

# DESIGNING NEW INSTITUTIONS

Ideas and tools for an  
emergent discipline



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## SUMMARY

This paper describes how new institutions can be designed, proposing elements of a discipline that, like building architecture, can bring together theory, practice, interdisciplinarity and critical thought.

Its premise is that the world badly needs new institutions to fill crucial governance gaps – from decarbonisation to mental health, data to AI. These gaps have grown in recent decades – partly the result of ideological aversion to creating new public organisations and an often-misplaced faith in markets; partly the result of diminished political confidence; and partly the result of a lack of good thinking on how exactly to design such institutions to make the most of contemporary values, tools and technologies.

The paper surveys some of the options<sup>1</sup>, from the very local to the global and from the very commercial to the public and civic. It sets out frameworks and choices, current trends and possibilities, and suggests how to mobilise new tools for the design and operation of institutions.

It makes the case for thinking in terms of ‘meshes’, ‘multiple centres’, ‘outside-in’ methods and new approaches to voice.

It suggests ways of thinking about design – from thinking in terms of assemblies to analogies with developments in architecture, which has partly shifted away from the grandiose megalomania of some 20<sup>th</sup>-century buildings towards attention to context, environment, lightness and more.

The primary goal is to help in the design of institutions for the transitions ahead – to a zero-carbon world, to handle inequality, ageing, democratic distrust and a world of powerful AI. The paper suggests some institutional needs, from energy transition funds to urban transport systems overseers and data guardians to fair pay funds (it does not cover the related, important – but distinct – question of how to change existing organisations).

An earlier version of the paper helped prepare the way for the creation of **TIAL, the Institutional Architecture Lab**, which begins work in 2024. This paper sits alongside resources available on the TIAL website to guide the design of new institutions. For inputs of all kinds, I’m very grateful to my two collaborators in TIAL, **Juha Leppänen** and **Jessica Seddon**.

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<sup>1</sup> A comment on definitions: organisations is a very broad term, with institutions usually used to refer to organisations with a public purpose and some more formal standing. This paper is oriented towards institutions but there is no clear boundary between the two, and some organisations can mutate into taking a more formal, statutory nature.

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# I. BACKGROUNDS

## The context

Every year hundreds of thousands of new organisations are formed – mainly small businesses and to a lesser extent NGOs and public agencies. Many fill important needs. But we lack many of the more publicly-oriented institutions we need, institutions focused on the priorities of our times, whether decarbonisation or handling data and AI, mental health, care, or the defence of democracy.

Recent decades brought an ideological aversion to creating new institutions – if government really was the problem rather than the solution, then it made sense to rely on the private sector to solve problems.

The US was once a pioneer of public institution building – from the **UN** to **NASA**, the **ICC** to **DARPA** – but has created no major new institutions in recent decades. The same is true of the UK, much of whose daily life revolves around institutions like the **NHS** and **BBC**, but which has created nothing comparable in the last half century (there have been many smaller new institutions, from the **Health Security Agency** to **ARIA**).

There are examples of very creative new institutional designs around the world, from **India's Aadhaar** to **China's social credit systems**. There is also plenty of innovation in organisational forms in business: from **Semco** and **Mondragon** to the **Valve** corporation, **Zappos**, **Goretex**, **Morning Star** and **Spotify**, and many in civil society, from **Wikipedia** to **Buurztorg**. Many of these have used flat structures, lattices, project-based teams, and principles of self-organisation. Ideas like the **DAO**, the **Decentralised Autonomous Organisation**, have also inspired many with their promise of minimal hierarchy.

But little work has been done on how to adapt these to serve global public challenges and, at a global level, there is a striking lack of institutions well-fitted to the big tasks of our times. At the same time there is widespread dissatisfaction with the older institutions we have inherited – which are seen as too often unduly hierarchical, unequal, rigid and ill-suited to the tasks or ethos of the times (the picture below, from Reykjavik, captures our ambiguous relationship with the institutions that are meant to serve us).



The net result is that we lack good roadmaps to show us what our institutions could look like in the future.<sup>2</sup>

## The roots of organisation and the challenges of design

All organisations build on universal human tendencies to cooperate, collaborate, communicate, divide tasks and manage boundaries. The term *organisation* simply refers to **the ways in which these tendencies are extended and codified**, with ever more complex divisions of labour that allow both differentiation and integration at larger scales. Our dependence on formal, legally constituted organisations reflects a basic lesson: **relying on enthusiasm and informal arrangements alone can work fantastically well for short periods but very rarely works well through setbacks and crises.**

So, we use organisations to do three things:

- First, to **organise with stability**: creating regularities across time and space that don't just depend on interpersonal relationships.
- Second, to **demarkate**: with rules to distinguish inside and outside, compliant and deviant behaviours of values, duties of obligation from non-duties.
- Third, to **shape collective action in a socially recognised form**: to work, an organisation needs to be recognised by others. It needs to answer questions of what is and what matters.

Institutions do all of these and more, drawing either directly or indirectly on the authority of the state or the public interest to achieve shared goals and embody shared values.

There is a huge literature on organisational design, including many frameworks that looked at functional, divisional, matrix or flat structures, and in recent decades dozens of proposals for 'U-form', 'M-form' or 'N-form' organisations and exploration of how these might be transparent, 'trustless' or 'permissionless'.

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<sup>2</sup> I was strongly influenced by Michael Young, founder of a hundred or so organisations in the public sector, business and civil society. He argued that new ideas are often best embodied in a new organisation: it can start with a different ethos to old organisations. Turning tasks into organisations rather than one-off projects helps to ensure that the task becomes part of people's daily rhythms, interests and identities.

These vary greatly in their coherence and viability. The test for any proposed ideas is **whether they help to solve fundamental challenges**:<sup>3</sup>

- The problem of **sustainability** – how is the early enthusiasm of a project turned into a permanent form, how does heat become cool and ‘institutionalised’ in the way that many past social movements mutated into laws, bureaucracies and regulations? Another aspect of this is how long the institution intends to survive – some seek eternal life, others to fix a time-limited problem, or to be bought out or taken over.
- The **principal-agent** problem: how does the ‘principal’ (the owner or creator) of the organisation ensure its workers and managers serve its interests rather than their own (e.g., a population ensuring a government serves its interests or shareholders overseeing CEOs)?
- The **supervision** problem: how does a head office know what its branches are doing in its name?
- The **values** problem: how are common values and standards of behaviour maintained over disparate entities, particularly if these are operating in diverse cultural contexts?
- The **adaptation** problem: how does an organisation change and learn (strategy, structure, actions) when its environment changes? In evolutionary terms an organisation can integrate variation and selection (whereas in markets and natural environments these are distinct). But how to mobilise the right level of variation and how to select intelligently is an eternal challenge.
- The **growth** problem: how does an organisation grow, since typically growth involves uncomfortable changes to structure, people, culture and external accountability? For example, founders are often ill-suited to later periods of growth and consolidation.
- The **influence** problem: how does an organisation spread its way of thinking, its representations of the world?<sup>4</sup>
- The **habit** problem: institutions always have their biggest influence through supporting habits, particularly ones that become mindless and automatic. They turn new actions into repetitions, yet this is quite hard to design from the start.

