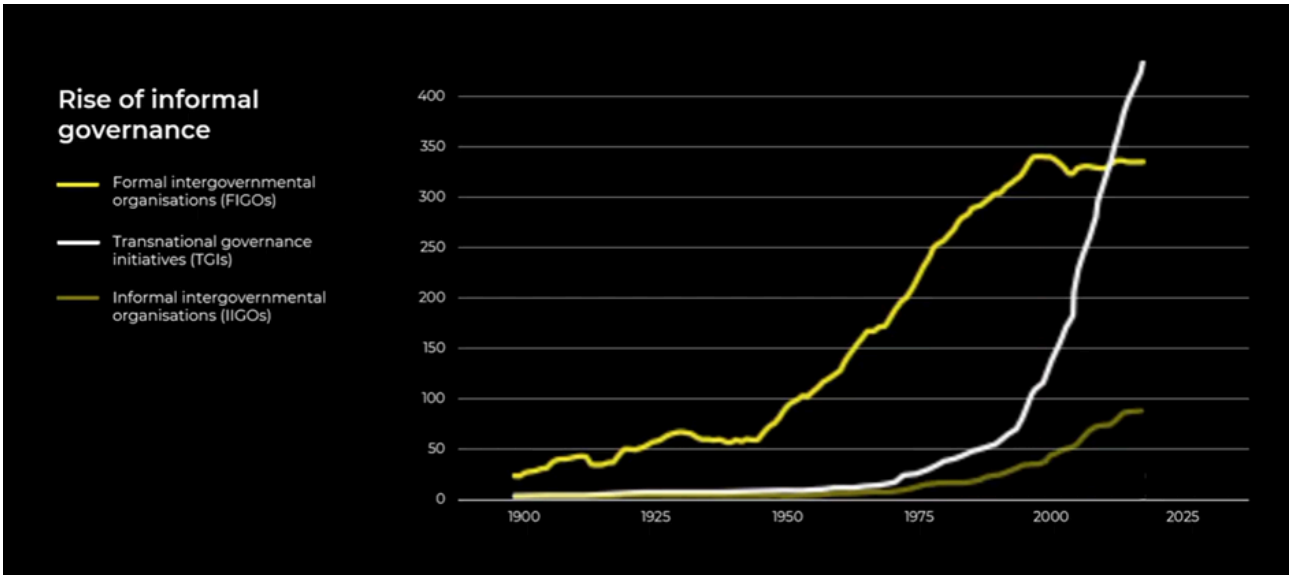
A second is the rise of **task-oriented platforms**, particularly around information and analysis — variously anchored in inter-nation-al processes. Examples include the IPCC, IUCN, IPBES, and Future Earth. and ICO. These have proven remarkably successful by providing critical scientific insights to inform global decision making. Others are more bottom-up: unofficial groups of scientists such as the Global Carbon Budget initiative, the Argos collaboration for ocean sensing, or Icarus, the development of an Internet of Animals that mobilises the intelligence of birds and animals to sense shifts in the world's ecosystems.

A third is the creation of **interagency coordinating bodies** to pool resources and ensure better coordination among international organisations, as well as state and non-state actors. Examples include the Global Environment Facility: a partnership led by the World Bank, UNEP, UNDP; the UN Network on Migration: led by IOM, WHO, UNICEF and multiple other UN bodies; the Cities Alliance: founded by the World Bank and UN-HABITAT; Gavi, the Vaccine Alliance: promoted by the World Health Organization, UNICEF, and the World Bank.

A fourth trend is the rise of **new multi-stakeholder coalitions cutting across public, private, and non-profit actors.** Global action has become harder because of resurgent nationalism, both in the great powers and in many others, and this has fuelled the development of non-state coalitions as alternatives to formal international groupings — especially when existing institutions face ineffectiveness and slow decision-making. Dozens of such partnerships exist from EITI to the Kimberley Process — some focused on analysis, some on coordinated action, some on pooling money. These also include **ad hoc efforts**, like COVAX Initiative and Ebola Response Coalition, which concentrate resources on addressing urgent crises. Complementing these efforts are **multi stakeholder partnerships** like the Global Innovation Fund (GIF), the Digital Public Goods Alliance (DPGA) and the Climate Finance Leadership Initiative (CFLI). They leverage

support from businesses, governments, and philanthropic organisations to strengthen the capacity to tackle global challenges.