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<sup>3</sup> Many of these are described with different frameworks in the vast literature on organisation, eg this piece which provides a good summary of many frameworks including Henry Mintzberg’s: <https://platform.europeanmoocs.eu/users/B/Lunenborg-Fred-C.-Organizational-Structure-Mintzberg-Framework-IJSAID-V14-N1-2012.pdf> Other useful books include: Brickley, J., Smith, C., Zimmerman, J. L., & Willett, J. (2002). Designing organizations to create value: From strategy to structure. New York, NY: McGraw-Hill; Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J. (2011). Organizational strategy, structure, and process. Palo Alto, CA: Stanford University Press.

<sup>4</sup> What Dan Sperber calls the ‘epidemiology of representations’.

These are just a few of the eternal problems of organisational design and operation that are never permanently solved.

## The diversity of forms

The world has many tens of millions of organisations in it. These range from small businesses to global firms; cooperatives to mutuals; primary schools to universities; train companies to airlines; parliaments to retailers; courts to prisons; political parties to TV channels. Not surprisingly, they have a vast range of ways of being designed. Generalisations mislead. Unlike living organisms, they do not share a common underlying code, though they share many other features with living things: multiple specialised parts, boundaries, metabolisms and usually a drive to grow, reproduce and survive. The diversity of public companies, partnerships, mutuals, coops, charities, clubs, associations, CICs, B-Corps, ministries, departments, agencies, IGOs, DAOs, churches, and communes reflects a diversity of tasks.<sup>5</sup> A similar diversity is needed for new organisations which might seek to:

- Deliver a new service (perhaps to deliver local food, care for the elderly or lifelong education) – learning from examples as varied as the NHS and Buurtzorg, Walmart, Amazon, BRAC and Uber
- Campaign to achieve a new change – learning from Greenpeace, BLM, #meToo
- Manage financial assets in novel ways - learning from banks, mutuals, hedge funds, impact funds and global bodies like the World Bank and others
- Worship in new ways – and learning from churches, mosques, temples, monasteries, cults and superchurches
- Generate new insight and understanding – and learning from research labs, bodies like the IPCC or the Cochrane collaboration
- Sell advertising in new ways – learning from platforms, search engines or TV services
- Teach in new ways – learning from schools, colleges and half a century of edtech and distance learning
- Cure in new ways – learning from hospitals, clinics, programmes and another half century of healthtech
- Entertain in new ways – learning from the vast variety of clubs, theatres, streaming services, VR and more

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<sup>5</sup> One of the best books on this topic is James Q Wilson's 'Bureaucracy' which shows in detail why the organisational forms of things like prisons, schools and tax collecting are so different from each other.

- Manage land or commons in new ways – learning from experience managing forests, lakes or fisheries
- Curate data in new ways – learning from the explosion of new kinds of data repository, coops, trusts, PDS and organisations like Ushahidi
- Regulate new activities – learning from the many existing bodies such as FCC, Ofgem and so on

This list is a warning against inappropriate generalisation. There are good reasons why organisations are so diverse. Indeed, it's best to think of this diversity as we would think of the diversity of flora and fauna in a natural environment. Architecture provides another useful analogy. Although some architecture is highly conformist, much of the best architecture is wilfully diverse, fitted to context, embodying values and also working for everyday uses.

## Metaphors and mental models

Organisations exist as much in the mind as in material reality. They only work if people believe in them and believe in their likelihood to survive. In this sense they are **useful fictions**, like so many social phenomena, from money to marriage. They depend for their daily work on what happens in the minds of their people, with self-motivation and self-policing generally more efficient than external motivation (through detailed incentives) or policing (through combinations of surveillance and punishments).

They are also mental creations in another sense since we rely on mental models when thinking about new organisations. The default is to think in terms of pyramids or organograms with a series of building blocks, usually organised in a hierarchy.

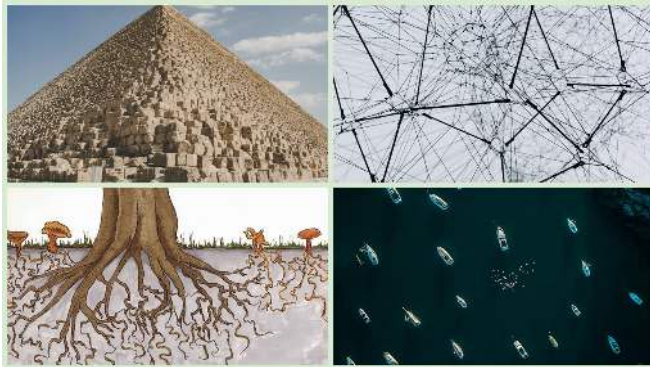
There are large bodies of theory concerned with shifting the relationships within these. The theories of central planning assumed a capacity at the centre to set goal, targets and rewards for all parts of the hierarchy. The theories of new public management, popular in the 1980s and 1990s, proposed separating policy from implementation, and then breaking up implementation into competing units and using contracts to connect the different parts of the organisation.

But there are many other mental models that can be useful in thinking about options, and that draw on the diversity of the natural world:

- Mycelium – organising like fungi, mainly through horizontal links
- Rhizomes – layered organisations
- Sponges – emphasising porousness



- Lattices – overlapping vertical and horizontal links



Some of the most creative thinking in recent years has emphasised self-organisation, mutuality and flat structures, with labels like holocracy, and 'teal'. These are important in suggesting alternatives. However, most real organisations, particularly ones with significant functions or assets, combine some elements of hierarchy, networks and individualism (as analysed very clearly by Mary Douglas's work on grid/group and Michael Thompson's work on the dynamics of organising and disorganising).<sup>6</sup> Many of the pioneers of the Internet, for example, were surprised when it led to the creation of vast new hierarchical organisations as well as looser flat egalitarian structures, and that history repeated itself in the 2010s and 2020s with the experience of blockchain and crypto organisational forms, which promised radical decentralisation but often led to new concentrations of power.

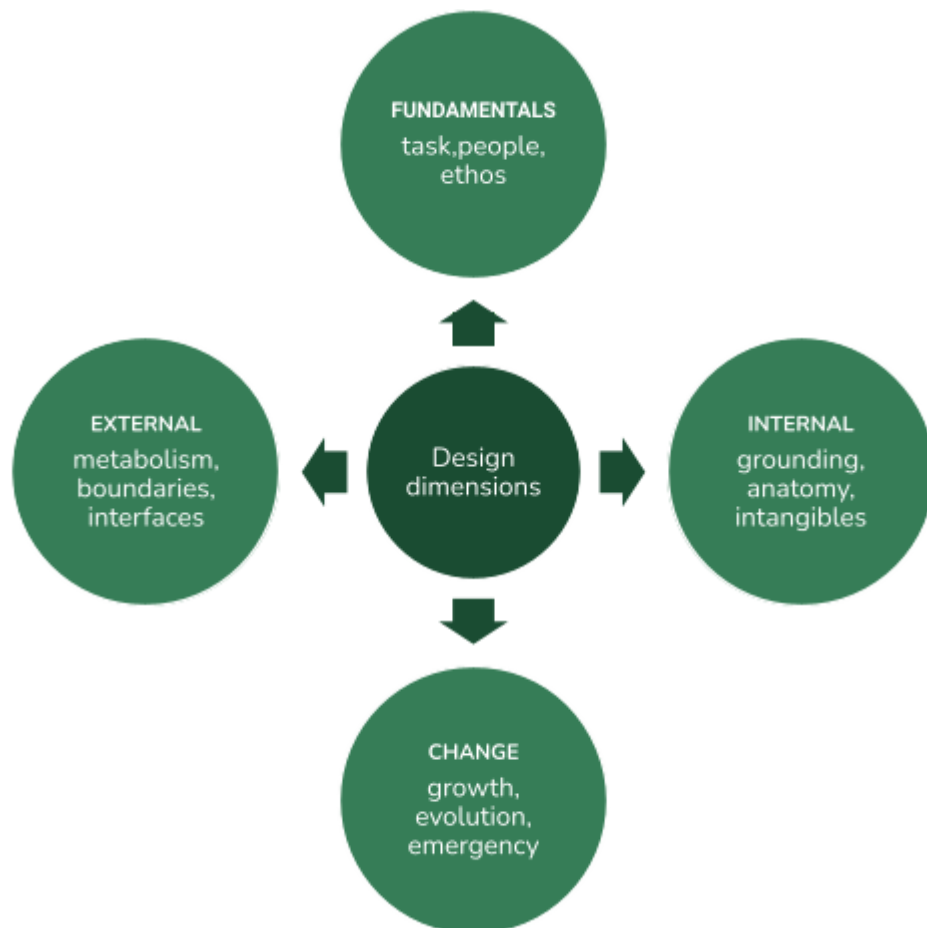
These mistakes reflected errors in understanding. For example, Vitaly Buterin, the very smart founder of Ethereum and first proponent of DAOs asked: "What is a corporation?" and answered: "It's nothing more than people and contracts all the way down." He couldn't have been more wrong.<sup>7</sup>

<sup>6</sup> More recently organisational theorists have fleshed out this simple idea, e.g., Robert Keidel 'Seeing Organisational Patterns'.

<sup>7</sup> I am more favourable to approaches like Stafford Beer's *Viable Systems Model* that emphasise the complexity and nuance of how real organisations work.

## II. TWELVE DIMENSIONS TO CONSIDER IN DESIGNING ANY NEW ORGANISATION

Anyone seeking to design a new institution, or organisation of any kind, has to address at least **twelve main design dimensions** before turning to legal documents, funding options and recruitment. Here, I briefly discuss each in turn, grouping them into **four clusters**: the first concerned with fundamentals, the second with relationships with the external environment, the third with internal processes and the fourth with change.



### FUNDAMENTALS

#### 1. Task: what is its task or purpose?

Most new organisations are established to fulfil a task. A commercial start-up is set up around a product or service which it hopes will grow and generate profits. A public agency is set up to fill a gap – such as

providing long-term care, or public mental health services. A global body is set up to police carbon emissions or combat organised crime.

Initially, this task (or purpose, which can be broader than a task) defines the shape of the organisation which needs to roughly fit the nature of the task (if not immediately, then in time), and determines what capabilities are needed, at what scale, and with what spread. However, any organisation can also be understood as a bundle of capabilities that can then be applied to other tasks. So clarity about tasks is a vital first step, but always bearing in mind the likely need to adapt to other tasks.

## 2. People: who is it?

Who is the organisation? When creating a new organisation, the choice of people is all-important. The employees are the ones likely to choose most future employees. The non-executives are the ones likely to choose their future replacements.

So, questions of capability and talent, a good fit between tasks and people, matter (and not surprisingly there is a vast literature and evidence base on identifying and nurturing talent). So too does **diversity** – how to build in the right mix of backgrounds, experiences, types. And **chemistry** – how to construct the right complementary skills and mindsets, the balance of exploration and exploitation, attention to detail and strategic vision and so on (for all the many flaws of models like Myers-Briggs they are at least right on the basic insight that teams need complementary mentalities). However, as we'll see, the people also include outer circles of stakeholders, supporters, contributors and partners who can substitute for gaps in the inner circles.

The people in an organisation are bound to have a very wide range of characters and dispositions. But how an organisation treats people does influence how they behave: whether it generally trusts or distrusts; empowers or disempowers; respects or disrespects; assumes purely extrinsic or intrinsic motivations, is bound to influence the characters they bring to work.

## 3. Ethos: what is its spirit or core values?

Organisations are born with a spirit or ethos. It may be hierarchical, egalitarian, closed, open, 'red', compassionate or mean, concerned with curiosity, ambition, care, love of nature or love of God. This spirit, and the values that underpin it, may be captured in a phrase (like a mission statement) but too much dependence on a prose version of the ethos is often a sign that the ethos is weak.

Values and ethos become meaningful when they guide choices and determine what isn't done as well as what is done. They both open and close opportunities. In some views, ethos is all-determining. However experience suggests that even organisations very overtly based on ethos need reinforcing mechanisms to harness ambition and avoid excesses of zeal. This ethos then connects to the narratives and myths the organisation tells itself and others, which may or may not bear much resemblance to reality.<sup>8</sup> Yet it is a vital part of reputation and can help organisations to be resilient through crises.

## EXTERNAL

### 4. Metabolism: what is its metabolism?

All organisations are defined by their metabolisms – typically drawing in money and some kind of authority in order to maintain equilibrium and pushing out goods, services or outcomes. There are essentially only three basic resources for institutions:

- Power – coercive power (physical force etc.)
- Money – to pay people and other organisations
- Attraction – the ability to attract devotees, consumers and investors, and to motivate workers to give time and commitment

These three can be substituted for each other in the short-run but in the long-run some kind of attraction is essential for the survival of any organisation, whether a church, a bank or a government. Equally, the outputs and outcomes generate the future inputs.

These resources provide the answers to the basic question – is anyone willing to be organised? They are only likely to be willing if they have to; they are rewarded for so doing or they want to. But some of the options for mobilising these are very different from in the past – with, for example, crowdfunding of money or micropayments, and large-scale contributions of voluntary time, ideas and data.

### 5. Boundaries: what is its sphere of direct and indirect action?

We can define all organisations by their boundaries which demarcate inside and outside. Within the boundary, their rules, means of allocating tasks, and powers operate. Within the boundary, compliance matters and infractions are punished. This boundary can be defined by the organisation chart, i.e., who is directly employed or what assets are within the organisation.

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<sup>8</sup> See 'Organisation Theory in the Public Sector' by Christensen et al.  
[https://books.google.co.uk/books?id=V9V9AqAAQBAJ&printsec=copyright&redir\\_esc=v#v=onepage&q&f=false](https://books.google.co.uk/books?id=V9V9AqAAQBAJ&printsec=copyright&redir_esc=v#v=onepage&q&f=false)

But there will also be an outer boundary of a sphere of influence, and some organisations can be structured with very small cores and very large spheres of influence managed through protocols. Digital technologies make it possible to organise with multiple concentric circles, inner and outer boundaries.