Countries continue to leverage their trading and market power to exert transnational influence when global processes are stalled. In the absence of a global agreement on carbon taxation, for example, Europe's Carbon Border Adjustment Mechanism (CBAM)'s rules are already proving influential beyond the EU as were Europe's GDPR rules on data protection. The rise of these many different types of coalitions, partnerships, and inside-out efforts to extend domestic policies to transnational incentives has happened against a backdrop of economic and diplomatic power shifts and divergence, including of worldviews. What's resulted is a messier picture, sometimes called a multi-multi-lateral system, with competition between agencies, fuzzy boundaries and shifting alliances. Although formal organisations remain important in trade, technical issues and social policy, they are less prominent now in the environment, health and much else, displaced by the newer forms.



However, the increasing complexity of the global governance architecture raises questions about the effectiveness and the sustainability of these new structures: 'soft pooling' is bound to be weaker than 'hard pooling', non-binding agreements are weaker than binding ones, and task-specific coalitions have generally mobilised much less money than the previous generation of formal IGOs. The shifts also raise a more fundamental question about the future role of institutions. In one view, most significant

deployment of power or money of any kind will continue to depend on formal organisations, as it has done in recent decades, whether in the form of Meta and Google, the Chinese Communist Party, the World Bank or IPCC. An alternative view, popular for several decades, puts confidence in non-institutional ecosystem-shaping by decentralised networks supported by technology, and therefore puts less of a premium on the development of new organisations.

A more realistic view perhaps emphasises how network technologies enable *both* stronger hierarchies and new forms of decentralised action rather than a shift from one to the other.

Development	Description	Examples
Regional/Less Formal Groupings	Regional/less formal coalitions centred around states but also include non-state actors.	AIIB, BRI (China); OGP, Indo-Pacific Economic Framework (U.S.); International Solar Alliance, Global Biofuels Alliance (India)
Task-Oriented and Information-Centric Platforms	Platforms focusing on research, data, and scientific insights to inform global policy and decision-making.	IPCC, IPBES, IUCN, Future Earth, ICO and Global Carbon Project (GCP)
Interagency Coordinating Bodies	Multi-agency alliances that pool resources and coordinate efforts across sectors and organisations to address specific issues.	Global Environment Facility (GEF); Gavi, the Vaccine Alliance; UN Network on Migration; Cities Alliance
Coalition Proliferation	Ad hoc and multi-stakeholder coalitions as alternatives to slow, formal institutions	COVAX, Ebola Response Coalition, Digital Public Goods Alliance, Climate Finance Leadership Initiative, Global Battery Alliance, Green Climate Fund (GCF), Global Innovation Lab for Climate Finance
Inside-Out	Exporting domestic policies and rules to transnational influence	CBAM, GDPR

The need for explicit attention to design

The recent partnerships are a pragmatic response to the difficulties that stand in the way of more powerful vehicles. But they are unlikely to be adequate — and they struggle to mobilise sufficient power or resources to act on shared challenges. Hence the need for more creativity to explore more powerful options that can complement the pragmatic responses. At a minimum, we need options ready for when political circumstances might change — and when there might be an alignment of interest amongst the major powers. So where are the design needs for the next two decades, and what are the promising ideas?

A useful framework is the idea of a **global governance ladder** — with each successive step upwards likely to be not only more difficult, but also dependent on all or most of the steps below. So, **convening for talk** is relatively easy — though often vital. **Intelligence orchestration** comes next and again is often a precondition for other action. **Technology standards** have strong existing institutions — but become harder in a context of geopolitical competition. Next comes **pooling of finance**, then **treaty-based law**, and finally the **deployment of coercive force**. In the long run the world will need institutional capacities at every step of the ladder — but often the first place to start is with intelligence orchestration and the convening of communities.

Some design principles

Building on this need for creativity we suggest seven design principles or prompts that can help in the movement from broad, abstract goals to practical action. These principles reflect a shift from the conventional top-down, static models towards more flexible, integrated, and intelligence-driven designs. Any real-life example will be a combination of design; a first cut that may become part of a treaty, an embryonic organisation that has room to add functions or shift course over time, and then more iterative learning by doing. This balance between explicit design and evolution will vary by context.

1. Focus on shared intelligence

Where the key global organisations of the 1940s were focused on finance, many of the new ones are focused on shared intelligence, partly making use of the proliferation of new technologies that allow data, knowledge and assessments to be shared. The focus on aggregating and synthesising knowledge of all kinds may increasingly be the foundation, and in some cases the motivation, for any kind of global cooperation or action. The LRTAP, for example, came about in part from modelling work by IIASA that traced emissions across national boundaries. Such observatories will increasingly be needed to track and assess risk — from a potential switch in the ocean currents that distribute heat from the Equator to the poles, to bio-risk, quantum computing and new diseases. Such observatories can separate the assessment process from decisions on action, which can still be left to governments. But such shared knowledge can be critical for discovering new possibilities for cooperation, deals, partnerships and action: it is part of the discovery process.