## 6. Interfaces: how does it interact with external organisations and influences?

Boundaries are also interfaces. If a new organisation is set up by an existing one, with more power and continuity (like a state setting up an agency or regulator, or a company awarding a franchise or license), then that interface becomes critical.

All formal organisations have basic ones of law, accounting, audit, and most have some kind of external accountability – such as a board representing stakeholders or a social movement accountable to its members or activists. Many have interfaces with funders and investors; sector regulators; major partners; trade unions. These will have a range of degrees of institutionalisation or informality.

There are widely varying traditions of governance in different countries (though the ISO recently attempted to suggest some common standards).<sup>9</sup>

That accountability can be hot or cool. **Hot accountability** is constant, regular, highly-charged – the accountability of opinion polls, markets or activists. The very hot accountability of a new social movement often quickly leads to fractures, with huge amounts of energy absorbed internally. The same is often true of early-stage commercial ventures, with investors constantly interfering to change management or product choices. **Cool accountability** is periodic and often more efficient, separating out accountability in the sense of supervision and visibility from the ability of stakeholders to act (which has built-in buffers).

Fundamental choices often need to be made early such as how transparent to be, who might have rights to attend AGMs and so on.

## INTERNAL

### 7. Grounding: in place or assets?

Many organisations are defined in part by place. They may be guardians of land, forests or agriculture. Public bodies tend to have a relationship to place. For example, a council, parish, city authority or nation state are defined by their relationship to the geographical space they oversee.

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<sup>9</sup> <https://www.iso.org/standard/65036.html>

Others are defined by the assets that constitute the organisation, e.g., looking after some stock, including capital, a repository, library, museum, foundation or endowment. These can be commercial or public, though some are organised as commons (and Elinor Ostrom helpfully analysed the eight key features of commons governance, which some have tried to apply to other fields like data).

These ‘stickier’ and heavier organisations generally have slower processes. They live longer and only rarely die. Many of those involved do not have the option of exit and so rely instead on voice.

### **8. Internal anatomy: structures, networks and capabilities?**

Every organisation has an internal anatomy, which includes both structures and flows, as well as processes. Typically, there will be a division of functions, both vertical (between key aspects of action, or different geographies) as well as horizontal functions (e.g. finance, HR, knowledge, brand/reputation). These can be visualised in the classic pyramidal organogram which usually has a topology of higher and lower, or alternatively in a circular structure distinguishing inner and outer. Often these align with timescales – with higher levels responsible for tasks over longer timescales and often requiring more cognitive complexity (the organisational theorist Elliot Jacques argued that “aligning level of work complexity with human capability levels seems to be the unrecognised master key to strategic breakthrough”).<sup>10</sup> Yet in some organisations the opposite is the case, with people and teams lower in the hierarchy taking responsibility for long-term projects while those at the top are consumed by the short-term pressures of markets or public opinion.

The internal anatomy can be thought of as involving a series of building blocks to assemble: finance, digital, HR, marketing, R&D, production and so on, all depending on the mix of tasks, with these sometimes organised in divisional forms or in matrix structures.

Crucial design questions follow from these internal architectural choices: these may include formal delegated decision-making rights which are specified for finance (how much to spend or invest) and people (rights to hire and fire). Most organisations contain some kind of triggered hierarchy, with everyday actions and rules to determine escalation upwards and occasional escalation downwards or to the whole in the case of problems (or opportunities). Without these, they risk being derailed by even small disagreements, as sometimes happens to young movements.

But it’s also useful to think of organisations, like cities, as composed of multiple centres that provide a focus for activity, identity and belonging

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<sup>10</sup> See *Organization Design, Levels of Work & Human Capability* from the Global Organization Design Society for a good exploration of the ideas of Jacques and others.

(teams, units, branches, professional groups). These are often very different from the pictures provided by classic organograms, or the logic of delegated authority. But they are essential to the success of any living organisation.

This informal organisation also complements the formal structures and can to some extent be mapped using tools like Social Network Analysis which ask people who they find helpful and useful sources of information (providing a rich map of the reality of how organisations and collaborations actually work, often very different from the formal organograms).

### **9. Knowledge, data and intangibles**

The deliberate, intentional organisation of knowledge of all kinds is increasingly key to how organisations work. This includes formal knowledge, tacit knowledge, data and much more. For some this has become a core activity – curating and orchestrating knowledge for a wider system. For others it is just vital to doing their job well.

And so the design of combinations of vertical and horizontal curation; the design of mechanisms for gathering knowledge, interpreting, synthesising and then applying; the design of norms, incentives and systems for sharing – all are increasingly important for organisations of all kinds.

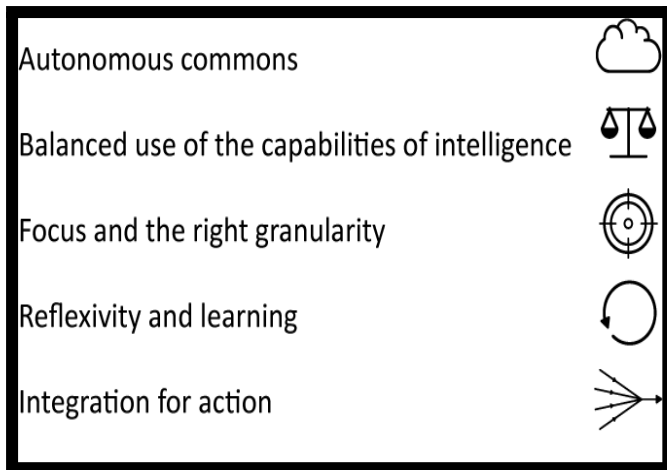
Any organisation can be analysed in terms of these cognitive processes of collective intelligence: how well it observes, uses models, predicts, creates, remembers and judges.<sup>11</sup> I showed in my book 'Big Mind' how organisations can become true collective intelligences and the importance of common languages (what I call 'autonomous commons', learning loops and more). It is these which enable the new options of mesh architecture.

There are also many subtleties in how internal communication should best be organised, for example with scope for unstructured communication within teams but more structured and purposeful communication between teams.<sup>12</sup>

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<sup>11</sup> In 'Big Mind; how collective intelligence can change our world', Princeton University Press, 2017.

<sup>12</sup> This connects to the question of noise, and how much organisations should aim to eliminate noise (the argument of 'Noise' by Daniel Kahneman et al) and the counter-argument that any evolutionary system needs noise in order to discover new options, see exchange in <https://journals.sagepub.com/home/col>.



## CHANGE

### 10. Growth and feedback: what allows it to survive or grow?

All organisations have to cope with change and many seek to grow, whether churches or companies, movements or platforms, drawing on feedback loops from their metabolism. If it is a commercial company, the obvious ones are sales and profit, though there may be proxies for this: sufficient hype or the prospects of future profit may pull in investment and energy. In government, legitimation is the key currency from which all else flows: for a public agency the key feedback loop will be some delivery of public value that convinces its key stakeholders to provide it with funds and a license to operate. For global bodies the usual feedback loop is support from national governments, since very few have their own resource base, which is in turn influenced through reputation. For social movements the key feedback is commitment of supporters and members willing to give time and money, or to show up on marches. In all cases a combination of effective supply and effective demand makes growth possible and the theory of how these work provides a way to think through strategic options.<sup>13</sup>

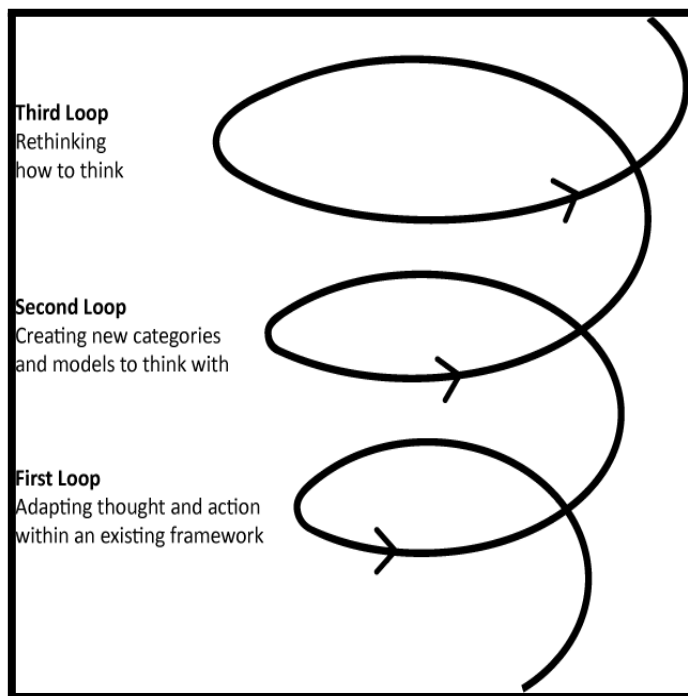
However, some organisations do not aspire to growth, including many based around love or care. Some of the best schools seek to remain the same size and recognise that growth would be likely to damage their ethos and quality. The same is true of many organisations in art (like galleries and studios) or religion (like monasteries). Often their most important challenge is to resist the temptation to grow.

<sup>13</sup> For a much more detailed explanation of these concepts and their application see: 'In and Out of Sync', by G Mulgan et al, Nesta and Young Foundation.



## 11. Evolution: what mechanisms for evolution are built in?

Every organisation has either explicit or implicit means for handling change of task, focus and means. Its task may have been completed or may have changed its nature. The environment may have changed as may the available means. So it's vital to learn, mobilising the different types of learning loop:



This needs to be recognised from the start: overly rigid founding documents that tie down a task or a set of means can quickly become redundant (which is often a problem for public organisations that can be too task-oriented). But agreement on change can be tricky. The ability of the executive to change may be limited – by a board, or by external bodies with some rights and powers. In constitutions there is often a distinction between ordinary decisions and constitutional ones, i.e. decisions about the rules of the game, which can only be taken by a larger group. At these points it may be necessary to merge, be taken over or break the organisation up.

Within the Web3 field, and DAOs, where the operation of the organisation is governed by algorithms, this topic is about how an organisation can update its own code and the rules of governance adaptation.<sup>14</sup>

<sup>14</sup> Zargham, Michael and Nabben, Kelsie, Aligning 'Decentralized Autonomous Organization' to Precedents in Cybernetics (April 4, 2022). Available at: <https://ssrn.com/abstract=4077358> or <http://dx.doi.org/10.2139/ssrn.4077358>.

## 12. Emergency: coping with threats and existential crisis?

Organisations vary greatly according to their precarity or competitive environment. Some live in constant fear of extinction (including many small businesses and charities). Others are comfortable and safe (such as foundations and most universities). If they are precarious then they need to be very attentive to threats: cash flow, customer feedback, competitors' strategies.

Some rules for emergency need to be designed into any institution – moments when ultra-fast decision-making is needed or when it faces an existential crisis. In these moments the normal rules are suspended.

This can be explicit, like the right to call a 'state of emergency' (the 'state of exception' in Giorgio Agamben's phrase). In some contexts, an external power comes into play, e.g., when a bank or company faces bankruptcy, administration, receivers and regulators all gain formal powers. In others, a temporary governance arrangement is called into being.

Some would argue that turnover, churn and extinction are healthy evolutionary processes (the US economy for example has much higher firm creation and destruction rates than Europe, and some argue that public bodies too should be designed for a time-limited existence<sup>15</sup>).

These twelve dimensions provide a useful framework for the job of design – each is a prompt for analysis, options and discussion well before jumping to particular legal forms. Each warrants a whole document in its own right – I've just tried to provide a very brief summary here. Having done a first cut of these, it's then useful to move to parallel questions. These are summarised in the next sections.

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<sup>15</sup> See Herbert Kaufmann's 1976 book 'Are government organisations immortal?'

## III. NEW PRINCIPLES FOR INSTITUTIONAL DESIGN

In this section I look at common directions of travel, made possible by trends in both technology and consciousness, and show how these suggest new options for the design of public institutions.

Since the 1990s business organisation has changed radically, with the world's most highly capitalised companies often organised around platforms and data. Very few public institutions have used any comparable methods, and the 'playbook' for public institutions has hardly been updated for a generation or more. Yet it is now possible to organise in radically different ways: using platforms to aggregate functions; putting data and algorithms at the heart of organisations; enabling teams to self-organise or collaborate in very different ways; and allowing cross-organisational networks to play a much bigger role. Here I suggest four pointers to the future for public institutions.

### Platforms for aggregation and orchestration

Platforms now dominate daily life and they also make it possible to organise in very different ways. Amazon, Google, Facebook, Apple's app store, Alibaba, Tencent, Airbnb, Uber and many others apply platform logic to the provision of services. Instead of the company directly providing services itself it provides a way of organising provision by many providers to many consumers. This logic enabled Airbnb for example to become the world's largest provider of hotel accommodation without owning any hotels.

I first became involved in applying platform models to the public sector in the 1990s, when we imagined public service platforms that could provide a diverse range of services to users, like the commercial platforms intermediating between many providers and many users. Examples included Learndirect (which at one point was the world's second biggest educational organisation), and the use of personal budgets in care. Many ideas were developed at the time – like the Guaranteed Electronic Markets model proposed in the mid-1990s and later implemented in some labour markets as 'Slivers of Time' (the story is covered in [a New Yorker piece](#) in 2021).

However, these ideas were probably too far ahead of their time and were not well understood either by ministers or the departments responsible for them. Politicians, coming from a pre-digital generation, had little confidence that the public sector could create or operate platforms and tended to defer to business.

Two decades on, however, platforms are more common in the public sector. The [Societal Platform](#) programme promoted in India by Nandan Nilekani is a good example, including experiments like Open Network for Digital Commerce run by the Indian government. Looking to the future there are many fields where public platforms could become critical, particularly ones linking many providers and many users. They include public procurement which has obvious scope for aggregating, and then connecting, demand and supply; the provision of care; and lifelong learning.