2. Design mesh structures

A second theme is the more explicit linking of multiple tiers of governance: some transnational, some national, some regional and some city level —

as well as horizontal links out to business and civil society. The results are often quite complex arrangements, sometimes with a core that looks more familiar but offshoots with variable geometry fitted to task and context. They often look very different from traditional universal global institutions and provide stability at the core with flexibility at the edges. By ensuring decentralised coordination and enabling cross-cutting partnerships, multi-layered structures can be better suited to handle the complexities of contemporary global issues. For example, a forest conservation initiative can work with international organisations/governments to set standards, with regional stakeholders to align regulations, and with local businesses and civil society organisations to implement policies on the ground. This approach allows for a more dynamic and responsive approach to complex issues.

3. Create hybrids

Many recent developments — and many in the future — will be hybrids, linking public sector, business, civil society and philanthropy in often complex combinations. Some will aggregate capital, using layered approaches. Some may be deliberately temporary to address immediate crises, others deliberately very long-term. Few will fit well with either traditional international relations and political theory or with mainstream economic theories. These are important because power, money, and technology are no longer so monopolised by nation states. Hybrids recognise this new reality.

4. Lean into the practical politics — aligning interests and values

Any new proposal has to align with the reality of political and national interests, and in particular potential support from the key powers, while also asserting more general values. Here the key is to strike a balance between excessive pragmatism (which assumes that current political constraints will last forever) and excessive naiveté (proposals which essentially ignore any role for politics).

A key question for any new proposal is to either think through how it looks to the major powers — US, China, EU, India, Russia — and to seek out potential areas of common interest, or how a sufficiently influential new coalition, with an alternate form of power, might be formed as the base. As the global value of particular environmental resources such as rainforests, polar ice caps, and certain minerals becomes clearer, for example, it is conceivable that new and powerful groupings could emerge. Just 17 of the world's "megadiverse" countries hold 70% of biodiversity, for example. Three (Brazil, Indonesia, and the Democratic Republic of Congo — a grouping referred to as "the OPEC of rainforests") hold 52% of the world's primary rainforests.

5. Build in multiple accountabilities — both core and peripheral

The classic 20th-century global institutions primarily relied on accountability to nation states, whether through the Security Council, UNGA or shareholders in the finance organisations. As nation-states have become more volatile, responsive to voter micro-sentiment with everything potentially symbolic on social media, it's become important to consider different kinds of accountability, often explicitly combining formal and informal accountability — formal to the nations and other bodies that they depend on, but also informal accountability to a global public, through media, social media and other forms of engagement, to legitimate and build trust directly to global citizens and stakeholders, partly through convening and conversation.

6. Explore new economic foundations in global public goods

One of the biggest challenges faced by all global bodies, whether existing or new, is funding. None have the power that nation states depend on — the power to raise taxes that derives from their monopoly of coercion. Very few own any assets. Instead, global organisations have to pull together

funds from governments and then become dependent on the bigger donors. More recently others have pulled together complex assemblies of finance, from governments, investors and philanthropy. Indeed, super-rich philanthropists have increasingly filled part of the space — which is good in terms of addressing needs, but sometimes unhealthy in representing a return to pre-democratic models of power without accountability.

An alternative approach would more deliberately sort out the economic base of global governance, using global public goods to fund global public goods and, more specifically, using global public goods that are the result of science to fund future science. Specifically, this could mean raising taxes or licence fees for such things as geostationary orbits, electro-magnetic spectrum, access to natural capital, oceans and the like, and potentially air traffic routes and landing slots, and the major seabed communication links, and using these resource flows to fund global action. This would of course require backing from the major powers. But getting this right – and before private control of global public goods is consolidated- would greatly transform the psychology and confidence of global public-benefit institutions (though more funding would also need to be matched by transparency and strict auditing to ensure efficiency).

7. Use upside-down thinking and action

The traditional method for creating new international organisations was top down — treaties, laws, committees, then appointments of chairs, CEOs and filling out organograms downwards. But an almost opposite design method is also beginning to emerge, starting with the tasks that need to be done; focusing on what kinds of support are needed (money, skills, knowledge); creating provisional approaches that then build up credibility through results; and, in some cases, mutating into more formal organisations in time. These emphasise legitimation through outcomes rather than inputs; learning by doing; and earned trust. Bottom-up networks in medicine, education and human rights, and countering misinformation are examples of these.