## Mesh architectures and lattices

The second is a related trend towards what I call mesh architectures. These combine vertical and horizontal organisation, both formally and informally. Within organisations the cheapness and ubiquity of communications make it easier to organise horizontals (cross-cutting functions, project teams, knowledge, databases, agile, sprints), alongside the more traditional verticals, often in temporary ways to solve specific time-limited challenges. These are as much about flows of knowledge, resources and enthusiasm, and the real life of organisations, as they are about formal structures. They include hardware and communications architectures as well as relationships between people.

Some aspects of this can be thought of as equivalent to the 'stack' models used in communications, with standardised layers enabling modular reassembly at higher levels.<sup>16</sup>

Changing values – and in particular the valuing of voice, autonomy and self-direction – reinforce this tendency towards more horizontal connections alongside vertical structures.<sup>17</sup> This shift alone marks out most 21<sup>st</sup>-century organisations from their predecessors. At the same time, it is easier to organise meshes outside the organisation in the environments or ecosystems in which they operate. Indeed, a crucial role for many of the new generation of public institutions is to feed and support an ecosystem of data, information and knowledge beyond their boundaries: supporting shared intelligence.

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<sup>16</sup> I used the stack metaphor for proposals about future forms of global communications governance as an example.

<sup>17</sup> Frederic Laloux's 'Reinventing Organisations' is rightly influential and includes many fascinating case studies.

## Multiple centres

The third trend is that these platforms and mesh architectures then make it easier to mobilise multiple centres in parallel – multiple poles of attraction and action within hierarchical structures or networks. Many of the most successful public institutions are rich in such centres which can be more important than the formal hierarchies.<sup>18</sup> For example, the BBC with its multiple centres of expertise around specialisms such as nature, science, news, drama, the World Service, or the NHS with its multiple centres ranging from self-governing local general practices to the medical specialisms and powerful institutions such as teaching hospitals. All successful universities work in this way.

Here there is a gulf between some common assumptions and practices of organisational design (particularly those promoted by big consultancies, which tend to emphasise neat organograms, clean hierarchies and sharp focus) and the lessons of history as to which organisations succeed and survive over time.<sup>19</sup> With multiple centres it becomes easier to adapt to a changing environment – and one lesson for public organisations is that it's often wise not to give them too rigid a mandate, leaving space for them to evolve.

## Outside-in

The fourth growing theme for organisational architecture is the need for 'outside-in' structures and processes which allow the outside to come inside the organisation, viewing the organisation as open, connected and porous. This has many meanings; every organisation has to find ways to link shifts in the external environment to internal decisions. That can be through market research, surveys, customer

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<sup>18</sup> For more on the equivalents in physical architecture, I've found the work of Christopher Alexander over many decades very useful.

<sup>19</sup> A high proportion of the organisations that have survived longest (from companies to charities, universities to religious orders) defy conventional wisdoms about organisational forms, working in practice but not in theory.

complaints and many other means. Cooperatives have a particular struggle to ensure they remain attuned to external realities – with Mondragon, the world’s largest cooperative, an outstanding example of adaptation over many decades.<sup>20</sup>

Some other key examples of the need to bring the outside in include:

- **Externalities:** the need to reflect the impacts of the organisation in its own choices, in particular what economics calls externalities (including ecological and social effects)
- **Accountability:** the need to bring the voice of those affected by organisations into their governance, whether through formal reporting metrics like ESG or through engaging with stakeholders or beneficiaries
- **Data:** making the data and knowledge of the organisation open and useable for others, whether in the form of open data, open source software or open knowledge

## Voice and democracy

The fifth trend is towards voice and democracy. There have been many attempts to introduce limited democracy into institutions and workplaces: cooperatives, worker control, worker representation on boards and supervisory boards, worker control of production flows. These have evolved in cycles – with periods of greater worker voice and power, and other periods when managers and owners have reasserted power.

Many believe that in principle employees should have a say about decisions, and in principle, digital tools make it easier to organise large numbers of workers, even in multinational firms. For public bodies the design challenge is how to balance democracy for the workers, and professionals on the one hand, and the rights to voice of beneficiaries and users on the other. A parallel challenge concerns how to make diversity real – again both in terms of employee and beneficiary voice.

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<sup>20</sup> I’ve had the good fortune to collaborate with the Mondragon group over many years, including through several serious crises.

## IV. THE ENVIRONMENT, CONTEXT OR SYSTEM

Every organisation exists within a context, an environment or system.<sup>21</sup> Understanding the context is crucial to the successful design and embedding of new public institutions and involves subtle statecraft. Much depends on the nature of the environment. Is the organisation in constant competition, in the way that a business, a political party or a media outlet will be? If this is the case, then there is no need for the organisation to be perfect. It just needs to have some edge over its competitors in the crucial dimensions.

For public institutions the environment is more complex – one in which it needs to build legitimacy, through its actions, outcomes achieved, ethos and relationships.

This context can be usefully thought about in three dimensions:

- **Above:** the stronger, richer organisations that can influence it for better or worse, providing money, contracts, encouragement, regulating or for that matter penalising and crushing. Here the design challenge is how to maximise the supports and minimise the threats.
- **Horizontal:** the potential competitors and collaborators in the space, each of which may need a stance, whether friendly, hostile, or one of neglect. Here the design challenge is to think through potential complementary capabilities, and, again, potential threats.
- **Below:** the members, beneficiaries, consumers, citizens. Here the design challenge is how to maximise the positive inputs, reciprocal relationships: how to attract.

In each case, standard system mapping methods, such as mapping others according to their likely degree of support and power, help to give a realistic sense of the outlook for a new organisation. The relationship between an organisation and environment can also be understood in evolutionary terms, as a dynamic process of variation, selection and replication, as old and new organisations attempt to respond to environmental change, both cooperating with each other and competing, a process that happens at multiple levels, from the small unit within the organisation to the organisation, sector, nation to the global level. One purpose of the methods described in this paper is to support more creative variation of options to then test out as organisations search a ‘fitness landscape’ (rather than assuming that there is a fixed optimum).

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<sup>21</sup> Thinking Systems, Geoff Mulgan, UCL/STePP 2020

Sometimes, however, organisational models become stuck if the evolutionary pressures are blocked – whether by monopoly in business or constitutional lock-in in politics. Variation and adaptation slow down, ultimately leaving less competent organisations.



## V. THE DIGITAL AND INTANGIBLE

In every era, the possible organisational forms depend on the available technology – in particular, the options for communicating facts, commands, discussions and allowing organisations to act on the world. At times, the potential for technology-driven change has been exaggerated. Earlier forecasts that the Internet, blockchain and other technologies would do away with hierarchy and strengthen democracy now look like anachronisms. Yet, all of these technologies have greatly transformed the options available, just as electricity and the telephone did in the 19<sup>th</sup> century, with digital technologies tending to empower hierarchies *and* networks, more centralised control *and* much more decentralised coordination, new concentrations of power as well as new distributions.<sup>22</sup> They allow far more visibility than non-digital means of organisation and much greater speed to scale.