Some work in progress and future priorities

Here we briefly list current projects with which TIAL is interacting and which may provide opportunities to apply new design ideas:

- **Observatories:** work is underway to design a potential International Science-Policy Observatory on Waste and Plastics. In 2024 options were published to create a Global AI Observatory. There are many other potential candidates for more systematic orchestration and synthesis of global scientific knowledge.
- **Task oriented partnerships**: there have been many relative success stories, e.g., around malaria, and some in development such as TEA (Transforming Employment in the age of AI), pooling tools and methods to potentially help hundreds of millions navigate through disruptive changes, building on models developed in Bangladesh, Singapore and Australia.
- **Temporary action organisations:** responding to disasters and crises, drawing on innovations of Ushahidi and others on tools for distribution of money, housing, food etc and new models like 'Policy Steering Rooms'.
- **Funds**: there are many new kinds of funds in development, including the transition funds (such as the Green Climate Fund, Adaptation Fund, the EU's Just Transition Fund and more), and innovative approaches like Germany's Sovereign Tech Fund.
- **Global evidence observatories:** building on the past work of Cochrane, Campbell and others, new options are opening up using Generative AI to synthesise global evidence, as well as projects like ClimateGPT from Erasmus bringing together climate models to guide decision-makers.

- **Future generations**: TIAL's white paper on policy options for reflecting the interests of future generations came out shortly before Ursula von Der Leyen announced that this would be a role of one of the newly appointed commissioners for the EU. Much of the discussion focuses on new national-level institutions but the EU shows that these may also take transnational or even global forms.
- **Global citizens assembly**: this was announced at UNGA September 2024 (shaped by Izwe) and represents one of many initiatives to find ways to represent the global public in decisions.
- **New pools/aggregators**: there are many emerging models sharing software (as with India's DPI), or seeking to organise coordinated transnational procurement etc. (including TIAL's upcoming work on AI procurement and commissioning).

Scenarios and contexts

Will the global context be propitious for ideas of this kind? It's impossible to predict what might be possible a decade or more from now. But we can roughly demarcate at least four distinct scenarios (though the actual patterns may combine these):

- **Adhocracy**: In one scenario, there is no progress towards a new generation of global, multilateral institutions. Instead, we see a world of clubs, ad hoc arrangements, task-specific projects. In this scenario there is value in providing easier models and tools to use — rather than every initiative being bespoke. There is also value in gathering evidence on efficacy and patterns.
- **Repurposing:** In a second scenario existing institutions are repurposed for new purposes: Montreal, WHO, WB and others.
- **Competition:** In scenario three the picture is dominated by intensifying competition, power-driven new rules such

as GDPR/CBAM, emergent standards, and competing blocs not just in electronics and AI but also in fields like cleantech.

- **Rebirth:** in scenario four — the gravity of problems leads to return to deliberately co-created global options and some key alignment of interests for the major powers (technological risk, failed states, organised crime) but with new forms of accountability and a much bigger emphasis on shared knowledge/data.

What is to be done?

There is a huge amount of creative activity underway around global governance, despite the difficult context. As we have shown, one key need of the next period is a better fusion of imagination and practicality. At present there is a fair amount of quite vague futuristic imagination on the one hand, and on the other hand plenty of less imaginative incremental pragmatism.

Past advances in global governance have depended on a middle space that bridges imagination and engagement with practical realities, developing options that may not be viable in the short term but become essential once conditions change or new crises rise. However, there are few if any dedicated centres of teams doing this exploratory work, whether in universities or elsewhere, and bridging the gap between the deliberations of committees of retired officials and politicians on the one hand, and on the other, vaguer speculation that merges into science fiction.

This becomes apparent when urgent new needs arise – like the race to find ways to govern AI prompted by the advent of ChatGPT. The development of new concepts and ways of thinking, alongside constant iteration in response to live challenges, may be the best way to advance thought and action – ensuring that the world has more options available when future crises jolt the world into action.

The Institutional Architecture Lab (tial.org) started work in 2023, seeking to contribute both theories and practical inputs to the design of the next generation of public institutions, collaborating with philanthropy, national governments and the UN. Alongside practical work, we have already published a variety of think-pieces on topics such as how to represent the interests of future generations in today's decisions, as well as toolkits and guides. Other reports that will be published shortly cover topics including procurement, defending democracy and the use of blockchain in new organisational design.

THE INSTITUTIONAL ARCHITECTURE LAB