The platform model – for cars, hotels, goods – is one aspect of this and is continuing to spread from cars, buildings and goods into new fields such as care. Surveillance becomes much more feasible – including surveillance of workers, consumers and suppliers, usually in very asymmetrical ways. Online decision making by larger numbers including collective intelligence methods are slowly becoming more mainstream, though less common than hierarchical surveillance. Smart contracts are proving feasible in a few fields. And, of course, algorithms are doing far more delegated decision making, as well as overseeing human decisions.

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<sup>22</sup> 'Communication and control: networks and the new economies of communication', Polity 1991.

## VIII. MECHANISMS, MYTHS AND MARGINS

A useful way of thinking how an organisation or institution builds itself, and bringing together the various points made in the last four sections, is to consider three dimensions that will be essential to long-term success.

- The first of these is to **consider mechanisms**. What is the essential task that the institution does? How does it do this well – or at least better than competitors?
- The second is to **consider myths**. Every organisation is supported by a representation of itself – founding stories, audacious goals and tasks, heroes and villains.
- The third is to **consider margins**. To survive through difficulties the organisation will need margins, buffers. Cash is one of the most important – even the most brilliant ideas will not survive if the organisations devoted to them run out of cash. For public bodies the margins lie in stakeholder support and engagement.

## IX. WHAT IF?

A discipline of organisational and institutional architecture should provide practical options that fill pressing needs. But it should also be able to ask **'what if?'** questions to prompt alternative designs.

Evolutionary biology has developed the concept of a 'morpho-space' that maps the possible options for a particular trait or body shape, for example abilities to smell, or see, or legs and wings. These can then be compared with the actual manifestations of these body shapes and traits. The surprising finding from this analysis is that usually only a very small proportion of the possible options has ever been explored through evolution. There may be non-obvious structural reasons or it may be a matter of chance. But at least, in principle, there are many possible new creatures that could exist and thrive but have never been tried.

Something similar happens with organisational forms; the possibilities must greatly outnumber the actual experiments, and as a result many potentially superior options are likely to have been missed out on. It follows that a discipline of institutional design should be able to open up more possibilities.

To do so we can use two very different approaches. One approach is to investigate recent examples of institutional design and imagine them being applied in different domains. The box below summarises some of the more interesting recent initiatives.

### Recent examples of institutional innovation:

**Government Guidance Funds**, Asia Infrastructure Investment Bank and other examples in China which have mobilised huge sums of money for shaping the direction of economic growth.

**NDIS (National Disability Insurance Scheme) in Australia**, a relatively rare innovation in welfare provision, now accounting for a significant proportion of GDP

**Aadhaar and ONDC** (Open Network for Digital Commerce) in India, both impressive examples of public sector innovation using platform models to deliver benefits to citizens

**Bristol City Leap** (Climate Partnership) in the UK, an interesting example of a structured way to connect long-term public and private commitments to decarbonisation in a city

**a2i in Bangladesh**, a leading example of a digital team within a government that has now been partially spun-out

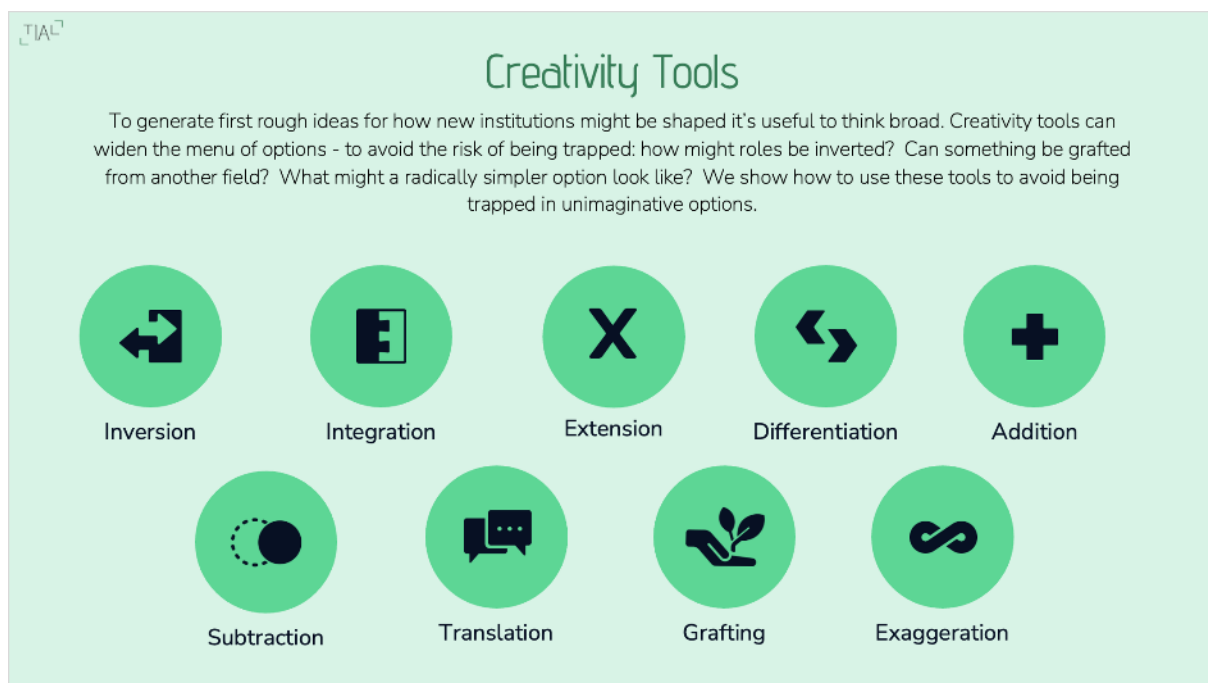
**Future Generations Commissioner** in Wales, a pioneering example of attempts to embody the interests of future generations in current decisions

**Victoria Mental Health Commission in Australia**, a new institution to tackle mental health with the close involvement of beneficiaries

**SPRIN-D**, Cyber and Information Domain Service (CIDS), and DATI in Germany, the last focused on adoption of technologies

**Bogota CareBlocks in Colombia**, one of many innovations in the organisation of care

Another approach uses creativity methods to multiply options – playing with different variants, rather as mutations help to drive evolution:



Source: TIAL (2024), *A Guide to Designing New Institutions - Version 1*

A third method is a more a dialectical process that starts with questions and tasks, moving through proposal, interrogation and scepticism, and then synthesis:

- What organisational designs would allow the world to see its key metabolisms in real time and coordinate action in response (climate, oceans, food production, etc.)?
- What if all the citizens of a neighbourhood or city could observe all decisions in real time and contribute to them?
- What if all the potential impacts of an investment decision were transparent and visible to those affected?

- What would a company look like if it took the wellbeing and mental health of its employees as seriously as its financial results?

## X. GROWING A DISCIPLINE AND A PRACTICE

The design and implementation of new public institutions demands clarity of purpose, smart thinking about options and subtlety (what's sometimes called 'statecraft') deep knowledge of the options and lessons from elsewhere as well as sensitivity to context, politics and culture.

Unfortunately, there are no places to learn this mix of skills, and so anyone tasked with creating a new institution tends to improvise or just to draw on past models.

We think it's possible to do better and that there is a clear analogy with architecture which is supported by courses, qualifications and organisations with deep expertise.

Architecture goes back thousands of years, and over time has accumulated multiple sub-disciplines, styles, bodies of knowledge and theories to help create buildings that are not only functional but also beautiful, inspiring and loveable. It has also provided a focal point for debates about how societies should be run. While much architecture remains in the 20<sup>th</sup>-century mode of big statements, often imposed with little regard for context or user needs, others have sought a very different ethos: lighter, learning from and integrating with nature and environments, connecting with history, drawing on metaphors from organic processes and forms, temporary, flat, able to reconfigure and so on.

There is no direct read-across between physical and institutional architectures, but we would like to see a field of institutional and organisational architecture which is as creative, dynamic and reflective as the best of architecture.

There have been many centres and research programmes and there are many insights to be drawn from public administration, business theory, international relations and organisation theory, and particular approaches like mechanism design, behavioural insights, mission-oriented innovation, agile, commons theories, integral theories, evolutionary economics, platform and blockchain models and many more. There's much to be learned from the histories which document the messy emergence of institutions like the European Central Bank, UN or IPCC.

But these are not easy to use if you are given the task of creating a new institution and they don't draw on a shared body of knowledge and experience about what works for what tasks. That's why we advocate sharper theory; case studies; live experiments, particularly around the potential of new technologies; integration into teaching; and critical

argument. Crucially, too, we need a more systematic approach to evidence: what works for what tasks? This opens up crucial questions about what the measures of success should be. Are they survival, growth, profit or public value? Internal interests or external ones? Self-defined measures or measures which take the perspective of the wider system? Very similar questions apply to physical architecture.

The end goal must be to build institutions that serve us better and better fit the pressing challenges we now face. ○

# ANNEXES: Priorities, past writing and notes

## 1. Priorities for institutional architecture

There are many governance gaps, fields where a lack of organising capacity makes it harder to achieve the goals the public says they want achieved. These are just a few examples:

**Decarbonisation.** The challenge of climate change has already generated many new institutions – from IPCC to carbon offset providers; bodies like Climate KIC and Carbon Trusts to new monies linked to carbon. Others will include new generations of neighbourhood energy provider (rooted in place; founded on a stock of capital and therefore some accountability to providers for EFW or installations; a membership of consumers; and some novel potentials for using data or exchange as members generate their own energy). Another category is data curators for carbon emissions at the level of neighbourhoods, cities and economic sectors (including through work with the UK government’s Centre for Data Ethics and Innovation); regulators – of emissions levels; auditors and quality assurance functions – and much more. I recently co-authored a piece proposing what we called ‘Home Upgrade Agencies’ focused on shifting residential homes away from fossil fuel dependence.

**Artificial intelligence.** There are now many proposals in circulation for global bodies, starting with [observatories](#) and moving onto potentially empowered regulators. In the past there have been proposals for national regulators ([this](#) links to a proposal I published in 2016), and some have created powerful bodies, such as China’s Cyberspace Administration. But, more than a decade after AI became very present in daily life, this remains a space with remarkably few serious designs or options, a symptom of the weakness of the field of institutional design.

**Pay.** Imbalances of pay are now a chronic problem in many countries. In the US nearly half of the lowest paid workers were deemed essential during the pandemic – but a much smaller proportion of the highest paid. Some countries have strong institutions to regulate pay, particularly in priority sectors. Canada has a Pay Equity Commission, South Africa a Commission for Employment Equity. I’ve suggested a possible new institution to address this question, combining analysis, public dialogue and allocation of funds.<sup>23</sup> This is a good space to compare alternative options.

**Transport system overseers.** Every city and city region needs some capacity to orchestrate systems. Some are moving towards mobility as a service (MAAS) which requires coordination, common ticketing and internal resource allocation. Some are grappling with data sharing to enable real-time observation of patterns across different modes, from trams and trains to micro-mobility, cars and pedestrians. Here the task is to design institutions which can perform this kind of systems oversight (and in some parts of the world including the informal economy of minibuses etc).

**Mobilising capital.** There are many institutional needs around capital, particularly to direct to higher priority tasks. China’s Governance Guidance Funds are a prime example. Others are looking at various types of Energy Transition Fund which can manage national deals to finance

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<https://www.geoffmulgan.com/post/the-contribution-reward-fund-an-answer-to-pay-inequality-and-the-neglect-of-essential-work>



the energy transitions of countries, particularly ones in Africa and the Middle East with reserves of oil and gas, that need to be persuaded not to bring them to the surface for sale.

**Protecting democracy.** There is growing awareness that democracy is threatened by deliberate programmes of disruption, including misinformation, deep fakes and more. Few if any countries have institutions with the powers and capabilities that may be needed to protect democracy, particularly during election campaigns.

## 2. Some past writings on organisational design

I've written quite a lot on organisational design and architecture in the past, including setting up various organisations (set out [in this section](#) of my website). I've had some:

- i) Direct involvement in setting up many organisations, some within government, some in civil society and some in between. Each time I was struck how little useful theory or guidance there was to help. Often the task is contracted out to consultancies which use a perfectly reasonable combination of experience, observation and fashion – but struggle to answer any pressing questions about the basis of knowledge or evidence they use to make their recommendations.
- ii) Experience in supporting the creation of commercial start-ups (notably Start Up Europe across 28 countries) and social enterprises (including Social Innovation Europe) and running both commercial and social investment funds. Here there are many more toolkits and frameworks to use – though these tend to reinforce orthodoxies.
- iii) Several decades experience of training in business development across all sectors (including topics such as franchising, licensing, strategy, evidence and implementation).
- iv) A series of books and other writings that included reflections on institutional design, including 'The Art of Public Strategy', 'Big Mind', and shorter pieces proposing designs for institutions ranging from data trusts to new global governance entities, which have provided an outlet for my own thoughts on what institutional architecture and design could entail.

Some other recent examples of work I've done in this space include:

- A study and design of new options for the management of data, including data trusts: <https://www.nesta.org.uk/blog/new-ecosystem-trust/>
- An overview of options for reform of global governance: <https://www.geoffmulgan.com/post/impossible-and-inevitable-the-twisting-road-to-global-governance>
- An overview of options for reforming global governance of communications: <https://www.jesus.cam.ac.uk/sites/default/files/inline/files/China%20UK%20Dialogue%20Centre%20white%20paper.pdf>
- Proposals on global science governance (part of the STRINGs project on steering research and innovation towards the global goals): <https://strings.org.uk/>

- A project on the organisation of intelligence by governments during the pandemic globally (part of IPPO – covidandsociety.com)
- Proposals for AI governance both [globally](#) and [within nations](#).

### 3. Notes



THE INSTITUTIONAL ARCHITECTURE LAB

### ABOUT TIAL

TIAL was formed in 2023 as an effort to help the institutional design community coalesce, learn together, and grow.

### CONTACT US

Get in touch with us to collaborate around institutional architecture — or simply let us know about the work that you are doing.

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